EUROPEAN CENTRAL BANK

EUROSYSTEM

CCBM2
User Requirements

CCBM2

Version 4.1
July 2008

Table of Contents

CCBM2

Overview

Introduction

On 8 March 2007 the Governing Council of the European Central Bank (ECB) decided to review the Eurosystem's current collateral management handling procedures, in particular the present Correspondent Central Banking Model (CCBM). A medium-term project for the next generation of collateral management has since been launched under the name "Collateral Central Bank Management" (CCBM2). CCBM2 is a common platform for Eurosystem collateral management, which may be used by the Eurosystem NCBs on a voluntary basis. Its objective is to consolidate and increase the efficiency of the Eurosystem's internal systems for collateral management. In particular, it aims, to the extent possible, to address the drawbacks identified in the current set-up by optimising the cost of mobilising collateral and by enhancing liquidity management.
The CCBM2 project is being conducted in parallel with the TARGET2-Securities (T2S) project in order to exploit all possible synergies and avoid any overlap between the two projects.

An initial consultation on this next generation of collateral management was launched in summer 2007 to seek the opinion of the market on the CCBM2 project and its guiding principles. Feedback received from market participants was, overall, very positive.

The user requirements have subsequently been drafted in accordance with the guiding principles of CCBM2. They also reflect the specific input provided by market participants in their responses during the initial consultation phase. A first draft of the user requirements for CCBM2 has been submitted for public consultation in spring 2008.

Based on the feedback received through this second market consultation, the CCBM2 User Requirements document version 4.1 was finalised.

1. Introduction to CCBM2

Overview

Introduction

This document defines the final set of user requirements for CCBM2 (Collateral Central Bank Management). The user requirements gathering stage has also taken into consideration:

- the General Documentation on Eurosystem Monetary Policy instruments and procedures,
- input received in Eurosystem-internal discussions,
- the market consultation launched on 26 April 2007,
- the market consultation launched on 8 March 2008,
- the experience of the shared collateral management platform ECMS of the Nationale Bank van België/Banque Nationale de Belgique and De Nederlandsche Bank.

Some of the features described in this document (e.g. the Market Operations Platform, the issue of repatriation, emergency collateral, concentration limits, valuation of credit claims, and the inclusion of fixed term deposits and liquidity absorbing transactions) are currently being explored by the Eurosystem and thus are subject to revision at a later stage.

Contents

This chapter contains the following topics:

1.1. Scope of CCBM2

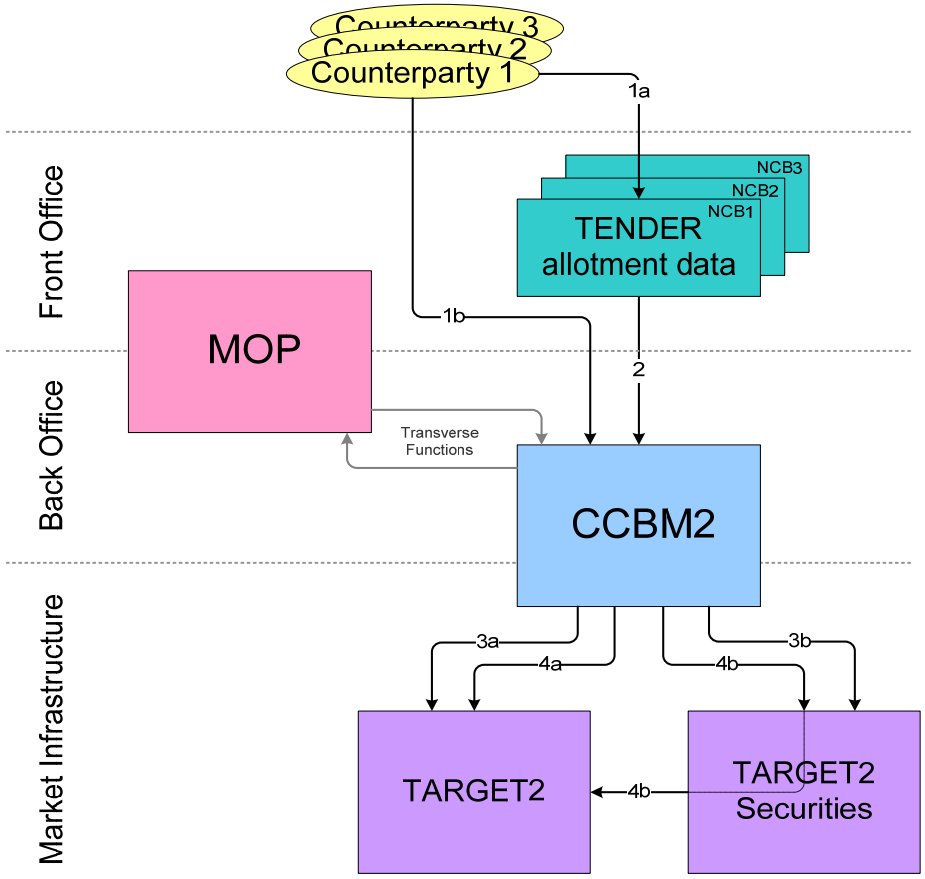
Scope

CCBM2 aims at covering collateralised credit provision by the National Central Banks (NCBs) of the Eurosystem by:

- providing collateral handling functionalities,
- handling an important part of the monetary policy implementation,
- providing intraday credit in central bank money to allow TARGET2 to run smoothly.

Interaction with other Eurosystem applications

The high-level diagram below situates CCBM2 vis-à-vis other major Eurosystem projects in the field of competence of the ESCB Payment and Settlement Systems Committee (PSSC) and/or the ESCB Market Operations Committee (MOC). The diagram below illustrates how CCBM2 interacts with some of the other Eurosystem applications when dealing with the settlement of a liquidity providing reverse transaction (e.g. the weekly Main Refinancing Operation (MRO) or regular credit provision).
CCBM2 interacts closely with TARGET2 and TARGET2Securities (T2S). In addition, synergies and possibilities for transverse back office functions with the Market Operations Platform (MOP, see explanation below) will be investigated, e.g. sharing databases for euro and non-euro denominated securities, (SWIFT-) messaging components, valuation routines, fx-swaps, etc.



Continued on next page

Scope of CCBM2, Continued

Interaction with other Eurosystem applications (continued)

Table below gives an overview of the information flows shown in the above diagram:

Stage		Description
1	a	Counterparties subscribe to the tender at their own NCB.
	b	Counterparties submit collateral transactions directly in CCBM2
2		The Front Office of each NCB handles the tendering related activities and compiles a file with the tender allotment results. CCBM2 provides a function to import the file with tender data.
3	a	CCBM2 processes the tender allotment data and handles the adequate collateralisation in interaction with TARGET2 (e.g. credit line update).
	b	If necessary, CCBM2 interacts with T2S Securities Settlement System (SSS) to mobilise the securities as collateral.
4	a	For Free of payment (FoP) transactions, CCBM2 sends a credit provision instruction to TARGET2.
	b	For Delivery versus Payment (DvP) transactions, T2S provides liquidity to TARGET2.

Note The MOP is an ESCB project which involves the implementation of a common shared technical solution for the execution, processing and settlement of market operations, more specifically, portfolio management and foreign exchange operations.

1.2. Principles of CCBM2

Introduction

These User Requirements comply with the principles gathered from internal Eurosystem discussions and have been confirmed in the market consultations.

Principle 1

The CCBM2 will provide central banks with an IT platform for the management of eligible collateral used for Eurosystem credit operations, whilst complying with the principle of decentralisation of access to credit.

CCBM2 provides an IT platform to NCBs. This platform supports their decentralised credit and collateral relations with their respective monetary policy counterparties and allows rationalising their internal organisation when handling collateral in credit operations.
NCBs will retain a legal and business relationship with counterparties and (I)CSDs. Therefore, CCBM2 will not appear as a separate legal entity.

Principle 2

CCBM2 is fully compatible with TARGET2 and T2S, in particular the communication interfaces and settlement procedures used by T2S for the mobilisation of the securities.

CCBM2 closely interacts with TARGET2 for payments and, in the future, with T2S for securities transactions. Moreover, CCBM2 will support auto-collateralisation in T2S. CCBM2 provides a harmonised service to support interactions with TARGET2 or the Proprietary Home Accounting (PHA). PHAs are supported in as far as they use similar harmonised standards as TARGET2. In addition, CCBM2 offers standardised interfaces and harmonised messaging protocols. This allows all participants, i.e. NCBs and counterparties, to monitor and manage the flow of messages in real time for themselves and also on behalf of instructing parties. Introducing CCBM2 will result in an increased level of harmonisation in terms of communication standards in accordance with the removal of Giovannini barrier 1, scheduled for 2011.

Note
- The term SSS (Securities Settlement System) is used generically in this document. It refers both to the (possible) period that CCBM2 starts operating before T2S and to the period that CCBM2 and T2S (as an SSS-infrastructure) co-exist. Before T2S, SSS refers to the Eurosystem eligible (I)CSDs and the correspondent credit institutions used by NCBs and counterparties as described in the General Documentation chapter 5.3.1; after T2S, it refers to the (I)CSDs that have not yet joined T2S and the correspondent credit institutions used by NCBs and counterparties as described in the General Documentation chapter 5.3.1.
- The term TARGET2 is also used generically. It refers to both the Payment Module (PM) of TARGET2 and the PHA systems or the Home Accounting Module (HAM) of TARGET2, where relevant. The transition period for TARGET2 ends in 2012. It is expected that NCBs then will no longer operate the PHAs for payments and standing facilities. If they do, the PHAs would have to adapt to the CCBM2 interface standards.

Continued on next page

Principles of CCBM2, Continued

Principle 3

The scope of CCBM2 covers both domestic and cross-border use of collateral, as well as different collateralisation techniques (such as pledge and repo, pooling and earmarking), depending on the practices of each NCB.

CCBM2 provides a comprehensive IT platform. Its scope includes domestic and cross-border collateral. It supports the legal techniques of repo and pledge to mobilise the collateral. The collateral can be pooled or earmarked to the credit operations. The full life-cycle management of all credit operations is also incorporated.

Principle 4

CCBM2 handles all eligible collateral: both securities and non-marketable debt instruments.

CCBM2 performs the necessary functions related to the management of instructions regarding all securities movements (automatic instruction creation and sending a full settlement cycle follow-up) as well as those related to custody of securities ultimately held at the local (I)CSD and at the local NCB acting as intermediary custodian.
This means:

- keeping records of mobilised securities and making the necessary book-keeping entries on custody accounts (including where they are carried on the books of an NCB) in accordance with local securities accounting rules,
- processing all relevant assets services in accordance with local practices; supporting tax with holding services.

The work that is currently done by (I)CSDs to remove the Giovannini barrier 3 related to processing relevant assets services (especially coupons and redemptions) will contribute to the harmonisation of back office procedures of (I)CSDs and related interfaces, thereby benefiting CCBM2. In addition, CCBM2 will also perform the necessary functions for the use of non-marketable assets as collateral.

Principle 5

CCBM2 processes collateral transactions in real time on a straight-through-processing (STP) basis, permitting the movements of collateral and the related credit adjustments in TARGET2 in real time.

Application-to-Application (A2A) communication between counterparties and CCBM2 is based on SWIFT standard messages or secured internet access, thus allowing STP processing.
STP processing allows the speeding up of credit provision, whether in the provision of intraday credit in TARGET2, marginal lending facilities or settlement of reverse transactions such as MROs and LTROs.

Continued on next page

Principles of CCBM2, Continued

Principle 6

CCBM2 will be able to take collateral through all eligible SSSs and eligible related linkages between them.

These links between SSSs in various countries have been established for some time.
The issue of securities repatriation will be further discussed in the Eurosystem. The result of this discussion process will not affect the CCBM2 functionalities.
As far as the ECB's Governing Council considers these types of links eligible for use in Eurosystem credit operations, they:

- represent a valid alternative to the current CCBM,
- will remain an alternative for the cross-border transfer of collateral after the implementation of CCBM2.

1.3. Functional Modules

Overview

Introduction

This section provides a brief description of the various functional modules of CCBM2.

Contents

This section contains the following topics:

1.3.1. Generalities

Voluntary participation

Participation in CCBM2 is voluntary. CCBM2 remains compatible and interoperable with the current CCBM procedures.

Modularity

The modular approach enables the NCBs to choose optional CCBM2 modules in accordance with their:

- internal NCB requirements; and / or
- local market requirements.

Example Participation in CCBM2 could be influenced by:

- the life cycle (amortisation) of current systems; or
- the degree of progress in removing Giovannini Barriers 1 and 3.

Flexibility

CCBM2 has a high degree of flexibility, which allows it to:

- swiftly and smoothly adapt to changes in the market place,
- more easily implement updates or new functions as and when decided by the Governing Council,
- adopt modular design methods,
- efficiently process the transaction volumes of all the participating NCBs.

1.3.2. Modular structure

Mandatory and optional modules

CCBM2 is based on a modular architecture, consisting of four modules:

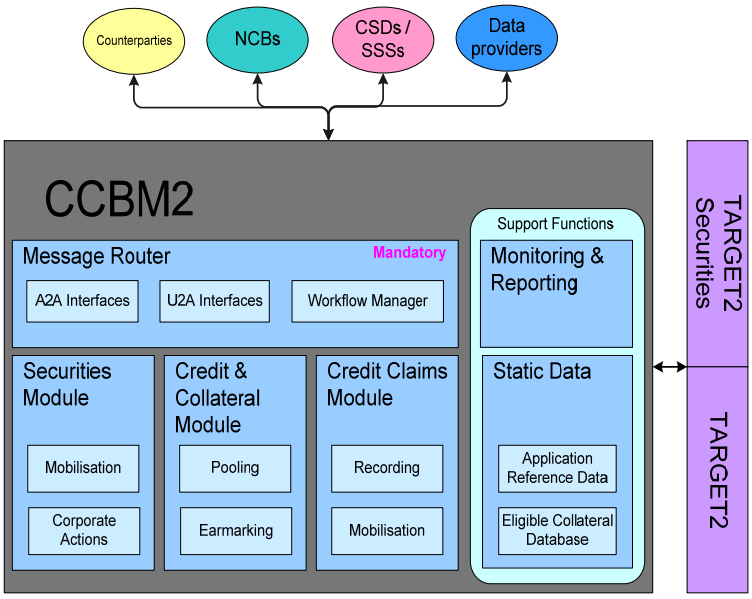
- one mandatory module:
  - Message Router

- three optional modules:
  - Credit & Collateral Module
  - Securities Module
  - Credit Claims Module.

Other functions, such as Static Data management, Monitoring and Reporting are an integrated part of CCBM2, regardless of the chosen modules.

Note CCBM2 also offers some additional functions:
- to accept new collateral for the TARGET2 contingency module,
- in the domain of emergency collateral.

Schematic overview



1.3.3. Message Router

Functionality

The Message Router is the mandatory module of CCBM2.

The Message Router handles the communication between CCBM2 and:
- counterparties,
- other NCBs (e.g. existing CCBM procedures),
- market infrastructures (e.g. TARGET2).

Moreover, it has the business logic to deal with the modular set up of CCBM2 and thus to process the interactions between:
- CCBM2 modules,
- CCBM2 and NCB proprietary Collateral Management Systems (NCB CMS) - in case not all the optional modules are chosen,
- CCBM2 and External Collateral Management Systems (External CMS) - e.g. for tri-party services.

Module composition

The Message Router contains the CCBM2 Workflow Manager and enables the channelling of all data through the Application-to-Application (A2A) and User-to-Application (U2A) Interfaces.

Workflow Manager

The Workflow Manager processes the instruction and defines the routing path to the relevant module using:
- pre-defined workflows,
- incoming information,
- static data.

It performs validity checks and tracks the life cycle of each operation throughout the process at any time.

Interfacing

Interfacing with and accessing CCBM2 is based on
- SWIFTNet,
- EXDI,
- secure internet access.

Depending on the user, interfaces will use SWIFTNet, EXDI and/or secured internet access. The internal functioning of CCBM2, however, is independent from the access channel.

A2A and U2A Interfaces

CCBM2 can be accessed through an A2A or a U2A interface. Both modes of interfacing are available through the three access channels.
For the counterparties of the participating NCBs, the A2A Interface and the U2A Interface are fully worthy alternatives to each other.

1.3.4. Credit & Collateral Module

Functionality	The optional Credit & Collateral Module enables NCBs to: • centralise collateral related activities for handling monetary policy operations in one application, • grant intraday credit in TARGET2. The module supports both pooling and earmarking techniques.
Module composition	The Credit & Collateral Module offers the functionality for: • following up on the pooled and earmarked collateral, • managing the coverage of the reverse transactions and the intraday credit, • valuation, • auto-collateralisation.
Pooling	When an NCB chooses pooling, all collateral is registered in a collateral pool. This pool is managed independently from the credit operations it covers. The Credit & Collateral Module calculates a global sum of the value of all collateralised assets. This pool must always cover the outstanding credit operations and liquidity provision. In pooling, credit is granted by means of connected payments, internal and external collateral needs, or a credit line (overdraft facility).
Earmarking	When an NCB chooses earmarking, all collateral is unequivocally linked to a specific credit operation. Each credit operation must be covered by a well-defined set of assets. In earmarking, credit - be it intraday credit, overnight credit or liquidity providing reverse transactions resulting from tender procedures - is granted by means of payments.
Auto-collateralisation	CCBM2 provides a harmonised service to support auto-collateralisation procedures. Auto-collateralisation is a procedure in an SSS which allows counterparties to obtain intraday credit from their HCB for the settlement of the DvP securities transactions in which they are involved as a buyer.

1.3.5. Securities Module

Functionality	The optional Securities Module handles: • all functions related to the management of instructions concerning the settlement of securities transactions, • the custody of these securities.
Pledge/repo	The Securities Module handles both pledge and repo techniques, the latter in a DvP (Delivery versus Payment) or FoP (Free of Payment) mode.
Functions related to the (de)mobilisation	The Securities Module deals with the functions related to the settlement of securities transactions: • receiving mobilisation/demobilisation requests, • validations, • sending instructions to SSSs, via the Message Router, • processing of acknowledgement message, matching status message, settlement status message, settlement confirmation, etc., • updating the securities accounting records, • cancellations. The Securities Module provides the necessary data for the daily reconciliation with the securities positions held by the (I)CSD and CCBM2.
Functions related to the relevant assets services	The Securities Module deals with the relevant assets services in the following cases: • coupon payments, • redemptions (partial or full).

1.3.6. Credit Claims Module

Functionality

The optional Credit Claims Module performs:
- acceptance of non-marketable assets as collateral, both on a domestic and cross-border basis.

Counterparties can instruct to (de-)mobilise credit claims as collateral:
- credit claim per credit claim; or
- through a bulk file containing several credit claims.

Retail Mortgage-Backed Debt instruments (RMBDs) are used in physical form and are completed by the HCB on the basis of an instruction from the issuer. The information is entered manually in CCBM2 via the U2A Interface.

Different steps

The Credit Claims Module manages the different steps in the mobilisation/demobilisation process:
- receipt of credit claims data in CCBM2,
- validations,
- (de)mobilisation of credit claims as collateral,
- pricing.

Credit Claims are administered via pooling.

1.3.7. Support functions

Introduction

The support functions of CCBM2 are:
- Static Data management,
- event monitoring and reporting.

Static Data

The Static Data Support Function serves as a central repository of referential data available to the CCBM2 modules.

The Static Data contain:
- application reference data, such as:
  – Actors: NCBs, counterparties, SSSs, etc.,
  – Administration: payment paths, calendar, fees,
  – Authorisation & Auditing data.
- financial information on the marketable assets, such as:
  – Characteristics of the assets: ISIN code, country of location, coupon, etc.,
  – Market prices,
  – Pool factors,
  – Theoretical valuation,
  – Price source priority,
  – Payments schedules,
  – Credit risk assessment.

  Financial information will be:
  - synchronised with the ECBs Eligible Assets Database (EADB) and the Monetary Policy Eligible Counterparties (MPEC) database,
  - completed through several external feeders (e.g. valuation hubs of Deutsche Bundesbank and Banque de France, Bloomberg, Reuters, NCB's own feeders) or through a manual entry.

- financial information on the non-marketable assets, such as:
  – Characteristics of the assets: identification code, type, etc.,
  – Redemption schedule,
  – Interest rate data: type, value, periodicity, interest formula,
  – Nominal amount at issuance,
  – Outstanding amount,
  – Theoretical price.

Note Static data is managed and owned by the NCBs participating in CCBM2. As of today, most of the securities information is common; it is managed centrally in the EADB. This common information will be mirrored in CCBM2. The public data of EADB can, as today, still be consulted via the ECB-website.

Continued on next page

Support functions, Continued

Monitoring & Reporting

The Monitoring & Reporting Support Function delivers the CCBM2 tools for:

- input,
- monitoring,
- reporting.

Four main user groups are defined: NCB users, counterparties, CCBM2 operators and the ECB.
Each user group has its own security profile and access rights to the Monitoring & Reporting Support Functions. The four-eyes principle is supported for critical functions (such as the manual entry of credit and collateral instructions).

All participating NCBs and their counterparties have at their disposal tools to:

- follow-up their credit and collateral business managed in CCBM2,
- enter and maintain static data manually,
- enter credit and collateral instructions manually.

The reporting function comprises two types of reporting:

- current business day: pre-defined reports from the production database. These fulfil the needs of NCB users and counterparties for the daily management of their credit and collateral;
- previous business days: flexible reporting possibilities on data of previous days coming from the Statistical & Reporting Database (SRDB). These fulfil the needs coming from non-time-critical reporting such as statistical needs, historical views, input for risk or other analyses, etc.

1.4. ICT (Information and communications technologies)

General infrastructure	CCBM2 and its future operations are based on a centralised structure with a high level of continuity, security and availability measures. This infrastructure satisfies a number of basic principles that will guarantee an application that meets all customer needs and expectations.
Technical operation	The technical operation of CCBM2 is based on a high degree of automation and complies with requirements concerning: • confidentiality, • integrity, • availability, • data recovery.
ESCB compliance	CCBM2 is built in accordance with the ESCB ICT principles and standards.
Security	CCBM2 is fully compliant with ESCB-level Security Requirements and Controls. CCBM2 will for instance provide robust protection: • against external intrusion attempts, • against unauthorised actions, • of the data of each individual owner, etc.
Availability	CCBM2 availability will at least be synchronised with the calendar and the opening hours of TARGET2 and T2S.

2. Message Router

Overview

Introduction

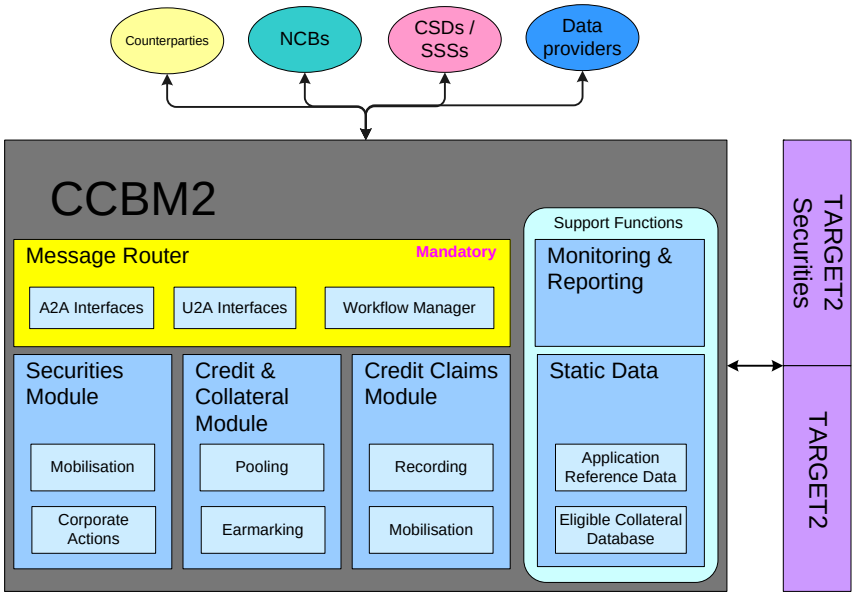
This section describes the way external systems can interface with CCBM2.

Contents

This section contains the following topics:

2.1. Module Presentation

Schematic overview



Mandatory Module

The Message Router is the mandatory module of CCBM2.

Relation to other modules

The Message Router closely interacts with:

- the Credit & Collateral Module for credit and collateral management,
- the Securities Module for mobilisation/demobilisation of marketable assets,
- the Credit Claims Module for mobilisation/demobilisation of non-marketable assets,
- the Static Data Support Function for validation checks,
- the Monitoring & Reporting Support Function.

2.2. Generalities

Introduction

The Message Router handles communication between CCBM2 and:
- counterparties,
- other NCBs (e.g. for existing CCBM procedures),
- market infrastructures (e.g. TARGET2, SSSs).

Moreover, it has the business logic to deal with the modular set-up of CCBM2 and thus to process the interaction between:
- CCBM2 modules,
- CCBM2 and NCB proprietary Collateral Management Systems (NCB CMS) in case not all optional modules are chosen,
- CCBM2 and External CMS (e.g. for tri-party services).

In this way, it drives and monitors the business processes related to CCBM2 from start to finish.

Module composition

The Message Router contains the CCBM2 Workflow Manager and enables the channelling of all data through the A2A and U2A interfaces.

Functionalities

The Message Router manages:
- the receipt of incoming instructions,
- the syntax and structure validation,
- validity checks,
- the workflow of the treated operations,
- routing the received information to the appropriate module (CCBM2 or external module),
- the status of the life cycle of any operation in process,
- preparing outgoing instructions,
- sending outgoing instructions,
- communication with external parties,
- communication with market infrastructure,
- format conversion,
- etc.

Data consultation

The Message Router enables participating NCBs and their counterparties to follow up on the status of the full life cycle of any instruction that is being processed in CCBM2, in real time. The Message Router is thus an important support for the Monitoring and Reporting Function and the U2A Interface of CCBM2.

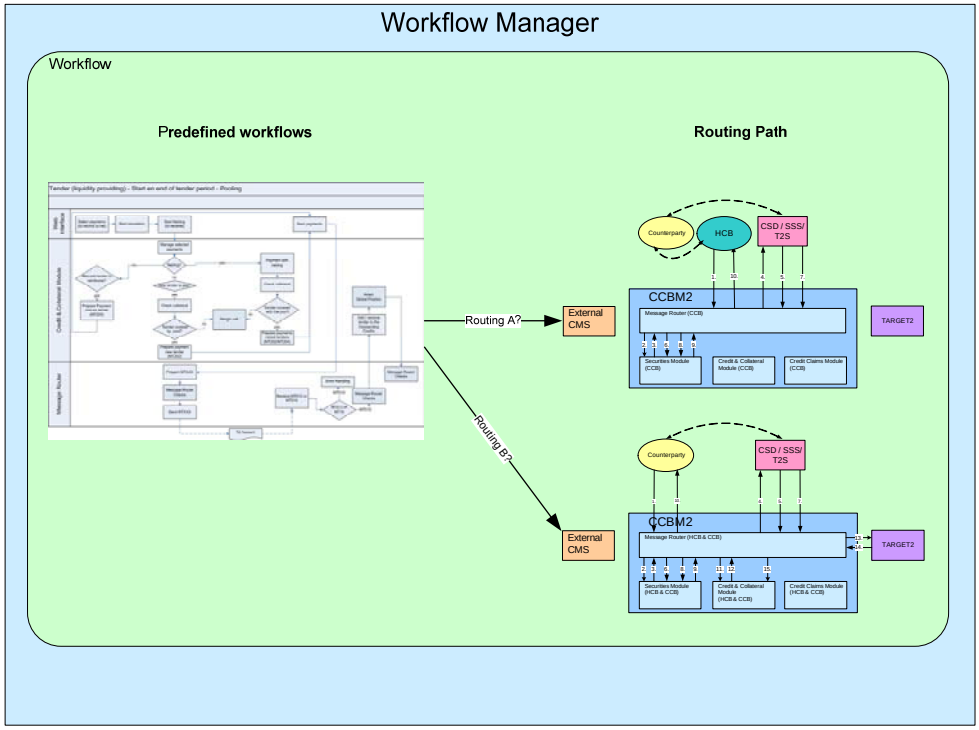
2.3. Workflow Manager

Workflow Manager

The Workflow Manager processes the instructions and defines the routing path using:
- pre-defined workflows,
- incoming information,
- static data.

It performs validity checks and follows the life cycle of each operation at any time.

Every time the Message Router sends instructions to other (internal or external) modules or to external parties, the status of an operation is changed. Conversely, every time the Message Router receives a message from other (internal or external) modules or external parties, the status of an operation is changed.
This enables real-time monitoring of the processing status of the operations.



Workflow

"Workflow" is a term used to describe a series of tasks and procedural steps taken to achieve a pre-defined objective. In CCBM2 this is the execution of various CCBM2 functions.

Continued on next page

Workflow Manager, Continued

Routing path

The choices of the NCBs define the routing path for each workflow.

A routing path is a particular order in which modules (internal or external) have to be used in order to process a workflow. It depends on an actual situation stemming from the involved NCBs, the type of transaction/instruction, the type of collateral, the number of optional modules chosen, the usage of External CMS, etc.

The parameters stored in the Static Data allow a dynamic building of the routing paths.

The Message Router decides each time which routing path will be used for processing instructions or operations.

Note: Some examples of routing paths are explained in the use cases in chapter 10.

Validity Checks

The Message Router checks the validity of the incoming data against the information in the Static Data.
Amongst others, the following validity checks are performed:

- eligibility of the sender/counterparty
- existence of NCB
- NCB participating in CCBM2
- type of collateral.

Workflows examples

- Settlement of a tender operation
- Mobilisation of securities
- Demobilisation of securities
- Cancel of a mobilisation or demobilisation of a security
- Mobilisation of credit claims
- Demobilisation of credit claims
- Registration freezing
- Global position update
- Auto-collateralisation assistance on T2S
- Coupon / redemption payment
- Reconciliation and sending statements of holding
- Security pricing
- Credit claim pricing
- EADB reporting and acquisition
- Tax reporting
- Cost charging
- TARGET2 contingency collateral

2.4. Interfacing to CCBM2

Overview

Introduction This section describes the way external systems can interface with CCBM2.

Contents This section contains the following topics:

2.4.1. Interfacing

Introduction

Interfacing with and accessing CCBM2 is based on:

- SWIFTNet,
- EXDI,
- secure internet access.

Depending on the user, interfaces will make use of SWIFTNet, EXDI and/or secured internet access. The internal functioning of CCBM2, however, is independent from the access channel.

A2A and U2A Interfaces

CCBM2 can be accessed through an Application-to-Application (A2A) or a User-to-Application (U2A) interface. Both modes of interfacing are available through the three access channels.

For the counterparties of the participating NCBs, the A2A Interface and the U2A Interface are fully worthy alternatives to each other.

Eurosystem Single Interface (ESI)

CCBM2 will adhere to the Eurosystem Single Interface (ESI) concept.

2.4.2. A2A Interface

Functionality

The A2A Interface ensures the automated communication between CCBM2 and applications of external parties.

The different accepted incoming message standards and formats are made compatible within the Message Router, which enables further processing in one harmonised internal CCBM2 format.

Network

The A2A Interface can be accessed through SWIFTNet, EXDI or secure internet access, in compliance with ESI.

Incoming instructions

The A2A Interface:
- receives and stores the incoming instructions as such,
- performs the basic structure and syntax validation,
- performs format conversions,
- forwards the instructions to the Workflow Manager.

Outgoing instructions

The A2A Interface:
- receives the instructions from the Workflow Manager,
- determines the standard of communication with external parties,
- performs format conversions,
- stores and sends the instructions on the adequate communication network.

SWIFTNet FIN

In the current version of the UR ISO 15022 is applied to the SWIFTNet FIN messaging. The future standard will be ISO 20022, and CCBM2 will comply with both the current and the future standard.
Whereever in the document SWIFTNet FIN messages are mentioned, the A2A secure internet access using XML messages is a fully fledged alternative.

Continued on next page

A2A Interface, Continued

A2A Interface towards SSSs	CCBM2 has an A2A Interface towards the SSSs based on SWIFTNet FIN messages. This interface will be based upon market standards and take full advantage of the removal of Giovannini barriers 1 and 3. As of that stage, this interface will be flexible enough for CCBM2 to process incoming/outgoing SWIFT formats adapted by all the SSSs to which CCBM2 needs to connect. If there is a delay in removing Giovannini barriers 1 and 3, an alternative consists in exploiting the modular set-up of CCBM2 and temporarily re-using the existing local interface between NCBs and SSSs. In this case, the concerned NCB does not opt for the Securities Module and uses its existing CMS to interface with the local SSS. Use cases 10.2, 10.3 and 10.4 clarify this solution.

2.4.3. U2A Interface

Functionality

Users of NCBs and counterparties can interface towards CCBM2 in a User-to-Application mode. This U2A Interface allows them to enter and consult the data to which they have access, online, in real time and securely. It also enables them to request some reports.

The U2A Interface can be customised according to the security and functional requirements of each user profile.

Network

The U2A Interface can be accessed through SWIFTNet, EXDI or secure internet access, in compliance with ESI.

NCB users

The interactive U2A Interface enables NCB users to (in a pull mode):

- consult historical data,
- consult data on day-to-day credit and collateral management and monitoring, such as eligible assets, collateral transactions, coupon payments, etc., including their processing status,
- insert/update/delete static and transactional data - according to pre-defined security and permission rules,
- enter credit and collateral transactions on behalf of their counterparties,
- make print screens and export data to spreadsheets or PDF-documents,
- depend on it as a back-up for input of credit and collateral transactions if the SWIFT connection between a counterparty and the CCBM2 platform is down,
- manually enter tender allotment results and bilateral operations.

Counterparties

The counterparties can subscribe to the U2A Interface so they can consult their credit and collateral data (in a pull mode).
However, they only have a functional subset of the screens of the NCB users. They are subject to separate security requirements.
The different counterparties can use the U2A Interface to:

- consult their credit and collateral business,
- consult historical data,
- consult future operations (e.g. coupons, redemptions, collateral transactions sent to CCBM2 with a value date in the future),
- key in collateral transactions, working on a consult and transaction basis (e.g. for small credit institutions not using SWIFTNet FIN services),
- depend on it as a back-up for the SWIFTNet FIN connection if the counterparty premises are down,
- consult some static data like the eligible securities (envisaged, but not yet confirmed),
- make print screens and export data to spreadsheets or PDF documents.

Continued on next page

U2A Interface, Continued

CCBM2 operators	In the U2A Interface, the CCBM2 operators have a specific subset of screens available for their business needs: • the operation of CCBM2, • support and helpdesk for the NCBs that use CCBM2, • CCBM2 monitoring.
Authorisation	Different authorisation profiles will be supported for each type of user. For critical functions, the four-eyes principle will be enforced.

2.5. Connection to NCB Collateral Management Systems (optional)

Introduction

Some NCBs may decide not to choose some or all of the optional CCBM2 modules from the start. The alternatives to the optional modules within CCBM2 are considered as NCB proprietary Collateral Management Systems (NCB CMS).

If only the Message Router is used, in combination with domestic business modules in the field of securities, credit claims and credit & collateral management, the communication between the respective domestic modules can be handled both via the Message Router and directly between the domestic modules. The respective NCB can choose freely the preferred communication channel.

If an NCB does not opt for the optional Credit & Collateral Module, Securities Module and/or Credit Claims Module, CCBM2 can set up only one interface per external module.

Workflow Manager & Routing Path

The Workflow Manager has the intelligence to deal with the modular set-up of CCBM2. The workflow manager processes the interaction between CCBM2 and the NCB CMS.

The routing paths of the Workflow Manager enable CCBM2 to deal with the fact that a part of a business process is performed outside CCBM2 in a NCB CMS.

Interfacing modes

If the Credit and Collateral Module is not chosen, for those functions, the alternative domestic or proprietary NCB CMS needs to be interfaced to the Message Router according to the same modalities as the optional Credit & Collateral Module.

If the Securities Module and/or the Credit Claims Module is/are not chosen, for those functions, the alternative domestic or proprietary NCB CMS can be interfaced in two modes to the Message Router:

- cancel and replace mode,
- transaction-by-transaction mode, whereby the NCB CMS interfaces to the Message Router in exactly the same way as the correspondent CCBM2 optional module interfaces to the Message Router.

Note Each NCB concerned is responsible for the interface between its proprietary system (NCB CMS) and CCBM2.

Continued on next page

Connection to NCB Collateral Management Systems (optional), Continued

Cancel and replace

In the cancel-and-replace mode, a total sum of collateral values for all mobilised securities and credit claims is processed.

In CCBM2, the external collateral sum can be registered in two ways:
- the NCB enters the corresponding total collateral value manually via the U2A interface in the pool managed by CCBM2,
- the NCB CMS sends the corresponding total collateral value to CCBM2 via the A2A interface.

A cancel-and-replace transaction has no expiry date and its result remains valid until a new cancel-and-replace transaction is registered.

In the cancel-and-replace mode, no individual data are registered in the operational CCBM2 databases.

Transaction by transaction

CCBM2 can also interface with NCB CMSs transaction by transaction.

The NCB CMS may interface with CCBM2:
- without the use of the Securities Module and/or Credit Claims Module; or
- with use of the Securities Module and/or Credit Claims Module.

All the communication is processed via the Message Router.

Reporting & monitoring

Only to the degree that the NCB CMS is interfaced to the Message Router in the same way as the optional modules, the Workflow Manager offers the possibility of monitoring the full life cycle of underlying business processes and transparently providing the full status information via the U2A interface to the counterparties.

2.6. Interaction with External Collateral Management Systems (optional)

Overview

Introduction

This section describes the interaction with External Collateral Management Systems (External CMS).

Contents

This section contains the following topics:

2.6.1. General description

Introduction

Independently from the choice of optional modules, some NCBs may decide to use one or more 'non-NCB' collateral management services for securities and/or credit claims, such as tri-party services offered by SSSs, in a transaction-by-transaction mode as well as in a cancel-and-replace mode. The CCBM2 functionality is compatible with the existing systems, according to the modalities of interfacing agreed by the Eurosystem.

In this document, the ‘non-NCB’ services are labelled as External Collateral Management systems or External CMS.

Cancel and replace/ transaction by transaction

The External CMS can use both of the following methods:

- cancel-and-replace mode, registering a global amount of collateral
- transaction-by-transaction mode, registering every transaction individually.

2.6.2. Cancel-and-replace mode

Introduction

In a cancel–and-replace mode, CCBM2 registers a total sum of collateral value coming from an External CMS. This sum is a part of the global collateral amount. A new sum cancels and replaces the previous sum. The new global collateral amount has to be sufficient to cover the outstanding credits.

In CCBM2, the external collateral sum can be registered in two ways:
- the NCB enters the corresponding total collateral value manually via the U2A Interface in the pool managed by CCBM2,
- the External CMS sends the corresponding total collateral value to CCBM2.

A cancel-and-replace transaction has no expiry date and its result remains valid until a new cancel-and-replace transaction is registered.

In the cancel-and-replace mode, no individual data are registered in the operational CCBM2 databases.

All the communication is processed via the Message Router.

Interface to CCBM2

In the cancel and replace mode, no individual credit and/or collateral data are registered in the operational CCBM2 databases.

For cancel and replace transactions, CCBM2 does not use the Securities Module or Credit Claims Module. Consequently, the functionality embedded in the Securities Module or Credit Claims Module of CCBM2 is performed outside CCBM2 in the External CMS.

Registration

In CCBM2, the external collateral sum is registered in two ways:
- the NCB enters the corresponding total collateral value manually via the U2A Interface in the pool managed by CCBM2,
- the external CMS sends the corresponding total collateral value to CCBM2 through the A2A Interface.

A cancel-and-replace transaction has no expiry date and its result remains valid until a new cancel and replace transaction is registered.

2.6.3. Transaction-by-transaction mode

Introduction

CCBM2 can also interface with External CMSs transaction by transaction.

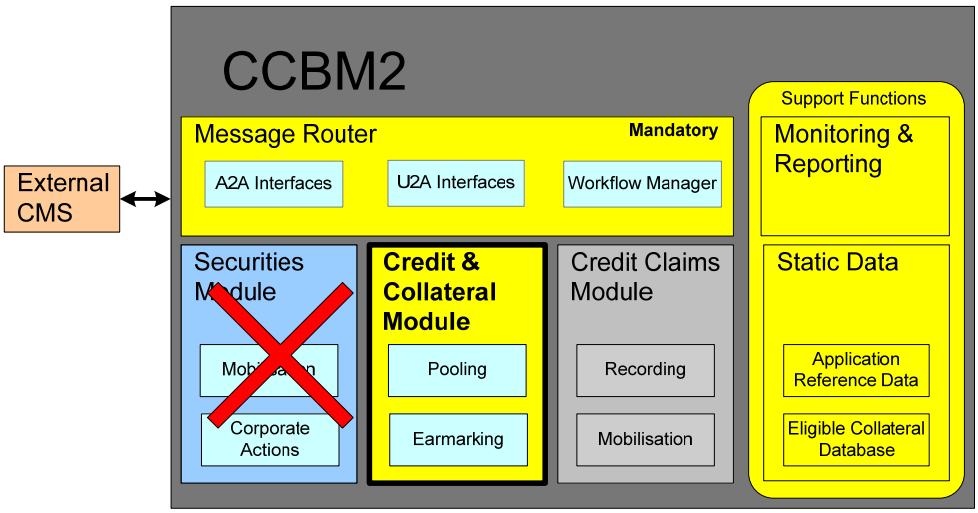
The External CMS may interface with CCBM2:
- without the use of the Securities Module and/or Credit Claims Module; or
- with use of the Securities Module and/or Credit Claims Module.

All the communication is processed via the Message Router.

Example 1: without use of optional module

The External CMS interfaces with the Message Router in exactly the same way as the Securities Module and/or Credit Claims Module interacts with the Message Router without using the Securities Module and/or Credit Claims Module. The counterparty sends instructions to the External CMS. In this case the functions of the Securities Module and/or Credit Claims Module are outsourced to the External CMS.

This illustration shows the use of the Message Router and the Credit & Collateral Module.



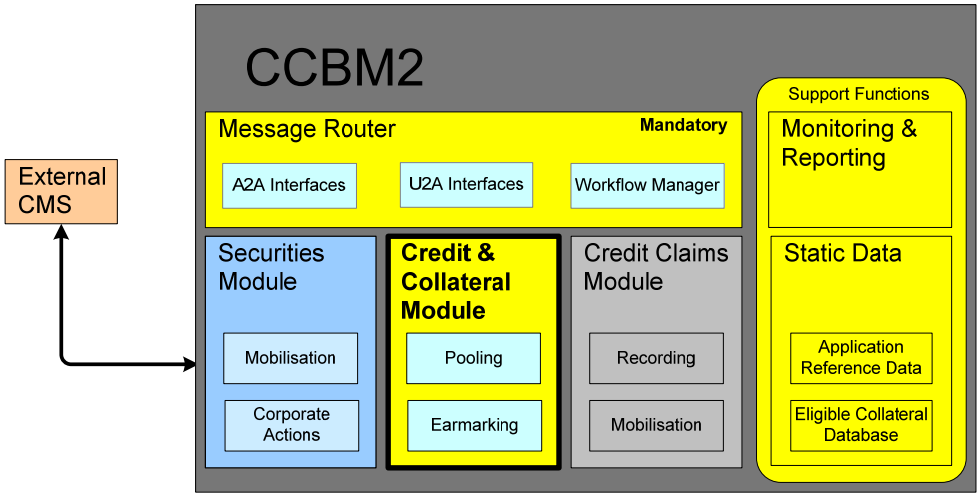
Continued on next page

Transaction-by-transaction mode, Continued

Example 2: with use of optional module

The External CMS interfaces with CCBM2 in exactly the same way as the counterparties interface with CCBM2. The External CMS sends collateral instructions to CCBM2 on behalf of the counterparty. CCBM2 makes full use of the Securities Module and/or Credit Claims Module: there is no outsourcing of collateral management to the External CMS.

This illustration shows the use of the Message Router, the Credit and Collateral Module and the Securities Module as an optional module:



3. Credit & Collateral Module

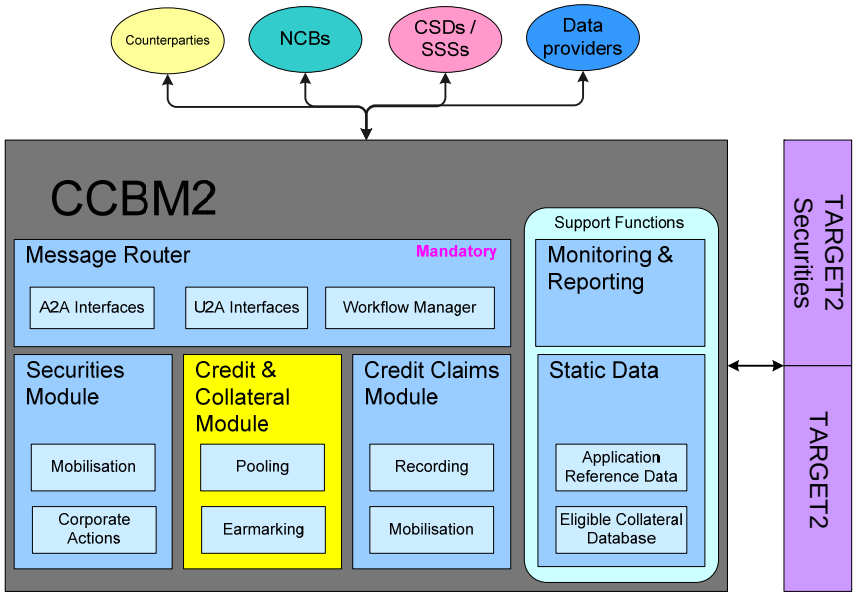
Overview

Introduction This chapter describes the Credit & Collateral Module of CCBM2.

Contents This part contains the following topics:

3.1. Module Presentation

Schematic overview



Optional Module

The Credit & Collateral Module is an optional module.

Relation to other modules

The Credit & Collateral Module closely interacts with:

- the Message Router for communication and workflow management,
- the Securities Module for mobilisation/demobilisation of marketable assets,
- the Credit Claims Module for mobilisation/demobilisation of non-marketable assets,
- the Static Data Support Functions for pricing information for valuation,
- the Monitoring & Reporting Support Functions.

3.2. Generalities

Introduction	The Credit & Collateral Module enables NCBs to centralise collateral-related activities for handling monetary policy operations in one application or to grant intraday credit in TARGET2.
Functionality	The Credit & Collateral Module manages: • collateral valuation, • input of reverse transaction allocations, • collateral pooling, • collateral earmarking, • combinations of pooling and earmarking, • follow-up on earmarked and pooled collateral, • intraday and overnight credit coverage, • credit operations settlement, • marginal lending on request, • concentration limits, • liquidity absorbing reverse transactions and collection of fixed term deposits (optional), • credit freezing (optional), • support of auto-collateralisation (optional), • global position.
Data consultation	Participating NCBs and their counterparties are able to: • consult, update and monitor their relevant data, • follow up each counterparty's global credit and collateral position.
Pooling & Earmarking	CCBM2 supports the techniques of both pooling and earmarking collateral.

Continued on next page

Generalities, Continued

Pooling

When an NCB chooses pooling, all collateral is registered in a collateral pool. This pool is managed independently from the credit operations it covers.
The Credit & Collateral Module calculates, per counterparty, the global sum of the value of all assets collateralised. This sum must always cover all the outstanding credit operations or liquidity provision.
In pooling, credit is granted by means of:

- connected payments (cf. 3.5.3.1.1) in TARGET2 for liquidity providing reverse transactions resulting from tender procedures (mainly MROs and LTROs);
- a credit line or overdraft facility in TARGET2 upon which counterparties can draw to obtain intraday or overnight credit
- on-demand actions for refinancing operations.

Earmarking

When an NCB chooses earmarking, the collateral is not managed independently from the credit operations they cover. Collateral is unequivocally linked to a specific credit operation. Each credit operation must be covered by a well-defined set of assets.
In earmarking, credit - intraday credit, overnight credit or liquidity providing reverse transactions resulting from tender procedures - is granted by means of credit transfers or payments.
These payments can take the form of the cash leg of DvP instruction in an SSS or a straight payment in TARGET2, after receipt of collateral (Payment after Delivery, or PaD). A PaD is a payment ordered by the Credit & Collateral Module after CCBM2 has received confirmation that the collateral has been successfully delivered to the NCB.

Repo & pledge

Collateral can be mobilised in favour of the NCBs participating in CCBM2 using the legal techniques of repo and pledge. Both mobilisation techniques can be combined with the two techniques of pooling and earmarking collateral to the outstanding credit operations.

Continued on next page

Generalities, Continued

Overview

The table below provides an overview:

	Pool	Earmarking
Pledge	• The pledged collateral is not assigned to a specific credit operation • Margining is done at a global level • Intraday and overnight liquidity is provided through a credit line • Tender credits are provided through connected payments	• The pledged collateral is assigned to a specific credit operation • Margining is done at a global level • Intraday and overnight liquidity is provided through a PaD credit transfer • Tender credits are provided through a PaD credit transfer
Repo	• The repo'd collateral is not assigned to a specific credit operation • Margining is done at a global level • Intraday and overnight liquidity is provided through a credit line • Tender credits are provided through connected payments	• The repo'd collateral is assigned to a specific credit operation • Margining is done at a global level • Intraday and overnight liquidity is provided on a DvP or PaD basis • Tender credits are provided on a DvP or PaD basis

In a pooling context, the repos are free of payment (FoP), because there is no link between the collateral and the credit provision.
In an earmarking context, the repos can be on both a DvP and FoP basis, the latter resulting in a PaD. A pledge always results in a PaD.

Credit claims

In CCBM2, credit claims are managed by pooling only.

3.3. Valuation

Daily valuation	All assets mobilised as collateral are valued by the Credit & Collateral Module daily or on request. The valuation method used depends on the type of the asset (marketable or non-marketable).
Valuation of marketable assets	The valuation of the marketable assets is based on: • the nominal value, • the price, according to the priorities defined in the Static Data, • the haircut, • the pool factor, • accrued interest, • index factors. The accrued interest is based on: • the nominal value, • the coupon rate, • the number of days in the current coupon period, • the number of days in the year, • tax data, • the pool factor. The data used to calculate the asset value are stored in the Static Data.
Harmonised valuation	The valuation in CCBM2 is harmonised: each ISIN-code has the same price for each NCB/counterparty at a given moment. Therefore, the Eurosystem needs to set general valuation standards with the same prioritisation of the price providers for all parties involved.
Valuation of non-marketable assets	To value non-marketable assets, the Credit & Collateral Module retrieves its information from the Static Data, which supports the valuation by nominal amount (based on the nominal value and the haircut) and theoretical valuation, e.g. via the present value approach (PV), according to the rules decided by the Eurosystem. The methods are explained in detail in the Static Data.

3.4. Input of reverse transaction allocations

Input	The respective tender allotment information of the liquidity providing and absorbing reverse operations (i.e. LTROs, MROs , fine tuning and structural operations) can either be imported automatically from the NCB proprietary system or entered manually. Bilateral transaction allocations (fine tuning and structural operations) can also be imported automatically or entered manually.
Data in CCBM2	The following data is imported into the Credit & Collateral Module: • counterparty, • tender ID, • type of reverse operation, • nominal value, • interest rate, • value date, • maturity date, • optional: amount to be earmarked.
Follow-up in CCBM2	CCBM2 offers the possibility to: • perform a preliminary check if the collateral for open market operations is sufficient, • adjust the reverse operation amount in case of a shortage of collateral, • terminate the reverse transaction in case of a moratorium The reverse operation amount per credit transaction, including the accrued interests that need to be covered by the collateral, is calculated daily.

3.5. Pooling (repo & pledge)

Overview

Introduction

The pooling functionality manages the counterparties' credit and collateral position, incorporates all changes in the collateral position and grants credit accordingly.

Contents

This section contains the following topics:

3.5.1. Functional principles of pooling

Mobilisation and demobilisation	The repo and pledge processes allow a counterparty to mobilise collateral (i.e. marketable and non-marketable assets) to the collateral pool and demobilise collateral from the collateral pool. This can be done: • at any time of the business day on an STP basis in CCBM2, • according to the terms and conditions of the relevant SSS.
Using the pool	The collateral pool is used to grant credit by means of: • connected payments in TARGET2 for liquidity providing reverse transactions resulting from tender procedures, • a credit line or overdraft facility in TARGET2 upon which counterparties can draw to obtain intraday or overnight credit. The collateral pool also makes it possible to provide in internal and external collateral needs: credit freezings (optional).
Independency between collateral and credit	The assets in the collateral pool are managed independently from the credits they cover.

3.5.2. Management of the collateral pool

Overview

Introduction This section describes the management of the collateral pool.

Contents This section contains the following topics:

3.5.2.1. Management of the pool

Construction of the pool

In CCBM2, each eligible counterparty can mobilise collateral to a collateral pool at any time of the working day (CCBM2 at least will be synchronised with the working hours of T2 and T2S). This is done through mobilisation of collateral in:

- the Securities Module,
- the Credit Claims Module,
- NCB Collateral Management System,
- External Collateral Management System.

Both domestic and cross-border transactions are integrated in the pool.

Vice versa, collateral can be demobilised from the pool by the counterparty at any time of the working day. This is only possible when all the outstanding credits are sufficiently covered by the remaining collateral pool.

Note CCBM2 provides neither a virtual nor a real pooling of collateral between two or more different monetary policy counterparties. It only provides counterparty subaccounts within a single Monetary Policy Eligible Counterparty (MPEC). It provides a facility for offering consolidated information on collateral provided by entities belonging to a group.

Collateral subaccounts

CCBM2 allows several collateral subaccounts per counterparty. This makes it possible to segregate, per NCB, collateral which was mobilised in the counterparty's global pool.

Example It is possible to distinguish collateral mobilised by several of the counterparty's back offices, branches, group members, etc.

Collateral modification

If the collateral is changed, the process is as follows:

Stage	Description
1	A modification occurs in: • the collateral pool (e.g. mobilisation/demobilisation of collateral by the counterparty), • the value of the pool because of new valuation of an asset, a coupon or (partial) redemption payment, etc.
2	The counterparties' position changes and reflects the modification.
3	The credit line managed by CCBM2 in TARGET2 is automatically adjusted accordingly, or a margin call requirement is issued.

3.5.2.2. Interactions with other modules

Message Router	The Credit & Collateral Module receives the required information from the Message Router.
Mobilisation and demobilisation	Once the Mobilisation/demobilisation information is processed, the Credit & Collateral Module adjusts the collateral with the correct value. The details on the transactions are stored in the Securities or Credit Claims Module. The Message Router follows up on the life cycle of the transactions via the Workflow Manager.

3.5.3. Credit provision

Overview

Introduction

The Credit & Collateral Module is used to handle the following credit operations:

- liquidity providing reverse transactions (MROs (Main Refinancing Operation), LTROs (Longer-Term Refinancing Operation), fine tuning, and structural operations)
- internal and external collateral needs: credit freezings (optional),
- credit line management.

Contents

This section contains the following topics:

3.5.3.1. Liquidity providing reverse transactions

Introduction

This part describes the import of tender allocation results and the settlement of liquidity providing reverse transactions (MROs, LTROs, fine tuning and structural operations), using connected payments and netting.

Contents

This section contains the following topics:

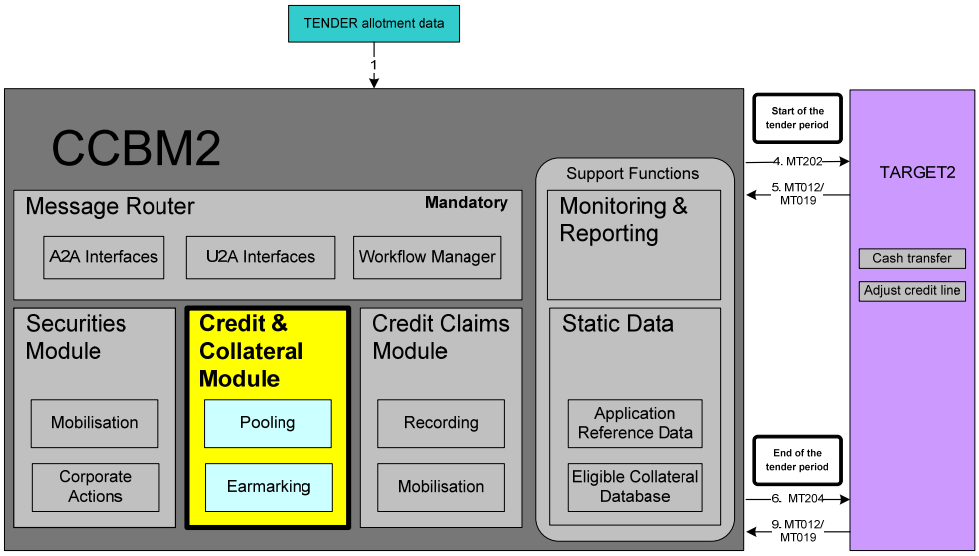
3.5.3.1.1. Connected payments

Reverse operation

In a pooling situation, liquidity providing reverse operations are settled via connected payments. A connected payment links the cash transfers of a tender settlement to the adaptation of the credit line. Both operations are processed simultaneously.

Illustration

The complete flow of the tender processing for a direct participant is shown below:



Continued on next page

Liquidity providing reverse transactions, Continued

Process

The process is handled as follows:

Stage	Description (start of period)
1	Allotment data is sent to CCBM2.
2	Message Router receives and processes the tender allotment data.
3	The Credit & Collateral Module stores the information, calculates, optionally nets and prepares the connected payments. The message with a successful feedback is sent to the Message Router.
4	The Message Router prepares and performs the communication with TARGET2 (MT202 and MT204).
5	TARGET2 initiates an MT012 (settlement) or MT019 (non-settlement) to the Message Router as soon as the instruction is received.
6	Message Router processes the received information from TARGET2. The Credit & Collateral Module adapts the global position.

Stage	Description (end of period)
7	The Credit & Collateral Module sends the payments (cash and interest amount) to the Message Router.
8	The Message Router receives and processes the payments.
9	TARGET2 initiates an MT012 (settlement) or MT019 (non-settlement) to CCBM2 as soon as the instruction is received.
10	The Message Router processes the received information from TARGET2. The Credit & Collateral Module adapts the global position.

3.5.3.1.2. Netting

Netting payments

The Credit & Collateral Module offers the possibility to net the payments of matured and new tender operations.

Example

The payment of a matured tender and a new tender can be netted.
Below are specific examples of two different tenders:

Specifications	Tender 1	Tender 2
Liquidity providing reverse operation	MRO	MRO
Duration	1 week	1 week
Start date	15/07/2007	22/07/2007
Maturity date	22/07/2007	29/07/2007
Nominal value	€ 1,000	€ 700
Interest	€ 10	€ 7

Required operations on 22/07/2007 (maturity date of Tender 1 and value date of Tender 2):

	NCB		Counterparty	
Tender1		**€ 1,010**	**€ 1,010**	
Tender2	**€ 700**			**€ 700**
Net		**€ 310**	**€ 310**	

On 22/07/2007 the counterparty's cash account will be debited with 310 and the NCB's cash account will be credited with 310.

3.5.3.2. Credit line management

Introduction

CCBM2 manages a credit line in TARGET2. This is an overdraft facility which can be drawn upon in order to obtain intraday or overnight credit.

Credit line

In a pooling situation, the credit line (available for intraday credit) is the difference between:

- the global pool of collateral, and
- the sum of all the outstanding credits (the liquidity providing reverse operations - incl. interest accruals - and the credit freezings).

Example

The credit line balances out the total collateral with the total credits, which results in the overview shown in the example below:

Global position counterparty ABC			
Collateral		**Outstanding credits**	
Securities	10,000	Tenders	11,000
Credit claims	10,000		
		Credit Line	9,000
Σ Collateral	20,000	Σ Credits	20,000

Change in credit line

In a pooling situation, the credit line is modified for each change in the total collateral pool or in the outstanding credits.

Communication with TARGET2

A modification in the credit line is communicated to TARGET2 via ICM in A2A mode, through the Message Router. As long as CCBM2 has not received the confirmation from TARGET2, the global position in CCBM2 is frozen.

End of day

In a pooling situation, the TARGET2 end-of-day automatic procedures are used for reversing intraday credit not reimbursed into overnight credit. See §3.6.2.3 "End of day" for details.

3.5.3.3. Internal and external collateral needs: credit freezings (optional)

Introduction

Optionally, CCBM2 provides credit freezings for different purposes.

Principle of credit freezing

Credit freezings allow the counterparties to use their collateral pool efficiently and the NCBs to collateralise own claims (beside monetary policy implementation and intraday credit).
Credit freezings offer a facility to have a part of the pool not translated into a credit line.

Types of credit freezings

There are different types of credit freezings:

1. credit freezing that can only be managed by the NCB,
2. credit freezing that can be managed by the counterparties among other things to divert a part of the own credit line to other counterparties.
3. credit freezing for which a third party is mandated by a counterparty.

Process

The process of credit freezing can be as follows:

Stage	Description
1	A credit freezing instruction (MT199) is: • sent via A2A or entered via U2A by a counterparty, • sent by a CCP/SSS on behalf of the counterparty, • entered via U2A by the NCB.
2	The Message Router validates and processes the incoming instruction.
3	The instruction is processed in a cancel-and-replace mode.
4	The Credit & Collateral Module checks if the coverage of the collateral pool is sufficient and adds the requested freezings to the counterparties' outstanding credits. If the credit freezing is managed by an NCB, the collateral used for matured open market operations can also be used for credit freezing purposes.
5	The credit line is updated.
6	The Message Router prepares the outgoing message.
7	The credit freezings are confirmed to the intermediary through an MT298 message. The operations can be monitored via the U2A Interface.

3.5.4. Global position & Margining

Global position

The global position gives a complete overview of the counterparties' credit and collateral position in one view.
Based on the circumstances (available collateral , External CMSs, freezings and reverse transactions), the global position per counterparty is calculated in real time and updated accordingly.

Continuous monitoring

The Credit & Collateral Module continuously:
- monitors the global position of each counterparty with its NCB,
- checks if all the credits are adequately collateralised.

Margining

If the value of the collateral does not sufficiently cover the sum of all outstanding credit operations, a margin call requirement is issued.
To reduce the number of margin calls, NCBs can apply a trigger point.

The Credit & Collateral Module provides margin control based on the global margining principle. This means that the total pool of the collateral is considered, regardless of the operations the collateral is used for. The total value of the pool should be within a certain boundary, set by the trigger point.

Issuing a margin call

By continuously monitoring each counterparty's global position, CCBM2 provides margin call information in real time. When a margin call is required, CCBM2 flags this information to the NCB.
The NCB decides on the necessary action to be taken. If required, the NCB contacts its counterparty.
The NCB monitors that the situation is clarified.

Resolving a margin call

A counterparty can resolve a margin call requirement by:
- mobilising additional collateral, or
- transferring cash to its account in TARGET2 (except in case of a tender).

Trigger point

The trigger point is the pre-specified level of the value of the liquidity providing reverse transactions at which a margin call is executed.
If used, this trigger point is 0.5% of the amount of the liquidity providing reverse transactions.

Note The optional rounding of the credit line calculated by CCBM2 can be set individually per NCB, according to local needs, e.g. rounding to the previous multiple of € 25,000.

Continued on next page

Global position & Margining, Continued

Principle

The difference between the current credit line and the suggested credit line opening affects the credit line as follows:

If the difference is... the trigger point,	the ...
<	current credit line remains valid in TARGET2.
≥	suggested credit line replaces the current TARGET2 credit line.

Communication with TARGET2

In order to calculate the difference, CCBM2 retrieves the existing credit line from TARGET2, via the Message Router.
The credit line is retrieved from TARGET2 for reconciliation purposes.

3.6. Earmarking (repo & pledge)

Overview

Introduction

The Earmarking functionality manages the counterparties' credit position linked to the earmarked collateral.

Contents

This section contains the following topics:

3.6.1. Functional principles of earmarking

Link between collateral and credit	In the Earmarking functionality, collateral is unequivocally linked to a specific credit operation. Each credit operation is thus covered by a well-known set of assets.
Earmarking business dialogue	In the Earmarking functionality, the communication between the counterparties and CCBM2 concerns both credit and collateral transactions. The instructions and messages exchanged between the counterparties and CCBM2 contain the data necessary to: • identify the collateral covering a credit, and • request this credit.

3.6.2. Credit provision: payments

Overview

Introduction

The Credit & Collateral Module is used to handle the following credit operations:

- liquidity providing reverse transactions (MROs, LTROs, fine tuning and structural operations),
- intraday and overnight credit (marginal lending).

Contents

This section contains the following topics:

3.6.2.1. Liquidity providing reverse transactions

Introduction This part describes the settlement of liquidity providing reverse transactions (MRO, LTRO, fine tuning, structural operations) in case of earmarking.

Contents This section contains the following topics:

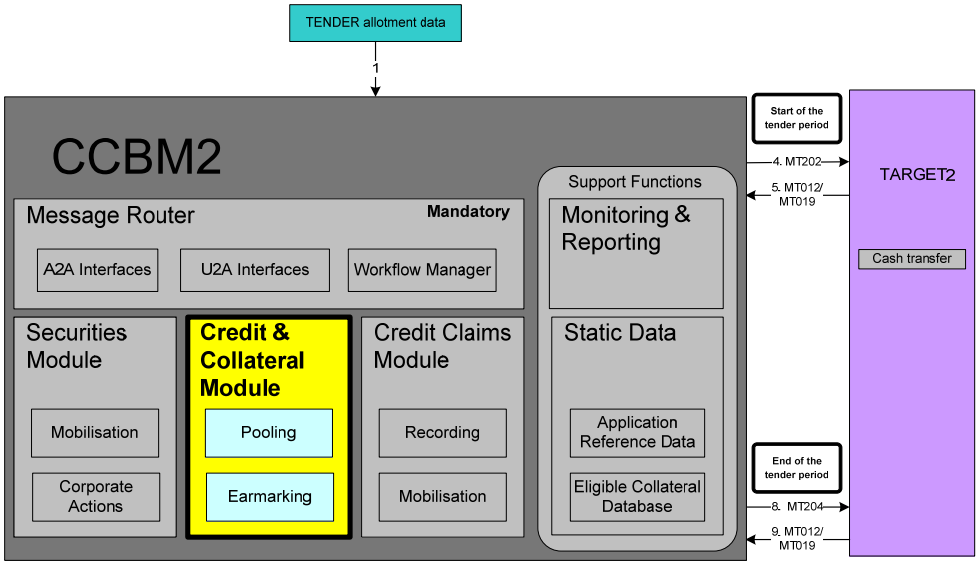
3.6.2.1.1. Liquidity providing tender operations

Reverse operations

To settle liquidity providing reverse operations (e.g. MRO and LTRO), the collateral instruction must uniquely refer to this credit operation.
Liquidity providing reverse operations can be settled on a DvP or FoP basis.

Illustration 1

The complete flow of the tender processing in the FoP modus is shown below:



Continued on next page

Liquidity providing reverse transactions, Continued

FoP

For FoP settlement in an earmarking situation, liquidity providing tender operations are settled **without** using the mechanism of connected payments:

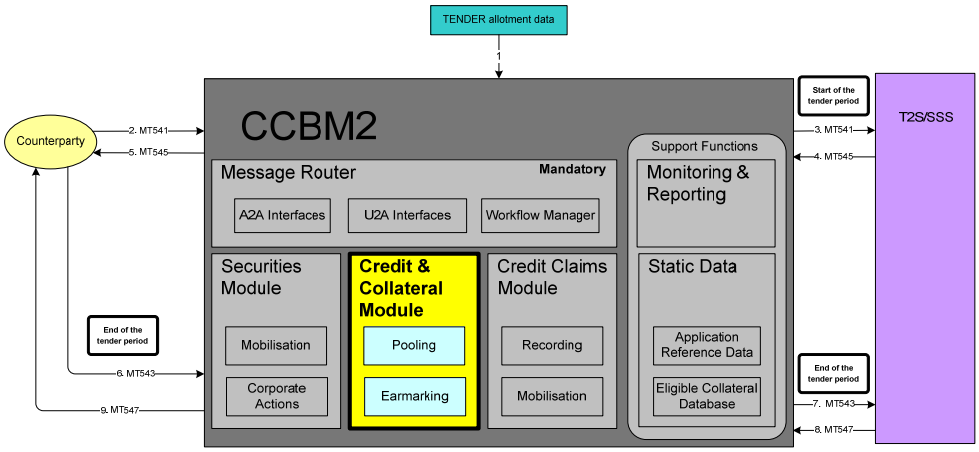
Stage	Description (start of period)
1	Allotment data are sent to CCBM2.
2	The Message Router receives and processes the allotment data.
3	The Credit and Collateral Module stores the information and calculates, optionally nets and prepares three connected payments. The message with a successful feedback is sent to the Message Router.
4	The Message Router formats and sends the communication to TARGET2 (MT202).
5	TARGET2 initiates an MT012 (settlement) or an MT019 (non-settlement) to the Message Router.
6	The Message Router processes the received information from TARGET2.

Stage	Description (end of period)
7	The Credit & Collateral Module sends the two payments (MT204) to the Message Router.
8	The Message Router sends the two MT204s to TARGET2.
9	TARGET2 sends an MT012 (settlement) or an MT019 (non-settlement) to the Message Router. In case of non-settlement, the user can then take appropriate action to solve the problem.
10	The Message Router processes the received information from TARGET2 and transfers it to the Credit & Collateral Module.
11	The Credit & Collateral Module marks the collateral as available and initiates a demobilisation of the collateral through the Securities Module (via the Message Router).

Continued on next page

Liquidity providing reverse transactions, Continued

Illustration 2 The complete flow of the tender processing in the DvP modus is shown below:



Note The diagram shows an example in which the SSS requires receipt of pre-matched instructions.

Continued on next page

Liquidity providing reverse transactions, Continued

DvP

For DvP settlement in an earmarking situation, liquidity providing tender operations are settled as follows:

Stage	Description (start of period)
1	Allotment data are sent to CCBM2.
2	The counterparty sends a DvP instruction (MT541) to CCBM2.
3	The Message Router forwards the instruction to SSS/T2S.
4	The SSS/T2S settles the transaction and confirms this to CCBM2 via an MT545.
5	The counterparties' credit position is updated in the Credit & Collateral Module and the Message Router forwards the confirmation of settlement (MT545) to the counterparty.

Stage	Description (end of period)
6	CCBM2 initiates the reverse DvP instruction (MT543).
7	The Message Router forwards the instruction to the SSS/T2S.
8	The SSS/T2S settles the instruction and confirms this via an MT547.
9	The counterparties' credit position is updated in the Credit & Collateral Module and the Message Router forwards the confirmation of settlement (MT547) to the counterparty.

Note

If the counterparty only sends one repo-instruction for the start and the end of the tender period, stages 6 and, as the case may be, 7 are not required.

Although netting is not used in the example shown, CCBM2 provides for this functionality.

3.6.2.1.2. Collateral substitution and netting

Substitution

Collateral can be substituted by the counterparty at any time of the working day. However, the collateral value must cover the credit to which it is linked.

In case of reuse

Assets that are already collateralised and that have to be reused remain with the SSS. In any case, the rules and procedures of the SSS have to be followed.

Example Assets can be reused, e.g. because a previous liquidity providing reverse operation has ended.

Netting of tenders

If the SSS offers sophisticated settlement functions for blocks of transactions, CCBM2 will not organise an internal netting of tender and will use these functions.
If the SSS does not provide special settlement facilities, CCBM2 can net the forward and spot legs (both the securities and/or cash leg) before sending them to the SSS.

Note Netting is only possible with pre-matched instructions to the SSS.

3.6.2.2. Intraday and overnight credit

Instructions	A counterparty asking for intraday or overnight credit must send an instruction to CCBM2. The Credit & Collateral Module then interacts (via the Message Router) with the Securities Module to settle the credit and collateral transaction.
Reversing an operation	The instruction has no pre-defined forward leg: the counterparty has to reverse the operation on its own initiative (DvP outright).
Importance of timing	Basically, operations without a pre-defined forward leg can be reversed by the counterparty at any time in CCBM2 if the counterparty has enough cash. To respect exact timing however, CCBM2 has to align with the rules and procedures of the subjacent SSS.

3.6.2.3. End of day

Principle	The earmarking technique has specific end-of-day procedures for reversing intraday credit operations. These procedures may depend on the SSS rules and procedures and on whether the relevant counterparty has a credit line in TARGET2.
No recourse to marginal lending	If all intraday credit transactions need to be reversed (or a sufficient credit position is available), there is no overnight use of liquidity and the securities are returned to the counterparty.
No credit line in TARGET2	At the end of the day, all intraday credit should be reimbursed. If the balance in TARGET2 is insufficient, the counterparty has different alternatives to get cash in order to settle the second leg of the repo: recourse to the market or requesting an overnight credit (marginal lending facility) by starting a new repo transaction. The initiative for the (partial) recourse to marginal lending can also be with the NCB. In this case the NCB will use the marginal lending on request in order to transform the intraday credit into overnight credit by using the specific TARGET2 procedures. At the start of the following day, TARGET2 activates the refunding of the marginal lending and notifies CCBM2. Then, CCBM2 adjusts the internal records regarding the status of the credit provision.
Credit line in T2	At the end of the business day, TARGET2 (a specific function in the PM) singles out the amount of intraday credit not returned by the credit institution. Then: • TARGET2 debits the counterparty's marginal lending facilities account, transfers the liquidity to the counterparty's RTGS account, and simultaneously decreases the credit line (connected payment); • TARGET2 sends a notification to CCBM2 to signal the activation of the automatic marginal lending facility; • CCBM2 adjusts the internal recording regarding the counterparty's credit line in TARGET2 and keeps record of the amount of marginal lending granted. At the start of the following day, TARGET2 activates the refunding of the marginal lending, increases the counterparty's credit line (connected payment) and notifies CCBM2. Then, CCBM2 adjusts the internal records regarding the counterparty's credit line in T2 and the marginal lending reimbursement.

3.6.3. Margining

Margining

The margining process is performed for the sum of all credit transactions registered for a specific counterparty. It takes into account all collateral mobilised by that counterparty. Although individual margining is also possible for earmarking, CCBM2 proposes to use global margining in an attempt to harmonise the procedures among NCBs.

Note By definition, only monetary policy operations can be outstanding overnight.

Process

The process is as follows:

Stage	Description
1	A modification occurs in: • the collateral value (e.g. new valuation of an asset, a coupon or partial redemption payment, etc.), • the outstanding credits (e.g. an interest accrual of a reverse transaction).
2	The modification is immediately reflected in the global position of the counterparty.
3	If the total collateral value does not cover the outstanding operations, a margin call takes place and no intraday credit may be drawn. During the day this should not occur, since collateral may not be withdrawn if the value of remaining collateral is insufficient to cover the outstanding credit.

3.7. Pooling & Earmarking combined

Overview

Introduction

The Credit & Collateral Module offers the functionality to use both pooling and earmarking in combination.

Contents

This section contains the following topics:

3.7.1. Functional principles of earmarking combined with pooling

Pooling & Earmarking combined

An NCB decides what collateral technique it normally wants to use: pooling or earmarking. In cases where the NCB uses both collateral techniques, CCBM2 will support this by accepting collateral through repo transactions (DvP and FoP) and using the counterparties' available pool of collateral for the remainder of the collateral requirement.

Earmarking

The concepts of earmarking are applicable:

- The required liquidity, i.e. intraday credit, overnight credit or liquidity providing reverse transactions resulting from tender/bilateral procedures, is covered by specifically mobilised assets.
- In the process of tender operations, the counterparty will indicate which part of the requested liquidity will be covered by collateral via repo. The repo transactions with the local SSS will automatically take place on a DvP basis (or FoP). All other repo transactions will be on a FoP basis.
- Maturing operations with new operations can be netted.

Pooling

The concepts of pooling are applicable:

- Each mobilisation of collateral is registered in a collateral pool. This pool leads to granting credit through a credit line or overdraft facility in TARGET2 or through connected payments in TARGET2 for liquidity providing reverse transactions resulting from tender procedures (mainly MROs and LTROs).
- The cash settlement of the new operation can be netted with the settlement of the maturing operation.
- The pool of collateral can also be used to square the collateral requirement in the tender process.

3.7.2. Use case: Mobilisation through pooling and earmarking in tender operation

Use case

To clarify the CCBM2 process in the combination of earmarking and pooling, a use case is presented.

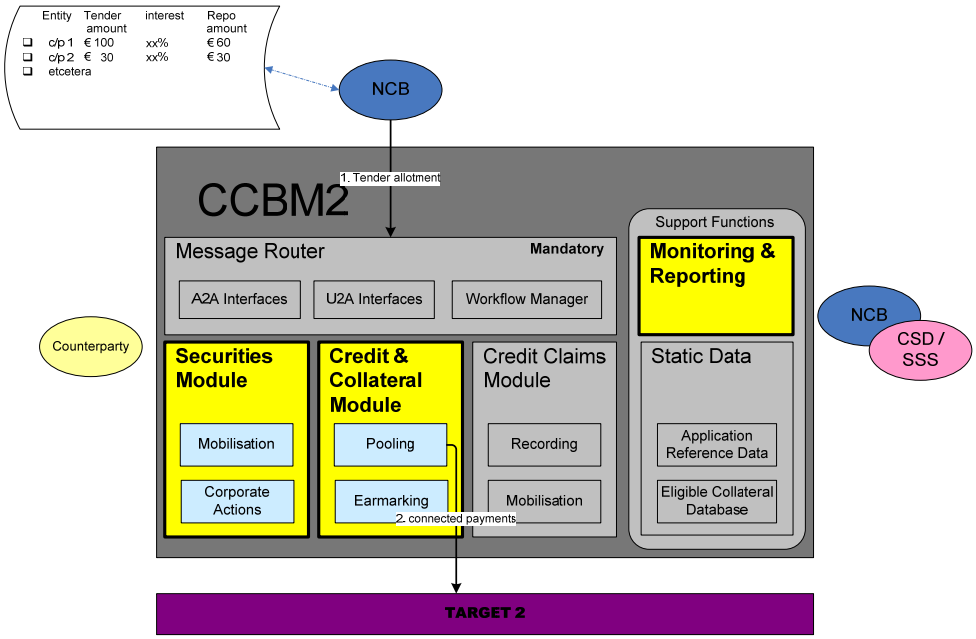
The following scheme shows the detailed process step by step, from the perspective of one counterparty, when:

- both pooling and earmarking techniques are used in a domestic or cross-border context,
- the collateral requirement stems from a tender operation,
- both NCBs (HCB and CCB) participate in CCBM2.

Continued on next page

Use case: Mobilisation through pooling and earmarking in tender operation, Continued

Process

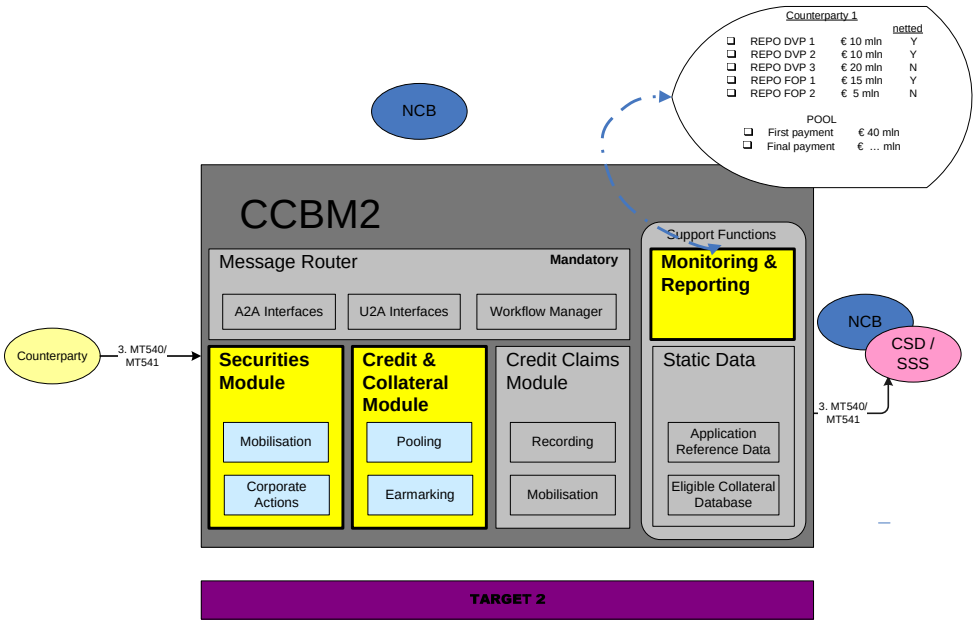


Stage	N°	Description
Tender allotment	1	CCBM2 receives tender allotment details in one file, containing information like tender identification, maturity, and identification of bids allotted (counterparties may be allotted more than one bid at a different rate). CCBM2 prepares a tender settlement screen. This screen will be presented through a U2A Interface, as shown in stage no. 3. The counterparty indicates which part of the tender is covered by DvP and/or FoP.
Connected payments	2	CCBM2 recognises which part of the tender operation will be covered by the pool and prepares the relevant connected payments (cf. 3.5.3.1.1). These payments can be adjusted if earmarking allotment is not reached by MT540/541 sent by the counterparty (see stage no. 6). These payments can be netted with maturing operations, such upon instigation of the relevant NCB.

Continued on next page

Use case: Mobilisation through pooling and earmarking in tender operation, Continued

Process

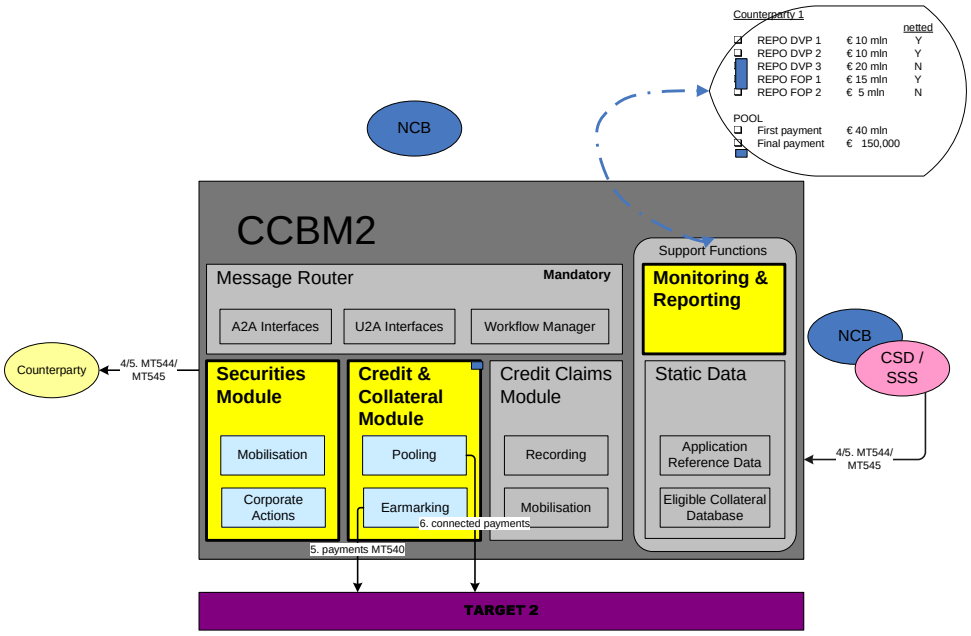


Repo transactions	3	CCBM2 receives messages from counterparties: • 3 MT541 instructions (settlement through local SSS), • 2 MT540 instructions (cross-border settlement through correspondent NCB/SSS). The "tender settlement screen" shows the details and status of the collateralisation of the tender operation. The NCB-user can indicate whether the FoP transactions have to be netted with the existing ones, or that new transactions will have to be settled.
Settlement DvP repo	4	The (local) SSS credits the RTGS account of the counterparty upon successful settlement of the transactions. This will be reflected in the "tender settlement screen".

Continued on next page

Use case: Mobilisation through pooling and earmarking in tender operation, Continued

Process



Settlement FoP repo	5	Upon receipt of confirmation of the successful settlements from the SSSs/NCBs, including the price of the relevant assets, CCBM2 can establish the collateral value and instructs the related payments to TARGET2. For transactions where the use of netting has been indicated, the relevant assets will not be demobilised, but remain in the custody account of the CCB.
Monitoring	6	All collateral receipts and related payments are stored in the "tender settlement screen" for final approval by the user-NCB. At the end of the process, the complete tender allotment should be covered by collateral. If the earmarking amount is not reached or is exceeded by the MT540/541 sent by the counterparty, the collateral requirement can be met via the pool (adjustment of connected payment) or via repo (new instructions, cancellations). This can be an automated process. In this example, the collateral value of the FoP repo transactions appeared to be € 19,850,000 instead of the expected/indicated € 20,000,000. An additional connected payment of € 150,000 will be made to fully cover the tender allotment.

3.8. Third party custody

Third party custody

Counterparties without a safe custody account with an NCB or a securities settlement account with an SSS fulfilling the ECB's minimum standards, may settle the transactions of underlying assets through the securities settlement account or the safe custody account of a corresponding credit institution.

For this purpose CCBM2 offers an interface -based on the modalities described in chapter 2.4 - to the correspondent credit institutions as it is done for SSSs.

3.9. Indirect TARGET2 participants

Indirect TARGET2 participants	Since indirect TARGET2 participants are allowed to settle open market operations via a direct participant, CCBM2 provides the functionality where the pool is owned by the indirect participant and the cash account is owned by the direct participant. The reverse transactions conducted by the indirect participants will have to be settled through regular debit/credit transfers (not connected payments) on the direct participants TARGET2 account. However an indirect participant can not get access to intraday credit through a credit line in TARGET2. As all collateral provided to the HCB is deposited in its own name, surplus collateral can not be affected to its direct participant.

3.10. Concentration Limits

CCBM2

CCBM2 provides the functionality to fulfil the Eurosystem's requirements concerning concentration limits. A limit can be set in absolute or relative terms or can be a combination of both. A limit can be either hard or soft. CCBM2 will be flexible enough to impose limits on different combinations of variables contained in the EADB.
The matter of concentration limits is currently being explored further by the Eurosystem.

Examples
- no more than X% of the collateral submitted by a counterparty may consist of non-marketable assets,
- the value of collateral from one asset category (e.g. corporate bonds) submitted by a counterparty may not exceed X% of the total collateral used, or X million euro, whichever is higher,
- the value of collateral submitted by a counterparty and issued by a single issuer should not exceed X% of the total collateral used, or X million euro, whichever is higher,
- the value of collateral submitted by a counterparty that is part of one issued security should not exceed X% of the total outstanding value of this security, or X million euro, whichever is higher,
- the value of collateral consisting in Pfandbriefe issued by the counterparty itself should not exceed X% of the total collateral used, or X million euro, whichever is higher,
- the value of collateral consisting in ABSs owned by the counterparty itself should not exceed X% of the total collateral used, or X million euro, whichever is higher (this assumes that the EADB would contain some additional information which is presently not included in the EADB).

Note

The CCBM2 function of checking for concentration limits is a complementary function relating to the fulfilment by the counterparty of its obligation not to submit collateral securities exceeding the concentration limits. CCBM2 will only be able to check concentration limits at the level of individual assets if the Securities Module and the Credit Claims Module are also taken by the relevant NCB.

Different forms

Two possibilities for imposing limits are envisaged:
- specific limits, such as limits on issuer/issues or limits on asset types,
- a limit to the amount of collateral "financially linked" to a counterparty that a counterparty itself can deliver to the Eurosystem. These "links" refer to types of correlation that are not prohibited by the "no close link" clause, such as Special Purpose Vehicles (SPVs).

These limits are applicable at the level of the individual counterparty.

3.11. Liquidity absorbing reverse transactions and collection of fixed term deposits (optional)

Optional

The handling of liquidity absorbing reverse transactions and collection of fixed term deposits is an optional function of CCBM2.

Settlement

For the settlement of tender allotments, CCBM2 sends three payment instructions to TARGET2:

- one to debit the counterparties account at the beginning of the transactions,
- two to credit this account at maturity:
  – one for the nominal amount, and
  – one for the interest amount.

Liquidity absorbing tenders

Liquidity absorbing tenders and the collection of fixed term deposits are not settled via connected payments. At the value date, the TARGET2 account of the counterparty is debited via an MT204 generated by CCBM2. At the maturity date, the amount of the tender, including the interest, is credited to the counterparties' account via two MT202.

3.12. Auto-collateralisation (optional)

Description

CCBM2 provides a set of harmonised services to facilitate auto-collateralisation procedures. Auto-collateralisation is an agreement between an SSS and its local NCB. Auto-collateralisation is a procedure which allows counterparties to obtain intraday credit from their HCB for the settlement of the DvP securities transactions in which they are involved as a buyer. Whether the auto-collateralisation takes place for the eligible securities on flow or on stock is of no difference to CCBM2. Moreover, CCBM2 will provide the service regardless of whether the SSS works with an integrated or interfaced model.

Motivation

According to the SSS requirements, an SSS could provide auto-collateralisation services in central bank money (CeBM) to the Eurosystem's eligible counterparties to facilitate the settlement of their securities-related instructions.

Level of service

CCBM2 offers several facilities to support the auto-collateralisation process. The services used depend on the aforementioned agreement between an SSS and its local NCB and the settlement model as used by that SSS. Answering the questions "how is the auto- collateralisation process agreed upon?" and "when does the actual intraday credit provision takes place?" determine which CCBM2 services will be needed.

If the SSS adopts an "integrated" model (please note: T2S model defined separately), auto-collateralisation takes place almost entirely in the SSS, because both securities and cash accounts are managed by the SSS. In such a scenario, CCBM2 provides the necessary information (such as valuation) to this SSS to be able to run the auto-collateralisation. Furthermore, CCBM2 keeps record of the collateral delivered in this SSS for monitoring purposes and, if need be, for accounting reasons.

If the SSS adopts an "interfaced" model, whereby the cash accounts are managed in TARGET2, CCBM2 provides additional functions in order to activate the provision of intraday credit on the cash account of the counterparty, according to the TARGET2 UDFS.

Note Accounting records in CCBM2 might be necessary for legal reasons (e.g. to keep records on the pledge account).

Continued on next page

Auto-collateralisation (optional), Continued

Availability	Auto-collateralisation will be available in pledge and repo environments, according to the legal framework of the relevant NCB and the options available in the TARGET2 UDFS. At this moment, not all SSSs in the Eurosystem offer the auto-collateralisation functionality to their customers.
In accordance with Eurosystem rules	Because auto-collateralisation is basically an intraday credit granting mechanism, it must follow the Eurosystem rules. According to these rules, intraday credit should be reimbursed by the concerned counterparties before the end of the day. If not, at the end of the day, CCBM2 takes the necessary interaction with TARGET2 and/or the SSS, following the different procedures applicable in pledge and repo situations.
SSS	The SSS needs: • the list of eligible counterparties with access to intraday credit through auto-collateralisation, • the list of securities eligible for auto-collateralisation, • the collateral value of the eligible securities (i.e. after valuation and application of the risk control framework), • information on close links for ex ante checks (if available and if the bilateral agreement between SSS and the local NCB includes this activity to be performed by the SSS).
NCBs	NCBs will be able to: • set limits on the provision of intraday credit through auto-collateralisation to one or several participants, • restrict the provision of intraday credit through auto-collateralisation at any moment of the day (e.g. for crisis management purposes), • activate the provision of intraday credit on a transaction-by-transaction basis (“pre-agreement”), • monitor the intraday credit granted.

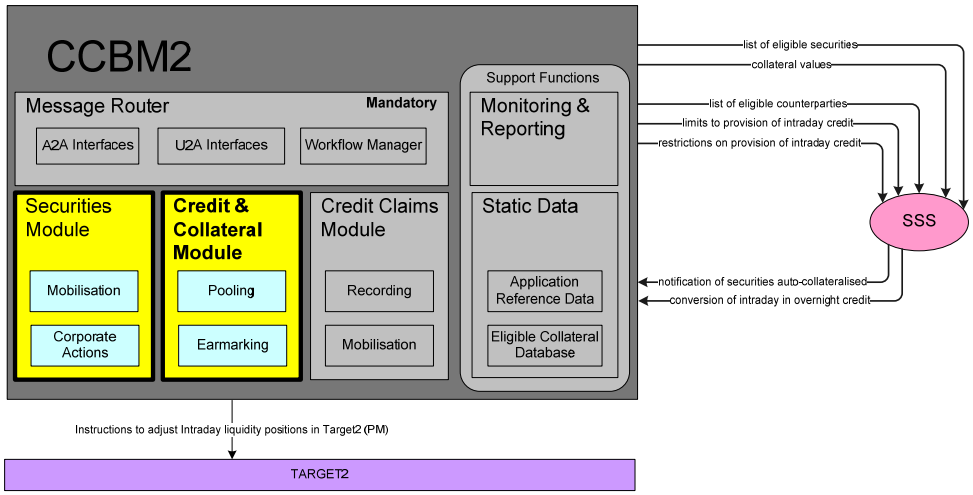
Continued on next page

Auto-collateralisation (optional), Continued

Information flows

CCBM2 is the shared platform through which participating NCBs manage their credit and collateral for monetary policy operations and intraday credit.
Therefore, CCBM2 will be able to provide individual NCBs a view of their exposure to their counterparties at any time of the working day. For the operations managed within CCBM2, this can be obtained or derived from the Credit & Collateral Module.

The information flows in auto-collateralisation are illustrated below:



Use cases

The use cases below explain the situation of auto-collateralisation with an "interfaced" SSS (pledge with pooling; cash-leg settlement in TARGET2) as well with an “integrated” SSS (settlement of both cash and securities at SSS platform).

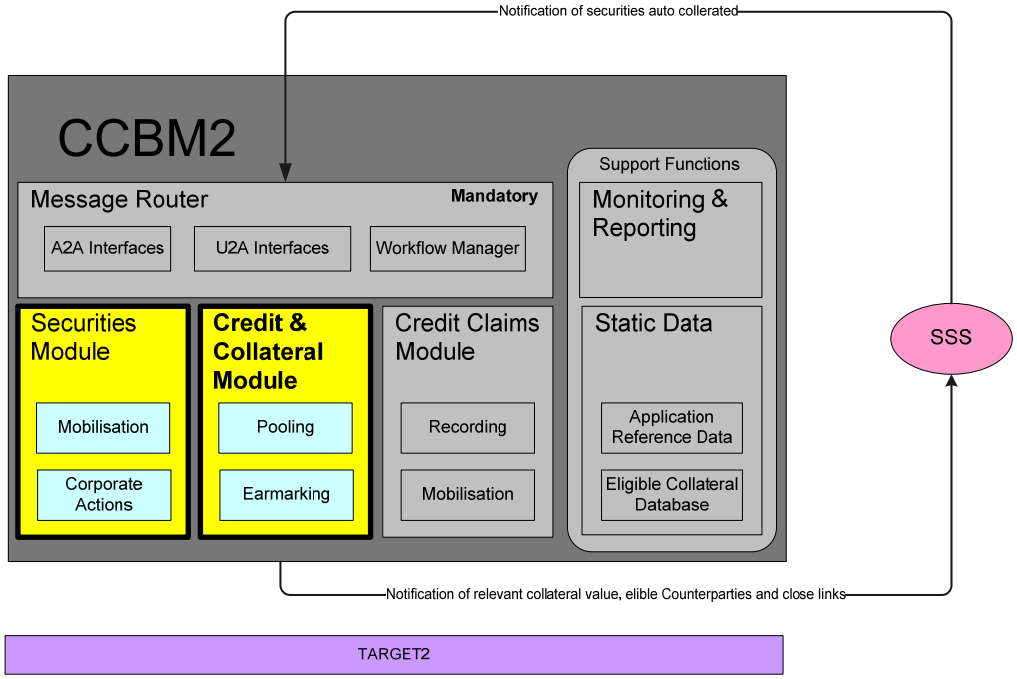
Continued on next page

Auto-collateralisation (optional), Continued

Process with an "interfaced" SSS

The following scheme shows how CCBM2 will support the functionality of auto-collateralisation, if and when offered by an “interfaced” SSS connected with CCBM2.

Below is a detailed description of the auto-collateralisation process between the CCB, the HCB and an “interfaced” SSS. The working assumption is that both the CCB and the HCB are members of CCBM2.
The cross-border dimension is incorporated by a counterparty being a remote participant of an SSS. The home NCB of this counterparty interacts through CCBM2 with a CCB, i.e. the NCB of the relevant SSS’s country.

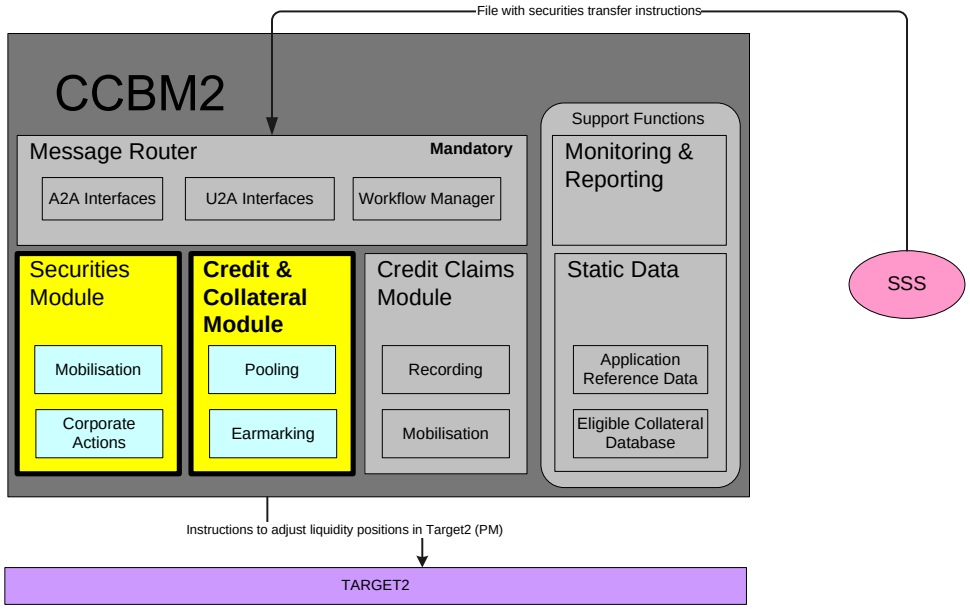


Stage	No.	Description
On S - 1	1	The SSS communicates to CCBM2 the list of assets potentially usable for auto-collateralisation purposes (this step is not strictly necessary).
	2	CCBM2 sends to SSS: - the collateral value to be used on the following settlement day for the above list of eligible securities; - the list of eligible counterparties with access to intraday credit for auto-collateralisation; - information on close links for ex ante checks (if available).

Continued on next page

Auto-collateralisation (optional), Continued

Process with an "interfaced" SSS



Stage	No.	Description
On "S" (Settlement date) Mobilisation / booking	1	The SSS - on behalf of the counterparty - transfers the collateral on the CCB's securities account and notifies such transfer to CCBM2 via an ordinary message (e.g. MT544) with a specific flag (i.e. auto-collateralisation).
Accounting records update	2	CCBM2, after having carried out eligibility checks, updates the securities accounting records of the CCB, the HCB (if other than the CCB) and the counterparty. Note: these checks have been already performed by the SSS; they can be carried on by CCBM2 on behalf of the CCB according to the Internal Manual.
Liquidity provision	3	CCBM2 sends – on behalf of the HCB - a connected payment message to TARGET2 to increase the credit line in the counterparty's main RTGS account and, at the same time, to debit it in favour of the dedicated sub-account of the counterparty (*).
Liquidity provision confirmation	4	TARGET2 confirms to CCBM2 the increase of the blocked liquidity on the sub-account of the counterparty(*).

Continued on next page

Auto-collateralisation (optional), Continued

Process with an "interfaced" SSS

Notification of "end-of-settlement cycle"	5	The SSS uses this blocked liquidity for the securities transaction settlement process, through the specific TARGET2 procedures. At the end of the SSS settlement cycle, the eventual remaining blocked liquidity is released (i.e. "unblocked") and transferred to the main RTGS account. CCBM2 is notified via the TARGET2 Ancillary System Interface (ASI), because there can be no demobilisation of these securities before the end of the settlement cycle.
Demobilisation of collateral	6	Option 1: collateral demobilisation on request: During the day, after stage 5, the counterparty can send a request to CCBM2 for the demobilisation of collateral according to ordinary CCBM2 procedures. Option 2: automatic collateral demobilisation: At pre-defined times during the day (one or more) an automatic process is activated by CCBM2 to demobilise the auto-collateralised securities to the counterparty's account at the SSS (i.e. CCBM2, after having successfully reduced the credit line in TARGET2, instructs the SSS to transfer the securities from the CCB's account to the counterparty's account).

Continued on next page

Auto-collateralisation (optional), Continued

Note A function to decrease the dedicated liquidity originated by auto-collateralisation is also foreseen in CCBM2, but only as a specific NCB function performed on an exceptional basis (e.g. reverse transaction in case of errors) normally related to a pre-defined contingency measure vis-à-vis the Ancillary System.
An example of this exceptional case would be if stage 5 (settlement process by SSS) could not take place (due to technical reasons), in which case the intraday liquidity would have to be returned to the HCB.

Note (*) Alternatively, CCBM2 may just generate an "opening confirmation" specifying the amount the NCB is willing to transact (the collateral value net of haircuts), allowing the transaction between the NCB and the counterparty/participant to be included into the next processing cycle and improving the counterparty's cash position. Alternatively, where the TARGET2 component system works on a prefund basis, the cash amount needed on the NCB side will be instructed to be transferred from the NCB main account in the PM into the NCB's dedicated sub-account. In the context of the completion of the cycle, it may be transferred upon debit instruction of the ancillary system into its technical account and onwards to the long participants to achieve the settlement of the cycle. Transactions which are not needed for the counterparty's cash position will lapse thereafter.

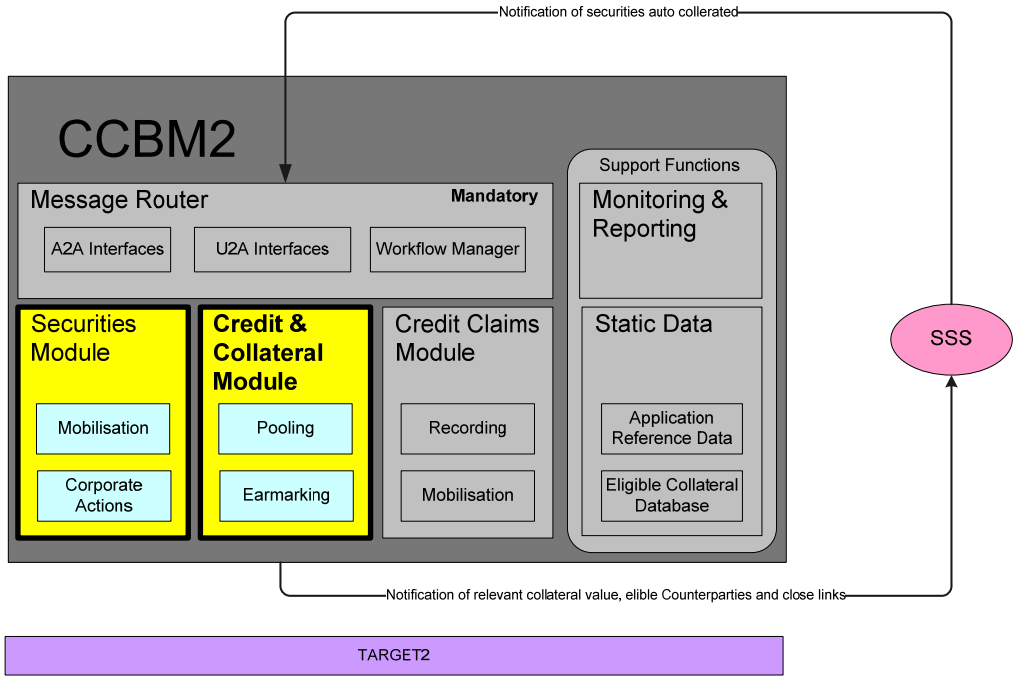
Continued on next page

Auto-collateralisation (optional), Continued

Process with an "integrated" SSS

The following scheme shows how CCBM2 will support the functionality of auto-collateralisation, if and when offered by an “integrated” SSS (please note: T2S model defined separately) and whereby the local NCB is connected with CCBM2.

Below is a detailed description of the auto-collateralisation process between the CCB, the HCB and an “integrated” SSS. The working assumption is that both the CCB and the HCB are members of CCBM2.
The cross-border dimension is incorporated by a counterparty being a remote participant of an SSS. The home NCB of this counterparty interacts through CCBM2 with a CCB, i.e. the NCB of the relevant SSS’s country.

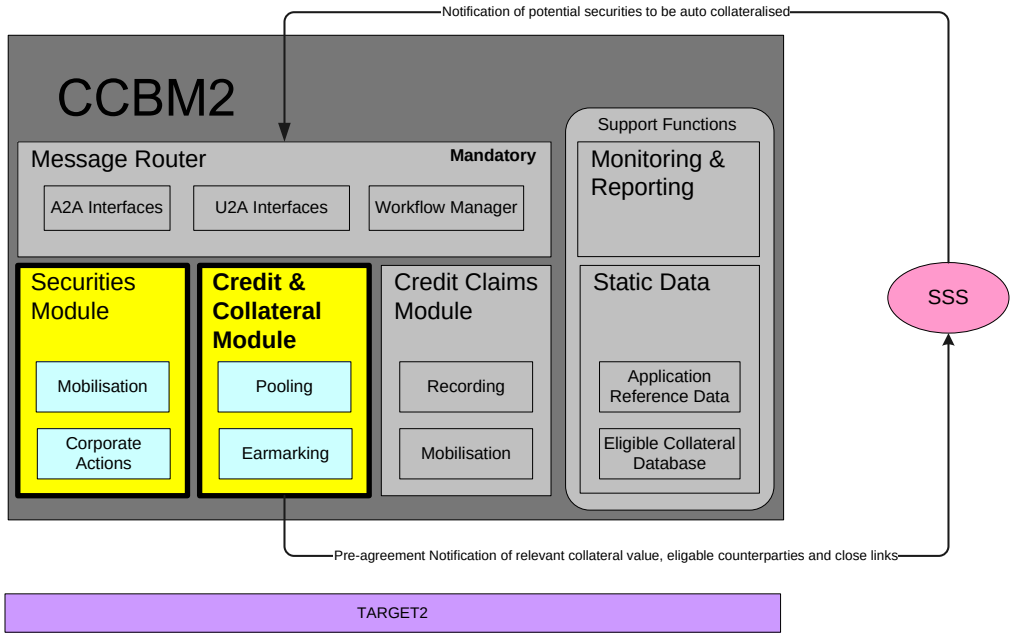


Stage	No.	Description
On S - 1	1 (optional)	The SSS communicates to CCBM2 the list of assets potentially usable for auto-collateralisation purposes.
	2	CCBM2 sends to SSS for information or by way of pre-agreement: - the collateral value to be used on the following settlement day for the above list of eligible securities; - the list of eligible counterparties with access to intraday credit for auto-collateralisation; - information on close links for ex ante checks (if available).

Continued on next page

Auto-collateralisation (optional), Continued

Process with an "integrated" SSS

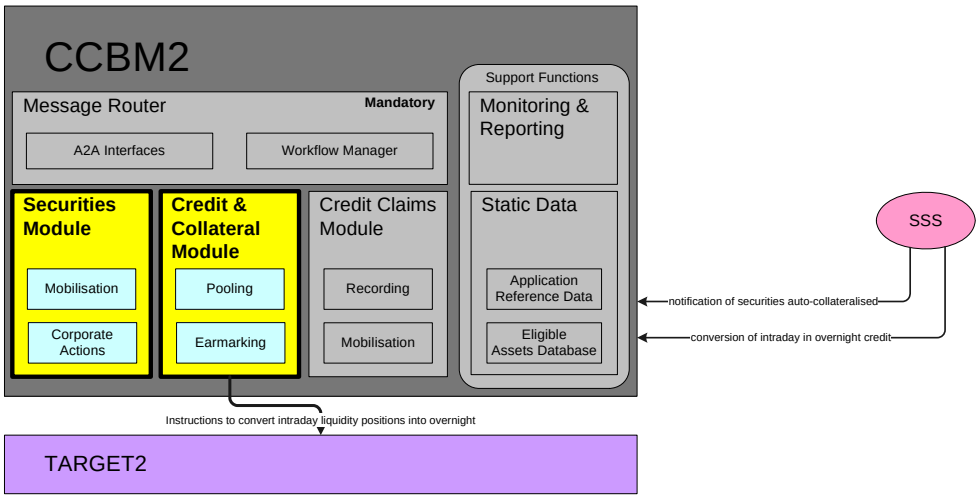


Stage	No.	Description
On "S" (Settlement date) Mobilisation / booking	1	The SSS - on behalf of the counterparty - transfers the collateral actually needed in DvP transactions to the HCB's securities account with the relevant CCB, debits the HCB's cash account for the collateral value and credits the counterparties' cash account. If and when new auto-collateralisation transactions are needed for securities on flow, being transactions entered in the system on S, the pre-agreement process for these specific transactions is repeated. The SSS notifies such transfers to CCBM2 via messages with a specific flag (i.e. auto-collateralisation). The timing of such notifications depends on the underlying agreement.
Accounting records update (optional)	2	CCBM2, after carrying out eligibility checks, updates the securities accounting records of the CCB, the HCB (if other than the CCB) and the counterparty. Note: these checks have been already performed by the SSS; they can be carried on by CCBM2 on behalf of the CCB according to the Internal Manual (if required by national law).

Continued on next page

Auto-collateralisation (optional), Continued

Process with an "integrated" SSS



Notification of "end-of-settlement cycle"	3	The SSS uses this liquidity for the securities transaction settlement process on the integrated platform. At the end of the SSS settlement cycle, the eventual remaining liquidity is available for other settlements.
Demobilisation of collateral	4	Option 1: collateral demobilisation on request: During the day, after stage 2, the counterparty can send a demobilisation request to CCBM2 for the demobilisation of collateral according to ordinary CCBM2 procedures. Option 2: automatic collateral demobilisation: At pre-defined times during the day (one or more) an automatic process is activated by the SSS to demobilise the auto-collateralised securities to the counterparty's account at the SSS. This will take place in a regular DvP transaction, so securities demobilisation will only take place once the cash account on the SSS platform has been successfully debited.
End-of-day		Specific procedures will be in place between the SSS and CCBM2 and between CCBM2 and TARGET2 to convert, where necessary, the intraday liquidity position into an overnight position.

4. Securities Module

Overview

Introduction

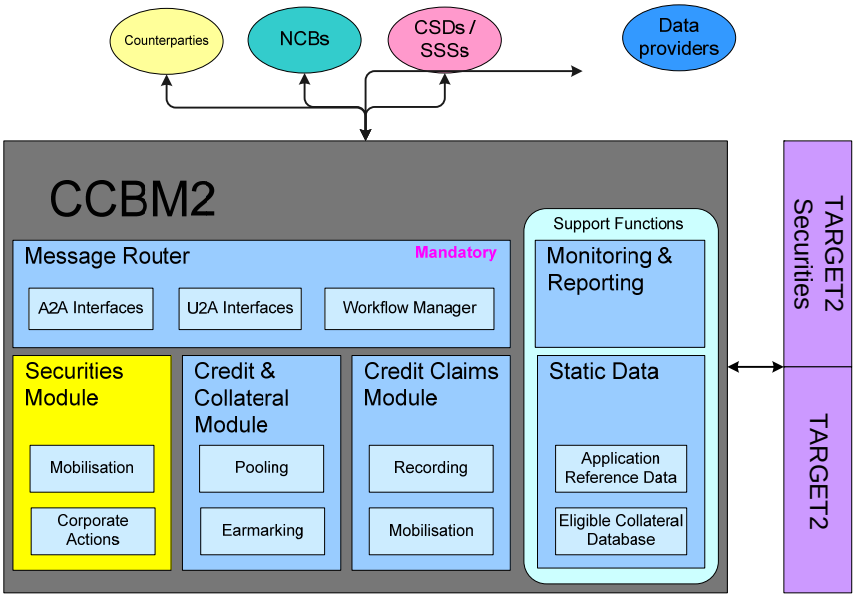
The Securities Module deals with mobilisation and demobilisation of marketable assets (securities) that can be used as collateral in Eurosystem credit operations.
This particular module also handles relevant assets services related to the mobilised securities.

Contents

This chapter contains the following topics:

4.1. Module Presentation

Schematic overview



Optional Module

The Securities Module is an optional module.

Relation to other modules

The Securities Module closely interacts with:

- the Message Router for exchanging messages with the external parties,
- the Credit & Collateral Module (via the Message Router) for feeding the valuation & credit processes,
- the Static Data Support Function for using the Application Reference Data and the Eligible Collateral Database,
- the Monitoring & Reporting Support Function.

The Securities Module does not interact with the Credit Claims Module.

4.2. Generalities

Harmonisation	The Securities Module communicates via the Message Router with all eligible SSSs and counterparties in a similar way, based on SWIFT standards or via a secure internet access. The choice for SWIFT standards is the market solution for removing Giovannini barrier 1, to be implemented no later than March 2011. For the SWIFT interface towards SSSs, CCBM2 will develop communication protocols based on the MT5 category regarding custody, matching and settlement that comply with the technical rules of each SSS of a country whose NCB participates in CCBM2, until full harmonisation among CSDs is reached.
Payments	Payments between the involved parties (for processing of relevant assets services and the cash amount of DvP transactions) are made in Central Bank money.
Data input and consultation	The participating NCBs and their counterparties can consult the data to which they have access and follow the processing of the instructions through via the U2A Interface. This module also offers manual input of securities instructions for both participating NCBs and counterparties.
Valuation	The valuation of the mobilised collateral and the impact on the global position of a counterparty are not included in the scope of the Securities Module, but are managed by the Credit & Collateral Module.

4.3. Mobilisation

Overview

Introduction This section describes the mobilisation of marketable assets.

Contents This section contains the following topics:

4.3.1. Functionalities and flows

Functionalities

This part of the Securities Module manages the functionalities for mobilisation:

- Receiving mobilisation requests,
- Validations,
- Sending instructions to SSSs via the Message Router,
- Processing of acknowledgement message, Matching status message, Settlement status message, Settlement confirmation, etc.,
- Update of the securities accounting records,
- Cancellations.

Flows for processing securities

There are three possible flows for processing securities:

- Domestic and cross-border mobilisation between two participating NCBs and their counterparties,
- Cross-border mobilisation when only the Home Central Bank (HCB) participates in CCBM2,
- Cross-border mobilisation when only the Correspondent Central Bank (CCB) participates in CCBM2.

4.3.2. Receiving requests

Communication methods

All communication with the Securities Module is done transaction by transaction, i.e. no bulk processing.

Pledge & Repo

Each request can be made via two possible transaction types:

- pledge, characterised by:
  - securities being transferred FoP to the counterparties' HCB, or
  - securities being registered as pledged to the NCB according to any other legal arrangement applicable to the SSS (or the NCB's custody accounts).

  Legal ownership remains in the hands of the counterparty;
- repo transactions, characterised by:
  - securities being transferred FoP (with separate settlement of the cash part after settlement of the securities part) or DvP to the HCB of the counterparty,
  - the second leg can be independent from the first leg, or both legs can be managed by one instruction.

  Legal ownership is simultaneously transferred to the HCB.

The value of the securities that need to be mobilised can be obtained through the Credit & Collateral module. For DvP instructions, the cash amount must be taken from the same module.

DvP & FoP

As far as the NCB accepts collateral via repo:

- DvP is only possible in a domestic context in the current state of play,
- FoP is possible in both domestic and cross-border contexts.

Note With the implementation of T2S, DvP can also apply to the cross-border context. Only T2S can implement a cross-border DvP settlement transaction in which a central bank is one of the counterparties (in central bank money).

Counterparty instructions

The counterparty sends the following messages to the CCBM2 platform:

- FoP transactions are instructed by means of MT540 (receive free of payment),
- DvP transactions are instructed by MT541 (receive against payment),
- for cross-border operations: if the HCB does not participate in CCBM2 but the CCB does, the HCB, rather than the counterparty, must send the request to CCBM2.

4.3.3. Validations

Message Router

All requests are directed via the Message Router, which:
- performs basic validation (e.g. authorised SWIFT address), and
- posts the request to the Securities Module, which then performs some checks.

Eligibility checks

As soon as the Securities Module receives the request from the Message Router, it further validates the request by performing eligibility checks.
For example:
- check on asset eligibility,
- check on close links (optional - also possible ex post).

If the counterparty delivers a close link paper, the relevant NCB will be informed.

Additional checks

The Securities Module may need to perform additional checks (e.g. depending on the HCB granting the credit).
All necessary checks are performed using the Application Reference Data within the Static Data, as far as the necessary information is available.

For DvP transactions, the amount of the cash part is checked in the Credit & Collateral Module.

Validation result

When the criteria are not met, the counterparty receives a feedback message (MT548) which uses standardised qualifiers. The transaction becomes void. It is now up to the counterparty to take appropriate action.

In the opposite case, each valid mobilisation request causes CCBM2 to send a securities instruction on a STP basis to the SSS on behalf of the relevant NCB.
In a cross-border operation with the CCB not participating in CCBM2, the instruction is sent to the NCB which is responsible for instructing the SSS.

4.3.4. Interaction with SSSs

Sending instructions

After positive validation of the mobilisation request, the Message Router sends a securities instruction to the SSS on behalf of the relevant NCB. Some SSSs may require a matching instruction by both parties involved in the transaction. Other SSSs use pre-matched instructions.

Processing status

When the SSS has received the instruction from CCBM2, the SSS sends an MT548 on the processing status to CCBM2.
The following cases can occur:

- Accepted & unmatched:
  Each accepted instruction from CCBM2 to settle securities as collateral, can remain unmatched for a while. No immediate further action is required from CCBM2.
  As far as SSSs provide information on similar notifications by the counterparty (e.g. MT578 Settlement acknowledgement), this information can be used by the relevant NCB to find the reason for the non-matching and contact the sender of the request when needed.
- Accepted & matched:
  The transaction is ready for settlement on the due settlement date.
- Rejected:
  A manual intervention by the relevant NCB is necessary to continue or abort the transaction.

Note The counterparty can check the processing status via the Monitoring & Reporting Support Function via the U2A Interface.

Outside CCBM2

If, in a cross-border context:

- the CCB participates in CCBM2 and the HCB does not, CCBM2 sends an MT548 only in case of a rejection.
- the HCB participates in CCBM2 and the CCB does not, the CCB is supposed to send an MT548 to CCBM2 in case of rejection.

Continued on next page

Interaction with SSSs, Continued

Settlement	On the due settlement date, the SSS tries to settle the mobilisation transaction. When the SSS has settled the transaction, the following actions are taken respectively: • the SSS informs CCBM2 through a message (MT544 for FoP and MT545 for DvP), • CCBM2 notifies the counterparty of the settlement, using a copy of the confirmation message, • the securities positions of the concerned counterparty and participating NCB are modified in CCBM2. If a repo was settled on a DvP basis, both cash and securities settlement are managed by the SSS at the same time. If a repo with a separate cash part was used, the cash part can be settled only after the securities part was settled. The cash part is managed by the Credit & Collateral Module. When the SSS settles cash and/or securities operations on a multilateral basis (e.g. the SSS adapts DvP Model 2 and Model 3), CCBM2, if needed, provides reconciliation procedures between the net balances settled and the individual operations.
HCB/CCB outside CCBM2	If the HCB does not participate in CCBM2, a copy of the settlement confirmation is delivered to that NCB by CCBM2. If the CCB does not participate in CCBM2, it will inform CCBM2 about the settlement in a similar way.
Credit & Collateral	The Credit & Collateral Module uses the settlement information to adjust the collateral and credit positions of the counterparty for participating NCBs.

4.3.5. Accounting records

Accounting records	The Securities Module keeps accounting records of the securities mobilised as collateral according to local securities accounting rules. These records are kept with the SSSs and NCBs. In legal terms CCBM2 complies with two distinct concepts. These include, on the one hand, merely recording transactions(storing of information) or, alternatively, making book entries on custody accounts (carried by the NCBs on their books for their counterparties).
Omnibus or segregated accounts with the SSSs	NCBs continue to have their securities accounts with their SSSs as in the current collateral framework. CCBM2 will be mandated to operate these accounts on their behalf. CCBM2 supports both segregated and/or omnibus accounts. In any case, the NCBs retain, to the extent necessary, the operating authority over their securities accounts with their respective SSSs.
Confirmation of settlement	Once a confirmation of settlement is received (MT544 message), the Securities Module updates the corresponding securities accounting records.
CCB and HCB in CCBM2	If, for a cross-border settlement, both the HCB and CCB participate in CCBM2, the Securities Module will update, after the receipt of the confirmation of settlement from the SSS, all accounting records, i.e. from the CCB and HCB.
CCB outside CCBM2	If, for a cross-border settlement, the HCB participates in CCBM2 and the CCB does not, the Securities Module will update, after the receipt of the confirmation of settlement from the CCB, the accounting records of the HCB.
HCB outside CCBM2	If the CCB participates in CCBM2 and the HCB does not, the Securities Module will update, after the receipt of the confirmation of settlement from the SSS, the accounting records of the CCB.

4.3.6. Cancellations

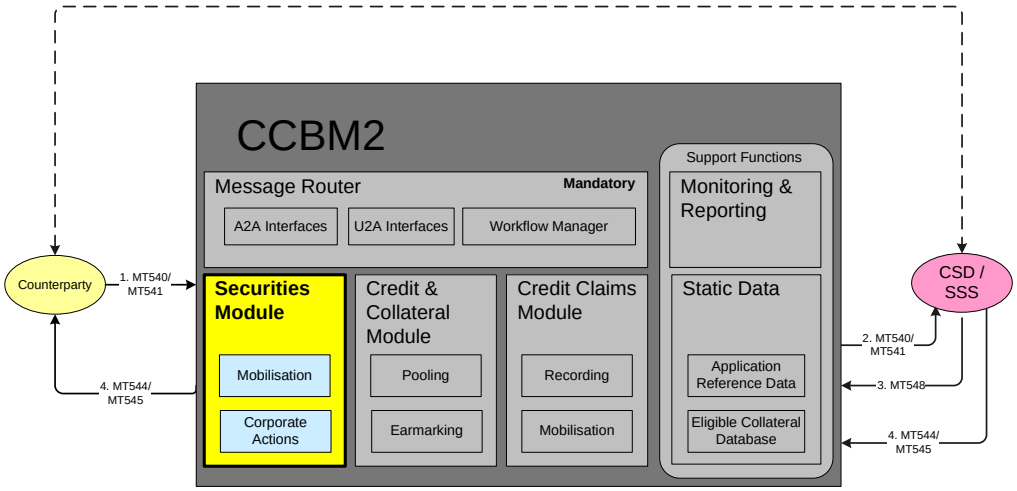
Timing	Cancellations can be performed before or even after matching takes place, depending on the SSS, but before settlement.
Initiators	Cancellations can be initiated by: • the counterparty, according to the rules of the relevant SSS, • the SSS, when the securities or cash cannot be delivered. In this case, the transaction can be carried forward to the next settlement date, • CCBM2, on behalf of the counterparty, in the case of pre-matched instructions. In some cases, however, CCBM2 can decide to ask the counterparty to send a cancellation request to the SSS. In that case, CCBM2 sends a matching instruction when necessary.
Feedback	CCBM2 is informed by the SSS via an MT548, or by the non-participating CCB for a cross-border operation, and adapts the status of the request on its platform without further notification. If a CCBM2 CCB acts on behalf of a non-participating HCB, the HCB is informed of the cancellation.
Carrying forward	If the SSS carries transactions forward to the next settlement date, CCBM2 adapts the history of the collateral request to reflect the modification of the previous settlement date.

4.3.7. Use case 1: Domestic and cross-border mobilisation between two participating NCBs

Process

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic or cross-border context,
- both NCBs (HCB and CCB) participate in CCBM2,
- SWIFT or Web-based communication channels are used (the example shows the use of SWIFTFin messages).



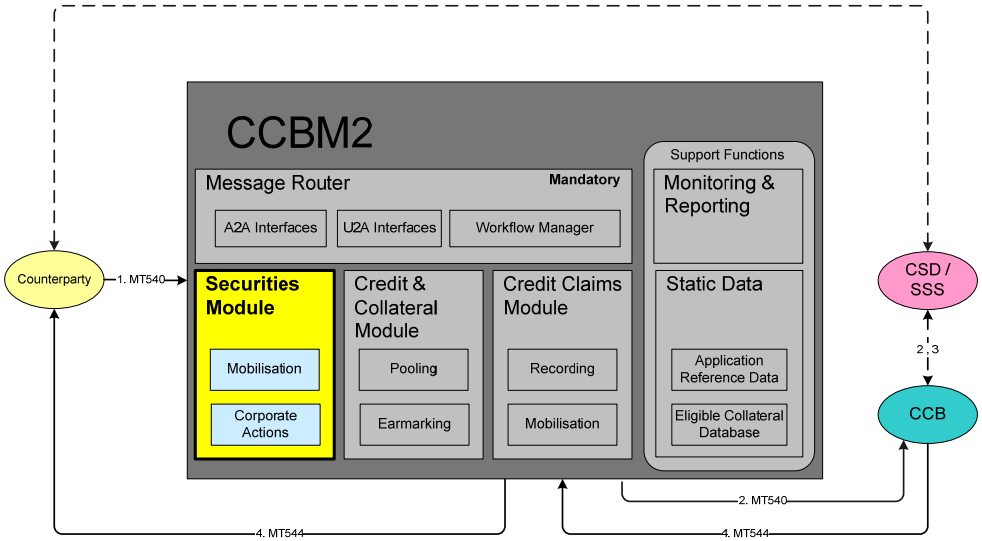
Stage	No.	Description
Mobilisation request	1	The counterparty sends an MT540 (FoP) or MT541 (DvP) to CCBM2.
Validation		The Securities Module performs eligibility checks and additional checks.
Sending instruction	2	CCBM2 sends an MT540/MT541 to SSS.
Matching	3	SSS sends an MT548 to CCBM2 as soon as the instruction is received, and another MT548 when matching occurs afterwards.
Settlement	4	SSS sends an MT544 (FoP) or MT545 (DvP) to CCBM2 to confirm the operation.
		CCBM2 sends an MT544 or MT545 to the counterparty.

4.3.8. Use case 2: Cross-border mobilisation when only the HCB participates in CCBM2

Process

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a cross-border context,
- only the HCB participates in CCBM2,
- SWIFT or Web-based communication channels are used (the example shows the use of SWIFT Fin messages).



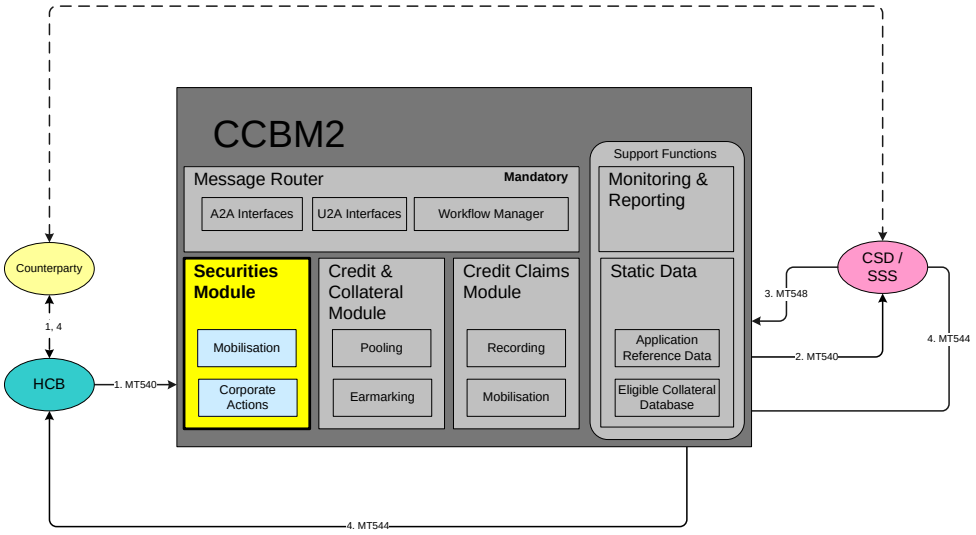
Stage	No.	Description
Mobilisation	1	The counterparty sends an MT540 (FoP) to CCBM2.
Validation		The Securities Module performs eligibility checks and additional checks.
Sending instruction	2	CCBM2 sends an MT540 to the CCB.
		The CCB sends an MT540 to SSS.
Matching	3	The matching flow takes place outside CCBM2 between the CCB and SSS.
Settlement	4	SSS sends a settlement confirmation to the CCB.
		CCB sends an MT544 (FoP) to CCBM2.
		CCBM2 sends an MT544 to the counterparty.

4.3.9. Use case 3: Cross-border mobilisation when only the CCB participates in CCBM2

Process

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a cross-border context,
- only the CCB participates in CCBM2,
- SWIFT or Web-based communication channels are used (the example shows the use of SWIFTFin messages).



Stage	No.	Description
Mobilisation	1	The counterparty sends a mobilisation instruction (FoP) to HCB.
		The HCB sends an MT540 to CCBM2.
Validation		The Securities Module performs eligibility checks and additional checks.
Sending instruction	2	CCBM2 sends an MT540 to SSS.
Matching	3	SSS sends an MT548 to CCBM2 immediately after receiving the instruction, and another MT548 when a matching occurs afterwards.
Settlement	4	SSS sends an MT544 (FoP) to CCBM2.
		CCBM2 sends an MT544 to the HCB.
		The HCB sends a settlement confirmation to the counterparty.

4.4. Demobilisation

Demobilisation/ mobilisation

The process of demobilising securities is very similar to the mobilisation process. However, when both legs of a repo transaction are managed by a single instruction, a separate demobilisation instruction is not necessary.

Check on mobilised securities

In case of a demobilisation of mobilised securities, CCBM2 needs to check whether:

- the position that is referred to exists in the Securities Module,
- the collateral position is sufficient in the Credit & Collateral Module (only for pledge and FoP repo),
- the separate cash part of the second leg of a FoP repo is executed before demobilising the securities.

To perform the check of the collateral position, CCBM2 always consults with T2 for the most recent information on the counterparties' cash position.

4.5. Custody functions

Overview

Introduction This section describes the custody functions of CCBM2 for securities.

Contents This section contains the following topics:

4.5.1. Relevant assets services

Relevant assets services

The Securities Module handles the relevant assets services in the following cases:

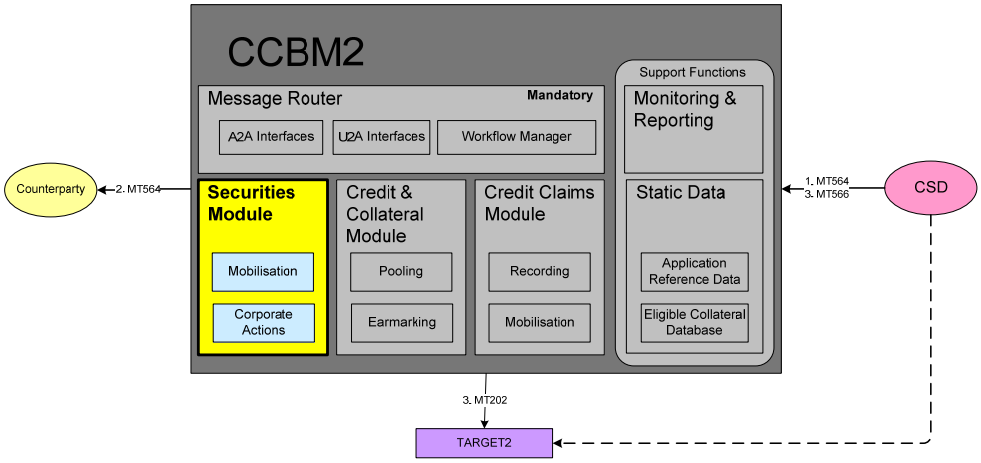
- coupon payments,
- redemptions (partial or full).

CCBM2 can handle several announcements on the same coupon or redemption.

CCBM2 handles relevant asset servicing payments, according to procedures and payment systems used by the various SSSs for this purpose.

CCBM2 participants

When collateral is used in a domestic context, the following process is applied:



Continued on next page

Relevant assets services, Continued

Schematic overview

The process can be described as follows:

Stage	Time	Description
1	D_{ANN}	SSS announces (an update of) a coupon or redemption to CCBM2 some time ahead of the payment date D (via MT564). For each coupon or redemption, several announcements are possible.
2	D-x	CCBM2 reconciles the Static Data and collateral positions with the latest information, if any, it received from the SSS at the end of the x^{th} day before D.
		CCBM2 reports differences to the responsible NCB (including cases where no or not enough information was given by the SSS, or where the information in the Static Data was insufficient). If a difference occurs, it is possible to take corrective action and re-iterate the reconciliation process.
		CCBM2 sends an MT564 to the counterparties where the reconciliation has not revealed any differences and where all the necessary information is present. MT564 contains all data necessary to calculate the coupon or redemption (e.g. interest rate, or nominal amount for that counterparty at the end of D-x or D_{REC} if D_{REC} precedes D-x), as well as the resulting cash amount to pay.
	D-1	The processing of D-x is repeated until D-1 (each time an MT564 is received from the SSS).
	D_{REC}	A number of days (often 1) before the payment date, the record date occurs: the securities positions within SSS and CCBM2 are recorded at the end of the day and will serve as the payment basis.
3	D	SSS makes the payment to the relevant NCB in T2(S) or a local clearing system (sometimes confirmed by an MT566 to that NCB).
		CCBM2 reconciles the obtained payments with the expected payments as administered in CCBM2. Differences are reported to the responsible NCB, which must solve the problem before the processing can continue.
		CCBM2 instructs a transfer of the money from the NCB to the counterparty.

Continued on next page

Relevant assets services, Continued

Non-CCBM2 participant

Some differences apply to the above scheme when either the HCB or CCB decides not to participate in CCBM2:

- Only the HCB participates in CCBM2 (and the CCB does not)
  - Stage 1: CCBM2 receives all information about the coupon or redemption from the CCB instead of the SSS.
  - Stage 3: the CCB, instead of CCBM2, receives the money from SSS and transfers it to the HCB.
- Only the CCB participates in CCBM2 (and the HCB does not)
  - Stage 3: CCBM2 instructs the transfer of money from the CCB to the HCB (via MT202 to TARGET2). The HCB then pays the counterparty.

4.5.2. Statement of holdings

Reconciliation	Each day, reconciliation takes place between the data on securities positions obtained from the SSS (or the CCB outside CCBM2) and the own data managed in CCBM2. A report is produced if there are differences.
Statement of holdings	A daily statement of holdings is available for all counterparties with outstanding positions (as far as the HCB is a participant in CCBM2; otherwise, that HCB receives the information from CCBM2). This message also contains the collateral value of every position.

4.5.3. Tax reporting

Principle	CCBM2 stores the incoming SWIFT messages concerning tax reporting formalities from the SSSs and CCBs outside CCBM2. This allows the relevant NCBs to follow up on the incoming messages.
Functionality	The U2A Interface provides a function for visualising information contained in the stored messages related to tax issues. The data will be accessible online for a certain period of time. After this period, the data will be archived for a number of years, pursuant to the national legal requirements.

5. Credit Claims Module

Overview

Introduction

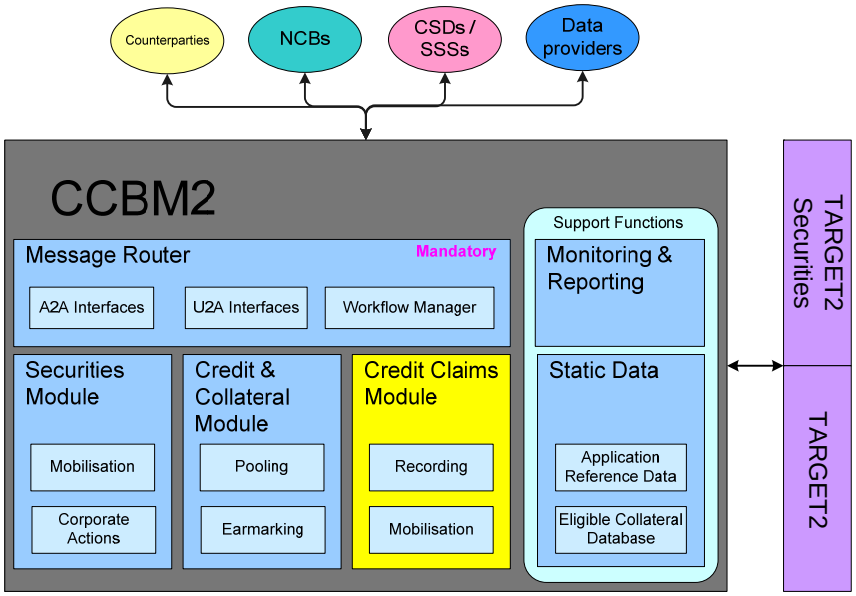
The Credit Claims Module deals with mobilisation and demobilisation of non-marketable assets (credit claims and RMBDs) that can be used as collateral in Eurosystem credit operations.

Contents

This chapter contains the following topics:

5.1. Module Presentation

Schematic overview



Optional Module

The Credit Claims Module is an optional module.

Relation to other modules

The Credit Claims Module closely interacts with:

- the Message Router for exchanging messages with the external parties,
- the Credit & Collateral Module for feeding the valuation and credit processes,
- the Static Data Support Function for using the Eligible Collateral Database,
- the Monitoring and Reporting Support Function.

The Credit Claims Module does not interact with the Securities Module.

5.2. Generalities

Mobilisation methods

The Credit Claims Module performs acceptance of non-marketable assets as collateral on both a domestic and cross-border basis.

Counterparties can instruct to (de)mobilise credit claims as collateral:
- credit claim per credit claim; or
- through a bulk file containing several credit claims.

Note The Credit Claims Module also offers manual input of credit claims through the U2A Interface as a full alternative.

RMBDs are used in physical form and are completed by the NCB on the basis of an instruction from the issuer. The information is entered manually in CCBM2 via the U2A Interface.

Legal procedures of mobilisation

Credit claims can be governed by different national legal regimes, e.g. that of the:
- credit claim agreement,
- counterparty,
- debtor (or guarantor),
- creditor.

The Eurosystem accepts a maximum of two different legal regimes when credit claims are mobilised as collateral.

Notification procedures

CCBM2 supports the two main legal procedures for notifying the debtor of credit claims:
- Register-like solutions: recording and mobilising a credit claim in CCBM2 legally links the counterparty (a central credit register is currently used by 8 NCBs).
- According to the legal obligations in some countries, notifying the debtor ex ante or ex post is necessary when a credit claim is mobilised as collateral.

Data input and consultation

Participating NCBs and their counterparties can consult the data to which they have access and follow up the processing of the instructions using the Monitoring & Reporting Support Function of the U2A Interface.

No cash flows

CCBM2 will not process cash flows for credit claims.

5.3. Mobilisation

Overview

Introduction This section describes the processing of credit claims.

Contents This section contains the following topics:

5.3.1. Introduction

Functionalities

The Credit Claims Module manages the different steps in the mobilisation process:

- receipt of credit claims data in CCBM2,
- validations,
- mobilisation of credit claims as collateral.

Processing credit claims

Credit claims can be processed in three ways:

- Domestic and cross-border mobilisation between two participating NCBs and their counterparties,
- Cross-border mobilisation with only the Home Central Bank (HCB) participating in CCBM2,
- Cross-border mobilisation with only the Correspondent Central Bank (CCB) participating in CCBM2.

Important If the Correspondent Central Bank (CCB) or Home Central Bank (HCB) does not participate in CCBM2, the application is fully compatible with the current CCBM procedures.

Pledge and assignment

CCBM2 supports both the legal techniques of pledge and assignment of credit claims.

5.3.2. Receipt of credit claims data

Methods for receiving credit claims data

Credit claims data can be received in the Credit Claims Module in two different ways:

- one message or instruction per credit claim,
- via a bulk file.
  The counterparty submits a number of credit claims using a file. This bulk file contains all credit claims to be mobilised as collateral.

Note Both the A2A and the U2A Interfaces are valid alternatives for mobilising credit claims.

Credit claims data

The counterparty has to provide all necessary data for:

- checks (e.g. eligibility checks, legal checks and close link checks),
- the mobilisation of credit claims as collateral,
- valuation.

Maintenance of credit claims data

The counterparty has to report changes in the static data of a credit claim, e.g. decrease of nominal amount due to a reimbursement. This can be done via the two above-mentioned methods as if the claims are newly reported.

Documents

Depending on the country where the credit claim is issued, original contracts should be sent to the NCB for specific national legal requirements.

5.3.3. Validations

Validations

Validation is done on each new or updated credit claim independent from the way the credit claims data is received.

Eligibility checks

Before the credit claim becomes eligible, CCBM2 registers the positive outcome of several eligibility checks, depending on the country where the credit claim is issued:

Check	Country specific
Type of debtor / guarantor: non-financial corporations, public sector entities, international or supranational institutions.	No
Minimum size of domestic credit claims	Yes (until end 2011)
Minimum size of cross-border credit claims	No
Location of debtor/guarantor (euro area)	No
Credit Quality of debtor or guarantor in relation to the European Credit Assessment Framework (ECAF). At least single A or PD < 0.10%. Use of four credit assessment sources: • External Credit Assessment Institutions (ECAI); e.g. Moody's, S&P, • NCB's internal credit assessment system (ICAS); e.g. FR, DE, • Internal ratings-based system (IRB) with supervisor's validation, • Rating tool of third-party providers (RT). Note: For unrated Public Sector Entities (PSE), there is an implicit credit assessment for debtor or guarantors. This credit assessment is derived from the ECAI credit assessment of the central government of the country where the debtor or guarantor is located.	No
Close link (see Static Data)	No
Number of different laws not exceeding two, for: • counterparty, • creditor, • debtor/guarantor, • credit claim agreement.	No

Continued on next page

Validations, Continued

Additional checks	Depending on the law governing the credit claim agreement, additional checks, outside of CCBM2, may be necessary to make the credit claim eligible, such as: • (Physical) verification of the existence of the credit claim, • Debtor notification (ex ante or ex post) or registration, • Receipt of pledge agreement, • No restrictions regarding mobilisation or realisation, • No restrictions relating to banking secrecy regarding debtor information. NCBs will be able to enter the results of these checks manually in CCBM2 via the U2A Interface.
Successful validations	When validation is successful, the Credit Claims Module proceeds automatically to the mobilisation of the credit claim as collateral.
Unsuccessful validations	When validation is unsuccessful, the counterparty is informed. Via the A2A Interface: • one message per credit claim (SWIFT MT598); or • a bulk file containing the unsuccessful credit claims. This feedback is accompanied by a reason code. The complete (de)mobilisation process can be monitored also via the U2A Interface.

5.3.4. Mobilisation

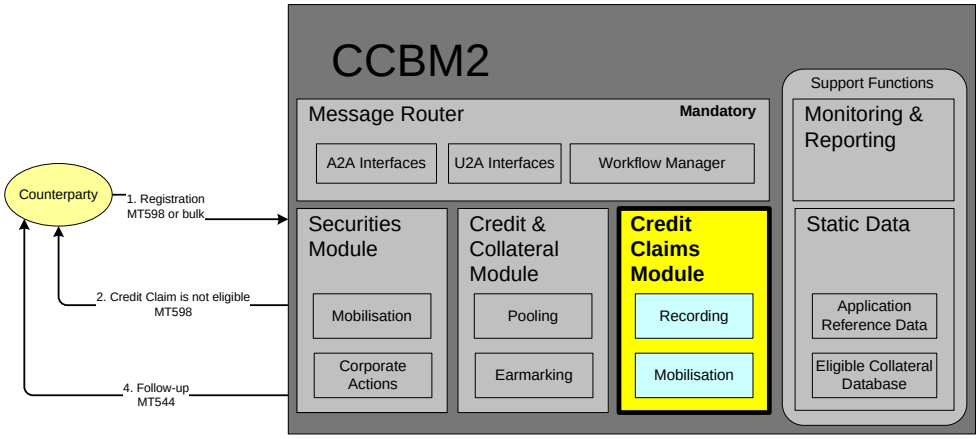
New credit claims	The process of mobilising a new credit claim is triggered automatically after it is successfully validated. The process is independent of the way the credit claim data is received.
Updated credit claim	Updated claims are already mobilised; however, at this stage the changes are taken in to account.
Feedback to the counterparty	If an individual Swift message MT598 was used, the successful mobilisation will be confirmed with a MT544; if something went wrong in the mobilisation stage, this will be notified to the counterparty using a SWIFT MT548 message. If the U2A Interface or a bulk file was used, the counterparty can monitor the successful mobilisation in the U2A Interface.
Accounting records	Each time a mobilisation is successfully processed, the Credit Claims Module updates the corresponding accounting records.
Collateral Pool	Each time a mobilisation is successfully processed, the Credit Claims Module triggers a feedback to the Credit & Collateral Module to add it to the pool.
CCB and HCB in CCBM2	If, for a cross-border settlement, both the HCB and CCB participate in CCBM2, the Credit Claims Module will update all accounting records, i.e. from the CCB and HCB.
CCB outside CCBM2	If, for a cross-border settlement, the HCB participates in CCBM2 and the CCB does not, the Credit Claims Module will update the HCB's accounting records.
HCB outside CCBM2	If the CCB participates in CCBM2 and the HCB does not, the Credit Claims Module will update, after receipt of the settlement confirmation from the HCB, the CCB's accounting records.

5.3.5. Use Case 1: Domestic and cross-border mobilisation between two participating NCBs

Illustration

The image below describes the mobilisation flow of a credit claim when:

- collateral is used in a domestic or cross-border context,
- both NCBs (HCB and CCB) participate in CCBM2,
- SWIFT or Web-based communication channels are used (the example illustrates the use of SWIFTFin messages).



Continued on next page

Use Case 1: Domestic and cross-border mobilisation between two participating NCBs, Continued

Credit claim flow

Four distinct major phases can be identified when describing the flow of a credit claim mobilisation.

Phase	No.	Description
Data recording	1	The credit claim (or changes) is sent to the Credit Claims Module and the CCB by: • the counterparty who sends an MT598 (individual recording), • a counterparty who reports and mobilises a list of credit claims (bulk recording). Result: All static data of the credit claims are stored in the Eligible Collateral Database
Validations	2	CCBM2 validates the eligibility and checks whether the additional legal requirements were successfully conducted.
		If the credit claim is not valid for mobilisation, CCBM2 sends an MT598 to the counterparty.
		In the case of a bulk procedure, the counterparty is informed on the credit claims which are not eligible.
Mobilisation	3	The mobilisation is triggered automatically.
Follow-up	4	The Credit Claims Module sends a message via the Message Router to the Credit & Collateral Module for increasing the collateral pool of the counterparty.
		In the case of the MT598, CCBM2 sends an MT544 to the counterparty to acknowledge the mobilisation.

5.3.6. Use Case 2: Cross-border mobilisation when only the HCB participates in CCBM2

Situation

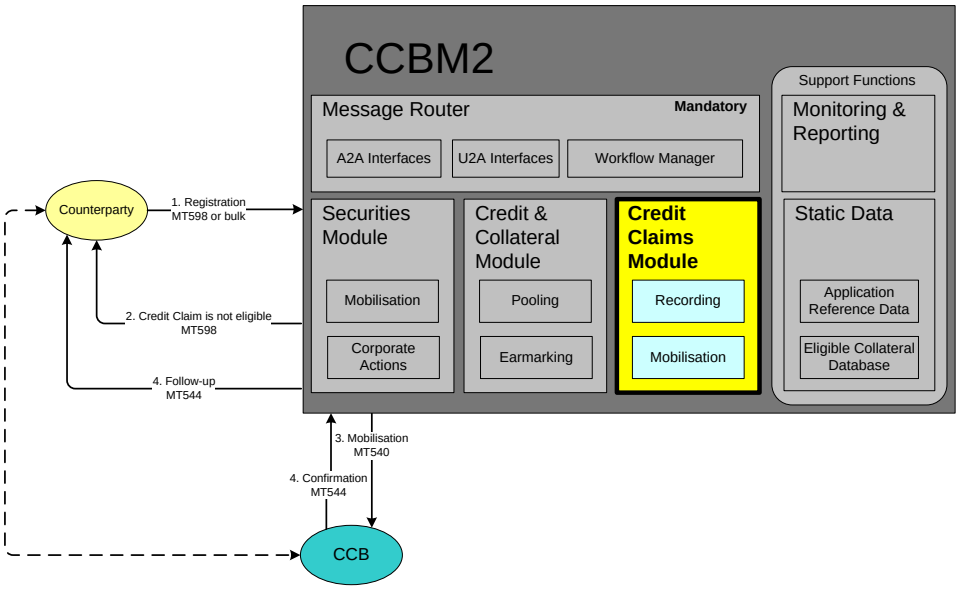
The image below describes the mobilisation flow of a credit claim when:
- collateral is used in a cross-border context,
- only the HCB participates in CCBM2 (the CCB has its own collateral management system),
- SWIFT or Web-based communication channels are used (the example below shows the use of SWIFTFin messages).

Role of the CCB

When the Correspondent Central Bank (CCB) does not participate in CCBM2, the counterparty or its HCB has to send to CCBM2 and to the CCB:
- all static data on the credit claim,
- original contracts for specific national legal requirements.

Illustration

The image below describes the mobilisation flow of a credit claim when only the Home Central Bank (HCB) participates in CCBM2:



Continued on next page

Use Case 2: Cross-border mobilisation when only the HCB participates in CCBM2, Continued

Process

Four distinct major phases can be identified.

Phase	No.	Description
Recording	1	The credit claim (or changes) is sent to Credit Claims Module and the CCB by: • the counterparty who sends an MT598 (individual recording), • a counterparty who reports and mobilises a list of credit claims (bulk recording). Result: All static data of the credit claims are stored in the Eligible Collateral Database.
Validations	2	CCBM2 performs validations on the messages.
		If the credit claim message fails to pass the validations, CCBM2 sends an MT598 to the counterparty to indicate it.
		In the case of a bulk procedure, the counterparty is informed of the credit claims which are not successfully validated.
		Optional: CCBM2 can forward the credit claims data to the CCB using the MT598 or bulk file (for the eligibility checks and legal requirements check to be performed by the CCB).
Mobilisation	3	CCBM2 sends an MT540 mobilisation request per credit claim to the CCB.
Follow-up	4	The CCB checks the eligibility of the credit claim and sends a confirmation message MT544 to CCBM2 if the credit claim is eligible.
		The Credit Claims Module sends a message via the Message Router to the Credit & Collateral Module for increasing the collateral pool of the counterparty.
		In the case of the MT598, CCBM2 sends an MT544 to the counterparty to acknowledge the mobilisation.

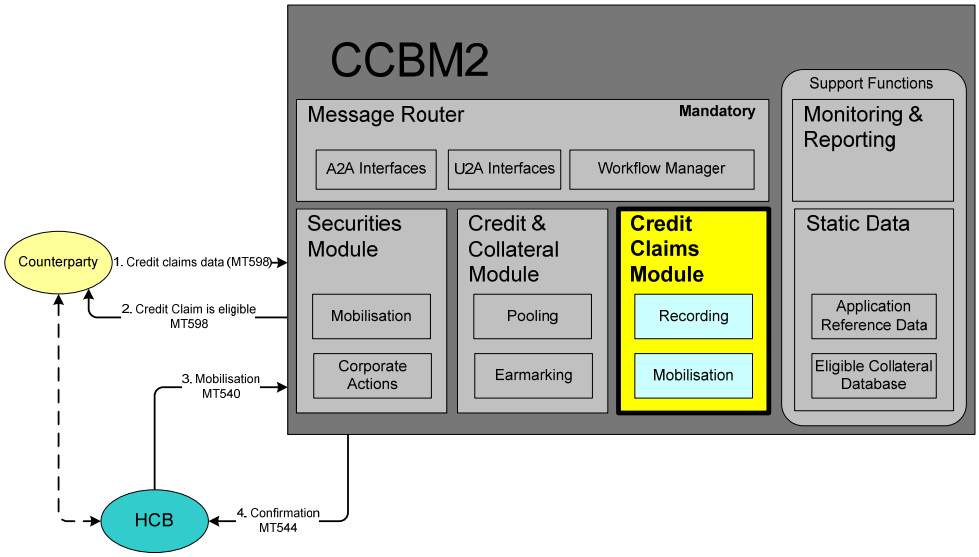
5.3.7. Use Case 3: Cross-border mobilisation when only the CCB participates in CCBM2

Situation

The image below describes the mobilisation flow of a credit claim when:

- collateral is used in a cross-border context,
- the CCB participates in CCBM2 (the HCB has its own collateral management system),
- SWIFT or Web-based communication channels are used (the example shows the use of SWIFTFin messages).

Illustration



Continued on next page

Use Case 3: Cross-border mobilisation when only the CCB participates in CCBM2, Continued

Process

Four distinct major phases can be identified.

Phase	No.	Description
Recording	1	The counterparty sends an MT598 to CCBM2. Result: All static data of the credit claims are stored in the Eligible Collateral Database.
Validations	2	CCBM2 validates the eligibility and checks whether the additional legal requirements were successfully conducted.
		If the credit claim is not valid for mobilisation, CCBM2 sends an MT598 to the counterparty.
Mobilisation	3	The HCB of the counterparty sends a mobilisation message (MT540) to CCBM2.
		CCBM2 checks whether the requested credit claim is eligible.
Follow-up	4	If eligible: • the credit claim is added to the HCB's position, • a confirmation MT544 is be sent to the HCB. If not eligible, CCBM2 will send a rejection message MT548 to the HCB.

5.4. Demobilisation

Methods for demobilisation

The counterparty can ask at any time for a demobilisation of a credit claim.

The demobilisation can be instructed:
- credit claim per credit claim,
- in a bulk file.

Note Both the A2A and the U2A Interfaces are valid alternatives for demobilising credit claims.

Check on pledged credit claims

In the case of a demobilisation of pledged credit claims, checks need to determine whether:
- the position that is referred to actually exists in the Credit Claims Module, and
- the global collateral position is sufficient in the Credit & Collateral Module.

To perform the check of the collateral position, CCBM2 always consults TARGET2 for the most recent information on the counterparty's cash position.

Feedback to the counterparty

If an individual Swift message MT542 was used, the successful demobilisation will be confirmed with an MT546; if something went wrong in the demobilisation stage, this will be notified to the counterparty using an MT548 message.

If the U2A Interface or a bulk file was used, the counterparty can monitor the successful demobilisation via the U2A Interface.

Accounting records

Each time a demobilisation is successfully processed, the Credit Claims Module updates the corresponding accounting records.

Collateral Pool

Each time a demobilisation is successfully processed, the Credit Claims Module triggers a feedback to the Credit & Collateral Module to remove it from the pool.

6. Static Data

Overview

Introduction

This chapter describes the general functionalities of the Static Data Support Function.
This particular function provides the necessary tools for the management of two main data groups, namely:

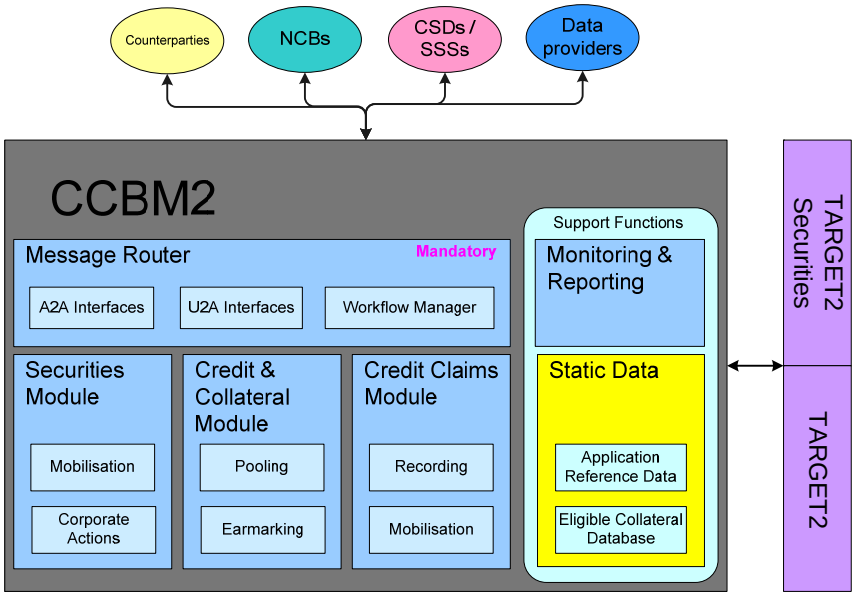
- Application Reference Data,
- Eligible Collateral Database, which contains data on:
  - Marketable assets,
  - Non-marketable assets.

Contents

This chapter contains the following topics:

6.1. Presentation

Schematic overview



Automatic functionality

The Static Data Support Function is not mandatory as such, but is embedded in the CCBM2 functionality and will automatically be implemented when a CCBM2 module is chosen.
It serves as a central repository of referential data available to the CCBM2 modules.

6.2. Generalities

Data management	Static data is managed and owned by the NCBs participating in CCBM2. As of today, most of the securities information is held in common and managed centrally in the EADB. This common information will be mirrored in CCBM2. The public data of EADB can, as today, still be consulted via the ECB website.
Data consultation	Participating NCBs and their counterparties can consult the data to which they have access and follow the status of the instructions via the U2A Interface.
Data management	To manage all reference data, five generic functions are available: • Consultation of lists and detail data, • Creation of a new record, • Update of a record , • Deletion of a record, • Validation of the updates. Note • Historic data with validity period are stored. • Automatic data flows are available through generic interfaces for high volume static data.
Validation of the updates	The four-eyes principle is applied to key information. The Static Data Support Function maintains a list of data that need validation by another user before creation, modification or deletion to become effective. This list of information needing validation by another user can eventually be different for each participating NCB.

6.3. Application reference data

Overview

Introduction

The Static Data Support Function allows the management of the different reference data used throughout the application. This section explains how reference data is maintained in the Static Data Support Function.

Contents

This section contains the following topics:

6.3.1. Reference data on actors

Different Actors

The Static Data Support Function contains lists of all:

- National Central Banks of the ESCB,
- Counterparties eligible for monetary policy operations
- Third parties (debtors and issuers of non-marketable assets, guarantors of marketable assets),
- Rating Agencies,
- Acceptable markets (regulated or non-regulated markets accepted by the ESCB),
- (International) Central Securities Depositories (CSDs) and Securities Settlement Systems (SSSs) fulfilling the ECB's minimum standards.

Note
- Part of the data on counterparties is imported from the MPEC database managed by the ECB. An incoming interface is available to load these data.
- The unique identification of the third parties among the Euro Area requires special attention.

Common general data

For each of the different actors, a set of general data needs to be stored, namely:

- identification codes:
  - VAT Nr,
  - BIC code/ MFI ID code,
  - Other identification codes.
- denomination,
- location information,
- contact information,
- NCB responsible for maintaining the data on the actor.

Continued on next page

Reference data on actors, Continued

Specific data

In addition to the general data, the following specific data needs to be stored on each party. The list of attributes given below is not exhaustive.

Actor	Specific data to be stored
NCBs	• Collateral Management System (Pooling / Earmarking / Both) • Mobilisation technique (Pledge / Repo / Both) • Minimum nominal amount for credit claims • Lists of used CCBM2 modules
Counter-parties	• Main credit assessment source for credit claims (ECAI, ICAS, IRB, RT) • Alternate credit assessment sources + business case on which the request for using an alternate credit assessment source is based • Credit assessment sources submission date • Certification information (e.g. last self-certification date for credit claims) • Qualified Intermediary info • Status • MFI ID code
Third parties	• Entity type (corporate, PSE, central government, credit institution, etc.) • Identification of the main activity (PSE, NACE, etc.) • Public Sector Entity Class (PSE1 to PSE3) • Long term rating + source
Rating Agencies	• Mapping of their ratings with the harmonised rating scale
Acceptable Markets	(only recurrent general data)
SSSs	• Accepted links with other SSSs: Eligible links between SSSs, usable for the cross-border transfer of marketable assets • Participation in T2S

Continued on next page

Reference data on actors, Continued

Check on close links

CCBM2 offers functionalities for checking the close links between counterparties and the issuers / guarantors / debtors of marketable and non-marketable assets.
Counterparties are not allowed to provide an NCB with:
- underlying assets that were issued or guaranteed by the counterparty itself,
- underlying assets of which the issuer, debtor or guarantor is an institution with which the counterparty has a close link.

CCBM2 remains flexible with respect to changes in this framework.

Each NCB is responsible for maintaining the close links information on its counterparties. The close links can be checked:
- in real time before accepting an asset as collateral (ex ante check),
- on a regular basis for the assets already used as collateral (ex post check).

Note — The CCBM2 function of checking for close links is a complementary function relating to the fulfilment by the counterparty of its obligation not to submit collateral securities bearing close links.

Important — Close links data can be stored in CCBM2. The close links database contains a history of the relations between:
- counterparties identified by their BIC code, and
- the linked third parties identified by their unique identification number.

The final outcome depends on future decisions in this area.

6.3.2. Administration data

Introduction

Administration data used throughout the application is maintained in the Static Data Support Function. This data has different lists of codes and their description, parameters, etc.

Calendar

A reference calendar contains:
- the legal holidays in the different countries of the Eurosystem,
- the tender operations calendar,
- the TARGET2 calendar,
- etc.

Fees

The Static Data Support Function provides the information required for calculating the fees for billing.

Payment paths

The lists of the different cash and securities accounts of the counterparties and NCBs used for collateral operations are maintained in CCBM2.
These accounts are used for:
- mobilisation / demobilisation securities,
- paying coupons and redemptions,
- executing credit operations,
- etc.

Exchange rates

The Static Data Support Function offers the possibility to maintain exchange rates between:
- the Euro and other currencies,
- the Euro and the legacy currencies.

An open interface allows the import of daily exchange rates from an external data provider.

Continued on next page

Administration data, Continued

Application Parameters

General system parameters, possibly with a different value per participating Central Bank, are managed in the Static Data Support Function. The solution offered makes it easy to create new parameters.

Examples of such parameters are:
- The trigger point for margin calls,
- The threshold for price variation before raising a warning,
- The initial margin, the threshold for updating the credit opening in TARGET2,
- The business hours of each NCB.

Concentration Limits

The parameters allowing the Credit & Collateral Module for checking the concentration limits are maintained in the Static Data Support Function. Concentration limits should be applicable at the level of individual counterparties, limiting the use of certain groups of assets as collateral. For example:
- Limits on issuers / issues,
- Limits on asset types.

CCBM2 allows the parameters to be updated flexibly.

General reference tables

The Static Data Support Function contains different general reference tables:
- Country ISO Codes,
- Currency ISO Codes,
- External pool types (type of amount of collateral held and valued outside the CCBM2 system),
- Credit freezing type,
- Interest basis (30/360, ACT/360, ACT/ACT),
- Asset type (bond, medium-term note, credit claim, etc.) + concentration limit per asset type,
- Coupon type (zero, variable, fixed, inverse floater),
- Coupon frequency (monthly, quarterly, etc.),
- Third-party type (central bank, central government, corporate, credit institution, etc.),
- Liquidity class of marketable asset (1 to 4),
- Quotation frequency (daily, weekly, etc.),
- Asset Status,
- Governing law type for credit claims (counterparty, debtor, creditor, etc.),
- Reimbursement type (at maturity, partial redemption, pool factor),
- etc.

6.3.3. Authorisation and auditing

User Authorisations	All information stored in CCBM2 is subject to access right limitations when users request an insert, update, delete or consultation.
Audit trail	Much of the information stored in the CCBM2 application is sensitive. All changes (creation, update, deletion) to this type of information are tracked with a timestamp. The Static Data Support Function makes it possible to maintain a list of information for auditing purposes.

6.4. Marketable assets

Overview

Introduction

The Static Data Support Function allows the management of all information related to the marketable assets that can be used as collateral in Eurosystem liquidity providing operations.

Contents

This section contains the following topics:

6.4.1. Characteristics of the marketable assets

Static data synchronised with EADB

The following core data are maintained for the debt instruments and are synchronised with the ECB's Eligible Assets Database (EADB):

- ISIN code,
- Long/short-term rating + source
- Country of location / registration,
- Coupon structure (frequency, type, rate),
- Currency of denomination,
- Date and Time of entry,
- Link to guarantor and/or issuer,
- Identification of Sender,
- Issuance date,
- Liquidity class (1 to 4),
- UCITS compliant (true / false),
- Maturity date,
- Outstanding Nominal Value,
- Price quotation type (Unit price, % of nominal value, yield, etc.),
- Link to reference market,
- Quotation frequency,
- Asset Status ((hypothetical, eligible, matured, deleted) + comments,
- Valuation haircut ECB/Add-on to haircut,
- Harmonised rating scale level,

If additional fields become necessary or existing ones need to be amended, this can be easily incorporated in to CCBM2.

Static data not synchronised with EADB

The following static data is not synchronised with EADB but needs to be maintained, mainly for theoretical valuation reasons:

- Asset Name,
- Acknowledgement flag (true / false),
- Interest basis (30/360, ACT/360, ACT/ACT),
- Original nominal value,
- Reference index for coupon calculation,
- Spread to reference index,
- Number of spot days,
- ABS data:
  - Clean up call value,
  - CPR rate,
  - Series of flags: Callable, Still Callable, Putable, Sinkable, Perpetual, Soft Call, RTG Sensitive, Reverse convertible, Fix to float, Float to fix
- Pool factor,
- Inflation index rate,
- Interest rate
- Coupon payment dates.

6.4.2. Synchronisation with EADB

Introductory remark

The description below of the mechanism for synchronisation with EADB is based on the current state of play. If this process is updated, CCBM2 will comply with the new version of the process.
For participating NCBs, CCBM2 optionally offers a tool for reporting eligible assets to the ECB's EADB.

Process

The Eligible Assets part of the ESCB internal data exchange system is processed daily in three stages:

Stage		Description
1	(ECB) acquisition	An NCB sends a request to the ECB to either: • create or update an asset, • delete an asset.
2	(Acquisition) acknowledgement	The ECB sends an acknowledgement to the sending NCB.
3	(ECB) dissemination	The ECB disseminates to all NCBs an updated list of the eligible assets, containing: • all matured assets; • all deleted assets; • all new or updated assets; • all reassigned assets (change of sender). For participating NCBs, CCBM2 takes on board the list from the ECB.

Monthly list

Each month, the ECB disseminates a fully updated list of the current assets, consisting of three separate files:
- one containing only eligible assets,
- one containing only ineligible assets,
- one containing only potentially eligible assets.

6.4.3. Elements for marketable assets pricing

Collateral pricing

The eligible marketable assets used as collateral need to be priced for valuation reasons.

Generic interfaces

The Static Data Support Function offers generic interfaces for loading and storing:
- market prices from different price providers (WM, Bloomberg, etc.),
- pool factors,
- inflation indexes.

Note The valuation itself is executed in the Credit & Collateral Module.

Pool factor

The valuation of some assets depends on the pool factor: the outstanding principal amount divided by the original principal amount. The result is expressed as a decimal.

Confidence control

To avoid loading incorrect data, a confidence control will be performed based on:
- the variation percentage of each new price,
- the pool factor,
- the inflation index.

Asset price

The value of an eligible marketable asset is calculated including accrued interests and on the basis of:
- the most representative price on the business day preceding the valuation date,
- the last trading price, when no representative price is available on the business day preceding the valuation date,
- a theoretical price:
  - when there is no market reference price available,
  - when the obtained reference price is older than five days or has not moved for at least five days.

For each eligible marketable asset, the Eurosystem defines the most representative price source to be used for calculating the market value. It may also define a ranking of secondary price sources in case the primary price source is not suitable. Market prices are uploaded automatically into the system if available. Quality checks can be defined that send warning messages to the responsible unit within the Eurosystem. This responsible unit may always overwrite manually the prices in the system.

Continued on next page

Elements for marketable assets pricing, Continued

Payments schedules

Payment schedules for the coupons and redemptions of marketable assets are maintained in CCBM2, derived from the static data of the assets.

Price Source Priority

A priority must be defined between the different price sources and price types. To reach a level playing field for counterparties, CCBM2 applies the same valuation to a given asset, whichever NCB grants the credit.

Note If no valid market price can be obtained, a theoretical valuation process is initiated.

Valuation hubs

For marketable assets, the theoretical valuation framework currently relies in particular on two valuation hubs, operated by:

- the Deutsche Bundesbank for assets other than asset-backed securities ("non-ABS"), and
- the Banque de France for asset-backed securities ("ABS").

Note CCBM2 offers the functionalities to interface with these valuation hubs, based on the ECB's specified standards (EXDI). For other theoretical pricing sources (in-house pricing models of some NCBs or external service providers), a generic interface is present.

Theoretical price calculation

If no valid market price can be obtained, the theoretical valuation process contains three consecutive steps, namely:

Stage		Description
1	Price "cleansing"	CCBM2: • identifies the assets that need to be priced theoretically because of the lack of a reliable market price ("price staleness check"), and • initiates a timely theoretical valuation.
2	Demand for theoretical pricing	According to directions given by the responsible NCB, the list of identified assets is sent to the appropriate valuation hub or another theoretical price source by means of the transfer method specified by the ECB (EXDI).
3	Theoretical Price Upload	Theoretical prices calculated by the valuation hubs or other sources of theoretical valuation: • are loaded in CCBM2, • are checked for consistency. (A warning appears if the daily, weekly or monthly price variation is higher than a percentage given in system parameters).

Continued on next page

Elements for marketable assets pricing, Continued

ABS	Static ABS data need to be sent to the valuation hub before the demand for theoretical pricing.

6.4.4. Establishment of high credit standards

Purpose	The Static Data Support Function allows control of the high credit standards for marketable assets according to the set of criteria described in the General Documentation, namely: • ECAI credit assessment, • Euro area public sector issuers or guarantors, • Euro area non-financial corporate issuers or guarantors.
ECAI credit assessment	The available ECAI ratings of the marketable assets, for the reporting of which participating NCBs are responsible, are stored in CCBM2: • A generic interface permits loading ECAI rating information from external sources, • Any update in the first best rating triggers an eligibility check of the concerned asset. Changes in the eligibility of assets are synchronised with EADB.
Public sector issuers or guarantors	The credit assessment of euro area central governments are stored in the Static Data Support Function. Any update in the first best rating triggers an eligibility check of all the assets whose implicit credit assessment is derived from this rating, for as long as a CCBM2-participating NCB is responsible for reporting these assets. Changes in the eligibility of these assets are then synchronised with EADB. A synchronisation will only take place if the relevant NCB has chosen the optional reporting functionality.
Non-financial corporate issuers or guarantors	If the high credit standards for marketable assets issued / guaranteed by non-financial corporations located in the euro area cannot be established on the basis of an ECAI credit assessment, the ECAF rules for credit claims apply. The Static Data Support Function allows for the recording of the information required to check these assets' eligibility: probability of default attributed by the counterparties IRB, NCBs' ICAS, RT. Changes in eligibility based on the ECAF rules for credit claims are not synchronised with EADB.

6.5. Non-marketable assets

Overview

Introduction

The Static Data Support Function makes it possible to manage all information related to the two types of non-marketable assets that can be used as collateral in Eurosystem liquidity providing operations: credit claims and non-marketable Retail Mortgage Backed Debt instruments (RMBDs).

Contents

This section contains the following topics:

6.5.1. Characteristics of the credit claims

Purpose

The Static Data Support Function stores all static data of credit claims.

Data to be stored

The following data on credit claims could be stored:

- Asset Identification code (Credit Claim ID),
- Type of credit claim (e.g. leasing claims, factoring claims),
- Status,
- Issuance date,
- Maturity date,
- Currency (only EUR allowed at this time),
- Loan agreement language,
- Links with counterparty, guarantor, debtor,
- Redemption schedule,
- Laws governing the credit,
- Credit assessment source used by the counterparty for the eligibility of the credit claim,
- Probability of default, rating or PSE type, depending on the credit assessment source,
- Harmonised Rating Scale level,
- Interest rate data: type, value, periodicity, interest formula,
- Nominal amount at issuance,
- Outstanding amount,
- Theoretical price,
- Haircut calculated based on the residual maturity, interest rate type and valuation type (outstanding, theoretical),
- Debtor's name,
- Debtor's address (or tax code),
- Debtor class/sector,
- Debtor residence,
- Type of non-marketable asset (e.g. credit claim, RMBD),
- Coupon type (fix, floating, zero coupon).

Note The final harmonised set of static data needs to be defined, taking into account the need to identify the credit claim, national legal requirements and availability. Some data might be mandatory, and other data might be country-specific.

6.5.2. Elements for credit claims pricing

Methods of pricing

The collateral value is calculated in the Credit & Collateral Module. The Static Data Support Function provides the relevant data, including prices, for the Credit & Collateral Module.

CCBM2 supports two methods for pricing credit claims:
- the theoretical pricing,
- the valuation based on the outstanding amount.

The relevant prices are stored in the Static Data area.

Daily theoretical price

The theoretical price is calculated by the responsible NCB. The theoretical valuation approach for fixed and floating-rate credit claims without options is the present value. Credit claims with optional features can also be valued by NCBs if the ECB has accepted the theoretical valuation approach. Theoretical prices may also be calculated by a valuation hub. CCBM2 provides theoretical price calculation services. Theoretical price calculation of credit claims is subject to the future decisions taken by the relevant bodies by the end of the temporary period (2012) or at another point in time.

Currently, the use of theoretical pricing is not mandatory. If the data for theoretical price calculations are not available or the responsible NCB chooses to do so, the collateral value will be based on the outstanding amount of the credit claim.

Theoretical pricing process

Below is an explanation of the pricing process in cases where a theoretical price provided from outside CCBM2 is chosen:

Stage	Description
1	CCBM2 sends a file to the responsible NCB to calculate the theoretical price of the credit claim.
2	The responsible NCB responds by sending a file with the theoretical price of the requested credit claim.
3	The theoretical price of the credit claim is stored in the Eligible Collateral Database and becomes available for processing by the Credit & Collateral Module.

6.5.3. Characteristics of the RMBDs

Introduction

Irish Mortgage Backed Promissory Notes (MBPNs) are currently the only instrument contained in the RMBDs asset class. MBPNs are transferable non-marketable debt instruments in the form of promissory notes, which are backed by a pool of mortgage loans. The management of the underlying pool of mortgage loans in terms of eligibility, valuation, legal aspects, etc. is not in the scope of CCBM2. The Static Data Support Function only stores the static data of the promissory notes that will be collateralised in the Credit & Collateral Module.

Data to be stored

The following data on the promissory notes need to be stored:

- Promissory note Identification code (ORN),
- Link with counterparty (issuer),
- Issuance date,
- Maturity date (matching that of the operation in respect of which the MBPN is presented as collateral),
- Currency (only EUR allowed at this time),
- Amount of liquidity provided,
- Maturity amount (value to be paid by the counterparty on maturity date of the credit operation),
- Interest rate applicable to the relevant credit operation,
- Nominal amount, incorporating the appropriate haircut for RMBDs.

7. Monitoring & Reporting

Overview

Introduction

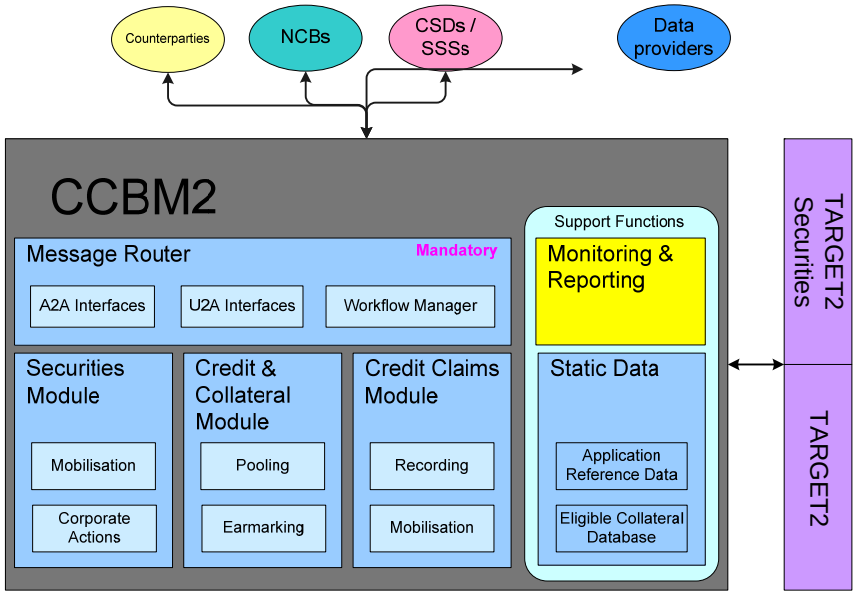
This chapter describes the CCBM2 tools for monitoring and reporting.
It explains how CCBM2 users interact with the system and how reporting is done. It also describes the reporting facilities of the CCBM2 Statistical and Reporting Database (SRDB) in greater detail.

Contents

This publication contains the following topics:

7.1. Presentation

Schematic overview



Automatic functionality

The Monitoring & Reporting Support Function is not mandatory as such, but is embedded in the CCBM2 functionality and will automatically be implemented when a CCBM2 module is implemented.
This means that all participating NCBs and their counterparties have at least the tools to:

- enter and maintain static data manually,
- follow up the life cycle of their transactions.

Depending on the modules chosen, they will also be able to:

- follow up their credit and collateral business managed in CCBM2,
- enter credit and collateral instructions manually.

Interaction with other modules

The Monitoring & Reporting Support Function interacts with all CCBM2 modules. It allows consultation and administration of the information in the:

- Static Data Support Function,
- Credit & Collateral Module,
- Securities Module,
- Credit Claims Module,
- Message Router.

Note The Monitoring & Reporting Support Function only covers the mandatory module and the optional modules an NCB has chosen. The functions are available, but NCBs can use them to the extent they need, according to the modules they use in CCBM2 and taking into account which functions NCBs maintain in their own systems.

7.2. Generalities

Secured access

Each user has his or her own security profile and access rights to the Monitoring & Reporting Support Function.
The user authorisations are available in the Static Data Support Function.

Different user groups

Four main user groups are defined. Within each group, several profiles are available.

Group	Authorisations
NCB users	Input, monitoring and reporting of: • their own data, and • the credit and collateral data of their respective monetary policy counterparties.
Counterparties	Input, monitoring and reporting of their own credit and collateral data. In this group are also included other users on behalf of the counterparties.
CCBM2 operators	Access to operating data, according to their specific needs.
ECB	Monitoring and reporting of all data needed for monetary policy implementation, risk management, collateral monitoring or analytical purposes.

Data privacy protection

Within CCBM2, data is strictly segregated. NCB users and counterparties can only access their own data.

7.3. Monitoring

U2A Interface	All users have a U2A Interface to fulfil their own business needs in monitoring their processes in any of the CCBM2 modules. This allows them to consult the data to which they have access online, in real time and securely. The U2A Interface can be customised according to the security and functional requirements of each user profile.
Monitoring of non-CCBM2 processes	In the U2A Interface the user can also monitor processes not entirely processed in CCBM2 providing that these non-NCB systems are fully interfaced to the Message Router.
ECB	The interactive U2A Interface enables the ECB, within a frame that has to be constituted, to: • Consult data needed for risk management purposes, i.e. data allowing the user to assess credit, liquidity, concentration-related risks resulting from Eurosystem credit operations, data necessary to perform analyses on specific assets, asset types, features of assets that are relevant from a risk perspective; data allowing the user to assess the adequacy of risk control measures; any other data that might be relevant to conducting ad hoc risk analyses; • Consult data on individual counterparty and individual asset level needed to monitor the use of collateral to the extent necessary for implementing monetary policy and conducting analytical studies • Export the data for further analysis into an Excel format.

7.4. Reporting

Overview

Introduction

The reporting function comprises of two types of reporting:

- pre-defined reports from the production database. These fulfil the needs of NCB users and counterparties for the day-to-day management of their credit and collateral).
- flexible reporting possibilities on data of previous days coming from the Statistical & Reporting Database (SRDB). These fulfil the needs which arise from non-time critical reporting such as statistical needs, historical views, input for risk or other analyses, etc.

Contents

This section contains the following topics:

7.4.1. Reporting on the production database

Characteristics

Reporting on the production database is performed by means of:
- the U2A Interface, which is available to all users,
- a set of pre-defined printed reports, which are available to NCB users,
- data files, which are available to NCB users.

Reporting via the U2A Interface

The U2A Interface allows the visualised data to be exported to:
- PDF documents, or
- spreadsheets (Excel).

Reporting via pre-defined printed reports

CCBM2 same-day reporting provides a set of pre-defined printed reports which are not visualised in the U2A Interface.
This reporting is intended for NCB users to support their day-to-day credit and collateral management business processes.

Examples
- A listing of all currently collateralised assets with their value ordered by asset type for all counterparties of an NCB.
- Forecasts, e.g. future values of specific assets or of the collateral stock.

Data files

CCBM2 supports accounting and tax reporting requirements by delivering data files which contain all the detailed data of every relevant related event in CCBM2. NCBs can fully exploit these data files in their own applications for accounting and tax reporting requirements.

7.4.2. Reporting from the SRDB

Statistical & Reporting database	CCBM2 has a Statistical & Reporting Database (SRDB) for flexible and customisable reporting purposes. The SRDB is fed daily with a transfer of the operational database after the completion of the end-of-day procedure.
Examples of SRDB functionalities	Some examples of SRDB functionalities are: • the NCB statistical reporting to the ECB, • a long-term, historical view of all the data related to the collateral provision by NCBs, • an instrument for risk management activities and for analysing and monitoring collateral activity by the NCBs and the ECB, • ex post close link check, • information for billing and fee calculation, • etc.
Future requirements	If required, data from sources other than CCBM2 can be integrated into the SRDB. It is designed in such a way that it offers all the required flexibility to meet quickly changing reporting and analysis requirements.
Accessibility	An NCB can only access its own data and its counterparties' data. The ECB has access to the data in the SRDB which are required to execute its risk management, use-of-collateral monitoring and other analytical activities.
Managed reporting environment	The NCBs and the ECB are able to exploit information in the SRDB through a web-based business intelligence environment. This environment will comprise: • the execution of a number of pre-defined fixed reports which are automatically refreshed daily, • the execution of a number of pre-defined flexible reports for which it is possible to specify a number of parameters used when making a report, • definition of ad hoc reports made from scratch to cover the specific reporting needs of the NCB or the ECB.

Continued on next page

Reporting from the SRDB, Continued

Reporting to the ECB

The SRDB enables NCBs to generate files for reporting to the ECB. The use of this SRDB interface for ECB reporting guarantees consistent reporting to the ECB for participating NCBs.

The process of reporting to the ECB is as follows:

Stage	Description
1	The NCB checks the completeness and validity of the data to be sent to the ECB.
2	The NCB triggers the generation of the required files.
3	The files are sent to the ECB, where the relevant data is further processed and analysed if necessary.

8. Collateral in emergency situations

Overview

Introduction

CCBM2 offers functionalities for collateral management in various emergency or stress situations.

Contents

This chapter contains the following topics:

8.1. Introduction

Functionality	CCBM2 is able to: • accept new eligible collateral for the TARGET2 contingency module, • offer functions in the domain of emergency collateral.
Emergency collateral	Consequently, CCBM2, under condition of a positive Governing Council decision: • accepts other collateral than the listed eligible assets in emergency or stress situations (e.g. the acceptance of non-euro denominated assets in custody with G10 central banks), • serves as Eurosystem platform for the provision of euro eligible collateral in emergency situations in other currency zones.

8.2. TARGET2 contingency module

TARGET2 contingency module	When TARGET2 runs in contingency mode, a counterparty has to mobilise additional collateral to get a starting balance/credit in the contingency module. CCBM2 will accept new eligible collateral, feeding the TARGET2 contingency module with the necessary payment capacity, to process the most critical and urgent payments.

8.3. Emergency collateral

Overview

Introduction

This section describes two types of emergency collateral.

The Eurosystem is currently exploring the possibility of accepting foreign collateral in emergency situations.

Contents

This section contains the following topics:

8.3.1. Ineligible euro collateral

Ineligible euro collateral	Basically, credit is never granted without adequate (eligible) collateral. In case the Governing Council decides to deviate from this rule, CCBM2 needs to be able to: • receive and process this collateral, and • segregate it from the collateral used under normal circumstances.

8.3.2. Foreign collateral (optional)

Introduction

Accepting foreign collateral is currently subject to further analysis.

Non-euro collateral for the Eurosystem

The Eurosystem is exploring the possibility of accepting foreign collateral, i.e. collateral in a currency other than the euro, in emergency situations.

See The CPSS report 'Cross-Border Collateral Arrangements (CBCA report)' BIS, January 2006, provides important background information on this topic.

CCBM2 & foreign collateral

In principle, several possibilities are feasible, e.g.:

- accepting central bank guarantees based on foreign collateral from another central bank,
- CCBM-like arrangements with foreign central banks,
- direct access to non-euro markets.

Depending on the options approved by the Governing Council, CCBM2 needs:

- an exchange rate mechanism,
- an FX risk mitigating mechanism,
- to integrate foreign assets in its static data,
- to comply with requirements of non-euro markets, etc.

Note Synergy with the Market Operation Platform project will be further examined (e.g. the database of foreign assets could be reused).

Euro collateral for foreign central banks

Similarly, in emergency situations outside the euro area, the Eurosystem would, subject to further analysis, be able to use CCBM2 to offer eligible euro collateral to foreign central banks.

9. ICT

Overview

Introduction This chapter describes the CCBM2 IT operational model.

Contents This chapter contains the following topics:

9.1. General infrastructure

Introduction	CCBM2 and its future operations are based on a centralised structure with a high level of continuity, security and availability measures. This allows CCBM2 to abide by a series of basic principles which guarantee that the application satisfies all customer needs and expectations.
Technical operation	The technical operation of CCBM2 is based on a high degree of automation and complies with requirements concerning: • confidentiality, • integrity, • availability, • static data recovery.
ESCB compliance	CCBM2 is built in accordance with the ESCB ICT principles and standards.
Quantitative requirements	Section 10.9 mentions the quantitative requirements for CCBM2 as currently identified by the Eurosystem.

9.2. Operations Model

Dual hosting operations model with regional sites	In order to meet the requirements, CCMB2 is operating in a dual hosting model. The application modules are running alternatively in multiple regions. The region where CCBM2 is operating at a given time is called the active region. The other regions are called passive regions. In each region one site, called the primary site, is operative. Depending on the business continuity requirements – mainly RPO and RTO – each region has its secondary or disaster recovery site available for a disaster failover. The operational region will be transparent to the user. The data, application modules and configuration data will be kept up to date in the regions by means of data replication techniques on both the application and the database level.
RTO and RPO	The operational environment guarantees a: • Recovery Time Objective or RTO of a maximum of 2 hours in the event of a regional disaster (RTO is the maximum allowed time that the application will not be available), • Recovery Point Objective or RPO of zero (RPO is the maximum allowed loss of data and/or transactions).
Operations support	The active site's local support team provides operations support during the interactive time slot. All contact channels are set up in such a way that switching between the two regions will not affect the users that require support. This will be realised by setting up, among other things, a common phone number, an e-mail address, a common centralised website, etc. The effective location of the operational site is transparent to users and clients. However, the information on the site which is operational at a given moment is published (the "rotation calendar") on the CCBM2 website for information purposes only.
Availability	The availability of CCBM2 will at least be synchronised with the calendar and the opening hours of TARGET2 and T2S.
Security	CCBM2 is fully compliant with ESCB-level Security Requirements and Controls. CCBM2 will for instance provide robust: • protection against external intrusion attempts, • protection against unauthorised actions, • protection of the data of each individual owner, etc.

9.3. Contingency plan

Critical transactions	CCBM2 is characterised by an RTO of a maximum of 2 hours without loss of data. In this time span it may be necessary to execute a limited number of critical credit and/or collateral transactions.
Contingency plan	For this purpose the UDFS will elaborate a contingency plan along the following guidelines: • the reconstruction of the latest 'normal' situation before the disaster occurred, • a procedure for settling a limited number of critical credit and/or collateral transactions, • a procedure for integrating, after the recovery, the critical contingency transactions in the operational production database.

10. Annex

Overview

Introduction

This annex describes use cases, explaining the process of mobilising securities when the system includes different actors, with different combinations of modules.

Contents

This annex contains the following topics:

10.1. All CCBM2 modules

Overview

This section describes 3 use cases of securities mobilisation with all the CCBM2 modules.

Contents

This section contains the following topics:

10.1.1. Use case 1:Domestic and cross-border mobilisation between two participating NCBs

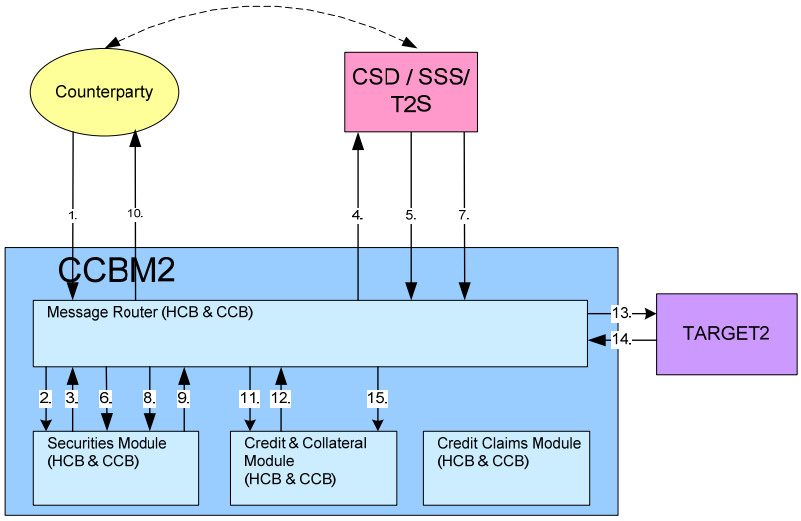
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic or cross-border context,
- both NCBs (HCB and CCB) participate in CCBM2,
- all CCBM2 modules are chosen by the HCB and the CCB,
- the counterparty sends collateralisation instructions directly to CCBM2,
- pooling collateral has been chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Use case 1:Domestic and cross-border mobilisation between two participating NCBs, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation & routing	2	The Message Router performs validity checks and sends the request to the Securities Module.
Preparing mobilisation instruction	3	The Securities Module performs eligibility and additional checks and prepares a mobilisation instruction for the SSS.
Sending mobilisation instruction	4	The Message Router sends the mobilisation instruction to the SSS.
Matching	5	The SSS can send several types of status messages regarding validation, matching and/or settlement. CCBM2 needs the settlement status message to go to the next stage.
Validation & routing	6	The Message Router performs validity checks and sends the message to the Securities Module.
Settlement	7	The SSS sends a settlement confirmation to the Message Router.
Validation & routing	8	The Message Router performs validity checks and sends the message to the Securities Module.
Accounting records update	9	The Securities Module updates the securities accounting records of the HCB and the CCB and prepares a confirmation message for the counterparty.
Sending mobilisation confirmation	10	The Message Router sends the confirmation message to the counterparty.
Routing	11	The Message Router informs the Credit & Collateral Module that new collateral is mobilised.
Adding new collateral to the pool	12	The Credit & Collateral Module valuates the new collateral, adds it to the pool account of the counterparty, calculates the new credit line and prepares a message to update the credit line of the counterparty in TARGET2.
Sending a modify credit line	13	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	14	TARGET2 sends a confirmation message to the Message Router.
Routing and new global position	15	The Message Router sends the confirmation to the Credit & Collateral Module. The Credit & Collateral Module adapts the global position.

10.1.2. Use case 2: Cross-border mobilisation when only the HCB participates in CCBM2

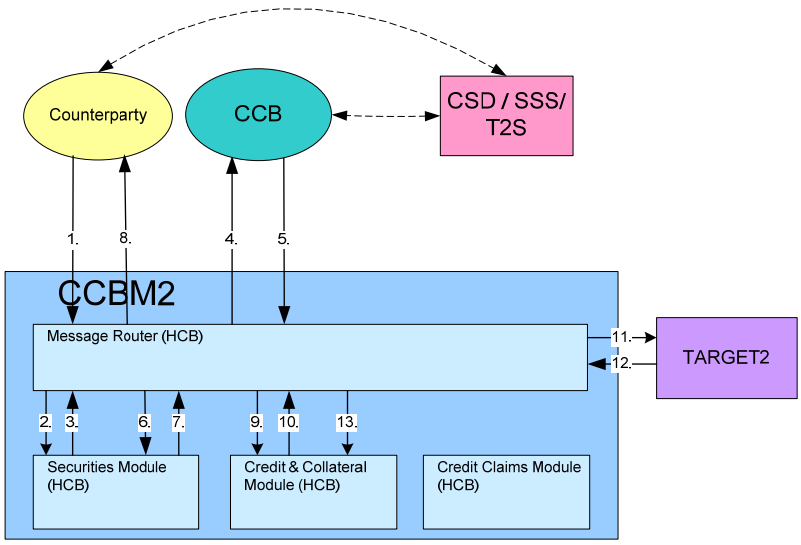
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a cross-border context,
- only the HCB participates in CCBM2,
- all CCBM2 modules are chosen by the HCB,
- the counterparty sends collateralisation instructions directly to CCBM2,
- pooling collateral has been chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Use case 2 : Cross-border mobilisation when only the HCB participates in CCBM2, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation & routing	2	The Message Router performs validity checks and sends the request to the Securities Module.
Preparing mobilisation instruction	3	The Securities Module: • performs eligibility and additional checks, • prepares a mobilisation instruction to the CCB.
Sending mobilisation instruction	4	The Message Router sends the mobilisation instruction to the CCB.
Settlement	5	The CCB sends a settlement instruction to the Message Router.
Validation & routing	6	The Message Router performs validity checks and forwards the message to the Securities Module.
Accounting records update	7	The Securities Module updates the securities accounting records of the HCB and prepares a confirmation message for the counterparty.
Sending mobilisation confirmation	8	The Message Router sends the confirmation message to the counterparty.
Routing	9	The Message Router informs the Credit & Collateral Module that new collateral is added.
Adding new collateral to the pool	10	The Credit & Collateral Module: • valuates the new collateral, • calculates the new credit line, • prepares a message to update the credit line of the counterparty in TARGET2.
Sending a modify credit line	11	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	12	TARGET2 sends a confirmation message to the Message Router.
Routing and new global position	13	The Message Router sends the confirmation to the Credit & Collateral Module. The Credit & Collateral Module adapts the global position.

10.1.3. Use case 3: Cross-border mobilisation when only the CCB participates in CCBM2

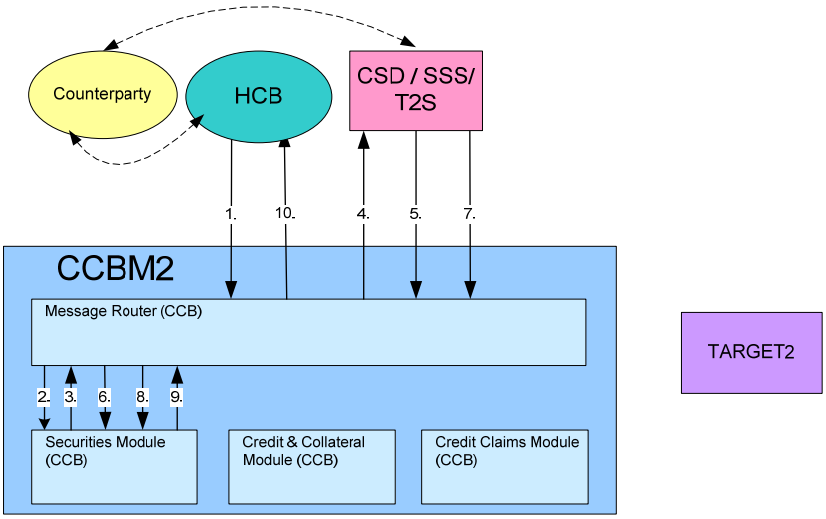
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a cross-border context,
- only the CCB participates in CCBM2,
- all CCBM2 modules are chosen by the CCB,
- pooling collateral has been chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Use case 3: Cross-border mobilisation when only the CCB participates in CCBM2, Continued

Process

Stage	No.	Description
Mobilisation request	1	The HCB sends a mobilisation request to CCBM2.
Validation and routing	2	The Message Router: • performs validity checks, • sends the request to the Securities Module.
Preparing mobilisation instruction	3	Securities Module: • performs eligibility and additional checks, • prepares a mobilisation instruction to the SSS.
Sending mobilisation instruction	4	The Message Router sends the instruction to the SSS.
Matching	5	The SSS can send several types of status messages regarding validation, matching and/or settlement. CCBM2 needs the settlement status message to go to the next stage.
Validation and routing	6	The Message Router: • performs validity checks, • sends the message to the Securities Module.
Settlement	7	The SSS sends a settlement confirmation to the Message Router.
Follow-up	8	The Message Router performs validity checks and sends the message to the Securities Module.
Accounting records update	9	The Securities Module updates the securities accounting records of the CCB and prepares a confirmation message for the HCB.
Sending mobilisation confirmation	10	The Message Router sends the confirmation message to the HCB.

10.2. Only Message Router, Credit & Collateral Module and an NCB CMS with a local interface to an SSS

Overview

This section describes one use case of mobilisation of securities with the CCBM2 Message Router, the Credit & Collateral Module and the collaboration of an NCB CMS.
The NCB CMS interfaces with CCBM2 transaction by transaction.
The NCB CMS replaces the Securities Module and has a local interface with the SSS.

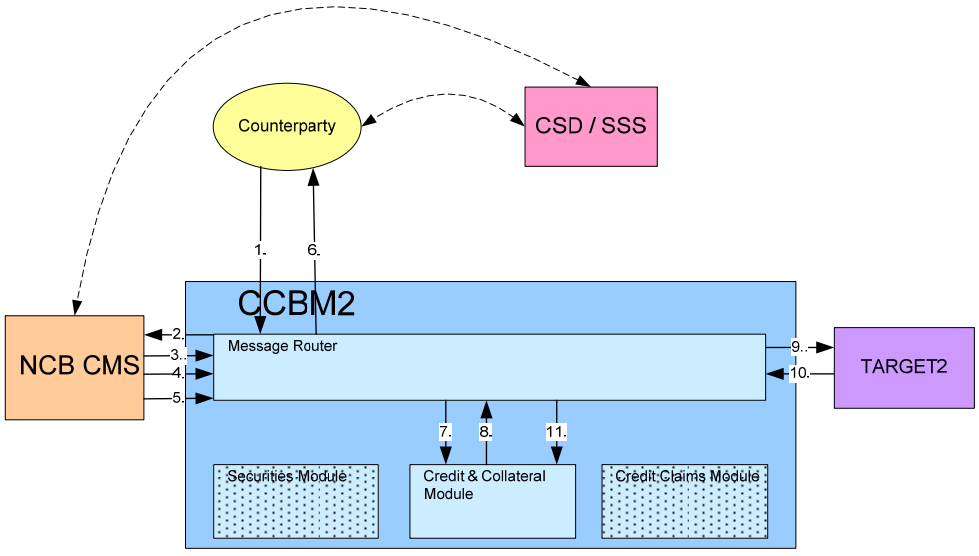
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic context,
- the NCB has only chosen the Message Router and the Credit & Collateral Module and uses an NCB CMS,
- the counterparty sends collateralisation instructions directly to CCBM2,
- pooling collateral was chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Only Message Router, Credit & Collateral Module and an NCB CMS with a local interface to an SSS, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation and routing	2	The Message Router performs validity checks and sends the mobilisation request to the NCB CMS.
Sending mobilisation instruction	3	The NCB CMS sends a mobilisation instruction to the SSS and informs the Message Router that the instruction has been sent.
Matching	4	The NCB CMS can send several types of status messages to the Message Router regarding validation, matching and/or settlement.
Settlement	5	The NCB CMS sends a settlement confirmation message to the Message Router.
Mobilisation confirmation	6	The Message Router sends the confirmation message to the counterparty.
New collateral	7	The Message Router informs the Credit & Collateral Module that new collateral is added.
Calculating new global position	8	The Credit & Collateral Module valuates the new collateral, calculates the new credit line and prepares a message to update the credit line of the counterparty in TARGET2.
Modifying credit line	9	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	10	TARGET2 sends a confirmation message.
New global position	11	The Message Router sends the confirmation to the Credit & Collateral Module. This module adapts the global position.

Note The second part of stage 3 and stage 4 are not mandatory; however, they are supported to enable the counterparty to monitor the whole process through the CCBM2 U2A Interface.

10.3. Only Message Router and an NCB CMS with a local interface to an SSS

Overview

This section describes one use case of mobilisation of securities with only the CCBM2 Message Router.
The NCB CMS interfaces with CCBM2 transaction by transaction.
The NCB CMS replaces the CCBM2 optional modules and has a local interface with the CSD/SSS.

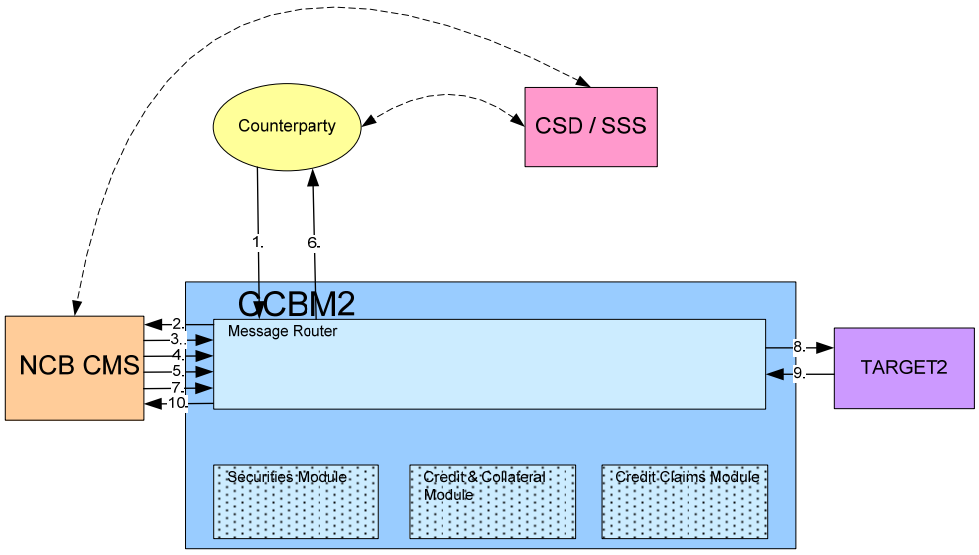
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic context,
- NCB has only chosen the Message Router and uses an NCB CMS,
- the counterparty sends collateralisation instructions directly to CCBM2,
- pooling collateral was chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Only Message Router and an NCB CMS with a local interface to an SSS, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation & routing	2	The Message Router performs validity checks and sends the mobilisation request to the NCB CMS.
Sending mobilisation instruction	3	The NCB CMS sends a mobilisation instruction to the SSS and informs the router that the instruction has been sent.
Matching	4	The NCB CMS can send several types of status messages to the Message Router regarding validation, matching and/or settlement.
Settlement	5	The NCB CMS sends a settlement confirmation message to the Message Router.
Mobilisation confirmation	6	The Message Router sends the confirmation message to the counterparty.
Modify credit line message	7	The NCB CMS sends a message to update the credit line of the counterparty in TARGET2 to the Message Router.
Modifying credit line	8	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	9	TARGET2 sends a confirmation message to the Message Router.
Routing	10	The Message Router sends the confirmation to the NCB CMS.

Note The second part of stage 3 and stage 4 are not mandatory; however, they are supported to enable the counterparty to monitor the whole process through the CCBM2 U2A Interface.

10.4. Only Message Router and an NCB CMS with a local interface to an SSS and a PHA

Overview

This section describes one use case of securities mobilisation with only the CCBM2 Message Router.
The NCB CMS interfaces with CCBM2 transaction by transaction.
The NCB CMS replaces the CCBM2 optional modules and has a local interface with the SSS and with a PHA.

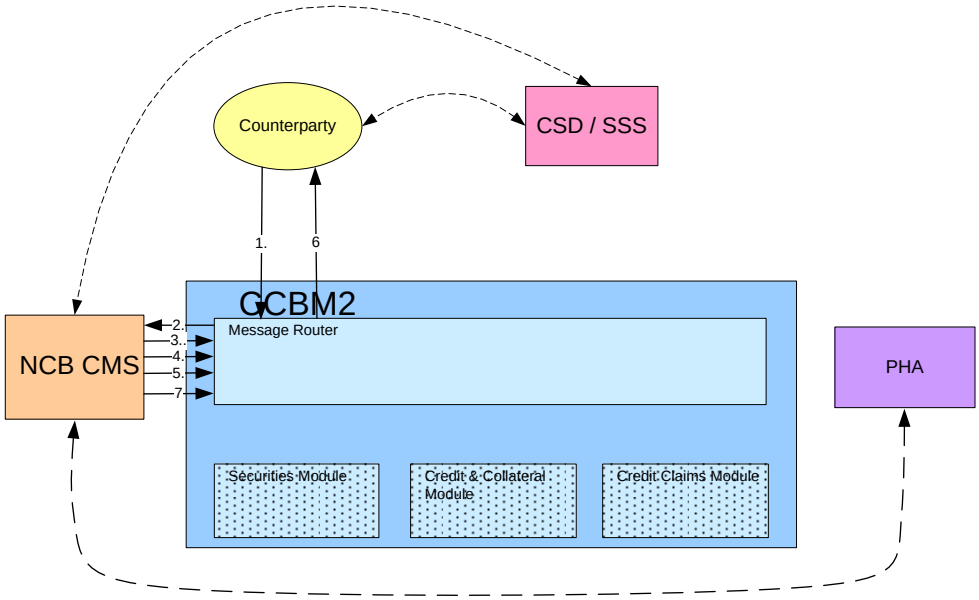
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic context,
- the NCB has only chosen the Message Router and uses an NCB CMS,
- the counterparty sends collateralisation instructions directly to CCBM2,
- pooling collateral was chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Only Message Router and an NCB CMS with a local interface to an SSS and a PHA, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation & routing	2	The Message Router performs validity checks and sends the mobilisation request to the NCB CMS.
Sending mobilisation instruction	3	The NCB CMS sends a mobilisation instruction to the SSS and informs the router that the instruction has been sent.
Matching	4	The NCB CMS can send several types of status messages to the Message Router regarding validation, matching and/or settlement.
Settlement	5	The NCB CMS sends a settlement confirmation message to the Message Router
Mobilisation confirmation	6	The Message Router sends the confirmation message to the counterparty.
Credit line confirmation	7	The NCB CMS sends a update credit line confirmation message to the Message Router.

Note The second part of stage 3, stage 4 and stage 7 are not mandatory; however, they are supported to enable the counterparty to monitor the whole process through the CCBM2 U2A Interface.

10.5. All CCBM2 modules and an External CMS

Overview

This section describes one use case of mobilising securities with all the CCBM2 modules and the collaboration of an External CMS.

CCBM2 interfaces with the External CMS transaction by transaction.

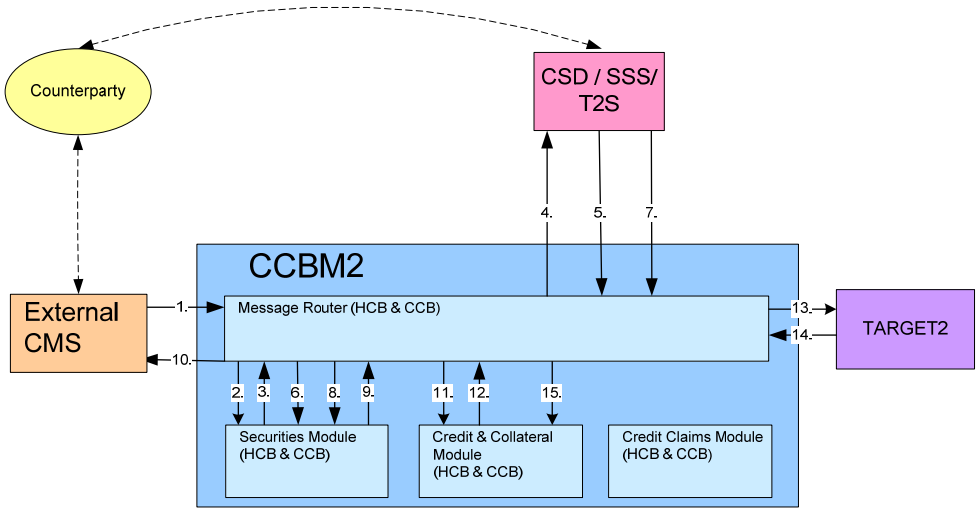
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic or cross-border context,
- both NCBs (HCB and CCB) participate in CCBM2,
- all CCBM2 modules are chosen by the HCB and the CCB,
- the External CMS initiates the collateralisation on behalf of the counterparty,
- pooling collateral has been chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

All CCBM2 modules and an External CMS, Continued

Process

Stage	No.	Description
Mobilisation request	1	The External CMS sends a mobilisation request to CCBM2.
Validation & routing	2	The Message Router performs validity checks and sends the request to the Securities Module.
Preparing mobilisation instruction	3	The Securities Module: • performs eligibility and additional checks, • prepares a mobilisation instruction to the SSS.
Sending mobilisation instruction	4	The Message Router sends the mobilisation instruction to the SSS.
Matching	5	The SSS can send several types of status messages regarding validation, matching and/or settlement. CCBM2 needs the settlement status message to go to the next stage.
Validation & routing	6	The Message Router performs validity checks and sends the message to the Securities Module.
Settlement	7	The SSS sends a settlement confirmation.
Validation & routing	8	The Message Router performs validity checks and sends the message to the Securities Module.
Accounting records update	9	The Securities Module: • updates the securities accounting records of the HCB and the CCB, • prepares a confirmation message for the External CMS.
Sending mobilisation confirmation	10	The Message Router sends the confirmation message to the External CMS.
Routing	11	The Message Router informs the Credit & Collateral Module that new collateral is added.
Adding new collateral to the pool	12	The Credit & Collateral Module valuates the new collateral, calculates the new credit line and prepares a message to update the credit line of the counterparty in TARGET2.
Sending a modify credit line	13	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	14	TARGET2 sends a confirmation message to the Message Router.
Routing and new global position	15	The Message Router sends the confirmation to the Credit & Collateral Module. The Credit & Collateral Module adapts the global position.

10.6. Only Message Router, Credit & Collateral Module and an External CMS

Overview

This section describes one use case of securities mobilisation with only the CCBM2 Message Router , the Credit & Collateral Module and the collaboration of an External CMS.
The External CMS interfaces with CCBM2 transaction by transaction and replaces the Securities Module.

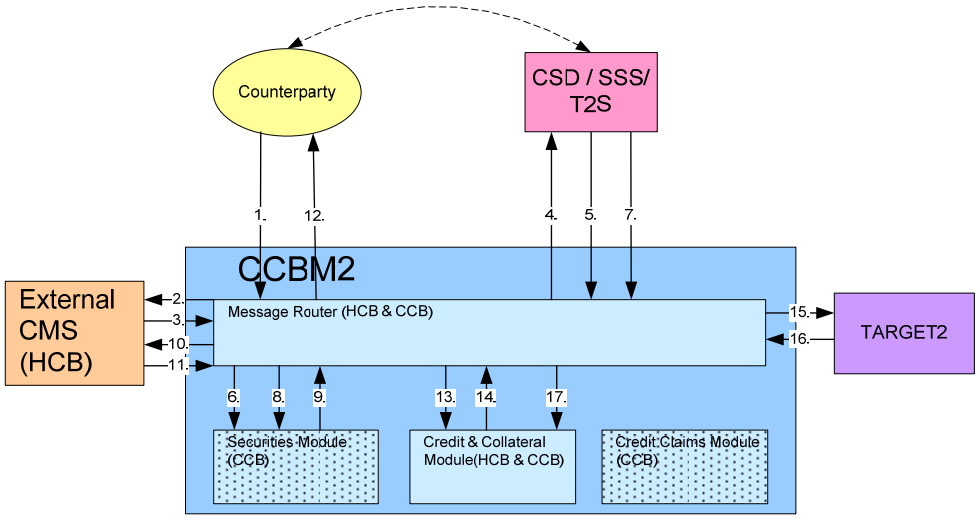
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic or a cross-border context,
- both NCBs (HCB and CCB) participate in CCBM2,
- HCB has only chosen the Message Router and the Credit & Collateral Module and uses an External CMS,
- the counterparty sends collateralisation instructions directly to CCBM2,
- all CCBM2 modules are chosen by the CCB,
- pooling collateral was chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Only Message Router, Credit & Collateral Module and an External CMS, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation and routing	2	The Message Router performs validity checks and sends the mobilisation request to the External CMS.
External CMS message	3	The External CMS sends a mobilisation instruction to the Message Router.
Sending mobilisation instruction	4	The Message Router sends the instruction to the SSS.
Matching	5	The SSS can send several types of status messages regarding validation, matching and/or settlement. CCBM2 needs the settlement status message to go to the next stage.
Validation and routing	6	The Message Router performs validity checks and sends the message to the Securities Module (CCB).
Settlement	7	The SSS sends a settlement confirmation to the Message Router.
Validation and routing	8	The Message Router performs validity checks and sends the message to the Securities Module (CCB).
Accounting records update	9	The Securities Module updates the securities accounting records of the CCB and prepares a confirmation message for the External CMS.
Validation and routing	10	The Message Router performs validity checks and sends the message to the External CMS.
External CMS message	11	The External CMS sends a confirmation message to the Message Router.
Mobilisation confirmation	12	The Message Router sends the confirmation message to the counterparty.
New collateral	13	The Message Router informs the Credit & Collateral Module that new collateral is added.
Calculating new global position	14	The Credit & Collateral Module valuates the new collateral, calculates the new credit line and prepares a message to update the credit line of the counterparty in TARGET2.
Modifying credit line	15	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	16	TARGET2 sends a confirmation message.
New global position	17	The Message Router sends the confirmation to the Credit & Collateral Module. This module adapts the global position.

10.7. Only Message Router and an External CMS

Overview

This section describes one use case of securities mobilisation with only the CCBM2 Message Router.
The External CMS interfaces with CCBM2 transaction by transaction.

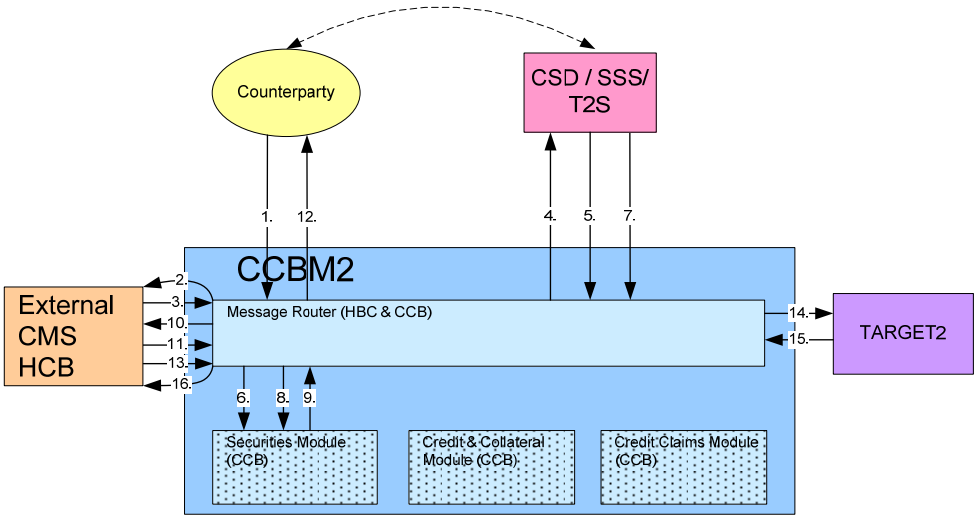
Situation

The following scheme shows how securities are successfully mobilised as collateral when:

- collateral is used in a domestic and cross-border context,
- both NCBs (HCB and CCB) participate in CCBM2,
- HCB has only chosen the Message Router and uses an External CMS,
- the counterparty sends collateralisation instructions directly to CCBM2,
- all CCBM2 modules are chosen by the CCB,
- pooling collateral has been chosen.

Illustration

The image below describes the mobilisation flow in CCBM2 and the relations between the different modules:



Continued on next page

Only Message Router and an External CMS, Continued

Process

Stage	No.	Description
Mobilisation request	1	The counterparty sends a mobilisation request to CCBM2.
Validation & routing	2	The Message Router performs validity checks and sends the mobilisation request to the External CMS.
External CMS message	3	The External CMS sends a mobilisation instruction to the Message Router.
Sending mobilisation instruction	4	The Message Router sends the mobilisation instruction to the SSS.
Matching	5	The SSS can send several types of status messages regarding validation, matching and/or settlement. CCBM2 needs the settlement status message to go to the next stage.
Validation & routing	6	The Message Router performs validity checks and sends the message to the Securities Module (CCB).
Settlement	7	The SSS sends a settlement confirmation.
Validation & routing	8	The Message Router performs validity checks and sends the message to the Securities Module (CCB).
Accounting records update	9	The Securities Module updates the securities accounting records of the CCB and prepares a confirmation message for the External CMS.
Validation & routing	10	The Message Router performs validity checks and sends a confirmation message to the External CMS.
External CMS message	11	The External CMS sends a confirmation message to the Message Router.
Mobilisation confirmation	12	The Message Router sends the confirmation message to the counterparty.
Modify credit line message	13	The External CMS sends an message to update the credit line of the counterparty in TARGET2 to the Message Router.
Modifying credit line	14	The Message Router sends a modify credit line instruction to TARGET2.
Credit line confirmation	15	TARGET2 sends a confirmation message to the Message Router.
Routing	16	The Message Router sends the confirmation to the External CMS.

10.8. Marginal Lending Facility on Request

Overview

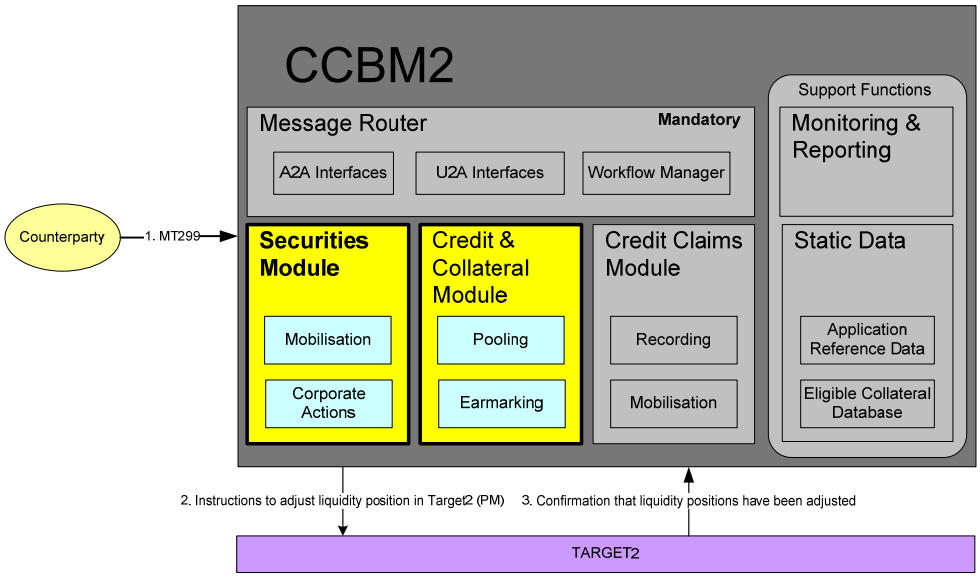
This section describes 2 use cases of marginal lending facility on request.

Contents

This section contains the following topics:

10.8.1. Use case 1: Marginal Lending Facility on Request - Pledge with Pooling

Illustration



Assumption: NCB makes full use of CCBM2 and uses the Standing Facilities Module of TARGET2.

Continued on next page

Use case 1: Marginal Lending Facility on Request - Pledge with Pooling, Continued

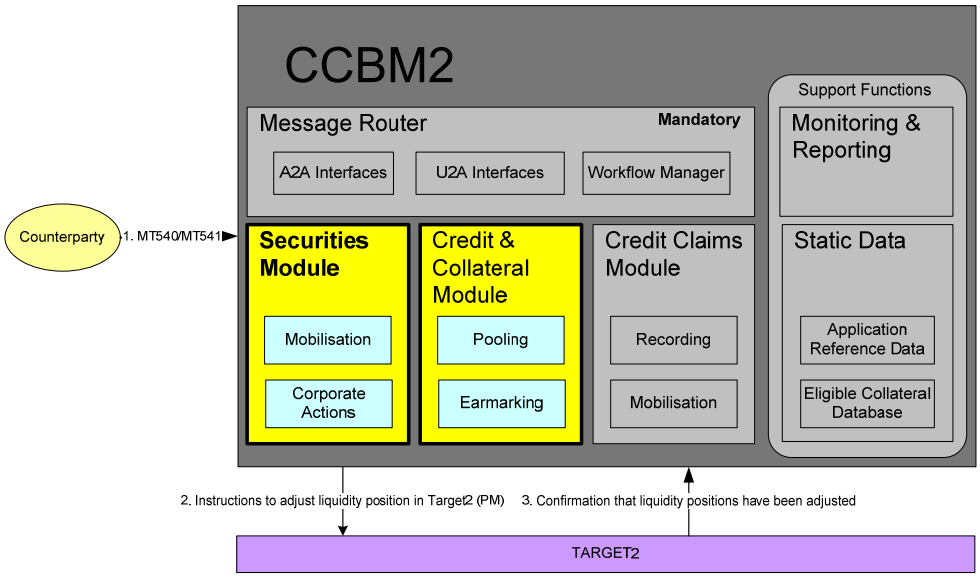
Process

Stage	Description
1 S until 18:15 CET or 18:30 CET on the last day of the minimum reserve maintenance period	If a counterparty (either a counterparty with a credit line in TARGET2 or one without such a credit line) needs overnight liquidity at the end of the day (either to respect the reserve average or to settle queued payments), it sends a request (e.g. MT299) to CCBM2 for recourse to the marginal lending facility. This request for overnight credit has to specify the amount of marginal lending requested.
	CCBM2 checks if the collateral in the pool is sufficient to grant the marginal lending facility.
2	If the pool is sufficient, CCBM2 sends an order to TARGET2 to set up the marginal lending facility transfers. Please refer to Chapter 12.3.1 of Book 2 of the TARGET2 UDFS (or Chapter 5.3 of the TARGET2 GFS) for further details on this standing facility. As a result, TARGET2 debits the marginal lending facilities account of the counterparty and transfers the liquidity to the counterparty's RTGS account or the TARGET2 HAM account. T2 optionally sends the notifications to the counterparty (MT910) and to the counterparty's NCB (MT900).
3	TARGET2 sends a notification to CCBM2 to confirm the activation of the marginal lending facility. Based on this confirmation, CCBM2 adjusts the internal recording regarding the counterparty's liquidity position in TARGET2 and keeps record of the amount of marginal lending granted in the Credit & Collateral Module.
S 19:00 CET	At the start of the following business day, TARGET2 activates the refunding of the marginal lending and notifies CCBM2. Then, CCBM2 adjusts the internal records regarding the status of the credit provision. The credit given is then again booked as Intraday credit if a PA account is used or redeemed if a HAM account is used.

Note The current version of the UDFS of T2 does not envisage sending such notification to the collateral manager. Thus, the opportunity to request the introduction of this notification in T2 should be evaluated.

10.8.2. Use case 2: Marginal Lending Facility on Request – Repo with Pooling

Illustration



Assumption: NCB makes full use of CCBM2 and uses the Standing Facilities Module of TARGET2.

Continued on next page

Use case 2: Marginal Lending Facility on Request – Repo with Pooling, Continued

Process

Stage	Description
1 S 18:00 CET for (i) and until 18:00 CET on S for (ii)	If a counterparty needs overnight liquidity in TARGET2, it can request recourse to the marginal lending facility by (i) transferring an Intraday repo operation into an overnight repo operation or (ii) starting a new repo operation. In the case of a new repo operation, the normal procedure for mobilising collateral applies (see chapter 4.3.7 of the User Requirements, use case 1) and is started by sending a MT540/MT541 to CCBM2 as depicted in this use case. Transferring an Intraday repo operation into an overnight repo operation is done automatically, no additional instructions from the counterparty are needed.
2	CCBM2 sends an order to TARGET2 to set up the marginal lending facility transfers. As a result, TARGET2 debits the marginal lending facilities account of the counterparty and transfers the liquidity to the counterparty's RTGS account or the TARGET2 HAM account.
3	TARGET2 sends a notification to CCBM2 to confirm the activation of the marginal lending facility. Based on this confirmation, CCBM2 adjusts the internal recording regarding the counterparty's liquidity position in TARGET2 and keeps record of the amount of marginal lending granted in the Credit & Collateral Module.
S 19:00 CET	At the start of the following business day, TARGET2 activates the refunding of the marginal lending and notifies CCBM2. Then, CCBM2 adjusts the internal records regarding the status of the credit provision. The credit given is then again booked as Intraday credit.

Note The current version of the UDFS of T2 does not envisage sending such notification to the collateral manager. Thus, the opportunity to request the introduction of this notification in T2 should be evaluated.

10.9. Quantitative requirements

Introduction

This section describes the CCBM2 quantitative requirements as currently identified by the Eurosystem.

Quantitative requirements

Extrapolation of the key figures for the sizing of CCBM2

Items	Sum of responses	Euro area 27	Low value for Dec-2015	Average value Dec-2015	High value for Dec-2015
Eligible assets per day					
Number of ISINs that are deposited by one (or more) credit institution(s) for both pledge and repo. Only "active" ISINs are counted (only ISINs that are actually used for the pool /or which are earmarked are considered "active").	Average	Average	26,735	61,560	96,384
	18,716	26,975			
	Maximum	Maximum			
	20,756	29,914			
Credit claims per day					
Number of "active" credit claims that are deposited by one (or more) credit institution(s).	Average	Average	1,456,120	3,352,838	5,249,556
	1,017,086	1,469,169			
	Maximum	Maximum			
	1,018,289	1,470,906			
Collateral positions per day					
The total number of individual ISIN and credit claims per counterparty. Expl: An ISIN/credit claim held by different credit institutions will be counted twice.	Average	Average	1,711,259	3,615,922	5,520,586
	51,818	74,682			
	Maximum	Maximum			
	55,045	79,333			

Quantitative requirements, Continued

Quantitative requirements

Extrapolation of the key figures for the sizing of CCBM2

Items	Sum of responses	Euro area 27	Low value for Dec-2015	Average value Dec-2015	High value for Dec-2015
Number of transactions per day					
• Mobilisation					
Number of transactions that are initiated by the credit institution holding the collateral.					
o Initiated through A2A (e.g. SWIFT)	Average	Average	13,009	17,889	22,769
	2,255	3,249			
	Maximum	Maximum			
	8,550	13,009			
o Initiated through U2A (user interface)	Average	Average	12,352	17,472	22,593
	1,158	2,110			
	Maximum	Maximum			
	6,777	12,352			
• Asset servicing / system generated					
Number of movements, payments which are the result of events as a result of the characteristics of the collateral.	Average	Average	6,061	24,676	43,291
	981	1,464			
	Maximum	Maximum			
	2,195	3,278			
Number of transactions per hour					
Number of transactions per hour	Average	Average	1,460	1,888	2,315
	316	606			
	Maximum	Maximum			
	748	1,460			
Value of collateral held in custody (per day)					
Value of collateral held in custody (per day) (x1.000.000)	Average:	Average:	1,933,676	4,452,451	6,971,225
	1,090,420	1,951,004			
	Maximum:	Maximum:			
	1,248,395	2,233,657			
CSD					
Number of CSDs linked through the NCB to CCBM2	31	32	27	29	32

Quantitative requirements, Continued

Quantitative requirements

Extrapolation of the key figures for the sizing of CCBM2

Items	Sum of responses	Euro area 27	Low value for Dec-2015	Average value Dec-2015	High value for Dec-2015
Counterparties					
Number of credit institutions for whom the NCB has collateral in custody, or that do repo transactions with the NCB	1,377	1,981	1,695	1,838	1,981
Number of users					
• Total number of user-IDs					
o Within NCB	1,189	1,760	3,520	5,280	7,040
o other	1,029	1,839	3,679	5,518	7,357
• Number of concurrent users					
The maximum number of users that are active at the same time					
o Within NCB	123	270	541	811	1,081
o other	639	1,435	2,871	4,306	5,742
T2 information requests					
Total expected number of times (per day) that the credit lines in T2 will be updated by CCBM2.	13,837	20,790	real time (43,200)	/	real time (43,200)
Critical times during the day					
Moments during the day during which the smooth processing of transactions is most critical.	Throughout the day	/	Throughout the day	/	Throughout the day
Max. responses time					
• online query / update	Real time	/	Real time	/	Real time
• submitted transaction via SWIFT	Real time	/	Real time	/	Real time
History					
Number of days that historical data (value date < business date) is available online (and not yet moved to a data warehouse)	Indefinitely (online up to 7 years)	/	Indefinitely (online up to 7 years)	/	Indefinitely (online up to 7 years)

11. Glossary

A2A	Application to application. Communication directly between applications.
ABS	Asset Backed Security.
ASI	Ancillary System Interface
BIC	Bank Identifier Code
CCB	Correspondent Central Bank
CCBM	Correspondent Central Bank Model. A mechanism established by the European System of Central Banks with the aim of enabling counterparties to use underlying assets in a cross-border context. In the CCBM, national central banks act as custodians for one another.
CCBM2	Collateral Central Bank Management
CCM	Credit & Collateral Module
CCP	Central Counterparty
CeBM	Central Bank Money
CMS	Collateral Management System
Connected payment	Payments that trigger a change in the credit line in TARGET2 together with the debit or credit.
Counterparty	The opposite party in a financial transaction (e.g. any transaction with a central bank).
Credit line	Maximum collateralised overdraft position in TARGET2.
CSD	Central Securities Depository.
DaP	Delivery after payment
Direct debit	An authorised debit on the payer's bank account initiated by the payee.
DvP	Delivery versus Payment.
EADB	Eligible Assets Database
ECAF	Eurosystem Credit Assessment Framework
ECAI	External Credit Assessment Institution
ECB	European Central Banks
ECDB	Eligible Collateral Database

ECMS	Euro Collateral Management System
EEA	European Economic Area
ESCB	European System of Central Banks
EU	European Union
EXDI	ESCB XML data integration; Inter-NCB communication protocol.
FoP	Free of Payment
HAM	Home Accounting Module of TARGET2
HCB	Home Central Bank
ICAS	In-house Credit Assessment System
ICM	Information and Control Module (TARGET2)
ICSD	International Central Securities Depository
ICT	Information and Communications Technologies
IDC	Intraday Credit
IRB	Internal Ratings Based system
ISIN	International Securities Identification Number
LTRO	Longer-Term Refinancing Operation
Margin call	If the value of the underlying assets as collateral falls below the level of credits to cover, the central bank requires counterparties to supply additional assets (or cash).
Marginal lending facility	A standing facility of the Eurosystem which counterparties may use to receive overnight credit from a CB.
MFI	Monetary Financial Institution
MOC	Market Operation Committee
MRO	Main Refinancing Operation
NCB	National Central Bank
Netting	An agreed offsetting of positions or obligations.
OMO	Open Market Operation. Reverse transactions are the main open market instrument of the Eurosystem and can be employed in all four categories of Eurosystem operations: main refinancing operations; longer-term refinancing operations; fine-tuning operations; and structural operations.

Overnight credit	Overnight Credit through use of the marginal lending facility.
PaD	Payment After Delivery
Payment	In CCBM2 context; Bank-to-bank payments (MT 202, MT 204)
Payment capacity	Credit balance on the account plus collateralised credit line for overdraft (if available).
PD	Probability of default. The probability of default is the likelihood that a loan will not be repaid and will fall into default
PM	Payments Module of TARGET2
PV	Present Value
PSE	Public Sector Entities
Raw data file	The raw data file serves as check file for the verification of the positions of the General Ledger
Real-time gross settlement	The continuous (real-time) settlement of funds or securities transfers individually on an order-by-order basis (without netting).
Repo	Repurchase Agreement.
RIAD	ECB Data Exchange system
RMBD	Retail Mortgage-Backed Debt instrument
RT	Rating Tool
RTGS	Real-Time Gross Settlement System
SSS	Securities Settlement System.
SM	Securities Module
SRDB	Statistical & Reporting Database
SSS	Securities Settlement System
STP	Straight Through Processing
T2	TARGET2
T2S	Target2 Securities
TARGET2 UDFS	TARGET2 User Detailed Functional Specifications
TOP	ECB's system for subscription and allocation of open market operations.

Trigger point	A pre-specified level of the value of the liquidity provided at which a margin call is executed.
U2A	User to Application. The objective is to permit direct communication between a participant's users and CCBM2.
XML	Acronym for Extensible Mark-up Language. Subset of Standard Generalised Mark-up Language (SGML - ISO 8879)