part of eex group

ecc

Bond Collateral Concentration & EUR Minimum Cash Quota

01.06.2023

Internal

1. Accepted Types of Bond Collateral

Giving regard to RTS 153/2013 Annex I ECC only accepts bonds as collateral fulfilling the following conditions:

- ECB eligible
- admissible for Eurex
- remaining time to maturity > 14 calendar days
- fixed rate or zero rate bonds, floating rate bonds or reverse floating rate bonds with constant structure
- No optionalities and inflation-linked coupon structure
- Acceptable risk profile based on the internal risk assessment

ECC does not accept own issues (wrong-way risk) as well as close link securities as eligible 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.

2.1 Haircuts

Haircuts are applied to account for potential fluctuations of the collateral value within the liquidation period. For the purpose of evaluating collateral securities ECC uses the EUREX methodology, including conservative haircuts. The applied haircuts are calculated with regard to stressed market conditions and an adequate liquidation period. They are conservatively calibrated to limit as far as possible procyclical effects.

2. Minimum Cash Quota for Margin Requirements

Every Institution Clearing Member is obliged to stick to a pre-defined EUR Minimum Cash Quota, considering the EUR Cash Collateral Contributions in relation to the Margin Requirements (all margin classes considered, including Premium Margins). The EUR Cash Margin Quota is calculated and monitored on the level of the Institution Clearing Member and is only applied on Margin Requirements but not on Default Fund contributions.

According to the currently set requirement the EUR Minimum Cash Quota for Margin Requirements is 50%.

Changes to the minimum Cash Margin Ratio will be announced by means of a Clearing Circular.

The actual EUR Cash Margin Quota is calculated according to:

$$EUR\ Cash\ Margin\ Quota\ (CM) = \frac{EUR\ Cash\ Margin\ Collateral\ delivered\ per\ CM}{(Initial\ Margin\ Requirement + Premium\ Margins)\ per\ CM}$$

The calculation of the actual EUR Cash Margin Quota is possible on the basis of the EUREX reports.

3. Bond collateral 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.

For this, a CCP shall determine concentration limits at the level of individual issuers, types of issuers, types of assets, each clearing member, all clearing members. The concentration limits shall be set conservatively and include relevant criteria, e.g. economic sector, geographic region, the level of credit risk of a financial instrument / issuers, issuing country, liquidity of the instrument.

3.1 Total issue amount limit

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

4.1 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 $\mathrm{CV}_1, \dots, \mathrm{CV}_n$ the collateral values (market value after haircut) of all bonds delivered as margin collateral of a clearing member.

Let I be the issuer of interest. $\mathrm{N_I} = \{\mathrm{k} \mid \text{bond k issued by the issuer I}\}$ 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:

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

Let C be the country of interest. $\mathrm{N_C} = \{\mathrm{k} \mid \text{bond k's issuer domiciled in country C}\}$ 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:

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

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

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

[1] Based on the median of the available long term issuer ratings by Moodys, Fitch and Standard & Poors
[2] Only non EUR currencies considered

4. Examples

Let the margin requirement of a clearing member be 100 mn. EUR.

5.1 Issuer limit

Let the collateral portfolio be as follows.

Type	Nr	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 a rating of AAA, no issuer concentration limit applies. For company B the set $\mathrm{N_I} = \mathrm{N_{Issuer\ B}} = \{2{,}3\}$ and for company C $\mathrm{N_{Issuer\ C}} = \{4\}$

$$\sum_{i \in \mathrm{N_{Issuer\ B}}} \mathrm{CV_i} = 31 + 19 = 50 > 48 = 128 - 80\% \cdot 100 = \sum_{i=0}^{n} \mathrm{CV_i} - 80\% \cdot \mathrm{MarginRequirement}$$

I.e. there is a breach of the concentration limit of issuer company B.

$$\sum_{i \in \mathrm{N_{Issuer\ C}}} \mathrm{CV_i} = 30 < 48 = 128 - 80\% \cdot 100 = \sum_{i=0}^{n} \mathrm{CV_i} - 80\% \cdot \mathrm{MarginRequirement}$$

I.e. the collateral values of company C are within ECC’s concentration limit.

6.1 Country limit

Let the collateral portfolio be as follows.

Type	Nr	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. For country B the set $\mathrm{N_C} = \mathrm{N_{Country\ B}} = \{2{,}3\}$ and

$$\sum_{i \in \mathrm{N_{Country\ B}}} \mathrm{CV_i} = 33 + 29 = 62 > 52 = 132 - 80\% \cdot 100 = \sum_{i=0}^{n} \mathrm{CV_i} - 80\% \cdot \mathrm{MarginRequirement}$$

I.e. there is a breach of the concentration limit of country B.