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| CCPA Business Requirements  Default Fund Management (BRS-DF)  Version 0.4 ● Proposed |
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# Document history

The following table contains the document revisions, including references to specific comments.

| Version | Notes |
| --- | --- |
| V 0.1 | First draft |
| V 0.2 | Workshop version |
| V 0.3 | * Overview - (comment HD1) Modified description of default fund contribution components; (comments HD2) changed description of automatic default fund call * FN00006848 - (comment MM3) ‘Default fund account’ table modified to ‘DF Participant account’ * FN00006916 - (comments MM4/HD5) ‘Collateral account balance’ modified to ‘DF Balance’, with the added ‘Required amount’ * FN00006847 - (comments MM4/MM11) Added ‘DF Participant Contribution’ table representing each participant account requirement and balance * FN00006846 - (comment MM6) ‘Transactions’ table modified to ‘DF Participant Transactions’ * Default fund quota calculation - Modified preparatory description; (workshop comment ‘Restore CC&G DF model’) modified default fund calculation process * FN00006853 - (comment HD7) Added new requirement 'DF quota calculation schedule' * FN00006852 - Added new requirement 'Calculation of the Average Initial Margins' * FN00006854 - Added new requirement 'Calculation of the Dynamic Contribution Quota' * FN00006855 - Added new requirement 'Calculation of the Contribution Quota Due' * FN00006864 - (comments HD10/HD13/HD15) Added new requirement 'Default fund restitution activation' * FN00006865 - (comment HD12) OeKB replaced with OeNB; modified description of automatic default fund call/restitution * FN00006872 - (comment HD14) Added new requirement 'Default Fund Call Notification' * FN00006873 - (comment MM16) Adjustments made at default fund withdrawal process |
| V 0.4 | * FN00006848 Added DF external account table * FN00006848 Added Clearing Agent reference for the payment message handling * Normalized Status fields and Timestamp fields |

# Document Control

The following table contains the complete list of business requirements described in this document, together with their own identification code and status attributes.

For each requirement the following attributes are provided:

1. **Priority**: describes the importance of the requirement using the MoSCoW standard. More specifically, "Must" is a category used for business critical requirements,"Should" is specified for important but not "show-stopping" requirements, "Could" is used for "nice-to-have" requirements.
2. **Analysis**: expresses the level of completeness of the analysis. In particular the flag "Unknowns" means that there are still topics not covered by workshops and interviews, while "No unknowns" means that the analysis can be considered complete from the client perspective.
3. **Stability**: this flag describe the requirements stability in terms of changes connected to external stakeholder influence. A requirement is "Not Stable" if, for example, the team is waiting for an external feedback that could impact it (changing regulations, changing external systems, changing standards...)

| Code | Name | Priority | Analysis status | Stability |
| --- | --- | --- | --- | --- |
| FN00006916 | DF Account | Must | No unknowns | Stable |
| FN00006848 | Account definition | Must | No unknowns | Stable |
| FN00006847 | Default Fund requirement and balance | Must | No unknowns | Stable |
| FN00006846 | Default Fund transactions | Must | No unknowns | Stable |
| FN00006845 | Default fund Currency | Must | No unknowns | Stable |
| FN00006844 | Multimarket relationship | Must | No unknowns | Stable |
| FN00006853 | DF quota calculation schedule | Must | No unknowns | Stable |
| FN00006852 | Calculation of the Average Initial Margins | Must | No unknowns | Stable |
| FN00006854 | Calculation of the Dynamic Contribution Quota | Must | No unknowns | Stable |
| FN00006855 | Calculation of the Contribution Quota Due | Must | No unknowns | Stable |
| FN00006868 | Default fund call activation | Must | No unknowns | Stable |
| FN00006864 | Default fund restitution activation | Must | No unknowns | Stable |
| FN00006865 | Perform default fund call | Must | No unknowns | Stable |
| FN00006866 | DF Call message content | Must | No unknowns | Stable |
| FN00006872 | Default Fund Call Notification | Must | No unknowns | Stable |
| FN00006874 | Perform Default Fund Deposit | Must | No unknowns | Stable |
| FN00006873 | Perform Default Fund withdrawal | Must | No unknowns | Stable |

# Overview

Periodically CCPA computes default fund requirements in compliance to its EMIR obligations. Such computation generates as a final outcome the “default fund total amount” and is handled by the Clearing System risk management functions (not covered in this specification volume).

Each clearing member is obligated to contribute to the default fund with a specific amount calculated by the Clearing System and posted in a dedicated account safe-kept at the Austrian Central Bank.

Collateral posting, with the purpose of default fund contribution, can be done in the form of cash only.

*For the cash contribution the following assumptions are considered valid for the Clearing System “Multimarket release”:*

* *Default fund currency is in EURO only.*
* *Default fund is unique for all the markets and no separate default funds are allowed.*

*Such limitations do not negatively impact the support for PSE and VSE, which are expected to be handled with a unique DF in EUR, but will be overcome by an additional software release (covered by the initial service definition without any additional fees).*

Clearing System maintains the clearing member contribution balance and transactions in a dedicated collateral account called “Default Fund Participant contribution” and “Default Fund Participant transaction”. For each clearing member balance item, in addition to the posted cash amount, the following details are specified:

* Minimum quota
* Dynamic quota

The minimum quota represents the minimum default fund quota required by the CCP and depends on the membership type (to exclude Clearing Agents the field [Participant][participant type] is checked).

The dynamic quota is based on a calculation that takes into account the average of Initial Margins deposited in a determined period.

The Payment of the Default Fund (credit/debit) is either done manually, outside of the system, or by an additional option of the Clearing System that makes the process automatic through the usage of MT202 SWIFT messaging.

When the Default Fund is calculated, a Default Fund Call, represented by an Alert for the Clearing Member and related reporting in BCS, is automatically executed.

# Requirements

## Default fund definition

### FN00006916 - DF Account

The default fund is maintained by the CCPA and safe-kept at the National Central Bank in a physical account (TARGET2 PM).

This table represents the default fund account definition (considering that a single default fund in EUR is initially supported).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DF Account | | | | |
| This entity represents the default fund account at CCP level. | | | | |
| Field Name | Type | Prec. | Scale | Description |
| DF Account ID | INTEGER |  |  | Unique identification code of the Default Fund Account (Target2 PM).  Naming convention is: CCP + "-" + UniqueID. |
| Required amount | DECIMAL(20,5) | 20 | 5 | Actual required default fund quota (calculated applying the minimum threshold to the dynamic quota). |
| DF Currency | CHAR(3) |  |  | Currency of the default fund in ISO4217 |
| Requirement datetime | TIMESTAMP |  |  | Date and time of last update of default fund requirement. |
| Status | CHAR(1) |  |  | Whether the account is disabled or active.  Possible values are:   * "A": Activated * "D": Deactivated |
| Activation datetime | TIMESTAMP |  |  | Date in which the account was enabled, populated if the status is enabled |
| Deactivation datetime | TIMESTAMP |  |  | Date in which the account was disabled, populated if the status is disabled |

### FN00006848 - Account definition

The logic representation of participant contributions to each DF account and its connection to the external T2 account for the payment handling is represented in the Clearing System by the entities below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DF Participant account | | | | |
| It is the internal representation of the default fund contributions per participant. | | | | |
| Field Name | Type | Prec. | Scale | Description |
| DF Participant Account ID | VARCHAR(9) |  |  | This is the unique ID of the DF account per participant.  Naming convention is: [Participant code] + "- DFF". |
| DF Account ID | INTEGER |  |  | Unique identification code of the DF account |
| Clearing Agent code | INTEGER |  |  | Reference to the unique identification code of the Clearing Agent that manages the account.  Expressed in four digits (e.g. "5353"). |
| Status | CHAR(1) |  |  | Whether the account is disabled or active.  Possible values are:   * "A": Activated * "D": Deactivated |
| Activation datetime | TIMESTAMP |  |  | Date in which the account was enabled, populated if the status is enabled |
| Deactivation datetime | TIMESTAMP |  |  | Date in which the account was disabled, populated if the status is disabled |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DF External account | | | | |
| It is the internal representation of the default fund participant T2 external account. | | | | |
| Field Name | Type | Prec. | Scale | Description |
| DF Participant Account ID | VARCHAR(9) |  |  | This is the unique ID of the DF account per participant.  Naming convention is: [Participant code] + "- DFF". |
| External Cash Account | VARCHAR(50) |  |  |  |
| Status | CHAR(1) |  |  | Whether the account is disabled or active.  Possible values are:   * "A": Activated * "D": Deactivated |
| Activation datetime | TIMESTAMP |  |  | Date in which the account was enabled, populated if the status is enabled |
| Deactivation datetime | TIMESTAMP |  |  | Date in which the account was disabled, populated if the status is disabled |

### FN00006847 - Default Fund requirement and balance

For each Default Fund Account the current requirement and balance are kept updated. Also balance components are kept automatically updated by the System without the need of user intervention.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DF Participant Contribution | | | | |
| Collateral account balance in default fund currency. This entity contains a row for each collateral account having category ("DFF"). | | | | |
| Field Name | Type | Prec. | Scale | Description |
| DF Participant Account ID | VARCHAR(9) |  |  | Unique identification code of the collateral account |
| Participant Code | INTEGER |  |  | Identification code of the participant owning the account |
| Min Quota | DECIMAL(20,5) | 20 | 5 | Actual Minimum DF Quota required. |
| Dyn Quota | DECIMAL(20,5) | 20 | 5 | Calculated dynamic contribution. |
| Required Quota | DECIMAL(20,5) | 20 | 5 | Required default fund quota (calculated applying the minimum threshold to the dynamic quota). |
| Account Balance | DECIMAL(20,5) | 20 | 5 | Actual total default fund balance per participant. |
| DF Excess | DECIMAL(20,5) | 20 | 5 | Collateral posted in excess with reference to the required contribution |
| DF Call | DECIMAL(20,5) | 20 | 5 | Additional collateral to request to the Participant with reference to the required contribution. |
| Average margins | DECIMAL(20,5) | 20 | 5 | Average margin value used to calculate the participant DF share. |
| Evaluation datetime | TIMESTAMP |  |  | Date of last update of quota evaluation. |

### FN00006846 - Default Fund transactions

Transactions on default fund can be generated automatically by the System, in case of DF call, or inserted manually.

Transactions are maintained in the System and visible to the user.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DF Participant Transactions | | | | |
| The "Transactions" table contains the deposit or withdrawal transactions. | | | | |
| Field Name | Type | Prec. | Scale | Description |
| Transaction code | INTEGER |  |  | Uniquely identifies a transaction |
| DF Participant Account ID | VARCHAR(9) |  |  | Referenced participant account |
| Participant code | INTEGER |  |  | Identification code of the participant owning the account |
| Transaction date | INTEGER |  |  | Transaction Date expressed as "yyyymmdd" |
| Countervalue | DECIMAL(20,5) | 20 | 5 | Transaction value. Positive values are deposits, negative are withdrawals. |
| Currency | CHAR(3) |  |  | Currency in which the transaction has been executed in ISO 4217 (3 chars codes) |

### FN00006845 - Default fund Currency

Default fund currency can be EUR only.

*This is a limitation connected to the assumption that PRA and VIE market will have a unique DF in Euro.*

*Further adaptions will be done to support additional markets with different configurations in a full multicurrency, multi-DF shape.*

### FN00006844 - Multimarket relationship

A unique default fund is used to cover open liabilities in the event of default of participants operating on multiple markets.

*This is a limitation connected to the assumption that PRA and VIE market will have a unique DF in Euro.*

*Further adaption will be done to support additional market with different configurations in a full multicurrency, multi-DF shape.*

Relationship between Default Fund and Participants/Markets are represented in a separated document ("BRS-AS-Account Structure").

## Default fund quota calculation

The default fund quota calculation is carried out by the clearing system when a new default fund requirement is computed or manually by the operator.

The Total Amount of the Default Fundhas to be allotted among all participants; for this reason a Calculated Contribution Quota is calculated for each participant, on the basis of the average of the Initial Margins deposited in a certain former period. This amount is then compared with the minimum Contribution Quota.

|  |  |
| --- | --- |
| 1:Compute default fund quota | |
| Diagram details | |
| 1.0 - start | It represents the "start default fund quota calculation" action that can be triggered by a user (manually) or by the system (scheduled).  Input parameters used for the calculation are:   1. [DF]: Total targeted default fund amount (Total DF requirement) 2. [n]: Observation period (1 calendar month or multiples/fractions) 3. [Qmin]: Minimum contribution quota |
| 1.1 - Compute Minimum Quota of DF requirement | The Minimum contribution quota is determined on the basis of the membership type. |
| 1.2 - Calculate Average Initial Margin | For each Participant/Margin account, The Clearing System calculates the Average Initial Margins deposited in the previous n months.  Detailed calculation procedure in 'Calculation of the Average Initial Margins' requirement FN00006852. |
| 1.3 - Compute Dynamic Contribution Quota | In order to allot the total amount of the default fund among all clearing members, the system calculates the Dynamic Contribution Quota for each participant on the basis of the average of Initial Margins deposited in a certain period.  Detailed calculation procedure in 'Calculation of the Dynamic Contribution Quota' requirement FN00006854. |
| 1.4 - Compute Contribution Quota Due | The Contribution Quota Due is the result of the comparison between the Dynamic Contribution Quota and the Minimum Contribution Quota.  Detailed calculation procedure in 'Calculation of the Contribution Quota Due' requirement FN00006855. |

### FN00006853 - DF quota calculation schedule

The default fund quota calculation is carried out periodically by the clearing system according to a time schedule (e.g. monthly), but it can also be carried out manually by the operator.

### FN00006852 - Calculation of the Average Initial Margins

The process foresees the following steps:

1. computation, separately for each margin account, of the average of the Initial Margins deposited by the Participant xin the previous n months.
2. conversion of the values previously calculated from the Clearing Currency of each margin account to the DF currency (EUR). (no haircut).
3. calculation of the sum of the values previously calculated in order to assign to each Participantxa unique indicator of the Average Initial Margins (MIx) deposited in the previous n months.
4. calculation of the Total Average of the Initial Margins (MI) given by the sum of all the average values MIxpreviously calculated for each Participant.

### FN00006854 - Calculation of the Dynamic Contribution Quota

The process foresees the following steps:

1. computation of the ratio between the Average of the Initial Margins of the Participant x (MIx) and the Total Average of the Initial Margins (MI).
2. multiplication of the ratio (MIx)/(MI) by the Total Amount of the Default Fund (DF) to be allotted.
3. definition of the Dynamic Contribution Quota (QCx) as: QCx=DF\*(MIx)/(MI).

### FN00006855 - Calculation of the Contribution Quota Due

The Contribution Quota Due (QDx) is set as the maximum between the Dynamic Contribution Quota (QCx) previously calculated and the Contribution Quota Min (Qmin):

QDx=max{QCx; Qmin}.

The result obtained is rounded to the h-figure, where h is the predetermined rounding parameter of the Contribution Quota.

## Default Fund Call

The DF Call is scheduled to be run on [Payment Date] that is manually setup by the user. The aim of the process is to compute the default fund and generate the corresponding SWIFT message to the clearing member (optional).

This message will allow the transfer of cash from the clearing member TARGET2 PM account to the CCP.A’s TARGET2 PM account.

### FN00006868 - Default fund call activation

This process can be activated/deactivated per member (GCM/DCM). Participants for which this process is deactivated are handled via manual procedures.

### FN00006864 - Default fund restitution activation

The automatic process for the cash restitution in case of excess collateral can be activated/deactivated per member (GCM/DCM), independently from the activation/deactivation of the default fund call automatic process. Participants for which this process is deactivated are handled via manual procedures.

### FN00006865 - Perform default fund call

For each member the clearing system maintains a “Default fund balance”.

The process foresees the following steps/high level phases, for each clearing member:

1. Clearing system retrieves the value of the default fund current balance for each participant default fund account.
2. Clearing system compares the value of default fund requested contribution and default fund account balance. In case the difference (default fund call) is negative the clearing system generates a SWIFT message MT202 in order to transfer the default fund call amount from the member's account to the CCPA's account. This process is executed automatically by the system if the default fund call automatic process is activated, otherwise it is executed manually by the user. In case the difference is positive (excess collateral) and the default fund restitution automatic process is activated, an MT202 is generated in order to enable the user to handle restitution; otherwise the user can manually decide to require the excess collateral restitution.

|  |  |
| --- | --- |
| 2:Perform default fund call | |
| Diagram details | |
| 1.0 - start | It represents the "start default fund call" action that can be triggered by a user (manually) or by the system ([Payment Date]).  Input parameter is:   * Requested default fund contribution: total amount of DF |
| 1.1 - get account balance | Clearing System accesses the default fund collateral account in order to retrieve the value of the default fund deposited by the member. |
| 1.2 - compute DF call / restitution | Clearing System computes the difference between the actual default fund account balance and required default fund contribution  **[DF call] = [DF Part. account balance]- [Participant contribution]** |
| 1.3 - send default fund call MT202 | In case of positive default fund call, a default fund call is generated and sent via SWIFT message MT202.  The Clearing System transfers the default fund contribution from the TARGET2 PM account of the clearing member to the CCPA account held at the Austrian National Bank.  Conversely, in case of negative default fund call, the excess collateral can be returned to the clearing member. |
| 1.4 - receive confirmation MT900/910 | After transfer, confirmation (MT900/910) the DF Account total amount is finally updated with the new transaction. |

### FN00006866 - DF Call message content

The message should contain at least the following information:

1. Sender reference
2. Receive reference
3. value date
4. currency
5. amount

Specific details on the message format and content are provided in IDS-IS volume.

## Default Fund Deposit and Withdrawal

The Clearing System supports the user with manual processes of withdrawal and deposit of cash collateral with the purpose of default fund coverage.

After having received a default fund call the CLearing Member deposits new cash in order to cover the requirement.

On the other hand, it is also possible to manually withdraw the excess quota from the default fund account.

### FN00006872 - Default Fund Call Notification

In case of non SWIFT users, who do not allow the MT202 payment messages, users are alerted by a system notification and related report is provided in BCS.

### FN00006874 - Perform Default Fund Deposit

The overall process is structured in the following steps:

1. Clearing member make a deposit on a dedicated collateral account held at OeNB.
2. Administrative user transfers the cash from the clearing member's account into the CCPA's account held at National Bank.
3. Administrative manually feed the Clearing System with the transaction that post the cash collateral to the Participant DF Account. The relevant information to insert are the following:

a) Participant Code

b) DF Participant Account ID

c) Transaction date

d) Countervalue

e) Currency

f) Transaction Code

4. The Clearing System updates the DF account balance representing the default fund.

### FN00006873 - Perform Default Fund withdrawal

The overall process is structured in the following steps:

1. Clearing member makes a withdrawal from a dedicated collateral account held at OeNB.
2. Administrative user transfers the cash from the CCPA's account held at National Bank into the clearing member's account.
3. Administrative user manually feeds the Clearing System with the transaction that withdraw the cash collateral from the Participant DF Account. The relevant information to insert are the following:

a) Participant Code

b) DF Participant Account ID

c) Transaction date

d) Countervalue

e) Currency

f) Transaction Code

4. The Clearing System updates the DF account balance representing the default fund.