TARGET Instant Payment Settlement

User Handbook

~~V2~~V3.~~1~~0.~~1~~0

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Terms and abbreviations

The terms and abbreviations used in the User Handbook are shown in the table below. You will find terms with their description and the abbreviations, both in an alphabetical order.

Letter	Description
A	
A2A	Application-to-application
B	
BIC	Business Identifier Code
C	
CB	Central Bank
CMB	Credit Memorandum Balance
D	
DD	Day (e.g. used within the timestamp, every letter stands for one digit)
d	Decimal number
E	
e.g.	For example (Latin: ‘exempli gratia’)
G	
GUI	Graphical User Interface which is a type of interface which allows users to interact with electronic devices
H	
hh	Hour (e.g. used within the timestamp, every letter stands for one digit)
I	
i.e.	That is (Latin: ‘id est’)
M	
MM	Month (e.g. used within the same timestamp, every letter stands for one digit)
mm	Minute (e.g. used within the timestamp, every letter stands for one digit)
µs	Millisecond (e.g. used within the timestamp)
min.	Minimum
Max.	Maximum
N	
NRO	Non-repudiation of origin (NRO) provides the recipient (TIPS) with the evidence NRO which ensures that the originator (TIPS actor) will not be able to deny having sent the U2A instruction. The evidence of origin is generated by the originator and held by the recipient.
R	
Radio button	A type of GUI element which allows the user to choose only one of a predefined set of options.
S	
Select box	A select field in the GUI with an arrow on the right side. By clicking on the arrow, all possible input values are shown and can be selected with a mouse-click.

Letter	Description
ss	Second (e.g. used within the timestamp, every letter stands for one digit)
T	
Timestamp	A sequence of characters, denoting the date and the time in TIPS.
U	
UHB	User Handbook
U2A	User-to-application
Y	
YYYY	Year (e.g. used within the timestamp, every letter stands for one digit)

1. Introduction to TIPS

This chapter serves as an **introduction to the TIPS service**, which is developed by the Eurosystem as a pan-European Instant Payment solution in central bank money. This chapter is intended as a general description which includes all the main features of TIPS, including those that are out of scope for this document, which is dedicated to the use of the Graphical User Interface.

Section 1.1 describes the features of the TIPS Settlement model and its architecture, whereas section 1.2 focuses on the communication between TIPS and the other Eurosystem market infrastructure services, which are crucial for the smooth functioning of TIPS.

1.1 TIPS Overview

TIPS is a harmonised and standardised pan-European service with common functionalities for the settlement of Instant Payments across different countries and jurisdictions. It is based on the Single Euro Payments Area (SEPA) Instant Credit Transfer scheme. It is designed to settle payments instantly with around the clock availability without scheduled service downtime, i.e. it is open for business 24 hours a day, every day of the year. No distinction is made between domestic and cross-border payments.

TIPS offers immediate settlement in central bank money.

TIPS Participants and Instructing Parties have a Settlement interface to send payment instructions and receive payment confirmations based on ISO 20022 standards and compliant with the SEPA Instant Credit Transfer scheme.

TIPS is designed to be currency agnostic, in order to provide settlement in non-euro central bank money if requested, connecting to other RTGS systems.

1.1.1 TIPS settlement service model

All the cash used to settle transactions in euro in TIPS comes from accounts opened in TARGET2, which is the RTGS for the euro currency. As such, TIPS can be considered as an additional service to TARGET2. Since TIPS operates 24/7/365, it does not have to return the liquidity to the RTGS at the end of TARGET2 operating day, but both the inbound and outbound liquidity transfers can take place only during TARGET2 operating hours. Therefore, participants to TIPS have to take into consideration their liquidity needs for the hours during which TARGET2 will be closed. Since TIPS account balances are taken into account on the minimum reserve calculation, a snapshot of the balance on the TIPS accounts is taken at the closing time of TARGET2 immediately after the last execution of the Algorithm 3 (i.e. shortly after the Bank-to-Bank cut-off at 18:00 CET) in the RTGS system.

TIPS processes payments in a strict FIFO (First In First Out) order, i.e. the instructions[1] are processed in a rigorously ordered sequence and no prioritisation is foreseen. TIPS processes every Instant Payment according to **two settlement stages**: the first notifies the Beneficiary Participant after having reserved the

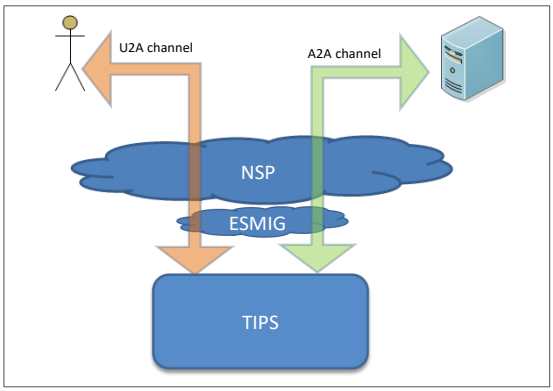
[1] The term "instruction" refers not only to Instant Payments or Liquidity Transfers, but also to local reference data updates and any other type of request that leads to the update of reference or dynamic data in TIPS.

funds on the Originator Participant account by creating a cash posting (since no partial settlement is allowed, the full amount is reserved) and the second settles the reserved amount after TIPS has received the confirmation that the payment has been accepted by the Beneficiary Participant or Instructing Party acting on behalf of the Participant/Reachable Party. In case of negative reply from the Beneficiary Participant, the reserved sum is released and is again available to settle other instructions on the same account. TIPS rejects any payment that is not settled within the configured timeout[2] period.

1.1.2 TIPS Access

TIPS Actors can access TIPS, via different Network Service Providers through the Eurosystem Single Market Infrastructure Gateway (ESMIG, see section 1.2.1) component, via U2A (User to Application) or A2A (Application to Application) mode.

Figure 1 – TIPS access



A2A communication relies, whenever possible, on ISO 20022 standard XML messages, for both inbound and outbound communication. In principle, when there is no ISO 20022 standard message available or when the usage of XML technology is not advisable for technical reasons (e.g. performance or network traffic constraints) flat data files may be used. However, at the current stage, there is no business case requiring flat data files to be used instead of ISO 20022 standard messages. All the exchanges are executed through a real-time transfer service, making it compulsory that both parties involved in a transaction are available when the message is sent (the Store and Forward service is only foreseen for the sending of Reports). In case the message cannot be delivered, no retry mechanism is available.

U2A communication, which is available for the subset of TIPS functionalities described in this document, is based on a Graphical User Interface and enables physical users of directly connected TIPS Actors to access and interact with TIPS. Authorised users are able to access GUI functions based on their access rights profile (see sections 3.3 and 3.4).

For both A2A and U2A communication any individual or application interacting with TIPS is identified by a Distinguished Name (DN), which is a sequence of attribute-value assertions separated by commas, e.g. <cn=smith, ou=tips-ops, o=bnkacctt, o=nsp-1>. The DN is uniquely linked to a digital certificate issued by the relevant NSP which TIPS Actors assign to their individuals (U2A) or applications (A2A).

[2] SCT^{Inst} Timestamp Timeout value is 20 seconds.

The ESMIG carries out an authentication check to identify the DN and an authorisation check at service level, to verify whether the DN is enabled to submit requests to TIPS.

After the ESMIG authentication, TIPS carries out the authorisation of the sender at application level based on the DN's access rights profile, which is defined at Common Reference Data Management (CRDM, see section 1.2.2) level.

TIPS authorises requests from specific users (i.e. individuals or applications identified by means of a DN) based on their relevant access rights profile. Each interaction with TIPS that can be triggered in A2A or U2A mode by means of a message or a GUI screen (e.g. sending a query or blocking a TIPS Account) is defined as a TIPS user function. The capability to trigger a specific TIPS user function is granted by means of the related Privilege.

All Privileges that are relevant for TIPS are defined and stored within the CRDM, which also offers the possibility to group different Privileges into sets known as Roles. Each of these Roles will define a standard, specific business role for TIPS Actors to use to interact with TIPS. TIPS users will be assigned one or more roles in the CRDM depending on their requirements, and the privileges contained in the roles will define their access rights configuration.

Roles are then granted to users identified by specific DNs. This allows the DN linked to the Role to trigger user functions in TIPS by exercising the Privileges contained within the Role.

1.2 Interactions with other services

TIPS is not a stand-alone service: in order to use it, TIPS Actors need to access other Eurosystem components, which are described in this section.

1.2.1 Eurosystem Single Market Infrastructure Gateway

The Eurosystem Single Market Infrastructure Gateway (ESMIG) authenticates TIPS Actors and gives them access to all authorised Eurosystem services, including TIPS. It also guarantees sanitisation of XML messages for security purposes and technical validation of the standard messages sent to the different services (schema validation and check of mandatory fields). If these checks are successful, the request and the sender's DN are forwarded to TIPS, which carries out the authorisation of the sender at application level based on the DN's access rights profile.

The ESMIG U2A portal implements an authentication web page that shall authorise users and let them reach the U2A interface URL of the relevant Eurosystem services, including TIPS.

1.2.2 Common Reference Data Management

The Common Reference Data Management (CRDM) is a centralised and harmonised reference data management component that allows authorised users to setup and maintain via a single dedicated interface all the data that is shared by more than one Eurosystem service.

For this reason, TIPS does not provide dedicated functions for the setup and most of the maintenance operations of its reference data (e.g. Participants, Accounts, Roles and Privileges). Since the actual creation of the reference data objects is performed on the CRDM, all the necessary steps to be taken in order to create the data are detailed in the CRDM UHB.

Changes to TIPS Reference data fall into two categories:

- Common reference data changes: carried out by authorised users in the CRDM interface and then propagated to TIPS on a daily basis. This also includes the initial setup of all reference data required by TIPS (e.g. creation of a new Participant or of a new Account). All functions are reported in Table 1.
- Immediate reference data changes: some time-critical reference data changes need to be implemented in TIPS immediately, without waiting the following daily propagation from the CRDM component. They are carried out by authorised users directly in the TIPS interface and processed immediately, in order to update the relevant local reference data.

The access to CRDM is possible in U2A mode through the ESMIG component. U2A functions can also be triggered in 4-eyes mode, so that a final approval from a different user is required before the change comes into effect.

As the CRDM component is available 5 days a week, 22 hours a day, the possibility to setup and maintain reference data for TIPS is only available during that time window. The data is propagated to TIPS asynchronously, on a daily basis at 17h00 CET, shortly before the business day change of TARGET2.

The following table lists all the reference data management operations that will be available in the CRDM for TIPS, along with the corresponding responsible TIPS Actors.

Table 1 – Responsible Actors for CRDM actions

Area	Object	Responsible TIPS Actor[3]
Party	Party	Operator, Central Bank
	Party Service Link	Operator, Central Bank
Cash Account	TIPS Account	Central Bank
	TIPS Transit Account	Operator
	TIPS Credit Memorandum Balance	Participant
	Limit	Participant
	Authorised Account User	Participant
Access Rights Management	User	Central Bank, Participant
	Role	Operator, Central Bank
	Privilege	Operator
	Certificate DN	Central Bank, Participant
	User Certificate DN Link	Central Bank, Participant
	Role User Link	All
	Role Party Link	Operator, Central Bank
	Privilege Role Link	Operator, Central Bank

[3] The TIPS Actor types listed refer to the default responsible actors in normal operations. Functionalities for Central Banks to act on behalf of Participants and for the Operator to act on behalf of other actors will be available.

Area	Object	Responsible TIPS Actor[3]
Message Subscription Configuration	Message Subscription Rule	Central Bank, Participant
	Message Subscription Rule Set	Central Bank, Participant
Network Configuration	Network Service	Operator
	Technical Address Network Service Link	Operator, Central Bank
	DN BIC Routing	Operator, Central Bank
	Routing Configuration	Operator, Central Bank, Participant
Report Configuration	Report Type	Operator
	Report Configuration	Central Bank, Participant
Restriction Type Management	Restriction Type[4]	Operator
Configuration Parameter	Country	Operator
	Currency	Operator
	System Entity	Operator
	TIPS BIC Directory	Operator
	Service	Operator
	Currency Service Link	Operator

1.2.3 TARGET2 and other RTGS systems

Liquidity in TIPS is provided from an external RTGS system (TARGET2 for the euro). TIPS can retain the liquidity when the RTGS system is closed, provided that it collects the balances of all its accounts into a "snapshot" and communicates it to the RTGS system at the end of the business day of the RTGS system.

It is possible to transfer liquidity between an RTGS account and a TIPS account[5], and the owner of the RTGS Account does not need to be the same as the owner of the TIPS Account. TIPS foresees two types of Liquidity Transfers: Inbound (from an RTGS system to TIPS) and Outbound (from TIPS to an RTGS system). There are no internal liquidity transfers between TIPS Accounts. All Liquidity Transfers, whatever the type, are performed by moving the liquidity through an RTGS Transit Account. TIPS has one and only one Transit Account defined for each currency, owned by the relevant Central Bank. The Transit Account for the euro is owned and maintained by the ECB. Liquidity transfers do not entail a reservation of funds, unlike Instant Payments, and are settled immediately.

An Inbound Liquidity Transfer moves liquidity from an RTGS account to a TIPS account in the same currency. Inbound Liquidity Transfer orders can be triggered only in the RTGS System and are received by TIPS (TIPS does not provide a functionality to pull liquidity from the relevant RTGS System).

Since TIPS can keep the liquidity in its accounts while TARGET2 is closed and considering that the balances of the TIPS accounts are, from a legal perspective, considered to be in the jurisdiction of TARGET2, TIPS prepares snapshots of the balances during the TARGET2 end of day procedure,

[4] For the blocking of TIPS Participants, TIPS Accounts and TIPS CMBs.

[5] TIPS accounts in euro are in the legal perimeter of TARGET2, they are opened by the responsible Central Bank and have to be dedicated to the settlement of instant payments in TIPS.

ensuring that no liquidity transfers are pending confirmation from TARGET2. The same procedure is foreseen for any other RTGS system connected to TIPS.

2. Overview of the User Handbook

The TIPS User Handbook, hereinafter called UHB, aims at facilitating the use of the Graphical User Interface (GUI) of TIPS. It is intended for any TIPS user regardless of the focus of activities and describes the full range of functionalities available in user-to-application (U2A) mode. The GUI component includes all the necessary elements to provide the authorised users with the possibility to query transactional data (e.g. the balance of account) and to amend the local reference data that shall be maintained on a 24/7/365 basis.

There is only one handbook addressing all TIPS Actors: TIPS Participants, Reachable Parties, Instructing Parties (operating on behalf of TIPS Participants or Reachable Parties), Central Banks and the TIPS Operator. Updated versions of the UHB will be provided if required.

The UHB is part of the functional documentation and complements the User Detailed Functional Specifications (UDFS). The UDFS is particularly relevant for UHB readers willing to get more information on the general concepts described in the previous chapter. Although it is mainly focused on the application-to-application mode (A2A), chapter one of the UDFS contains a detailed description of the business concepts used in TIPS, which are also relevant when using the GUI.

2.1 UHB Methodology

Several symbols and methodological elements are used throughout the TIPS UHB to ease orientation and help the reader to find the desired information quickly. Every page of the main UHB parts has a similar page layout. The reader can find four different elements:

- The header, which shows the chapter and sub-chapter title;
- The margin column on the left side of each page, which is used for subheadings and information signs;
- The text column, which contains the main information, tables and screenshots;
- The footer, which shows the page number.

2.2 UHB Structure

The UHB is structured in five parts:

Part 1 The **Introduction to TIPS** provides the reader with a general overview of the TIPS service and its relation with the other Eurosystem market infrastructure services. An extensive description of the TIPS service can be found in the TIPS UDFS.

Part 2 The **Overview of the User Handbook** explains the content and the approach of both the document and the GUI. While the first section explains how to use the UHB, the second section focuses on the design and common functionalities of the GUI.

Part 3 The **Initial Setup** gives the reader a rough guide about where to start with TIPS. It describes the reference data the user has to create in order to access and make use of

the service. Since the actual creation of the reference data objects is performed on the CRDM, all the necessary steps to be taken in order to create the data are detailed in the CRDM UHB.

Part 4 The **Screen Reference guide** part describes all the screens contained in the GUI. Each description follows an identical structure which comprises detailed information on all screen fields. Readers may refer to this part if they need detailed and precise information on a screen, field or button.

Part 5 The **Screen user guide** part provides the reader with a step-by-step description of the typical GUI workflows. Each description follows an identical structure. Readers may refer to this part if they need to know how to carry out an action using the GUI.

2.3 Overview of the Graphical User Interface

The GUI is a browser-based application for communication with TIPS in U2A mode. It is based on the ISO norm 9241 'Ergonomics of human system interaction'.

TIPS provides TIPS Actors with a Graphical User Interface offering basic functionalities to access information and controls (e.g. U2A queries, local reference data maintenance). The complete list of functions available 24/7/365 via the TIPS GUI is as follows:

Table 2 – Functions available in TIPS GUI

Type	Description
Query	Account balance and status query
Query	CMB limit and status query
Local reference data	Blocking/Unblocking of a Participant
Local reference data	Blocking/Unblocking of an Account
Local reference data	Blocking/Unblocking of a CMB
Local reference data	Increase/Decrease of a CMB limit
Task Management	Task List
Liquidity management	Enter Liquidity transfer Order[6]

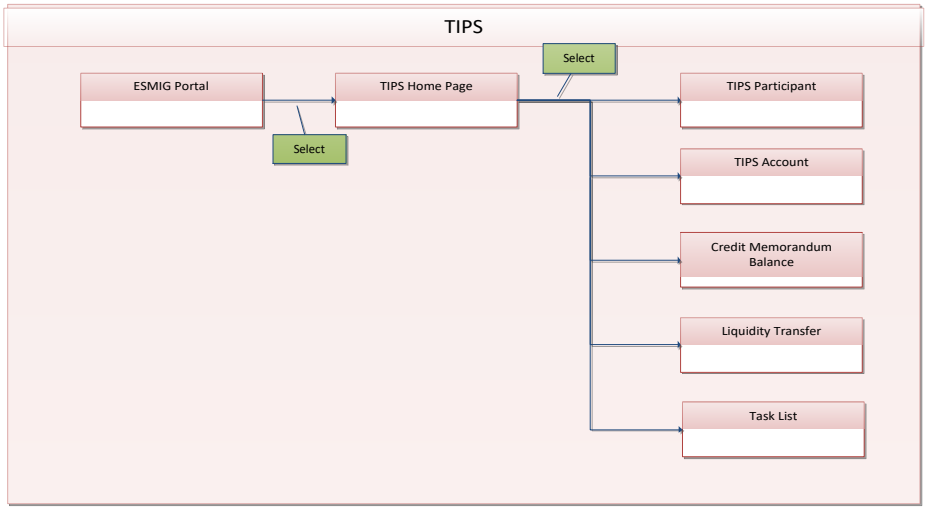
2.3.1 Sitemap

This section provides you with formalised illustration of screens (pictured as pink rectangles) and their related actions (pictured as green rectangles). The illustration helps you to get an overview of all GUI screens and their interrelation, indicated by the arrows.

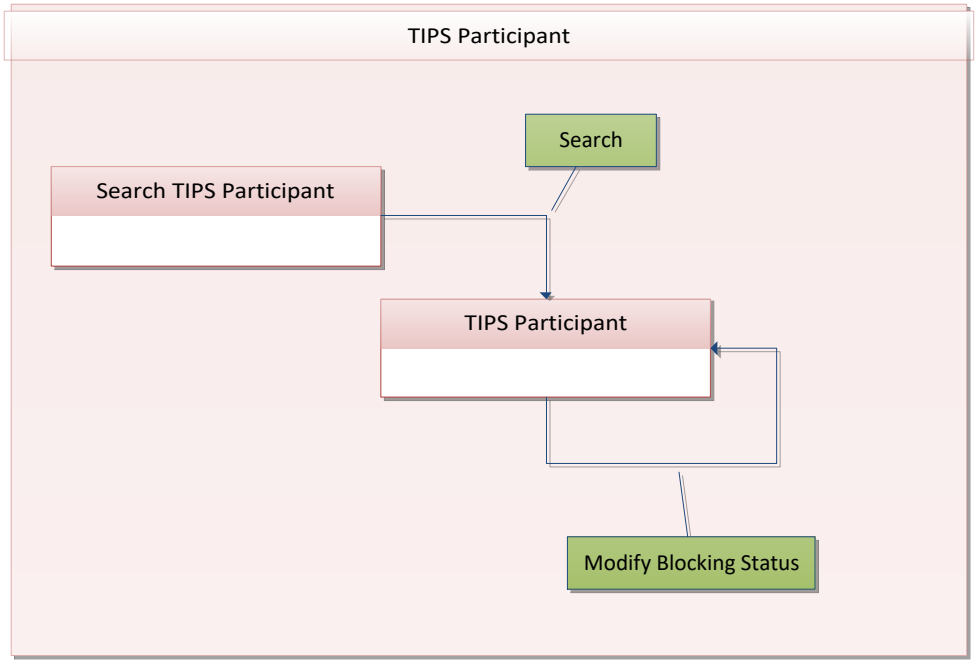
The header indicates the GUI menu item pictured by the sitemap. The single GUI screens are pictured following their business logic, starting with search/list screens, following with details or enter.

[6] Outbound liquidity transfers are allowed during the operating times of the respective RTGS.

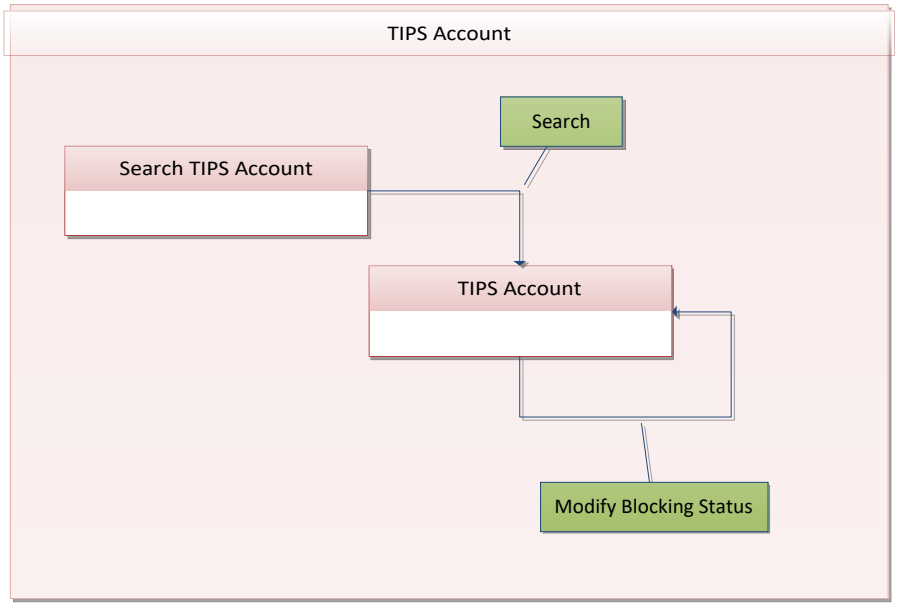
2.3.1.1 Homepage



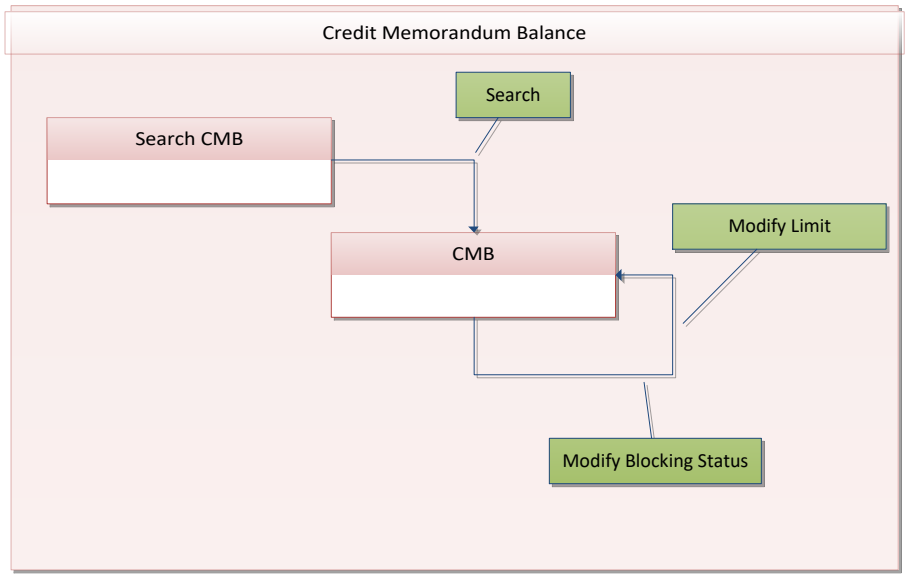
2.3.1.2 TIPS Participant



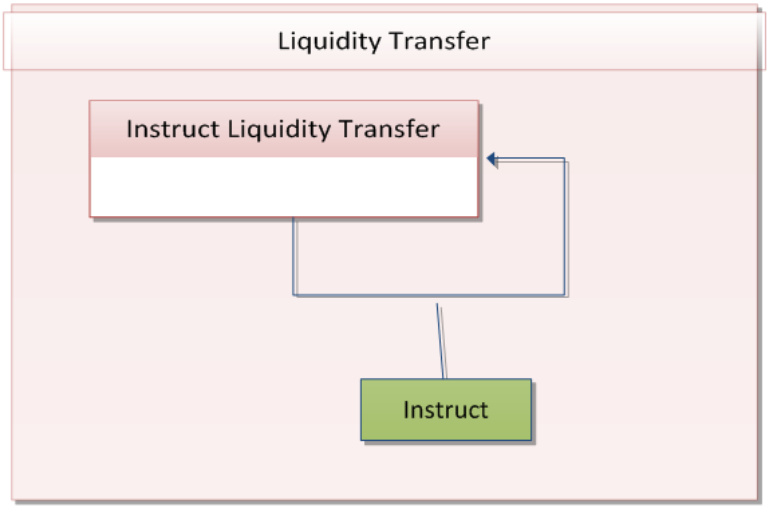
2.3.1.3 TIPS Account



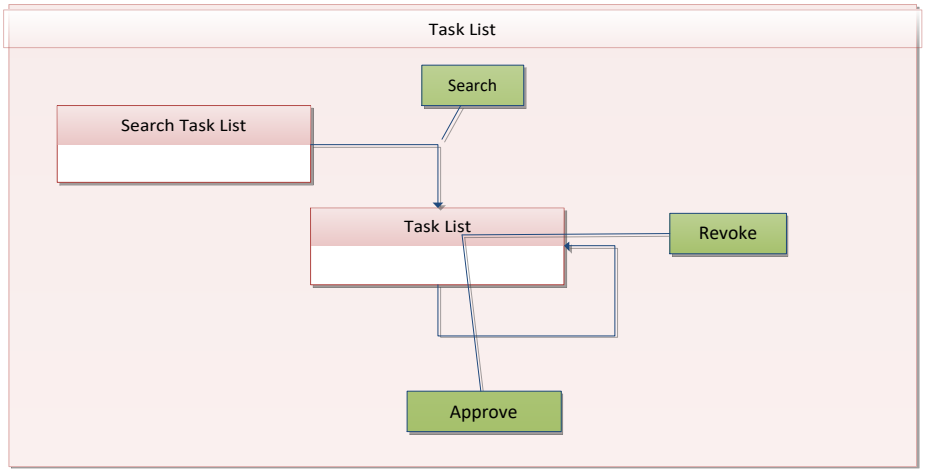
2.3.1.4 Credit Memorandum Balance



2.3.1.5 Liquidity Transfer



2.3.1.6 Task List



2.3.2 Setup and login process

Before entering the GUI, make sure that your workstation complies with the hardware and software requirements and implement all necessary preparations (e.g. firewall settings) described below.

Such requirements/preparations may be subject to periodical review/update to comply with changing technical/regulatory scenario.

Hardware requirements

The following hardware requirements are needed:

- Processor: 1 GHz or faster with support for PAE, NX, and SSE2;
- RAM: 1 GB (32-bit) or 2 GB (64-bit);
- Hard disk space: 16 GB (32-bit) or 20 GB (64-bit);
- Graphics card: Microsoft DirectX 9 graphics device with WDDM driver.

Software requirements

- Windows 7 OS required as OS;

- JRE Version: 1.8.0_31 or higher (remark: additional constraints coming from VAN providers to be verified).

Supported Web-Browsers and Settings

- The following web-browser is supported:
  - Microsoft Internet Explorer (11)

- Java script and java applets are used for validations on the client side therefore 'JavaScript' and 'Cookies' have to be set to 'enabled'.
  According to current Microsoft plans, IE11 will be supported till end of October 2020 and the 4CB plan to keep it in the qualified configurations accordingly. The complete redefinition of the qualified browsers' set and the full replacement of the applet technology will be then defined in the context of the Eurosystem Singe Market Infrastructure Gateway, being part of the ongoing T2/T2S consolidation project in line with the agreed schedule.

GUI Access

- Users are directed to an initial page named ESMIG portal that ensures proper routing to the web applications (currently: "TIPS", "CRDMTIPS") the user has been granted to enter.

NRO specific requirements

The applet installation on TIPS user side will be triggered with the first attempt to sign an instruction (and each time the user needs to sign one) and is transparent to users once the security warning asking for IBM applet installation is explicitly accepted by the user:

For security reasons, the applet (jar) archive delivered by the provider will be code signed by a trusted certification authority (Thawte) to ensure applet integrity on customer side.

In order to properly execute Thawte certificate revocation checks, customer should ensure proper Certificate Distribution List availability; these could be downloaded from the Internet at the following URLs:

- http://crl.thawte.com/ThawtePremiumServerCA.crl
- http://crl.thawte.com/ThawtePCA.crl
- http://th.symcb.com/th.crl

The TIPS users have to ensure that the security settings of their institutions, i.e. firewalls, allow for installation of the applet.

2.3.3 GUI Structure

This chapter explains the basic elements of the TIPS GUI structure (i.e. structure of the menu and the screens) helping you to navigate through the system and to use it quickly and efficiently.

The first subsection describes the menu structure where screens are grouped hierarchically. Then, the second subsection explains the layout structure common to all screens. The following subsections

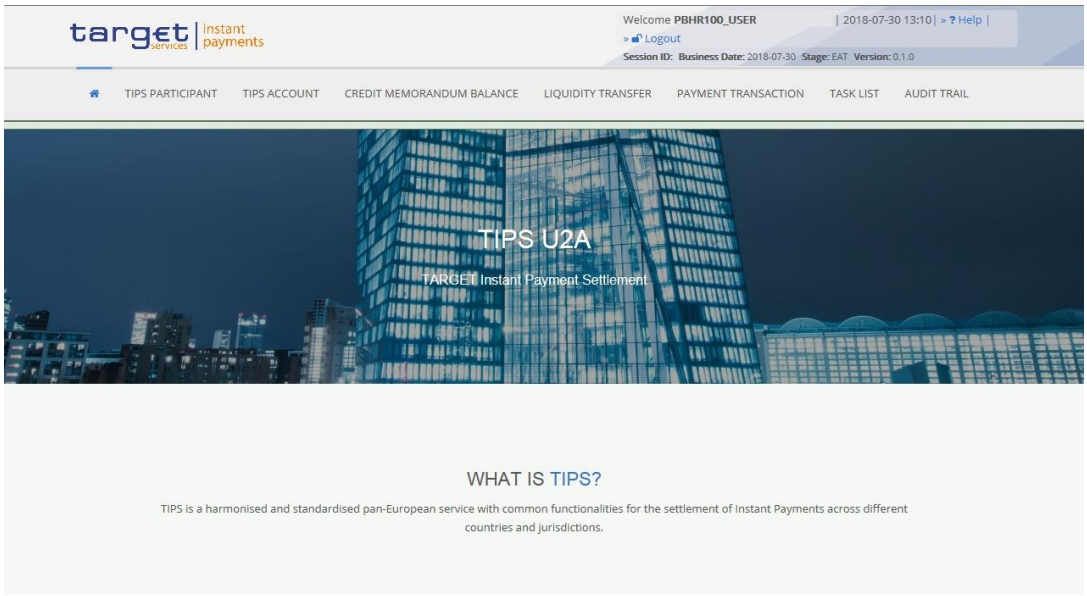
provide details on the different screen types and on recurring elements, such as common field types or buttons and icons.

2.3.3.1 Menu Structure

The GUI menu is structured into one hierarchical menu level. The level is presented as a menu bar containing the menu items (TIPS Participant, TIPS Account, Credit Memorandum Balance, Liquidity Transfer, Payment Transaction, Task List, Audit Trail) which are always visible on top of each screen.

Depending on the user access rights, it is possible that not all menu entries are visible. The user can contact its system administrator to verify that all the necessary Privileges to access all screens have been granted. The Privileges are listed in each screen and business scenario description.

Screenshot



2.3.3.2 Screen Structure

In general, each screen of the TIPS GUI follows the same layout containing a header and a content area.

Header

The header appears at the top of every screen. It contains four main elements providing useful information and helping the users to navigate between the different screens as shown in the illustration below

Screenshot with header elements

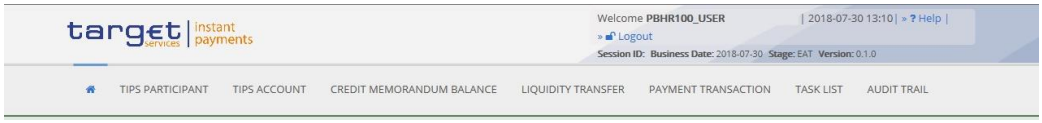


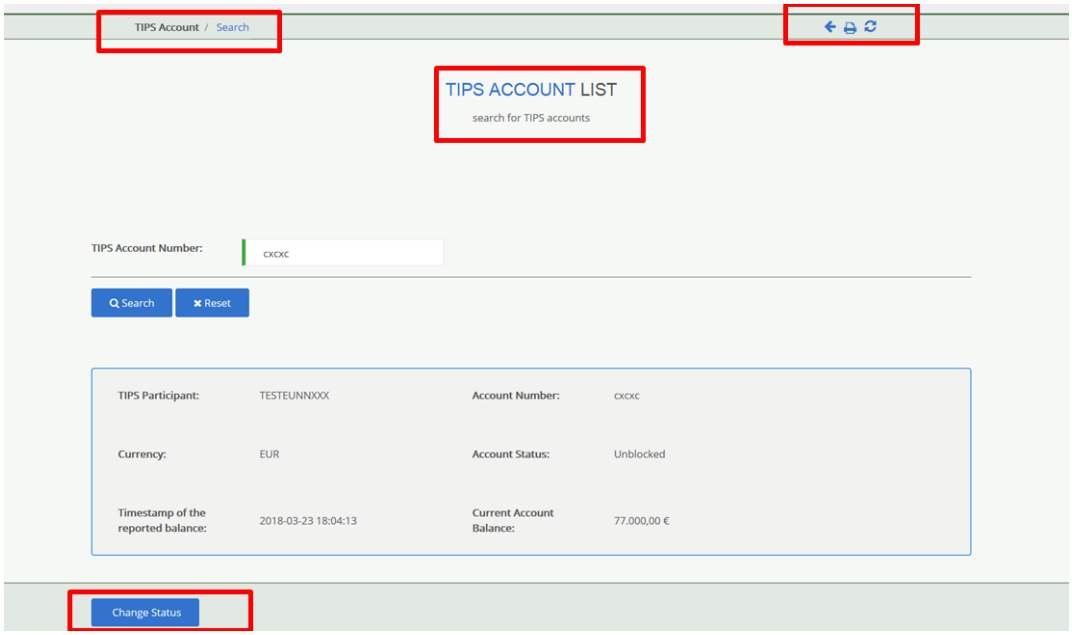
Table 3 – GUI header elements

Position	Element	Description
1	*TIPS logo* button	The element links to the welcome screen. While using the *new/edit* screens, the *TIPS logo* button is locked in order to ensure a safe and complete submission process.
2	Information panel	It displays the login name, the *logout* and *help* buttons as well as date and time of last data access.
3	Menu bar	It presents the menu items and allows the user to navigate to the screens.
4	TIPS Actor logo	It displays the respective logo in accordance with the chosen TIPS Actor in line with the white-labelling approach.

Content Areas

The content area is the part of the GUI where the user can trigger all business actions. It is organised by four main elements which help to interact properly with the GUI as shown in the illustration below.

Screenshot



Position	Element	Description
1	Breadcrumb	Shows the main path to the current screen
2	Print icon Refresh icon	Prints the screen content Reloads the screen
3	Frame and sub-frame title	Groups related information as a structural function
4	Button bar	Shows all available buttons for the current screen

The TIPS GUI consists of the following types of screens, each with a different function:

- *Welcome* screen
- *Search/List* screen
- *Details* screen
- *Enter* screen

Welcome screen The *welcome* screen is the entrance into the TIPS GUI. It also contains a ticker line providing the user with the latest information. The ticker is managed by the TIPS Operator.

Search/List screen The *search/list* screen allows the user to query the TIPS database using a predefined set of search criteria. After executing a search, a list of data records matching the search criteria is displayed in a table.

Details screen In contrast to the *search/list* screen, the user can only access the *details* screens via the *search/list* screen. the user can find all possible ways of accessing the screen via other screens in the respective screen description within the screen reference part.

Enter screen Similar to the *details* screens, the user can only access the *enter* screens through the main menu. This type of screen is used to enter reference data modification, inject an Outbound Liquidity Transfer and Approve/Revoke tasks.

2.3.3.3 Field types and properties

On *search/list* and *enter* screens, users can enter information via input fields and select fields. Pre-filled information is displayed in read-only fields.

Input fields

In input fields the user can enter text and/or numeric content. The format requirements, which are part of each field/screen description, shall be fulfilled. Input-sensitive fields are input fields with an auto-complete mode that help the user to input data. As soon as the user starts typing the first characters of the respective data into an input-sensitive field, TIPS automatically proposes possible matching entries from which the desired one can be selected.

Select fields

Select fields are either select boxes, radio buttons or check boxes.

- Select boxes: Functionally a select box is a way to enter data from a limited list of possible values. In TIPS you can find different types of select boxes: standard select box and auto-complete select box. You can select only one value at a time.
- Radio buttons: Enable the user to make exact selections using one value from a set of options. Only one value can be selected at a time. The user shall click on the icon corresponding to the option they would like to select.
- Check boxes: Enable the user to select more than one value at the same time. The user shall click on the boxes corresponding to the options they would like to select. Selected check boxes contain a check mark.

In addition to input and select fields, the TIPS GUI has also read-only fields, which are pre-filled and do not allow data changes.

Field Properties

TIPS fully supports UTF-8 Character Set .

Following the SEPA Instant Credit Transfer specifications, the character set is restricted for references and identifiers to support the Latin characters which are commonly used in international communication.

The complete list is as follows:

Table 4 – TIPS character set

Character	Description
a - z	26 small characters of the Latin alphabet
A - Z	26 capital characters of the Latin alphabet
0 – 9	10 numeric characters
/	Solidus (slash)
-	Hyphen
?	Question mark
:	colon
(	Opening parenthesis
)	Closing parenthesis
.	Full stop
,	Comma
'	Apostrophe
+	Plus
	Space (blank)

As additional rules, it is required that references, identifications and identifiers must not start nor end with '/' or contain '//'.

2.3.4 Validation

Front-end validation

In TIPS all submission processes undergo various validations, which take place in the front-end and/or in the back-end. Only correct entries, fulfilling all predefined criteria, can be further processed. To indicate the status of the recently performed action, TIPS uses two different types of messages to indicate a successful or failed validation as

described below.
In addition to the automatic validation carried out by TIPS, human validation can be imposed by using the 4-eyes mode.
Furthermore, non-repudiation of origin (NRO) is implemented for a specified number of screens.
As first part of the validation process, the front-end validation takes place without communication to the back-end. The front-end validation includes both the field validation and the cross-field validation. It is carried out after clicking on a button. The field validation verifies that all entries comply with the required format. The cross-field validation checks the data consistency between two or more fields/buttons in relation to each other.

Back-end validation

The back-end validation is the second part of the validation process. After successful front-end validation, the user's request is submitted to the back-end and checked for compliance with the business validation rules. In case of failure an error message is displayed. You can find a detailed list of all error messages and their description in the annex of the UHB (list of references for error messages).

Result

After each validation, the TIPS GUI informs the user about the result. There are two different message types available, the error message and the success message.

Error Message

Each error message appears at the top of the content area and next to the field containing the error. In the case of a failed front-end or back-end validation, it indicates the source of the failure, the type of error and a short hint.

Success message

If you are working in 4-eyes mode, the success message also provides you with the 4-eyes principle ID. This identification number helps the user to search for the respective transaction via the Task list – search/list screen.

4-Eyes Mode

Depending on the access rights setup, you can use TIPS in 2-eyes or in 4-eyes mode. The 2-eyes mode and the 4-eyes mode apply for enter screens (new and edit mode) and for any kind of deletion processes. If you are a 4-eyes mode user, your actions have to be confirmed by a second user in order to be processed.

First user

In 4-eyes mode the first user enters, changes or deletes the data on a screen and afterwards submits the action by clicking on the submit button in the button bar. The success message appearing after successful validation includes a 4-eyes principle ID. For the final execution a second user is needed to confirm the action.

Second User

After the first user has entered, changed or deleted the data, a second user (with the required privilege) has to approve or revoke this action via the task list screen either using the 4-eyes mode ID or the search functionality. An alert icon is shown on the active TIPS screen for those users with appropriate privileges to approve a pending action via the Task list screen. By clicking in the alert icon you are directed to the Task List - Search/List screen where you can first search and then approve/revoke the pending changes.

Digital signature - NRO

In order to ensure non-repudiation of origin (NRO) for critical transactions, the use of a digital signature has been implemented for specified screens. This means that the user will be asked to enter a PIN code for signature purposes whenever an instruction is initiated. With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor.
The following provides the exhaustive list of screens for which the NRO feature is implemented:

- *Participant Blocking – Change Status Screen* [ ]
- *Account Blocking – Change Status Screen* [ ].
- *CMB Blocking – Change Status Screen - new* screen [ ].
- *CMB Limit Modification – Modify Limit screen* [ ].
- *Liquidity Transfer - new* screen [ ].
- *Task list - Details* screen [ ].

2.3.5 Communication Network and services

Refer to the TIPS Connectivity Guide document for details on the communication network and services.

2.3.6 User Administration

Only registered users have access to the TIPS GUI, therefore registration to the network is necessary prior to the first GUI access. The Registration Guide provides information on how to fill in Registration Forms properly, e.g. access rights.

2.3.7 Security and administration service

In order to guarantee a secure and safe handling of the information and to protect customer data provided via the GUI, various security elements have been put into place:

- Each action requires system and/or human validation as described in the validation;
- The scope of available data and functions is controlled via the management of access rights;
- The security features provided by the network providers and described in their respective user documentation prevent unauthorised access.

3 Initial Setup

TIPS Service needs a series of Common Reference data that are used by TIPS but maintained and stored in a dedicated tool, the Common Reference Data Management (CRDM) component. The CRDM allows users to setup and maintain reference data that is shared by multiple Eurosystem services such as TIPS, TARGET2 and T2S[7] and propagates such data to the relevant services. The description of the CRDM is out of scope of this document: the following paragraphs will be devoted to a general description of the objects that are created in the CRDM in order to understand how to use them in the TIPS service.

3.1 TIPS Actors

Legal entities or organisations that interact with the TIPS application either directly or indirectly (i.e. through an Instructing Party) are generally known as TIPS Actors in the Common Reference Data Management repository. The TIPS participation model envisions different types of Actors, with different roles and responsibilities, as outlined below. Each legal entity may play different roles in TIPS. Generally speaking, any legal entity playing multiple business roles in TIPS results in the definition of multiple parties.

Legal relationships between parties in TIPS determine a hierarchical party model based on a three-level structure. The TIPS Operator is the only party on the top level of the hierarchy and it is responsible for the setup of each party of the second level, i.e. each Central Bank in TIPS. Similarly, each party belonging to the second level (i.e. a Central Bank) is responsible for the setup of all parties of its community represented by parties of the third level.

The possibility for users of each TIPS Actor to access their respective functions and fulfil their roles and responsibilities is enabled by setting up an adequate access rights configuration.

3.1.1 TIPS Operator

The TIPS Operator is the legal and organisational entity that operates TIPS. They are responsible for the initial setup and day-to-day operations of TIPS and act as a single point of contact for Central Banks and directly connected TIPS Actors[8]. TIPS Actors different from Central Banks may contact the Service Desk only for connectivity-related incidents. They are responsible for monitoring the system from a technical prospective and carrying out corrective actions in case of incidents or in the event of service unavailability. The TIPS Operator is also responsible for setting up and maintaining Central Banks reference data in the Common Reference Data Management component and, if required, they may operate on behalf of any TIPS Actor. They have full access to all live and all archived reference data and transactional data in TIPS.

[7] The reference data of TARGET2 and T2S is not part of CRDM for the time being.

3.1.2 Central Bank

Central Banks are responsible for setting up and maintaining reference data for all the TIPS Actors belonging to their national community. As far as the submission of liquidity transfers or the maintenance of reference data are concerned, they can act on behalf of one of their Actors in case of need. In order to allow the transfer of liquidity from RTGS to TIPS and vice versa, a single Transit Account must exist in TIPS for each single currency. The European Central Bank owns and manages the single TIPS Transit Account in euro. For any other settlement currency in TIPS, the relevant non-euro Central Bank shall define a single TIPS Transit Account for its currency.

In case a Central Bank is willing to make use of TIPS not only for the provision of liquidity to the Participants of its community, but also for the settlement of Instant Payments, it will have to open another Party as Participant.

3.1.3 Participant

Participants represent entities that are eligible for participation in TARGET2 (but do not necessarily own a TARGET2 Payments Module (PM) account). They are identified by a BIC11[9] in TIPS and hold TIPS Accounts. They can set and manage Credit Memorandum Balances (CMBs) linked to their own accounts as well as Instructing Party privileges for Actors acting on behalf of themselves or of Reachable Parties defined as users of their accounts or CMBs. They can also act as Instructing Parties for other TIPS Actors.

Participants shall hold TIPS Accounts, which are opened by their responsible Central Bank and used to settle Instant Payment transactions, Recalls and Liquidity Transfers in TIPS.

3.1.4 Reachable Party

Reachable Parties are also identified by a BIC11, but they cannot hold TIPS Accounts and rely on a Participant's account to settle payments in TIPS. They can also act as Instructing Parties, which allows them to interact directly with TIPS.

3.1.5 Instructing Party

The Privileges of **Instructing Party** allow an Actor to send (or receive) Instant Payments to (or from) TIPS. Instructing Parties are not defined as Parties, but as Distinguished Names that Participants and Reachable Parties can define and authorize to act on their behalf. Therefore they are not part of the hierarchical party model. Participants and Reachable Parties can act as Instructing Parties. Third parties, not necessarily being a TIPS Participant or a Reachable Party, can act as Instructing Parties on behalf of other TIPS Participants or Reachable Parties, taking on a subset or the whole set of functionalities that are available to the Participant or Reachable Party granted them in terms of access rights.

[9] in order to allow a given financial institution to be defined as two different TIPS parties (by the same Central Bank or by two different Central Banks), the same financial institution must be defined in the CRDM repository as two parties identified by two different 11-character BICs

3.2 TIPS Accounts and CMBs

This entity represents data related to accounts and CMBs that are held in TIPS and can be credited or debited during the processing of Instant Payment transactions or Liquidity Transfers[10]. Accounts can only be deleted from TIPS after their closing date and if their balance is zero. Once an Account is closed (i.e. its closing date has passed) only the responsible Central Bank can send instructions to modify its balance. If an Account is deleted while its balance is not zero, this deletion is rejected.

3.2.1 Types of Accounts

Accounts are opened in TIPS for the provision of liquidity and the settlement of Instant Payments. There are two types of Accounts: TIPS Accounts and Transit Accounts.

3.2.1.1 TIPS Account

TIPS Accounts are accounts that are used by Participants for the settlement of Instant Payment transactions and Liquidity Transfers. They cannot have a negative balance. Each TIPS Participant may own one or many TIPS Accounts and they may use them for their settlement activities or to give the possibility to settle to Reachable Parties or other Participants as well as authorising several BICs to operate on the account. They are maintained by Central Banks for their Participants.

3.2.1.2 Transit Account

Transit Accounts are opened by and belong to Central Banks. They are used for liquidity transfers between RTGS and TIPS Accounts. Transit accounts can have a negative balance, but they are not usable for the settlement of Instant Payment transactions. They are defined for carrying out the transfer of liquidity between the relevant RTGS system and TIPS. Only one transit account per settlement currency can exist in TIPS. The Transit Account for euro belongs to the European Central Bank.

3.2.2 Credit Memorandum Balance

Credit Memorandum Balances (CMBs) represent a credit limit defined for a Reachable party in TIPS. Each CMB is linked to one TIPS Account, but each TIPS Account can have any number of CMBs, each representing a credit line for a Reachable party in TIPS.

CMBs offer the possibility to define limit management flexibly on a TIPS Account, without dedicating liquidity exclusively for each single customer. Specifically, the sum of all CMB limits on a TIPS Account can be higher than the balance of the same Account at any time. A CMB can be defined without a limit. In this case, the related Reachable Party can make full use of the capacity of the related Account without any limitation.

TIPS continuously keeps track of the utilisation (amount of cash used for that CMB) and headroom (amount of cash still available for that CMB) for each CMB for which a limit is defined. Whenever an Instant Payment transaction is settled against a given Originator or Beneficiary CMB, TIPS will

[10] Only TIPS Accounts can be credited/debited via Liquidity Transfers

debit/credit the TIPS Account and decrease/increase the relevant CMB headroom accordingly at the same time. It is possible for the headroom to exceed the limit as a result of crediting payments: in this case the utilisation will be negative.

If an Instant Payment transaction exceeds the current CMB headroom for the Originator Participant, it is rejected. If a CMB headroom reaches zero, no more Instant Payments can be addressed to it until additional funds are provided through an Instant Payment transaction or the CMB limit is increased. In other words, in order for a debiting Instant Payment transaction addressing a given CMB to settle, the amount to be debited must be lower or equal to the current CMB headroom as well as the current balance on the TIPS Account. The CMB limit can be modified independently as a reference data update, which leads to the headroom being recalculated accordingly.

For unlimited CMBs, the headroom must always be considered infinite and, conversely, the utilisation always zero. If a limit is set for a previously unlimited CMB, the headroom and utilisation are calculated starting from the moment the limit is set. In other words, the headroom is automatically set to the same value as the limit, while the utilisation remains zero. These values are then normally updated with each subsequent payment transaction and limit change as described above.

3.3 Users

A user in TIPS is an entity representing either a physical user or an application. They are linked to a single Actor and can be assigned different Privileges. They are identified by a DN used for authentication purposes. Both U2A and A2A users are identified by an identifier which needs to be unique across the shared services.

A system user can be either a party administrator or a standard user. The party administrator is a special user that is able to assign/revoke Privileges to the other users of its party.

3.4 Privileges

Each individual action that can be undertaken in TIPS, such as instructing a payment or modifying a CMB, is defined as a TIPS Function. Access to TIPS Functions is regulated by Privileges, being in one-to-one association with them: given a Privilege, it is possible to uniquely determine which is the TIPS Function allowed.

This means that a user UX owns the access right to trigger a given TIPS user function FY if and only if UX was previously granted with the privilege PY identifying the capability to trigger FY.

The Privileges are grouped in a set of Roles; thus, each Role covers one or more TIPS functions. Roles are additive, meaning that the TIPS functions that a User can access are equal to the sum of the Functions allowed by each Privilege. Each User is linked to one or more Roles. Authorisation for a User to carry out a specific action in TIPS is determined by the combination of the Roles assigned to the User and the TIPS Actor the User belongs to. For example, a User belonging to a certain Participant may be allowed to instruct Instant Payments (based on its assigned Roles). This means that the user will be able to instruct an Instant Payment on a TIPS Account belonging to that Participant, but not on an Account belonging to another Participant.

The set of objects on which a TIPS Actor can operate is known as their data scope and is not modifiable. The TIPS Operator users are granted with the entire pool of privileges. It is the TIPS Operator user who

performs the initial configuration for Central Bank Parties. Privileges are propagated – grouped into Roles - to TIPS Actors by the Central Bank party administrators.
Not all Privileges can be assigned to all TIPS Actor types. For example, it is not possible for a Central Bank or a Participant to create or update Currencies.

3.4.1 Privileges

A TIPS Privilege represents the ability to access a given TIPS function. TIPS Privileges are set up and maintained by the TIPS Operator. They are assigned to Roles in the CRDM in order to create an organised set of access profiles to be granted to the Users.

3.4.2 Roles

They are assigned to Parties and Users for authorisation purposes. The Users are authorised to access the TIPS functionality related to the set of Privileges which are contained in the Role. CBs can configure specific roles to be granted to their own Participants and Reachable Parties, in order to grant them with proper access to functions. In turn, system administrators of Participants or Reachable Parties can use Roles granted by the relevant CB in order to assign proper access rights to their own system users.
Based on the granted set of Privileges, system users are authorised to input their own Reference data objects and to access and maintain them, i.e. to create new objects or to update or delete already existing objects.

3.5 General reference data

Some reference data used in TIPS are maintained in the CRDM by the TIPS Operator.

3.5.1 Business Identifier Code

Each TIPS actor is identified with an 11-character Business Identifier Code (BIC11) which must be unique in TIPS. BICs in TIPS are normally based on the SWIFT BIC Directory but can be manually inserted, modified and deleted by the TIPS Operator in contingency situations.

3.5.2 Currency

The TIPS Operator is responsible for maintaining the data of all the currencies that are available for settlement in TIPS. They are defined using ISO-compliant codes. Currency data includes the maximum number of decimal positions that can be accepted in a TIPS payment instruction in a given currency.

3.5.3 RTGS System

The TIPS Operator is responsible for listing all the RTGS systems that interact with TIPS, along with the respective currency, status (i.e. whether they are open and ready to receive liquidity transfers or not), distinguished name and business date. This distinguished name is used by the RTGS to send any messages or queries to TIPS (e.g. to manage the transfer of liquidity from the RTGS to TIPS and to query the balances of the TIPS accounts linked to the RTGS account).

The status and the business date are updated automatically upon receiving a camt.019 message from the relevant RTGS system and can be modified manually by the TIPS Operator in contingency situations.

3.5.4 System parameters

The system parameters are configured by the TIPS Operator in the CRDM and propagated to TIPS once a day at 17h00 CET, shortly before the business day change of TARGET2. They include the Retention Period, the SCT^{Inst} Timestamp Timeout, the Originator side Offset, the Beneficiary side Offset, the Sweeping Timeout, the Maximum Amount, the Acceptable Future Time Window, the Investigation Offset and the RTGS Alert. Please refer to the UDFS section 1.7.1 – "Service configuration" for a detailed description.

4 Screen Reference Guide

The TIPS Graphical User Interface provides the TIPS user with a number of U2A functions that must be available on a 24/7/365 basis. The GUI will be typically used to perform changes to local reference data that need to have immediate effect, to query the status of the accounts and the CMBs and to initiate Outbound Liquidity Transfers.

Within TIPS, local reference data maintenance instructions submitted in U2A mode can be triggered either in 2-Eyes or in 4-Eyes mode. In the second case, a final approval from a different user is required before the change comes into effect. When a 4-Eyes instruction is submitted, it is provisionally validated and put on hold until a second user, different from the initial submitter, confirms or revokes it. If the instruction is confirmed, it is submitted to TIPS as any other 2-Eyes instruction.

Context of Usage The context of usage explains what a screen displays, what you can do with the screen and which special features are available for the screen, for example the need for confirmation in 4-eyes mode or usage restrictions.

Screen Access The screen access lists all possible ways to access the screen. This includes navigation via the menu and navigation via other screens.

Privileges The Privileges segment lists all necessary Privileges to access the screens and to use its functions. First, the Privileges to access a screen are mentioned, followed by the Privileges that are necessary to use all functions on the screen.

Screenshot The screenshot can be used as orientation to work with the UHB. All screenshots are based on the maximum of access rights, so deviations are possible if you do not own all privileges which are necessary to use the screen in its full extent. In addition, deviations between the screenshot and the field/button description are possible in the case of mutually exclusive functions and based on a specific selection you have made. Values shown on the screenshot might also deviate from the default values indicated in the description.

Field description The field description provides all the relevant information related to the respective field name. It is structured in table format with a separate table for each frame. Sub-frames are indicated by subsection headings in the table. The following table explains the structure of a field description.

Table 5 – Example of a Field description

Field description

Query Account Balance and status : results	
TIPS Participant identifier	Shows the BIC of the party which sent the transaction
Account identifier	Shows the ID of the Account
Account status	Shows whether the Account is blocked for credit, blocked for debit, unblocked
Currency	Shows the currency under which the Account is denominated
Timestamp of the reported balance	Shows the timestamp at which the data was retrieved
Current Account balance	Shows the sum of unreserved and reserved balance

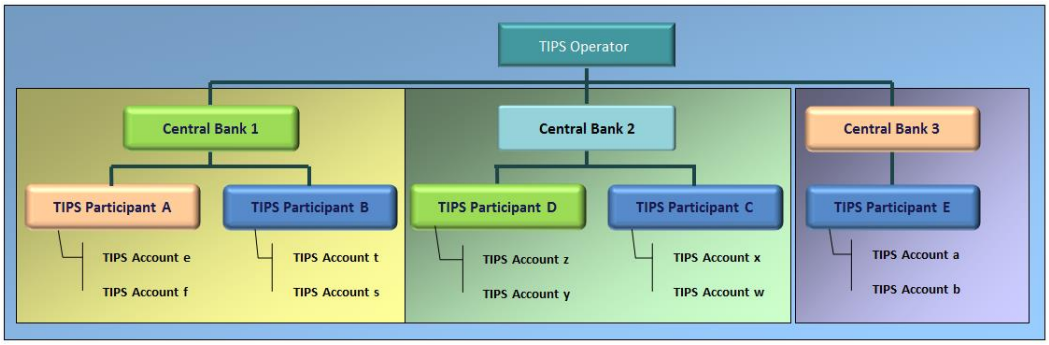
4.1 Queries

The Queries component provides the user with real-time information on production data (e.g. limit utilisation, account balances). The queries are available during the operating hours of the TIPS service, i.e. 24/7/365 and they are not queued but processed immediately, using the most recent data available in the system.

Each query may be available in A2A mode and/or U2A mode. The Queries component generates A2A queries as XML messages and in compliance with the ISO 20022 standard, where applicable.

The Queries component provides different users with a different scope of data, depending on their access profiles. While Central banks have access to all accounts in their books (and subsequently to all transactions on these accounts) Participants can only access their own accounts. Access for Instructing Parties is even further restricted to those accounts which they are permitted to instruct. If a party does not have access to the underlying data the query returns an error code. The TIPS Operator has access to all the Accounts, CMBs and transactional data in TIPS.

Figure 2 – TIPS hierarchical party model



4.1.1 Query Account balance and Status

The Account balance and status query allows the authorised actor to get detailed information for one account. TIPS does not foresee the usage of wildcards, therefore only one account per search can be retrieved.

4.1.1.1 Query account balance and status – Search screen

Context of Usage

This screen contains the ID of the Account as the only available search field. By inputting the relevant data, you can search the detailed information on the balance and the status of the Account. Account data, which will appear in the lower part of the screen, can only be viewed by users of the Account Owner, the relevant Central Bank which created and maintains it and the relevant Instructing Party, if granted the necessary privileges to instruct using this Account.

Screen Access

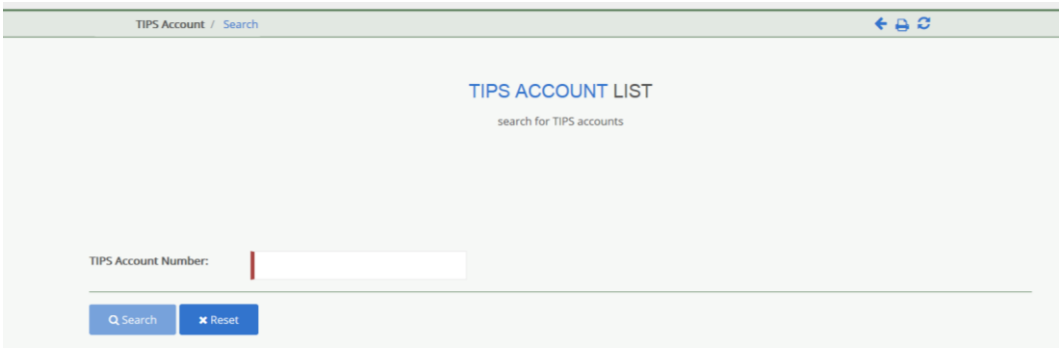
- TIPS Account >> Search screen

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Query Account balance and status: Search Criterion	
Object	**Required Format**
TIPS Account number	Max. 34 characters (SWIFT-x). References for error messages: [▶]: ▌R006

Buttons

Search	This function enables the user to retrieve the information on the selected Account. References for error messages: [▶]: ▌R010
Reset	This function enables the user to set the field to default value

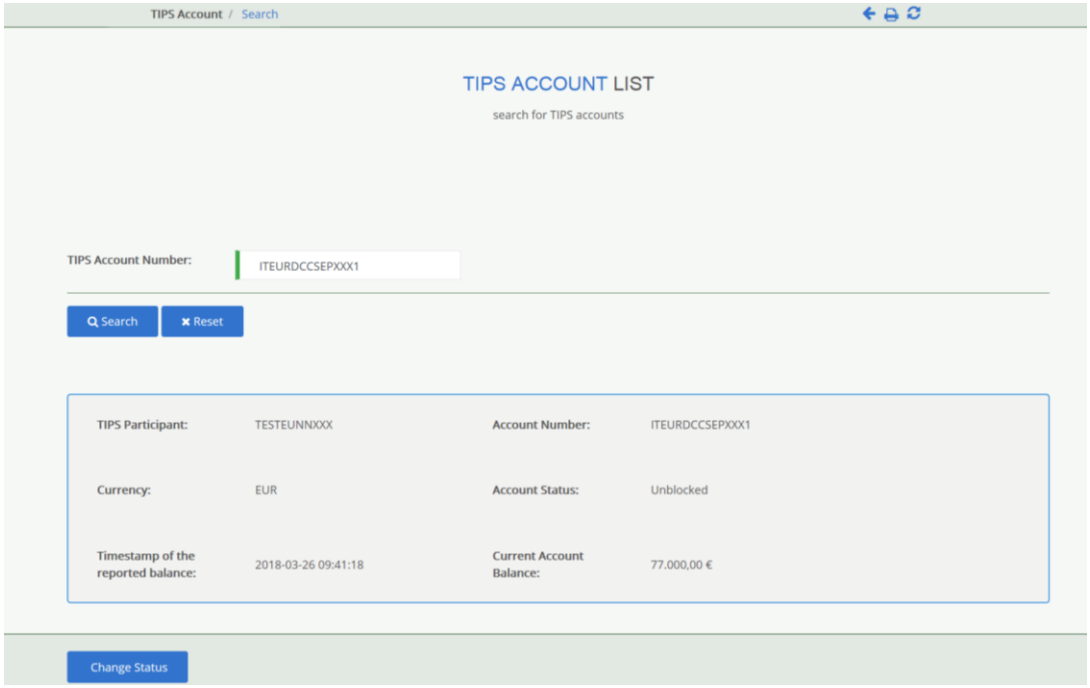
4.1.1.2 Query account balance and status – Display screen

Context of Usage The lower part of the screen displays detailed information on the balance and the status of the Account. The Change Status button is not enabled until a successful inquiry is executed.

Screen Access
- TIPS Account >> *Search* screen >> Click on the *Search* button

Privileges To use this screen, the following Privileges are needed:
- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Query Account balance and status: Results	
TIPS Participant	Shows the BIC of the party which owns the Account
Account Number	Shows the ID of the Account
Currency	Shows the currency under which the Account is denominated
Account status	Shows whether the Account is blocked for credit, blocked for debit, blocked for credit and debit, unblocked
Timestamp of the reported balance	Shows the timestamp at which the data was retrieved. Displayed format is: YYYY-MM-DD hh:mm:ss
Current Account balance	Shows the sum of unreserved and reserved balances

Buttons

Change Status	This function enables the user, if provided with the needed privilege, to access the TIPS Account blocking screen. References for error messages: [▶]: R008

4.1.2 Query CMB limit and Status

The CMB limit and status query allows the authorised actor to get the detailed information for one CMB. TIPS does not foresee the usage of wildcards, therefore only one CMB per search can be retrieved.

4.1.2.1 Credit Memorandum Balance – Search screen

Context of Usage

This screen contains the ID of the CMB as the only available search field. By inputting the relevant data, the user can search the detailed information on the limit utilisation and the status of the CMB. CMB data, which will appear in the lower part of the screen, can only be viewed by users of the Account Owner, the relevant Central Bank which created and maintains it and the relevant Instructing Party, if granted with the necessary privileges to instruct using this CMB.

Screen Access

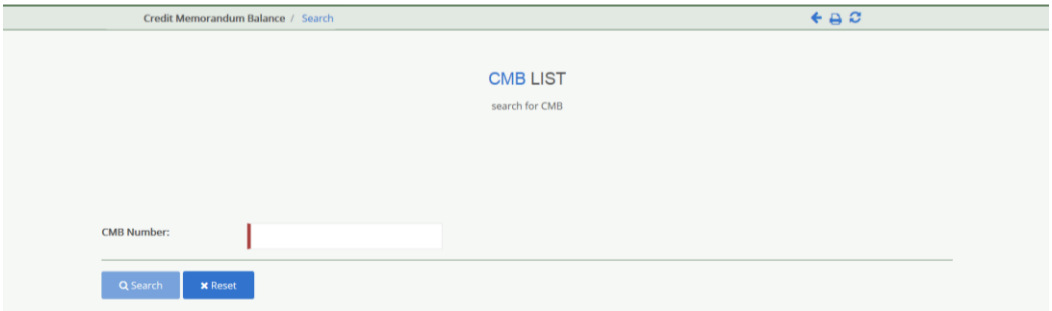
- Credit Memorandum Balance >> *Search* Screen

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Query Account balance and status: Search criterion	
Object	**Required Format**
CMB number	Max. 34 characters (SWIFT-x). References for error messages: [▶]: ▪ R006 ▪ R020

Buttons

Search	This function enables the user to retrieve the information on the selected CMB. References for error messages: [▶]: ▪ R010
Reset	This function enables the user to set the field to default value

4.1.2.2 Credit Memorandum Balance – Display screen

Context of Usage

This screen displays detailed information on the balance and the status of the CMB. Data can only be viewed by users of the Account Owner, the relevant Central Bank which

created and maintains it and the relevant Instructing Party, if granted the necessary privileges to instruct using this CMB. This function is available in both U2A and A2A mode.

The Change Status and the Modify Limit buttons are not enabled until a successful inquiry is executed.

Screen Access

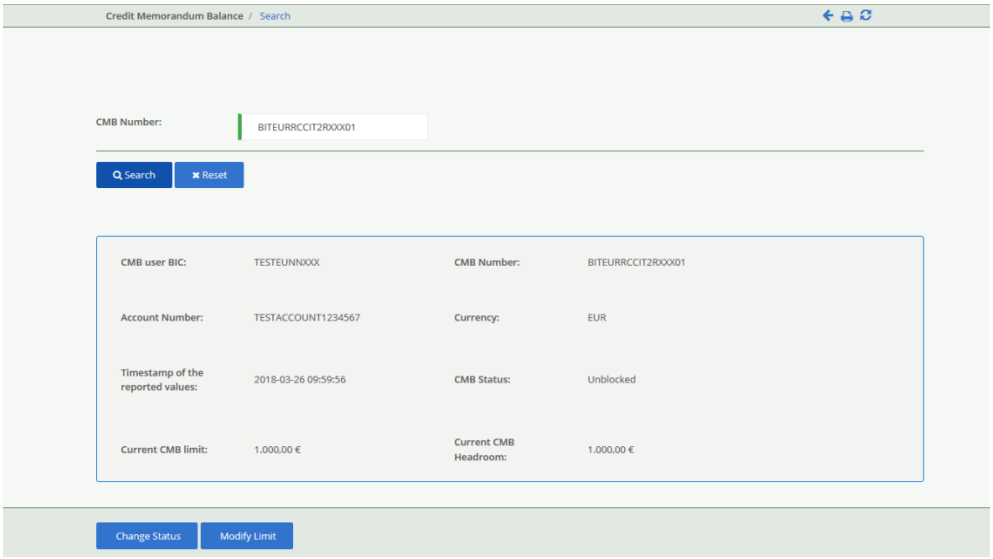
- Credit Memorandum Balance >> *Search* screen >> Click on the *Search* button

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Query CMB Limit and status: Results	
CMB user BIC	Shows the BIC of the CMB user
CMB Number	Shows the ID of the CMB, which is unique in TIPS
Account Number	Shows the ID of the Account to which the CMB is linked
Currency	Shows the currency under which the CMB is denominated
CMB status	Shows whether the CMB is blocked for credit, blocked for debit, blocked for debit and credit, unblocked
Timestamp of the reported values	Shows the timestamp at which the data was retrieved. Displayed format is: YYYY-MM-DD hh:mm:ss
Current CMB limit	Shows the maximum amount of liquidity that can be used for settlement of Instant Payments attempting to debit the selected CMB
Current CMB Headroom	Shows the amount of liquidity still available for Instant Payments debiting the selected CMB

4.1.3 Query Liquidity transfer status

The Liquidity Transfer status query allows the authorised actor to get the detailed information for one liquidity transfer. TIPS allows actors to query liquidity transfer orders which are still available in the production system, i.e. before they are purged, after a data retention period set to five calendar days.

4.1.3.1 Liquidity Transfer status – Search screen

Context of Usage

The upper part of the screen contains two search fields that must be inserted together to retrieve the relevant information. TIPS shall allow the Central Bank and the Liquidity Transfer initiator query the status of a Liquidity Transfer, which is identified by the combination of the Debtor BIC and the liquidity transfer transaction reference. This function is available only in U2A mode.
In case the user is not entitled to view the data on the searched transaction an error code is returned.

Screen Access

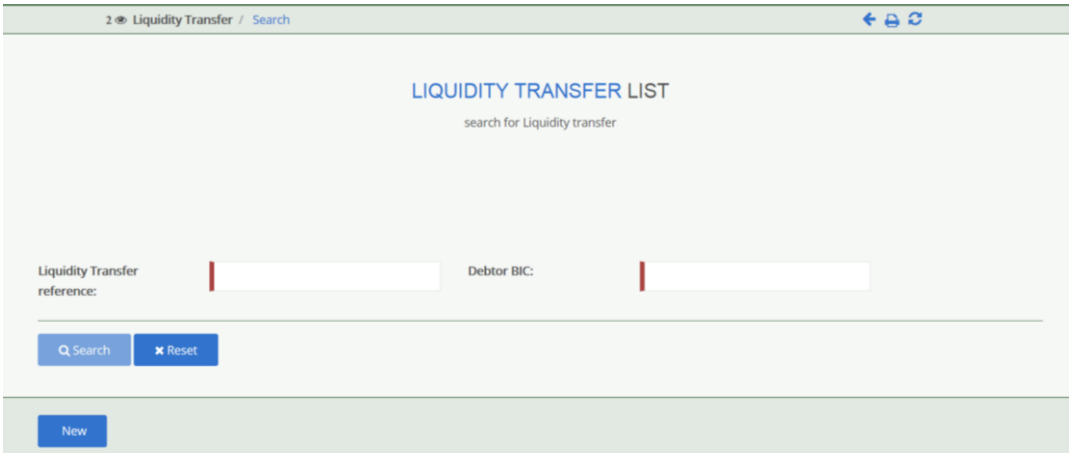
- Liquidity Transfer >> *Search* Screen

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Query Account balance and status: Search criterion	
Object	**Required Format**
Liquidity Transfer reference	camt.050 transaction Id
Debtor BIC	Field where to enter the BIC of the owner of the account to be debited. Format is BIC11.

Buttons

Search	This function enables the user to retrieve the information on the selected Liquidity Transfer.

	References for error messages: [▶]: ▌R010
Reset	This function enables the user to set the field to default value
New	This function enables the user to access the New Liquidity Transfer order screen.

4.1.3.2 Liquidity Transfer status – Details screen

Context of Usage

The lower part of the screen displays detailed information on the status of the relevant payment transaction, showing whether the transaction was settled successfully. This function is available only in U2A mode. In case the user is not entitled to view the data on the searched transaction an error code is returned.

Screen Access

▌Liquidity Transfer - *Search* Screen >> Click on the *Search* button

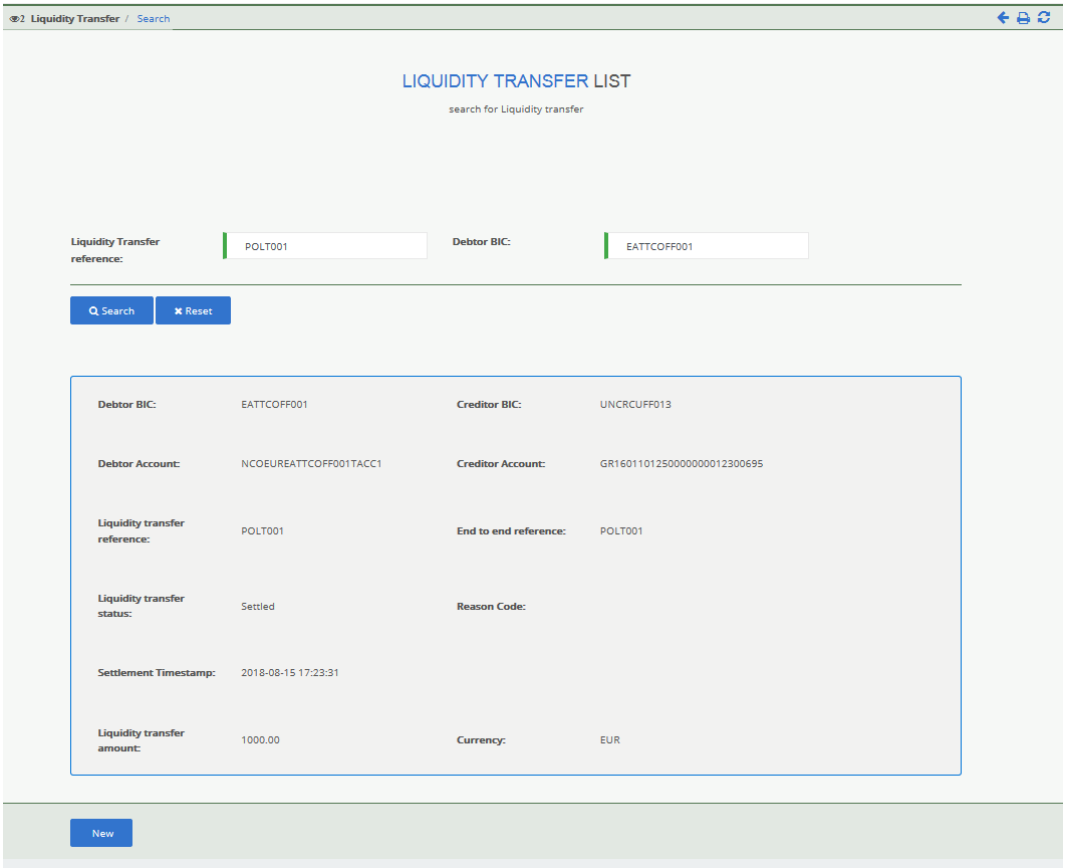
Privileges

To use this screen, the following Privileges are needed:

▌TIP_Query

▌TIP_QueryReachable

Screenshot



Field description

Query Liquidity Transfer: Result	
Debtor BIC	Shows the BIC code of the debtor of the given Liquidity transfer

Creditor BIC	Shows the BIC code of the creditor of the given Liquidity transfer
Debtor Account	Shows the debited Account
Creditor Account	Shows the credited Account
Liquidity transfer reference	Shows the reference of the liquidity transfer order
End to end reference	Shows the originator reference of the Liquidity Transfer.
Liquidity transfer status	Shows whether the instruction was settled or not settled
Reason code	Describes the reason of the unsettled status. Not filled in case the Liquidity transfer status is settled
Currency	The currency of the liquidity transfer
Settlement timestamp	Shows the time at which the Liquidity transfer was settled. Displayed format is: YYYY-MM-DD hh:mm:ss
Liquidity transfer amount	Shows the amount of the Liquidity transfer

4.1.4 Query Payment transaction

The Payment transaction status query allows the authorised actor to get the detailed information for one payment transaction. TIPS allows actors to query payment transactions which are still available in the production system, i.e. before they are purged, after a data retention period set to five calendar days.

4.1.4.1 Query Payment transaction – Search screen

Context of Usage

This screen contains two search fields that must be inserted together to retrieve the relevant information. TIPS shall allow the Originator Participant, the Instructing Party acting on behalf of the Originator Participant, the Beneficiary Participant and the Instructing Party acting on behalf of the Beneficiary Participant to query the status of a payment transaction, which is identified by the combination of the BIC of the Originator Participant or Reachable Party and the payment transaction reference.

This function is available in U2A mode only. In case the user is not entitled to view the data on the searched transaction an error code is returned.

Screen Access

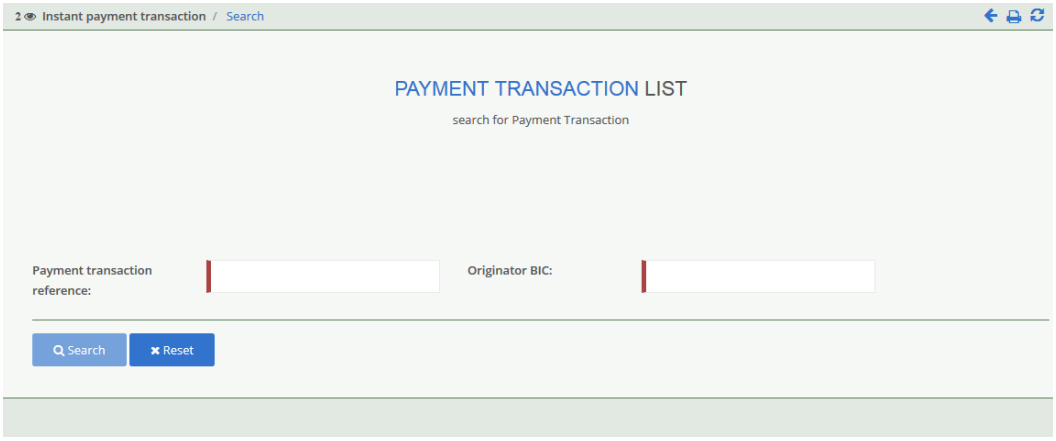
- Payment transaction >> *Search* Screen

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Query Payment transaction: Search criteria	
Object	**Required Format**
Payment transaction reference	pacs.008 (or pacs.004) transaction Id
Originator BIC	Field where to enter the BIC of the owner of the TIPS account to be debited. Format is BIC11. References for error messages: [▶]: ▌R002

Buttons

Search	This function enables the user to retrieve the information on the selected payment transaction. References for error messages: [▶]: ▌R010
Reset	This function enables the user to set the field to default value

4.1.4.2 Query Payment transaction – Display screen

Context of Usage

This screen displays detailed information on the status of the relevant payment transaction, showing whether the transaction was settled successfully. This function is available in U2A mode only. In case the user is not entitled to view the data on the searched transaction an error code is returned.

Screen Access

▌Payment transaction - *Search* Screen >> Click on the *Search* button

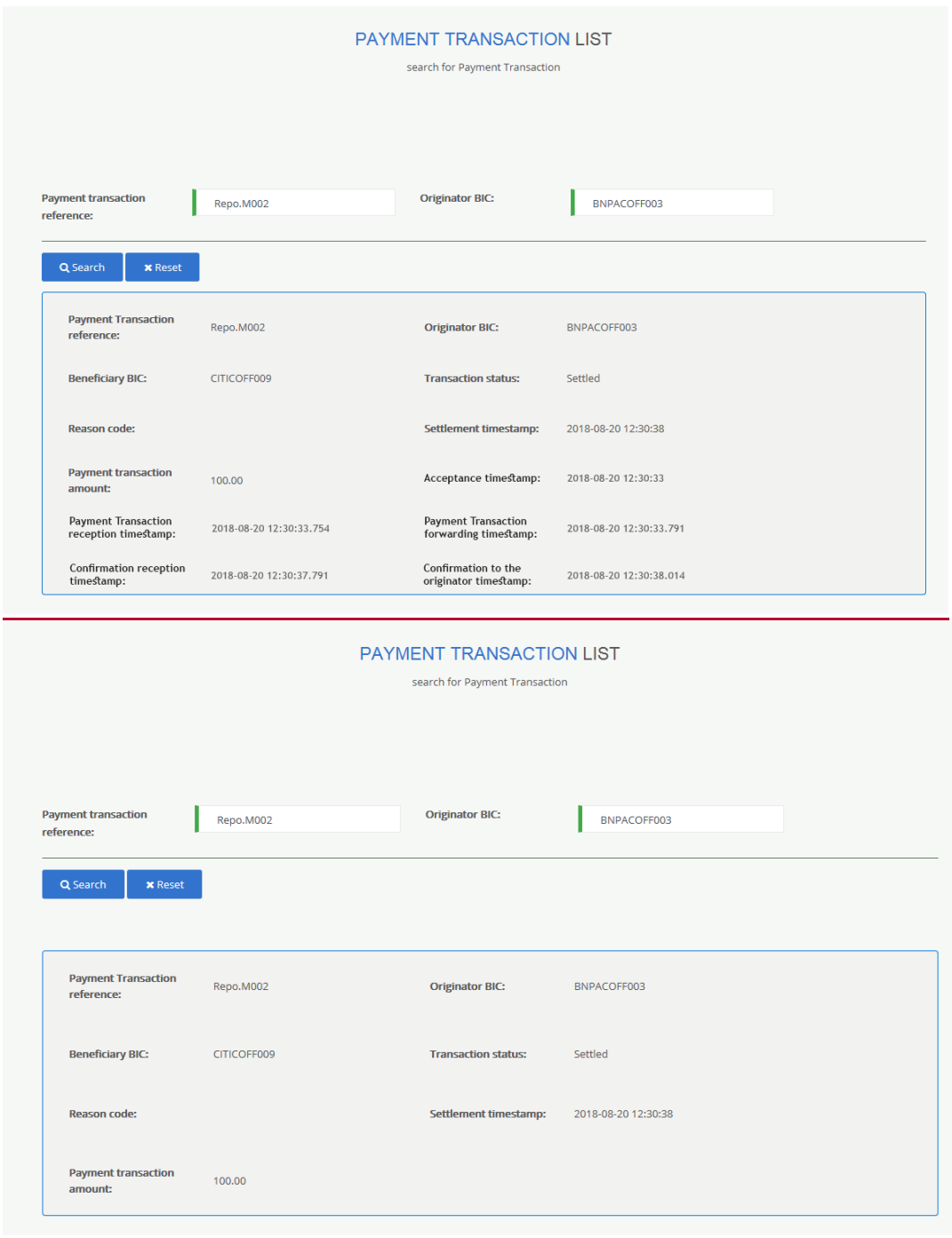
Privileges

To use this screen, the following Privileges are needed:

▌TIP_Query

▌TIP_QueryReachable

Screenshot



Field description

Query Payment transaction: Result	
Originator BIC	Shows the BIC code of the Originator Bank of the given transaction
Beneficiary BIC	Shows the BIC code of the Beneficiary Bank of the given transaction
Payment Transaction reference	Shows the reference of the transaction

Transaction status	Shows whether the instruction was settled or not settled
Reason code	Describes the reason of the unsettled status. Not filled in case the Transaction status is settled
Settlement timestamp	Shows the time at which the transaction was settled. Displayed format is: YYYY-MM-DD hh:mm:ss The field is not filled in case the transaction is not settled.
Settlement business date	Shows the RTGS business date at which the transaction was settled. Displayed format is : YYYY-MM-DD The fiel dis not filled in case the transaction is not settled.
Payment transaction amount	Shows the amount of the transaction
Acceptance timestamp	Shows the Acceptance timestamp of the instant payment. Displayed format is: YYYY-MM-DD hh:mm:ss
Payment transaction reception timestamp	Shows the timestamp when the payment transaction is received by TIPS from the originator participant. This timestamp contains the time of last update for payment accepted by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is received). Displayed format is: YYYY-MM-DD hh:mm:ss:µsµsµs
Payment transaction forwarding timestamp	Shows the timestamp when the payment transaction is forwarded to the beneficiary participant. This timestamp contains the time of last update for payment forwarded by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is sent out). Displayed format is: YYYY-MM-DD hh:mm:ss:µsµsµs
Confirmation reception timestamp	Shows, if available, the timestamp when the confirmation for a payment transaction is received by TIPS from the beneficiary participant. This timestamp contains the time of last update for payment confirmed by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is received). Displayed format is:

	YYYY-MM-DD hh:mm:ss:µsµsµs
Confirmation to the originator timestamp	Shows, if available, the timestamp when the confirmation for a payment transaction is forwarded by TIPS to the counterpart. This timestamp contains the time of last update for payment notified by TIPS (TIPS network is "stateless" and there is no evidence of the time a message is sent out). Displayed format is: YYYY-MM-DD hh:mm:ss:µsµsµs

4.2 Blocking

Due to the level of criticality entailed in the blocking of a TIPS Actor, Account or CMB, the function is made available in TIPS in real-time and on a 24/7/365 basis. These changes in the configuration of the said Reference Data objects are done using the same input stream of the Instant Payments.

4.2.1 Participant Blocking

The Actor can be blocked for crediting and/or debiting directly in TIPS and the relevant data changes will be taken into account in real-time on a 24/7/365 basis. These operations are carried out by authorised users directly in TIPS via the TIPS interface and processed in the same flow as Instant Payment transactions. The operations can be carried out by an authorised user of the Central Bank of the TIPS Participant holding the relevant Account or by an authorised user of the TIPS Operator (only in contingency situations).

Blocking a TIPS Participant for debiting/crediting results in an equivalent blocking on all Accounts owned by that Participant and all the CMBs linked to those Accounts. The individual Account and CMB blocking status is not overwritten. When crediting or debiting a TIPS Account, TIPS also checks the Owner Participant blocking status. If this Participant is blocked, the whole payment operation is rejected. Unblocking the TIPS Participant means that all of its Accounts and CMBs revert back to their individual blocking status.

Blocking/Unblocking status is also available, with non-immediate effect, in the CRDM; any change that is propagated from the CRDM to TIPS does not overwrite these values if they have been changed within TIPS via an immediate change.

The possible values that an Actor can assume are:

- Unblocked;
- Blocked for debiting;
- Blocked for crediting;
- Blocked for crediting/debiting.

4.2.1.1 TIPS Participant– Search/Display Screen

Context of Usage

This screen contains the BIC of the Participant whose Blocking status has to be changed as the only available search field. Participant data can only be viewed by the relevant Central Bank which created and maintains it. This function is available in both U2A and A2A mode.

Screen Access

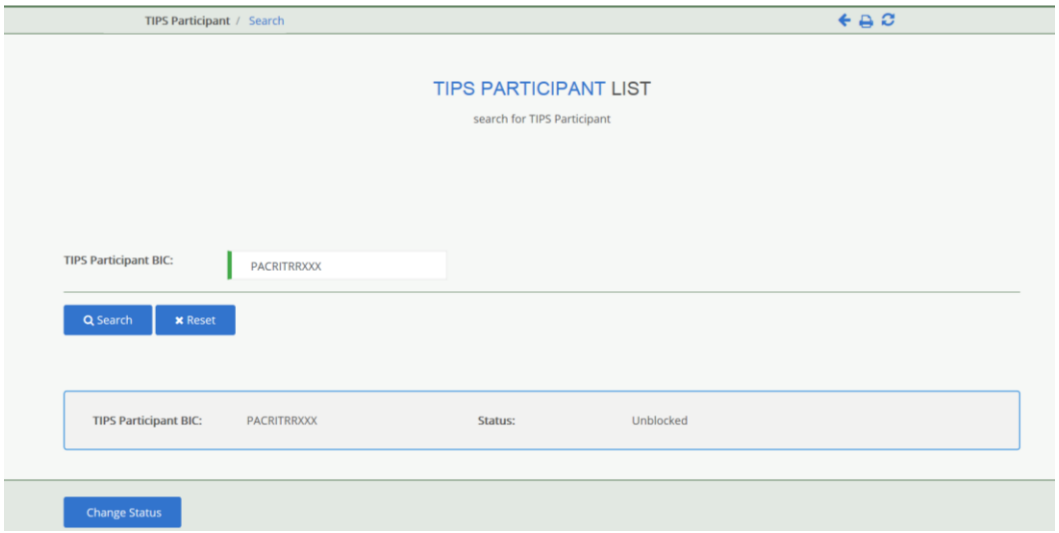
- TIPS Participant >> *Search/display* screen

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable
- TIP_ModifyAllBlocking

Screenshot



Field description

TIPS Participant Blocking: Search criterion	
Object	**Required Format**
TIPS Participant BIC	Field where to enter the BIC of the owner of the TIPS Account to be debited. Format is BIC11. References for error messages: [▶]: ▌R002

TIPS Participant Blocking	
TIPS Participant BIC	Shows the BIC of the Party whose Blocking status the user is checking
Status	Shows the blocking status of the TIPS Participant. Possible values are: Unblocked, Blocked for Debiting, Blocked for Crediting, Blocked for Crediting/Debiting

Buttons

Search	This function enables the user to Search the Blocking status of the selected Participant. References for error messages: [▸]: ▌R010
Reset	This function enables the user to set the field to default value
Change Status	This function enables to access the Change Status screen where to modify the Blocking status of the Participant. References for error messages: [▸]: ▌R009

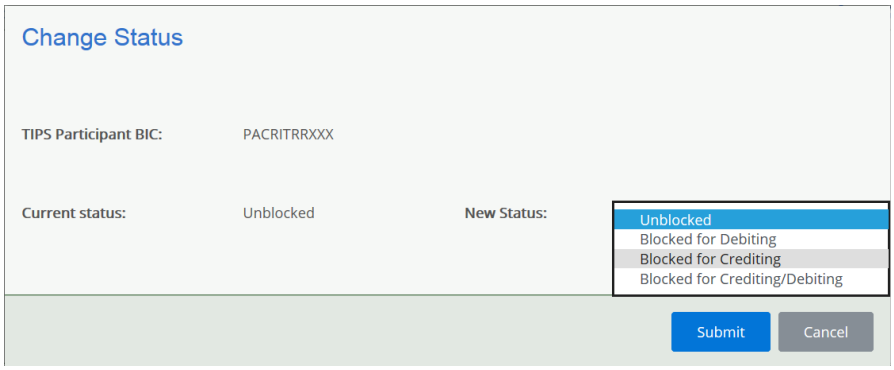
4.2.1.2 Participant Blocking – Change Status Screen

Context of Usage This screen contains a number of fields regarding the Actor Blocking. You can enter a blocking status, modify an existing blocking status or remove an existing blocking status. You can use this screen either in 2-eyes or in 4-eyes mode. This function is available in both U2A and A2A mode.

Screen Access
▌TIPS Participant >> *Search/display* Screen >> Click on the *Search* button >>
Click on the *Change Status* button

Privileges To use this screen, the following Privilege is needed:
▌TIP_ModifyAllBlocking

Screenshot



Field description

TIPS Participant blocking	
Object	**Description**
TIPS Participant BIC	Shows the BIC of the Party whose Blocking status the user is modifying
Current status	Shows the current blocking status of the TIPS Participant.
New Status	Drop-down menu where to choose the new value of the Blocking status. Possible values are: Unblocked, Blocked for Debiting, Blocked for Crediting, Blocked for Crediting/Debiting. In case the actor chooses a New Status that is identical to the Current status, an error message appears

Buttons

Submit	This function enables the user to Submit the desired Blocking status for the TIPS Participant. Upon clicking on the submit button you will be asked to enter your PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor
Cancel	This function enables the user to cancel the process and return to the previous screen

4.2.2 Account Blocking

The Account can be blocked for crediting and/or debiting directly in TIPS and the relevant data changes will be taken into account in real-time on a 24/7/365 basis. These operations are carried out by authorised users directly in TIPS via the TIPS interface and processed in the same flow as Instant Payment transactions. The operations can be carried out by an authorised user of the Central Bank of the TIPS Actor holding the relevant Account or by an authorised user of the TIPS Operator (only in contingency situations).
Blocking/Unblocking status is also available, with non-immediate effect, in the CRDM; any change that is propagated from the CRDM to TIPS does not overwrite these values if they have been changed within TIPS via an immediate change.

The possible values that an Account can assume are:

- Unblocked;
- Blocked for debiting;
- Blocked for crediting;
- Blocked for crediting/debiting.

The blocking status of an Account or a CMB is not taken into account in case the Participant holding the Account or the CMB is blocked. Only once the TIPS Participant is unblocked the blocking status of the related Account and CMB is taken into consideration.
Blocking a TIPS Account for debiting/crediting results in an equivalent blocking on all CMBs linked to that Account. The individual CMB blocking status is not overwritten. When crediting or debiting a CMB, TIPS also credits or debits the related account. If this account is blocked, the whole payment operation is rejected. Unblocking the TIPS Account means that all linked CMBs revert back to their individual blocking status.

4.2.2.1 Account Blocking – Search/display Screen

Context of Usage This screen contains the ID of the TIPS Account whose Blocking status has to be changed as the only available search field. Account data can only be viewed by the relevant Central Bank which created and maintains it. This function is available in both U2A and A2A mode.

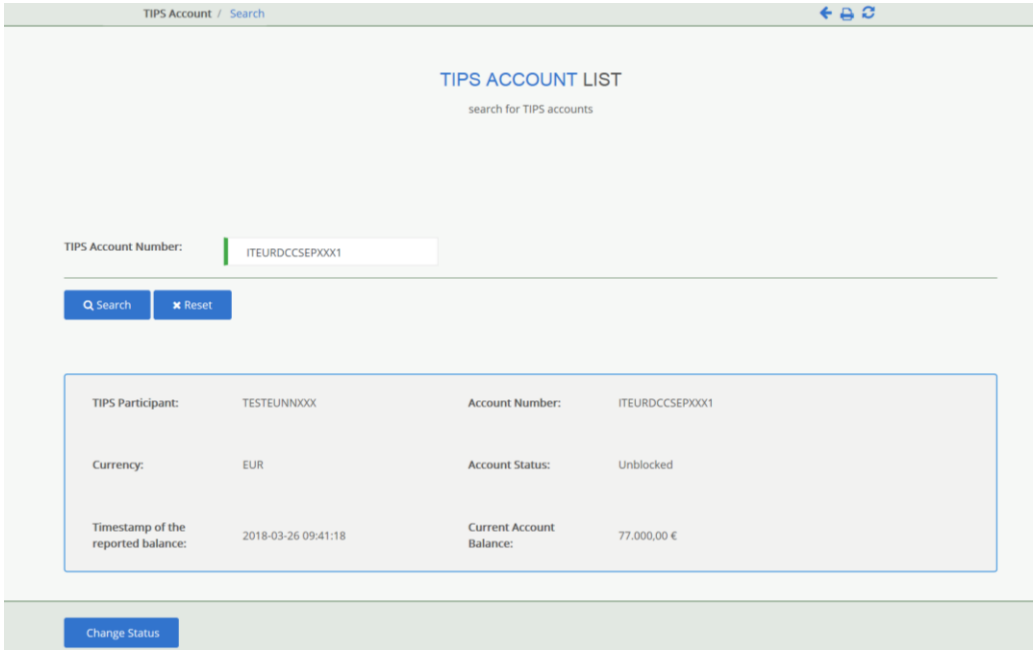
Screen Access
- TIPS Account >> *Search/display* screen >> Click on the *Search* button

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable
- TIP_ModifyAllBlocking

Screenshot



Field description

Account Blocking: Search criteria	
Object	**Required Format**
TIPS Account Number	Max. 34 characters (SWIFT-x). References for error messages: [ ]: - R006

Account Blocking	
TIPS Participant	Shows the BIC of the party which owns the Account
Account Number	Shows the ID of the Account whose Blocking status the user is checking
Currency	Shows the currency under which the Account is denominated
Account Status	Shows the blocking status of the TIPS Account. Possible values are: Unblocked, Blocked for Debiting, Blocked for Crediting, Blocked for Crediting/Debiting
Timestamp of the reported balance	Shows the timestamp at which the data was retrieved. Displayed format is: YYYY-MM-DD hh:mm:ss
Current Account Balance	Shows the sum of unreserved and reserved balances

Buttons

Search	Th se Re -
Reset	Th
Change Status	Th cr Re -

4.2.2.2 Account Blocking – Change Status Screen

Context of Usage

This screen contains a number of fields regarding the TIPS Account Blocking. The user can enter a blocking status. This screen can be used either in 2-eyes or in 4-eyes mode. This function is available in both U2A and A2A mode.

Screen Access

- TIPS Account >> *Search/display* screen >> Click on the *Search* button >>

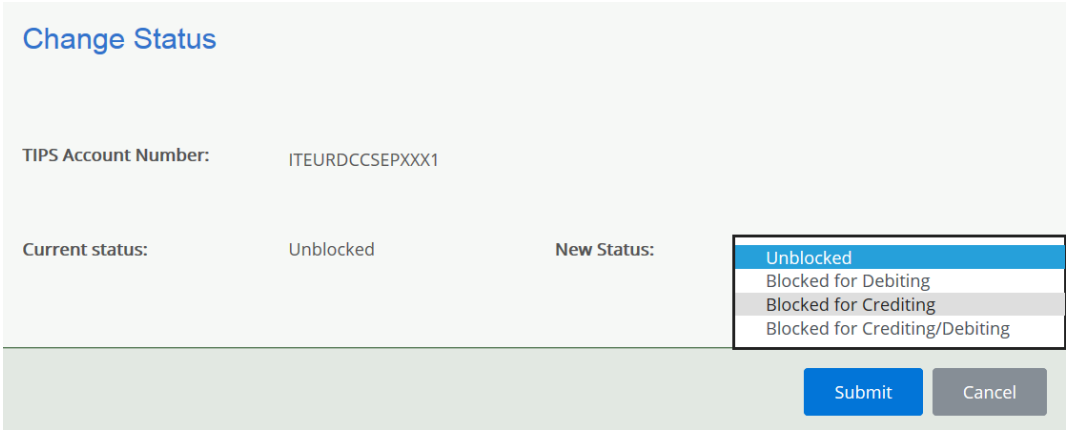
Click on the *Change Status* Button

Privileges

To use this screen, the following Privilege is needed:

- TIP_ModifyAllBlocking

Screenshot



Field description

TIPS Account Blocking	
Object	**Description**
TIPS Account Number	Shows the ID of the Account whose Blocking status the user is modifying
Current status	Shows the current blocking status of the TIPS Account.
New Status	Drop-down menu where to choose the new value of the Blocking status. Possible values are: Unblocked, Blocked for Debiting, Blocked for Crediting, Blocked for Crediting/Debiting. In case the actor chooses a New Status that is identical to the Current status, an error message appears

Buttons

Submit	This function enables the user to Submit the desired Blocking status for the TIPS Account. Upon clicking on the submit button the user will be asked to enter their PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor
Cancel	This function enables the user to cancel the process and return to the previous screen

4.2.3 CMB Blocking

The CMB can be blocked for crediting and/or debiting directly in TIPS and the relevant data changes will be taken into account in real-time on a 24/7/365 basis. These operations are carried out by authorised users directly in TIPS via the TIPS interface and processed in the same flow as Instant Payment transactions. The operations can be carried out by an authorised user of the TIPS Actor holding the Account, of the Central Bank of the TIPS Participant holding the Account, of the Instructing Party authorised by the TIPS participant or by an authorised user of the TIPS Operator (only in contingency situations).

Blocking/Unblocking status is also available, with non-immediate effect, in the CRDM; any change that is propagated from the CRDM to TIPS does not overwrite these values if they have been changed within TIPS via an immediate change.

The possible values that a CMB can assume are:

- Unblocked;
- Blocked for debiting;
- Blocked for crediting;
- Blocked for crediting/debiting.

The blocking status of a CMB is not taken into account in case the relevant Account or the Party holding the Account are blocked. Only once the TIPS Actor and the TIPS Account are unblocked the blocking status of the related CMBs is taken into consideration.

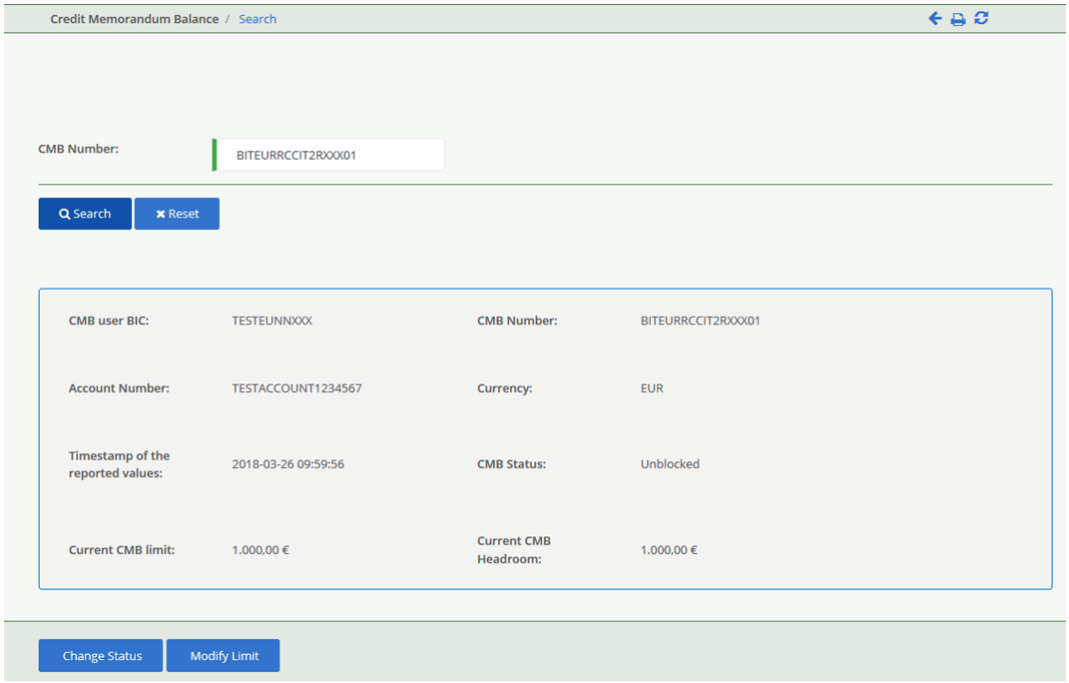
4.2.3.1 CMB Blocking – Search/display screen

Context of Usage This screen contains the ID of the CMB whose Blocking status has to be changed as the only available search field. This function is available in both U2A and A2A mode.

Screen Access
- Credit Memorandum Balance >> *Search/display* screen >> Click on the *Search* button

Privileges To use this screen, the following Privileges are needed:
- TIP_Query
- TIP_QueryReachable
- TIP_ModifyCMBBlocking

Screenshot



Field description

CMB Blocking: Search criteria	
Object	**Required Format**
CMB Number	Max. 34 characters (SWIFT-x). References for error messages: [ ]: ▌R006 ▌R020

CMB Blocking	
CMB user BIC	Shows the BIC of the CMB user
CMB Number	Shows the ID of the CMB whose Blocking status the user is checking
Account Number	Shows the ID of the Account to which the CMB is linked
Currency	Shows the currency under which the CMB is denominated
CMB Status	Shows the blocking status of the CMB. Possible values are: Unblocked, Blocked for Debiting, Blocked for Crediting, Blocked for Crediting/Debiting
Timestamp of the reported values	Shows the timestamp at which the data was retrieved. Displayed format is: YYYY-MM-DD hh:mm:ss
Current CMB limit	Shows the maximum amount of liquidity that can be used for settlement of Instant Payments attempting to debit the selected CMB

Current CMB Headroom	Shows the amount of liquidity still available for Instant Payments debiting the selected CMB

Buttons

Search	This function enables the user to Search the Blocking status of the selected CMB. References for error messages: [▸]: ▸ R010
Reset	This function enables the user to set the field to default value
Change Status	This function enables to access the Change Status where to create or modify the Blocking status of the CMB. References for error messages: [▸]: ▸ R009
Modify Limit	This function enables to access the Modify Limit screen where to create/update the Limit References for error messages: [▸]: ▸ R021

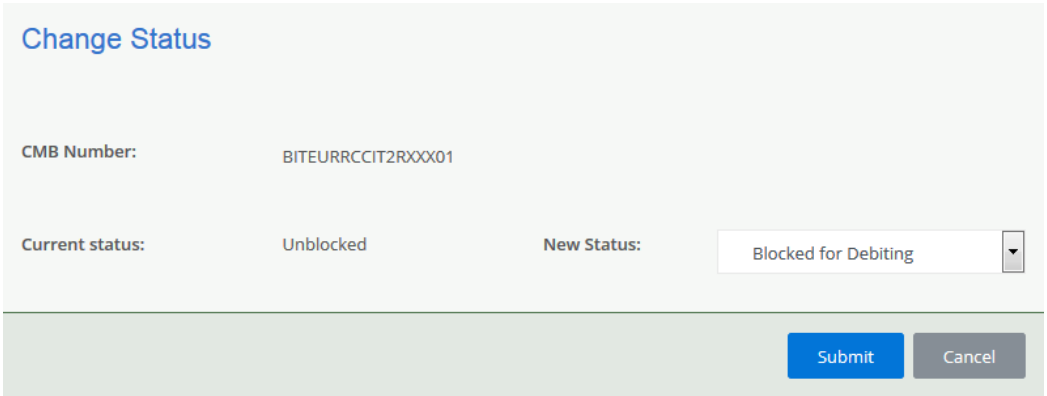
4.2.3.2 CMB Blocking – Change Status Screen

Context of Usage This screen contains a number of fields regarding the CMB Blocking. You can enter a blocking status, modify an existing blocking status or delete an existing blocking status. You can use this screen either in 2-eyes or in 4-eyes mode. This function is available in both U2A and A2A mode.

Screen Access ▸ Credit Memorandum Balance >> *Search/display* screen >> Click on the *Search* button >> Click on the *Change Status* Button

Privileges To use this screen, the following Privilege is needed:
▸ TIP_ModifyCMBBlocking

Screenshot



Field description

CMB Blocking	
Object	**Description**
CMB Number	Shows the ID of the CMB whose Blocking status the user is modifying

Current status	Shows the current blocking status of the TIPS CMB.
New Status	Drop-down menu where to choose the new value of the Blocking status. Possible values are: Unblocked, Blocked for Debiting, Blocked for Crediting, Blocked for Crediting/Debiting. In case the actor chooses a New Status that is identical to the Current status, an error message appears

Buttons

Submit	This function enables the user to Submit the desired Blocking status for the CMB. Upon clicking on the submit button you will be asked to enter your PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor
Cancel	This function enables the user to cancel the process and return to the previous screen.

4.3 Limit management

The limit is the maximum amount of liquidity available for a CMB. It is the sum of the utilisation (amount of cash used for that CMB) and the headroom (amount of cash still available for that CMB). It can be modified at all times directly in TIPS. Limit management functions are also available, with non-immediate effect, in the CRDM.

A CMB can be defined without a limit. In this case, it is possible to make full use of the capacity of the related Account without any limitation. For unlimited CMBs, the headroom must always be considered infinite and, conversely, the utilisation always zero.

CMBs offer the possibility to define limit management flexibly on a TIPS Account without dedicating liquidity exclusively for each single customer. Specifically, the sum of all CMB limits on a TIPS Account can be higher than the balance of the same Account at any time.

The CMB limit can be modified independently as a reference data update directly in TIPS (although the service is available also on the CRDM), which leads to the headroom being recalculated accordingly.

If a limit is set for a previously unlimited CMB, the headroom and utilisation are calculated starting from the moment the limit is set. In other words, the headroom is automatically set to the same value as the limit, while the utilisation remains zero. These values are then normally updated with each subsequent payment transaction and limit change.

When a CMB limit is modified, the headroom and utilisation are updated accordingly. It is possible that a change in a limit leads the headroom to become negative, after which the CMB will only accept Instant Payments in credit until the headroom is again more than zero.

The increase and reduction of a CMB limit has no effect on the values of the other possible CMB limits linked with the same TIPS Account.

4.3.1 CMB Limit modification

The limit is the only CMB feature, together with the blocking feature, that can be modified in A2A and U2A mode directly in TIPS.

The new limit is immediately taken into consideration after it is set, i.e. the headroom and the utilisation are calculated starting from the moment the limit is modified.
The limit can be modified directly in TIPS and the relevant data changes will be taken into account in real-time on a 24/7/365 basis. These operations are carried out by authorised users directly in TIPS and processed in the same flow as Instant Payment transactions. The operations can be carried out by the TIPS participant holding the Account, by the relevant Central Bank, by an Instructing Party authorised by the TIPS participant or by the TIPS Operator (only in contingency situations).
Limit update is also available, with non-immediate effect, in the CRDM.

4.3.1.1 CMB Limit Modification – Search/display screen

Context of Usage

This screen contains the ID of the CMB as the only available search field. By inputting the relevant data, you can add, modify or delete the limit of the searched CMB. CMB data can only be viewed by the Account Owner, the relevant Central Bank which created and maintains it and the relevant Instructing Party, if granted the necessary privileges. The lower part of the screen shows detailed information about the CMB.

Screen Access

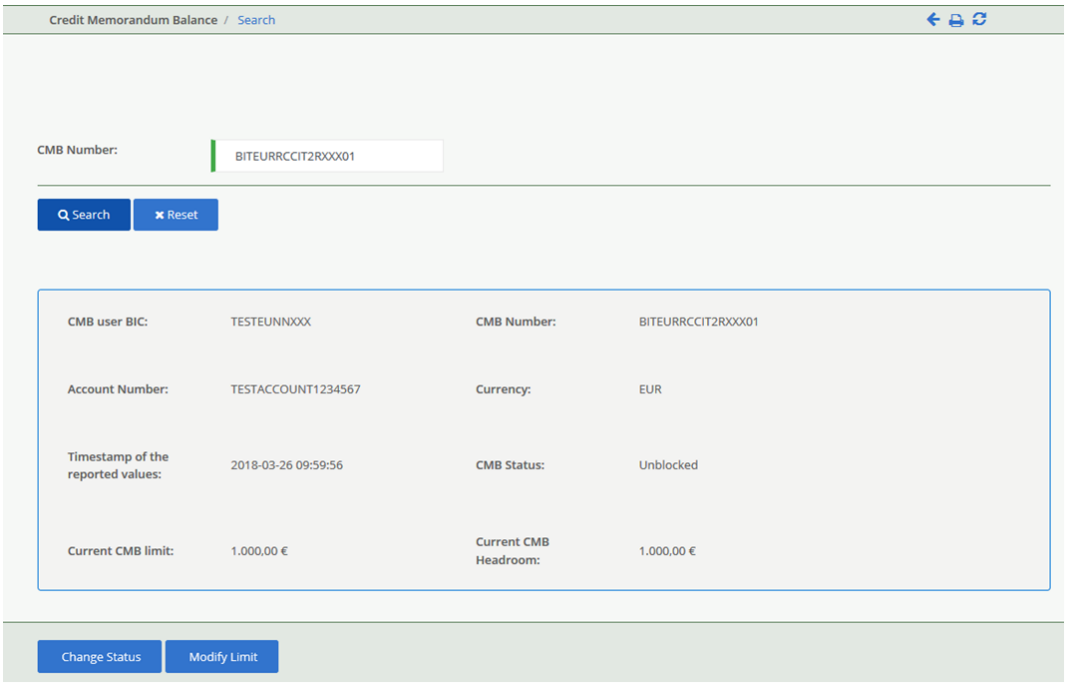
- Credit Memorandum Balance >> *Search/display* screen >> Click on the *Search* button

Privileges

To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable
- TIP_AdjustCMBLimit

Screenshot



Field

CMB Limit Modification: Search criterion

description

Object	Required Format
CMB Number	Max. 34 characters (SWIFT-x). References for error messages: [▶]: ▌R020

CMB Limit Modification	
Object	**Description**
CMB user BIC	Shows the BIC of the CMB user
CMB Number	Shows the ID of the CMB, which is unique in TIPS and whose Limit the user wants to create or update
Account Number	Shows the ID of the Account to which the CMB is linked
Currency	Shows the currency under which the CMB is denominated
CMB status	Shows whether the CMB is blocked for credit, blocked for debit, blocked for debit and credit, unblocked
Timestamp of the reported values	Shows the timestamp at which the data was retrieved. Displayed format is: YYYY-MM-DD hh:mm:ss
Current CMB Limit	Shows the maximum amount of liquidity that can be used for settlement of Instant Payments attempting to debit the selected CMB
Current CMB Headroom	Shows the amount of liquidity still available for Instant Payments debiting the selected CMB

Buttons

Search	This function enables to access the lower part of the screen where to view the CMB details. References for error messages: [▶]: ▌R010
Change Status	This function enables the user, if provided with the needed privilege, to access the CMB blocking screen. References for error messages: [▶]: ▌R008
Modify Limit	This function enables to access the Modify Limit screen where to create/update the Limit. References for error messages: [▶]: ▌R021

4.3.1.2 CMB Limit Modification – Modify Limit screen

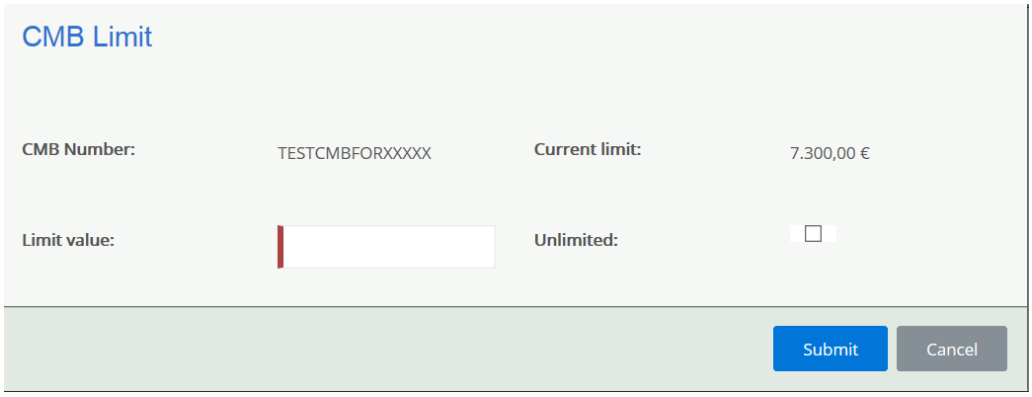
Context of This screen contains a number of fields regarding the CMB Limit. The user can enter a new Limit or set the CMB to Unlimited. This screen can be used either in 2-eyes or in 4-eyes

Usage mode. This function is available in both U2A and A2A mode.

Screen Access
- Credit Memorandum Balance >> *Search/display* screen >> Click on the *Search* button >> Click on the *Modify Limit* button

Privileges To use this screen, the following Privilege is needed:
- TIP_AdjustCMBLimit

Screenshot



Field description

CMB Limit Modification	
Object	**Description**
CMB Number	Shows the ID of the CMB, which is unique in TIPS and whose Limit the user wants to create or update
Current Limit	Shows the current Limit of the TIPS CMB
Limit Value	Field where to enter the amount of the Limit for the CMB. In case the actor inserts a Limit that is identical to the Current Limit, an error message appears. In case the actor inserts a value the Unlimited value Radio button will not be available
Unlimited value	Radio button to fill with a checkmark in case the user wants to set the Limit value of the CMB to Unlimited. In case the Current limit is already unlimited this button is not available

Buttons

Submit	This function enables to create or modify a CMB Limit according to the information entered. Upon clicking on the submit button the user will be asked to enter their PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor
Cancel	This function enables the user to cancel the process and return to the previous screen.

4.4 Liquidity Transfer

TIPS supports Central Bank Money liquidity transfers between accounts denominated in the same currency from TIPS to an RTGS System (Outbound) or vice versa from an RTGS System to TIPS (Inbound).

The Outbound Liquidity Transfer functionality can be triggered in A2A and in U2A via a dedicated TIPS GUI screen and is executed immediately. The process foresees that an authorised entity, e.g. a TIPS Participant, Instructing Party, if having necessary privileges or Central Bank acting on behalf, triggers an Outbound Liquidity Transfer order towards the corresponding RTGS System, in the form of a Liquidity Transfer message. A target RTGS Account must be specified. No reservation of funds occurs in this scenario and settlement takes place immediately.

4.4.1 Liquidity Transfer functionality

This section describes the processing of an Outbound Liquidity Transfer order sent by a Central Bank, a Participant or an Instructing Party acting on behalf of the Participant in order to transfer liquidity from a TIPS Account to an RTGS Account. Central Banks shall be able to initiate an Outbound Liquidity Transfer even if the closing date of the TIPS Account is exceeded and regardless of the TIPS account's blocking status.

4.4.1.1 Liquidity Transfer - New screen

Context of Usage

This screen contains a number of fields regarding immediate liquidity transfers. You can enter data to create a new outbound liquidity transfer. TIPS shall allow the TIPS Participant which is the owner of the TIPS Account to be debited or the Instructing Party (if granted the necessary privileges to instruct) or the relevant Central Bank to trigger this function. You can use this screen either in 2-eyes or in 4-eyes mode. This function is available in both U2A and A2A mode. In case the Actor is not entitled to launch the Outbound Liquidity Transfer no access to the screen is possible.

Screen Access

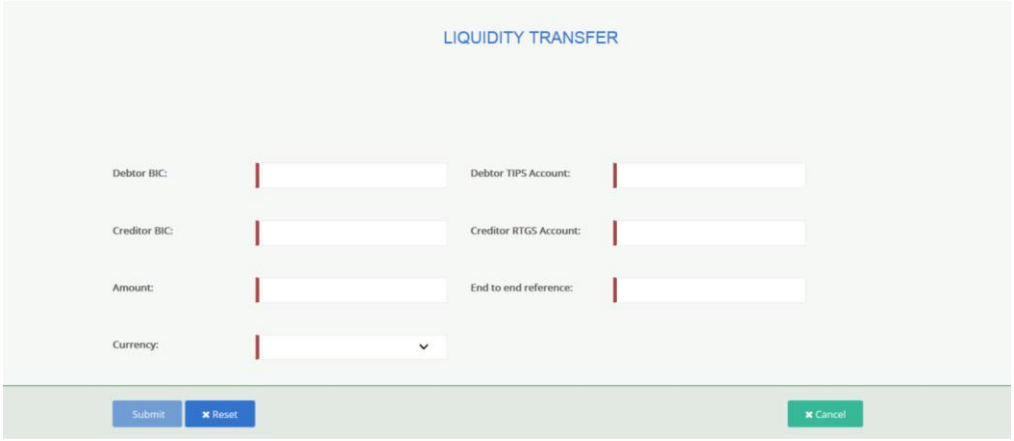
- Liquidity Transfer >> *Search* screen >> Click on the *New* button

Privileges

To use this screen, the following Privilege is needed:

- TIP_LiquidityTransfer

Screenshot



Field description

Liquidity Transfer	
Object	**Required Format**
Debtor BIC	Field where to enter the BIC of the owner of the TIPS Account to be debited. Format is BIC11. References for error messages: [▸]: ▌L002
Debtor TIPS Account	Field where to enter the TIPS Account to be debited. Format is max. 34 characters (SWIFT-x). References for error messages: [▸]: ▌L002
Creditor BIC	Field where to enter the BIC11 of the owner of the RTGS Account to be credited. Format is BIC11. References for error messages: [▸]: ▌L001
Creditor RTGS Account	Field where to enter the RTGS Account to be credited. Format is max. 34 characters (SWIFT-x). References for error messages: [▸]: ▌L001
Amount	Field where to enter the amount to be transferred with the Liquidity Transfer. Format is max. 18 digits including the decimal point and up to 5 decimal places. References for error messages: [▸]: ▌L012

Currency	Field where to enter the currency used for the amount of the Liquidity Transfer. It has to be the same as the currency of the Debtor and the Creditor Accounts. Required format is: 3 characters (SWIFT-x). References for error messages: [▸]: ▌R007
End to end reference	End to end identifier for the requested credit transfer. Format is max. 16 characters (SWIFT-x)

Buttons

Submit	This function enables to Inject the Outbound Liquidity Transfer according to the information entered. Upon clicking on the submit button the user will be asked to enter their PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor. References for error messages: [▸]: ▌L005 ▌L006 ▌L007 ▌L008 ▌L009 ▌L011 ▌L012 ▌TBL1
Reset	This function enables the user to set all fields to default value and blanks out all optional fields.
Cancel	This function enables the user to cancel the process

4.5 Task List

This functions is used to confirm or revoke all the reference and dynamic data changes that were initiated in 4-eyes mode, thus adding the check of a second user before completing the action.

4.5.1 Task List functionality

4.5.1.1 Task List – Search/List Screen

Context of Usage This screen contains the Action type, the User reference, the Object identifier, the Timestamp of update and the Status , as search fields. You can use this screen to find the item waiting for approval and then approve or revoke it. The 4-Eyes functionality is available for the following functions: Block/Unblock of a Party, Block/Unblock of an Account, Block/Unblock of a CMB, Limit Update and Outbound Liquidity Transfer. This function is only available in U2A mode.

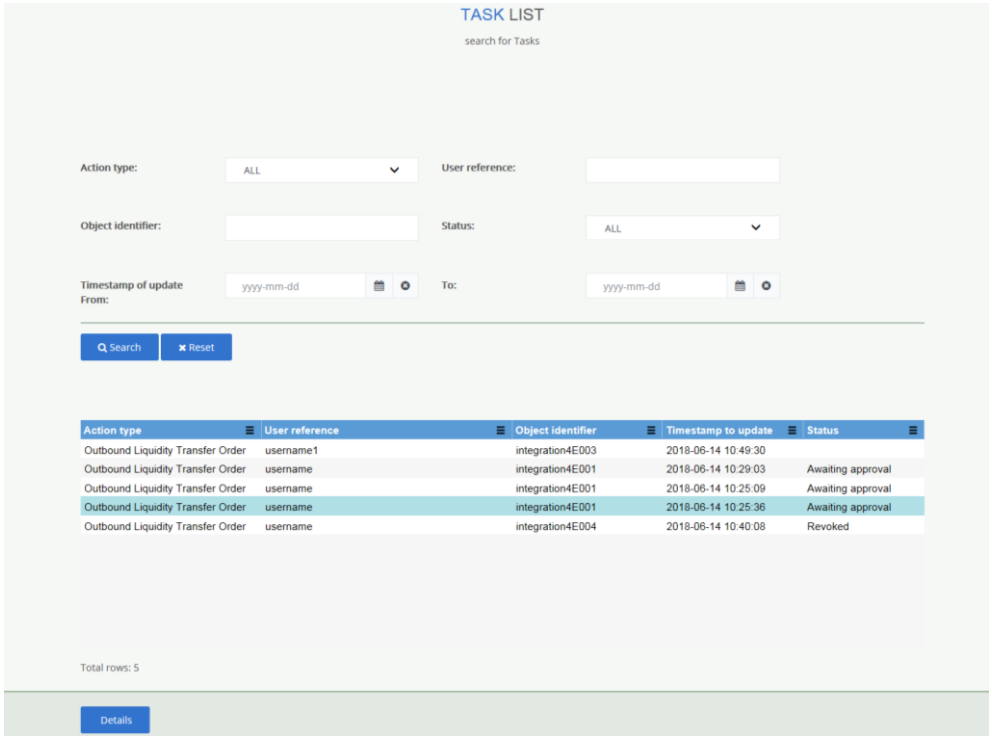
The search results will be displayed in a list, which is sorted by the values of the Timestamp of update in descending order.

Screen Access
- Task List >> *Search/List* Screen

Privileges To use this screen, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Screenshot



Field description

Task List: Search criteria	
Action type	Select the type of action initiated by the first user for a dedicated reference or dynamic data object from the possible values: ▌All ▌Block/Unblock Party ▌Block/Unblock Account ▌Block/Unblock CMB ▌Update CMB Limit ▌Outbound Liquidity Transfer Order
User reference	Type the identification of the user that entered the Action to be approved/revoked. Required format is: max. 35 characters (SWIFT-x) References for error messages: [▶]: ▌DS14
Object identifier	Enter the identifier of the object. Possible values are: ▌Party BIC in case of Block/Unblock Party ▌Account number in case of Block/Unblock Account ▌CMB number in case of Block/Unblock CMB ▌CMB number in case of Update Limit ▌Transaction reference in case of Outbound LTO
Timestamp of update from	Enter the lower bound of the date and time from which the Action was requested. Required format is: YYYY-MM-DD hh:mm:ss
Timestamp of update to	Enter the upper bound of the date and time from which the Action was requested. Required format is: YYYY-MM-DD hh:mm:ss
Status	Select the status of the Action from the possible values: ▌All ▌Awaiting approval ▌Approved ▌Revoked

Task List: List	
Action type	Type of action initiated by the first user for a dedicated reference or dynamic data object. Possible values are: ▌Block/Unblock Party ▌Block/Unblock Account ▌Block/Unblock CMB ▌Update CMB Limit ▌Outbound Liquidity Transfer Order
User reference	User that entered the Action to be approved/revoked

Object Identifier	Business identifier of the object whose Status the user is checking. Possible values are: ▌Party BIC in case of Block/Unblock Party ▌Account number in case of Block/Unblock Account ▌CMB number in case of Block/Unblock CMB ▌CMB number in case of Update Limit ▌Transaction reference in case of Outbound LTO
Timestamp of update	Shows the timestamp at which the Action was inserted by the first user. Displayed format is: YYYY-MM-DD hh:mm:ss
Status	Shows the status of the Action. Possible values are: ▌All ▌Awaiting approval ▌Approved ▌Revoked

Buttons

Search	This function enables to retrieve the list of actions initiated by the first user. In case there is only one Action the approver is automatically redirected to the Details screen where to Approve or Revoke the Action. References for error messages: [▶]: ▌R009
Reset	This function enables the user to set all fields to default value and blanks out all optional fields.
Details	This function enables the user to display the details of the selected task.

4.5.1.2 Task List – Details Screen

Context of Usage This screen contains a number of fields regarding the Action Awaiting approval. In case the Actor is not entitled to view the data on the searched transaction an error code is returned.

Screen Access
▌Task List >> *Search/List* Screen >> Click on the *Search* button >> *List* screen >> Click on the *Details* button

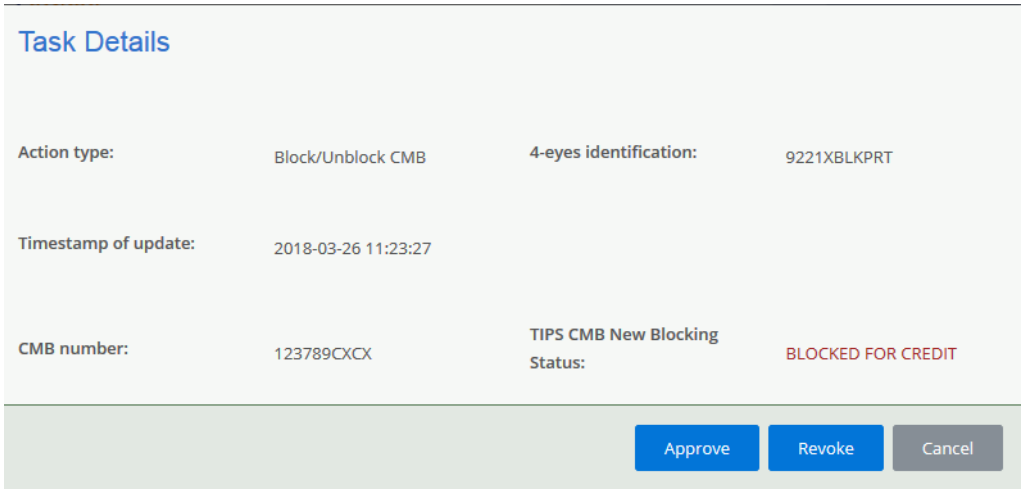
Privileges To use this screen, the following Privileges are needed:
▌TIP_ModifyAllBlocking[11]
▌TIP_ModifyCMBBlocking[12]
▌TIP_AdjustCMBLimit[13]

[11] In case the action to approve or revoke is the modification of the TIPS Participant Blocking status or the TIPS Account Blocking status

[12] In case the action to approve or revoke is the modification of the TIPS CMB Blocking status

- TIP_LiquidityTransfer[14]

Screenshot



Field description

Selected Task	
Object	**Description**
Action type	Shows type of Action the user is about to Approve or Revoke
4-Eyes identification	Shows the ID of the Action
Timestamp of update	Shows the time at which the Action was triggered by the first user. Displayed format is: YYYY-MM-DD hh:mm:ss
Details of Selected Task	
Block/Unblock Party	
TIPS Participant BIC	Shows the BIC of the Party whose new Blocking status the user is Approving/Revoking
TIPS Participant New Blocking Status	Shows the New Blocking status that is awaiting for approval. It is shown in red in the screen.
Block/Unblock Account	
TIPS Account Number	Shows the ID of the Account whose Blocking status the user is modifying
TIPS Account New Blocking Status	Shows the New Blocking status that is awaiting for approval
Block/Unblock CMB	
CMB Number	Shows the number of the CMB whose Blocking status the user is checking
TIPS CMB New Blocking Status	Shows the New Blocking status that is awaiting for

[13] In case the action to approve or revoke is the modification of the CMB Limit

[14] In case the action to approve or revoke is the sending of a LTO

	approval
Update Limit	
CMB Number	Shows the number of the CMB, which is unique in TIPS
Linked TIPS Account	Shows the ID of the Account to which the CMB is linked
Limit Value	Shows the New value of the CMB Limit that is awaiting for approval. In case the value is Unlimited the Unlimited wording will appear instead of a specific amount.
Outbound Liquidity Transfer	
Debtor BIC	Shows the BIC11 of the owner of the debited TIPS Account.
Debtor TIPS Account	Shows the debited TIPS Account.
Creditor BIC	Shows the BIC11 of the owner of the credited RTGS Account.
Creditor RTGS Account	Shows the credited RTGS Account
Amount	Shows the amount to be transferred with the Liquidity Transfer.
Currency	Shows the currency used for the amount of the Liquidity Transfer.

Buttons

Approve	This function enables you to approve the action initiated by the first user. Upon clicking on the Approve button you will be asked to enter your PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor. The button is only available when the Status of the Action is Awaiting approval. References for error messages: [▸]: ▌R011
Revoke	This function enables you to revoke the action initiated by the first user. Upon clicking on the Revoke button you will be asked to enter your PIN for digital signature purposes (NRO). With the entry of the PIN, TIPS attaches a digital signature to the instruction entered by the TIPS actor. References for error messages: [▸]: ▌R011
Cancel	This function enables the user to cancel the process and return to the previous screen

4.6 Audit Trail

4.6.1 Audit Trail functionality

4.6.1.1 Audit Trail – Search/list screen

Context of Usage

This screen allows an authorized requestor to search for revisions performed by a specific user on all the reference and transactional objects or on a selected type of reference or transactional object or to search for all the revisions performed by all the users under the data scope of the requestor on the selected reference or transactional objects. This function is available only in U2A mode.

Screen Access

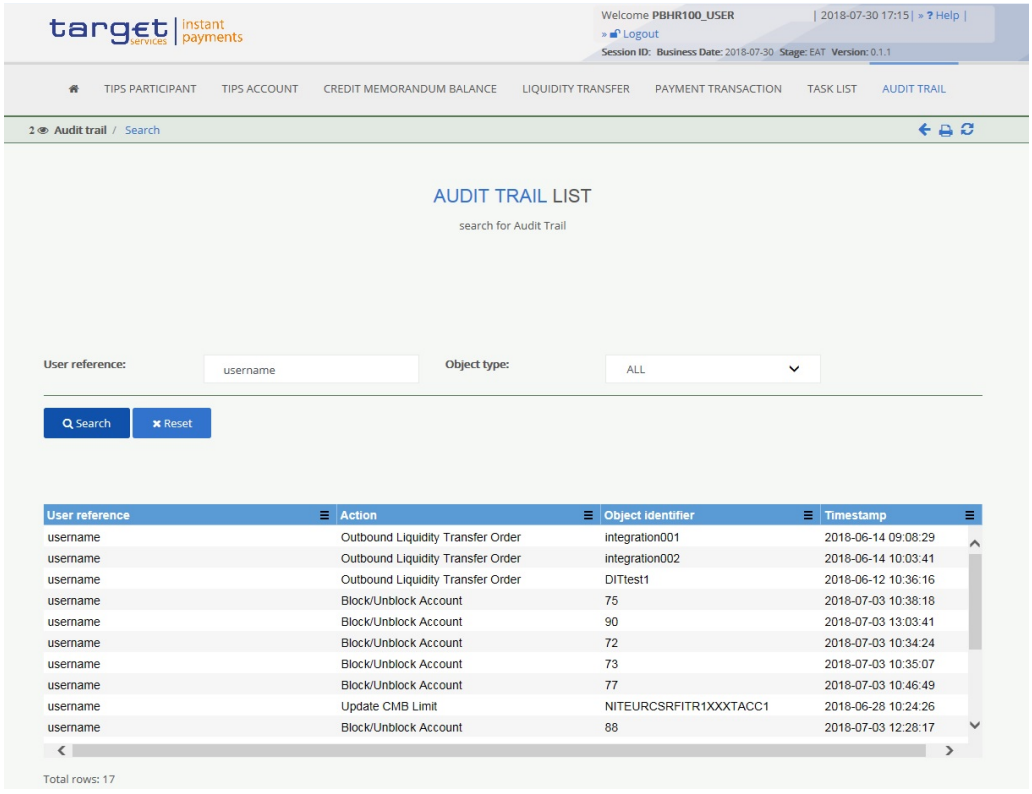
- Audit trail >> Search/List screen>> Click on the search button >>

Privileges

To use this screen, you need the following privileges:

- TIP_Query

Screenshot



Field description

Audit Trail: Search criteria	
User reference	Type the user that performed the Action. Required format is: max. 35 characters (SWIFT-x) References for error messages: [ ]: DS14

Object type	Select the type of object on which an action was performed from the possible values: ▌ All ▌ Party ▌ Account ▌ CMB ▌ Outbound LTO

Audit Trail: List	
User reference	User that entered the Action to be approved/revoked
Action	Action performed by the user on reference or transactional data. Possible values are: ▌ Block/Unblock Party ▌ Block/Unblock Account ▌ Block/Unblock CMB ▌ Update CMB Limit ▌ Outbound Liquidity Transfer Order
Object identifier	Business identifier of the object whose Status the user is checking. Possible values are: ▌ Party BIC in case of Block/Unblock Party ▌ Account number in case of Block/Unblock Account ▌ CMB number in case of Block/Unblock CMB ▌ CMB number in case of Update Limit ▌ Transaction reference in case of Outbound Liquidity Transfer Order
Timestamp	Shows the timestamp at which the Action was performed by the user. Displayed format is: YYYY-MM-DD hh:mm:ss

Buttons

Search	This function enables the requestor to retrieve the list of actions entered by a specific user or by all the users under the requestor data scope.
Reset	This function enables the user to set all fields to default value and blanks out all optional fields.

5 Screen user guide

The Screen user guide part comprises business scenarios adapted from typical user workflows. Each business scenario represents a single workflow and consists of single action steps, intermediate results and a final result. In detail, each business scenario description has the same structure and contains the following elements.

Context of Usage The context of usage describes the aim of the business scenario and indicates whether it is mandatory or optional in order to fulfil the overall business package. It also contains the usage restrictions and the pre-requisites (excluding the privileges), if available.

Privileges In this section, all the necessary Privileges to access and use the involved screens are listed. First the Privileges to access the first screen are mentioned, followed by the Privileges necessary to proceed with the business scenario. Afterwards, the Privileges for the following screens are mentioned in the same order.

Reference This section lists all references to the screens involved, in order of their appearance in the business scenario.

Instructions Each workflow is described from the start to the end, beginning with the access to the starting screen. The instructions involve a number of separate steps which lead you through a series of screens and actions. Each action step is focused on one single action. Intermediate results are included and the instructions end with a final result. Possible alternatives and repetitions are highlighted with a notice sign.

5.1 Monitoring of Accounts, CMBs, Liquidity Transfers and Payments

5.1.1 Query Account Balance and Status

Context of Usage This business scenario describes how to view the Account balance details allowing the user to monitor and manage balances through queries.
To perform these queries and use these screens the user must use a party with existing TIPS accounts.

Privileges To carry out this business scenario, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Reference Further information on screens involved can be found in the screen reference part:

- 4.1.1 Query Account balance and Status

Instructions

1. Go to the *TIPS Account* screen
2. Enter the TIPS Account number as search criterion
3. Click on the *Search* button
   ➔ The *TIPS Account balance - display* screen containing the search results is displayed

5.1.2 Query CMB Limit and Status

Context of Usage This business scenario describes how to view the CMB Limit and Status allowing to monitor and manage a Limit set on a CMB, for instruction investigations, through queries.
In order to monitor the Limit, you have to insert the CMB number, which is always unique in TIPS (no other CMB and no Account can have the same number).

Privileges To carry out this business scenario, the following Privileges are needed:

- TIP_Query

- TIP_QueryReachable

Reference Further information on screens involved can be found in the screen reference part:

- 4.1.2 Query CMB Limit and status

Instructions

1. Go to the *CMB* screen
2. Enter the CMB number as search criterion
3. Click on the *Search* button
   - ➔ The *CMB Limit and status display* screen, containing search results is displayed on the screen.

5.1.3 Query Liquidity Transfer Status

Context of Usage This business scenario describes how to view the status of a Liquidity Transfer order.
In order to check the status, you have to insert the Liquidity transfer reference and the Debtor BIC.

Privileges To carry out this business scenario, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Reference Further information on screens involved can be found in the screen reference part:

- 4.1.3 Query Liquidity Transfer status

Instructions

1. Go to the Liquidity Transfer screen
2. Enter the Liquidity Transfer reference and the debtor BIC as Search criteria
3. Click on the Search button
   - ➔ The *Liquidity Transfer status display* screen, containing the search result, is displayed on the screen.

5.1.4 Query Payment Transaction Status

Context of Usage This business scenario describes how to view the status of a Payment transaction.

Privileges To carry out this business scenario, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable

Reference Further information on screens involved can be found in the screen reference part:

- 4.1.4 Query Payment Transaction status

Instructions

1. Go to the Payment transaction screen

2. Enter the Payment transaction reference and the originator BIC as Search criteria
3. Click on the Search button
   ➔ The *Payment Transaction status display* screen, containing the search result, is displayed on the screen.

5.2 Management of Local Reference Data

5.2.1 Blocking/Unblocking of Participants

Context of Usage

This business scenario describes how to modify the blocking status of a TIPS Participant allowing the user to unblock, block for crediting, block for debiting or block for debiting/crediting said Participant. When a Participant Blocking status is modified, payments involving the Participant are affected immediately. This scenario is needed when the settlement should be prevented for all the Accounts owned by a specific Participant, or when the settlement needs to be allowed again after a previous blocking of the Participant. Settlement is also prevented on all CMBs linked to the TIPS Accounts of this Participant.

Privileges

To carry out this business scenario, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable
- TIP_ModifyAllBlocking

Reference

Further information on screens involved can be found in the screen reference part:

- 4.2.1 Participant Blocking

Instructions

1. Go to the *TIPS Participant – search* screen
2. Enter the TIPS Participant number as search criterion
3. Click on the *Search* button. The current Blocking status is shown
4. Click on the *Change Status* button
5. Select the desired Blocking Status from the drop-down menu
6. Click on the *Submit* button
   ➔ The TIPS Participant is displayed with the new Blocking status

5.2.2 Blocking/Unblocking of Accounts

Context of Usage

This business scenario describes how to modify the blocking status of a TIPS Account allowing you to Unblock, block for crediting, block for debiting or block for debiting/crediting said Account. When an Account Blocking status is modified, payments involving the Account are affected immediately. This scenario is needed when the settlement on a specific Account should be prevented, or when the settlement needs to be allowed again after a previous blocking of the Account.

Privileges

To carry out this business scenario, the following Privileges are needed:

- TIP_Query

- TIP_QueryReachable
- TIP_ModifyAllBlocking

Reference Further information on screens involved can be found in the screen reference part:

- 4.2.2 Account Blocking

Instructions

1. Go to the TIPS Account – search screen
2. Enter the TIPS Account number as search criterion
3. Click on the *Search* button. The current Blocking status is shown
4. Click on the *Change Status* button
5. Select the desired Blocking Status from the drop-down menu
6. Click on the *Submit* button
   ➔ The TIPS Account is displayed with the new Blocking status

5.2.3 Blocking/Unblocking of CMBs

Context of Usage This business scenario describes how to modify the blocking status of a CMB allowing you to Unblock, block for crediting, block for debiting or block for debiting/crediting said CMB. When an Account Blocking status is modified, payments involving the CMB are affected immediately. This scenario is needed when the settlement on a specific CMB should be prevented, or when the settlement needs to be allowed again after a previous blocking of the CMB.

Privileges To carry out this business scenario, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable
- TIP_ModifyCMBBlocking

Reference Further information on screens involved can be found in the screen reference part:

- 4.2.3 CMB Blocking

Instructions

1. Go to the *CMB - search* screen
2. Enter the CMB number as search criterion
3. Click on the *Search* button. The current Blocking status is shown
4. Click on the *Change Status* button
5. Select the desired Blocking Status from the drop-down menu
6. Click on the *Submit* button
   ➔ The CMB is displayed with the new Blocking status

5.2.4 CMB Limit Modification

Context of Usage This business scenario describes how to maintain the CMB Limit allowing the user to create, modify or delete (i.e. set to unlimited) a Limit value. When a CMB limit is modified, the headroom of the CMB is updated accordingly. The CMB headroom is updated (increased or decreased) on the basis of the difference between the old limit value of the CMB and the new limit value.
Creating a Limit is not mandatory in TIPS; a CMB can be used with an Unlimited value.

Privileges To carry out this business scenario, the following Privileges are needed:

- TIP_Query
- TIP_QueryReachable
- TIP_AdjustCMBLimit

Reference Further information on screens involved can be found in the screen reference part:

- 4.3.1.2 CMB Limit Modification – Modify limit screen

Instructions

1. Go to the *CMB – search/display* screen
2. Enter the CMB number as search criterion
3. Click on the *Search* button. The current Limit is shown
4. Click on the *Modify Limit* button
5. Type the desired amount on the Limit field
6. Click on the *Submit* button
   ➔ The CMB limit is displayed with the new amount

5.3 Liquidity Transfer

5.3.1 Inject Outbound Liquidity Transfer

Context of Usage This business scenario describes how to inject an Outbound Liquidity transfer from a TIPS Account to an RTGS Account opened in an RTGS System connected to TIPS. When a Liquidity transfer is instructed, the balance of the Debited TIPS Account is updated accordingly. This functionality is needed every time a Participant needs to move liquidity back to the relevant RTGS system.

Privileges To carry out this business scenario, the following Privilege is needed:

- TIP_LiquidityTransfer

Reference Further information on screens involved can be found in the screen reference part:

- 4.4.1.1 Liquidity Transfer - New screen

Instructions

1. Go to the *Liquidity Transfer - new* screen
2. Enter the Liquidity transfer information (Debtor BIC, Debtor Account number, Creditor BIC, Creditor Account number, Amount, Currency)
3. Click on the *Submit* button
   ➔ The Liquidity Transfer is sent and the TIPS Account is debited

5.4 Task List

5.4.1 Task List confirmation/Revoking

Context of Usage This business scenario describes how to approve or revoke an action, which has been initiated by a different user in 4-eyes mode. The use of 2-eyes or 4-eyes mode depends on your access rights configuration. Approving an action is mandatory for the usage of the 4-eyes mode. Before you start, the action has to be initiated by a different user.

Privileges

To carry out this business scenario, the following Privileges are needed[15]:

- TIP_Query
- TIP_QueryReachable
- TIP_ModifyAllBlocking[16]
- TIP_ModifyCMBBlocking[17]
- TIP_AdjustCMBLimit[18]
- TIP_LiquidityTransfer[19]

Reference

Further information on screens involved can be found in the screen reference part:

- 4.5.1 Task List

Instructions

1. Go to the *Task List – search/list* screen
2. Enter the search criteria (Action type and 4-Eyes identification) about the action waiting for your approval.
3. Click on the *Search* button. The search result will appear on the lower part of the screen
4. Choose one action to approve/revoke and then click on the *Details* button. The result is displayed in the *Task List – Details* screen
5. Check the data. If everything is correct, click on the *Approve* button, otherwise click on the *Revoke* button.

[15] The user always needs the TIP_Query privilege or TIP_QueryReachable and one of the following privileges depending on the task to be approved/revoked

[16] In case the action to approve or revoke is the modification of the TIPS Participant Blocking status or the TIPS Account Blocking status

[17] In case the action to approve or revoke is the modification of the TIPS CMB Blocking status

[18] In case the action to approve or revoke is the modification of the CMB Limit

[19] In case the action to approve or revoke is the sending of a LTO

6 Annex

6.1 Reference for error messages for GUI Screens

This section includes a list of references for error messages for all GUI screens. Each error code table entry includes the error text and the description.

6.1.1 Error Codes

Reference for error message	Field or Button	Error text
L001	Creditor BIC field Creditor RTGS Account field	Unknown Creditor or Creditor Account
L002	Debtor BIC field Debtor TIPS Account field	Unknown Debtor or Debtor Account
L005	Submit button	The Debtor or the Debtor Account is blocked
L006	Submit button	Outbound or Inbound LT is a duplicate submission
L007	Submit button	Failure of the settlement attempt of the instruction due to insufficient cash balance
L008	Submit button	RTGS system is closed
L009	Submit button	Invalid content of the field RTGS Status
L011	Submit button	Order not found
L012	Amount field Submit button	The amount is lower or equal to zero
R002	TIPS Participant BIC field	Party not existing
R006	TIPS Account Number field CMB Number field	Account/CMB not existing
R007	Currency field	Currency not correct
R008	Change Status button	User not allowed to block/unblock the TIPS Account/CMB
R009	Change Status button Search button	User not allowed to block/unblock the TIPS Participant
R010	Search button	User not allowed to query the TIPS Participant/Account/CMB/Task List
R011	Approve button Revoke button	User not allowed to approve/revoke the task
DS14	User Reference field	User does not exist
R020	CMB Number field	CMB not existing
R021	Modify Limit button	User not allowed to change the Limit

TBL1	Submit button	The owner of the debtor account or the debtor account/CMB is blocked