

T2/T2S CONSOLIDATION

USER REQUIREMENTS DOCUMENT

FOR

FUTURE RTGS (RTGS)

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1 HIGH VALUE PAYMENTS SETTLEMENT (HVP)

1.1 OVERVIEW

1.1.1 Context Diagram

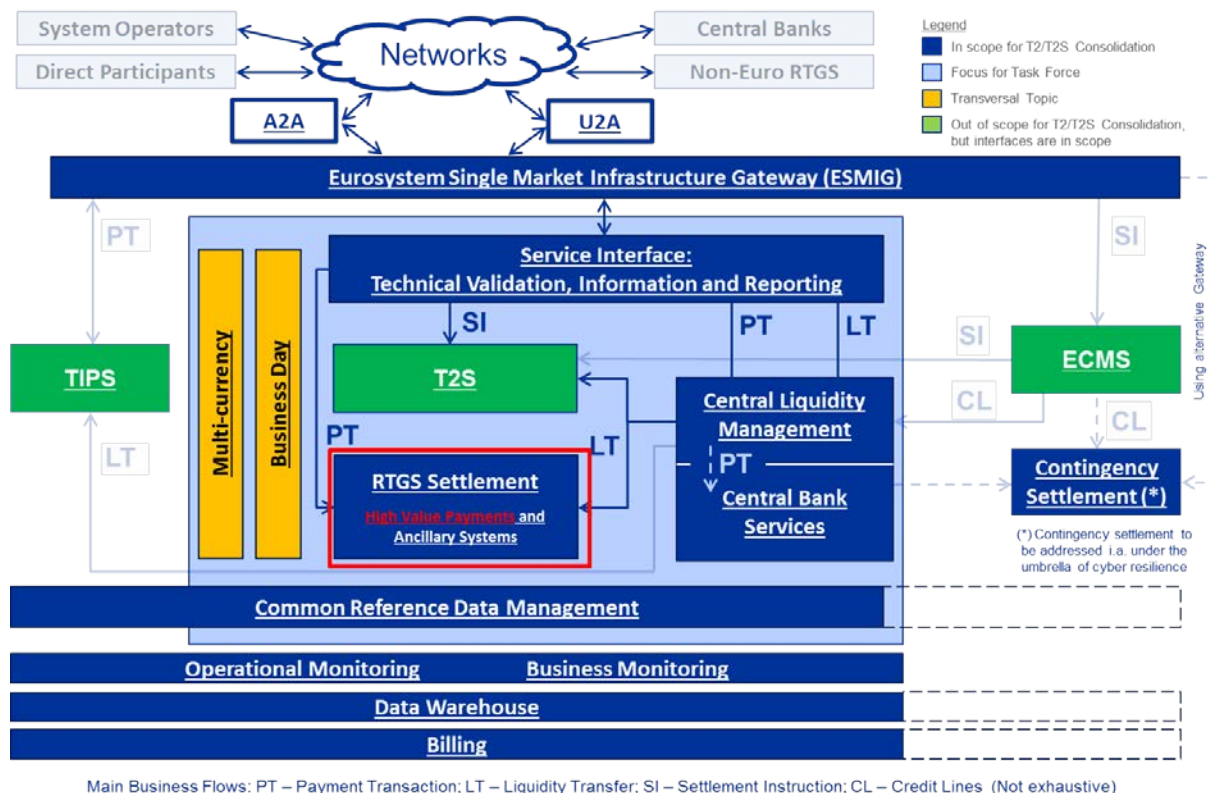


Figure 1: Context diagram for High Value Payments Settlement

This section describes the services offered for High Value Payments (HVP). The RTGS for High Value Payments is in charge of processing payment orders on the participants RTGS Dedicated Cash Accounts (DCA).

This includes the entry disposition, the settlement and the queue management.

For details on the account structure used in the RTGS Services, please refer to [reference to CLM-section].

This document does not define the channels through which the interaction with the system has to take place, i.e. no channel - whether it is A2A or U2A - is excluded for now. The description of the processes generic as all processes could possibly be provided in both U2A and A2A modes.

1.1.2 Business Processes

Business Process Name	BP Reference	Business Process Description
Payment Order Processing	RTGS.BP.HVP.PAYT	<p>Processing of a payment order, which can be</p> <ul style="list-style-type: none"> • a credit transfer • a direct debit • a mandated payment <p>The payment order types listed above can also be warehoused or processed as a back-up payment</p>
Queue Management/Payment Order Amendment	RTGS.BP.HVP.PAYA	Amendment of a payment order originally submitted before with respect to a predefined set of interventions. Including Queue Management.
Queue Management/Payment Order Cancellation	RTGS.BP.HVP.PAYC	Cancellation of a payment order originally submitted before. Including Queue Management.
Liquidity Reservation	RTGS.BP.HVP.LIQR	Execution of a Liquidity Reservation (increase and decrease).
Intra-RTGS Liquidity Transfer	RTGS.BP.HVP.LIQT	Intra-RTGS liquidity transfer for the settlement of a liquidity transfer between RTGS DCAs (any RTGS DCA or RTGS AS DCA) of the same participant

Table 1: Business Processes for High Value Payments

1.2 PAYMENT ORDER PROCESSING

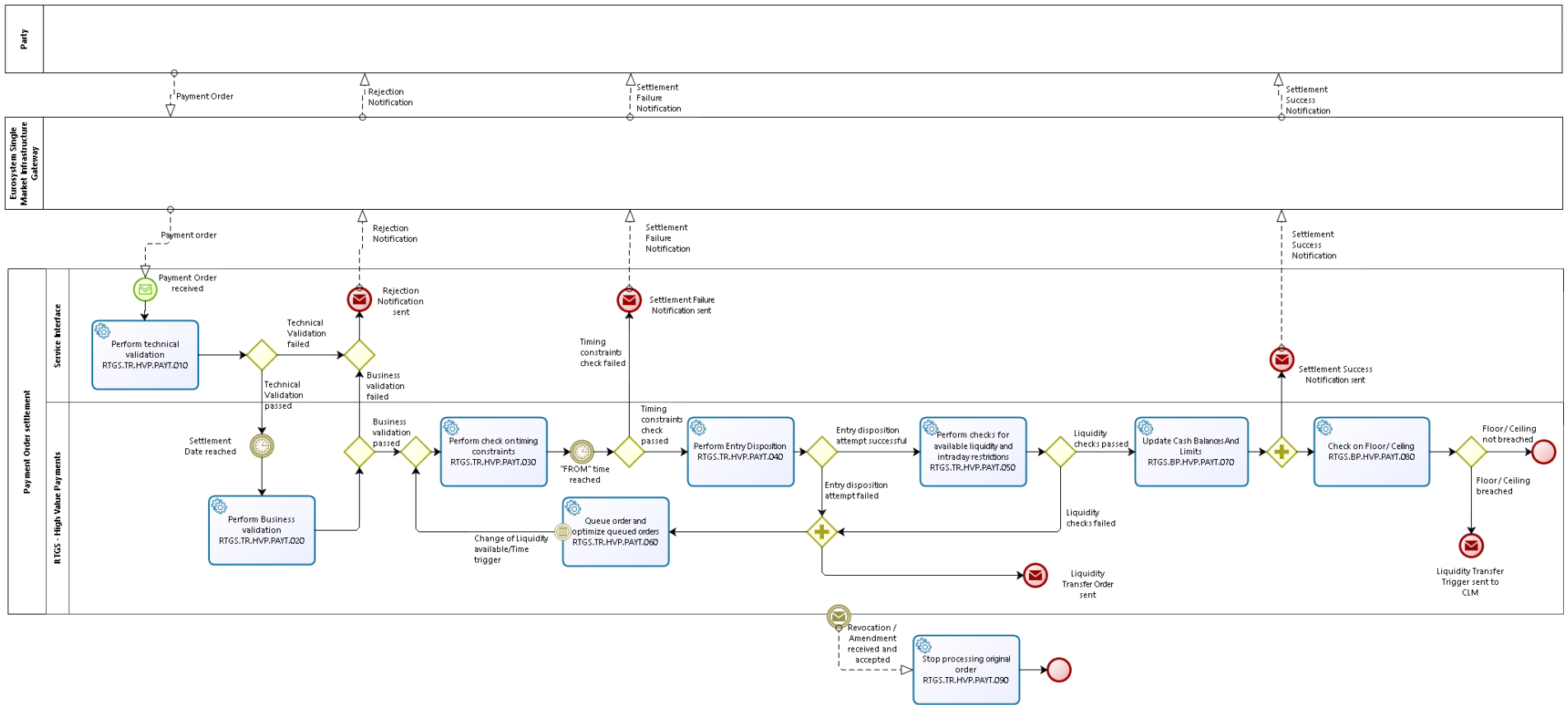
Business Process Ref: RTGS.BP.HVP.PAYT

This business process describes the processing of a payment order. The process will be initiated by a RTGS participant via sending of the respective message to the platform. The platform will process the message. If the message content is either invalid or would result in reference data checks to fail, it will be rejected and a rejection notification will be sent to the sender. If the message content is valid and reference data checks have been passed, the platform will perform a series of operations according to the message content:

These core settlement operations of a payment order include various checks on timing, e.g. on the execution time reached. If either of these checks fails, the core settlement operation may result in a failure and an alert or a settlement failure notification is sent to the sender. Furthermore, there will be checks on blocked accounts/participants. If these are not passed (i.e., one of the accounts / participants involved is blocked), the payment order will be earmarked and its processing suspended (until possible approval/rejection by the CB or continuation after unblocking). Additionally, the core settlement operation also includes provision checks on available liquidity on the balances involved, limits possibly breached, liquidity reservations/segregation possibly over-exploited and specific offsetting checks. If, on the one hand, these provision checks fail and all the aforementioned checks succeeded, the payment order will be queued for a re-attempt for settlement. The queue will then be dissolved through offsetting with new incoming liquidity and optimisation algorithms, payment order amendment (e.g. change order in queue) or through payment order cancellation or through time-induced rejection (e.g. end of day, "REJECT time" reached). If, on the other hand, these provision checks succeed, the core settlement operation will result in a success and the platform will finally and irrevocably book the payment order on the debit and credit accounts involved. In that case, the platform can optionally send a settlement success notification to the sender. All in all, the sender will receive - as long as it does not send additional instructions affecting the settlement of the original payment order- only one notification related to the payment order from the platform through push-mode: either a rejection, or a failure, or a cancellation, or a success notification.

The settlement process described here is as generic as possible, i.e. the description tries to capture most part of the requirements imposed by the different RTGS services involved on the platform (including High-Value-Payments and Ancillary Systems). Main features of the settlement process can be found here, whereas discrepancies to and specifics for Ancillary System settlement can be found in the respective paragraph on Ancillary Systems.

1.2.1 Business Process Model



Business Process Model 1: Payment Order Processing

1.2.2 Process Information

Process goal:

▶

Process context:

▶

Pre-conditions:

▶

Time constraints:

▶

Expected results:

▶

Triggers:

▶

Sub-processes:

▶

1.2.3 User Requirements

1.2.3.1 TECHNICAL VALIDATION

Task Ref: RTGS.TR.HVP.PAYT.010

If the technical validation failed, rejection notifications with appropriate reason code must be sent to the sender.

1.2.3.2 BUSINESS VALIDATION

Task Ref: RTGS.TR.HVP.PAYT.020

Id	RTGS.UR.HVP.PAYT.020.010
Name	Business Validation Ia - Service specific authorisation checks
Description	<p>The RTGS Services shall ensure that the payment order can be sent:</p> <ul style="list-style-type: none"> • By the owner of the account to be debited; or • By the owner of the account to be credited (in case of a direct debit and if there is a contractual arrangement between creditor and debtor to do so); or • By a third party which is neither debtor nor creditor (in case of a mandated payment or if there is a contractual arrangement between the third party and both creditor and debtor to do so, e.g., an Ancillary System - the service will not be checking that such contractual arrangement exists); or • By the respective CB acting on behalf its credit institutions/customers. <p>The RTGS Services shall perform the check as soon as the message has passed the technical validation, in particular, before the intended settlement date.</p>

Id	RTGS.UR.HVP.PAYT.020.020
Name	Business Validation Ib - Check on intended Settlement date
Description	<p>For warehoused payments, whose the intended settlement date is not yet reached, the RTGS Services shall park the payment order and therefore not yet consider it as an object for the core settlement operation. The intended, future settlement date cannot be later than five business days from the warehouse payment order submission date.</p> <p>Nonetheless, the RTGS Services shall perform the authorisation checks described above as soon as the message has passed the technical validation, in particular, before the intended settlement date.</p>

Once the intended settlement date is reached, the RTGS Services will send the payment order automatically and immediately to the business validation step described below.

On the contrary, the RTGS Services will send non-warehoused payment orders having passed all the checks described above, immediately to the business validation step described below.

The RTGS Services will perform the checks described below in one step in order to capture all the possible breaches; the checks therefore must not stop after the first breach occurring, if there could be further breaches in the subsequent checks. If the validation failed overall, the RTGS Services must send rejection notifications with appropriate reason codes for all breaches which occurred to the sender.

Id	RTGS.UR.HVP.PAYT.020.030
Name	Business Validation IIa - cross-fields consistency checks
Description	The RTGS Services shall check consistency versus a defined set of rules, including cross-field validations.

Id	RTGS.UR.HVP.PAYT.020.040
Name	Business Validation IIb - domain value checks
Description	The RTGS Services shall check consistency versus a defined set of rules, including domain value checks.

Id	RTGS.UR.HVP.PAYT.020.050
Name	Business Validation III - Payment type specific checks
Description	The RTGS Services shall check consistency versus a defined set of rules which depend on the message type. E.g., customer payments will have to pass some specific checks, whereas interbank payments will have to pass other, different checks.

Id	RTGS.UR.HVP.PAYT.020.060
Name	Business Validation IV - White list check
Description	The RTGS Services shall check if the sending account is on the white list for High value payments of the receiving account. If not, the order will be rejected.

1.2.3.3 CHECK ON TIMING CONSTRAINTS

Task Ref: RTGS.TR.HVP.PAYT.030

Id	RTGS.UR.HVP.PAYT.030.010
Name	From Time
Description	The RTGS Services shall ensure that a payment order can only be submitted to settlement if its "From Time" - if indicated - is reached. If no "From Time" is indicated, no restriction applies in that respect.

Id	RTGS.UR.HVP.PAYT.030.020
Name	Reject Time and To Time
Description	<p>The RTGS Services shall ensure that a payment order can only be submitted to settlement if its "Reject Time" - if indicated - is not yet reached. Otherwise, it will be rejected.</p> <p>15 min before the indicated Reject Time and Till time and without successful settlement yet, the RTGS services shall send out a warning notification to the party to be debited on an optional basis..</p>

Id	RTGS.UR.HVP.PAYT.030.030
Name	End of Day - submission of orders
Description	The RTGS Services shall ensure that a payment order can only be submitted to settlement if the relevant cut-off time is not yet reached. E.g., customer payments may have to be settled until one predefined customer payment cut-off time, whereas interbank payments have to be settled until another predefined, different interbank payment cut-off time. End of Day depend on the currency.

Id	RTGS.UR.HVP.PAYT.030.040
Name	End of Day - revocation of queued orders
Description	The RTGS Services shall ensure that a payment order can only be settled if the relevant cut-off time is not yet reached. The RTGS services shall cancel queued orders not yet settled at the end of day. End of Day depend on the currency.

1.2.3.4 PERFORM ENTRY DISPOSITION

Task Ref: RTGS.TR.HVP.PAYT.040

This activity checks whether the payment order settlement can be attempted: only if no queued payment order of the same priority or higher exists. There are two exceptions to this rule:

- Normal payment (so called "bypass principle" for normal payments, which means that the submission time for normal payment is meaningless)
- Offsetting bringing additional liquidity to the sender

Id	RTGS.UR.HVP.PAYT.040.010
Name	Priority
Description	The RTGS Services shall ensure that every payment should be marked as "normal", "urgent" or "highly urgent". If no priority class is selected, The RTGS Services shall handle payments as normal payments.

Id	RTGS.UR.HVP.PAYT.040.020
Name	Conditions for settlement attempt of highly urgent and urgent payments
Description	The RTGS Services shall ensure that a highly urgent or urgent payment can - apart from the exception described below - be submitted to settlement only if no payment with a higher or the same priority is queued.

Id	RTGS.UR.HVP.PAYT.040.030
Name	Conditions for settlement attempt of normal payments - so called "bypass principle" for normal payments
Description	The RTGS Services shall ensure that a normal payment can - apart from the exception described below - be submitted to settlement only if no payment with a higher priority are queued. This means that the submission time for normal payment is meaningless.

Id	RTGS.UR.HVP.PAYT.040.040
Name	Exception for settlement attempt – offsetting with liquidity increase
Description	Even if the conditions described above (URs 040.020 and 040.030) are not fulfilled, the RTGS Services shall nevertheless attempt settlement for the payment if bilateral offsetting between the debited and credited participants brings additional liquidity to the debited participant. In case this optimisation feature does not improve the debited participant liquidity, the RTGS Services shall queue the payment order..

Id	RTGS.UR.HVP.PAYT.040.050
Name	Offsetting for settlement attempt
Description	<p>When a payment order is submitted to settlement, offsetting is required in order to reduce the liquidity needed for its settlement, in any case.</p> <p>The payments that can be selected together with the payment submitted to settlement are:</p> <ul style="list-style-type: none"> • Payments on top of the receiver's queue ("offsetting position 1") • Payments not on top of the receiver's queue, but bringing liquidity to the receiver("extended offsetting")

1.2.3.5 PERFORM CHECKS FOR AVAILABLE LIQUIDITY AND BLOCKED ACCOUNTS

Task Ref: RTGS.TR.HVP.PAYT.050

The RTGS Services shall settle a payment order under several conditions:

- ▶ The account/party is not blocked (for credit, debit or credit/debit);
- ▶ The bilateral or multilateral limits are not breached for any normal payment. At the start of day, limits are set according to the standing orders (so called "defined limit"), and are updated all along the business day after each relevant credit and debit (so called "free limit position"); and
- ▶ The balance is sufficient.

Note: For a EURO-CB, this check is meaningless since a EURO-CB account can be negative. For a participant, the credit line is managed within CLM, so the account cannot be negative.

- ▶ The reservation is sufficient:
 - Two reservations are available : one for highly urgent (HU) payments, and one for urgent (U) payments;
 - At the start of day, reservations are set according to the standing orders, and up to the available balance. The amount that cannot be reserved is called "pending value" and is

queued. Following any incoming credit, the pending value is updated and the "defined value" (i.e. the reserved amount minus the related debits) of the related reservation is increased;

- After each debit, the "defined value" of the related reservation is updated
- The condition for drawing liquidity depends on the priority of the payment. As described hereafter, a payment can draw liquidity from its own reservation and lower level reservations.

Id	RTGS.UR.HVP.PAYT.050.010
Name	Blocked accounts/parties validation
Description	The RTGS services shall check whether the credited accounts/credited parties are eligible (i.e. not blocked) for being credited and debited accounts/debited parties are eligible for debiting. If the check fails, the payment order will be earmarked and will be - for the time being - taken out of the processing. It can be re-released or rejected through authorisation by the Central Bank of the blocked account/participant.

Id	RTGS.UR.HVP.PAYT.050.020
Name	Limit check
Description	<p>The RTGS Services shall perform a check toward bilateral and multilateral limits, only for normal payments.</p> <p>First, the RTGS Services shall check whether a bilateral limit exists between the debited and the credited participant. In case the amount of the normal payment is less than the free bilateral limit position, the check is positive. If the check fails, the RTGS Services shall queue the order.</p> <p>In case no bilateral limit is defined, the RTGS Services shall check the multilateral limit . In case the amount of the normal payment is less than the free multilateral limit position, the check is positive. If the check fails, the order is queued.</p>

Id	RTGS.UR.HVP.PAYT.050.030
Name	Balance check for highly urgent payments
Description	<p>The RTGS Services shall ensure that a highly urgent payment will draw liquidity from:</p> <ol style="list-style-type: none"> 1. The HU reservation; 2. if not enough, from the non-reserved liquidity (balance of the account minus the HU and U reservations); and 3. if not enough, the U reservation <p>In case not enough liquidity is available, the RTGS Services shall queue the payment and send a liquidity transfer order.</p>

Id	RTGS.UR.HVP.PAYT.050.040
Name	Balance check for urgent payments
Description	<p>The RTGS Services shall ensure that a urgent payment will draw liquidity from:</p> <ol style="list-style-type: none"> 1. The U reservation 2. If not enough, from the non-reserved liquidity (balance of the account minus the HU and U reservations) <p>In case not enough liquidity is available, the RTGS Services shall queue the payment and send a liquidity transfer order.</p>

Id	RTGS.UR.HVP.PAYT.050.050
Name	Balance check for normal payments
Description	<p>The RTGS Services shall ensure that a normal payment will draw liquidity from the non-reserved liquidity (balance of the account minus the HU and U reservations)</p> <p>In case not enough liquidity is available, the RTGS Services shall queue the payment and send a liquidity transfer order.</p>

1.2.3.6 QUEUE PAYMENT ORDER AND OPTIMISE QUEUED PAYMENT ORDERS

Task Ref: RTGS.TR.HVP.PAYT.060

If the entry disposition fails, this activity includes the identification of the related queue where the payment order is to be located

Id	RTGS.UR.HVP.PAYT.060.010
Name	Identification of the queue
Description	<p>The RTGS Services shall manage three queues according to the priority of the payment:</p> <ul style="list-style-type: none"> • Highly urgent queue; • Urgent queue; and • Normal queue

Id	RTGS.UR.HVP.PAYT.060.020
Name	Order in the queues
Description	<p>The RTGS Services shall ensure that the payment orders are ordered -by default- according to the submission time, i.e. FIFO.</p> <ul style="list-style-type: none"> • This default order may be changed through amendment/cancellation of queued payment orders (see queue management processes)

Optimisation has the objective to dissolve as soon as possible the queues. It can be either event-based, i.e. triggered when any event that can help settling a payment occurs, such as new liquidity on an account or settlement of a payment higher in a queue, or time-based, i.e. started regularly, to take into account all the events that occurred since the last optimisation.

Optimisation is aiming at resolving the reasons for non-settlement, i.e. either lack of liquidity through offsetting, or breach of a limit which can be bilateral or multilateral. It is described in terms of objective (to increase the number of settled payments) and constraints (balances and limits, order in the queues). Optimisation is designed in a way to provide liquidity-saving features.

Id	RTGS.UR.HVP.PAYT.060.030
Name	Optimisation objectives
Description	<p>The RTGS Services shall reduce the stock of unsettled payments and minimise the needed liquidity through optimisation.</p> <p>The constraints described before in the entry disposition (order in the queues, bypass principle for normal payments, offsetting) need to be applied strictly.</p>

1.2.3.7 BOOKING

Task Ref: RTGS.TR.HVP.PAYT.070

1.2.3.7.1 Update Cash Balances and Limit

Id	RTGS.UR.HVP.PAYT.070.010
Name	Update cash balance - Booking on a gross basis
Description	The RTGS Services shall book each and every payment order on a gross basis. This is without prejudice to the use of offsetting effects in the provision check when several payment orders are submitted together for settlement and settle simultaneously on a gross basis within one legal and logical second.

Id	RTGS.UR.HVP.PAYT.070.020
Name	Update reservation - Debiting highly urgent payment
Description	For each debiting Highly Urgent payment, the RTGS Services shall update the reservations according to the steps of the check: <ul style="list-style-type: none"> 1. The available amount within the HU reservation is updated; 2. In case the amount in the HU reservation is not enough, and that the non-reserved liquidity for normal payments is not enough neither, the remaining amount is deduced from the U reservation

Id	RTGS.UR.HVP.PAYT.070.030
Name	Update reservation - Debiting urgent payment
Description	For each debiting urgent payment, the RTGS Services shall update the U reservation according to the available amount within the U reservation.

Id	RTGS.UR.HVP.PAYT.070.040
Name	Update pending reservation
Description	In case of pending reservation, the RTGS Services shall reduce the pending value in case of a crediting payment bringing liquidity to a , first the pending HU reservation and then the pending U reservation.

Id	RTGS.UR.HVP.PAYT.070.050
Name	Update limit in case of debit
Description	The RTGS Services shall, for each normal payment debiting an account, decrease the free bilateral or multilateral limit.

Id	RTGS.UR.HVP.PAYT.070.060
Name	Update limit in case of credit
Description	The RTGS services shall, for each payment (whatever its priority), increase the free bilateral or multilateral limit.

Id	RTGS.UR.HVP.PAYT.070.070
Name	Exclusive control over the settlement
Description	The RTGS services shall ensure that no credit or debit can take place on the cash accounts without being processed by the settlement process.

The latter requirement will prevent concurrency of different settlement processes for the same liquidity units.

Id	RTGS.UR.HVP.PAYT.070. 080
Name	Final booking process
Description	The RTGS Services shall ensure that, once booked on the cash accounts, cash debits and credits must be final, i.e. irrevocable and unconditional.

1.2.3.7.2 Check Balance Floor and Ceiling

Task Ref: RTGS.TR.HVP.PAYT.080

Id	RTGS.UR.HVP.PAYT.080.010
Name	Floor and ceiling
Description	Once the payment is finally booked, the RTGS Services shall check subsequently whether certain balance levels have been breached by booking on the accounts involved in the settlement (i.e., floor or ceiling level thresholds have been breached). If so, the RTGS Services shall send a liquidity transfer request to Central Liquidity Management to adjust the liquidity on the accounts involved so that the balance constraints set by floor and ceiling are satisfied again. Irrespective of the outcome of this final check and of the liquidity transfer requests probably arising, the original payment order remains finally booked.

1.3 QUEUE MANAGEMENT/PAYMENT ORDER AMENDMENT

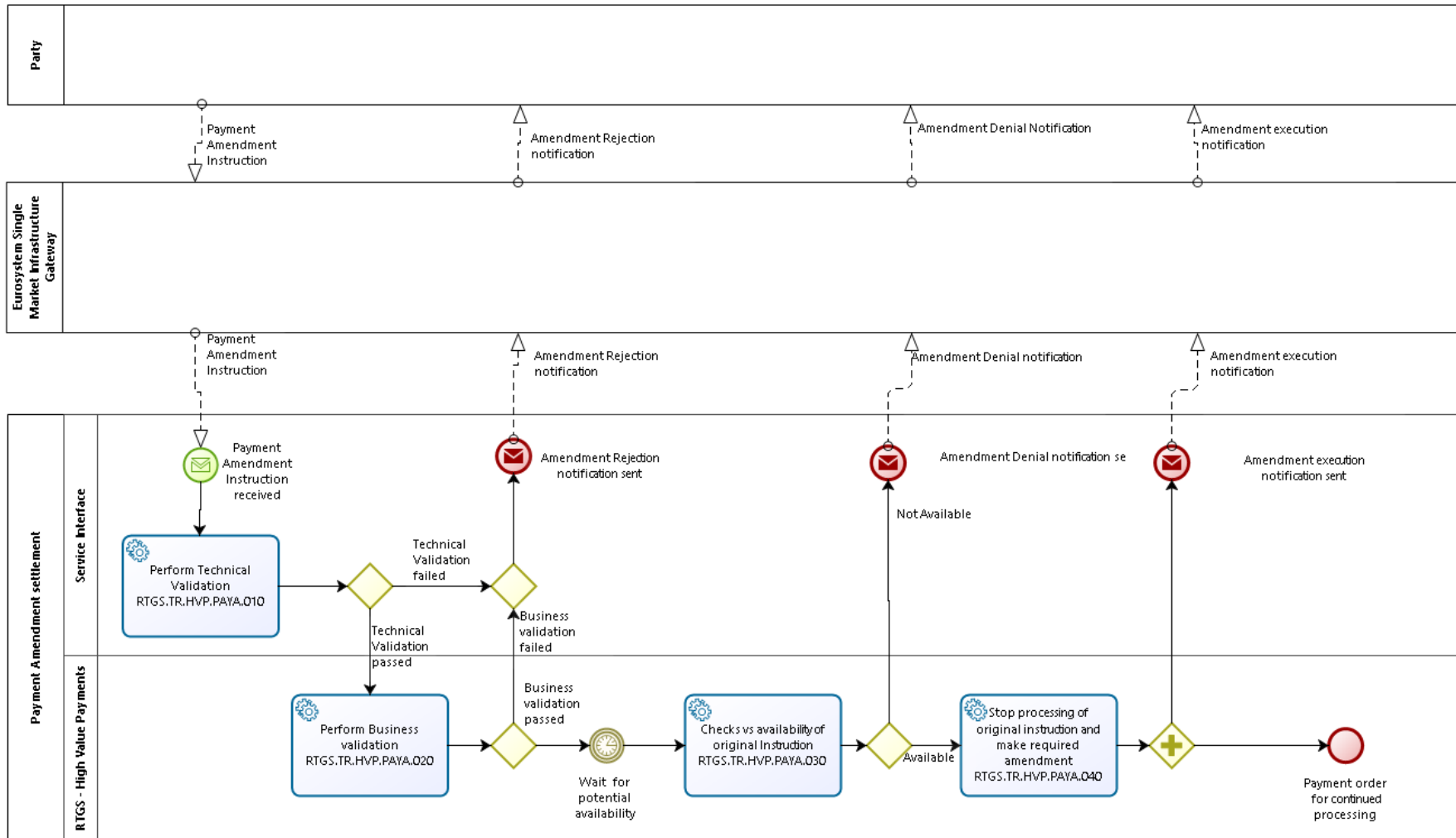
Business Process Ref: RTGS.BP.HVP.PAYA

This business process describes the amendment of a payment order. The process will be initiated by an external party participating in the platform via sending of the respective message to the platform. The platform will process the message. If the message content is either invalid or would result in reference data checks to fail, it will be rejected and a rejection notification with appropriate reason code will be sent to the sender of the amendment. If the message content is valid and reference data checks have been passed successfully, the platform will perform an amendment attempt of the original payment order the amendment message is referring to. If the amendment operation fails, an amendment denial notification with appropriate reason code is sent to the sender of the amendment. In case the amendment operation succeeds, the platform will amend the original payment accordingly and the platform will send an amendment success notification to both the sender of the amendment and to the initial sender of the original payment order.

The following control options are offered:

1. Change priority (not possible for highly urgent) (This does not change the submission time);
2. Put on top of the respective queue one or several payment orders for re-ordering the queued transaction (triggering their settlement attempt). In case several payment orders were selected they will be put on top of the queue according to their previous order. The default-order is determined by the submission timestamp;
3. Bring one or several payment orders to the bottom of the respective queue for re-ordering the queued transaction (possibly triggering the settlement of another payment order). In case several payment orders were selected they will be put on the bottom of the queue according to their previous order. The default-order is determined by the submission timestamp; and
4. Change of execution time (only if it was set before) (possibly triggering the settlement of another payment order).

1.3.1 Business Process Model



Business Process Model 2: Queue Management/Payment Order Amendment

1.3.2 User Requirements

1.3.2.1 TECHNICAL VALIDATION

Task Ref: RTGS.TR.HVP.PAYA.010

(See 1.2.2.1)

If the validation failed, rejection notifications with appropriate reason code must be sent to the sender.

1.3.2.2 BUSINESS VALIDATION

Task Ref: RTGS.TR.HVP.PAYA.020

Id	RTGS.UR.HVP.PAYA.020.010
Name	Business Validation - Service specific authorisation checks
Description	<p>The amendment of a payment order can be sent by the participant owning the account to be debited or the respective CB acting on its behalf</p> <p>If the validation failed, rejection notifications with appropriate reason code must be sent to the sender of the payment amendment instruction.</p>

Id	RTGS.UR.HVP.PAYA.020.020
Name	Amendment of payment orders
Description	<p>The following payment amendment instructions are valid:</p> <ul style="list-style-type: none">• Change priority (not possible for highly urgent) (This does not change the submission time).• Put on top of the respective queue one or several payment orders for re-ordering the queued transaction (triggering their settlement attempt). In case several payment orders were selected they will be put on top of the queue according to their previous order. The default-order is determined by the submission timestamp.• Bring one or several payment orders to the bottom of the respective queue for re-ordering the queued transaction (possibly triggering the settlement of another payment order). In case several payment orders were selected they will be put on the bottom of the queue according to their previous order. The default-order is determined by the submission timestamp.• Change of execution time (only if it was set before) (possibly triggering the settlement of another payment order). <p>If the validation failed, the RTGS Services shall send rejection notifications with appropriate reason code to the sender of the payment amendment instruction.</p>

1.3.2.3 CHECKS VS. AVAILABILITY OF ORIGINAL PAYMENT ORDER

Task Ref: RTGS.TR.HVP.PAYA.030

Id	RTGS.UR.HVP.PAYA.030.010
Name	Status of original payment order
Description	<p>The original payment order to be amended with the respective payment amendment instruction has to be in an intermediate state (excluding blocked payments) to be eligible for amendment (e.g. queued and not considered in an ongoing optimisation simulation process, an order for which the "FROM" time was not reached yet or a warehouse payment). Thus, amendment of instructions is not feasible if they are already in an end state (e.g. settled, rejected or cancelled). The check for availability should also wait for a short period of time until a currently ongoing optimisation cycle is over, so that the payment orders not settled within this settlement attempt reached again an intermediate state</p> <p>The availability can be also dependent not only on the state, but also on the attribute to be changed itself. E.g., one can change the "TILL time" or "REJECT time" as long it has not elapsed and only to a time which has not yet elapsed etc.</p>

1.3.2.4 STOP PROCESSING OF ORIGINAL PAYMENT ORDER AND MAKE REQUIRED AMENDMENT

Task Ref: RTGS.TR.HVP.PAYA.040

The RTGS Services shall suspend the original payment order from the general processing of payment orders before and while the requested amendment takes place.

This means that a currently queued instruction has to be removed from its queue, if it is not considered in an ongoing optimisation simulation process.

An instruction for which the "FROM" time is not reached yet or a warehouse payment have not to be considered in the checks related to their eligibility.

The original payment order will be amended according to the valid Payment Amendment Instruction.

1.3.2.5 CONTINUE PROCESSING OF AMENDED ORDER

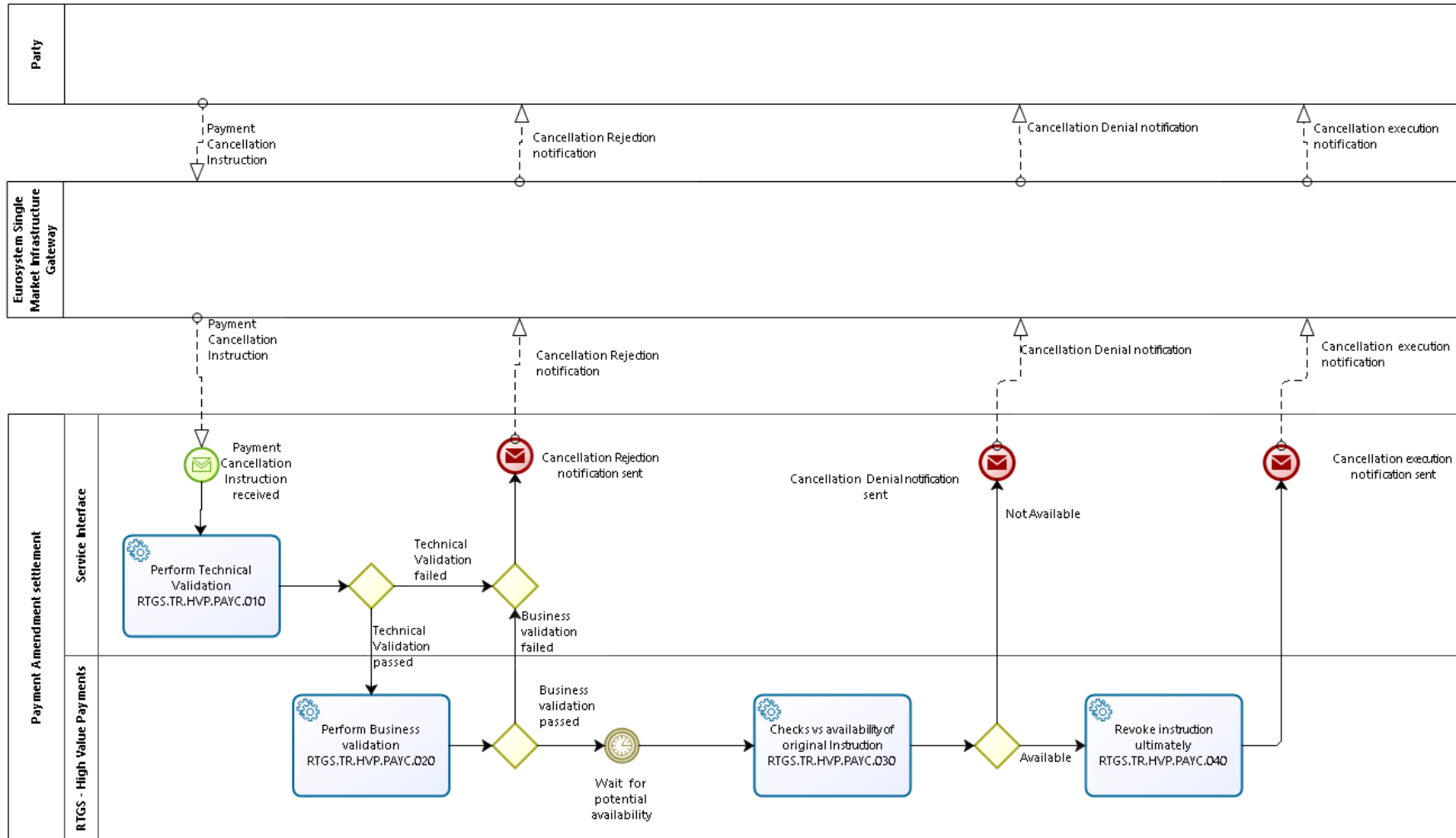
Depending on the most recent state of the original payment order and the attribute which was amended, the amended payment order will be processed through the core settlement operations chain. For instance, if the queue order was changed, the amended payment order will be placed at the respective position and will be captured by the normal queue dissolution processes. If, on the other hand, the priority has changed, the amended payment order will be placed in the queue according to the new priority and the original submission time of the original payment order (i.e., the amendment does not result in an update of that relevant timestamp; the position in the new queue is determined as if the original payment order has already been placed to that queue originally).

1.4 QUEUE MANAGEMENT/PAYMENT ORDER CANCELLATION

Business Process Ref: RTGS.BP.HVP.PAYC

This business process describes the cancellation of a payment order. The process will be initiated by an external party participating in the platform via sending of the respective message to the platform. The platform will process the message. If the message content is either invalid or would result in reference data checks to fail, it will be rejected and a rejection notification will be sent to the sender of the cancellation. If the message content is valid and reference data checks have been passed successfully, the platform will perform a cancellation attempt of the original payment order the cancellation message is referring to. If the cancellation operation fails, a cancellation denial notification with appropriate reason code is sent to the sender of the cancellation. In case the cancellation operation succeeds, the platform will cancel the original message and the platform will send a cancel success notification to both the sender of the cancellation and the initial sender of the original payment order.

1.4.1 Business Process Model



Business Process Model 3: Queue Management/Payment Order Cancellation

1.4.2 User Requirements

1.4.2.1 TECHNICAL VALIDATION

Task Ref: RTGS.TR.HVP.PAYC.010

If the validation failed, rejection notifications with appropriate reason code must be sent to the sender of the cancellation.

1.4.2.2 BUSINESS VALIDATION

Task Ref: RTGS.TR.HVP.PAYC.020

Id	RTGS.UR.HVP.PAYC.020.010
Name	Cancellation of payment orders
Description	<p>The cancellation instruction can be sent by the sending participant, the participant owning the account to be debited in the case of a direct debit, or the respective CB acting on behalf its credit institutions/customers.</p> <p>If the validation failed, rejection notifications with appropriate reason code must be sent to the sender of the cancellation.</p>

1.4.2.3 CHECKS VS. AVAILABILITY OF ORIGINAL INSTRUCTION

Task Ref: RTGS.TR.HVP.PAYC.030

Id	RTGS.UR.HVP.PAYC.030.010
Name	Status of original payment order
Description	<p>The payment order to be cancelled with the respective instruction has to be in an intermediate state to be eligible for cancellation (e.g. queued). Thus, cancellation of payment orders is not feasible if they are already in an end state (e.g. settled, rejected or cancelled).</p> <p>A payment order eligible for cancellation can either be a queued Payment Order (see 0</p> <p>Queue Payment Order and optimise queued Payment orders), an order for which the "FROM" time was not reached yet or a warehouse payment.</p> <p>Payment orders which are captured in an optimisation cycle must also be treated as "potentially settled" and are therefore not available to an immediate cancellation. The check for availability should also wait for a short period of time until a currently ongoing optimisation cycle is over, so that the payment orders not settled within this settlement attempt reached again an intermediate state.</p>

1.4.2.4 REVOKE INSTRUCTION ULTIMATELY

Task Ref: RTGS.TR.HVP.PAYC.040

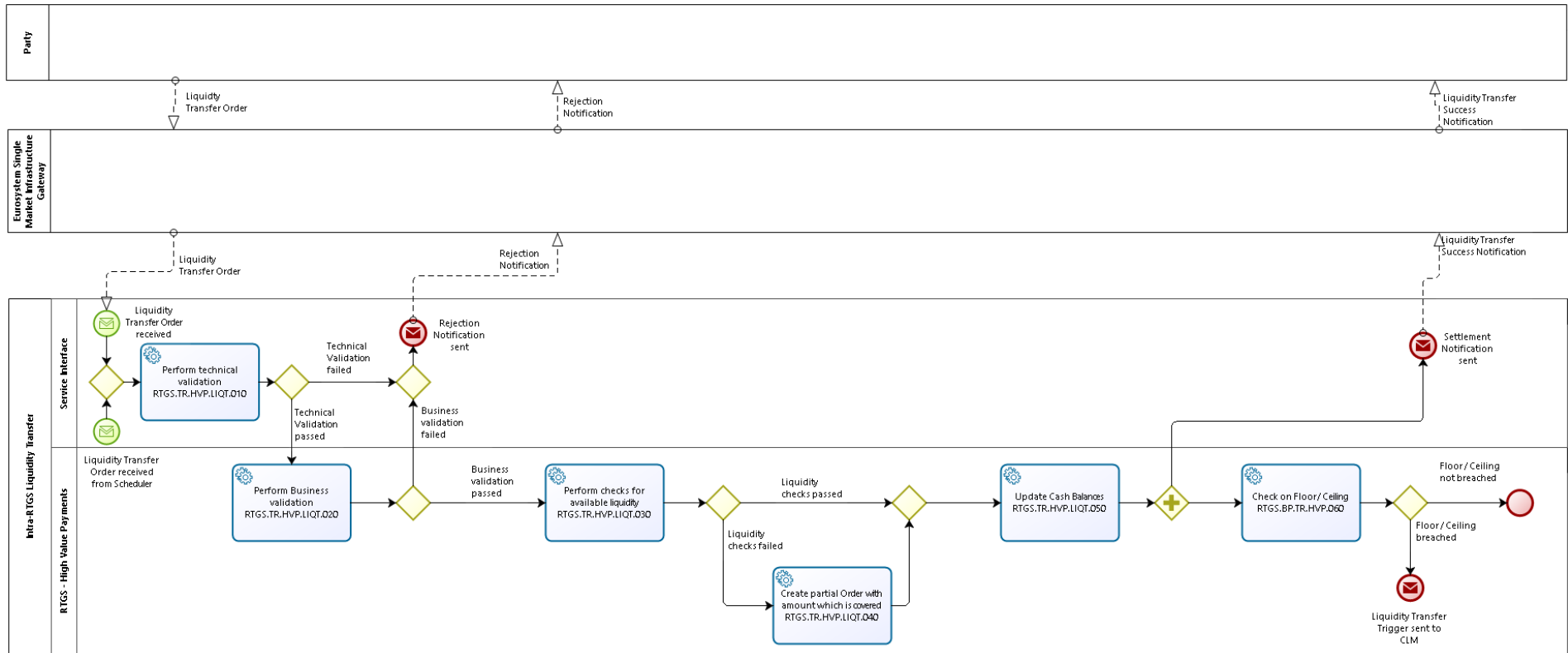
The original payment order will be cancelled according to the valid Payment Cancellation Instruction.

1.5 INTRA-RTGS LIQUIDITY TRANSFER

Business Process Ref: RTGS.BP.HVP.LIQT

This business process describes the processing of an intra-RTGS liquidity transfer request from a an AS participant's RTGS DCA to another RTGS DCA (e.g. from an AS participant's RTGS HVP DCA to its RTGS AS DCA and vice versa). Standing Order Liquidity Transfers, Immediate Liquidity Transfers and Predefined Liquidity Transfers are covered by this business process. The process will be initiated by either the RTGS participant itself or by the AS on the participants' behalf or by the CB on the participants' behalf via sending the respective liquidity transfer to the RTGS service. The RTGS Services will process the liquidity transfer. If the liquidity transfer content is either invalid or would result in reference data checks to fail, it will be rejected and a rejection notification will be sent to the sender (depending on the channel, a proper message in A2A mode or an error message on the screen in U2A mode). If the liquidity transfer content is valid and certain reference data checks have been passed, the RTGS service will attempt to transfer (part of) the liquidity amount requested to the account referred to. In case the intra-RTGS liquidity transfer (partly) succeeds, the RTGS service will transfer (part of) the amount requested and the RTGS service will send a (partly) transfer success notification to the participants involved (in case the participant opted for it).

1.5.1 Business Process Model



Business Process Model 4: Intra-RTGS Liquidity Transfer

1.5.2 Process Overview

Process goal:

- ▶ Transfer of liquidity from a RTGS DCA to another RTGS DCA, e.g.:
 - Transfer of liquidity from AS participant's RTGS HVP DCA to its RTGS AS DCA
 - Transfer of liquidity from AS participant's RTGS AS DCA to its RTGS HVP DCA

Process context:

▶

Pre-conditions:

- I. Both RTGS DCAs exist
- II. Respective privileges have been granted to the initiating participant
- III.

Time constraints:

▶

Expected results:

- ▶ Liquidity successfully transferred

Triggers:

- ▶ Physical event
- ▶ Manual event
- ▶ Time-based event (for pre-defined order)

Sub-processes:

▶

1.5.3 User Requirements

1.5.3.1 PERFORM TECHNICAL VALIDATION

Task Ref: RTGS.TR.HVP.LIQT.010

The message is parsed and field level validation is performed – e.g. on correct data type, size. It is to be checked whether all mandatory fields are populated actually.

If the validation failed, rejection notification with appropriate reason code must be sent to the relevant parties (depending on the channel, a proper message in A2A mode or an error message on the screen in U2A mode).

1.5.3.2 PERFORM BUSINESS VALIDATION

Task Ref: RTGS.TR.HVP.LIQT.020

The checks described below will be performed in one step in order to capture all the possible breaches; the checks therefore must not stop after the first breach occurring, if there could be further breaches in the subsequent checks. If the validation failed overall, rejection notifications with appropriate reason codes for all breaches which occurred must be sent to the sender.

Id	RTGS.UR.HVP.LIQT.020.010
Name	Business Validation - Service specific authorisation checks
Description	The RTGS services shall perform service specific authorisation checks. A request for a liquidity transfer from the participant's RTGS HVP DCA to the RTGS AS DCA can be sent by the AS, the AS on the participant's behalf or the respective CB acting on behalf its participants/AS. As for the cross-border scenario (i.e. RTGS HVP DCA and dedicated RTGS AS DCA can be owned by participants in different banking communities), the CB acting on behalf is the one holding the account to be debited in its books. The request for a liquidity transfer can also be triggered by the scheduler in the case of standing orders. The request for a liquidity retransfer from the RTGS AS DCA to the participant's RTGS HVP DCA can be sent by the participant, AS or the respective CB acting on behalf of its AS or triggered by a predefined order set up by the AS or by the participant.

Id	RTGS.UR.HVP.LIQT.020.020
Name	Business Validation - field and reference data checks
Description	The RTGS services shall perform the following field and reference data checks: <ul style="list-style-type: none"> • Field value validation - codes are valid, values are within allowed range • Cross-field validation - referential integrity (e.g., currency of the accounts involved same as amount currency etc.) • Checks vs database to ensure that an object either does exist, or doesn't exist (as appropriate to the process being performed) • Duplication checks

Id	RTGS.UR.HVP.LIQT.020.030
Name	Business Validation - White list check
Description	The RTGS Services shall check if the sending account is on the white list for Liquidity transfers of the receiving account. If not, the order will be rejected.

1.5.3.3 PERFORM CHECKS FOR AVAILABLE LIQUIDITY

Task Ref: RTGS.TR.HVP.LIQT.030

Id	RTGS.UR.HVP.LIQT.030.010
Name	Check vs. amount to be transferred
Description	The RTGS services shall perform checks versus the amount to be transferred. The liquidity available covers the requested liquidity transfer amount. In case of lack of liquidity the usual rules for partial execution apply (cf Table "Liquidity Transfer Types" in the chapter on Ancillary Systems).

1.5.3.4 CREATE PARTIAL REQUEST WITH AN AMOUNT WHICH IS COVERED

Task Ref: RTGS.TR.HVP.LIQT.040

If the liquidity transfer is initiated either by an AS on its participant's' behalf or by an automatic trigger from the scheduler, the liquidity transfer is settled partially. For several standing orders, in case the sum of all standing orders for intra-RTGS liquidity transfers of the participant to be settled at the same event is larger than the available liquidity; all respective standing orders are reduced in a pro-rata mode.

1.5.3.5 UPDATE CASH BALANCES

Task Reference RTGS.TR.HVP.LIQT.050

The RTGS services shall book the liquidity transfer finally and irrevocably on the two RTGS accounts and shall update the defined value. A (partly) success notification will be sent to the sender and to the owner of the debited account.

1.5.3.6 CHECK ON FLOOR/CEILING

Task Reference RTGS.TR.HVP.LIQT.060

If certain floor or ceiling amounts are breached on the RTGS HVP DCA or on the RTGS AS DCA, a liquidity transfer is triggered.

1.6 LIQUIDITY RESERVATION

Business Process Ref: RTGS.BP.HVP.LIQR

This business process describes the processing of a reservation request.

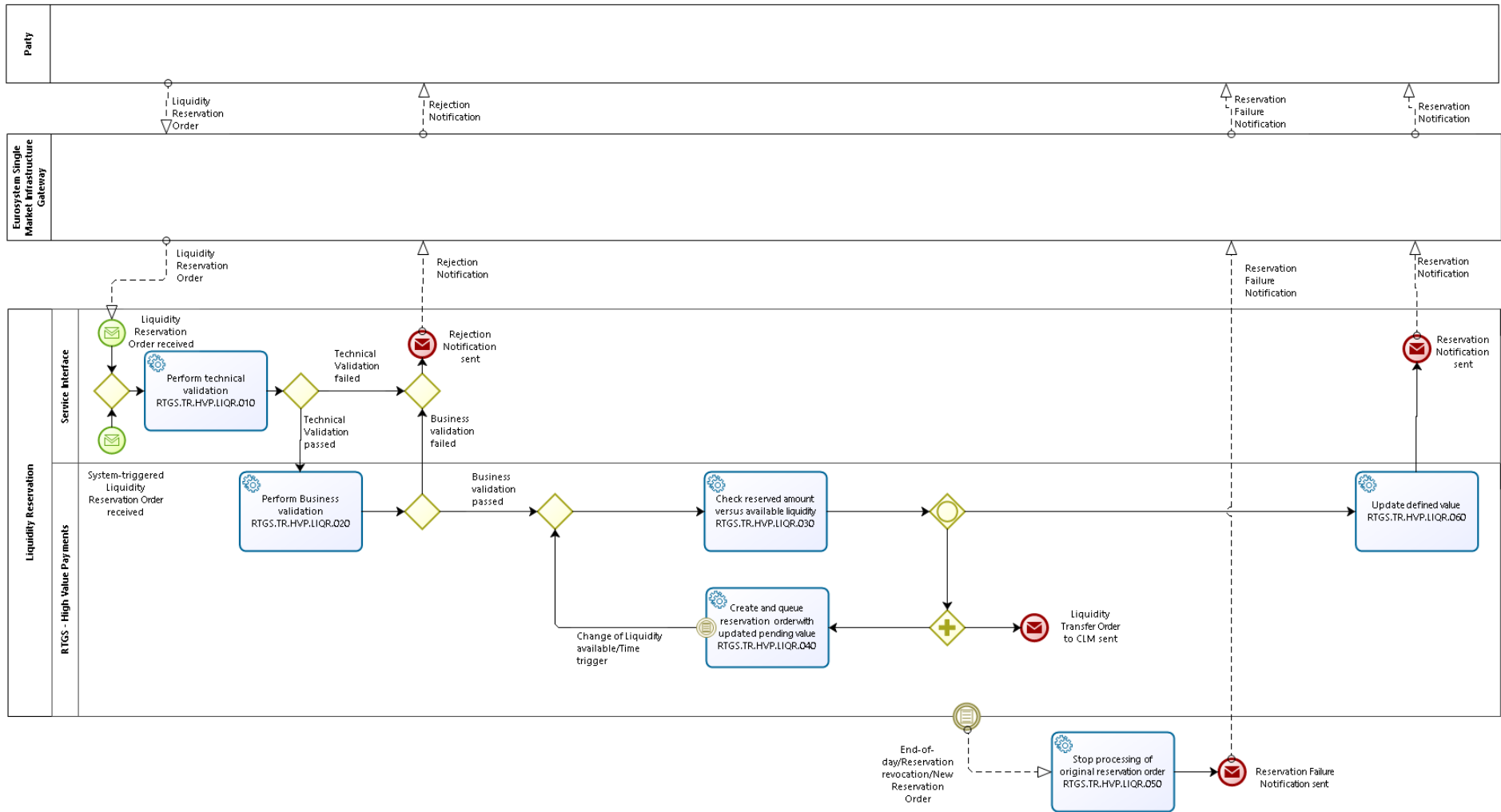
The process will be initiated either by a Standing Order at the Start of Day, or intraday by an external party participating in the platform via sending of the respective message to the platform. The platform will process the message. If the message content is either invalid or would result in certain reference data checks to fail, it will be rejected and a rejection notice will be sent to the sender.

If the message content is valid and certain reference data checks have been passed, the platform will attempt to reserve the amount requested on the account referred to up to the non-reserved amount.

In case the reservation operation (partly) succeeds, the platform will reserve (part of) the amount requested and the platform will send a (partly) reservation success notice to the sender of the request and to the account owner.

The amount that cannot be reserved is called "pending value" and is queued. Following any incoming credit, the pending value is updated and the "defined value" (i.e. the reserved amount minus the related debits) of the related reservation is increased.

1.6.1 Business Process Model



Business Process Model 5: Liquidity Reservation

1.6.2 Process Information

Process goal:

▶

Process context:

▶

Pre-conditions:

▶

Time constraints:

▶

Expected results:

▶

Triggers:

▶

Sub-processes:

▶

1.6.3 User Requirements

1.6.3.1 TECHNICAL VALIDATION

Task Ref: RTGS.TR.HVP.LIQR.010

If the validation failed, rejection notifications with appropriate reason code must be sent to the relevant parties.

1.6.3.2 BUSINESS VALIDATION

Task Ref: RTGS.TR.HVP.LIQR.020

Id	RTGS.UR.HVP.LIQR.020.010
Name	Business validations
Description	<p>The reservation request can be sent by the sending participant, the participant owning the account to be debited or the respective CB acting on behalf its credit institutions/customers. The request can also come from a scheduler in case of a standing order.</p> <p>If the validation failed, rejection notifications with appropriate reason code must be sent to the relevant parties.</p>

1.6.3.3 CHECK RESERVED AMOUNT VERSUS AVAILABLE LIQUIDITY

Task Ref: RTGS.TR.HVP.LIQR.030

Id	RTGS.UR.HVP.LIQR.030.010
Name	Check vs. amount to be pre-empted
Description	<p>It is to be checked if the liquidity available covers the requested reservation amount. The amount which is surpassing the available liquidity coverage is called "pending value"</p>

1.6.3.4 CREATE AND QUEUE RESERVATION ORDER WITH UPDATED PENDING VALUE

Task Ref: RTGS.TR.HVP.LIQR.040

A partial reservation request will be created with the amount which can be immediately covered. That covered amount will be immediately reserved for the purpose indicated.

That latter, remaining (reduced) pending part will be queued and processed in an event-oriented way. In case of an increase of the available liquidity an asynchronous resolving process attempts to process the pending reservation order. Even if the increase of available liquidity is not sufficient for the complete processing the pending reservation will be processed partly (the pending reservation is decreased and the existing reservation is increased).

Interventions on pending reservation requests: New reservation requests related to the participant's RTGS account will either increase the pending amount, or decrease it.

Note: Due to the asynchronous processing incoming liquidity might be blocked and used by a parallel booking process before the attempt to increase the reservation has been performed.

1.6.3.5 STOP PROCESSING OF ORIGINAL RESERVATION ORDER

Task Ref: RTGS.TR.HVP.LIQR.050

Upon reception of End-of-day notification, a Reservation revocation or a New Reservation Order, the RTGS Services shall stop to process of the original reservation order.

1.6.3.6 UPDATE DEFINED VALUE

Task Ref: RTGS.TR.HVP.LIQR.060

The reservations will be finally and irrevocably booked.

2 RTGS SERVICES FOR ANCILLARY SYSTEMS (AS)

2.1 OVERVIEW

2.1.1 Context Diagram

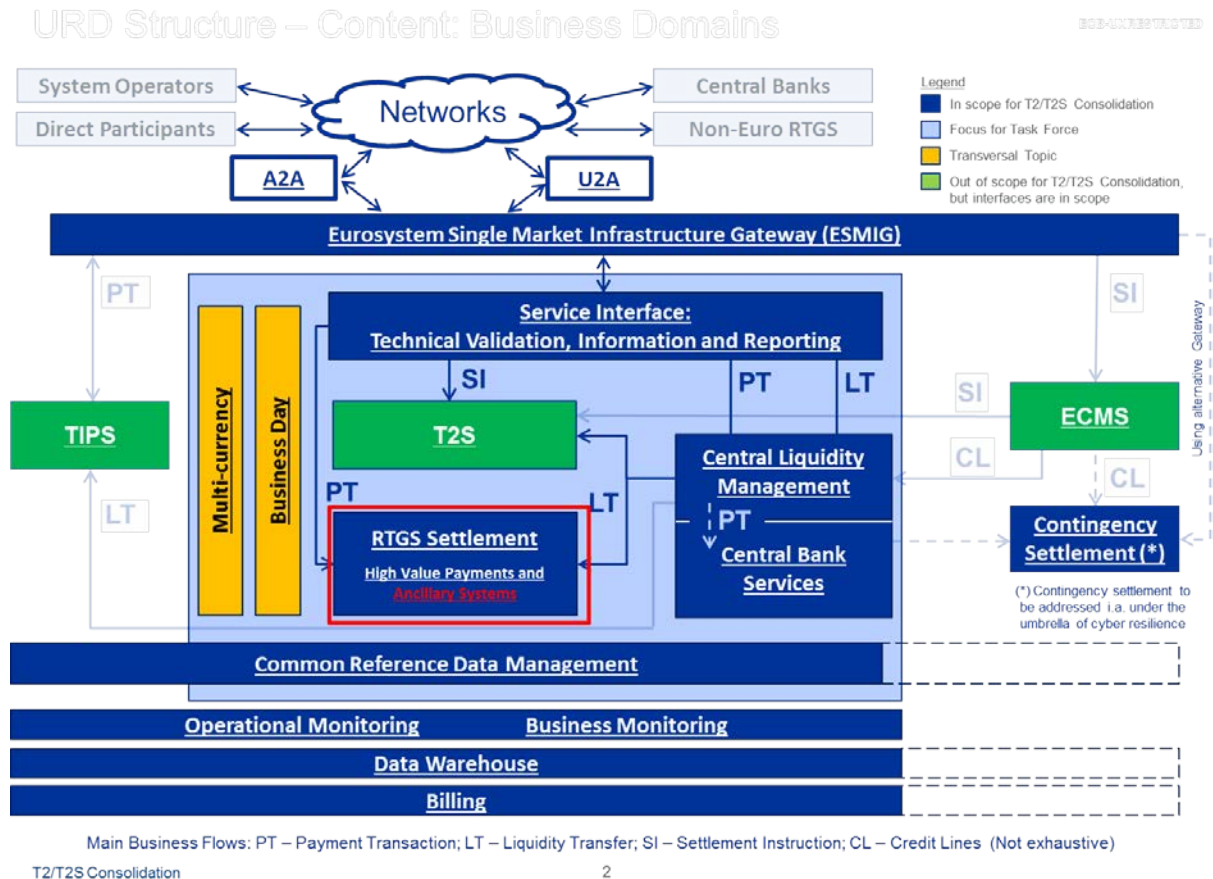


Figure 2: Context diagram for Ancillary Systems

This section describes the RTGS Services for Ancillary Systems (AS). It includes *Ancillary System Liquidity Transfer Order*, *Ancillary System Standing Order for Liquidity Transfer* and *Ancillary System Transaction Processing*. The RTGS services are in charge of processing transactions orders on the ASs participants' accounts.

For details on the account structure used in the RTGS Services for ASs, please refer to [reference to CLM-section].

2.1.2 Business Processes

Business Process Name	BP Reference	Business Process Description
Ancillary System Transaction Processing	RTGS.BP.AS.AST	Settlement of an ASs transaction.

Table 2: Business Processes for Ancillary Systems

2.1.3 Account types for AS Business

The following diagram depicts a generic account constellation for an AS participant (Party A), e.g. a settlement bank with various types of settlement businesses and with accounts opened in the book of one Central Bank:

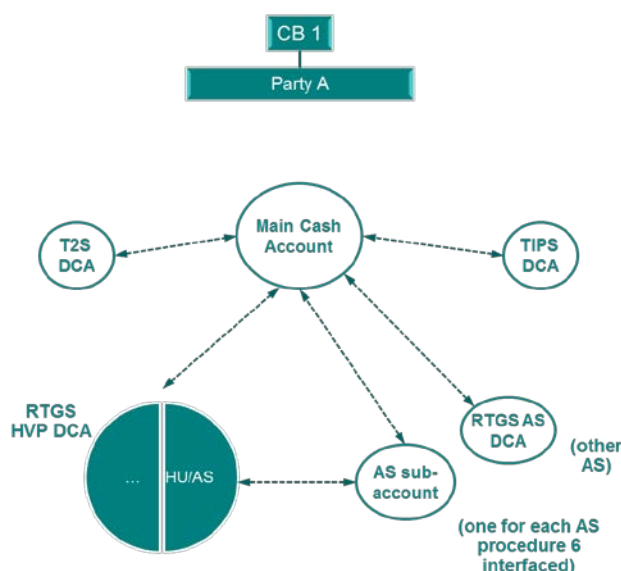


Figure 3: Generic account constellation for an AS participant

Besides DCAs for securities and instant payments settlement, it has a RTGS DCA for High Value Payments (with reserved amounts for Highly-Urgent AS related transactions) and two accounts for AS transactions: one account (for AS procedure "Settlement on dedicated Liquidity Accounts (interfaced)") as a sub-account of the RTGS HVP DCA, the second account (for other AS) as an RTGS AS DCA. RTGS HVP DCA and RTGS AS DCA are the same account types from a technical point of view. The two types differ in how they are used.

Account type	Ownership
RTGS HVP DCA	<ul style="list-style-type: none"> Party A
RTGS AS DCA	<ul style="list-style-type: none"> Party A
RTGS HVP DCA sub-account	<ul style="list-style-type: none"> Party A
Guarantee Funds Account	<ul style="list-style-type: none"> Guarantor, CB or the AS

Table 3: Accounts and their ownership

The settlement itself will be executed either on technical accounts owned by the AS or on RTGS HVP DCAs held by the AS. These technical accounts can have a non-zero balance at the end-of day.

2.1.3.1 SEPARATION OF LIQUIDITY

Account type	Settlement Procedure	Shared among several AS?
RTGS HVP DCA	<ul style="list-style-type: none"> direct settlement in the former TARGET2 PM account (e.g., Continuous Linked Settlement payments); "Real-Time Settlement"; "Bilateral Settlement"; "Standard Multilateral Settlement"; "Simultaneous Multilateral Settlement"; and "Settlement on dedicated Liquidity Accounts (real-time)"¹ 	<ul style="list-style-type: none"> Y
RTGS AS DCA	<ul style="list-style-type: none"> direct settlement in the former TARGET2 PM account (e.g., Continuous Linked Settlement payments); "Real-Time Settlement"; "Bilateral Settlement"; "Standard Multilateral Settlement"; and "Simultaneous Multilateral Settlement" 	<ul style="list-style-type: none"> Y
RTGS HVP DCA sub-account	<ul style="list-style-type: none"> "Settlement on dedicated Liquidity Accounts (interfaced)" 	<ul style="list-style-type: none"> N

Table 4: Separation of liquidity for different settlement procedures

¹ Liquidity for "Settlement on dedicated Liquidity Accounts (real-time)" can be transferred from the RTGS HVP DCA to a technical account either held by the AS or the CB for prefunding purposes.

2.1.3.2 SOURCES OF LIQUIDITY

The following table provides a summary on the liquidity used for settlement and the respective accounts the liquidity stems from:

Liquidity source	Usage	Complementation	Segregation of liquidity
RTGS HVP DCA	Usage of reservations for HU payment.	Possibly complemented by other reservations/liquidity as outlined in the reservations section on HVP settlement on the RTGS HVP DCA.	No further separation by AS procedure/AS possible.
RTGS AS DCA	Usage of liquidity transferred from the RTGS HVP DCA to the RTGS AS DCA.	By default, no automated complementation is set up. Complementation can be set up by the participant through pre-defined liquidity transfers.	Separation by AS procedure/AS possible.
RTGS HVP DCA sub-account	Usage of liquidity transferred from the RTGS HVP DCA to the RTGS HVP DCA sub-account.	By default, no automated complementation is set up. Complementation can be set up by the participant through pre-defined liquidity transfers.	Separation by AS procedure/AS possible.
Guarantee Funds	Furthermore, a guarantee funds mechanism can be used for multilateral settlement procedures.	-	-

Table 5: Liquidity usage for AS settlement

2.1.4 Liquidity Transfer Types for Ancillary System Business

In general, the following types of liquidity transfers are foreseen:

Liquidity Transfer Type	Initiator	Settlement	Amount
Immediate Liquidity Transfer	AS participant	Only fully settable, if possible	Given in instruction
	AS (on behalf)	Partially settable, if necessary	Given in instruction
	CB (on behalf)	Only fully settable, if possible	Given in instruction
Predefined Liquidity Transfer	AS participant	Partially settable, if necessary	Given in instruction
	AS (on behalf)	Partially settable, if necessary	Can be variable (e.g. sweep back all)
Standing Order Liquidity Transfer	AS participant	Partially settable, if necessary	Given in instruction
	AS (on behalf)	Partially settable, if necessary	Can be variable (e.g. sweep back all)

Table 6: Liquidity Transfer Types

2.1.5 Ancillary System Settlement Procedures

The following former TARGET2 settlement procedures will be supported by the single platform:

Procedure	Description
Direct settlement in the former TARGET2 PM account (e.g., Continuous Linked Settlement payments).	Usual real-time gross-mode settlement of bilateral high value payments.
Real-Time Settlement	Usual real-time gross-mode settlement of bilateral high value payments.
Bilateral Settlement	Usual real-time gross-mode settlement of bilateral high value payments.
Settlement on dedicated Liquidity Accounts (real-time)	Usual real-time gross-mode settlement of bilateral high value payments.
Settlement on dedicated Liquidity Accounts (interfaced)	Usual real-time gross-mode settlement of bilateral high value payments.
Standard Multilateral settlement	"Debits first", i.e. first all the debits are executed, then all the credits. The RTGS Services shall allow the AS for the configuration of the time span within each single check for the various linked transactions has to be successful. If one of the transactions fails, the others, probably already executed, are unwound.
Simultaneous multilateral settlement	"All or Nothing", i.e. debits and credits are simultaneously executed. If one of the transactions fails, all the others aren't executed neither.

Table 7: Settlement Procedures

2.1.5.1 SETTLEMENT ON DEDICATED LIQUIDITY ACCOUNTS (INTERFACED) ON THE CONSOLIDATED PLATFORM

The requirements listed below ensure that the TARGET2 procedure known as "Settlement on dedicated Liquidity Accounts (interfaced)" can be almost fully mapped to the consolidated RTGS service:

Feature	Proposal for mapping
Dedicated Liquidity	Either as reservation on RTGS HVP DCA, or as liquidity on sub-account ("for AS1"), or as liquidity on a proper DCA ("for AS2")
Start of procedure	Regular liquidity (e.g. from RTGS HVP DCA to AS sub-account) at these business events can be set up through standing orders.
Blocking/control of liquidity by the AS	Whenever the AS using procedure 6 interfaced starts a cycle, the liquidity on the sub-accounts involved will be controlled/blocked by the AS. The control is given back to the participant through the end of cycle.
Liquidity increase during cycle initiated by the participant	Always possible, either through a liquidity transfer or a payment.
Increase of Liquidity during cycle through Auto-collateralisation/redemption and coupon payments	Will not be supported anymore.

Table 8: Features for "Settlement on dedicated Liquidity Accounts (interfaced)"

2.1.6 Contingency Measures for Ancillary Systems

Contingency measures for AS cover cases of unavailability of an AS or its communication infrastructure with the consolidated future RTGS service. In case of contingency, the AS can provide instructions which the relevant CBs can execute on behalf of the AS. These instructions can be:

- ▶ Payments from one participant to another participant;
- ▶ Payments from the AS technical account /RTGS HVP DCA owned by the AS to a participant's account;
- ▶ Liquidity transfers from the RTGS HVP DCA to an AS sub-account/ RTGS AS DCA of a participant and vice versa;
- ▶ Liquidity transfers at certain business events (e.g., start/end of procedure);
- ▶ start of cycle/end of cycle messages and
- ▶ Settlement files of the AS to be uploaded into the RTGS service.

Modification of credit lines will not be supported anymore.

2.2 ANCILLARY SYSTEM TRANSACTION PROCESSING

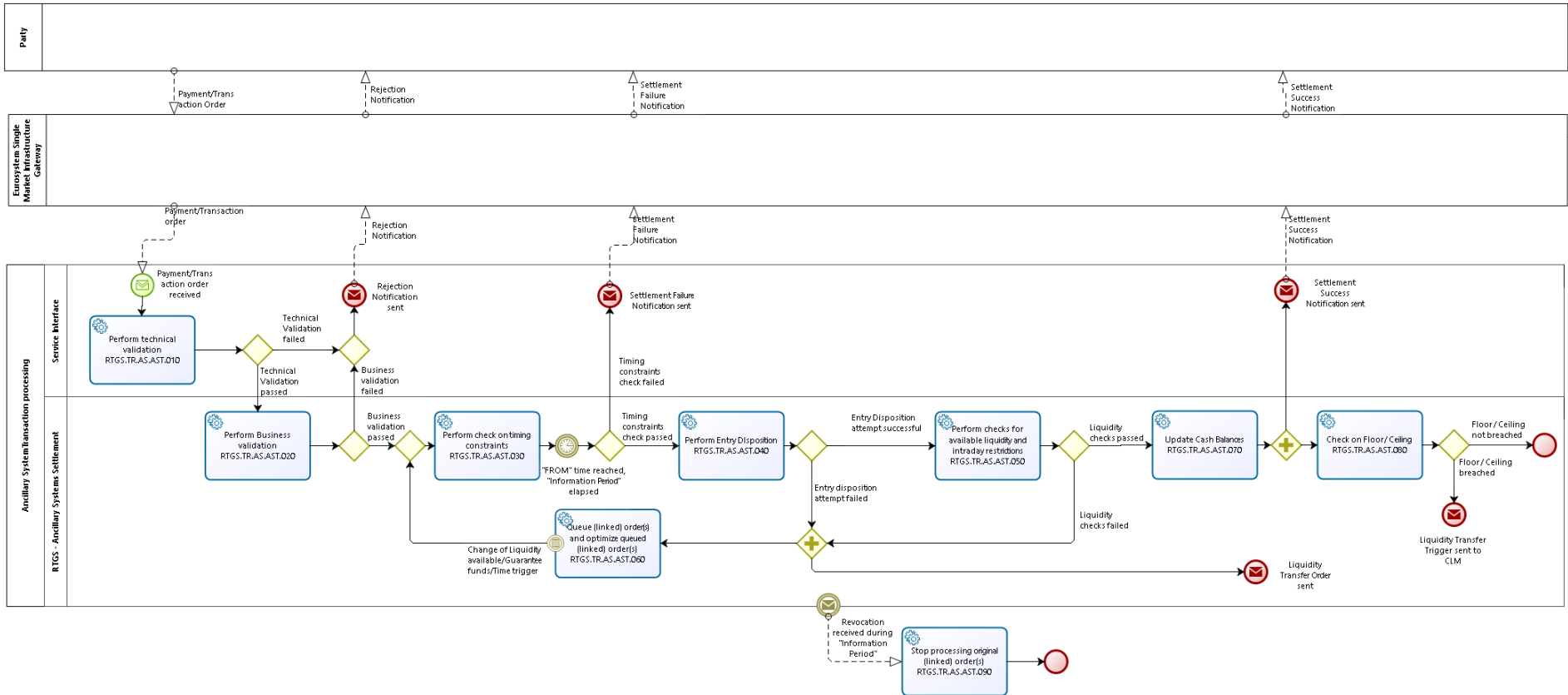
Business Process Ref: RTGS.BP.AS.AST

The *Ancillary System Transaction Processing* is similar to the *High Value Payments* processing, meaning that the processing of AS transactions has many similarities with to the processing of HVP payments, except the specificities described hereafter.

Specificities:

- ▶ The process will be initiated by the ancillary system participating in the platform, its participants or the CB acting on behalf via sending of the respective request message to the platform;
- ▶ The consideration of possible links between different AS transaction orders sent in one "batch";
- ▶ The usage of guarantee funds.
- ▶ The information period.

2.2.1 Business Process Model



Business Process Model 6: Ancillary System Transaction Processing

2.2.2 Process Information

Process goal:

▶

Process context:

▶

Pre-conditions:

▶

Time constraints:

▶

Expected results:

▶

Triggers:

▶

Sub-processes:

▶

2.2.3 User Requirements

Request messages from AS can be sent in "batch" mode, meaning that they have to be processed with possible links (e.g. for multilateral settlement purposes or for common monitoring). The request message handling and processing within the various steps in the different system components should cope with those specific links, i.e. they must not be broken up.

2.2.3.1 PERFORM TECHNICAL VALIDATION

Task Ref: RTGS.TR.AS.AST.010

Same as RTGS.TR.HVP.PAYT.010.

2.2.3.2 PERFORM BUSINESS VALIDATION

Task Ref: RTGS.TR.AS.AST.020

Similar to RTGS.TR.HVP.PAYT.020.

There will be a list of settlement banks per ancillary system. The RTGS Services shall check if the ancillary system is, indeed, authorised to debit/credit the settlement bank.

2.2.3.3 PERFORM CHECK ON TIMING CONSTRAINTS

Task Ref: RTGS.TR.AS.AST.030

Similar to RTGS.TR.HVP.PAYT.030 with one additional requirement:

Id	RTGS.UR.AS.AST.030.010
Name	Settlement period/To time
Description	<p>The RTGS services shall consider the following timing constraints with respect to settlement:</p> <ul style="list-style-type: none">• The "Settlement Period" is a time period set by the sender,• Whereas the "Reject Time" is a pre-defined point in time. <p>An AS transaction can only be submitted to settlement if it's "Settlement Period" - if indicated - has not yet elapsed / the "Reject Time" is not yet reached. Otherwise, it will be rejected.</p>

Id	RTGS.UR.AS.AST.030.020
Name	Information period
Description	<p>The RTGS services shall consider the following timing constraints with respect to settlement: The "Information Period" is a time period set by the sender.</p> <p>An AS transaction can only be submitted to settlement if it's "Information Period" - if indicated - has already elapsed. If no "Information Period" is indicated, no restriction applies in that respect. At the start of the information period, the system will be informing the settlement banks about the upcoming settlement via U2A broadcast.</p>

2.2.3.4 PERFORM ENTRY DISPOSITION

Task Ref: RTGS.TR.AS.AST.040

Similar to RTGS.TR.HVP.PAYT.040.

The main difference stems from the fact that single AS transactions will be of Highly Urgent priority by default. That means that the entry disposition follows the same pattern for each single AS transaction. Either they are settled immediately or they are allocated to the HU queue. For files of transactions, the links have to be respected in the entry disposition. As for reservations, there will be a special reservation for AS transactions/HU payments in place. For further details on this specific topic, please refer to [reference to Reservations section to HVP]

2.2.3.5 PERFORM CHECKS FOR AVAILABLE LIQUIDITY AND INTRADAY RESTRICTIONS

Task Ref: RTGS.TR.AS.AST.050

Provision check Ia – Intraday restriction validation

Same as RTGS.UR.PAYT.050.010

Provision check II/Limit check

As all AS transactions are of highly urgent priority, there is no check against bilateral or multilateral limits.

Provision checks III/Balance checks

Similar to RTGS.TR.HVP.PAYT.050

Id	RTGS.UR.AS.AST.050.010
Name	Provision check III - Blocking for "Settlement on dedicated Liquidity Accounts (interfaced)"
Description	The RTGS services shall respect that during the settlement process of settlement procedure "Settlement on dedicated Liquidity Accounts (interfaced)" the sub-account balance is exclusively reserved for the AS settlement in case of a running cycle.

Id	RTGS.UR.AS.AST.050.020
Name	Provision check III - Balance check - First Step
Description	<p>The RTGS services shall consider linkage constraints due to multilateral settlement.</p> <p>For linked transactions, the check has to be successful for all linked transactions involved (possibly at different points in time for the standard multilateral settlement).</p>

Id	RTGS.UR.AS.AST.050.030
Name	Balance check failure - Handling without guarantee funds
Description	<p>If Provision Check III fails for AS transactions, and no guarantee funds mechanism has been envisaged, the RTGS Services shall queue order(s) until the end of the settlement period or End of Day, respectively.</p>

Id	RTGS.UR.AS.AST.050.040
Name	Balance check failure - Handling with guarantee funds
Description	<p>The RTGS services shall consider usage of guarantee funds with respect to settlement:</p> <p>If the first balance check fails, in case a guarantee mechanism has been envisaged for linked transactions, a guarantee fund usage request is sent out to the party controlling the guarantee account when the intended settlement period has elapsed/Till Time or End of Day is reached. The request can either be accepted or rejected by the AS. If it was accepted, the guarantee funds will be considered in a second step upon. That means, the accounts to be debited which lacked liquidity in the first step, will be replaced by the guarantee account. If then still one of the various linked transactions cannot be settled, all linked transactions involved will be queued till the end of the settlement period or End of Day, or until revocation by the AS, respectively.</p>

2.2.3.6 QUEUE (LINKED) ORDER(S) AND OPTIMISE QUEUED (LINKED) ORDER(S)

Task Ref: RTGS.TR.AS.AST.060

Similar to RTGS.TR.HVP.PAYT.060. The main difference is the optimisation for linked transaction described below.

Id	RTGS.UR.AS.AST.060.010
Name	Optimisation for linked transactions
Description	<p>The RTGS services shall consider linkage constraints within optimisation and due to multilateral settlement.</p> <p>For linked transactions, the optimisation has to ensure that all linked transactions are processed such that the links are not broken.</p>

2.2.3.7 UPDATE CASH BALANCES

Task Ref: RTGS.TR.AS.AST.070

Similar to RTGS.TR.HVP.PAYT.070 with one additional requirement;

Id	RTGS.UR.AS.AST.070.010
Name	Unwinding for linked transactions - standard multilateral settlement
Description	<p>The RTGS services shall consider linkages constraints due to multilateral settlement in case of unsuccessful settlement attempts.</p> <p>For the standard multilateral settlement, if one of the debits fails, the others, probably already executed, have to be unwound at the end of the settlement period or whenever the AS revokes the file.</p>

2.2.3.8 CHECK ON FLOOR/CEILING

Task Ref: RTGS.TR.AS.AST.080

Same as RTGS.TR.HVP.PAYT.080.

3 NON-FUNCTIONAL REQUIREMENTS FOR HIGH VALUE PAYMENTS SETTLEMENT AND RTGS SERVICES FOR ANCILLARY SYSTEMS

3.1 AVAILABILITY

Id	RTGS.UR.NFR.ALL.010
Name	System Opening Hours for HVP
Description	HVP shall be opened from 02:30 to 00:30 on TARGET opening days.

Id	RTGS.UR.NFR.ALL.020
Name	System Opening Hours for ASI
Description	The ASI shall be opened from 02:30 to 00:30 on TARGET opening days. On weekends and TARGET2-closing days the ASI will be opened from 15:00 to 17:00.

These requirements specify a general availability of 22/5 for HVP and ASI on business days. Additionally, an opening window is for the Ancillary System Interface on TARGET closing days. A connection between ASI and CLM has to be possible at least between 15:00 and 17:00 on TARGET2 closing days.

Id	RTGS.UR.NFR.ALL.030
Name	Unplanned Downtime
Description	Unplanned downtime, calculated on a quarterly basis, shall not exceed xxxx hours, equivalent to an availability of xxxx%.

The RTGS services may be subject to incidents or failures, which may cause a temporary and unforeseen interruption of the service. Regardless of the total number of such unplanned interruptions, the overall amount of service unavailability time calculated on a quarterly basis shall not exceed xxxx hours.

Id	RTGS.UR.NFR.ALL.040
Name	Planned Downtime
Description	The RTGS services will provide a maintenance window between 00:30 and 02:30.

On TARGET2 opening days a maintenance window of at max two hours is foreseen for any kind of technical or functional maintenance.

3.2 DISASTER RECOVERY

Id	RTGS.UR.NFR.ALL.050
Name	Recovery Point Objective
Description	The RTGS services shall ensure a recovery point objective value of zero in case of site failures. In case of a loss of a complete region the RPO shall not exceed xxxx minutes.

The recovery point objective (RPO) is a point of consistency to which a user wants to recover or restart the service. It is measured as the amount of time between the moment when the point of consistency was created and the moment when the failure occurred.

The RTGS services ensure synchronous point of consistency creations and, as a consequence, no data loss in case of failures, unless the service can't be restarted in the same region and a failover to the backup-region has to be conducted. In this case a data loss of xxxx minutes will be tolerated.

Id	RTGS.UR.NFR.ALL.060
Name	Recovery Time Objective
Description	The RTGS services shall ensure a recovery time objective value of xxxx hours in case of site failures. In case of a loss of a complete region the RTO shall not exceed xxxx hours.

The recovery time objective (RTO) is the maximum amount of time required for recovery or restart of the service to a specified point of consistency. In case of a site failure, the RTGS services shall ensure maximum time of unavailability of xxxx hours starting from the time when the decision to restart the service is made up to the time the service is restored. In case of a major failure or a regional disaster, the RTGS services shall ensure maximum time of unavailability of xxxx hours starting from the time when the decision to restart the service is made up to the time the service is restored.

3.3 PERFORMANCE REQUIREMENTS

Id	RTGS.UR.NFR.ALL.070
Name	Response Time Goals
Description	The RTGS services shall process xxxx% of the transactions in under xxxx minutes and xxxx% of the transactions in under xxxx minutes.

Id	RTGS.UR.NFR.ALL.080
Name	Peak Workload per second
Description	The RTGS services shall be able to process xxxx transactions per second, enduring the peak load for at least xxxx hours.

Id	RTGS.UR.NFR.ALL.090
Name	Upward Scalability
Description	The RTGS services shall be scalable to handle: <ul style="list-style-type: none">• A xxxx% higher workload within xxxx minutes and• xxxx of the workload within xxxx.

In the course of the service's lifecycle the number of transactions to be handled might change due to market changes or adapted business behaviour. To be able to cope with it, the RTGS services shall be able to handle higher throughputs.

Id	RTGS.UR.NFR.ALL.100
Name	No Degradation of Service Level
Description	The RTGS services shall scale linear.

The RTGS services shall scale linear. This means that there shall be no degradation of the response time due to higher workload.

4 BUSINESS DATA DEFINITIONS

Id	RTGS.UR.BDD.010
Name	Party
Description	<p>This entity shall denote any legal or organisational entity required in the Market Infrastructure Services (i.e. RTGS, CLM, CRDM, T2S, TIPS, ECMS).</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Party Identifier (KEY): The unique technical identifier of a party • LEI • Party type: Type of institution e.g.: <ul style="list-style-type: none"> - Service Operator - Central Bank (CB) - Payment Bank - Ancillary System (AS) - Central Securities Depository (CSD) - CSD Participant - External CSD • Party Status: The business status of a Party for processing in the system (This attribute shall not specify a blocking status) • Party business role (multiple occurrences allowed) • Intraday Credit indicator (i.e. allowed/not allowed) • Intraday Credit limitation: Maximum intraday credit authorised to a Party • Standing facility indicator (i.e. allowed/not allowed) • Minimum reserve entitlement (i.e. the party is subject to / exempted from minimum reserve requirement) • Marginal Lending entitlement (i.e. the party is authorised / not authorised for marginal lending facilities) • Overnight deposit entitlement (i.e. the party is authorised / not authorised for overnight deposit facilities) • Opening Date: The date on which the contractual relationship with the party was legally established <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • Banking Group Identifier (e.g. blank if it does not belong to a Banking Group) • Account for minimum reserve: Account used for minimum reserve • Bilateral Limits (multiple occurrences allowed): Party with whom a Bilateral Limit exists • Multilateral Limits (multiple occurrences allowed): Parties which whom a Multilateral Limit exist • Closing Date: The date that the contractual relationship with the party has legally ended • List of Participants: A list of BICs of parties which are allowed to use the Ancillary System for their Ancillary System Transaction

	<ul style="list-style-type: none"> Guarantee Funds Account (multiple occurrences allowed): Accounts used for the Guarantee funds mechanism
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Id	RTGS.UR.BDD.020
Name	Party Name
Description	<p>This entity shall denote a Party Name.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> Party Identifier (KEY): The unique technical identifier of a party. It shall link the name back to the Party Valid From: The date from which the party name is valid. Since the Party Name may change over time, it is necessary to define period in which a name is valid Party Long Name: The full name of the party Party Short Name: The short name of the party Distinguished Name <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> n/a

Id	RTGS.UR.BDD.030
Name	Party Address
Description	<p>This entity shall denote the address of a Party.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none">• Address Identifier (KEY): The unique technical identifier of a Party Address• Party Identifier: The unique technical identifier of a party in T2S. It shall link the address to the party• Valid From Date: The date from which the party address is valid• Jurisdiction: The country of jurisdiction for the party. This attribute shall be mandatory for a legal address. It shall be the same country as in the legal address, except for supranational institutions• Street: The name of the street for the address• House Number: The house number for the address• City: The name of the city for the address• Postal Code: The postal code for the address• State or Province: The state or province for the address. Its use shall depend on the country code of the address• Country Code: The country code of the address. The two-character ISO country code (ISO3166-1) shall identify the country <p><u>Optional attributes:</u></p> <ul style="list-style-type: none">• n/a

Id	RTGS.UR.BDD.040
Name	Party Code
Description	<p>This entity shall denote a Party Code.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Party Identifier (KEY): The unique technical identifier of a party. It shall link the party code to the party • System Entity Identifier: The system entity code of another party (e.g. CSD) with which the party has a contractual relationship. This attribute shall qualify the code type in order to ensure uniqueness for cases where a financial institution has a relationship with more than one CSD • Valid From Date: The date from which the party code is valid • Code Type: The code type assigned to the unique internal party identifier. In particular this will include, amongst other possible values: 'BIC' or 'Parent BIC' • Party Mnemonic: The unique market code of a party based on the code type. In particular, where the Code Type is 'BIC' this will be the BIC Code of the Party associated with this Party Code <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • n/a

Id	RTGS.UR.BDD.050
Name	Limit
Description	<p>This entity shall denote a limit on party level which will restrict the settlement of normal payments by the party, either towards a specified party (bilateral) or in general (multilateral).</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Limit Identifier (KEY): The unique technical identifier of a limit • Limit type: Type of the limit e.g.: <ul style="list-style-type: none"> - Bilateral - Multilateral • Limit Amount • Limit Currency • From Party: Party whose normal payments are restricted by the Limit <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • To Party: Party with whom the Bilateral Limit exists (mandatory for Bilateral Limits). Cannot be a EURO-Central Bank, i.e. normal payments towards a EURO Central Bank cannot be restricted.

Id	RTGS.UR.BDD.060
Name	Cash Account
Description	<p>This entity shall denote any cash account required by the Market Infrastructure Services (i.e. RTGS, CLM, CRDM, T2S, TIPS, ECMS).</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Service. Possible values are: <ul style="list-style-type: none"> - RTGS - CLM - TIPS - T2S • Cash Account Number (KEY) • Cash Account type <ul style="list-style-type: none"> - For RTGS services: <ul style="list-style-type: none"> RTGS DCA, guarantee account, sub account for AS settlement, CB account, transit account, technical account - For CLM service: <ul style="list-style-type: none"> MCA, ML account, OD account, CB account, NCB ECB account, ECB mirror account, transit account - For TIPS service: <ul style="list-style-type: none"> TIPS DCA, transit account - For T2S service: <ul style="list-style-type: none"> T2S DCA, CB account, transit account • Currency: The account's currency, which is an eligible settlement currency • Owner: The Party who owns the account • Status: Current blocking status of the account; unblocked, blocked for debiting, blocked for crediting or blocked for both • Opening date: The date as of which an account is legally opened

Optional attributes:

- Cash Balance: Current cash balance (CLM MCA)
- Credit Line: Current maximum collateralised overdraft position of the Cash Balance (CLM MCA)
- Floor: A lower threshold per service which triggers the sending of a notification message if it is breached from above (absolute numbers). Used for receiving warnings if the accounts is running low
- Ceiling: An upper threshold per service which triggers the sending of a notification message if it is breached from below (absolute numbers). Used for receiving warnings if the account traps too much liquidity
- Minimum Reserve Party: Party for which this account is included for minimum reserve calculation (applicable for RTGS DCA and sub account for AS settlement)
- Linked Account Number: The identifier of an account linked to the account (e.g. the RTGS account linked to the T2S dedicated cash account or MCA and any DCA)
- List of Users: A list of BICs of parties which are allowed to use the account for instant payments (on the originator and beneficiary side)
- Default Flag: Indicating whether the account for instant payments is the default choice of a given user BIC
- Closing date: The date as of which an account is legally closed

Note: A negative balance is only allowed for the EURO-CB accounts ; for all other accounts the liquidity is restricted to the balance plus credit line if available

Id	RTGS.UR.BDD.080
Name	Payment
Description	<p>Within RTGS services, High-Value payments and Ancillary System Transactions are possible.</p> <p>For CLM, only payments linked to Central Bank Operations are possible.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Service. Possible values are: <ul style="list-style-type: none"> - RTGS - CLM • Payment category. Mandatory for RTGS, not used for CLM. Possible values are: <ul style="list-style-type: none"> - High-Value Payment - Ancillary System Transaction • Payment Type. Possible values are: <ul style="list-style-type: none"> - Mandated Payment - Credit - Direct Debit • Priority. Possible values are: <ul style="list-style-type: none"> - Highly Urgent - Urgent - Normal • Reference of Instruction: Reference given by the original instructor of the Payment • Internal Reference: Reference assigned by RTGS or CLM for the Payment • Transfer Amount: Amount to be credited or debited with the Payment • Currency • Source Account • Target Account • Entry Timestamp • Settlement Timestamp: Timestamp specifying the date and the time the settlement was attempted • Actual Amount: Amount actually settled with the Payment • Settlement Status: Possible values are: <ul style="list-style-type: none"> - Not executed - Unsettled - Settled <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • n/a

Id	RTGS.UR.BDD.090
Name	Liquidity transfer
Description	<p>For RTGS, an instruction to transfer central bank money from:</p> <ul style="list-style-type: none"> • an RTGS Dedicated Cash Account to another settlement service's Main/Dedicated Cash Account and vice versa; and • an RTGS DCA to another RTGS DCA. <p>For CLM, an instruction to transfer central bank money from:</p> <ul style="list-style-type: none"> • a Main Cash Account to a settlement service Dedicated Cash Account and vice versa; and • a Main Cash Account and another Main Cash Account. <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Service. Possible values are: <ul style="list-style-type: none"> - RTGS - CLM • Transfer Type. Possible values are: <ul style="list-style-type: none"> - Inbound Liquidity Transfer - Outbound Liquidity Transfer - Internal Liquidity Transfer • Underlying Transfer Type: identifies the underlying transfer type of the Inbound/Outbound or Internal Liquidity Transfer. Possible values are: <ul style="list-style-type: none"> - Immediate Liquidity Transfer - Pre-defined Liquidity Transfer (RTGS only) - Standing Order Liquidity Transfer • Reference of Instruction: Reference given by the original instructor of the Liquidity Transfer • Transfer Amount: Amount to be credited or debited with the Liquidity Transfer • Currency • Source Account • Target Account • Entry Timestamp • Settlement Timestamp: Timestamp specifying the date and the time the settlement was attempted • Actual Amount: Amount actually settled with the Liquidity Transfer • Settlement Status: Possible values are: <ul style="list-style-type: none"> - Not executed - Partially settled - Settled • Settlement Service Status: Possible value are: <ul style="list-style-type: none"> - Not applicable - Not executed

- Rejected
- Confirmed

Optional attributes:

- CLM Reference: Reference assigned by CLM for the Outbound Liquidity Transfer
- Settlement Service Reference: Reference assigned by the settlement service for the Inbound Liquidity Transfer
- RTGS Reference: Reference assigned by the RTGS service for the Inbound and internal Liquidity Transfer
- Partial Execution: Flag if partial execution is possible or not

Id	RTGS.UR.BDD.100
Name	Standing Order
Description	<p>For RTGS, an instruction template to transfer central bank money from:</p> <ul style="list-style-type: none"> • an RTGS Dedicated Cash Account to another settlement service's Main/Dedicated Cash Account and vice versa; and • an RTGS DCA to another RTGS DCA. <p>For CLM, an instruction template to transfer central bank money from:</p> <ul style="list-style-type: none"> • a Main Cash Account to a settlement service Dedicated Cash Account and vice versa; and • a Main Cash Account and another Main Cash Account. <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Transfer Type. Possible values are: <ul style="list-style-type: none"> - Inbound Liquidity Transfer - Outbound Liquidity Transfer - Internal Liquidity Transfer • Reference of Instruction: Reference given by the original instructor of the Liquidity Transfer • Transfer Amount: Amount to be credited or debited with the Liquidity Transfer • Currency • Source Account • Target Account • Trigger: either a time-based or event-based trigger that will initiate the Standing Order • Entry Timestamp <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • Partial Execution: Flag if partial execution is possible or not

Id	RTGS.UR.BDD.110
Name	Direct Debit Instruction
Description	<p>A list of parties which can instruct a direct debit from an account</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none">• From Account: Account debited <p><u>Optional attributes:</u></p> <ul style="list-style-type: none">• From Party (multiple occurrences allowed): Party instructing the direct debit• Maximum Amount (multiple occurrences allowed): Maximum Amount allowed to be debited for a given instructing Party

Id	RTGS.UR.BDD.120
Name	Reservation
Description	<p>Within the RTGS reservation facility, liquidity can be reserved by RTGS Dedicated Cash Account holders for the execution of special transactions with a certain priority class.</p> <p>Within the CLM reservation facility, liquidity can be reserved by CLM Main Cash Account holders for the execution of special transactions with a certain priority class.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Service. Possible values are: <ul style="list-style-type: none"> - RTGS - CLM • Priority Type: Type of the Priority e.g.: <ul style="list-style-type: none"> - Highly Urgent (HU) - Urgent (U) • Reservation Type: Type of the Reservation e.g.: <ul style="list-style-type: none"> - Regular Reservation from Standing Order - One-Time Reservation • Reservation Amount • Reservation Currency • Pending Value • Defined Value • Source Account • Internal Reference: Reference assigned by RTGS or CLM for the Reservation • Entry Timestamp • Settlement Timestamp: Timestamp specifying the date and the time the settlement was attempted • Settlement Status: Possible values are: <ul style="list-style-type: none"> - Not executed - Partially settled - Settled • Settlement Service Status: Possible value are: <ul style="list-style-type: none"> - Not applicable - Not executed - Rejected - Confirmed <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • Partial Execution: Flag if partial execution is possible or not

Id	RTGS.UR.BDD.130
Name	Standing Order for Reservation
Description	<p>A template for Reservations initiated automatically based on a time or event based trigger.</p> <p>Within the RTGS reservation facility, liquidity can be reserved by RTGS Dedicated Cash Account holders for the execution of special transactions with a certain priority class.</p> <p>Within the CLM reservation facility, liquidity can be reserved by CLM Main Cash Account holders for the execution of special transactions with a certain priority class.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none">• Service. Possible values are:<ul style="list-style-type: none">- RTGS- CLM• Priority Type: Type of the Priority e.g.:<ul style="list-style-type: none">- Highly Urgent (HU)- Urgent (U)• Reservation Amount• Reservation Currency• Source Account• Trigger: either a time-based or event-based trigger that will initiate the Standing Order• Entry Timestamp <p><u>Optional attributes:</u></p> <ul style="list-style-type: none">• Partial Execution: Flag if partial execution is possible or not

Id	RTGS.UR.BDD.140
Name	Whitelist
Description	<p>A list of accounts from which a certain payment category, i.e. High-Value Payments, Ancillary System Transactions or Liquidity Transfers, are accepted. By default, the whitelist includes all accounts in all Services, i.e. all payment categories are accepted from all accounts.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • To Account: Account credited • Payment category: Possible values are: <ul style="list-style-type: none"> - Liquidity Transfer - High-Value Payment - Ancillary System Transaction <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • From Account (multiple occurrences allowed): Account debited

Id	RTGS.UR.BDD.150
Name	Report Subscription
Description	<p>This entity shall denote which party has subscribed to receive which reports.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Report Subscription Identifier (KEY): The unique technical identifier of a report subscription • Report: The report subscribed to by the participant • Recipient: The party identifier of the receiver subscribing to the report • Mode: Specifies whether the participant receives the relevant report in full mode and/or in delta mode, and whether in push or pull mode • Scheduled Time: The scheduled time when the report is provided • Scheduled Event: The event that shall trigger the report to be produced • Subscription Valid From: The date from which the subscription is valid • Subscription Valid To: The date until which the subscription is valid <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • n/a

Id	RTGS.UR.BDD.160
Name	Message Subscription
Description	<p>This entity shall denote which party has subscribed to receive which messages.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Message Subscription Identifier (KEY): The unique technical identifier of a message subscription • Message Id: The identifier of the message subscribed to by the participant • Recipient: The party identifier of the receiver subscribing to the message • Mode: Specifies whether the participant receives the relevant report in full mode and/or in delta mode, and whether in push or pull mode • Subscription Valid From: The date from which the subscription is valid • Subscription Valid To: The date until which the subscription is valid <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • n/a

Id	RTGS.UR.BDD.180
Name	Currency
Description	<p>This entity shall denote any valid currency and information whether the currency is settled in the Market Infrastructure Services.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Currency code (KEY): The three-character ISO currency shall identify the currency • Currency Name • Number of decimals • RTGS Settlement currency: Specification of the currency is a T2S settlement currency (y/n) • T2S Settlement currency: Specification of the currency is a T2S settlement currency (y/n) <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • n/a

Id	RTGS.UR.BDD.190
Name	SWIFT BIC Directory
Description	<p>SWIFT, as the global authority for registering BIC codes, provides the BIC directory. The directory, as provided by SWIFT, shall be part of the CRDM. The directory shall be updated as soon as updates of the directory are available.</p> <p>The attributes shall be derived from the structure of the BIC directory</p>

Id	RTGS.UR.BDD.200
Name	Service
Description	<p>This entity shall denote any Market Infrastructure Service which is accessible via the ESMIG.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none"> • Service Identifier (KEY) • Service Short Name: i.e. RTGS, HVP, AS, CLM, CRDM, T2S, TIPS, ECMS • Service Long Name • Service Availability: Timeframe when service is available <ul style="list-style-type: none"> - Start Time: Start time of service - End Time: End time of service <p><u>Optional attributes:</u></p> <ul style="list-style-type: none"> • Cut-off (multiple occurrences allowed): Definition of cut-off of the service

Id	RTGS.UR.BDD.210
Name	User
Description	<p>This entity shall denote any information required by ESMIG to direct inbound and outbound communications.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none">• Distinguished Name (KEY)• ID of Sender: The ID shall result out of authentication process• External Party Address: Information required that the correct network provider, target address, communication mode and protocol (i.e. right external user address) are used• Accessible service (multiple occurrences allowed): Enumeration of Market Infrastructure Services the user is allowed to access <p><u>Optional attributes:</u></p> <ul style="list-style-type: none">• n/a

Id	RTGS.UR.BDD.220
Name	Role
Description	<p>A role is a set of defined privileges that allows or denies the user access to specific functionality within the service or to view specific data. A role consists of one or more privileges.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none">• Role Identifier (KEY)• Role Name <p><u>Optional attributes:</u></p> <ul style="list-style-type: none">• n/a

Id	RTGS.UR.BDD.230
Name	Privilege
Description	<p>A privilege defines a specific functional capability within a process or application in any of the Market Infrastructure Services. For example, within common reference data, possible privileges are: create new Cash Account, delete Party Address, or amend Limit. The definition of privileges is the means of granting and restricting access to functionality and data for specific roles.</p> <p><u>Mandatory attributes:</u></p> <ul style="list-style-type: none">• Privilege Identifier (KEY)• Role Identifier: the Role with which the Privilege is associated• Privilege Description• Privilege Class<ul style="list-style-type: none">- System Privilege: privilege is system-wide- Object Privilege: privilege applies only to a specific reference data object or group of reference data objects (e.g. a specific Party)• Object Identifier: Identifier of the reference data object or group of reference data objects to which the privilege applies (e.g. Account Number)• Function Identifier: Identifier of the functionality to which the privilege applies (e.g. Amend Party Address)• Allowed/Denied Indicator <p><u>Optional attributes:</u></p> <ul style="list-style-type: none">• n/a

5 USER INTERACTION

5.1 GENERAL USER REQUIREMENTS FOR USER INTERACTION

5.1.1 Query

Id	RTGS.UR.ALL.UI.010
Name	Query Audit Trail
Description	All User Interaction relevant services shall provide the functionality to query the modified data the attribute level, the user performing the change and the timestamp of the change through U2A and A2A interface.

Id	RTGS.UR.ALL.UI.020
Name	Query Broadcast
Description	All User Interaction relevant services shall provide the functionality to query detailed information on broadcasts through U2A and A2A interface. It should be distinguished between normal information provided in pull mode and alert broadcasts information provided in push mode.

Id	RTGS.UR.ALL.UI.030
Name	Query System time
Description	All User Interaction relevant services shall provide the functionality to query information on system time to align the time of a connected application through an application-to-application interface (A2A).

5.1.2 Action

Id	RTGS.UR.ALL.UI.040
Name	Confirm/Reject Task(s)
Description	All User Interaction relevant services shall provide the functionality to confirm/reject task(s) through the U2A and A2A interfaces.

Id	RTGS.UR.ALL.UI.050
Name	Act on behalf
Description	All User Interaction relevant services shall provide the functionality to act on behalf through U2A and A2A interfaces: <ul style="list-style-type: none">• Central banks to act on behalf of any party belonging to their banking community• The System operator to act on behalf of any party

Id	RTGS.UR.ALL.UI.060
Name	Access rights
Description	All User Interaction relevant services shall ensure that a user can only access functionality that is in line with the access rights to the user and the corresponding scope.

Id	RTGS.UR.ALL.UI.070
Name	Four-eyes (confirm, revoke amend)
Description	All User Interaction relevant services shall provide the functionality to use four-eyes approval covering the actions confirm, revoke and amend.

5.2 USER INTERACTION FOR FUTURE RTGS

5.2.1 Query

All described queries in this section shall be provided in U2A and A2A mode unless otherwise stated.

Id	RTGS.UR.RTGS.UI.010
Name	Query payments
Description	<p>The RTGS service shall provide functionality to query the status and details of payments, regardless of the type of payment. The user shall specify at least one of the following mandatory selection criteria:</p> <ul style="list-style-type: none"> • RTGS DCA account number • Owner BIC of RTGS DCA • Entry date or range of date (current business day as default) <p>In addition, the query shall allow the user to specify any combination of the following optional selection criteria:</p> <ul style="list-style-type: none"> • Payment type <ul style="list-style-type: none"> ▪ Standard payment ▪ Warehoused payment ▪ Liquidity transfer • Message type • Priority • Debit/Credit • Sender BIC • Receiver BIC • Amount • Priority • Status <p>The query shall return all business attributes of a payment including its processing status.</p>

Id	RTGS.UR.RTGS.UI.020
Name	Query message
Description	<p>The RTGS service shall provide functionality to query a payment order in xml format. The user shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none">• RTGS DCA account number• Owner BIC of RTGS DCA <p>The user shall also specify as a mandatory selection criterion:</p> <ul style="list-style-type: none">• Entry date or range of date (current business day as default) <p>In addition, the query shall allow the user to specify any combination of the following optional selection criteria:</p> <ul style="list-style-type: none">• Message type• Status• Amount or amount range (from amount – to amount)• Inbound or outbound• Sender BIC• Receiver BIC <p>The query shall return the message in xml format including the processing status. This query shall only be available in U2A mode.</p>

Id	RTGS.UR.RTGS.UI.030
Name	Query account balance
Description	<p>The RTGS service shall provide the functionality to query the balance on a RTGS DCA. The user shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none">• RTGS DCA account number• Owner BIC of RTGS DCA <p>The user shall also specify as a mandatory selection criterion:</p> <ul style="list-style-type: none">• Date of balance (current business day as default) <p>In addition, the query shall allow the user to specify any combination of the following optional selection criteria:</p> <ul style="list-style-type: none">• Currency when the mandatory selection criterion is the Owner BIC of the RTGS DCA <p>The query shall return the current account balance and all business attributes of the RTGS DCA.</p>

Id	RTGS.UR.RTGS.UI.040
Name	Query reservations
Description	<p>The RTGS service shall provide the functionality to query all reservations on the RTGS DCA. The user shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none"> • Cash Account Number • Owner BIC of RTGS DCA <p>The user shall also specify as a mandatory selection criterion:</p> <ul style="list-style-type: none"> • Entry date or range of date (current business day as default) <p>In addition, the query shall allow the user to specify any combination of the following optional selection criteria:</p> <ul style="list-style-type: none"> • Priority Type • Reservation Type • Reservation Amount • Reservation Currency <p>The query shall return all business attributes of the reservations.</p>

Id	RTGS.UR.RTGS.UI.050
Name	Query limits
Description	<p>The RTGS service shall provide the functionality to query all limits (multilateral and bilateral limit) on the RTGS DCA. The user shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none"> • Cash Account Number • Owner BIC of RTGS DCA <p>In addition, the query shall allow the user to specify any combination of the following optional selection criteria:</p> <ul style="list-style-type: none"> • Limit Type • From Party • To Party • Entry date or range of date (current business day as default) <p>The query shall return all business attributes of the limits.</p>

Id	RTGS.UR.RTGS.UI.060
Name	Query payments within one AS file
Description	<p>The RTGS service shall provide the functionality to query information on the payments within one AS file. The user shall specify as mandatory selection criteria:</p> <ul style="list-style-type: none"> • Ancillary System BIC • Submission date of file (date range) <p>In addition, the query shall allow the user to specify any combination of the following optional selection criteria:</p> <ul style="list-style-type: none"> • File Reference • Message type • Inbound or outbound message • Sender of message • Receiver of message • Amount of payment • Status of payment • Reference of payment <p>The query shall return all business attributes of the payments (within one AS file) including the processing status.</p>

Id	RTGS.UR.RTGS.UI.070
Name	Query status of one AS file
Description	<p>The RTGS service shall provide the functionality to query the status of one AS file. The user shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none"> • Ancillary System BIC • File reference <p>When specifying the Ancillary System BIC, then the user shall also specify as a mandatory selection criterion:</p> <ul style="list-style-type: none"> • Submission date of file (date range) <p>The query shall return all business attributes of the AS file including the processing status.</p>

Id	RTGS.UR.RTGS.UI.080
Name	Query liquidity on AS Settlement Bank Level
Description	<p>The RTGS service shall provide the functionality for the AS to query information concerning the (non-) availability of funds for the settlement of one AS file. The user shall specify at least one of the following mandatory selection criteria. In addition the query shall allow the user to specify any combination of mandatory or optional selection criteria.</p> <p><u>Mandatory selection criteria:</u></p> <ul style="list-style-type: none"> AS BIC <p><u>Optional selection criteria:</u></p> <ul style="list-style-type: none"> Entry Timestamp Entry date or range of date (current business day as default) <p>The query shall return all business attributes of the AS file including the processing status.</p>

Id	RTGS.UR.RTGS.UI.090
Name	Query liquidity on AS Level
Description	<p>The RTGS service shall provide the functionality for an AS settlement bank to query information concerning the (non-) availability of funds for the settlement of one AS file. The user shall specify as mandatory selection criterion:</p> <ul style="list-style-type: none"> Party BIC (can be derived from the user's data scope) <p>The user also shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none"> Entry Timestamp Entry date or range of date (current business day as default) <p>The query shall return all business attributes of the AS file including the processing status.</p>

Id	RTGS.UR.RTGS.UI.100
Name	Query account statement
Description	<p>The RTGS service shall provide the functionality to query a statement of account. The user shall specify one of the following mandatory selection criteria:</p> <ul style="list-style-type: none"> • Cash Account Number • Owner BIC of RTGS DCA <p>The user shall specify as mandatory selection criterion:</p> <ul style="list-style-type: none"> • Statement date (current business day as default) <p>The query shall return all business attributes of the account statement.</p> <p>This query shall only be provided in U2A mode because the available corresponding A2A report should be used as default. Therefore, it should be checked that one participant is using either the A2A report or the U2A query.</p>

Id	RTGS.UR.RTGS.UI.110
Name	Query to request a copy of a Report on Account Statement
Description	<p>The RTGS service shall provide the functionality to request a copy of a Report on Account Statement. The user shall specify at least one of the following mandatory selection criteria.</p> <p><u>Mandatory selection criteria:</u></p> <ul style="list-style-type: none"> • Cash Account number • Owner BIC of RTGS DCA <p><u>Optional selection criteria:</u></p> <ul style="list-style-type: none"> • Entry date or range of date (current business day as default)

5.2.2 Action

Id	RTGS.UR.RTGS.UI.120
Name	Change order of payments in a queue
Description	The RTGS service shall provide the functionality to change the order of payments (including warehoused payments) currently queued for settlement through U2A and A2A interface. The change should only be possible for payments not having reached a final status yet.

Id	RTGS.UR.RTGS.UI.130
Name	Modify a payment in a queue
Description	The RTGS service shall provide the functionality to modify the priority and / or the execution time of a payment (including warehoused payments) currently available in the system through U2A and A2A interface. The change should only be possible for payments not having reached a final status yet.

Id	RTGS.UR.RTGS.UI.140
Name	Cancel a payment in a queue
Description	The RTGS service shall provide the functionality to revoke a payment (including warehoused payments) currently available in the system through U2A and A2A interface. The cancellation should only be possible for payments not having reached a final status yet.

Id	RTGS.UR.RTGS.UI.150
Name	Revoke an AS file
Description	The RTGS service shall provide the functionality to revoke an AS file which has not reached a final status yet through U2A and A2A interface.

Id	RTGS.UR.RTGS.UI.160
Name	Create a liquidity transfer
Description	The RTGS service shall provide a functionality to create a liquidity transfer through U2A and A2A interface.

Id	RTGS.UR.RTGS.UI.170
Name	Create a Back-up/lump-sum payment
Description	The RTGS service shall provide a functionality to create a back-up / lump-sum payment through U2A interface. This action has to be activated by the CB on participant level.

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