# Reference data management

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**Trainer Name**

**Banca d'Italia**

**Banca d'Italia**

TIPS User Training Course

Date – Training type

*Day 1 - Session TIPS.TR.FN.030*

# Reference data management - Outline

| | |
|---|---|
| 1 | **Reference Data** |
| 2 | **Reference Data propagation** |
| 3 | **Blocking of participants, accounts and CMBs** |

# Reference data management - Outline

1 **Reference Data**

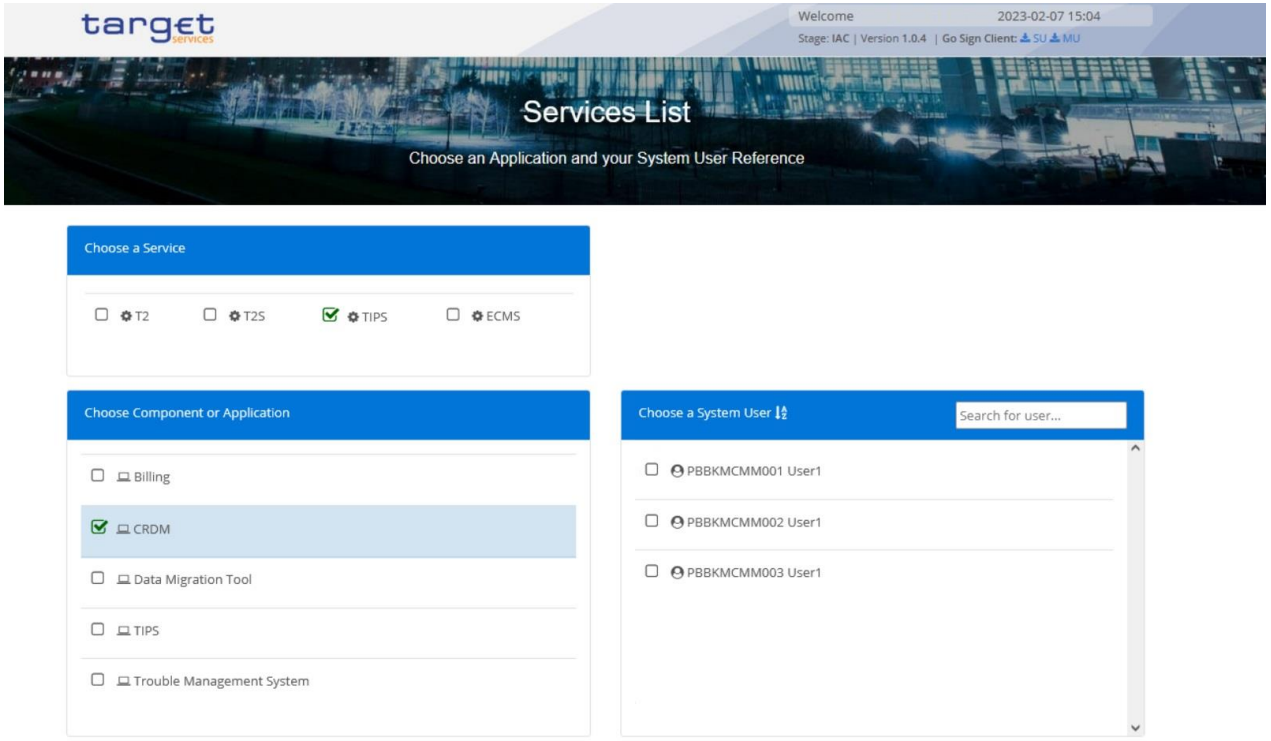
- *General concepts*
- *Hierarchical party model*
- *TIPS Actors*
- *Account structure*
- *Additional reference data objects for TIPS*

2 **Reference Data propagation**

3 **Blocking of participants, accounts and CMBs**

# ESMIG Access to TIPS – CRDM GUI

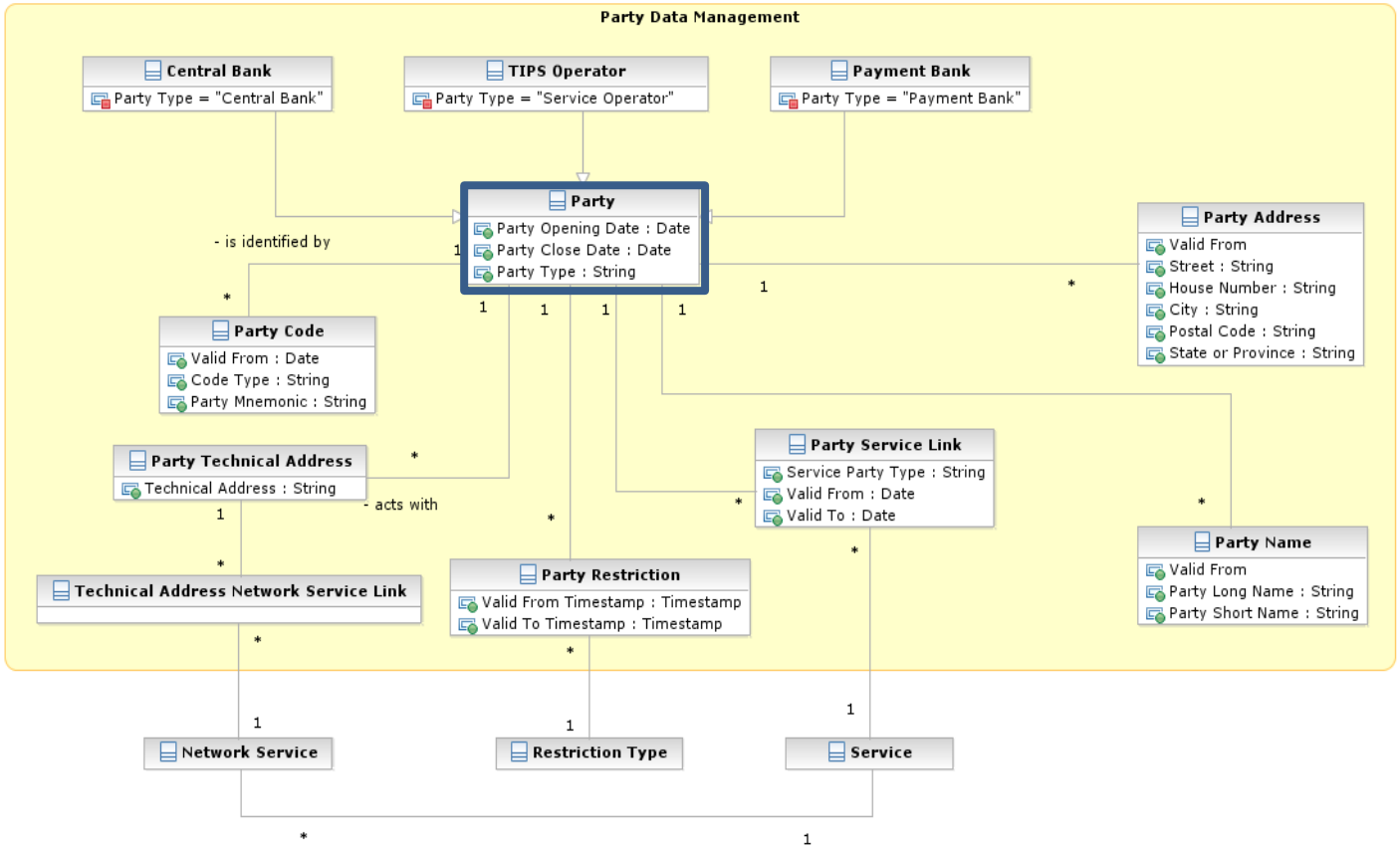
- **Service** -> TIPS; then **Component** -> CRDM; then select the **System User**




- Each TIPS/CRDM Actor may trigger all or only a subset of these functions depending on the **participant type** (e.g. Central Bank, TIPS Participant, Ancillary System, etc.) and only in relation to the **objects in its own data scope** and configured **Roles/Privileges**
- These functions are available **22 hours a day**, **5 days a week**

# Reference data object

A Reference data object is a set of logically related, self-consistent information consisting in one or more entities



# Common information attributes

All reference data objects have a set of **common** attributes

| Attribute | Description | PARTY XYZ |
|---|---|---|
| Technical Identifier | It is the automatically assigned primary identifier for a new item of reference data. | **20101968** |
| Revision Number | Given a technical identifier, this attribute marks every update of the item's attributes | **3** |
| Deletion Status | The exhaustive list of possible values is as follows:<br>• Active (ACTV)<br>• Deleted (DELE) | **ACTV** |
| Approval Status | The exhaustive list of possible values is as follows:<br>• Approved (APPR)<br>• Awaiting Approval (AWAP)<br>• Rejected (RJCT)<br>• Revoked (RVKD) | **APPR** |

# Common information attributes modifications

1) Before the processing:

| Technical Identifier | Revision | Attributes | Deletion Status | Approval Status |
|---|---|---|---|---|
| 20101968 | 5 | ABCD | ACTV | APPR |

2) After the first step of the processing:

| Technical Identifier | Revision | Attributes | Deletion Status | Approval Status |
|---|---|---|---|---|
| 20101968 | 5 | ABCD | ACTV | APPR |
| 20101968 | 6 | XYZ | ACTV | AWAP |

3) After the approval:

| Technical Identifier | Revision | Attributes | Deletion Status | Approval Status |
|---|---|---|---|---|
| 20101968 | 5 | ABCD | ACTV | APPR |
| 20101968 | 6 | XYZ | ACTV | AWAP |
| 20101968 | 7 | XYZ | ACTV | APPR |

# Reference data maintenance types

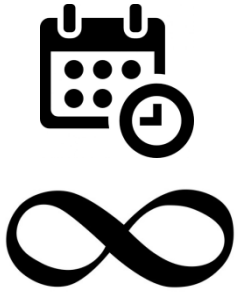
Duly authorised users can perform the following types of reference data maintenance operations on reference data objects

| | |
|---|---|
| Create  | It creates a new common reference data object |
| Update  | It updates an already existing common reference data object |
| Delete  | It deletes an already existing common reference data object. Deletion is always logical and not physical |
| Restore  | It reactivates a previously deleted common reference data object, i.e. it updates the approval status of this object from deleted to active |

# Reference data validity period

There are two categories of reference data objects

- Common reference data objects with limited validity period
- Common reference data objects with unlimited validity period



**Party NCBXITMMXXX**

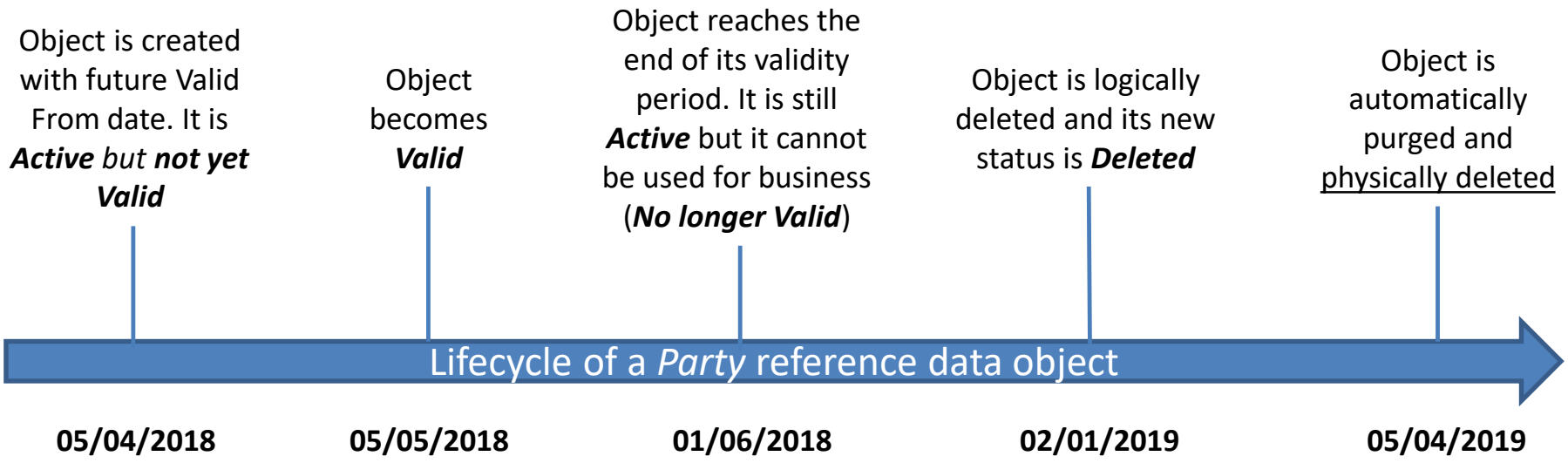
*Opening Date: 2018-02-15*
*Closing Date: 2018-05-30*
*Type: NCB*
*Deletion Status: ACTV*

**User USER001**

*Creation Timestamp: 2018-02-15 12:01:03.00*

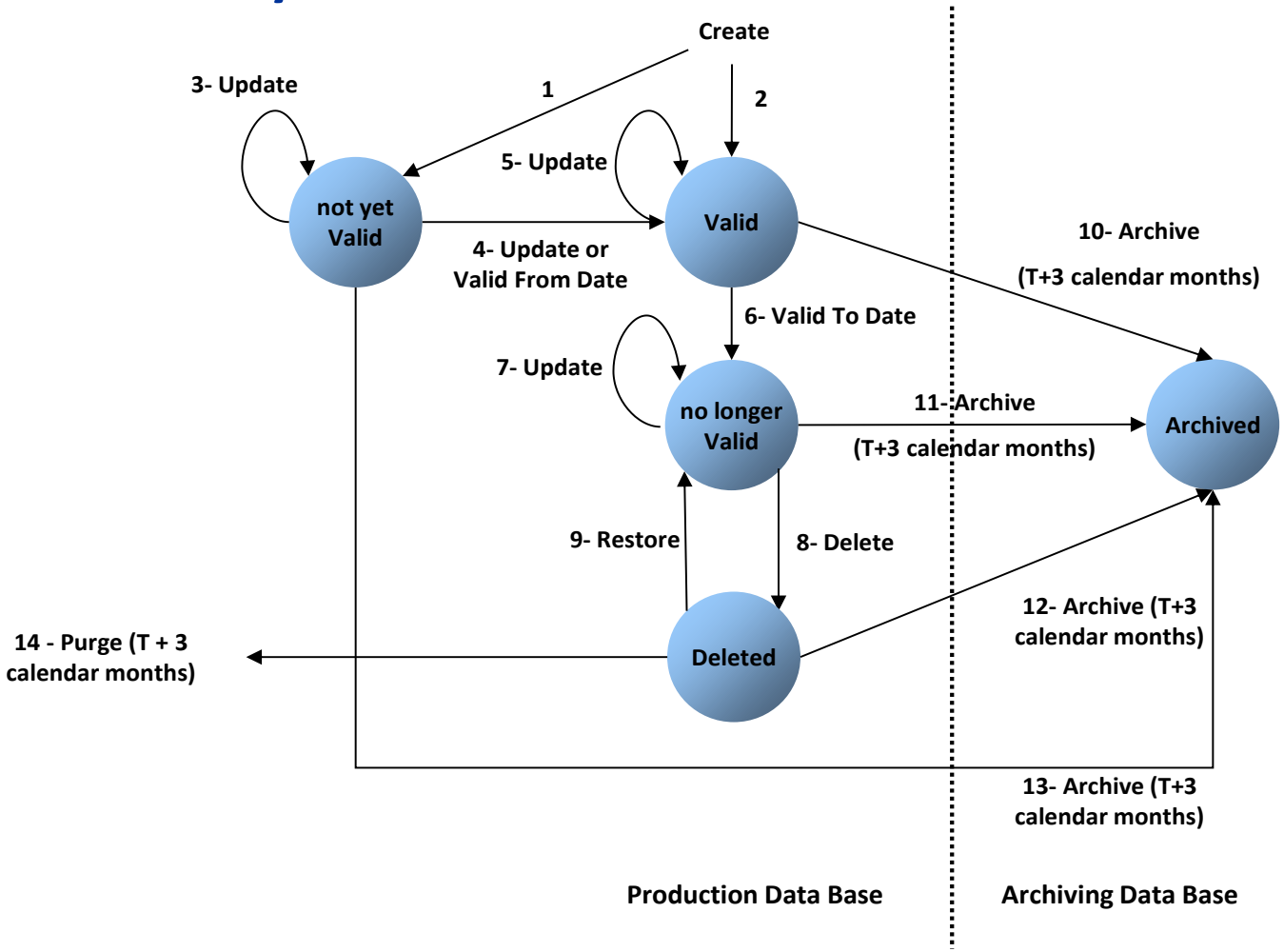
*Deletion Status: ACTV*

# Reference data with limited validity period




| Description | Date |
|---|---|
| Creation date | 05/04/2018 |
| Opening date | 05/05/2018 |
| Closing date | 01/06/2018 |
| Deletion date | 02/01/2019 |
| Physical deletion date | 05/04/2019 |

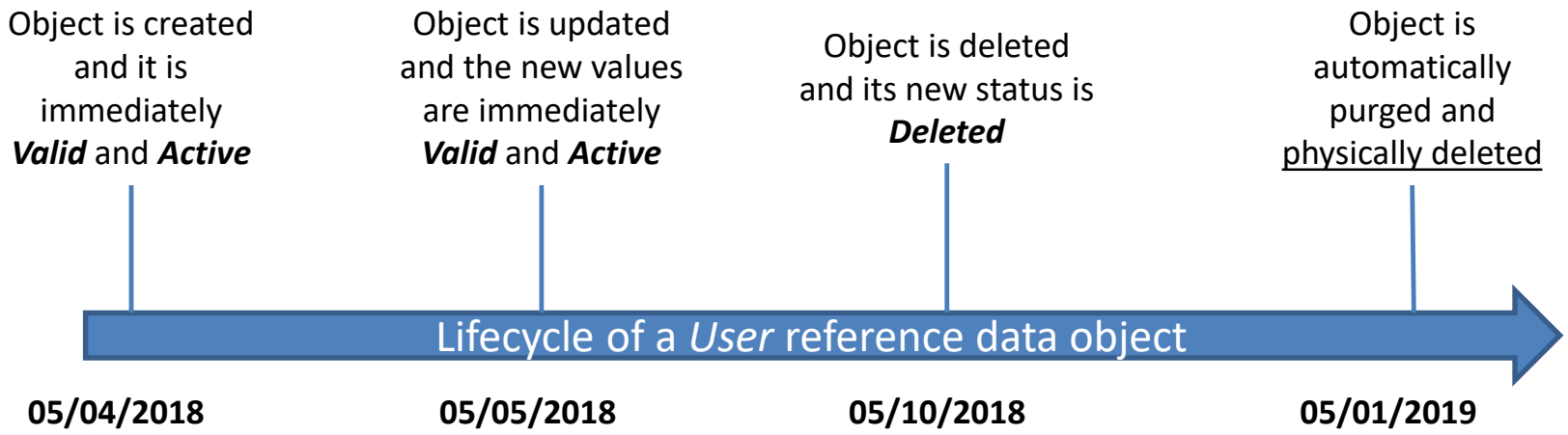
# Lifecycle of Common Reference Data Objects:
## Limited Validity Period



# Examples of Reference data with limited validity period

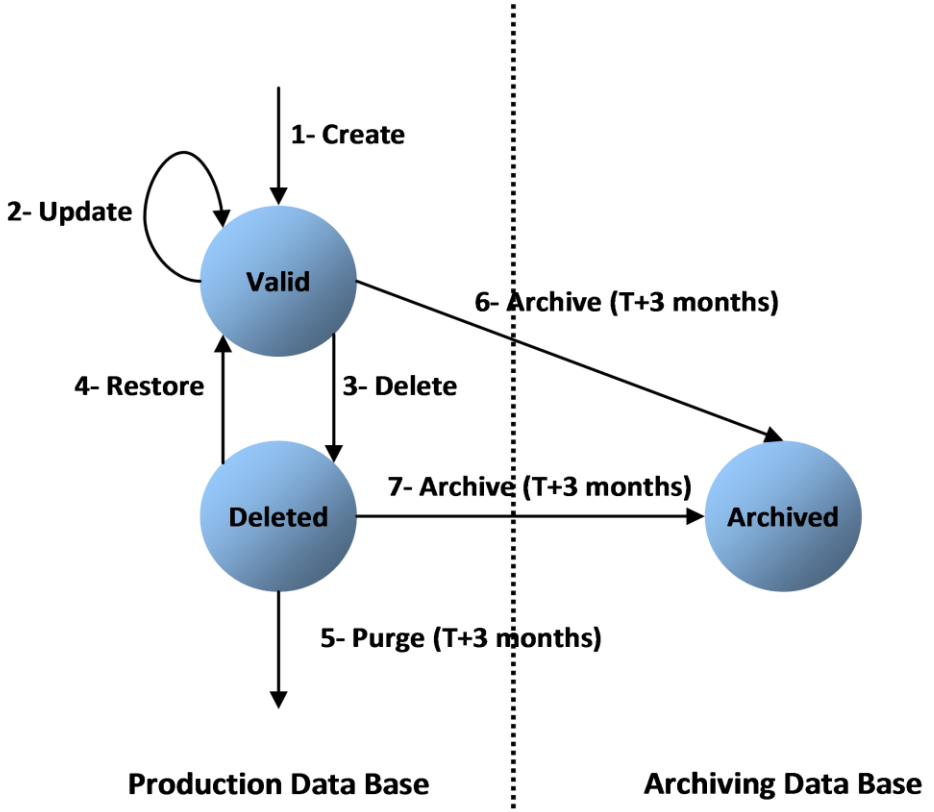
| AREA | OBJECT | CREATION | UPDATE | DELETION |
|---|---|---|---|---|
| Party | Party | Validity date may take the value of the current date | May take effect on the current date | May be performed only on objects that are not valid on the current date |
| | Party Service Link | | | |
| Cash account | Cash account | | | |
| | Authorised Account User | | | |
| | Limit | | | |

# Reference data with unlimited validity period




| Description | Date |
|---|---|
| Creation date | 05/04/2018 |
| Update date | 05/05/2018 |
| Deletion date | 05/10/2018 |
| Physical deletion date | 05/01/2019 |

# Lifecycle of Common Reference Data Objects:
## Unlimited Validity Period




- **1 – 2**: Upon successful creation and update the entity status is Valid
- **3**: A Valid entity can be deleted
- **4**: A deleted object might be restored within 90 days following the deletion
- **6**: After 90 days (retention period) a valid entity is copied into the archiving database
- **5 – 7**: After 90 days (retention period) a deleted entity is copied into the archiving database and purged from the production database

# Examples of Reference data with unlimited validity period

| AREA | OBJECT |
|---|---|
| Access rights management | User |
| | Role |
| | Privilege |
| | Certificate DN |
| | User-Certificate DN Link |
| | Role User Link |
| | Role Party Link |
| | Privilege Role Link |
| Network configuration | Network service |
| | Technical Address Network Service Link |
| Configuration parameters | Country |
| | Currency |
| | System entity |
| | Service |
| | Currency Service Link |

# TIPS Reference Data Objects aligned with T2-T2S CSLD (1/2)

| AREA | OBJECT | Responsible Actors |
|---|---|---|
| Party | Party | Operator, CB |
| | Part Service Link | Operator, CB |
| Cash Account | Cash Account | All |
| | Limit | All |
| | Authorised Account User | All |
| Access rights management | User | All |
| | Role | Operator, CB |
| | Privilege | Operator |
| | Certificate DN | All |
| | User-Certificate DN Link | All |
| Message subscription configuration | Message Subscription Rule | All |
| | Message Subscription Rule Set | All |

# TIPS Reference Data Objects aligned with T2-T2S CSLD (2/2)

| AREA | OBJECT | Responsible Actors |
|---|---|---|
| Network configuration | Routing | All |
| | Network service | Operator |
| | Technical Address Network Service Link | Operator, CB |
| | DN-BIC Routing | All |
| Report configuration | Report Type | Operator |
| | Report Configuration | All |
| Restriction type management | Restriction Type | Operator |
| Configuration parameters | Country | Operator |
| | Currency | Operator |
| | System entity | Operator |
| | Service | Operator |
| | Currency Service Link | Operator |
| Billing configuration | Invoice Configuration | CB |
| | VAT | CB |
| | Tariffs | Operator |
| | Service Items | Operator |
| | Billing Service Configuration | Operator |

# TIPS Reference Data Objects – List of A2A messages

| OBJECT | GUI Screens | A2A Messages |
|---|---|---|
| **Party** | Parties – Search/List Screen<br>Party – Details Screen<br>Party – New/Edit Screen | reda.014 PartyCreationRequest<br>reda.015 PartyQuery<br>reda.016 PartyStatusAdvice<br>reda.017 PartyReport<br>reda.022 PartyModificationRequest<br>reda.031 PartyDeletionRequest<br>reda.042 PartyAuditTrailQuery<br>reda.043 PartyAuditTrailReport |
| **Cash Account** | Cash Accounts – Search/List Screen<br>Cash Account – Details Screen<br>Cash Account – New/Edit Screen | acmt.007 AccountOpeningRequest<br>acmt.010 AccountRequestAcknowledgement<br>acmt.011 AccountRequestRejection<br>acmt.015 AccountExcludedMandateMaintenanceRequest<br>acmt.019 AccountClosingRequest<br>acmt.025 AccountQueryList<br>reda.039 CashAccountAuditTrailQuery<br>reda.040 CashAccountAuditTrailReport |
| **Limit** | Limits – Search/List Screen<br>Limit – New/Edit Screen | camt.011 ModifyLimit<br>camt.012 DeleteLimit |

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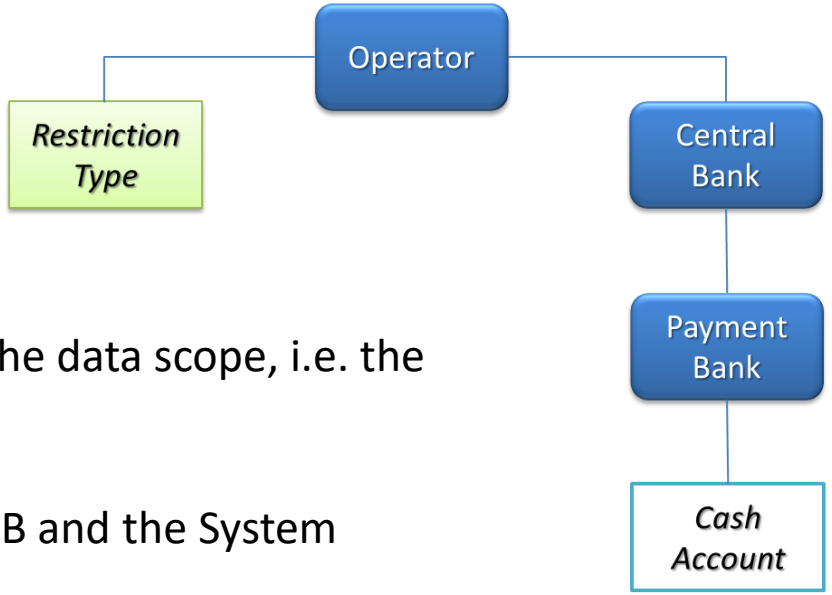
# Hierarchical model for CRDM objects




- The hierarchical model determines the data scope, i.e. the area of responsibility of each party
- Three levels of responsibility: each CB and the System Operator are responsible for their own reference data scopes

# Data scope (1/2)

- For each privilege, the hierarchical party model determines the data scope of the grantee, i.e. the set of reference data objects on which the grantee can trigger the relevant user function

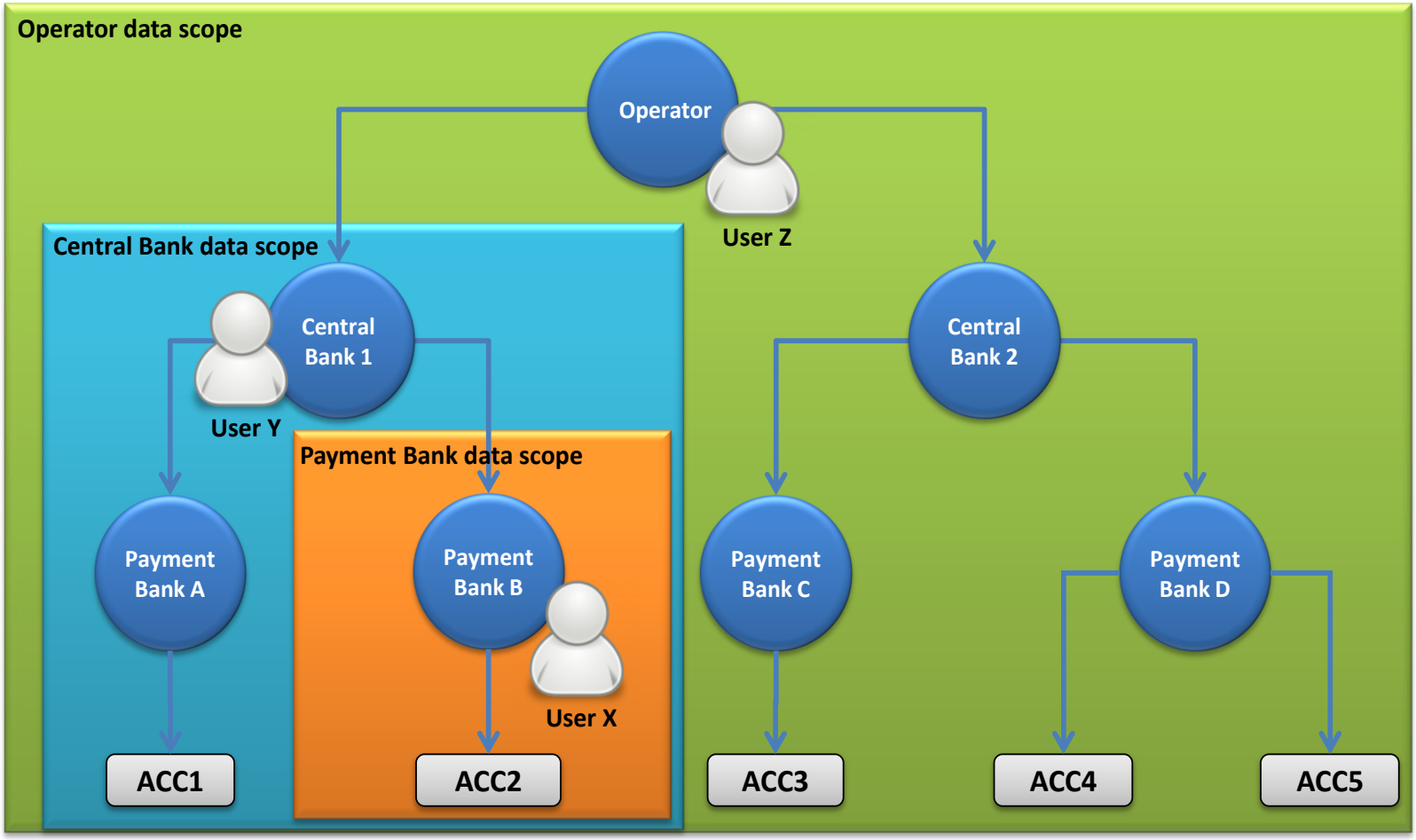
  More precisely:

  - Users of the Operator have visibility on all reference data objects, and can act on objects belonging to participants only in exceptional circumstances, following a specific agreement
  - Users of the Central Banks have visibility on all reference data objects belonging to the same system entity
  - Users of the payment banks have visibility on reference data objects that are (directly or indirectly) linked to the same party

# Hierarchical party model



## Data scope (2/2)



# Reference data management



1 **Reference Data**

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# Concept of Party in TIPS

**TIPS Actor**

- A TIPS Actor is any legal entity or organization interacting with TIPS either directly or indirectly (i.e. through an Instructing Party) and defined as an object in the Common Reference Data Management (CRDM) component

**Party**

- Each Actor is identified in TIPS with a Party object
- Each Party object is univocally identified in TIPS with a BIC-11
- Several **Party Types** are defined in TIPS, organised in a three-level hierarchical party model:
  - TIPS Operator (first level)
  - Central Bank (second level)
  - TIPS Participant, Ancillary System and Reachable Party (third level)

**Legal entity**

- Each legal entity may play different business roles in TIPS
  - i.e. a legal entity may be defined as a participant of different Central Banks
- A legal entity with different participations shall be identified by several Parties having different BIC-11

# Party types in TIPS (1/5)

## TIPS Operator

- The **TIPS Operator** is the legal and organisational entity that operates TIPS
- It is responsible for:
  - The initial setup and the day-to-day operations of TIPS
  - Monitoring of the system
  - Carrying out corrective actions in case of incidents or in the event of service unavailability
  - Setting up and maintaining Central Banks' reference data
  - Operating on behalf of any TIPS Actor, upon request of the respective Central Bank (in contingency scenario)
  - Generate monthly or quarterly statistics for EPC and CB reporting
- It can also access to live and archived TIPS reference data or transactional data

# Party types in TIPS (2/5)

## Central Bank

- The **Central Bank** is the only entity in legal relationship with the TIPS Operator
- Responsible for:
  - Setting up and maintaining reference data in the Common Reference Data Management repository for all the TIPS Actors belonging to their community
  - Owning and managing a single Transit Account for their currency (ECB for the euro)
  - Operating on behalf of any TIPS Actor in their community in case of need
- They can act as TIPS Participants (in this case the CB needs to define itself as a new Party with type Payment Bank)

# Party types in TIPS (3/5)

## TIPS Participant

- Identified by a BIC-11
- Entities that may hold one or many **TIPS Accounts**
- Receive liquidity from the relevant RTGS System by means of **Inbound Liquidity Transfers**
- The TIPS Participant is responsible for:
  - setting up and maintaining CMBs linked to its TIPS Accounts
  - configuring Instructing Party roles for itself and for its Reachable Parties
- Can act as Instructing Party as by definition it is able to specify DNs with the prerogatives of an Instructing Party for what concerns its TIPS Accounts

# Party types in TIPS (4/5)

## Ancillary System

- Identified by a BIC-11 (however its BIC-11 cannot appear as authorised BIC of any account)
- Entities that may hold one **TIPS AS Technical Account**
- Receive liquidity from the relevant counterpart by means of **Intra-service Liquidity Transfers** in TIPS
- Responsible for:
  - setting up and maintaining CMBs linked to its TIPS AS Technical Account
  - configuring Instructing Party roles for itself and for its Reachable Parties
  - Instructing Instant Payments/Recall/Investigation on behalf of their customers
- Can act as Instructing Party

# Party types in TIPS (5/5)

## Reachable Party

- Identified by a BIC-11
- Entities that are not entitled to hold accounts in TIPS
- A **Reachable Party** relies on (i) either a TIPS Participant's Account or (ii) a TIPS AS Technical Account to settle Instant Payment in TIPS
- Can act as Instructing Party, assuming that it can directly interact with TIPS

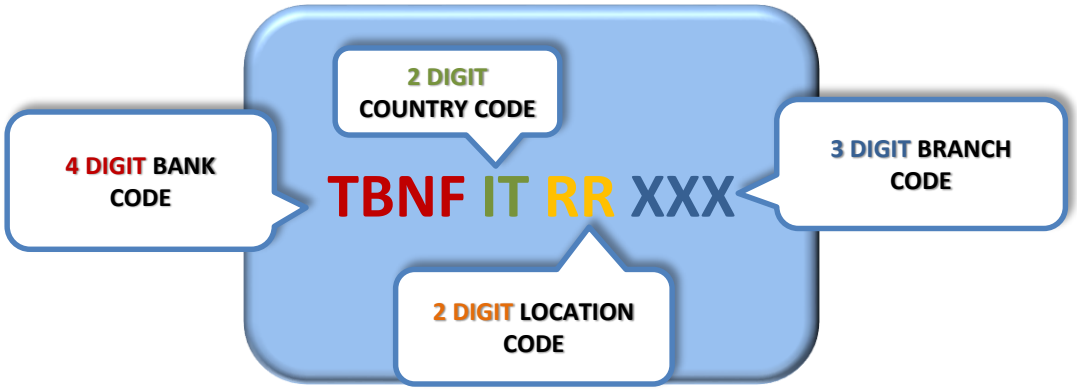
# Party types in TIPS – Instructing Party (it is not a party)

## Instructing Party

- It is not a **Party Type**. Conversely. it is a DN that TIPS Participants, Ancillary Systems and Reachable Parties may authorise to act on their behalf
- Third parties, not necessarily TIPS Participants or Reachable Parties, can act as Instructing Parties on behalf of TIPS Participants or Reachable Parties
- TIPS Participants, Ancillary Systems and Reachable Parties can act as Instructing Parties
- Its Access Rights configuration is determined by the TIPS Actor that capture it as an Instructing Party

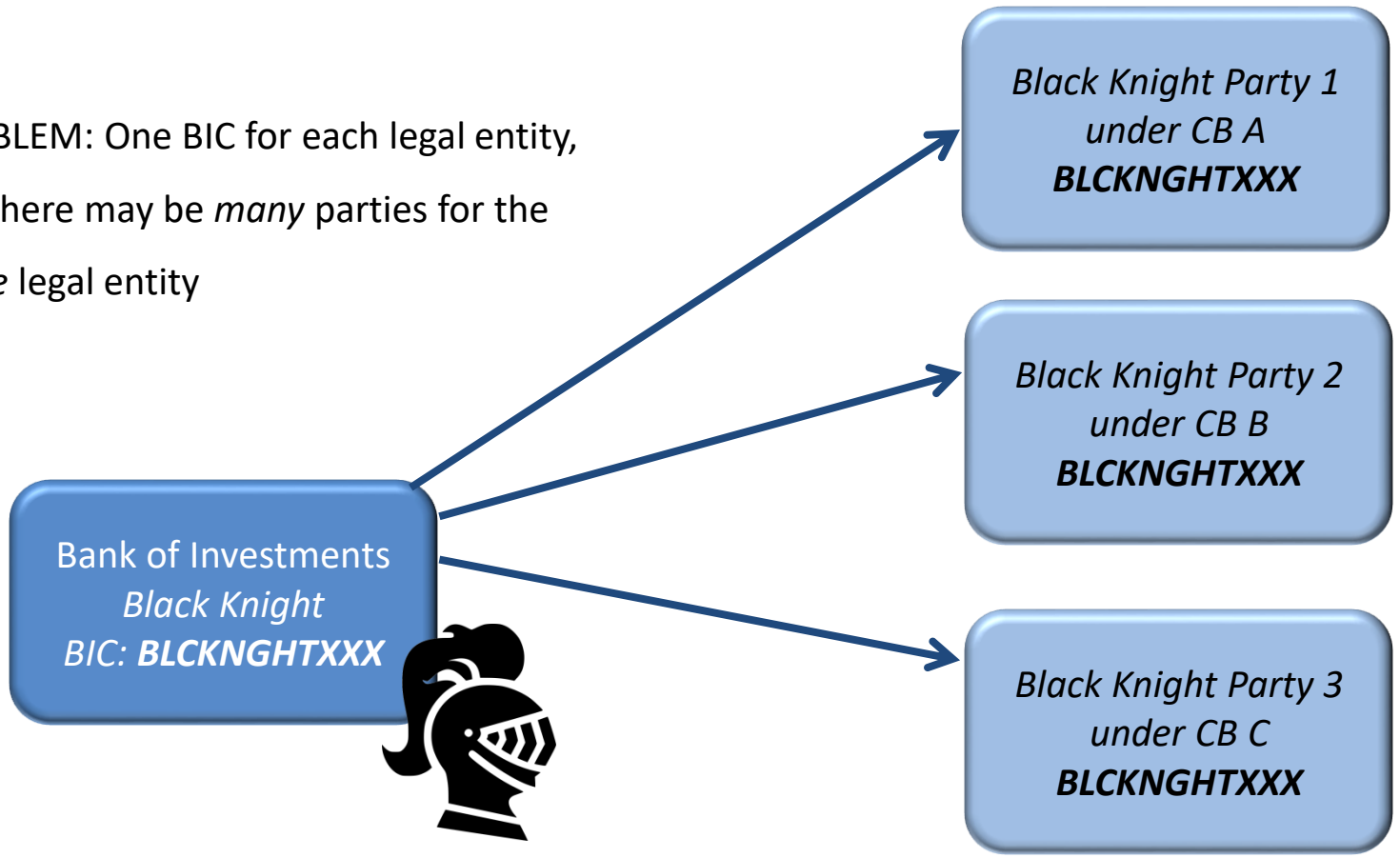
# How to identify a Party (1/4)

Each legal entity is identified in the financial market by a BIC (Business Identifier Code), according to the ISO 9362 standard



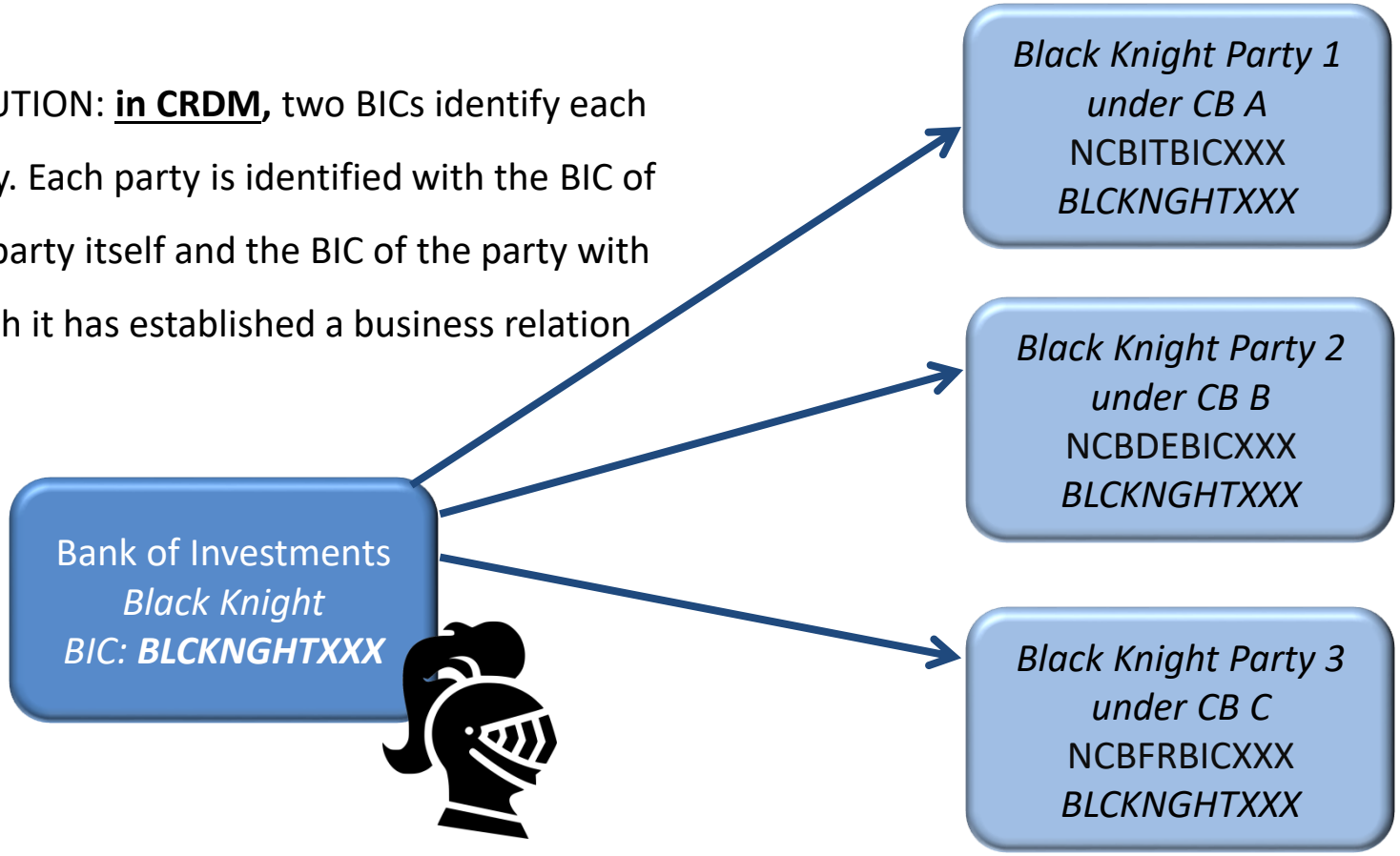

# How to identify a Party (2/4)

PROBLEM: One BIC for each legal entity, but there may be *many* parties for the *same* legal entity



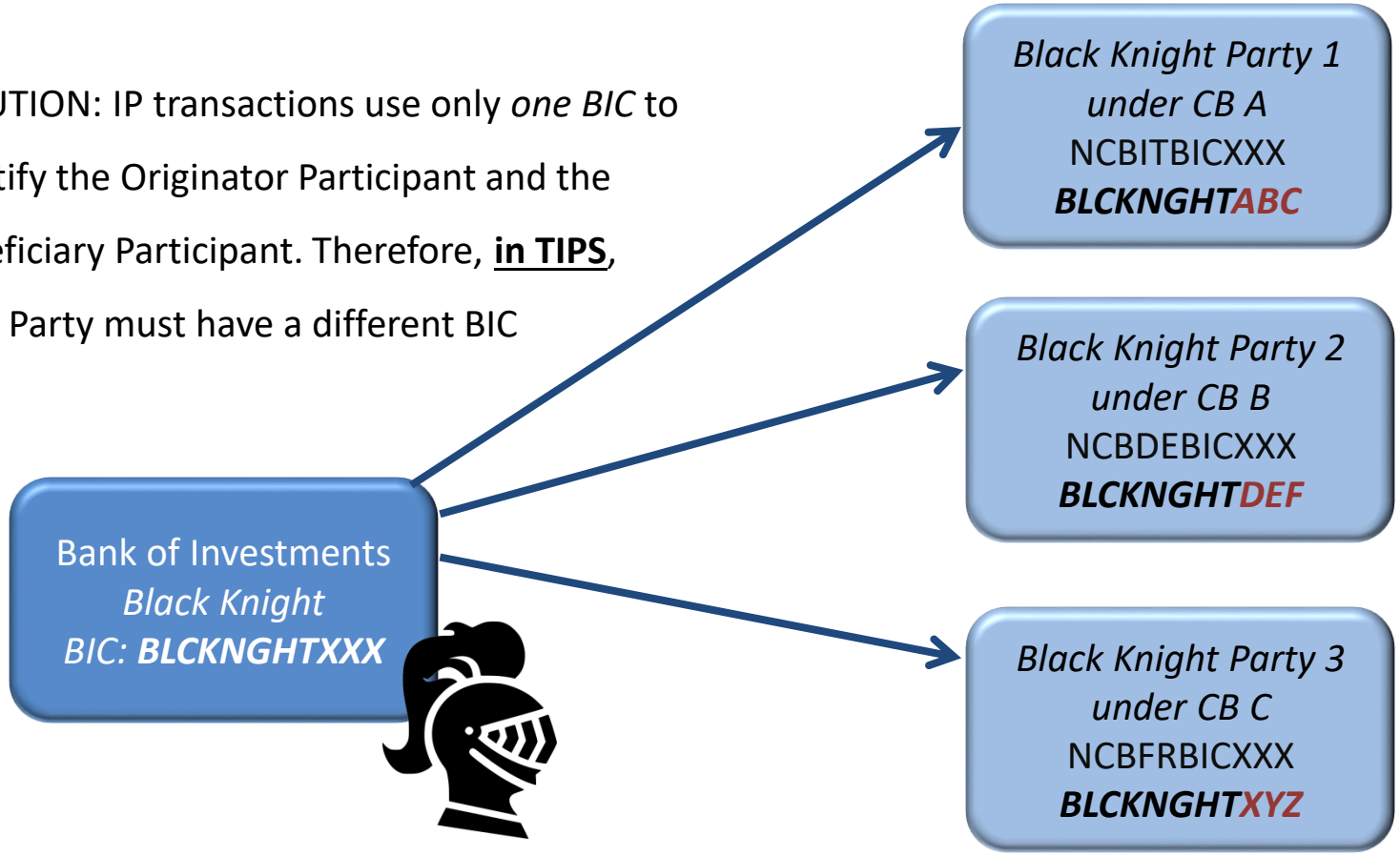
# How to identify a Party (3/4)

SOLUTION: **in CRDM,** two BICs identify each party. Each party is identified with the BIC of the party itself and the BIC of the party with which it has established a business relation

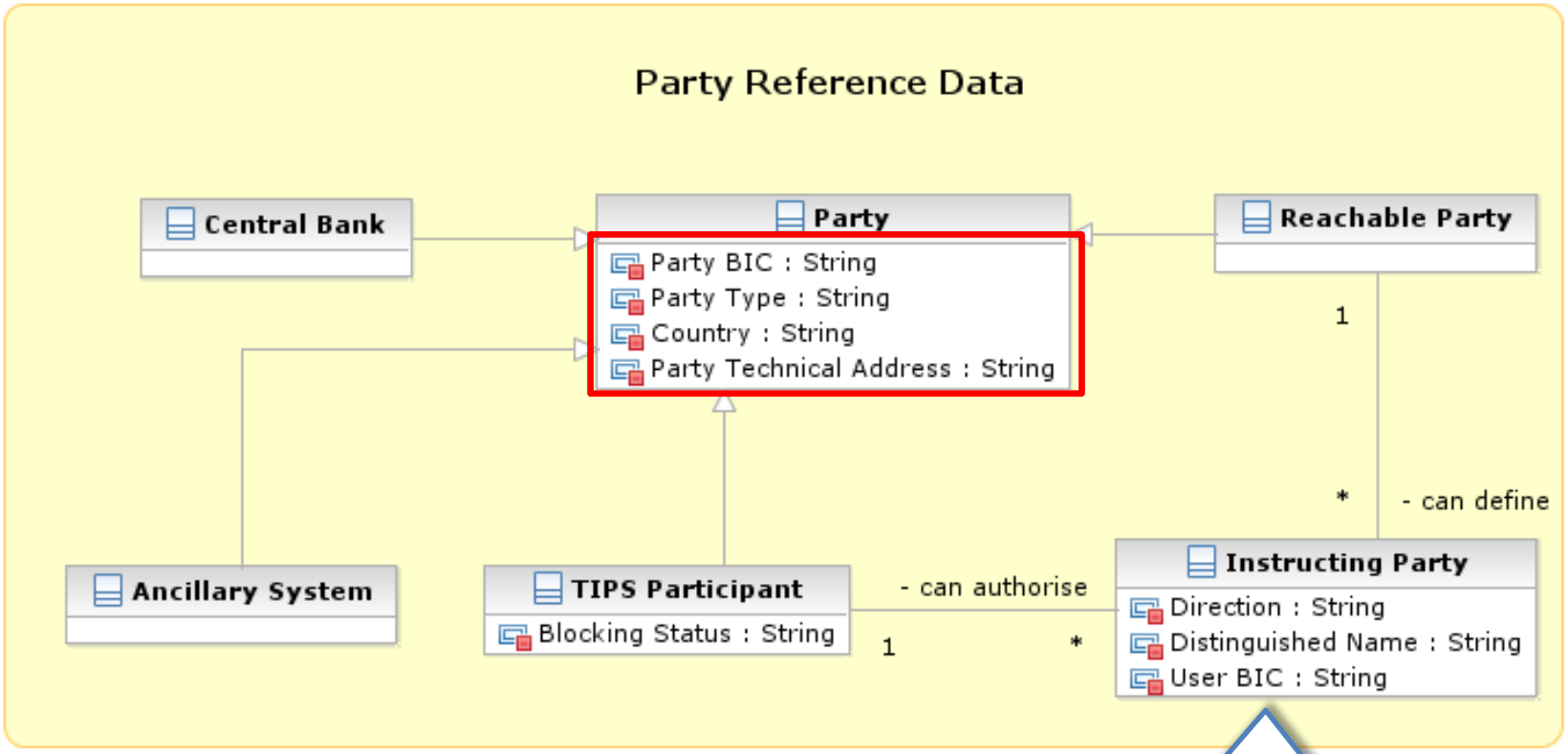


# How to identify a Party (4/4)

SOLUTION: IP transactions use only *one BIC* to identify the Originator Participant and the Beneficiary Participant. Therefore, **in TIPS**, each Party must have a different BIC



# Party reference data model



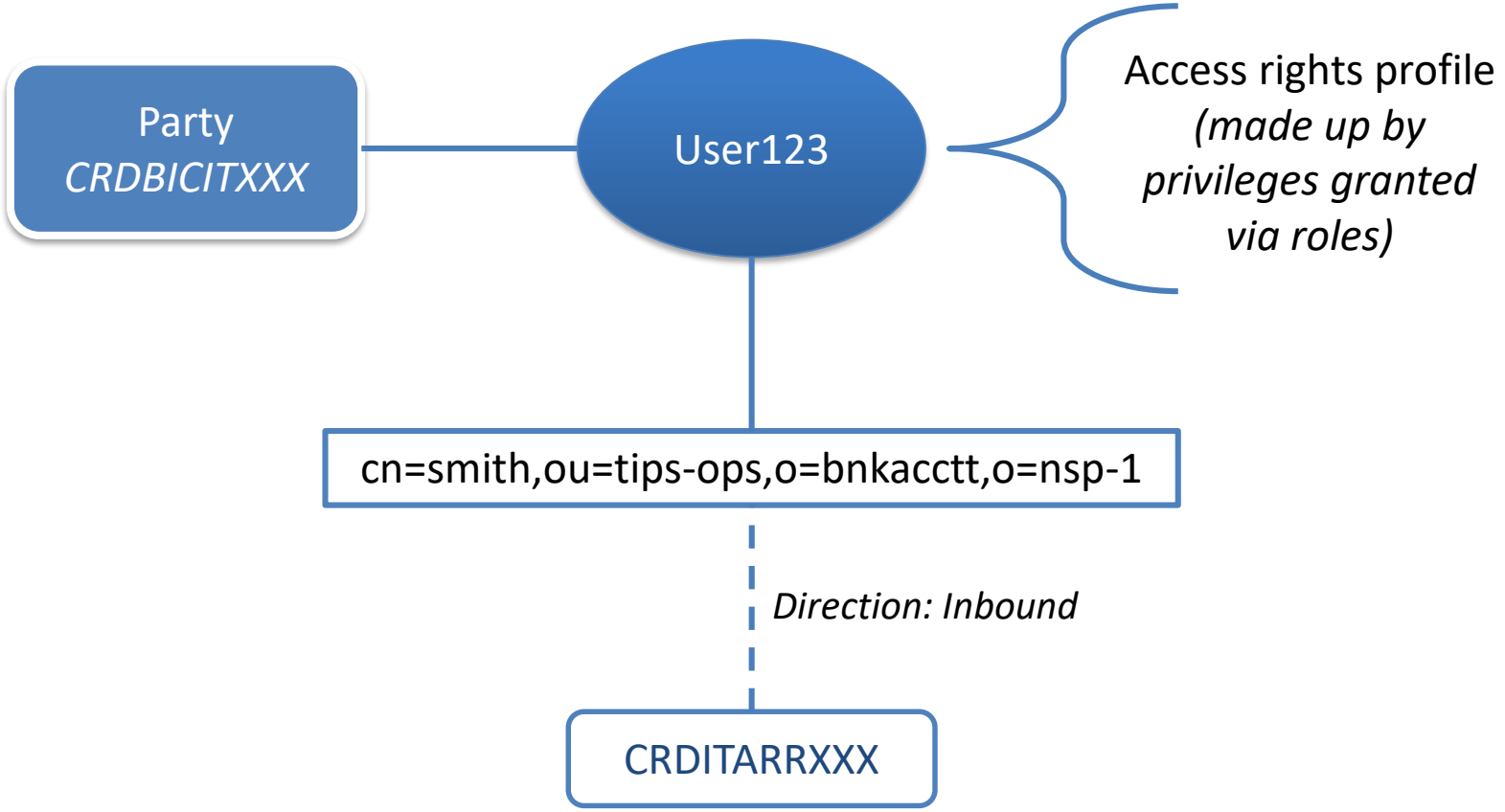

**The Instructing Party is not directly related to the Party table**

# Party entity

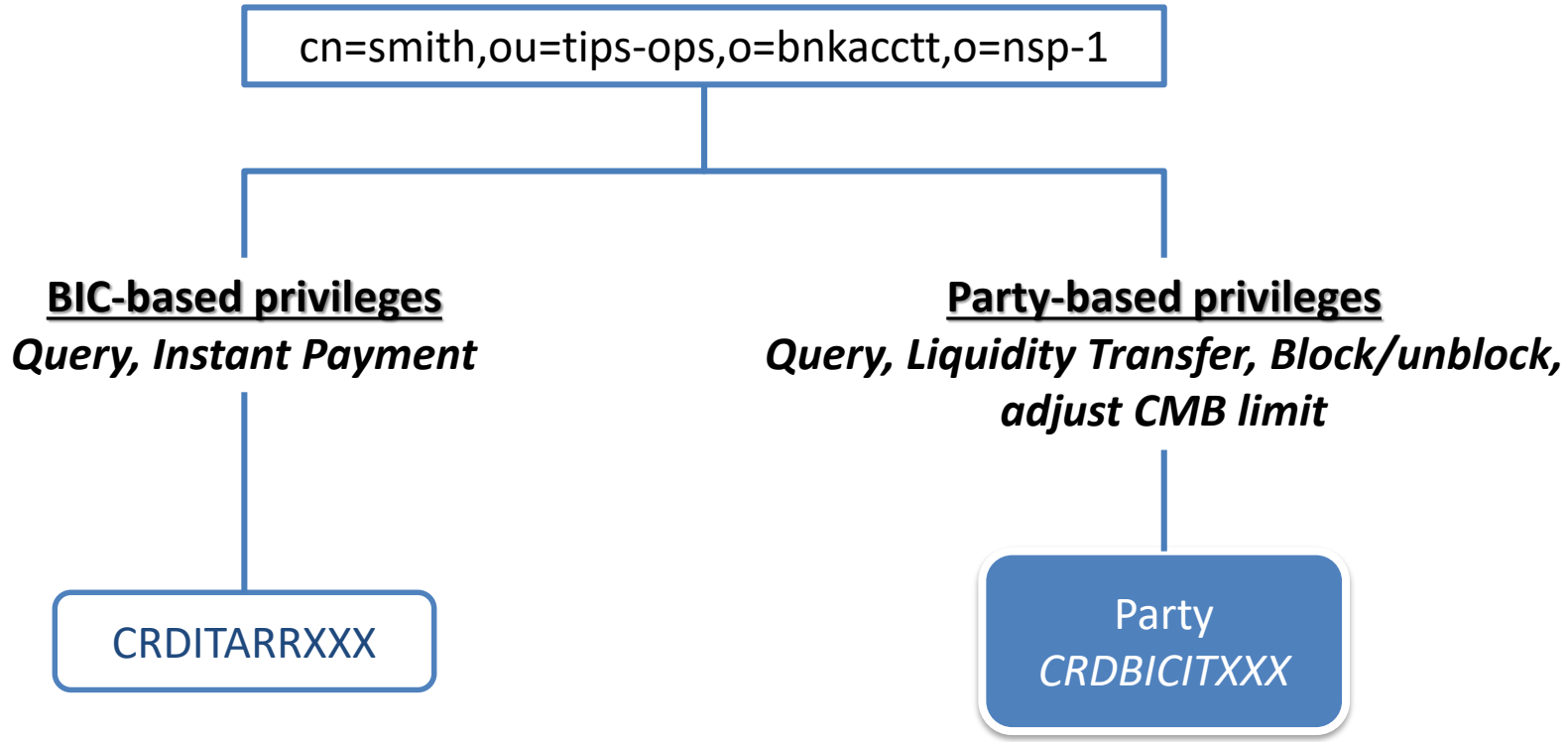
| Attribute | Description |
|---|---|
| Party BIC | 11-character Business Identifier Code (BIC-11) to univocally identify the Party in TIPS |
| Party Type | • TIPS Operator<br>• Central Bank<br>• TIPS Participant<br>• Ancillary System<br>• Reachable Party |
| Country | Country code of the responsible Central Bank |
| Party Technical Address | Distinguished Name defined for the receipt of messages relevant for the Party as account owner, such as reports and floor/ceiling notifications |
| Blocking Status | • Blocked for credit<br>• Blocked for debit<br>• Blocked for credit and debit<br>• Unblocked |

Additional reference data on Parties is stored in the CRDM, but it is not required for TIPS processing

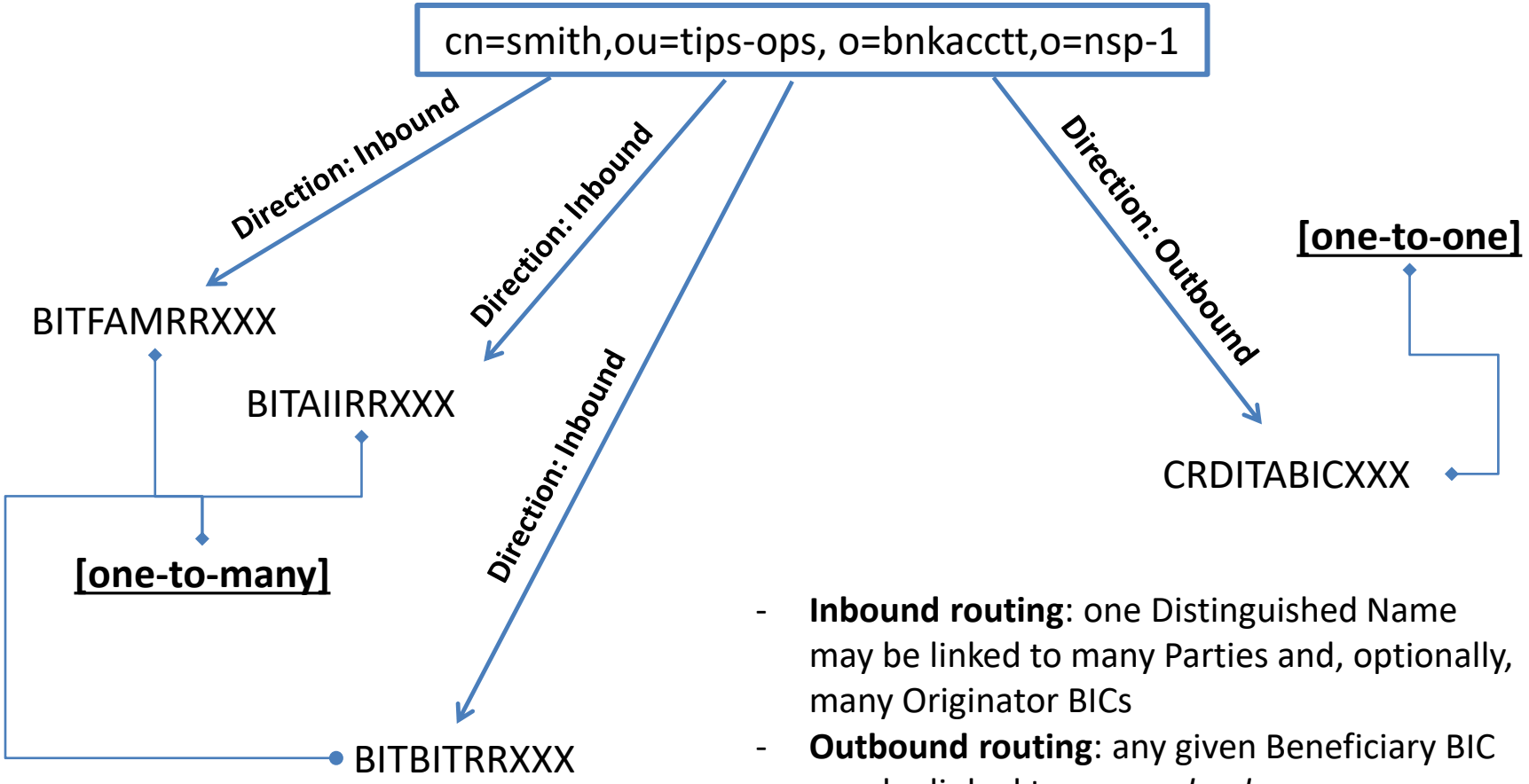
# Instructing party entity – CRDM configuration



# Instructing party entity – TIPS view (1/2)

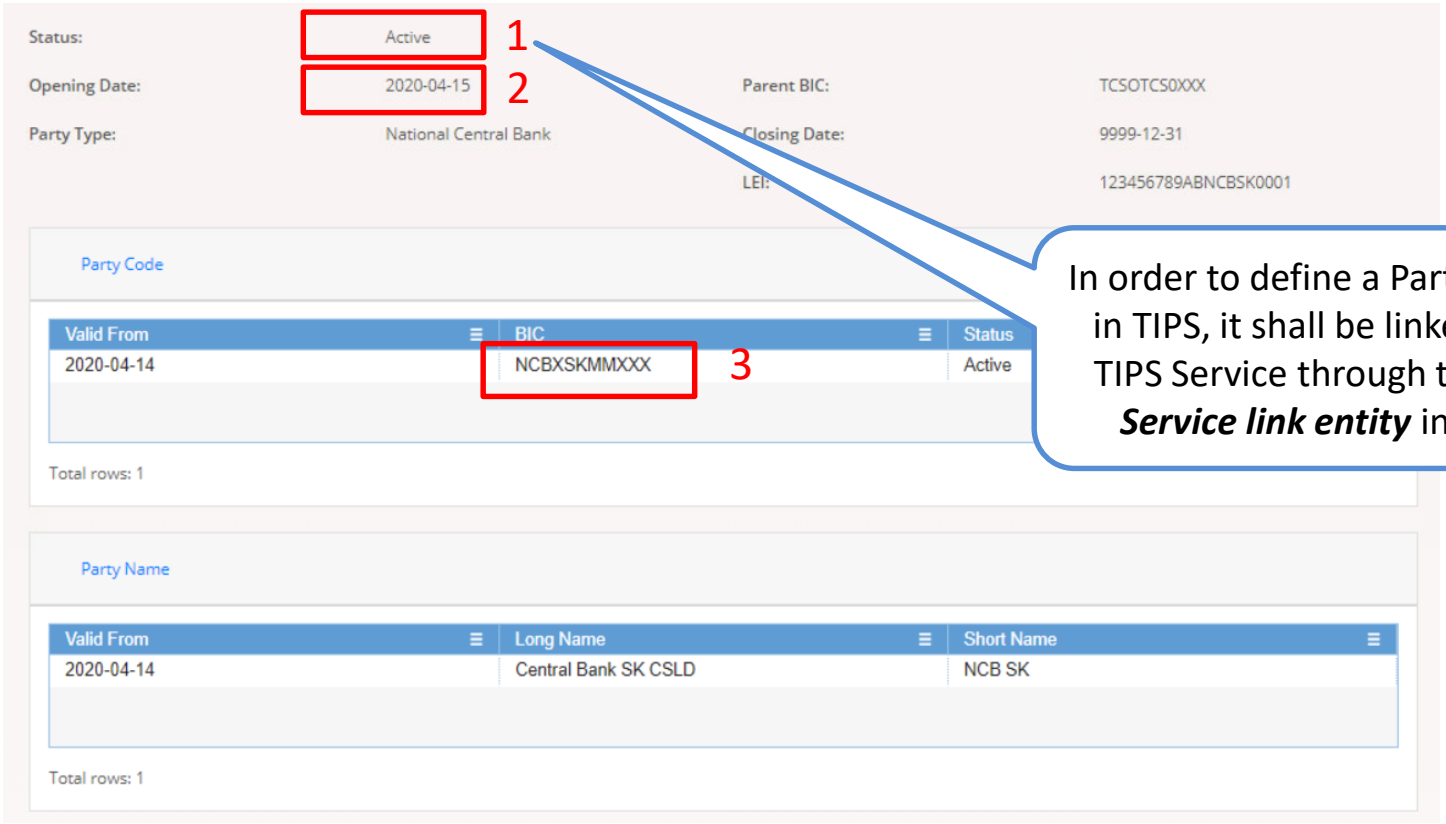


# Instructing party entity – TIPS view (2/2)




- **Inbound routing**: one Distinguished Name may be linked to many Parties and, optionally, many Originator BICs
- **Outbound routing**: any given Beneficiary BIC may be linked to *one and only one* Distinguished Name

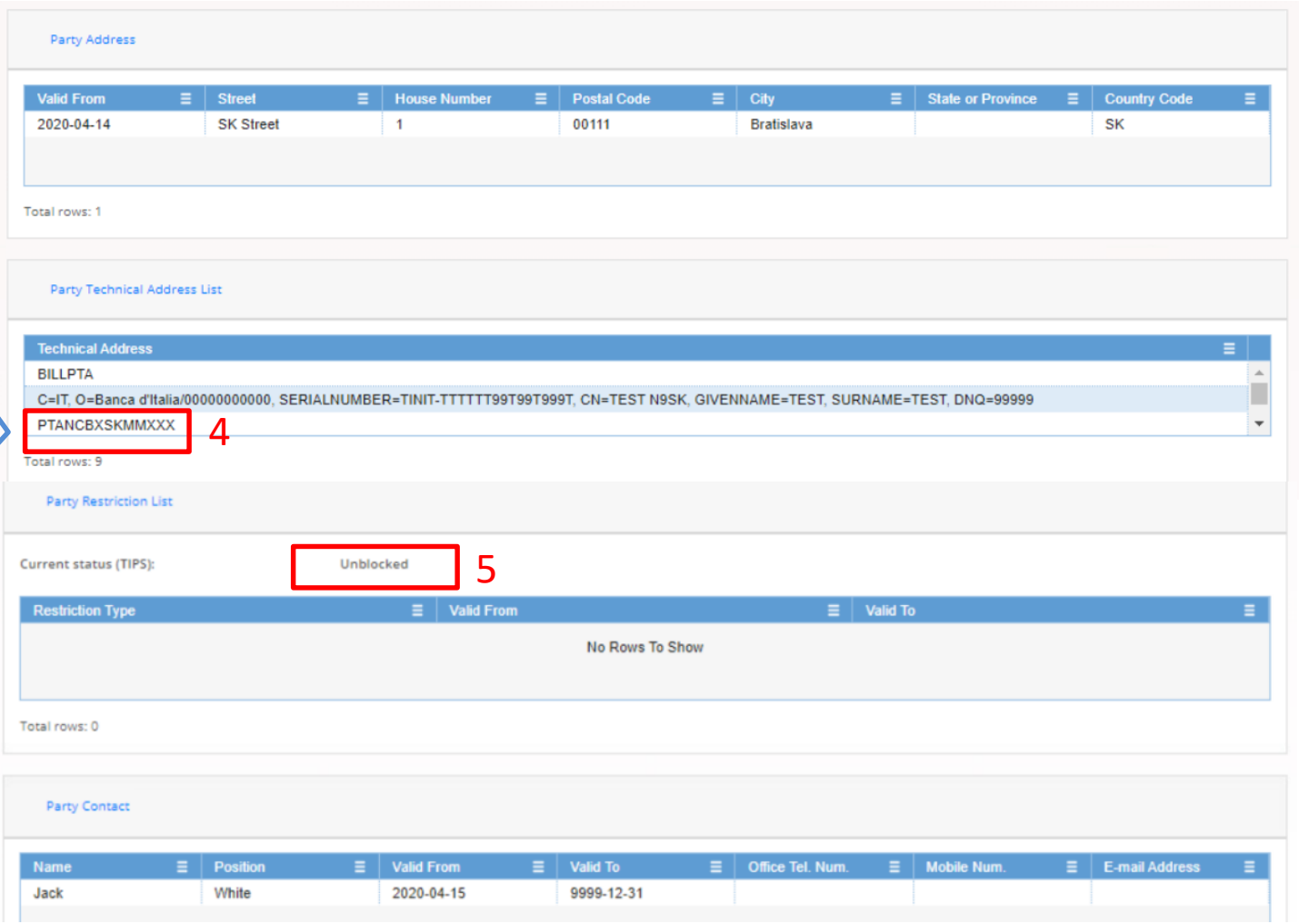
# Party reference data in CRDM (1/2)




In order to define a Party working in TIPS, it shall be linked to the TIPS Service through the ***Party Service link entity*** in CRDM

# Party reference data in CRDM (2/2)

DN for the receipt of TIPS Directory, reports and floor/ceiling notifications is set-up through the TANSL* configuration



Party Address

| Valid From | Street | House Number | Postal Code | City | State or Province | Country Code |
|---|---|---|---|---|---|---|
| 2020-04-14 | SK Street | 1 | 00111 | Bratislava | | SK |

Total rows: 1

Party Technical Address List

| Technical Address |
|---|
| BILLPTA |
| C=IT, O=Banca d'Italia/00000000000, SERIALNUMBER=TINIT-TTTTTT99T99T999T, CN=TEST N9SK, GIVENNAME=TEST, SURNAME=TEST, DNQ=99999 |
| PTANCBXSKMMXXX |

4

Total rows: 9

Party Restriction List

Current status (TIPS): Unblocked

5

| Restriction Type | Valid From | Valid To |
|---|---|---|
| No Rows To Show | | |

Total rows: 0

Party Contact

| Name | Position | Valid From | Valid To | Office Tel. Num. | Mobile Num. | E-mail Address |
|---|---|---|---|---|---|---|
| Jack | White | 2020-04-15 | 9999-12-31 | | | |

*(*) TANSL: Technical Address Network Service Link*

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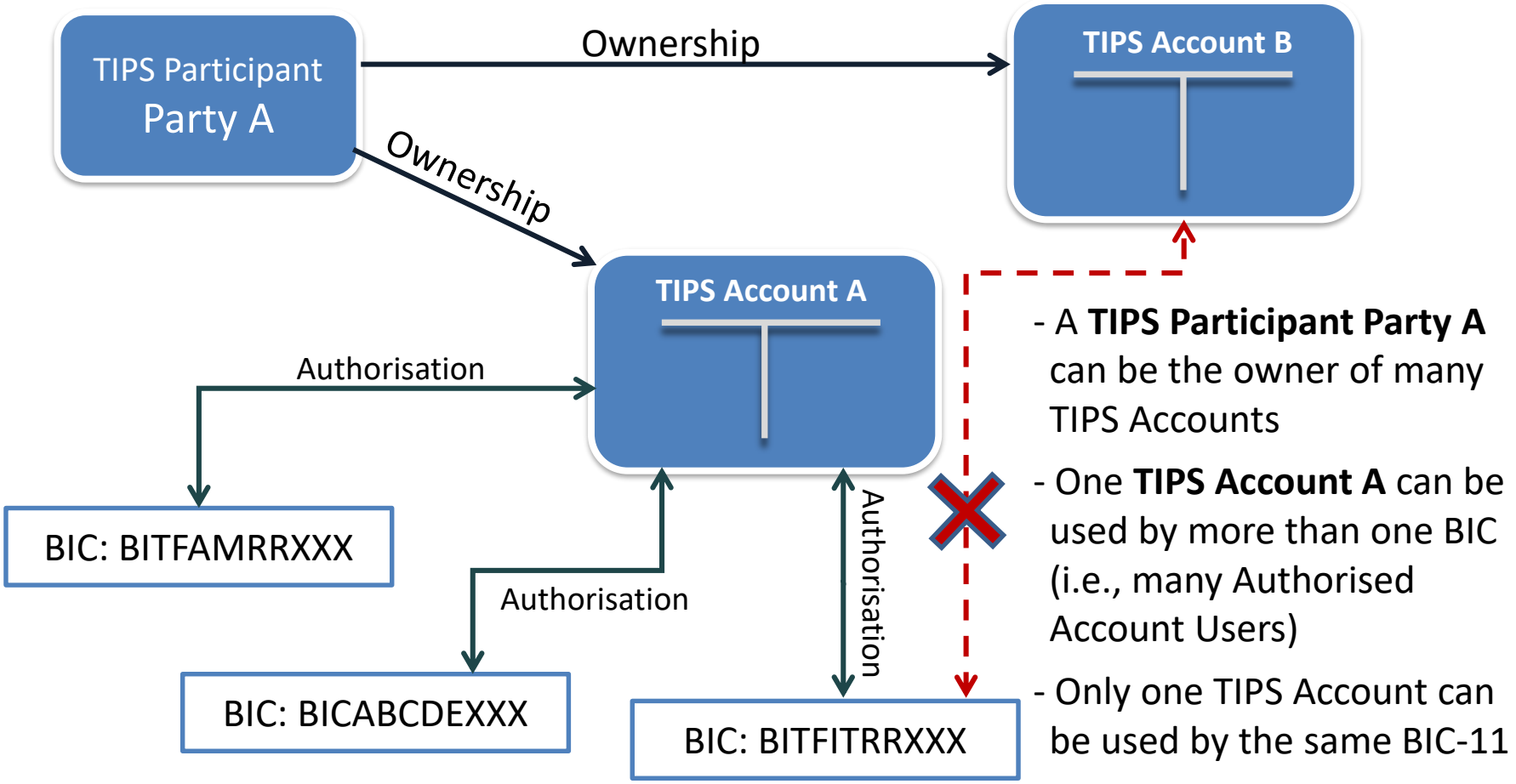
# Account definition in TIPS

- Accounts are opened in TIPS for the provision of liquidity and the settlement of Instant Payment transactions.
- Central Banks, TIPS Participants and Ancillary Systems can be defined as account owner
- Reachable parties are not entitled to hold accounts
- Account holders can define Credit Memorandum Balances (CMBs) linked to their accounts in TIPS, in order to define payment capacity limits for their Reachable Parties
- There are four types of accounts in TIPS:
  - **TIPS Account (or TIPS DCA)**
  - **TIPS AS Technical Account**
  - **Transit Account**
  - **TIPS Credit Memorandum Balance**

# TIPS Account

- **What it is**: Account used for the settlement of Instant Payments, Recall Response and Inbound/Outbound/Intra-service Liquidity Transfers
- **Creator**: Central Banks for their Participants (which are the owners of the Account)
- **How many**: There is no limit to the number of Accounts a TIPS Participant may retain in TIPS
- **Who uses it**: Any Authorised Account User (i.e. any BIC) linked to the account
- **Applicable limitations to their usage**:
  - **TIPS Accounts** cannot have a negative balance at any time
  - Several BICs can be authorised to settle on the same TIPS Account
  - Each BIC-11 can be authorised to use only one account for its settlement activities

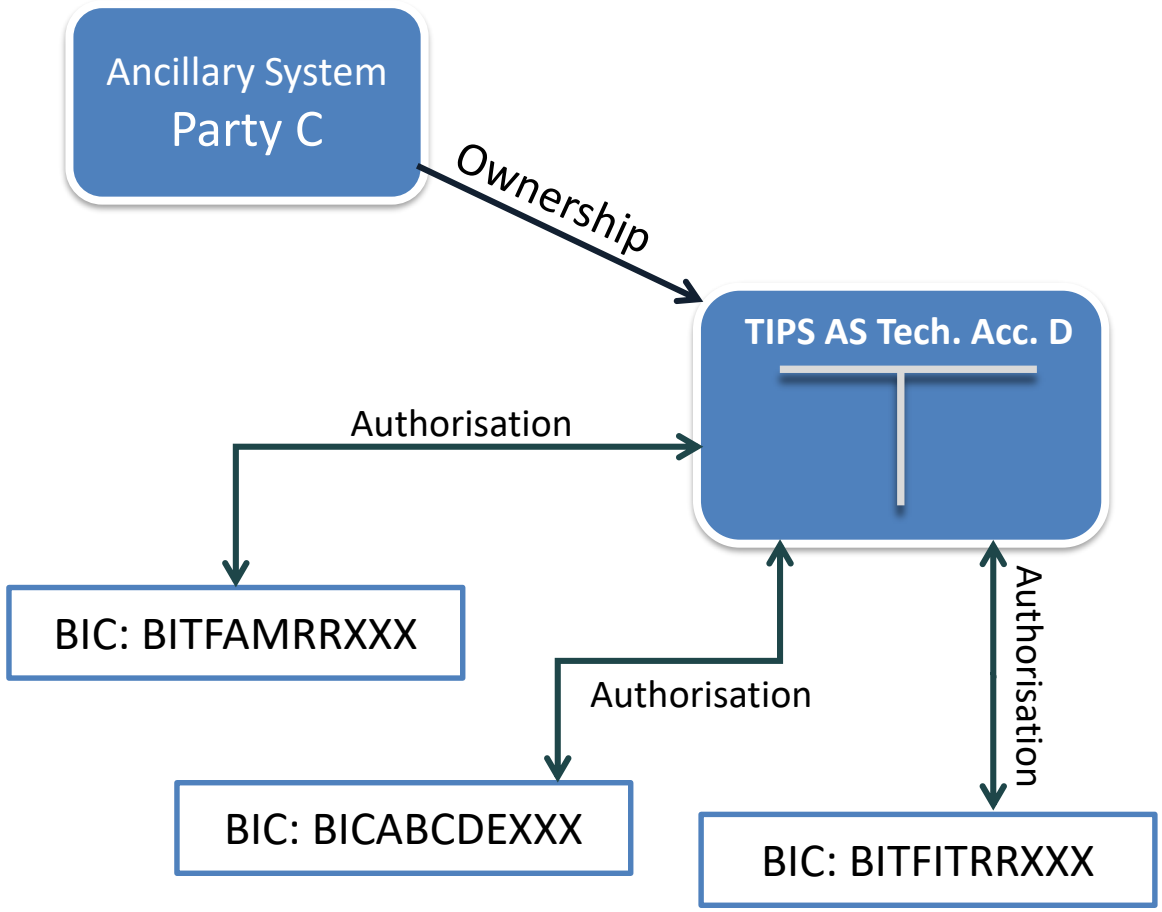
# Ownership vs Authorisation – TIPS Account



# TIPS AS Technical Account

- **What it is**: Account used for the settlement of Instant Payments, Recall Response and Intra-service Liquidity Transfers
- **Creator**: Central Banks for their Ancillary System (which are the owners of the Account)
- **How many**: Each Ancillary System may retain up to one TIPS AS Technical Account
- **Who uses it**: Any Authorised Account User (i.e. any BIC) linked to the account
- **Applicable limitations to their usage**:
  - **TIPS AS Technical Accounts** cannot have a negative balance at any time
  - Several BICs can be authorised to settle on the same TIPS AS Technical Account
  - The Ancillary System's BIC-11 cannot be set as an authorised BIC

# Ownership vs Authorisation – TIPS AS Technical Account




- An **Ancillary System Party C** can be the owner of at most one TIPS AS Technical Account
- The same **TIPS AS Technical Account D** can be used by more than one BIC (*many Authorised Account Users*)
- Only one account can be used by a given BIC-11 (*e.g. BITFITRRXXX cannot be set as Authorised User of any other account or CMB in the system*)

# Transit Account

- **What it is**: technical account involved in the liquidity transfer process between TIPS and the RTGS System operating a given currency
- **Creator**: TIPS Operator for the relevant Central Bank
- **Who uses it**: Each responsible Central Bank (e.g. ECB for EUR, or Riksbank for SEK)
- **How many**: Only one Transit Account per settlement currency can be created in TIPS
- **Applicable limitations to their usage**:
  - **Transit Accounts** cannot be used for the settlement of transactions
  - The Transit Account for euro belongs to the European Central Bank
  - Transit Accounts can have either zero or negative balance, reflecting the overall liquidity injected in TIPS for any given currency

# Account Entity

| Attribute | Description |
|---|---|
| Account Number | It specifies the unique number of the account |
| Account Type | • TIPS account<br>• TIPS AS Technical account<br>• Transit account |
| Currency | It specifies the currency of the account |
| Opening Date | Opening date of the account |
| Closing Date | Closing date of the account |
| Floor Notification Amount | It specifies the lower threshold for notifying the account owner. When equal to zero, the notification is not produced |
| Ceiling Notification Amount | It specifies the upper threshold for notifying the account owner. When equal to zero, the notification is not produced |
| Credit/Debit Notification Flag | Boolean attributes specifying whether the account owner must receive a credit/debit notification after the settlement of (i) any inbound/outbound Liquidity Transfer from the relevant RTGS system or (ii) intra-service Liquidity Transfers |
| Blocking Status | • Blocked for credit<br>• Blocked for debit<br>• Blocked for credit and debit<br>• Unblocked |

Additional reference data on Account entity is stored in the CRDM, but it is not used by TIPS

# Credit Memorandum Balance

- **What it is**: a limit set on the usage of the liquidity of a given TIPS Account or TIPS AS Technical Account
- **Creator**: TIPS Participant (for TIPS Accounts) or Ancillary System (for TIPS AS Technical Accounts)
- **How many**: each TIPS Account or TIPS AS Technical Account may have any number of linked CMBs, each CMB representing a credit line for a Reachable Party in TIPS
- **Applicable limitations to their usage**:
  - Each BIC-11 can be authorized to settle on only one CMB.
  - Each **CMB** can have only one authorised BIC-11 defined
  - The limit can be set to Unlimited value (full usage of the payment capacity of the linked Account). The Limit value can be updated at any time

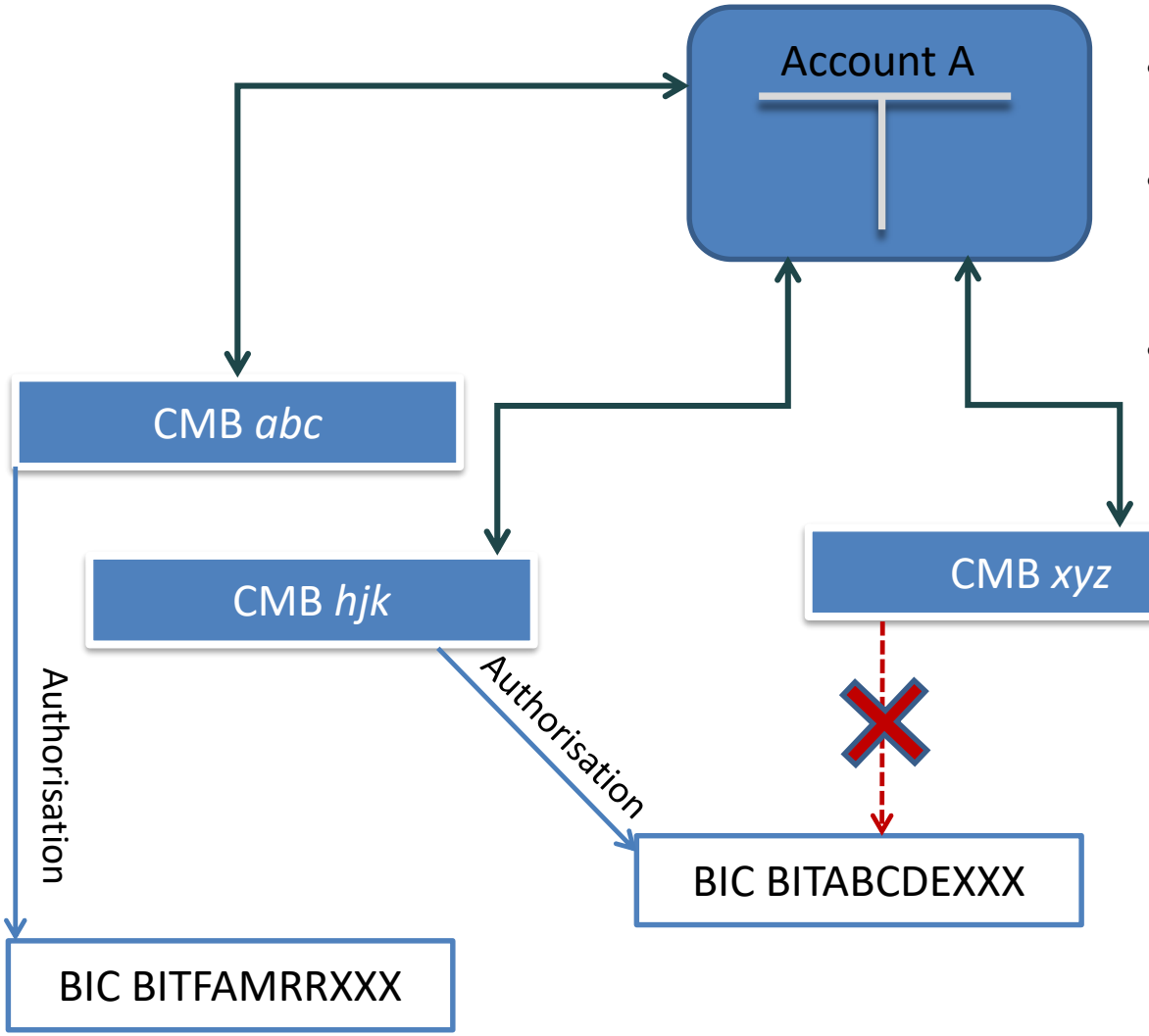
# Credit Memorandum Balance entity

| Attribute | Description |
|---|---|
| CMB Number | It specifies the unique number of the CMB |
| Opening Date | Opening date of the CMB |
| Closing Date | Closing date of the CMB |
| Floor Notification Amount | It specifies the lower threshold of the CMB headroom for notifying the owner of the account which the CMB is linked to. When equal to zero, the notification is not produced. |
| Ceiling Notification Amount | It specifies the upper threshold of the CMB headroom for notifying the owner of the account which the CMB is linked to. When equal to zero, the notification is not produced. |
| Limit | It specifies the limit amount for the CMB. |
| Blocking Status | • Blocked for credit<br>• Blocked for debit<br>• Blocked for credit and debit<br>• Unblocked |

More information on Accounts is stored in the CRDM, but it is not needed in TIPS

**They are two separate entities in CRDM; both of them shall be defined in order to make use of a CMB in TIPS**

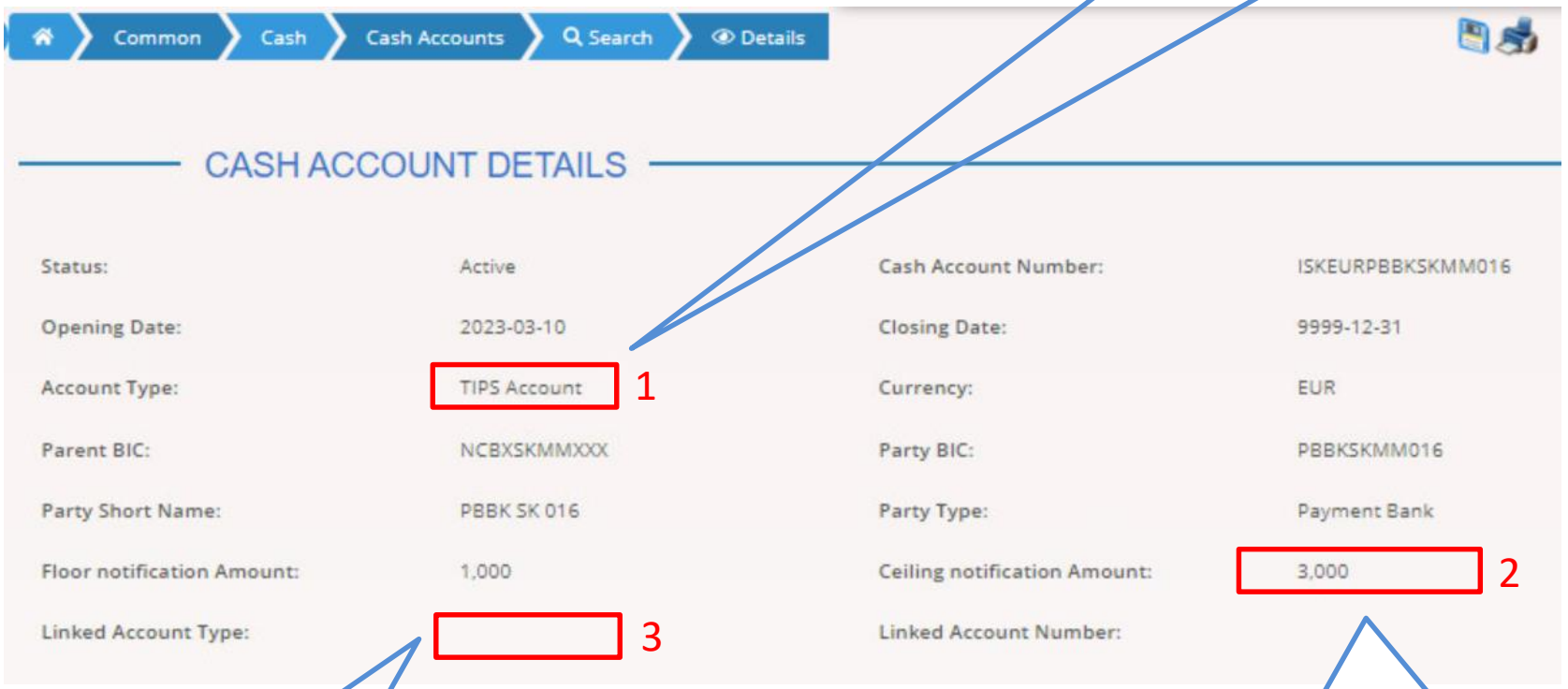
# Ownership vs Authorisation – CMB




- An **Account A** may be linked from 0-to-many CMB
- One **CMB** can be defined for a BIC only (one Authorised Account User)
- Only one CMB can be used by the same BIC11

# Cash Account/CMB reference data in CRDM

Same screen to maintain **TIPS Accounts**, **TIPS AS Technical Accounts** and **CMBs**




Needed only in case the object is a **CMB**

If greater than zero, it will trigger ceiling **notification** messages

# Reference data management - Outline

1 **Reference Data**

- *General concepts*
- *Hierarchical party model*
- *TIPS Actors*
- *Account structure*
- *Additional reference data objects for TIPS*

2 **Reference Data propagation**

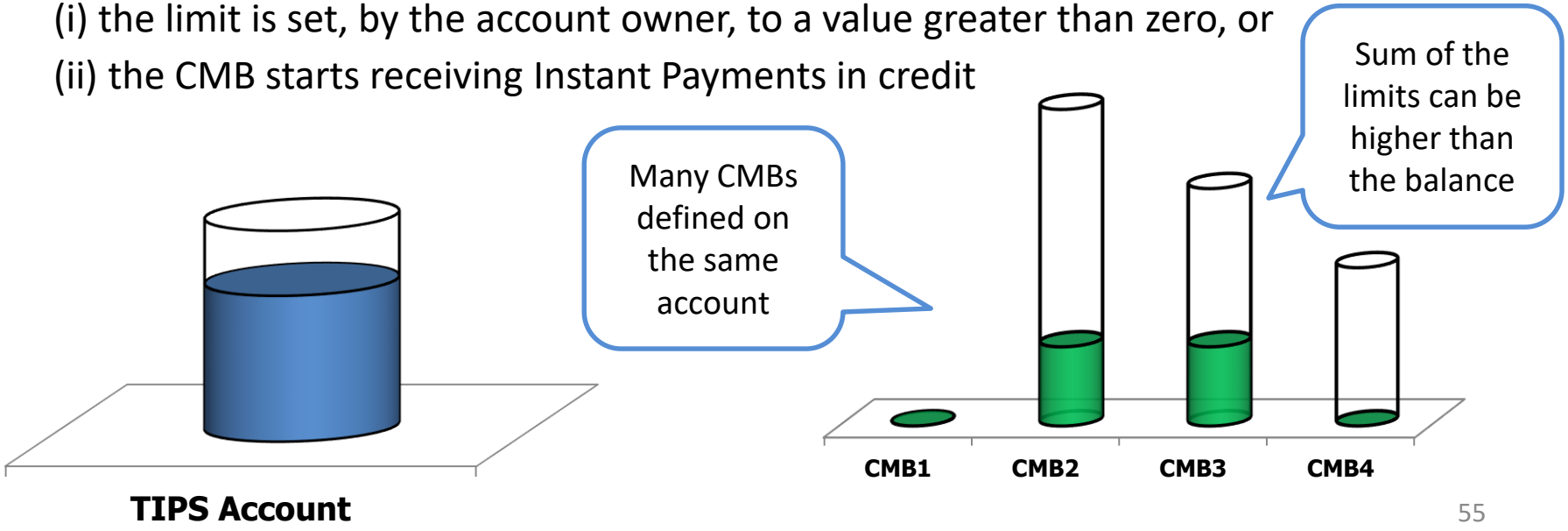
3 **Blocking of participants, accounts and CMBs**

# Limit configuration

- CMBs provides the account owner (and/or liquidity provider) with the possibility to define flexible limit management on TIPS Account or TIPS AS Technical Account, without the need to dedicate separate pots of liquidity for each single customer
- A CMB can also be setup with an **unlimited** limit value. In this case, the related counterpart can make use of the full payment capacity of the account linked to the CMB
- Limits can be set to zero. In this case, the related user cannot make use of the payment capacity of the account linked to the CMB until either

  (i) the limit is set, by the account owner, to a value greater than zero, or

  (ii) the CMB starts receiving Instant Payments in credit



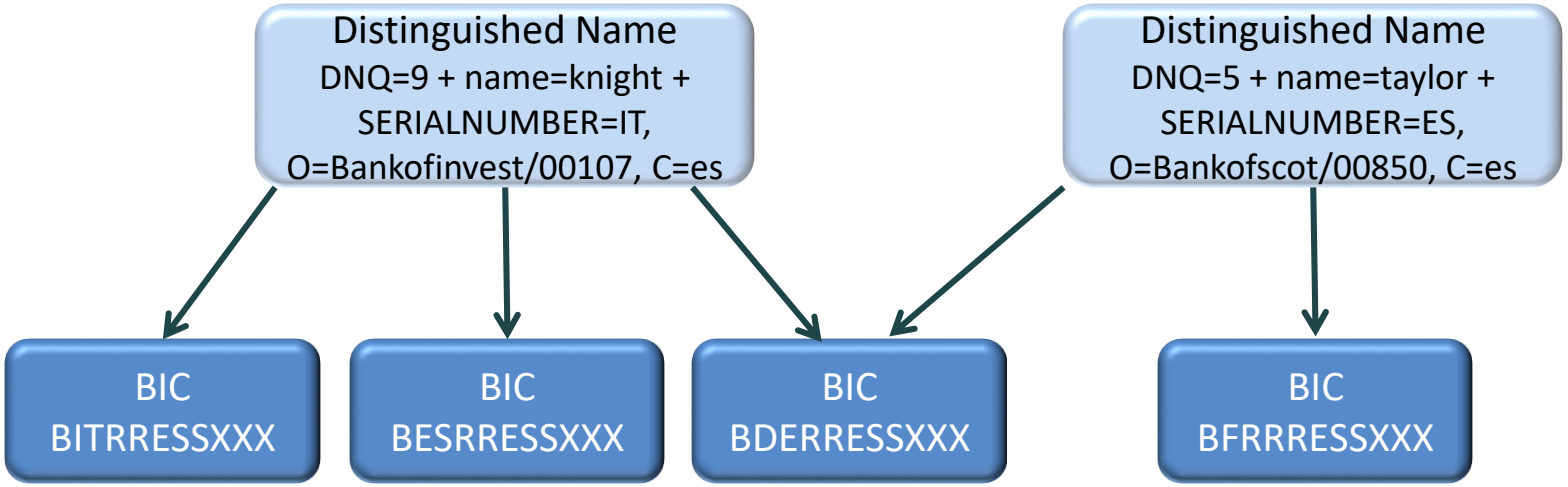
# DN-BIC Routing configuration (1/3)

- **Inbound messages:** TIPS shall allow a many-to-many relation between sender distinguished names and Parties, meaning :
  - That the same Instructing Party can play its role for many Parties, and
  - That a Participant or Reachable Party can authorise many Instructing Parties to act on its behalf
  - The couple (DN, BIC) is stored in the "Inbound DN-BIC Routing" table
- **Outbound messages:** There must be a many-to-one relation between Beneficiary Participant or Reachable Party and receiver distinguished names, meaning that:
  - Any given Beneficiary Participant BIC may be linked to one and only one Distinguished Name for the receipt of instant payment messages
  - The couple (DN, BIC) is stored in the "Outbound DN-BIC Routing" table
- In addition, it is possible to configure a separate Distinguished Name per TIPS Participant and Ancillary System, as "Party Technical Address", for the receipt of messages relevant to account owners, such as reports, debit/credit notifications and floor/ceiling notifications

# DN-BIC Routing configuration (2/3)

## Inbound messages

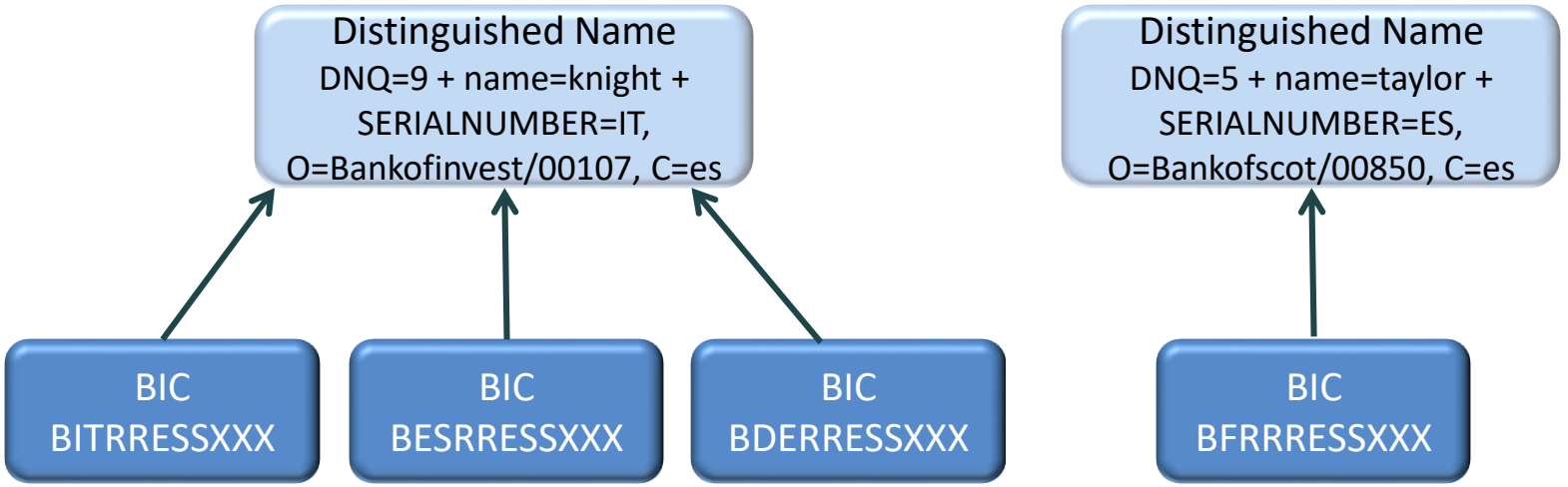
- TIPS shall allow a **many-to-many relation** between sender distinguished names and Parties, meaning that
  - the same Instructing Party can play its role for many Parties and
  - a Participant or Reachable Party can authorise many Instructing Parties to act on its behalf as a sender
- The couple (DN, BIC) is stored in the "Inbound DN-BIC Routing" table



# DN-BIC Routing configuration (3/3)

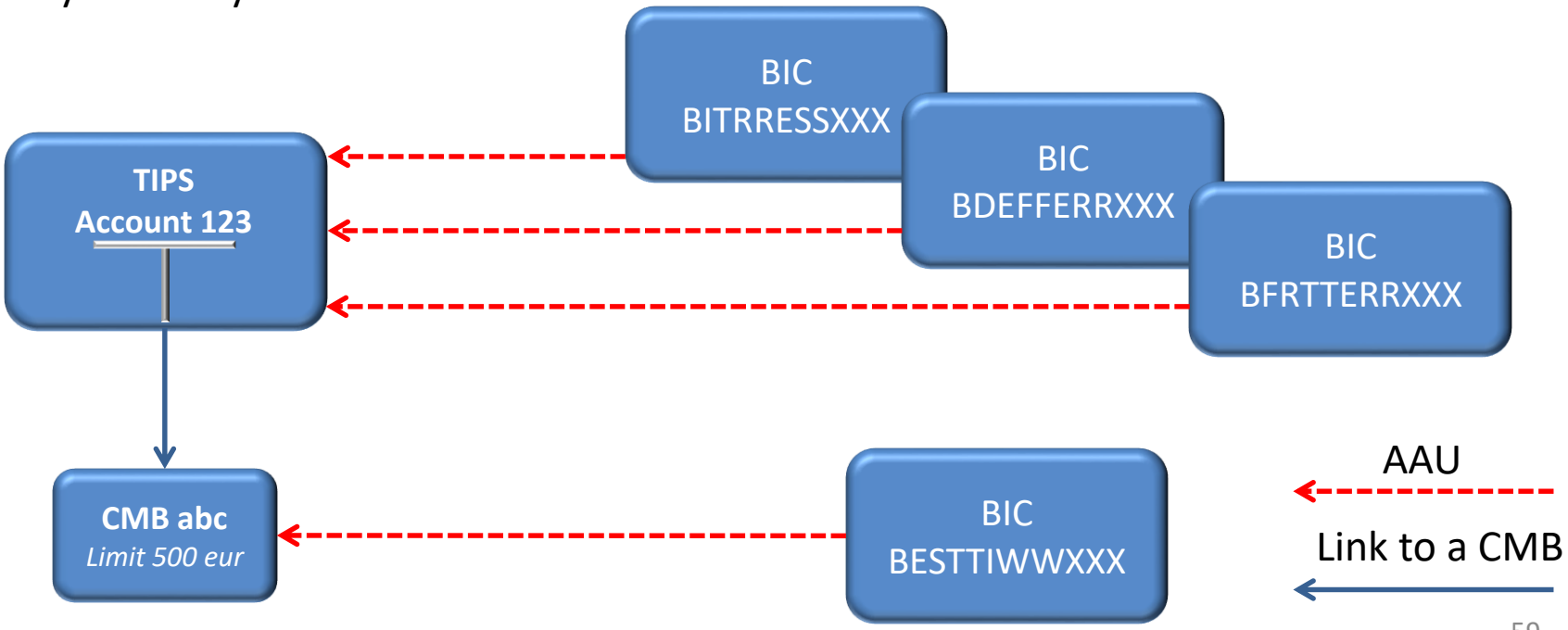
## Outbound messages

- There must be a **many-to-one relation** between Beneficiary Participant or Reachable Party and receiver distinguished names, meaning that
  - any given Beneficiary Participant BIC may be linked to a unique Distinguished Name for receiving instant payment (and recall) messages



# Authorised Account User (1/3)

- It is a link between a BIC and a TIPS Account or CMB
- It is needed in order to authorise a BIC to use the related TIPS Account or CMB for settlement purposes
- Each BIC can be linked to a unique TIPS Account or CMB
- Each CMB can have no more than one Authorised Account User, while TIPS Accounts may have any number



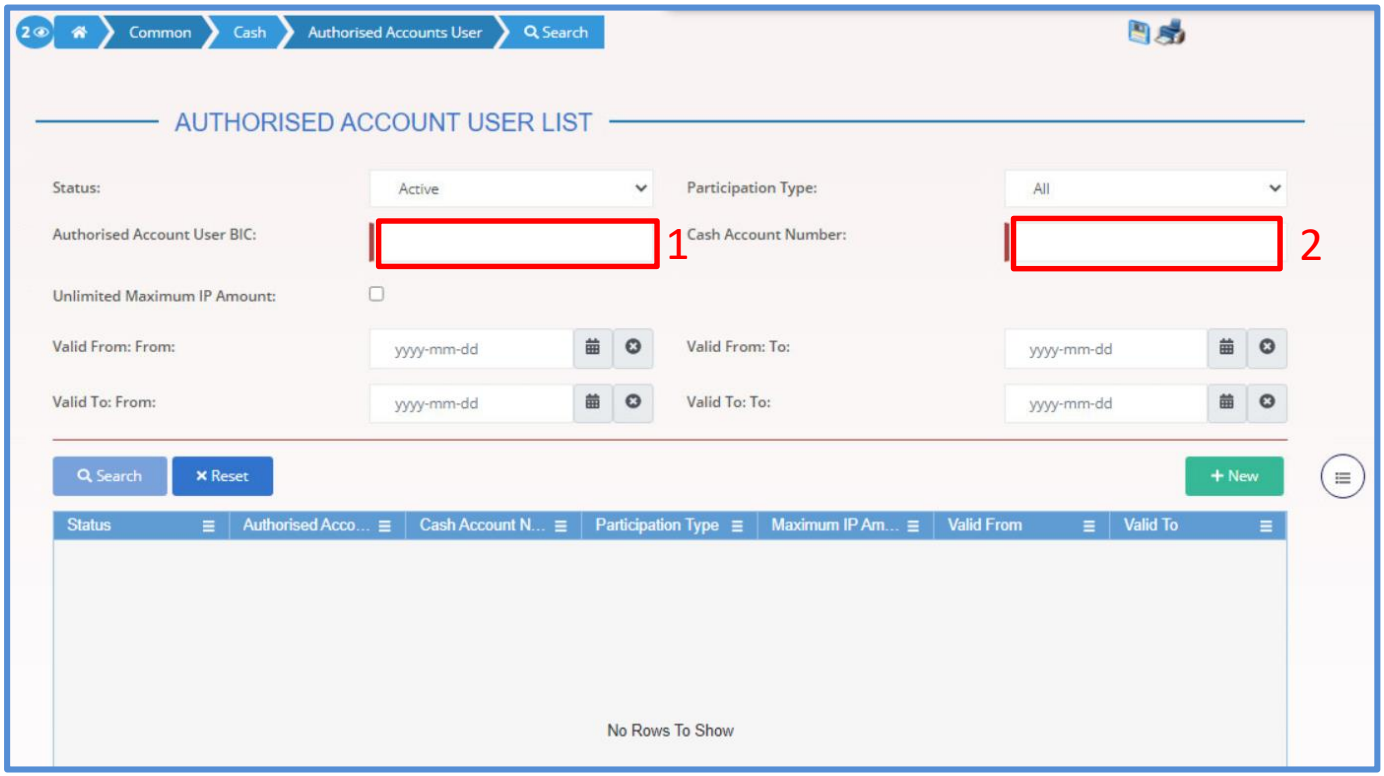
# Authorised Account User (2/3)

- Due to the fact that in the pacs.008/pacs.004 messages only the Originator/Beneficiary BICs are present, it is necessary to derive the account to be used in TIPS for the settlement of Instant Payments and positive Recall Responses
- Liquidity transfers do not entail the usage of the Authorised Account User entity
- The AAU entity is also used to build the TIPS Directory whose aim is to publish the list of BICs which are reachable through the TIPS service
- Additionally, the account owners may define a maximum amount threshold that they woukd accept via an Instant Payment Transaction
  - Currently, the EPC Maximum Amount is set to **100,000.00** EUR
  - Such a value is the minimum default value in EUR acceptable as a threshold in the AAU
  - However, in TIPS the maximum amount settled with an instant payment is set to **unlimited**
  - Theoretically, the account owners may setup different thresholds (above the EPC Maximum Amount) to indicate to their counterparts that the are accepting higher amounts
  - This value is published in the TIPS Directory, for each entry

# Additional reference data objects for TIPS



## Authorised Account User (3/3)



# Routing configuration

- The setup of routing configurations includes the configuration of the following reference data objects in CRDM: **network services**, **party technical addresses**, **TANSL** (link between a network service and a party technical address), and *default* and *conditional* **routings**.

- One party technical address can be used for several network services

- Each CRDM Actor connected directly is responsible for setting up and maintaining default and conditional routing static data related to its **outbound communication**

- Routing configurations are **needed** for receiving **reports, notifications** and **TIPS Directory** (via **CRDM Network Service**)

# Reference data management - Outline

1 **Reference Data**

2 **Reference Data propagation**

- *Overview*
- *Common Reference Data changes*
- *Immediate Reference Data changes*

3 **Blocking of participants, accounts and CMBs**

# Overview

- **Common reference data changes**
  - Made available through the CRDM
  - Available 22 hours a day, 5 days a week
  - Functions available in both 2-Eyes and 4-Eyes mode
  - It is required to capture data changes in advance
  - Propagated to TIPS on a daily basis at 17:00 CET, before the change of the RTGS System business day (i.e. T2-CLM)
- **Immediate reference data changes**
  - Made available directly in TIPS or CRDM
  - Available 24/7/365 in TIPS
  - Functions available in both 2-Eyes and 4-Eyes mode

# Reference data management - Outline

1 **Reference Data**

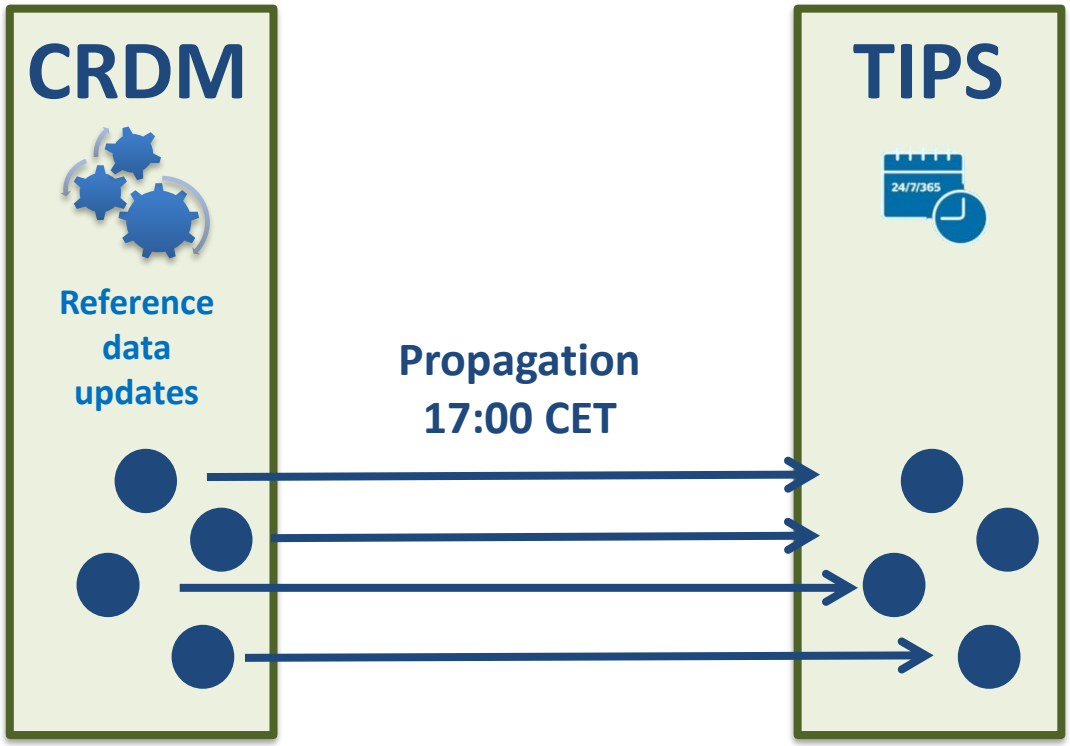
2 **Reference Data propagation**

- *Overview*
- *Common Reference Data changes*
- *Immediate Reference Data changes*

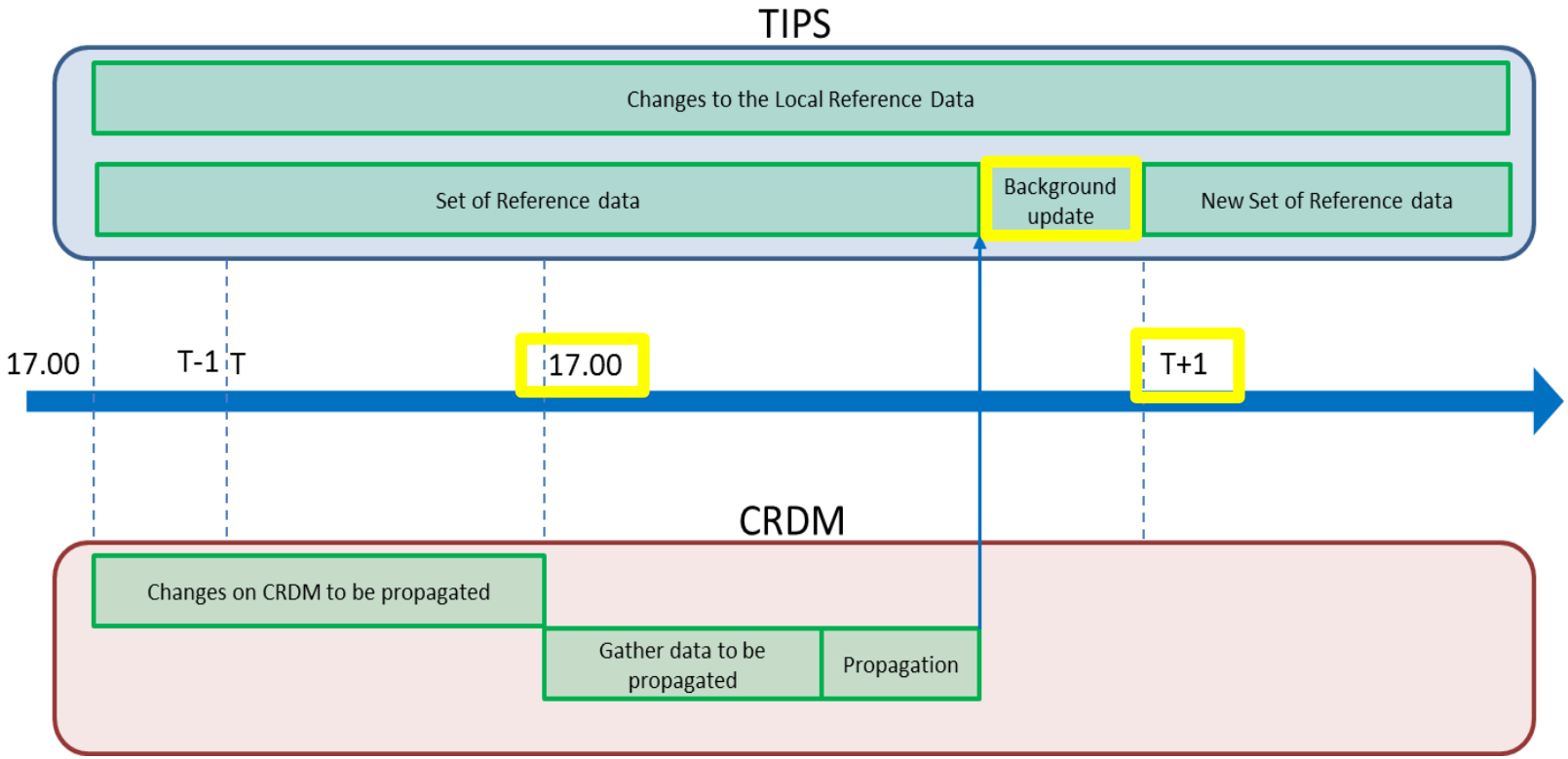
3 **Blocking of participants, accounts and CMBs**

# Daily propagation (1/2)

- All reference data updates performed in CRDM since the last propagation are transmitted to TIPS
- If an item, propagated on date T, contains a validity date in the future (e.g. T+2), TIPS acquires it immediately during the daily propagation, but the item will be available for business processing (e.g. settlement) only when the validity date is reached



# Daily propagation (2/2)



# Reference data management - Outline

1 **Reference Data**

2 **Reference Data propagation**

- *Overview*
- *Common Reference Data changes*
- *Immediate Reference Data changes*

3 **Blocking of participants, accounts and CMBs**

# Immediate reference data change in TIPS via TIPS users

| Entity | Possible operations | Responsible Actor(s) | U2A availability | A2A availability |
|---|---|---|---|---|
| TIPS Participant or Ancillary System | Update of blocking status | TIPS Operator, CB | Yes | Yes |
| Account | Update of blocking status | TIPS Operator, CB | Yes | Yes |
| CMB | Update of blocking status | TIPS Operator, CB, TIPS Participant, Ancillary System, Instructing Party | Yes | Yes |
| | Update of CMB limit value | | | |

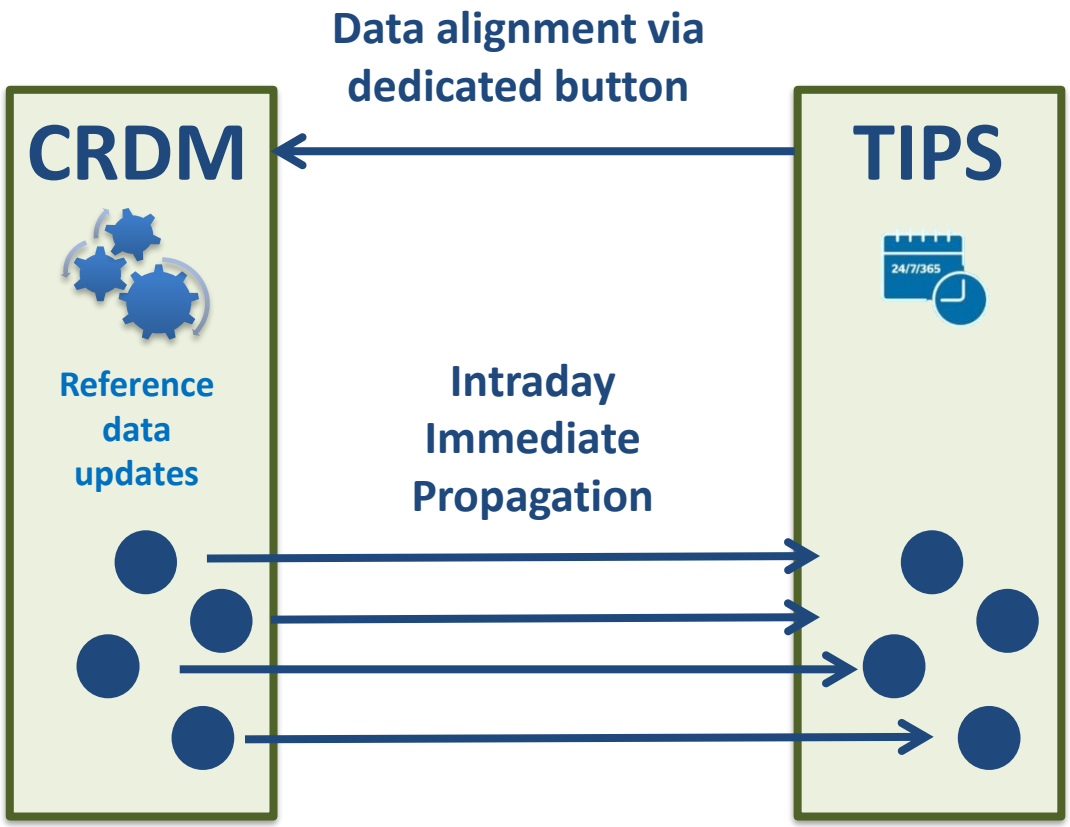
# Immediate reference data change in TIPS via CRDM users

- Available during **CRDM opening hours in U2A mode only**
- Upon **alignment with TIPS data** via dedicated button to grant consistency

| Entity | Possible operations | Responsible Actor(s) | U2A availability | A2A availability |
|---|---|---|---|---|
| TIPS Participant or Ancillary System | Update of blocking status | TIPS Operator, CB | Yes | No |
| Account | Update of blocking status | TIPS Operator, CB | Yes | No |
| CMB | Update of blocking status | TIPS Operator, CB, TIPS Participant, Ancillary System, Instructing Party | Yes | No |
| | Update of CMB limit value | | | |

# Intraday immediate propagation from CRDM

- All reference data updates performed in CRDM on specific operations are immediately transmitted to TIPS



# Reference data management - Outline



1 **Reference Data**

2 **Reference Data propagation**

3 **Blocking of participants, accounts and CMBs**

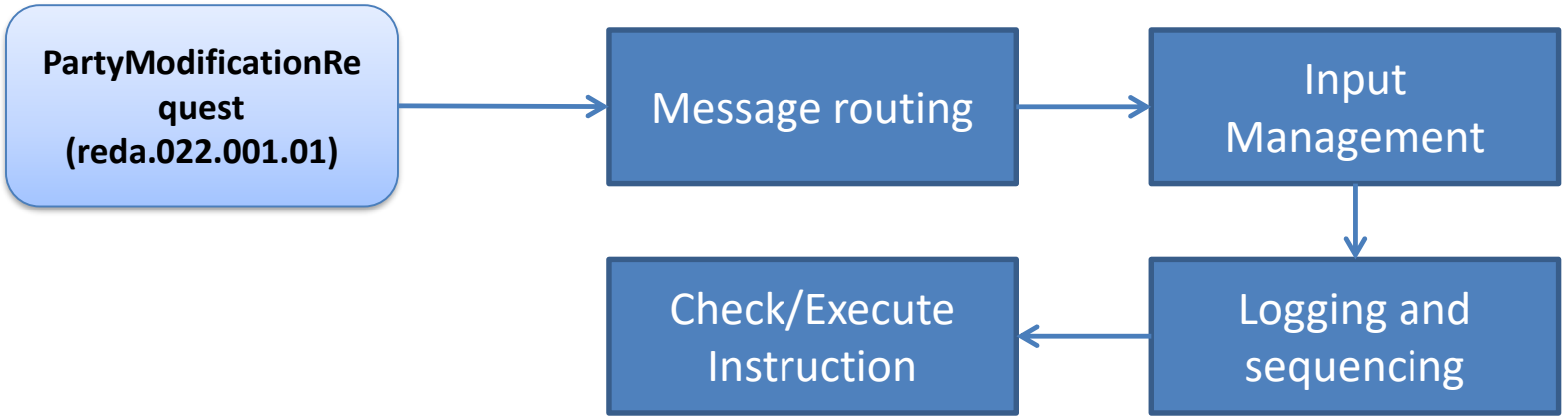
- ***Overview***
- ***Blocking of actors***
- ***Blocking of accounts***
- ***Blocking of CMBs***

# Blocking of participants, accounts and CMBs



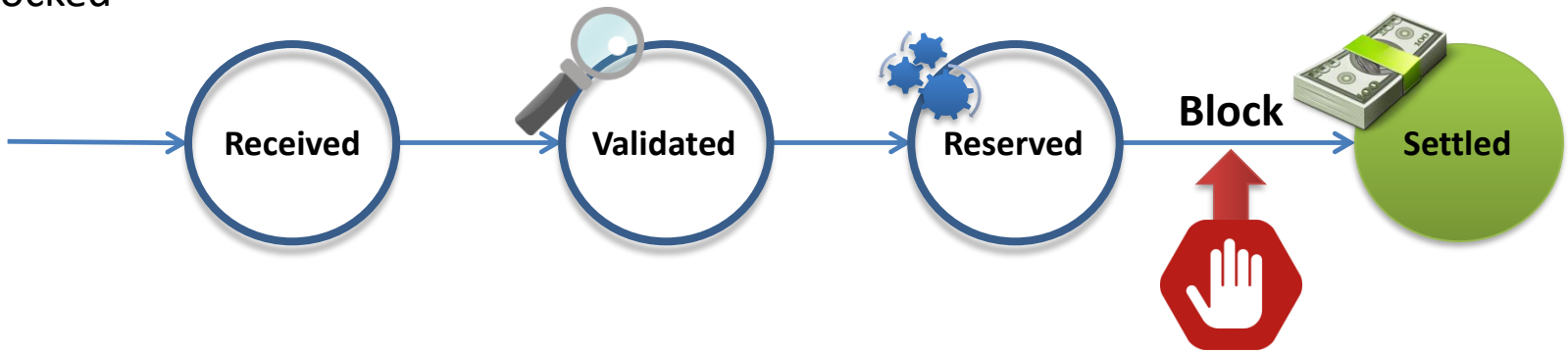
## Overview

- TIPS provides blocking functionalities as an *immediate* reference data change
- High-priority settlement-relevant reference data changes
  - Blocking operations are carried out by authorised users directly in TIPS via the TIPS interface (available 24 hours a day) or in CRDM (available 22 hours a day, 5 days a week) and processed in the same flow as Instant Payment transactions

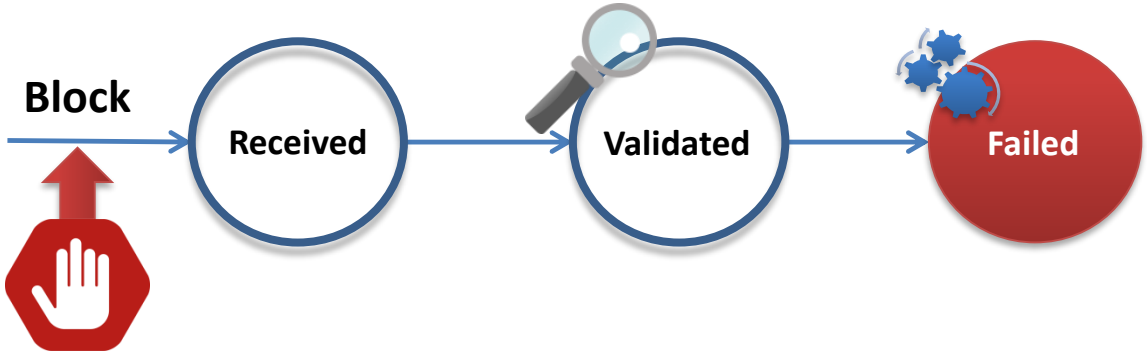


# Immediate effect

- If TIPS receives the ordered sequence where the debiting (or the reservation) precedes the blocking, the Instant Payment transaction will be processed before the account is blocked




- If, conversely, TIPS receives the ordered sequence where the account blocking is executed prior to the Instant Payment transaction, the account will be blocked whereas the transaction will be rejected



# Types of Blocking operations

- The types of Blocking operations in TIPS are listed below:
  - Blocking/unblocking of a participant
  - Blocking/unblocking of an account
  - Blocking/unblocking of a CMB
- Blocking operations can be submitted in U2A and A2A mode
- Regardless of the connection mode, all instructions are submitted to the TIPS core in the same format (no difference in priority and treatment of the request)

# Reference data management - Outline

1 Reference Data

2 Reference Data propagation

3 Blocking of participants, accounts and CMBs

- *Overview*
- *Blocking of actors*
- *Blocking of accounts*
- *Blocking of CMBs*

# Blocking of a TIPS Participant or Ancillary system (1/2)

- **WHO**: TIPS allows Central Banks to immediately block a TIPS Participant or Ancillary System belonging to their data scope, e.g. due to insolvency
- **WHAT**: Blocking a TIPS Actor for debiting/crediting results in an equivalent blocking on all accounts owned by the TIPS Actor and all the CMBs linked to these accounts. The individual Account and CMB blocking status is not overwritten
- **WHEN**: 24/7/365
- **HOW IT IS TRIGGERED**: Party blocking can be performed in U2A as well as A2A mode, the latter involving messages ***PartyModificationRequest*** and ***PartyStatusAdvice***
- **TYPES OF BLOCKING**: Blocked for credit; Blocked for debit; Blocked for credit and debit; Unblocked

# Blocking of a TIPS Participant or Ancillary System (2/2)

- **HOW IT WORKS**: The block is performed setting a restriction directly in TIPS (or in CRDM with immediate propagation to TIPS) on the party identifying the TIPS Participant or Ancillary System. TIPS performs the block request executing it immediately, without checking if the actor s already blocked. It overwrites the previous block type or adds a new one
- **EXCEPTION**: Blocking does not affect reserved amounts; if an amount is reserved for an ongoing payment when the blocking is applied, the instant payment transaction will be completed regardless of the new blocking status

# Blocking of TIPS Participants/Ancillary system

## Involved Messages

### PartyModificationRequestV01 (reda.022.001.01)

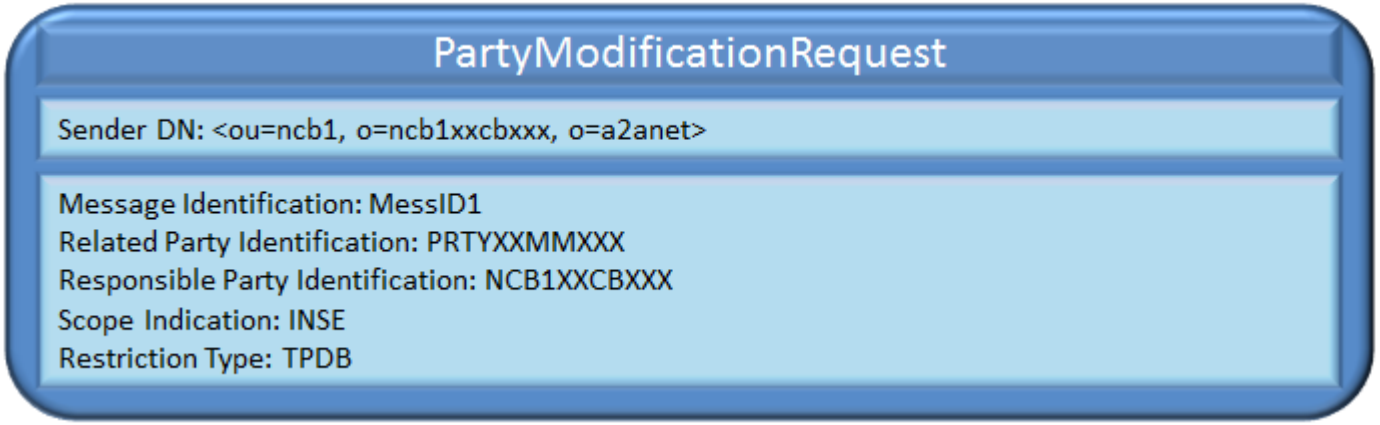
Sent by the Central Bank
Used to block/unblock the TIPS Participant or Ancillary system.

### PartyStatusAdviceV01 (reda.016.001.01)

Sent by TIPS to inform the Central Bank about the results of the execution of the Party Modification Request (i.e. completed, rejected)

# Blocking of a TIPS Participant/Ancillary system – A2A mode (1/3)

1. Central Bank sends a PartyModificationRequest (reda.022) with following information:
   - BIC of the TIPS Participant/Ancillary system for which the change of blocking status is requested
   - Type of blocking request: **TPCR** Block for credit; **TPDB** Block for debit; **TPBO** Block for both




2. TIPS receives the request for the amendment of a Party (block for debit)
3. TIPS successfully executes the Access Rights checks

# Blocking of a TIPS Participant/Ancillary system – A2A mode (2/3)

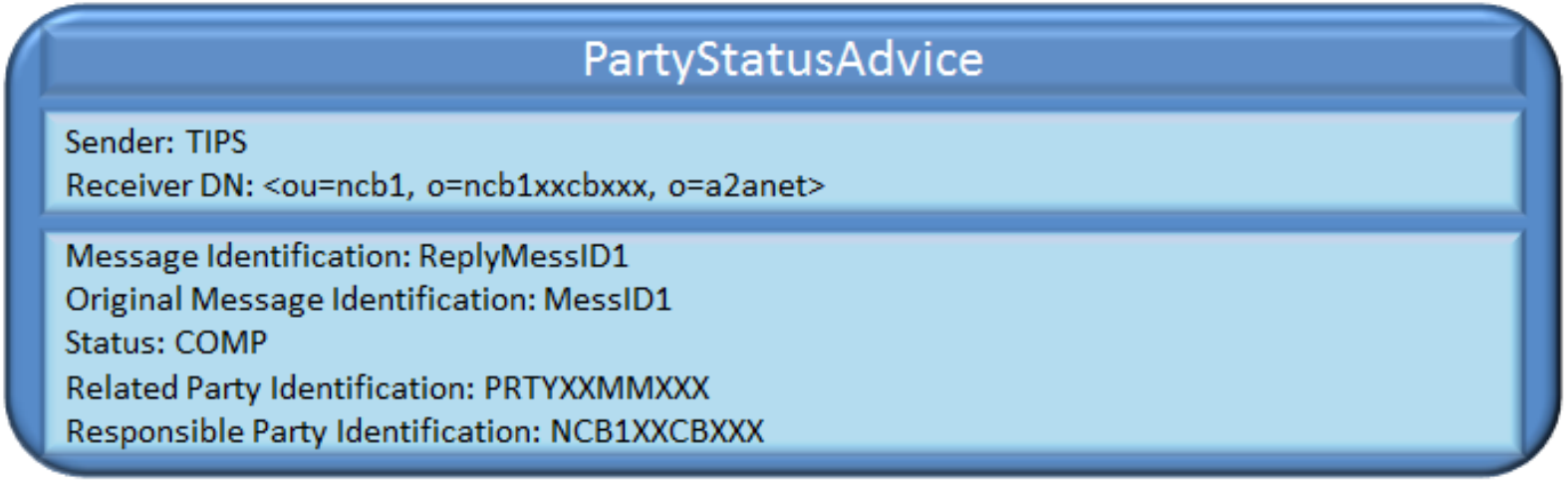
4. TIPS successfully executes the following business checks:
   - Block/unblock type is allowed (the Restriction Type Code must be **TPCR** (Block for credit), **TPDB** (Block for debit) or **TPBO** (Block for both debit and credit)
   - Party exists
   - Party type is allowed for blocking, i.e. the party being blocked must be a TIPS Participant or an Ancillary system.

5. TIPS executes the requested operation:
   - It identifies the TIPS Participant/Ancillary system from the Related Party Identification (PRTYXXMMXXX)
   - It identifies the type of block to be performed from the Restriction Type
   - It amends the TIPS Participant/Ancillary system and reports the requested type of block

| BIC | TYPE | BLOCKING STATUS |
|---|---|---|
| PRTYXXMMXXX | TIPS Participant | Blocked for debiting |

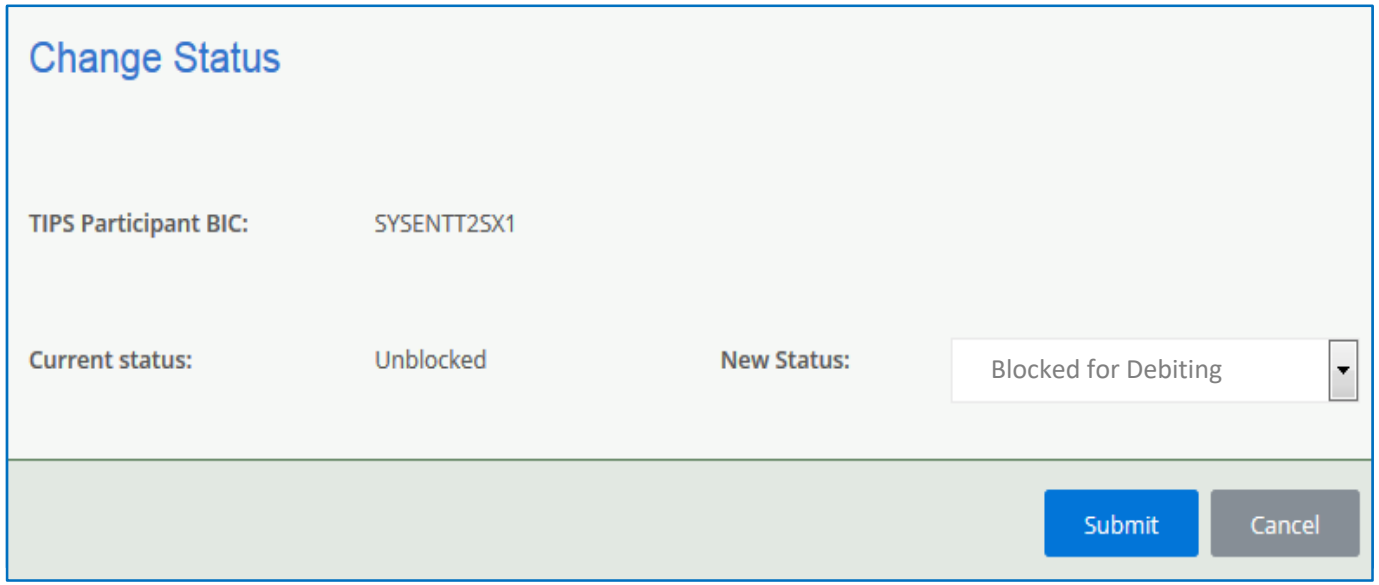
# Blocking of a TIPS Participant/Ancillary system – A2A mode (3/3)

6. The system sends a message to the Central Bank including the information about the successful execution



# Blocking of a TIPS Participant/Ancillary system – U2A mode

- U2A function requires the same information and it is treated in the same way by TIPS
- The request inserted via GUI is translated in the relevant A2A message and sent to the TIPS settlement core



# Reference data management - Outline



1 **Reference Data**

2 **Reference Data propagation**

3 **Blocking of participants, accounts and CMBs**

- *Overview*
- *Blocking of actors*
- *Blocking of accounts*
- *Blocking of CMBs*

# Blocking of accounts (1/2)

- **WHO**: TIPS allows Central Banks to block immediately an Account linked to a TIPS Participant or Ancillary System belonging to their data scope
- **WHAT**: Blocking a TIPS Account/TIPS AS Technical Account for debiting/crediting results in an equivalent blocking on all CMBs linked to the account. The individual CMB blocking status is not overwritten
- **WHEN**: 24/7/365
- **HOW IT IS TRIGGERED**: Account blocking can be performed in U2A as well as A2A mode, the latter involving messages ***AccountExcludedMandateMaintenanceRequest***, ***AccountRequestAcknowledgement*** and ***AccountRequestRejection***
- **TYPES OF BLOCKING**: Blocked for credit; Blocked for debit; Blocked for credit and debit; Unblocked

# Blocking of accounts (2/2)

- **HOW IT WORKS**: The block is performed setting a restriction directly in TIPS (or in CRDM with immediate propagation to TIPS) on the account. TIPS performs the block request executing it immediately, without checking if the account is already blocked but overwriting the previous block or adding a new one
- **EXCEPTION**: Blocking does not affect reserved amounts; if an amount is reserved for an ongoing payment when the blocking is applied, the payment transaction will be completed regardless of the new account blocking status

# Blocking of accounts

## Involved Messages

### AccountExcludedMandateMaintenanceRequest (acmt.015.001.02)

Sent by a TIPS Authorised Actor
Used to block an account or a CMB

### AccountRequestAcknowledgement (acmt.010.001.02)

Sent by TIPS to inform the
TIPS Authorised Actor upon the successful processing of the instructed acmt.015

### AccountRequestRejection (acmt.011.001.02)

Sent by TIPS to inform the
TIPS Authorised Actor upon the rejection of the instructed acmt.015

# Reference data management - Outline



1 **Reference Data**

2 **Reference Data propagation**

3 **Blocking of participants, accounts and CMBs**

- *Overview*
- *Blocking of actors*
- *Blocking of accounts*
- *Blocking of CMBs*

# Blocking of CMBs (1/2)

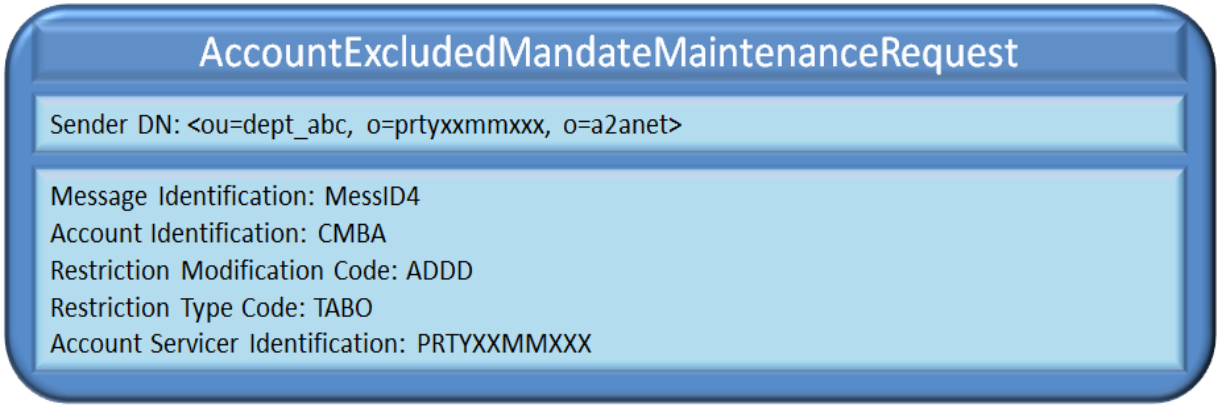
- **WHO**: TIPS allows Central Banks to immediately block a CMB linked to an account falling under their data scope. TIPS allows TIPS Participants and Ancillary Systems to block immediately a CMB linked to accounts under their data scope
- **WHAT**: Blocking a TIPS CMB does not have effects on any other reference data object
- **WHEN**: 24/7/365
- **HOW IT IS TRIGGERED**: CMB blocking can be performed in U2A as well as A2A mode, the latter involving messages ***AccountExcludedMandateMaintenanceRequest***, ***AccountRequestAcknowledgement*** and ***AccountRequestRejection***
- **TYPES OF BLOCKING**: Blocked for credit; Blocked for debit; Blocked for credit and debit; Unblocked

# Blocking of CMBs (2/2)

- **HOW IT WORKS**: The block is performed setting a restriction directly in TIPS (or in CRDM with immediate propagation to TIPS) on the CMB. TIPS performs the block request executing it immediately, without checking if the CMB is already blocked. It overwrites the previous block or adds a new one
- **EXCEPTION**: Blocking does not affect any pending payment (i.e. already validated and waiting for a reply from the Beneficiary Bank); for such instant payments, if the CMB blocking is applied, the transaction is completed regardless of the new CMB blocking status

# Blocking of accounts/CMBs – A2A mode (1/2)

1. Central Banks sends a ***AccountExcludedMandateMaintenanceRequest*** (acmt.015) with following information:
   - Account identification
   - BIC of the TIPS Participant/Ancillary system owning the account
   - Type of blocking request: **TACR** (Block for credit); **TADE** (Block for debit); **TABO** (Block for both credit and debit)




2. TIPS receives the request for the amendment of the account (e.g., block for both credit and debit)
3. TIPS successfully executes the Access Rights checks

# Blocking of accounts/CMBs – A2A mode (2/2)

4. TIPS successfully executes the following business checks:
   - Block/unblock type is allowed (the Restriction Type Code must be **TACR** (Block for credit), **TADE** (Block for debit) or **TABO** (Block for both debit and credit)
   - Account exists
   - Account owner exists

5. TIPS executes the requested operation
   - It identifies the account owner from the Account Servicer Identification (PRTYXXMMXXX)
   - It identifies the type of block to be performed from the Restriction Type
   - It amends the CMB and reports the requested type of block

| Account | Account Servicer | BLOCKING STATUS |
|---|---|---|
| CMBA | PRTYXXMMXXX | Blocked for Debit and Credit |

# Thank you for the attention!