Central liquidity management

User detailed functional specifications

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6.1 Settlement of payments linked to CBOs

6.1.1 Overview

A central bank system can send a payment order (pacs.009) or a direct debit (pacs.010) linked to a central bank operation or cash withdrawal to a CLM participant that holds a MCA in CLM. In case this can also be a connected payment, i.e., payments, that trigger a change in the credit line of the CLM participant and an immediate debit/credit of its account to compensate the change in this credit line. Payment orders and direct debits can be sent throughout the whole business day with the exception of the end of day processing (with the exception of the marginal lending facility) and the maintenance window. The processing of connected payments shall not be possible between the CB general cut-off for the use of standing facilities (i.e., 18:40) and the start of the provisioning of liquidity for the new business day (i.e., 19:00), as well as during the maintenance window. Central banks have the possibility to send payments with an “earliest debit time indicator” (FROM-Time) and with a “latest debit time indicator” (TILL-Time). Furthermore, it is possible to submit payments up to 10 calendar days in advance. In this case, the payment message is warehoused until CLM opens for that date. All payments have the same priority. There is no need to distinguish between urgent and normal payments. At the settlement date, the warehoused payment undergoes the business validation checks for a second time.

The initiation can be carried out A2A by the central bank system or U2A by the CB operator. There can be submitted the following payment types:

- credit transfers or
- direct debits used for the settlement of cash withdrawals, repayment of monetary policy operations and collections of fees

6.1.2 Definition of execution time

CLM participants have also the possibility to determine the settlement time of their transactions. The following options are available:

- transactions with an “earliest debit time indicator”
- transactions with a “latest debit time indicator”

The following table describes payments with a set execution time.
### Application processes description

#### Settlement of payments linked to CBOs

<table>
<thead>
<tr>
<th>Features</th>
<th>Earliest debit time indicator</th>
<th>Latest debit time indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transactions to be executed from a certain time (codeword: FROTIME)</td>
<td>Transactions which should be executed up to certain time (only warning indicator) (codeword: /TILTIME/)</td>
</tr>
<tr>
<td>Effect</td>
<td>Transaction is stored until the indicated time.</td>
<td>Setting the execution time only means a special identification via the U2A or A2A query.</td>
</tr>
<tr>
<td></td>
<td>At the earliest debit time, the transaction runs through the entry disposition.</td>
<td>The transaction is treated like any other payment of this type.</td>
</tr>
<tr>
<td>Management</td>
<td>If the transaction cannot be settled at the earliest debit time, it will be queued till cut-off time for payment type is reached (or revoked).</td>
<td>If the transaction cannot be settled until the indicated debit time, the payment will remain in the queue.</td>
</tr>
</tbody>
</table>

In case a payment with a “latest debit time indicator” is not executed 15 minutes prior to the defined time, an automatic notification in the GUI will be triggered. The notification will be directly displayed on top of all screens of the participant whose account will be debited.

**Note:** In case the codeword /CLSTIME/ is used, the payment will be treated in the same way as a payment with a “latest debit time indicator”.

It is possible to combine the “earliest debit time indicator” with the “latest debit time indicator”. The transaction is meant to be executed during the indicated period.

The defined execution time of a payment can be changed if the payment is not executed yet. Effect of changing settlement time see chapter [Amendment of payments](#).

**Note:** It is no longer possible to change the “earliest debit time indicator” of a payment which is queued due to the fact that the original “earliest debit time indicator” has been reached and it was already tried to settle this payment.

### 6.1.3 Warehouse functionality

#### Basics

It is possible to submit payments up to 10 calendar days in advance. In this case, the payment message is warehoused until RTGS service opens for that business date.

**Note:** In case a change in SWIFT standards or formats is performed warehoused payments with an execution time beyond this point in time cannot be stored in the RTGS service. This will be technically ensured by the RTGS service.
Rules

The validation of warehoused payments is a three layer approach:

- SWIFT format checks on the day of submission
- format checks by CLM service already on the day of submission
- content check (eg valid BICs) on the value day

No checks are made by SSP in the time between.

Processing on value day

On the value date with the start of the day trade phase (7.00) the warehoused payments are processed by CLM service (with entry timestamp 7.00) on top of the queue of incoming payments which have the same priority. They will be immediately settled if enough liquidity is available (normal processing of payments in the entry disposition, see chapter Entry disposition [29]). Otherwise they are queued until the settlement attempt is successful (see chapter Dissolution of the payment queue [29]).

Exception: Warehoused payments with an earliest debit time indicator are queued until the set execution time is reached.

Information and control functions

Warehoused payments benefit from the same functionality via U2A or A2A as queued payments:

- transparency about the status and other detailed information about the payment
- cancellation
- change of priority
- change of execution time (earliest and latest debit time indicator) if set in the warehoused payment

6.1.4 Flow of payments

6.1.4.1 Payments initiated by central bank

6.1.4.1.1 Credit transfer

Positive case

A central bank system can send a payment order linked to a central bank operation or cash withdrawal to a CLM participant that holds a MCA in CLM. Such a payment can be sent throughout the whole business day with the exception of the end of day processing (with the exception of the marginal lending facility) and the maintenance window. Central banks have the possibility to send payments with an “earliest debit time indicator” (FROM-Time) and with a “latest debit time indicator” (TILL-Time). Furthermore it is possible to submit
payments up to 10 calendar days in advance (warehoused payments). In this case, the payment message is warehoused until CLM opens for that date. All payments have the same priority. There is no need to distinguish between urgent and normal payments.

**Message flow**

**Figure 1 - pacs.009 CB operations**

**Process description**

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.009 via ESMIG to CLM</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM message check and validation positive booking takes place in CLM</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to CLM participant</td>
<td>Creation and forwarding camt.054 (credit) (optional) by CLM via ESMIG to CLM participant A</td>
</tr>
</tbody>
</table>
### Step 4: CLM via ESMIG to central bank

**Description**: Creation and forwarding of pacs.002 by CLM via ESMIG to central bank (optional)

#### Used messages
- pacs.009
- camt.054
- pacs.002

#### Technical validation failure

The service interface performs the following technical validations:
- type (including version) of delivered message is supported
- schema validation - syntax, format and structure of the message are compliant (e.g., all mandatory fields in the message received are populated)

If the technical validation fails the service interface rejects the message.

#### Message flow

![Message flow diagram](image_url)

**Figure 2 - pacs.009 CB operations technical validation failed**

#### Process description

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.009 via ESMIG to CLM</td>
</tr>
</tbody>
</table>
### Application processes description

**Settlement of payments linked to CBOs**

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM technical validation failed</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to central bank</td>
<td>Creation and forwarding of admi.007 by CLM via ESMIG to central bank</td>
</tr>
</tbody>
</table>

**Used messages**

- pacs.009
- admi.007

**Business failure**

The service interface performs the following business validations:

- Duplicate submission control for incoming payments including the fields:
  - sender of the message
  - message Type
  - receiver
  - transaction Reference Number
  - related Reference
  - value Date and
  - amount

- The sender of the message is authorised to send payments linked to central bank operations or cash withdrawals. If the sender of the message is not the owner of the MCA, CLM shall check that it is authorised to send a payment order on behalf of the account owner.

- All provided values are valid according to predefined values or cross-field validations.

- The MCA and the central bank account mentioned in the payment order exist and are active for settlement in the relevant currency.

- The MCA owner is not blocked at account or party level.

If the business validation fails the interface rejects the message.
Message flow

Figure 3 - pacs.009 CB operations business validation failed

Process description

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.009 via ESMIG to CLM</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM business validation failed</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to central bank</td>
<td>Creation and forwarding of a negative pacs.002 by CLM via ESMIG to central bank</td>
</tr>
</tbody>
</table>

Used messages
- pacs.009
- pacs.002

6.1.4.1.2 Direct debit

Positive case
A central bank system can send a direct debit linked to a central bank operation or cash withdrawal to a CLM participant that holds a MCA in CLM. Such a payment can be sent throughout the whole business day with the exception of the end of day processing (with the exception of the marginal lending facility) and the maintenance window. Central banks have the possibility to send payments with an “earliest debit time indicator” (FROM-Time) and with a “latest debit time indicator” (TILL-Time). Furthermore it is possible to submit
payments up to 10 calendar days in advance (warehoused payments). In this case, the payment message is warehoused until CLM opens for that date. All Payments have the same priority. There is no need to distinguish between urgent and normal payments.

**Message flow**

![Diagram showing the message flow between Central bank, CLM, and CLM participants]

**Figure 4 - pacs.010 CB operations**

**Process description**

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.010 via ESMIG to CLM</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM message check and validation positive booking takes place in CLM</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to CLM participant</td>
<td>Creation and forwarding of camt.054 (debit) (optional) by CLM via ESMIG to CLM participant A</td>
</tr>
<tr>
<td>4</td>
<td>CLM via ESMIG to central bank</td>
<td>Creation and forwarding of pacs.002 by CLM via ESMIG to central bank</td>
</tr>
</tbody>
</table>

**Used messages**

- pacs.010
- camt.054
- pacs.002
Technical validation failure

The service interface performs the following technical validations:

- type (including version) of delivered message is supported
- schema validation - syntax, format and structure of the message are compliant (eg all mandatory fields in the message received are populated).

If the technical validation fails the service interface rejects the message.

Message flow

![Diagram showing message flow between Central bank, CLM, and ESMIG]

Figure 5 - pacs.010 CB operations technical validation failed

Process description

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.010 via ESMIG to CLM</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM technical validation failed</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to central bank</td>
<td>Creation and forwarding admi.007 by CLM via ESMIG to central bank</td>
</tr>
</tbody>
</table>

Used messages

- pacs.010
- admi.007
Business failure

The service interface performs the following business validations:

- Duplicate submission control for incoming payments including the fields
  - sender of the message
  - message Type
  - receiver
  - transaction reference number
  - related reference
  - value Date and
  - amount

- The sender of the message is authorised to send payments linked to central bank operations or cash withdrawals. If the sender of the message is not the owner of the MCA, CLM shall check that it is authorised to send a payment order on behalf of the account owner.

- All provided values are valid according to predefined values or cross-field validations

- The MCA and the central bank account mentioned in the payment order exist and are active for settlement in the relevant currency.

- The MCA owner is not blocked at account or party level.

If the business validation fails, the interface will reject the message.
Message flow

Figure 6 - pacs.010 CB operations business validation failed

Process description

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.010 via ESMIG to CLM</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM business validation failed</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to central bank</td>
<td>Creation and forwarding a negative pacs.002 by CLM via ESMIG to central bank</td>
</tr>
</tbody>
</table>

Used messages
- pacs.010
- pacs.002

6.1.5 Rejection of payments

For different reasons a payment can be rejected and returned to sender. If business validation in CLM interface fails the CLM service creates and forwards a pacs.002 (negative – payment status report) to the instructing party. This can be every CLM participant who initiates a payment. The pacs.002 refers to the original instruction by means of references and a set of elements from the original instruction. Negative pacs.002 message is mandatory.
The following business validations are performed in CLM interface:

- check for duplicate payment order
- process specific authorisation checks:
  - Is the sender of the payment order the owner of the account to be debited?
  - In case of direct debit: is the sender of the payment order the owner of the account to be credited?
  - In case of mandated payments: is the sender of the payment order the neither the debtor nor the creditor and are there contractual agreements between the parties?
  - In case a central bank acts on behalf of a credit institution: does the credit institution belong to the acting central bank?
- check on value date for non-warehouse payments
- payment type specific checks
- field and reference data checks:
  - field value validation - codes are valid, domain values are within allowed range
  - cross-field validation - eg currency of the accounts involved same as amount currency etc.
  - database checks - eg existence of parties and accounts
- direct debit check
- check of backup payments
- mandated payment check
- account checks
- Error codes for possible rejections are listed in chapter Index of business rules and error codes [57].

If technical validation fails the payment is returned by admi.007.
6.1.5.1 Technical validations

6.1.5.2 Business validations

6.1.6 Amendment of payments

As long as a payment is not settled (including warehoused payments), an authorised system user has the ability to change the relevant parameters of this payment.

Three different control options are offered:

<table>
<thead>
<tr>
<th>Action</th>
<th>Actor = authorised system user for the</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-ordering (increase / decrease)</td>
<td>Debtor</td>
</tr>
<tr>
<td>Change of set execution time</td>
<td>Business sender</td>
</tr>
<tr>
<td>(if defined before sending to</td>
<td></td>
</tr>
<tr>
<td>the RTGS service)</td>
<td></td>
</tr>
<tr>
<td>Revocation (separate chapter Revocation of</td>
<td>Business sender</td>
</tr>
<tr>
<td>payments)</td>
<td></td>
</tr>
</tbody>
</table>

Those features are necessary to enable CLM Actors to react on changed liquidity conditions during the day.

Note: Changing of priority is not possible as all payments have the same priority.

The following rules apply in principle:

- Interventions must be made via the business interface of the CLM service in U2A and A2A. A description of individual U2A processes can be found in the user handbook.
- Individual or several payment orders together can be modified at the same time.
- The business interface shows receipt and execution or non-execution of a modified order.

In case of intervention at transaction level, processes are started to resolve the queues.
**Application processes description**

**Settlement of payments linked to CBOs**

---

**Message flow**

![Diagram showing the message flow between Authorised system user A, ESMIG, and CLM with steps 1, 2, and an optional message.]

---

**Process description**

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Authorised system user via ESMIG to CLM</td>
<td>An authorised system user A sends a camt.007 via ESMIG to the CLM service</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM message check and validation with positive or negative result</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to the authorised system user</td>
<td>Mandatory feedback to the authorised system user via camt.025</td>
</tr>
</tbody>
</table>

**Used messages**

- camt.007
- camt.025

---

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Case re-ordering the queued transactions

A system user authorised can change the queue position for an individual or for a sequence of payments. The selected payment or sequence of payments can be placed:

- to the top of the queued payments
- to the end of the queued payments

The re-ordering can be done at any time during the business day. The newly modified queue can be viewed through the Payment Queue query.

Case changing the execution time

Payments can include a time that indicates when they should be settled (transactions with an “earliest debit time indicator”).

Payments can include a time that indicates when they should have been settled (transactions with a “latest debit time indicator”).

The execution time (from/till) may be changed in the CLM business interface (advanced or postponed). The change has no impact on the payment processing, but on the queue management as the time indication only supports the CLM participant’s queue management. The changed execution time is part of the payment queue query result.

Changing the execution time has the following impact on the queue management:

<table>
<thead>
<tr>
<th>Action</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deleting the execution time of an urgent transaction (&quot;from&quot;)</td>
<td>Immediate settlement attempt, if the payment reaches the top of the queued urgent payments</td>
</tr>
<tr>
<td>Deleting the execution time of a high transaction (&quot;from&quot;)</td>
<td>Immediate settlement attempt, if the payment reaches the top of the queued high payments and no urgent payments are queued</td>
</tr>
<tr>
<td>Deleting the execution time of a normal transaction</td>
<td>Including the payment in the next settlement process</td>
</tr>
<tr>
<td>Changing the execution time of a urgent, high or normal transaction</td>
<td>Including the payment from the new indicated time</td>
</tr>
</tbody>
</table>

The newly modified execution time can be viewed through the Payment queue query.
6.1.7 Revocation of payments

6.1.8 Processing of payments

6.1.8.1 Entry disposition

6.1.8.2 Comprehensive queue management

6.1.8.3 Dissolution of the payment queue

6.2 Liquidity management

6.2.1 Available liquidity

6.2.2 Liquidity transfer

6.2.2.1 Overview

6.2.2.2 Initiation of liquidity transfers

6.2.2.3 Liquidity transfer process

6.2.2.3.1 Liquidity transfer from CLM MCA to settlement service

6.2.2.3.2 Liquidity transfer from settlement service to CLM MCA

6.2.2.3.3 Liquidity transfer between two CLM MCAs

6.2.2.3.4 Liquidity transfer between two DCAs in different settlement services

6.2.2.3.5 Rejection of liquidity transfer orders
6.2.2.3.5.1 Technical validations

6.2.2.3.5.2 Business validations

6.2.3 Liquidity management features

6.2.3.1 Liquidity reservation

6.2.3.1.1 Overview

6.2.3.1.2 Liquidity reservation process

6.2.3.1.3 Effect of liquidity reservation

6.2.3.2 Floor/ceiling

6.2.3.2.1 Definition of floor/ceiling threshold

6.2.3.2.2 Breach of floor/ceiling threshold - notification

6.2.3.2.3 Breach of floor/ceiling threshold - automatic liquidity transfer

6.3 Reserve management

6.3.1 Overview

6.3.2 Reserve management process

6.4 Standing facilities management

6.4.1 Overnight deposit
6.4.1.1 Overview

6.4.1.2 Overnight deposit process

6.4.1.2.1 Setup overnight deposit

6.4.1.2.2 Overnight deposit reverse transaction

6.4.1.2.3 Overnight deposit reimbursement and interest calculation

6.4.2 Marginal lending “on request”

6.4.2.1 Overview

6.4.2.2 Marginal lending “on request” process

6.4.2.2.1 Setup marginal lending “on request”

6.4.2.2.2 Marginal lending reimbursement and interest calculation

6.4.3 Automatic marginal lending

6.4.3.1 Overview

6.4.3.2 Automatic marginal lending process

6.4.3.2.1 Process automatic marginal lending

6.4.3.2.2 Marginal lending reimbursement and interest calculation

6.5 Reference data management
6.5.1 Concept

6.5.2 Overview

6.5.3 Reference data maintenance process

The common reference data maintenance process can be described as a common message flow that applies to every business scenario.

Upon the sending of a request instructed with an input message, a related response message or a technical validation error message is returned.

6.5.3.1 Reference data objects

The shared generic message flow is as follows:

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The authorised actor (CLM or RTGS participant or another actor operating on behalf of the MCA or RTGS owner under a contractual agreement) sends the input message to CRDM to create, modify or delete a common reference data entity.</td>
</tr>
<tr>
<td>2</td>
<td>In case of rejection upon technical validation, an admi.007 receipt acknowledgement is sent by CRDM to the sender of the originating request.</td>
</tr>
</tbody>
</table>
### Application processes description

#### Reference data management

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>CRDM performs the business validation and sends to the authorised actor a response message to report processing result.</td>
</tr>
<tr>
<td>4</td>
<td>CRDM will propagate the updated information to the subscribing services for their internal processing.</td>
</tr>
</tbody>
</table>

The messages used in the interaction change depending on the business scenario to be covered.

In the following table, for every concerned common reference data entity and related business scenario, the input and response messages are defined.

<table>
<thead>
<tr>
<th>Business scenario</th>
<th>Input message</th>
<th>Response message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create standing order</td>
<td>camt.024</td>
<td>camt.025</td>
</tr>
<tr>
<td>Modify standing order</td>
<td>camt.024</td>
<td>camt.025</td>
</tr>
<tr>
<td>Delete standing order</td>
<td>camt.071</td>
<td>camt.025</td>
</tr>
</tbody>
</table>
6.5.3.2 Reference data maintenance types

6.5.3.3 Validity of reference data objects

6.5.3.4 Reference data archiving and purging

6.5.3.5 Lifecycle of reference data objects

6.5.3.6 Reference data maintenance instructions processing

6.5.3.7 Reference data status management

6.6 Information management

6.6.1 Status management

6.6.1.1 Concept

EMIP services inform their EMIP actors of the processing results. This information is provided to the EMIP actors through a status reporting which is managed by the status management process. The communication of statuses to EMIP Actors is complemented by the communication of reason codes in case of negative result of an EMIP service process.

6.6.1.2 Overview

The status management process manages the status updates of the different instructions existing in EMIP service in order to communicate these status updates through status advice messages to the EMIP actors throughout the lifecycle of the instruction. The status management process also manages the reason codes to be sent to EMIP actors in case of negative result of an EMIP service process (eg to determine the reason why an instruction is unsuccessfully validated or settled).

The status of an instruction is indicated through a value, which is subject to change through the lifecycle of the instruction. This value provides EMIP actors with information about the situation of this instruction with respect to a given EMIP process at a certain point in time.
Since each instruction in an EMIP service can be submitted to several processes, each instruction in EMIP has several statuses. However, each of these statuses has one single value at a certain moment in time that indicates the instruction’s situation at the considered moment. Depending on its instruction type, an instruction is submitted to different processes in T2S. Consequently, the statuses featuring each instruction depend on the considered instruction type.

The following sections provide:

- the generic principles for the communication of statuses and reason codes to EMIP actors
- the list of statuses featuring each instruction type as well as the possible values for each of these statuses
- an overview of the reason codes management

However, reason codes are not exhaustively detailed below but are provided in section Index of status value and codes [→ 57].

6.6.1.3 Status management process

Communication of statuses and reason codes to EMIP actors

EMIP actors can query, at any point in time, the status values and reason codes of their instructions.

The statuses can be classified into two different types, common to all type of instructions:

- "Intermediate status" - There is a change occurred in any of the statuses of the instruction, but it does not imply the end of the processing of the instruction in EMIP. Further status updates are to be communicated to the EMIP actors until an "end status" is sent.

- "Final status" - This is the last status of an instruction (ie the status that an instruction has when processing for that instruction ends). If the status of an instruction is not of an "end status" type, then the instruction is still under process in EMIP. At a point in time, any instruction in EMIP reaches an "end status", as any instruction is settled, executed, cancelled or denied in the end.

For some specific status updates, the status management process informs the EMIP actors of the status change through the sending of status advice messages (according to their message subscription configuration).

Statuses and status values in EMIP

As previously mentioned, the statuses of an instruction depend on the considered instruction type. The following paragraphs provide the list of statuses and status values.

CLM service statuses are:

- message statuses
- payment statuses
CRDM statuses are:

- reference data maintenance instruction processing status

**Message statuses**

Indicates the status of the message (not applicable for queries) and it can have the following statuses:

<table>
<thead>
<tr>
<th>Status value</th>
<th>Definition</th>
<th>Direction</th>
<th>Intermediate status/ final status</th>
</tr>
</thead>
<tbody>
<tr>
<td>System entry</td>
<td>Message status after entering the CLM service</td>
<td>Incoming</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Waiting for open queue</td>
<td>Message status of a message arriving before the “Start of day trade phase”</td>
<td>Incoming</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Warehoused</td>
<td>Status of a message with a value date in the future or status of a message with the value date of the current business day until it will be forwarded to the processing at the start of the day trade phase</td>
<td>Incoming</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Processed</td>
<td>Message status if an incoming message is finally processed independent of whether the result is positive or negative</td>
<td>Incoming</td>
<td>Final</td>
</tr>
<tr>
<td>To be provided</td>
<td>Status of an outgoing message ready to be send to ESMIG</td>
<td>Outgoing</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Provided</td>
<td>Status of an outgoing message sent to ESMIG</td>
<td>Outgoing</td>
<td>Final</td>
</tr>
</tbody>
</table>

One business case can include one or more single messages which may have different message status. The message status is the detailed status related to the processing of each single message of a business case. The business case status is a result of the message status and the related processing.

Message statuses will not be reported via status message.

**Payment statuses**

Indicates the status of the payment instruction and it can have the following statuses:

<table>
<thead>
<tr>
<th>Status value</th>
<th>Definition</th>
<th>Intermediate/ final status</th>
<th>Reported via status message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Status after positive business validation</td>
<td>Intermediate</td>
<td>-</td>
</tr>
<tr>
<td>Status value</td>
<td>Definition</td>
<td>Intermediate/ final status</td>
<td>Reported via status message</td>
</tr>
<tr>
<td>--------------</td>
<td>------------</td>
<td>----------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Warehoused</td>
<td>Status of a payment with a value date of a future business day and status of a payment with the value date of the current business day until it will be forwarded to the processing at the start of the day trade phase. From then on they will be processed normally. To this booking status a time stamp is added. In general, warehoused payments are submitted up to ten calendar days in advance. In this case, the payment message will be warehoused until the day trade phase of CLM with the respective date starts.</td>
<td>Intermediate</td>
<td>-</td>
</tr>
</tbody>
</table>
| Earmarked    | Status of a payment which is ready for booking but not taken into account for various reasons. The booking status earmarked is split into the following business case status:  
  - Accounting stopped due to earliest debit time indicator  
  - AS accounting not yet started due to active information period  
  - Accounting stopped due to exclusion  
  - Pending decision on exclusion  
  - Waiting for end of cycle  
  - Waiting for completion of debits  
  - Waiting for algorithm 4 | Intermediate | - |
| Queued       | Status of a payment which is ready for booking but the first booking attempt was unsuccessful. Pending payments are waiting for the next booking attempt. To this booking status a time stamp is added. | Intermediate | - |
| Revoked      | Status of a payment which is revoked by a system user | Final | - |
| Rejected     | Status of a payment which is rejected by the system or by a system administrator (all payments with error code, except error code for revoked) | Final | Mandatory |
| Settled      | Status of a payment after booking. Final payments cannot be revoked. | Final | Optional |
| Invalid      | Messages which are negatively business validated in the entry disposition and do not lead to a booking attempt | Final | - |
### Task queue statuses

All data inputs or data changes by the user (called tasks, eg entering a liquidity transfer) are managed in the task queue administration of the respective service. The following statuses apply for CLM service.

<table>
<thead>
<tr>
<th>Status value</th>
<th>Definition</th>
<th>Transition possible to status</th>
<th>Intermediate/ final status</th>
</tr>
</thead>
<tbody>
<tr>
<td>To confirm</td>
<td>The task must be confirmed by a second user and will not be processed. This status can only occur in U2A for four eyes principle. It is the only status in which a task revocation is possible directly via respective screens.</td>
<td>Processing, revoked, rejected</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Processing</td>
<td>The task is ready to be processed at the moment. It can only occur directly after the task initiation (or after “to confirm” in case of four eyes principle).</td>
<td>Waiting, pending, partially pending, revoked, rejected, completed</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Waiting</td>
<td>The task can be processed, but the processing is not started till now, eg due to a running or stopped algorithm.</td>
<td>Pending, partially pending, revoked, completed</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Pending</td>
<td>A task should be stored with status “pending”, if the task was already tried to process at least one time but it could not be finalised. The processing was interrupted after the storage of entries initiated by the task and before the final processing of these entries. The task will be updated and further processed, if the preconditions for the pending status (eg liquidity increase) are changed.</td>
<td>Partially pending, completed, revoked, rejected</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Partially pending</td>
<td>A task should be stored with status “partially pending” if the user’s order cannot be processed completely (eg an increase of reservation cannot be executed completely because of lack of liquidity). The order is processed as far as possible. The task will be updated and further processed, if the preconditions for the &quot;partially pending&quot; status (eg liquidity increase) are changed.</td>
<td>Completed, revoked, rejected</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Revoked</td>
<td>The task has been revoked by a user.</td>
<td>-</td>
<td>Final</td>
</tr>
<tr>
<td>Rejected</td>
<td>An error was detected.</td>
<td>-</td>
<td>Final</td>
</tr>
<tr>
<td>Completed</td>
<td>The task was processed successfully and the business case stemming from the task is final. The tasks changing an existing business case (like</td>
<td>-</td>
<td>Final</td>
</tr>
</tbody>
</table>
## Reference Data maintenance instruction processing status

### 6.6.2 Report generation

#### Concept

EMIP services periodically inform with a set of predefined reports which deliver information specifically for the service business. They contain information, which is based on the data available for a party. The respective service triggers the generation of a report based on a business event, eg end of day, or at a predefined time. Please see chapter [Index of status value and codes](#) for the list of configurable business events. Depending on the party’s preferences the report is either sent out directly after creation or stored for later retrieval via the report query.

#### Overview

The report types generated by the respective service and the sort of information provided are described below.

In general all reports differ in and are defined by the following characteristics:

- the concerned party
- the sort of information collected
- the moment of data extraction during the business day and
- the reporting period
All information about the necessary attributes in each named category is stored as static data in CRDM and influences the generation of the report.

Report generation process
A generated report is available for download until it is replaced by the next, new generation of it, ie a report that is created at the end of day of the current business day replaces the report that was created at the end of day of the previous business day. The replaced report is no longer available for download. Nonetheless, as any other message, a report can be resent if the report message was sent in A2A mode before.

Sort of information - Report types
The EMIP services provide the following report type:

<table>
<thead>
<tr>
<th>Report providing service</th>
<th>Report name</th>
<th>ISO message</th>
<th>ISO code</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLM</td>
<td>Statement of accounts</td>
<td>BankToCustomerStatement</td>
<td>camt.053</td>
</tr>
</tbody>
</table>

Concerned party
Each report type provides information on a certain scope of data. The data scope is indicated by the party for which it is configured. In addition to reports on party level, CBs can also opt for reports on system entity level, ie reports providing the CB with information relating to all its parties. CBs can only configure reports on system entity level for themselves.

The concerned party has to be specified, when the report is configured for the first time.

Moment of data extraction
The creation of a report is always triggered at a certain point in time by the respective EMIP service. This point in time can be a specific time, eg 10:00 am or a specific event of the business day, eg end of day. A new report configuration can be set-up at the earliest for the next business day. The moment of data extraction as well as possible validity limitations have to be specified when the report is configured for the first time. The respective service only creates those reports for which the underlying report configurations is valid at the current business day.

Reporting period
The EMIP services distinguish between two different report classifications - complete reports and delta reports, which are all based on the latest available data. The difference between both is the time scope which is considered:
- Complete reports cover the current business day and provide the current values of all selected items at the time of the creation of the report.
Delta reports also consider the current business day but provide only information on the selected items which values changed since the previous report was created. The previous report can likewise be a complete report or a delta report. Therefore, the creation timestamp of the previous report is considered as the starting point in time for the reporting period. If there is no previous report for the current business day, the SoD is considered as the starting point in time for the reporting period.

**Possible recipients of a report**

All reports can be received by the technical address of

- concerned party
- another authorised party (e.g., co-manager)

---

**Figure 8 - CLM Report generation process**

A created report can be received by one or several receivers. Each party can decide, if it wishes to receive a report directly after its creation or if it wants to query it ad-hoc.
If a recipient wishes to receive a report directly after its creation, this has to be stored in the static data configuration of the report. That means the subscription of a report is independent from the message subscription.

If a recipient does not wish to receive a report directly after its creation but to query it afterwards, this behaviour of the service has to be stored in the CRDM configuration of the report as well. Also this recipient is stored as recipient of a report.

As a general principle the recipient(s) of a report can be different from the concerned party. For information about the setup of report configuration for specific concerned parties and recipients of a report please see UHB chapters related to report configuration setup.

**Preconditions for report creation**

In order to avoid unnecessary processing and storage the respective service does not create reports automatically. So, to initiate the creation of a report, the requiring receiver has to configure the report in advance. The configuration of the report has to be done via the graphical user interface of CRDM, which is described in the UHB.

This configuration is then stored as static data and is valid until the receiver decides that the report has not to be created anymore or until the “valid to” date stored within the report configuration is reached.

**Communication channel**

The respective service offers direct communication to applications via XML-messages in application-to-application mode (shortly A2A mode) as well as screen-based online access for connected users in user-to-application mode (U2A mode).

All reports that are offered by the EMIP services are available both in A2A and U2A mode.

In A2A mode the receiver gets the specific report pushed, provided that the push preference for the report is stored for the receiver in static data. Otherwise the report is just stored after generation.

To pull formerly created reports, a report query has to be sent either via the graphical user interface to the respective service or via A2A mode with the specification of the report instance asking for. In case the user has the respective privilege to obtain the requested report, it is sent out to the inquirer. Please see chapter [Query management](#) [44].

**Parameter synthesis**

The following parameters are specified for the setup of a report.
### Detailed information on the sort of information - report type - statement of accounts

It includes information on one main cash account of a dedicated CLM participant. It is only possible to configure this report as complete report for the end of day. The report is not available during the day and it is not available as delta version.

The report provides information about all items that have been booked to the account and balance information of the current business day. It does not include information from other services, i.e., there is no report including CLM and RTGS information.

**Used messages**

- camt.053

<table>
<thead>
<tr>
<th>concerned process</th>
<th>parameter</th>
<th>created and updated by</th>
<th>mandatory/optional</th>
<th>possible values</th>
<th>hint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup of a report</td>
<td>Report type</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>Statement of accounts</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Concerned party</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>System entity wide reporting flag</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>Yes, No</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Moment of data extraction</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>Time event, business event</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Reporting period</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>Complete report, delta report</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Possible recipient of a report</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Communication channel</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>Push mode, pull mode</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Valid from</td>
<td>CRDM actor</td>
<td>Mandatory</td>
<td>ISO-date</td>
<td></td>
</tr>
<tr>
<td>Setup of a report</td>
<td>Valid to</td>
<td>CRDM actor</td>
<td>Optional</td>
<td>ISO-date</td>
<td></td>
</tr>
</tbody>
</table>

The field „Valid To“ is the only field that can be amended after the report configuration has been stored.
6.6.3 Query management

6.6.3.1 Concept

Queries are provided by EMIP services to the system user as a means of satisfying his information needs on demand. He can obtain information on different business items by submitting query requests to EMIP services. These are answered on the basis of the latest data available in EMIP services.

6.6.3.2 Overview

EMIP services provide a range of predefined query types, which the system user can use to request information on business items. All user queries are available for all authorised system users of EMIP services.

They can send queries to EMIP services in A2A mode or in U2A mode. Generally, all queries are processed in real time. Exceptions occur during the maintenance window. Queries sent in A2A mode during the maintenance window are queued and notice of the queued status is given immediately to the requesting system user. The query request is answered after the end of maintenance window. It is not possible to send queries in A2A and U2A mode during the maintenance window.

6.6.3.3 Query management process

Initiating queries

In order to obtain the desired information the system user needs to submit a query to an EMIP service. For the communication with EMIP services in A2A mode all query and response messages are set up as XML messages compliant with the ISO20022 standard. For the communication with EMIP services in U2A mode a graphical user interface based on a standard browser application is provided.

Case: query request on CLM service

Message flow

Process description

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CLM participant via ESMIG to CLM</td>
<td>An authorised system user of a CLM participant A sends a query message via ESMIG to the CLM service</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM message check and validation positive</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to CLM participant</td>
<td>Query response (positive or negative) via ESMIG to CLM participant A generated by the CLM service</td>
</tr>
</tbody>
</table>

Used messages
See following table

In general an authorised system user can send each query in A2A mode as well as in U2A mode. However, there are some queries which are only accessible via U2A mode. Query availability in the respective communication mode is shown in the table below.

<table>
<thead>
<tr>
<th>Related service</th>
<th>Query type</th>
<th>Initiation via GUI (U2A mode)</th>
<th>Initiation via XML message (A2A mode)</th>
<th>Query request message</th>
<th>Query response message for operational error</th>
<th>Query response message for business data</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLM</td>
<td>Account statement query</td>
<td>X</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The different types of queries in EMIP services are static regarding the set of selection parameters, which can be mandatory, optional or conditional. RTGS and CLM service do not offer dynamic queries.

**Preconditions for successful processing of queries**

The relevant EMIP service validates the plausibility of the search criteria that were specified by the system user. In addition, the relevant service ensures that the sender of the query is allowed to retrieve the requested information by checking, whether the system user has been granted the necessary privilege.

Only if the system user possesses the necessary privilege to use the initiated query, the requested business information is provided. The privilege has to be granted in advance.

**Providing data for queries**

If all checks performed by respective service were successful, it extracts the requested business information from the production data. The system user receives the latest available data. If one of the plausibility and privilege checks performed by respective service fails, the system user receives a response indicating the error that has occurred.

**Retrieving the query response**

In case the extraction of the query data is successful, the respective service sends a query response containing the requested business information back to the requesting system user. In case the extraction of the query data returns a zero result, the requesting system user receives appropriate information. If a retrieval of the query result fails, then an error response is provided to the system user.

If the system user has sent the query via U2A mode, the response is given to the system user in U2A mode. The U2A dialogue is described in more detail in the UHB.
If the system user has sent the query via A2A mode, the response is given to the same system user in A2A mode. The respective service does not allow the routing of the query response to a dedicated technical address.

**Parameter synthesis**

No specific configuration from the system user is needed.

### 6.6.3.3.1 Common reference data query

The common reference data query can be described as a common message flow that applies to every business scenario.

Upon the sending of a query instructed with an input message, a related query response message or a technical validation error message is returned.

The shared generic message flow is as follows:
Step | Activity
--- | ---
1 | The authorised actor (CLM or RTGS participant or another actor operating on behalf of the MCA or RTGS owner under a contractual agreement) sends the query message to CRDM to retrieve a set of common reference data entity.
2 | In case of rejection upon technical validation, an admi.007 receipt acknowledgement is sent by CRDM to the sender of the originating query.
3 | CRDM performs the business validation and sends to the authorised actor a query response message to report processing result that is retrieved records or business error found during the validation.

The messages used in the interaction change depending on the query to be performed.

In the following table, for every concerned common reference data entity, the query and query response messages are defined.

<table>
<thead>
<tr>
<th>CRDM entity</th>
<th>Query message</th>
<th>Query response message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standing order</td>
<td>camt.069</td>
<td>camt.070</td>
</tr>
</tbody>
</table>
7 Data warehouse
8 Billing
9 Legal archiving
10 Contingency services
11 Catalogue of messages

11.1 Introduction

11.2 General information

11.2.1 Message validation

11.2.2 Communication infrastructure

11.3 List of messages

11.3.1 Account management (acmt)

11.3.2 Administration (admi)

11.3.3 Cash management (camt)

11.3.3.1 ModifyStandingOrder (camt.024)

11.3.3.1.1 Overview and scope of the message

This chapter illustrates the ModifyStandingOrder message.

The ModifyStandingOrder message is sent by an actor authorised to create or modify standing orders for liquidity transfers.

The ModifyStandingOrder message is replied by a camt.025 to return a positive technical response to the sender of the message or to provide detailed information in case of an error.

11.3.3.1.2 Schema

Outline of the schema

The ModifyStandingOrder message is composed of the following message building blocks:
MessageHeader

This block is mandatory and provides with the message identification provided by the requesting actor.

StandingOrderIdentification

This block is mandatory and provides with all the key information to identify an existing standing order to be amended or a new standing order to be created.

NewStandingOrderValueSet

This block is mandatory and provide with the pieces of information related to the standing order to be modified or created.

It includes the amount to be transferred, the required account references to perform the transfer, the intended validity period and the execution type in terms of event identification.

References/links

The schema and the related documentation in HTML/PDF format as well as the message examples are provided within the MyStandards repository under the following link:

https://www.swift.com/mystandards/CSLD/camt.024.001.05

11.3.3.2 GetStandingOrder (camt.069)

11.3.3.2.1 Overview and scope of the message

This chapter illustrates the GetStandingOrder message.

The GetStandingOrder message is sent by an authorised actor to retrieve standing order information.

The GetStandingOrder message is replied by a camt.070 to return the retrieved standing order information or to provide detailed information in case of an error (eg no rows retrieved).

11.3.3.2.2 Schema

Outline of the schema

The GetStandingOrder message is composed of the following message building blocks:

MessageHeader

This block is mandatory and provides with the message identification provided by the requesting actor.
RequestType

This block is optional and can be used to specify which kind of query must be performed.

StandingOrderQueryDefinition

This block is mandatory and provides with all the search criteria that must be used to filter standing order records in the CRDM coverage. Possible criteria are account and BIC.

References/links

The schema and the related documentation in HTML/PDF format as well as the message examples are provided within the MyStandards repository under the following link:

https://www.swift.com/mystandards/CSLD/camt.069.001.02

11.3.3.3 ReturnStandingOrder (camt.070)

11.3.3.3.1 Overview and scope of the message

This chapter illustrates the ReturnStandingOrder message.

The ReturnStandingOrder message is sent by CRDM to an authorised actor to provide with requested standing order information.

The ReturnStandingOrder message is sent as a response to a previously sent camt.069.

11.3.3.3.2 Schema

Outline of the schema

The ReturnStandingOrder message is composed of the following message building blocks:

MessageHeader

This block is mandatory and provides with the message identification provided by the requesting actor as well as the original business query message identification and the request type specifying the kind of query that has been performed.

ReportOrError

This block is mandatory and includes either the retrieved records or the error occurred during the query processing (eg no records retrieved).
Report

This block is mandatory and provides with all the pieces of information related to the retrieved standing order.

References/links

The schema and the related documentation in HTML/PDF format as well as the message examples are provided within the MyStandards repository under the following link:

https://www.swift.com/mystandards/CSLD/camt.070.001.03

11.3.3.4 DeleteStandingOrder (camt.071)

11.3.3.4.1 Overview and scope of the message

This chapter illustrates the DeleteStandingOrder message.

The DeleteStandingOrder message is sent by an actor authorised to delete standing orders for liquidity transfers.

The DeleteStandingOrder message is replied by a camt.025 to return a positive technical response to the sender of the message or to provide detailed information in case of an error.

11.3.3.4.2 Schema

Outline of the schema

The DeleteStandingOrder message is composed of the following message building blocks:

MessageHeader

This block is mandatory and provides with the message identification provided by the requesting actor.

StandingOrderDetails

This block is mandatory and provides with all the key information to identify an existing standing order to be deleted. Both identification and account identification must be provided.

References/links

The schema and the related documentation in HTML/PDF format as well as the message examples are provided within the MyStandards repository under the following link:
11.3.4 Headers (head)

11.3.5 Payments clearing and settlement (pacs)

11.3.6 Reference data (reda)
12 Index and digital signature

12.1 Index of business rules and error codes

12.2 Index of status value and codes

12.3 Index of instruction references

12.4 Digital signature on business layer
13 Additional information for CBs

13.1 Role of CBs in CLM

13.2 Reference data for central banks

13.2.1 Specific data for CBs

13.2.2 Setup of CLM related reference data

13.3 Settlement of payments - specific functions for central banks

13.3.1 Payments linked to monetary policy operations

13.3.2 Cash withdrawals

13.4 Credit line management

13.4.1 Credit line update

13.4.1.1 Overview

13.4.1.2 Credit line update process

13.4.2 Connected payment

13.4.2.1 Overview

A connected payment is a payment initiated by a central bank system or CB operator that triggers a change in the credit line of the CLM participant and an immediate debit/credit of its account to compensate the change in its credit line. Therefore the CLM participant needs a MCA.
The processing of connected payments is not possible between the CB general cut-off for the use of standing facilities (ie 18:40) and the start of the provisioning of liquidity for the new business day (ie 19:00), as well as during the maintenance window.

A connected payment leads to the increase or decrease of the CLM participants credit line and at the same time to a corresponding debit or credit of its MCA. (Note: the connected payment will be processed on all or nothing basis). Connected payments are not queued and can therefore not be revoked.

13.4.2.2 Connected payment process

The following payment flow illustrates a connected payment with positive validation and settlement on the basis of a pacs.009:

Message flow

![Diagram of the connected payment process](image)

Figure 9 - pacs.009 connected payment

Process description
### Additional information for CBs
### Credit line management

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.009 including codeword CONPAY via ESMIG to the CLM</td>
</tr>
<tr>
<td>2</td>
<td>CLM</td>
<td>CLM check and validation positive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Debit CB account and credit MCA participant A simultaneously decrease credit line for participant A (settlement amount must not be equal to credit line change) if business validation positive</td>
</tr>
<tr>
<td>3</td>
<td>CLM via ESMIG to central bank</td>
<td>Creation and forwarding of pacs.002 by the CLM (optional) via ESMIG to central bank</td>
</tr>
<tr>
<td>4</td>
<td>CLM via ESMIG to CLM participant</td>
<td>Creation and forwarding of camt.054 (credit) by the CLM via ESMIG to CLM participant A</td>
</tr>
</tbody>
</table>

**Used messages**
- pacs.009
- pacs.002
- camt.054

The following payment flow illustrates a connected payment with positive validation and settlement on the basis of a pacs.010
Message flow

![Diagram showing the message flow between Central bank A, CLM participant A, and ESMIG.]

**Process description**

<table>
<thead>
<tr>
<th>Step</th>
<th>Processing in/between</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central bank via ESMIG to CLM</td>
<td>The central bank sends a pacs.010 with codeword CONPAY and the credit line change via ESMIG to the CLM</td>
</tr>
</tbody>
</table>
| 2    | CLM                                    | CLM check and validation positive  
Credit CB account and debit MCA participant A simultaneously increase credit line for participant A (settlement amount must not be equal to credit line change) if business validation positive |
| 3    | CLM via ESMIG to central bank          | Creation and forwarding of pacs.002 by the CLM (optional) via ESMIG to central bank             |
| 4    | CLM via ESMIG to CLM participant       | Creation and forwarding of camt.054 (debit) by the CLM via ESMIG to CLM participant A            |

**Used messages**

- pacs.010
- pacs.002
- camt.054 debit

**Figure 10 - pacs.010 connected payment**
End-of-day procedures

13.5 End-of-day procedures

13.6 Query management - CB specific queries

13.7 Business/liquidity monitoring for CBs

13.8 Reserve management - specific functions for CBs

13.9 Standing facilities - specific functions for CBs

13.10 Data warehouse - specific functions for CBs

13.11 Billing - specific functions for CBs

13.12 Contingency services - specific functions for CBs

13.13 Specific requirements for CBs of "out" countries