ecc

part of eex group

# Bond collateral & Concentration Limits

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# Content

# 1. Eligible types of bond collateral

As stipulated in EMIR Article 46 (1) and related RTS 153/2013 Article 39 ECC accepts bonds that fulfil the requirements according to RTS 153/2023 Annex 1, Section 1 as margin and default fund collateral.

The key requirements can be summarized as follows:

- Bonds need to be both
  - an eligible asset for ECB (European Central Bank) and
  - admissible as collateral for Eurex Clearing.

- Beyond that, ECC applies additional requirements:
  - Remaining time to maturity needs to be 15 calendar days or more
  - Non-callable fixed rate or zero rate or non-callable floating rate bonds or non-callable reverse floating rate bonds with constant structure (i.e. no switch between fixed and floating coupons)
  - No optionality's and inflation-linked coupon structure
  - Acceptable risk profile based on internal risk assessment.

- ECC does not accept Clearing Members' own issues (wrong-way risk) as well as close link securities as collateral.

## 1.1 Valuing collateral

Collateral values are updated daily in the clearing system using the market price if available or the theoretical/model price, if market price is not available.

## 1.2 Haircuts

Haircuts are applied to account for potential fluctuations of the collateral value within the liquidation period.

To evaluate bond collateral ECC uses the EUREX methodology, including conservative haircuts.

The applied haircuts are calculated regarding stressed market conditions and an adequate liquidation period. They are conservatively calibrated to limit as far as possible procyclical effects.

# 2. Limits

According to Regulation EU/648/2012 (EMIR) Article 46 and the accompanying Regulatory Technical Standards (RTS) 153/2013 Article 42, a CCP shall establish and implement policies and procedures to ensure that the collateral remains sufficiently diversified to allow its liquidation within a defined holding period without a significant market impact.

## 2.1 Total issue amount limit

ECC does not accept more than 25% of the total issue amount per security.

## 2.2 Concentration limits

Furthermore, concentration limits regarding bond collateral with a long-term credit issuer rating[1] below AAA are applied on issuer, country and currency level.

Let $CV_0$ be the cash value and $CV_1, \dots, CV_n$ the collateral value (market value after haircut) of all bonds delivered as margin collateral of a clearing member.

Let I be the issuer of interest. $N_I = \{k \mid \text{bond } k \text{ issued by the issuer } I\}$ is the set of indices of all bonds of the issuer of interest. Then the sum of the collateral values of all issuer's bonds is limited as follows:

$$\sum_{i \in N_I} CV_i \leq \sum_{i=0}^{n} CV_i - 80\% \cdot \text{MarginRequirement}$$

Let C be the country of interest. $N_C = \{k \mid \text{bond } k\text{'s issuer domiciled in country } C\}$ is the set of indices of all bonds of the county of interest. Then the sum of the collateral values of all country's bonds is limited as follows:

$$\sum_{i \in N_C} CV_i \leq \sum_{i=0}^{n} CV_i - 80\% \cdot \text{MarginRequirement}$$

Let CCY be the currency[2] of interest. $N_{CCY} = \{k \mid \text{bond } k \text{ nominated in currency CCY}\}$ is the set of indices of all bonds of a special currency. Then the sum of the market values of all currency bonds is limited as follows:

$$\sum_{i \in N_{CCY}} CV_i \leq \sum_{i=0}^{n} CV_i - 80\% \cdot \text{MarginRequirement}$$

## 2.3 Examples

Let the margin requirement of the Clearing Member be EUR 100 MN.

[1] Based on the worst of the available long term issuer ratings by Moody's, Fitch and Standard & Poor's.
[2] Only non-EUR currencies considered

### 2.3.1 Issuer limit

Let the collateral portfolio be as follows.

| Type | No. | Issuer | Rating issuer | Collateral Value |
|---|---|---|---|---|
| **Cash** | 0 | - | - | 20 |
| **Bond** | 1 | Company A | AAA | 28 |
| **Bond** | 2 | Company B | BBB | 31 |
| **Bond** | 3 | Company B | BBB | 19 |
| **Bond** | 4 | Company C | AA | 30 |
| | | | | **128** |

Since Company A has an AAA rating, no issuer concentration limit applies. Both Company B and Company C, have an issuer rating below AAA, so the concentration limit applies.

For Company B the set $N_I = N_{Issuer\ B} = \{2,3\}$, the related collateral value is calculated according to

$$\sum_{i \in N_{Issuer\ B}} CV_i = 31 + 19 = 50.$$

The related upper limit is calculated according to

$$\sum_{i=0}^{n} CV_i - 80\% \cdot MarginRequirement = \ 128 - 80\% \cdot 100 = 48.$$

As 50 > 48 there is a breach of the concentration limit concerning issuer Company B.

For Company C the set $N_I = N_{Issuer\ C} = \{4\}$, the related collateral value is calculated according to

$$\sum_{i \in N_{Issuer\ C}} CV_i = 30.$$

As already shown the related upper limit is calculated according to

$$\sum_{i=0}^{n} CV_i - 80\% \cdot MarginRequirement = \ 128 - 80\% \cdot 100 = 48.$$

As 30 < 48 there is no breach of the concentration limit concerning issuer Company C.

### 2.3.2 Country limit

Let the collateral portfolio be as follows.

| Type | No | Issuer | Issuer's country | Rating country | Collateral Value |
|---|---|---|---|---|---|
| **Cash** | 0 | | - | - | 20 |
| **Bond** | 1 | Company A | Country A | AAA | 27 |
| **Bond** | 2 | Company B | Country B | BBB | 33 |
| **Bond** | 3 | Company C | Country B | BBB | 29 |
| **Bond** | 4 | Company D | Country A | AAA | 23 |
| | | | | | **132** |

Since the rating of Country A is AAA, no country concentration limit applies.

Contrary, for Country B with an external rating of BBB, the limit applies. For Country B the set $N_C = N_{\text{Country B}} = \{2,3\}$, the related collateral value is calculated according to

$$\sum_{i \in N_{\text{Issuer B}}} CV_i = 33 + 29 = 62.$$

The related upper limit is calculated according to

$$\sum_{i=0}^{n} CV_i - 80\% \cdot \text{MarginRequirement} = 132 - 80\% \cdot 100 = 52.$$

As 62 > 52 there is a breach of the concentration limit concerning Country B.