T2/T2S CONSOLIDATION

HIGH LEVEL BUSINESS CHANGES DOCUMENT

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1   INTRODUCTION

In the first and second quarter of 2016 a Market Consultation on the future of RTGS services was conducted. On the basis of the results and other considerations from the Eurosystem perspective, the Governing Council gave the green light to start the investigation phase for the T2/T2S Consolidation on 21 September 2016, together with the green light for the investigation phase for TARGET Instant Payment Settlement (TIPS) and for Eurosystem Collateral Management System (ECMS) projects.

Within the investigation phase, measures are analysed to support the Eurosystem plans to consolidate and optimise the provision of the T2 and T2S services, with the aim to:

▶ provide the opportunity to consider the development of new services for market participants or to adapt the existing ones to the changing needs of the payments business

▶ allow TARGET2 to benefit from state-of-the-art approaches and technologies offered by T2S through technical consolidation

▶ noticeably decrease running costs for the Eurosystem through functional consolidation between TARGET2 and T2S (as far as possible), which could also mean removing unused or little used functionality

▶ improve usability

Following the thorough discussions with market participants and Central Banks, this document describes on a high level the cornerstones of the future RTGS services. These cornerstones take into account the wide range of requirements of the various users of the future RTGS services, ranging from small independent institutions to large and multinational banking groups.

The current version of this document only includes aspects that have been described on the basis of the discussions so far.

2 MODULAR APPROACH

2.1. REQUIREMENTS

With the introduction of T2S and the planned future implementation of TIPS, the landscape and requirements concerning Future Eurosystem Payment and Settlement Services have been changing significantly.

In order to enable consolidation and to achieve the expected cost savings, functions for which there is a shared need in the various services will be provided once, centrally on a modular basis as far as possible and reasonable. A modular approach will be taken for the new requirements as well.

From a high level point of view, the following business domains were identified within the investigation phase:

PT – Payment Transaction; LT – Liquidity Transfer; SI – Settlement Instruction; CL – Credit Lines
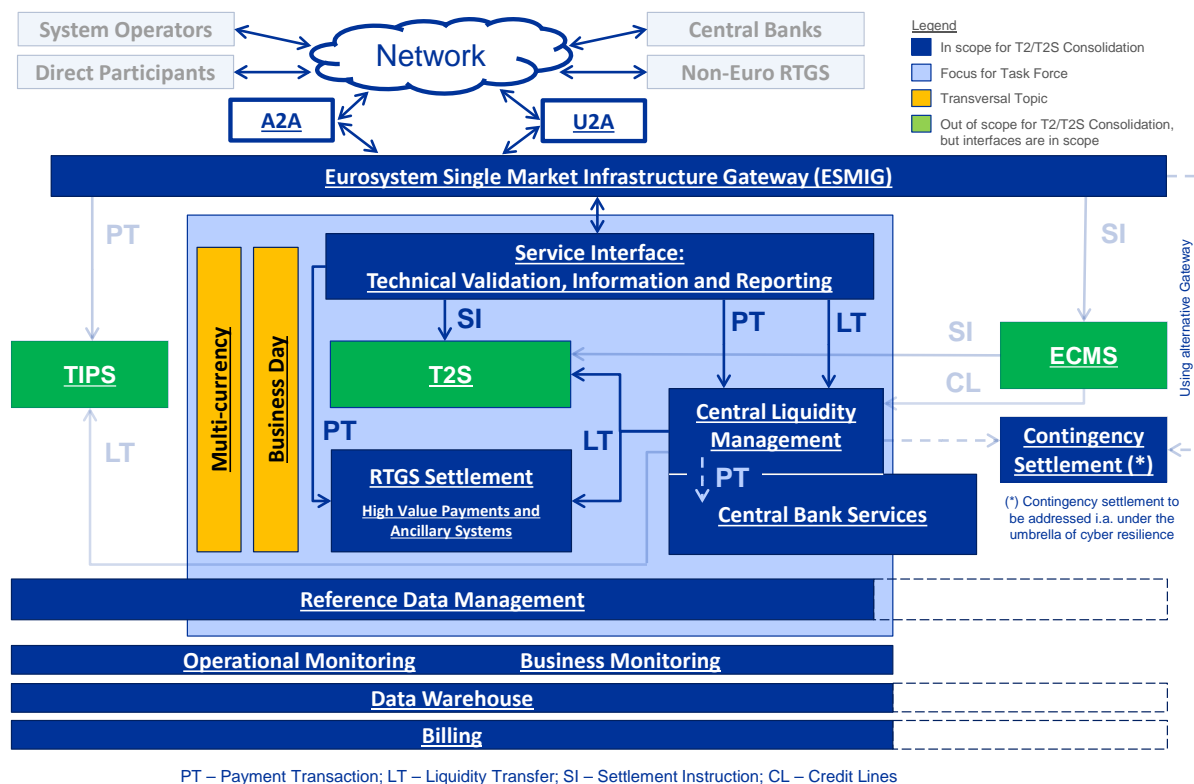
Figure 1: High Level Business Domains

The primary functional requirements identified during the first part of the investigation phase are:

► the Central Liquidity Management (CLM) function
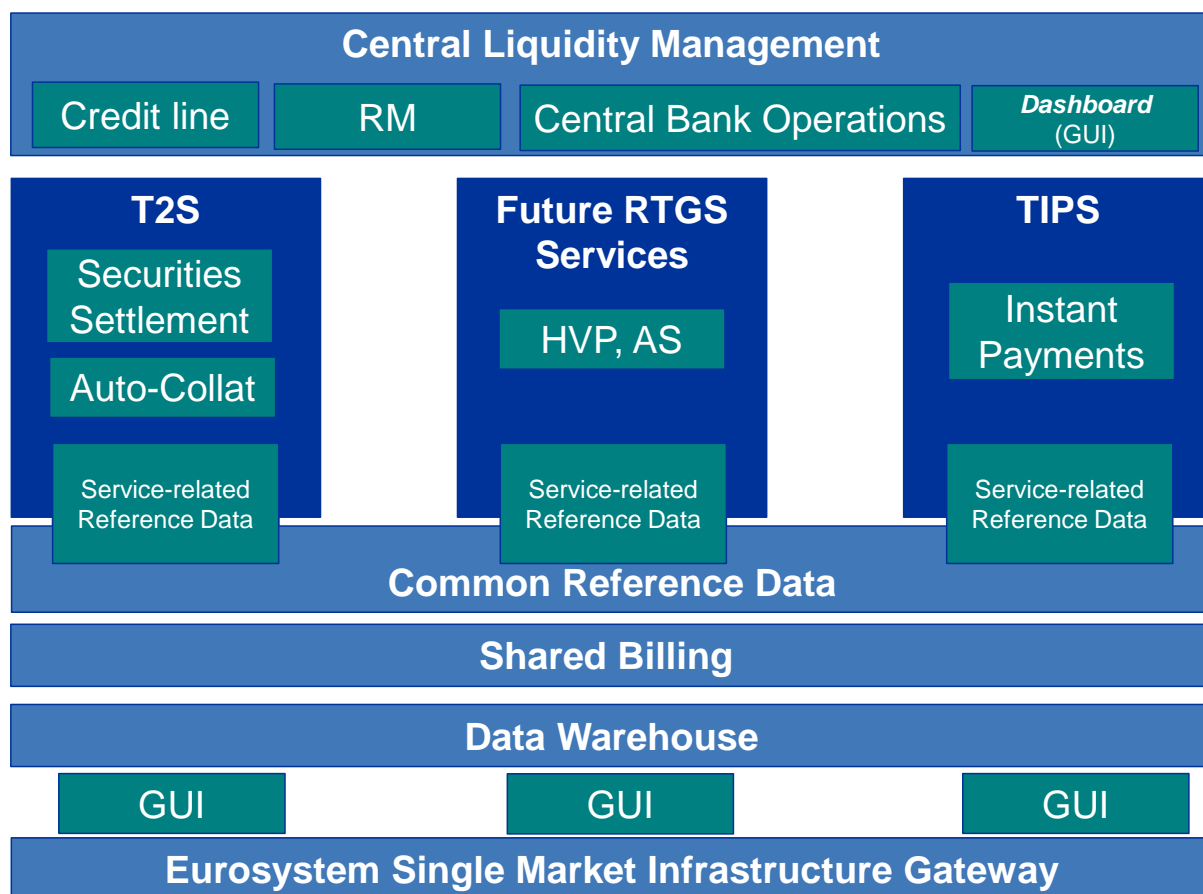
► the common Reference Data Management (RDM)

Figure 2: Shared Functional Modules

Further aspects are still under discussion.

2.2.   SHARED MODULES

2.2.1   Central Liquidity Management (CLM)

TARGET2 was initially developed in order to serve for the settlement of monetary policy operations, (high-value) urgent payments and ancillary system settlement in Central Bank Money only, and the embedded liquidity provisioning was mainly for these purposes. However, with the introduction of T2S and the planned introduction of TIPS, other settlement services are complementing these functions. Future RTGS Services will be one part of the Eurosystem's settlement services family. The CLM will ensure the efficient liquidity provisioning for the different services T2S, RTGS Services (i.e. High Value Payments (HVP) and Ancillary Systems (AS) Settlement), TIPS as well as the management of liquidity across those different services in a harmonised, generic way. The CLM will optimise the efficient usage of liquidity for the different services and the transfers between them.

Responding to the participants' needs, the users will always have a consolidated overall view of their liquidity within one currency, be able to dedicate liquidity for one single service and special purposes and be able to re-allocate liquidity easily from one service to another. Depending on the needs of a

participant, such re-allocations could either be done manually (based on individual liquidity transfers) or automatically (based on time-based or event-based standing orders).

However, the T2S auto-collateralisation function is only for usage within T2S service and the participants cannot use the T2S auto-collateralisation mechanism to allocate liquidity from T2S to another service. The provision of securities collateral to CBs shall instead be managed by the collateral manager with the following update of the participant's credit line.

The Main Cash Account (MCA) within the CLM will be the central source of liquidity for the different services with the participant's credit line linked to it. The settlement services T2S, TIPS and the Future RTGS services will use dedicated cash accounts for settling their specific transactions.

For RTGS services, it will be possible to settle on one or several RTGS Dedicated Cash Accounts (DCAs). For the settlement of AS transactions, participants shall have the option to use separate DCAs.

The high level of automation offered by the CLM will ensure fast and reliable liquidity provisioning and fulfil as far as possible the requirements of those participants who prefer a fully automatic usage of the payment capacity, especially for the settlement of RTGS services. Participants will be able to parameterise the triggers (i.e. floor/ceiling amounts, business events, queued payments, time events) and the resulting actions (i.e. notification only, transfer of liquidity) for their own accounts. After a one-off and customised configuration of the automation, the participant will achieve an automated liquidity management without the need to initiate manually liquidity transfers.
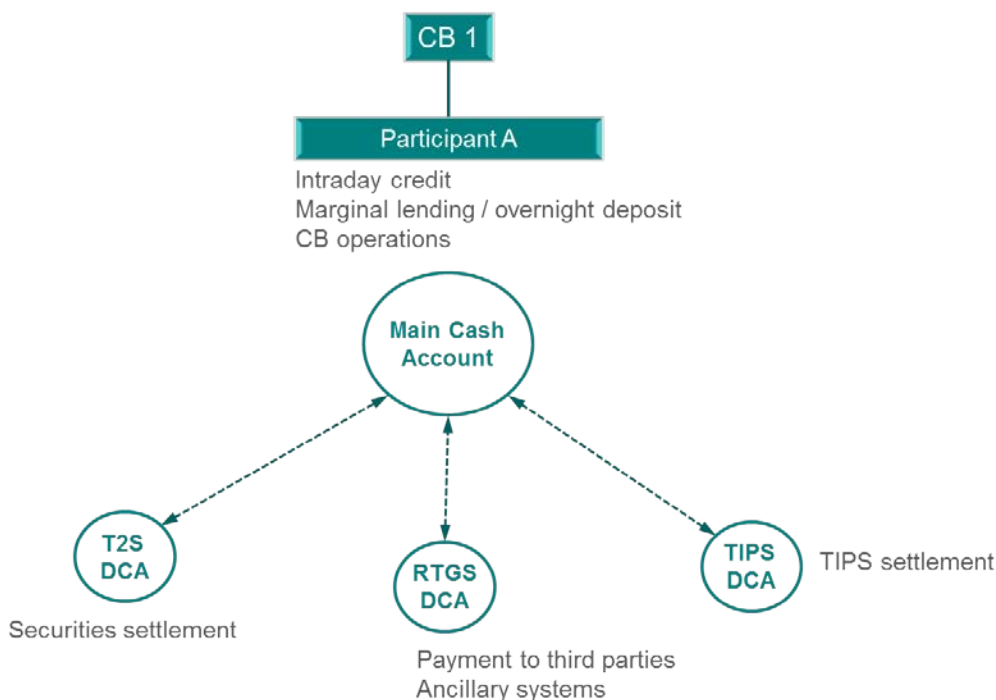

Figure 3: Basic Model for the CLM with Main Cash Account

The split of functions between the CLM and the settlement services can be summarised as follows:

▶ The credit line is managed centrally from the Main Cash Account and liquidity generated via the credit line can be used by every service connected to the CLM;

▶ A high level of automation is available to participants and it is possible for them to automate the allocation of the payment capacity to the various settlement services. Once defined by the participant, the handling of the payment capacity will then be performed automatically by the system, not necessitating the manual initiation of liquidity transfers between the different accounts;

▶ High Value Payments and Ancillary System transactions are performed on one or more RTGS DCAs;

▶ Liquidity for the processing of AS transactions can either be reserved on the RTGS DCA that is also used for HVP payment or it can be allocated on dedicated AS DCAs for specific Ancillary Systems; and

▶ Interactions with the Central Bank (CB) that fall outside of the normal payment business (e.g. marginal lending facility, overnight deposit) would be performed on the Main Cash Account and could draw liquidity from the connected DCAs automatically. The operations with Central Banks as well as the liquidity-tapping features will be detailed later in this document.

The following example shows how the handling of the payment capacity can be performed automatically between a CLM Main Cash Account and one RTGS DCA.

Example

A credit institution holding a Main Cash Account and one RTGS DCA sends a payment order to be settled in the RTGS services. There is however not enough cash on the RTGS DCA to settle the payment but additional liquidity is available on the Main Cash Account.

If the credit institution has activated the triggers previously described (i.e. floor/ceiling amounts, business events, queued payments, time events) the RTGS service will trigger the automatic transfer of liquidity from the Main Cash Account to the RTGS DCA to allow the processing of the payment.

The advantage of this model is the wide range of flexibility offered to cover the divergent participants' needs. It allows credit institutions with no direct access to settlement services to manage their minimum reserve obligations with their CB from one Main Cash Account. This is a cost effective solution for these participants as they do not need to hold an RTGS DCA.

Credit institutions with a Main Cash Account and at least one DCA that prefer a high-level of automation of the payment capacity usage will have the option to define floor and ceiling amounts as a trigger for initiating liquidity transfers of pre-defined amounts between the Main Cash Account and the DCAs. An account owner can define a minimum ("floor") or maximum ("ceiling") amount for its

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DCA(s). In case the balance falls below the defined floor amount, an additional pre-defined amount of liquidity is pulled from a defined account (floor balance order). When the balance exceeds the defined ceiling amount, a pre-defined amount of liquidity is pushed to a defined account (ceiling balance order). Moreover, such liquidity pull can be defined by event, e. g. if there are one or more payments in the RTGS queue which cannot settle due to insufficient funds on the account, the system triggers an automatic liquidity transfer of a pre-defined amount from the Main Cash Account.

Multinational credit institutions with various branches or entities can open the number of accounts they need and use the CLM functions to steer, manage and monitor the liquidity across all services within a single currency.

There's no obligation to hold a Main Cash Account or a DCA (unless subject to minimum reserves). If a participant wants to use one of the dedicated services, the corresponding DCA is needed. This DCA needs to be connected with at least one Main Cash Account to receive liquidity. This connected Main Cash Account can be owned by the same or another participant (belonging to the same or to another banking group), and it can be managed with the same or another Central Bank.
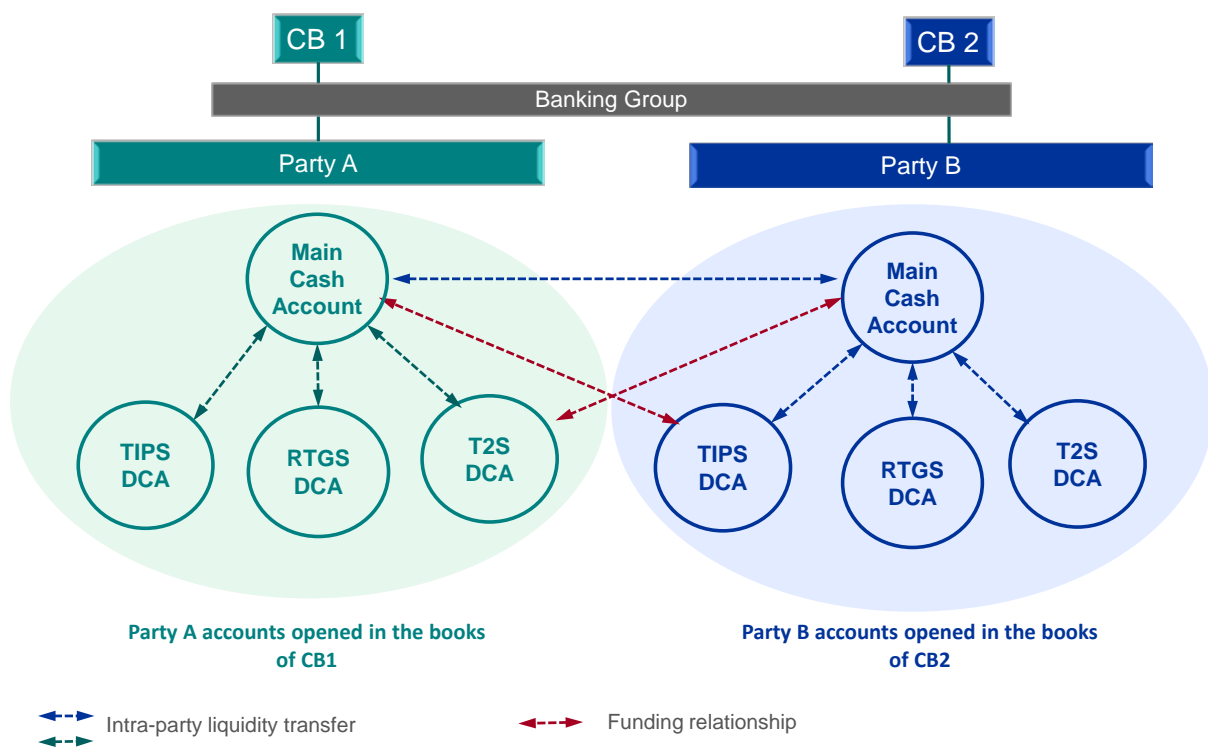

Figure 4: Example for the usage of the CLM for a multinational bank with a branch or entity abroad connected to multiple Main Cash Accounts

Also groups of banks, which have for instance concentrated their payment and/or settlement business into a single entity, can establish a corresponding account structure.
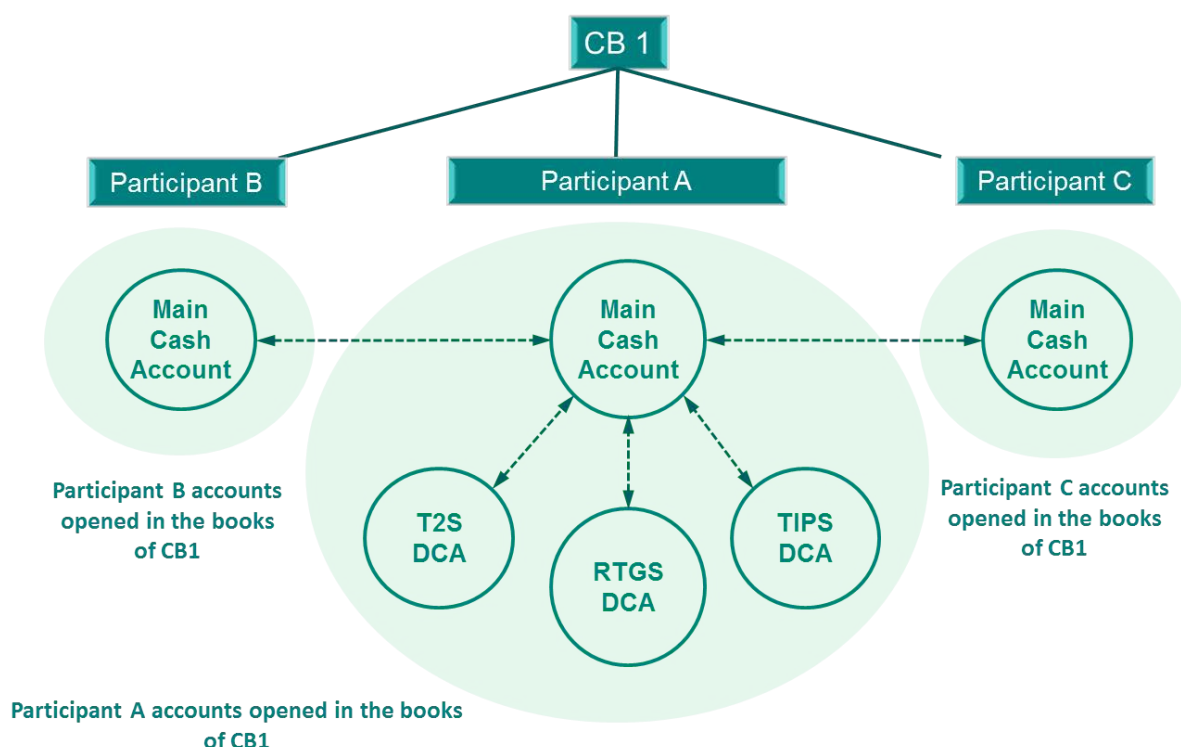

Figure 5: CLM for a group of banks

Monitoring functions will support the control of liquidity between the CLM and the settlement services via U2A and A2A.

All CLM functionalities will be accessible in User-to-Application (U2A) and in Application-to-Application (A2A) mode, so that smaller participants do not require back-office integration. The U2A mode will offer a dashboard for monitoring purposes.

2.2.2 Reference Data

Reference Data shall consist of common reference data and service-related reference data.

Common Reference Data will be shared across multiple services. A common repository for this data will avoid duplication of effort in maintaining the same information in different services (e.g. users) and avoid inconsistencies (e.g. due to wrong account numbers). Participants and accounts will be set up in a consistent way and can be addressed consistently by the different modules. Examples for common reference data are country codes, currency codes and the service availability calendar.

In general, service-related reference data will be used by and be valid for only one particular service. Examples for service-related reference data are message types and message routing.

Even if the internal handling of common reference data and service-related reference data could be different, they might still be maintained by the same interface.

Intraday modifications shall be applied on a real-time basis when necessary, e. g. for the blocking of an account or a participant. Moreover, it shall also be possible to modify reference data with a future value date (pre-entered with a defined validity start date and end date).

2.2.3   Eurosystem Single Market Infrastructure Gateway (ESMIG)

The Eurosystem Single Market Infrastructure Gateway (ESMIG) will be the common entrance for all interaction with the Eurosystem Market Infrastructures. Participants will therefore be able to use communication infrastructures established for different services that they want to use or access. Taking into account the current planning, the user will have access to RTGS, T2S, TIPS and potential future services via the ESMIG.

Based on common technical specifications, the ESMIG will be network agnostic (i.e. it will not rely on network specific features) and therefore allow connectivity through multiple service providers for both A2A and U2A traffic. The ESMIG will offer a cost-effective and secure access to the various entities and will take the wide range of interests and expectations towards the connectivity into account, with the aim to ensure that also participants with only a low volume of payments could have a cost-effective access.

3 ENVISAGED BUSINESS CHANGES

3.1 IMPROVED MANAGEMENT AND CONTROL OF THE PAYMENT CAPACITY

The CLM will offer a centralised view on all account balances (Main Cash Account and DCAs), the usage of the credit line and auto-collateralisation, and an overview of the sum of credits and debits of pending payments. Moreover, alerts will allow participants to control the liquidity available on the Main Cash Account and the DCAs. These features shall enable participants to monitor and manage their payment capacity more efficiently.

3.2 ALLOCATION OF PAYMENT TYPES TO THE ACCOUNTS

The following Central Bank Operations will in principle be processed by the CLM and booked on the Main Cash Account:

▶ update of the credit line (cash side);

▶ Standing Facilities (i.e. marginal lending and overnight deposits);

▶ cash withdrawals;

▶ open market operations;

▶ any other monetary policy operations;

▶ debit of billing amounts;

▶ interest payment orders linked to marginal lending, overnight deposits, minimum reserves and excess of reserve; and

▶ any other activity carried out by Central Banks in their capacity as Central Bank of issue.

3.3 STANDING FACILITIES

The Standing Facilities calculation shall also take into account the balances on the Main Cash Account and the DCAs of the participant.

3.4 PROCESSING OF PAYMENTS

3.4.1 Reservations

The liquidity provisioning for the settlement of all payment types in the Main Cash Account and in the RTGS DCA will be handled in a predefined order. The following table indicates the different sources of liquidity and the order in which the different sources will be tapped (1=first liquidity source, 2=second liquidity source…).

Business Purpose	Actor/ Initiator	Main Cash Account (MCA)			RTGS Dedicated Cash Account (DCA)			T2S DCA	TIPS DCA
		Cash Withdrawal	Central Bank Operations (CBO)	Available	Highly Urgent	Urgent (U)	Normal (N)		
Main Cash Account									
Cash Withdrawal	P	1	3	2	6	5	4		
Urgent Central Bank Operation	CB/P		1	2	5	4	3		
Normal Central Bank Operation	CB/P			1	4	3	2		
Credit line update	CB	3	2	1	6	5	4	7	8
Inter-service and intra-service Liquidity Transfer	P			1	n/a				
RTGS Dedicated Cash Account									
Inter-service and intra-service Liquidity Transfer	P					*			
Ancillary System transaction	P			4**	1	3	2		
U Payment	P			3**		1	2		
N Payment	P			2**			1		

Table 1: Pre-defined order of liquidity tapping

P = Participant, CB = Central Bank, * subject to the priority defined by the Participant, ** subject to prior configuration by the Participant

In the case of a CB Operation, a cash withdrawal or a credit line decrease, the CLM will automatically trigger a liquidity transfer from the RTGS DCA to the Main Cash Account in case of insufficient liquidity on the Main Cash Account. The respective liquidity transfer will be placed on top of the queue of all pending payments and liquidity transfers on the RTGS DCA. In all other cases, the liquidity transfers are subject to and based on pre-defined liquidity transfer orders set by the participant, with triggers either on the Main Cash Account or on the DCA.

3.4.2 Liquidity saving mechanisms

It is foreseen to retain the current liquidity saving mechanisms on the RTGS DCA:

- Entry disposition with offsetting features
- Comprehensive queue management
- Settlement of queued payments with highly efficient optimisation algorithm

3.5 MINIMUM RESERVE CALCULATION

The balance of the TIPS DCA will be automatically included in the minimum reserve calculation of the respective participant. The 24/7 approach of TIPS would not allow a cash sweep from the TIPS DCA towards the Main Cash Account, as TIPS requires this cash to allow settlement.

We will extend this approach to other DCAs and the minimum reserve end-of-day calculation process shall also take the relevant RTGS and T2S DCA balances into account. The end-of-day cash sweep is therefore not mandatory anymore.

Nevertheless, the different services shall foresee options that will allow participants to configure a transfer of the remaining liquidity at the end of day. This will enable the usage of the full payment capacity even during the downtime of one service.

It is however important to mention that the accounts to be included in the minimum reserve calculation for one participant shall belong to the same CB.
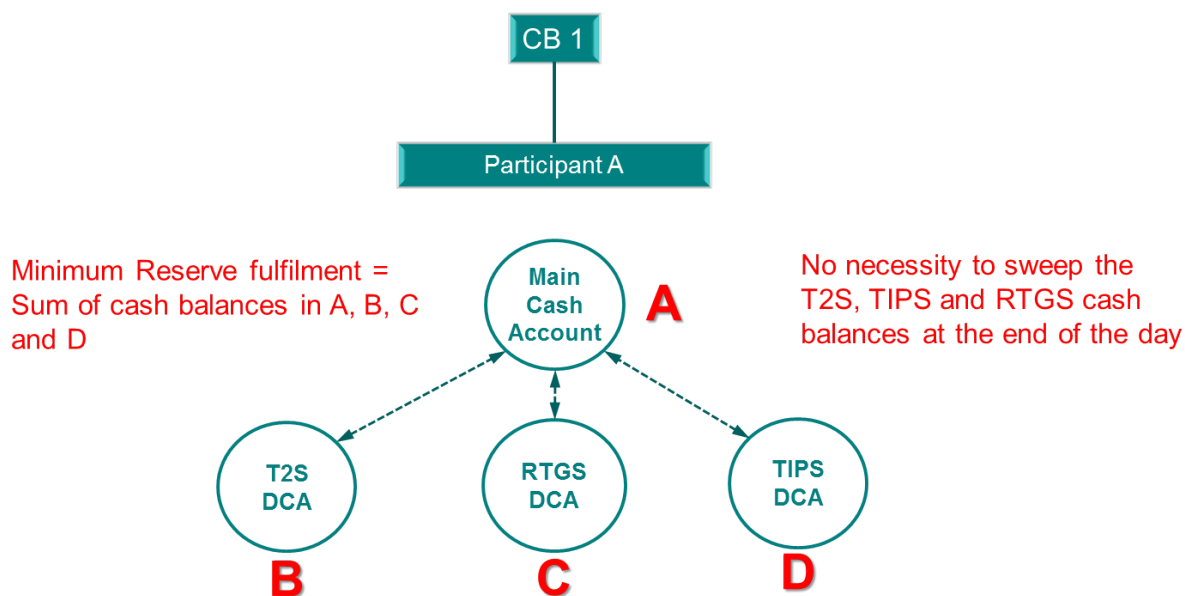

Figure 6: Minimum reserve management calculation