

Collateral Policy

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Collateral Policy	46	37	Approved by General Management; to be regularly reviewed by the Risk Committee

*EMIR = Regulation (EU) 648/2012; ** RTS = Comm. Del. Regulation (EU) 153/2013

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Change Log¹

Version	Effective Date	Change Description
V2.0	12.1.2014	Update on obligation to cover margin requirements by 10% in cash; new definition of eligible securities for collateral
V2.1	7.7.2014	Clarification on concentration limits: limits defined in regulation (EU)153/2013 (RTS) are considered, limits are not applied on collateral exceeding the required amount (no limits for over – collateralisation)
V2.2	14.7.2014	Update of minimum haircut per collateral class (Table 3 in Section 3.1)
V2.3	1.12.2014	Reduction of holding period from T+4 to T+3 due to introduction of settlement period T+2
V2.4	4.5.2016	Annual review – no changes
V2.5	12.5.2017	Amendments in concentration limits
V2.6	04.05.2018	Annual review – minor editorial changes

¹ The Change log is only used for final versions.

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1 Introduction

In this document, CCP.A defines its collateral policy in accordance with Article 46, Collateral Requirements, Regulation (EU) No. 648/2012 and pursuant to the supplementing Regulation ESMA, "*Regulatory technical standards on requirements for central counterparties*", Chapter X Art. 37-42. CCP.A only accepts highly liquid securities with minimal credit and market risk to cover its Clearing Members' risk exposure. CCP.A has taken a conservative approach to the admission of certain assets as collateral and to their evaluation.

A description is given of the procedures for selecting the instruments accepted as collateral as well as the valuation guidelines. This includes the definition of adequate haircuts for each of the instruments and the establishment of concentration limits (collateral limits). Strategies for avoiding "wrong way risk" are also explained.

This Collateral Policy refers to the clearing collateral that must be deposited (margins) and the contribution to the default fund.

Part A of the document (chapters 2-7) only concerns the collateral deposited to cover the margin requirements.

Part B of the document (chapter 8) concerns the contribution to the default fund.

Part A Accepted Collateral for the Margin Requirement

2 Collateral to cover the Margin Requirement

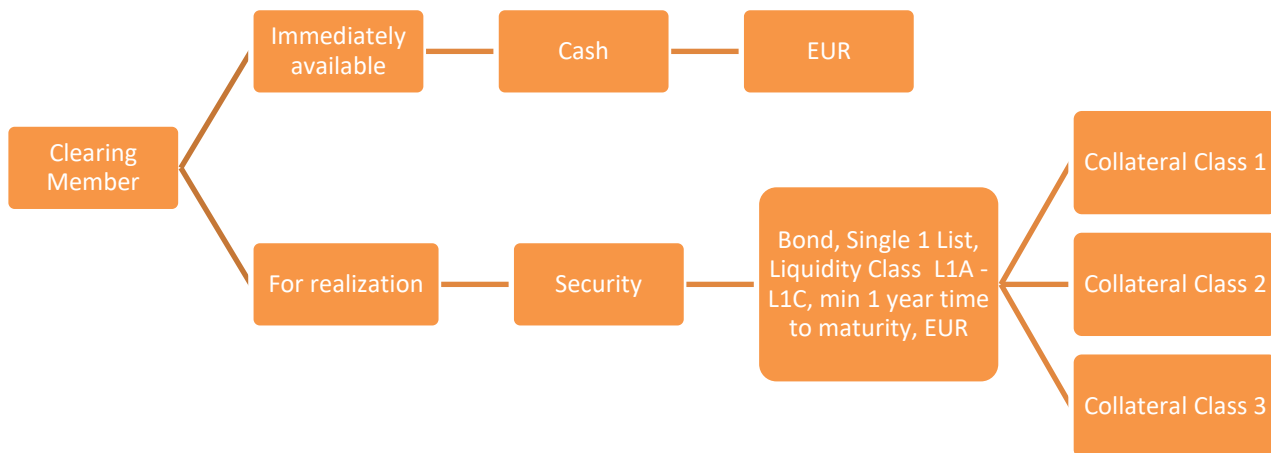


Figure 1 : Accepted Collateral for the Margin Requirement

2.1 Immediately Available Collateral – Cash

Cash collateral is only accepted in the currency admitted as clearing currency by CCP.A. However, not every clearing currency is automatically accepted as cash collateral.

At present, the following currencies are accepted:

- Euro (EUR)

2.2 Securities as Accepted Collateral

Securities are only accepted for the margin requirement, but not as deposits for the contribution to the default fund (see Part B, Chapter 8).

Securities are accepted whose issuers have low credit risk and low market risk, which are freely transferable and tradable on regulated markets for which price data is regularly published.

The following securities are therefore accepted as collateral by CCP.A.

Collateral Class 1-3:

- Debt instruments specified on the Single List of the ECB (<https://mfi-assets.ecb.int>).
- Listed in EUR
- Assignable to one of the liquidity classes in the table
- Remaining time to maturity of at least one year
- Listed on a regulated market in the EU
- The issuer is not
 - the Clearing Member or a company with which the Clearing Member is affiliated
 - CCP.A or a company belonging to the same group, i.e., WBAG or OeKB an entity that provides services critical for functions of CCP.A unless the entity is an EEA central bank. The following company is currently defined as such an entity: OeKB as the settlement bank. For securities in Collateral Class 1-3 in the single list, the max haircut is 10% (i.e. haircut <= 10%).
 - CCP.A retains the right to delete securities with 'Issuer Residence' in specific countries from the list of accepted collateral.

CCP.A assigns each security to one of three Collateral Classes. The assignment to a Collateral Class reflects the credit quality of a security; securities in Collateral Class 1 have the highest credit quality.

When assigning a security to a Collateral Class the liquidity, price availability, reference market and haircut considered adequate by the ECB are taken into consideration.

Liquidity classes

When taking liquidity into consideration, CCP.A uses the liquidity classes defined by the ECB as well as indicators it has developed itself for price availability.

Category I (L1A)	Category II (L1B)	Category III (L1C)	Category IV (L1D)
Central government debt instruments	Local and regional government debt instruments	Traditional Pfandbrief-style debt instruments	(Unsecured) credit institution debt instruments
Debt instruments issued by national central banks	Jumbo Pfandbrief-style debt instruments	Debt instruments issued by non-financial entities and other issuers	(Unsecured) debt instruments issued by financial institutions that are not credit institutions
	Agency debt securities	Other covered debt instruments issued by banks	
	Supranational debt instruments		

(1) Debt instruments issued by the ECB and debt instruments issued by the NCBs before the introduction of the Euro in their respective countries are in liquidity category I.

- (2) “Jumbo mortgage bonds and similar instruments” only refers securities with an issuing volume of at least € 1 billion, where at least three market makers have to offer bid and ask prices regularly.
- (3) Liquidity category II only includes marketable instruments from an issuer which has been classified by the ECB as an institution with a public mandate. Marketable assets issued by other institutions have to be assigned to category III or IV – depending on the issuer and the type of security.
- (4) Non UCITS compliant covered bank bonds, including structured covered bonds and several issuers issued covered bonds, are assigned to category III.

Table 1: Liquidity classes pursuant to ECB

In addition to the liquidity classes pursuant to ECB, liquidity is also assessed based on available closing prices. To this end, an analysis is conducted to check on how many days no prices were determined within an observation period on which, and therefore, the historic closing price has to be used.

Price Availability

The indicator 'price availability' is derived from the quotient of the number of current closing prices / number of trading days.

Example:

Observation period 1 Jan. 2013 to 30 Jun. 2013: 122 trading days
 ISIN AT0000809058 had a current price on 122 trading days; price availability: 100%
 ISIN AT0000723606 had a current price on 46 trading days; price availability: 38%
 ISIN AT0000A001X2 had a current price on 4 trading days; price availability: 3%

The securities are grouped into the following Collateral Classes.

2.2.1 Collateral Class 1:

- Liquidity Class 1A
- Price availability at least 95%
- Reference Market RMAT01 (WBAG, Official Market)
- ECB haircut max. 5%
- Individual haircut < maximum haircut of the Collateral Class

2.2.2 Collateral Class 2:

- Liquidity Class 1A or 1B
- Price availability at least 50%
- No restrictions to the reference market
- ECB haircut max 8%
- Individual haircut < maximum haircut of the Collateral Class

2.2.3 Collateral Class 3:

- Liquidity Class 1A to 1D
- Price availability less than 50%:

- ECB haircut max. 10%
- No further restriction of Liquidity Classes or Reference Market

The table below gives an overview of the assignment of bonds to Collateral Classes

Credit Rating	Time to Maturity	Liquidity Class							
		L1A		L1B		L1C		L1D	
		Straight	Zero	Straight	Zero	Straight	Zero	Straight	Zero
(AAA to A-)*	0-1	0.5	0.5	1.0	1.0	1.5	1.5	6.5	6.5
	1 - 3 years	1.5	1.5	2.5	2.5	3.0	3.0	8.5	9.0
	3 - 5 years	2.5	3.0	3.5	4.0	5.0	5.5	11.0	11.5
	5 - 7 years	3.0	3.5	4.5	5.0	6.5	7.5	12.5	13.5
	7 - 10 years	4.0	4.5	5.5	6.5	8.5	9.5	14.0	15.5
	> 10 years	5.5	8.5	7.5	12.0	11.0	16.5	17.0	22.5
(BBB+ to BBB-)*	0-1	5.5	5.5	6.0	6.0	8.0	8.0	15.0	15.0
	1 - 3 years	6.5	6.5	10.5	11.5	18.0	19.5	27.5	29.5
	3 - 5 years	7.5	8.0	15.5	17.0	25.5	28.0	36.5	39.5
	5 - 7 years	8.0	8.5	18.0	20.5	28.0	31.5	38.5	43.0
	7 - 10 years	9.0	9.5	19.5	22.5	29.0	33.5	39.0	44.5
	10 years	10.5	13.5	20.0	29.0	29.5	38.0	39.5	46.0

Table 2: Overview Collateral Classes

Legend:

- Green: Collateral Class 1:
- Orange: Collateral Class 2:
- Blue: Collateral Class 3:

CCP.A may re-assign an instrument that meets the criteria of Collateral Class 1 or 2 at any time to the next lower Collateral Class.

2.3 Collateral Not Accepted

Bank guarantees, gold and securities that do not meet the conditions stated in 2.2 as well as cash that is not denominated in the currencies listed in 2.1.

CCP.A retains the right to restrict the list of accepted collateral at any time, also for specific Members.

3 Valuation and Haircuts

Every cash collateral account and securities collateral account is assessed separately to determine the value of the collateral deposited by a Clearing Member and added up in accordance with the selected account structure.

The following valuation rules are applied:

- a) Cash collateral in EUR is valued at the current cash value in the respective currency without applying any further haircuts.

Example: When EUR 100,000 is deposited in cash, a value of EUR 100,000 is accepted as collateral.

- b) Securities are valued at the last available price, with haircuts being applied.
- c) For every security deposited on the cash collateral account, the volume deposited is multiplied by the last available price. This value is reduced by the haircut defined.

Example:

- *Volume deposited: EUR 100,000*
- *Last available price: 98%*
- *Haircut: 5%*
- *Value of the collateral: $100,000 * 0.98 - 100,000 * 0.98 * 0.05 = 93,100\text{€}$*

3.1 Determination of the Haircuts

The size of the haircut of a security is determined per Collateral Class, applying the following methods:

CCP.A computes the historic volatility per security based on daily closing prices. To this end, the same methods are applied as for calculating the risk factors (see document "*Margin Calculation Methodology*", <https://www.ccpa.at/en/risk-management/margin-calculation>).

The calculation is carried out on a monthly basis applying the following parameters:

- Lookback period: 600 days, 1 year
- Holding period: 3 days
- Confidence level: 99%

The volatility calculated in this manner is compared to the haircut published by the ECB for this security. The higher value of the calculated, historical volatility and the haircut considered adequate by the ECB is assigned to the security (individual haircut).

By considering the haircuts defined by the ECB, the credit quality, liquidity, remaining time to maturity and type of interest (fixed income = 'straight', zero coupon = 'zero') are implicitly taken into consideration.

The haircut of a Collateral Class is taken from the average haircut of all securities of a Collateral Class, with a minimum and a maximum level being defined for the haircut.

Collateral Class	Minimum	Maximum
1	8%	20%
2	10%	20%
3	12%	n.a. (100%)

Table 3: CCP.A Haircuts minimum / maximum per Collateral Class

4 Limits

All limits are applied on the required collateral amount only. They do not apply to collateral held by the CCP.A in excess of the minimum requirements for margins.

4.1 Cash Limits

EUR: 100% on a Member basis and for CCP.A total; no limits are set for cash deposits in EUR. This means that every Member may deposit the entire collateral in cash in EUR.

Total Cash Limit from a Member's perspective: Every Member must deposit at least 10% of the margin requirement for the cash market in the form of "cash collateral".

Total Cash Limit from CCP.A's perspective: 100%; the whole collateral may be deposited in cash.

4.2 Concentration Limits for Securities Deposited as Collateral

There are concentration limits per Collateral Class, individual issuer and groups of issuers. The collateral per Clearing Member and/or the entire collateral deposited with CCP.A is taken into account, with the assessed collateral (i.e. incl. haircut) being used.

Example for a Collateral Class limit for a Member:

- Bank XY has deposited EUR 1,500,000 in cash collateral and assessed bonds of Collateral Class 2 with a nominal value of 1.2 million at the current price. Applying a haircut of 10% results in a collateral value of 1,076 million.
- The share of collateral in Collateral Class 2 of Bank XY is therefore 42% (1,076/ 2,576) and is within the limit of 75%.

Example for an issuer limit CCP.A total:

- CCP.A has collateral totaling EUR 440 million (cash collateral + assessed securities collateral including the haircut). As cover, bonds of the issuer "Kreditanstalt für Wiederaufbau" in an amount of EUR 22 million have been deposited (valued at the last available price and applying the haircut).
- Thus, at CCP.A 5% of the total collateral is of an individual issuer and therefore within the limit of 50%.

The following concentration limits have been defined:

Collateral Type	Group	Limit CCP.A total	Limit per Member
Cash		100%	100%
Securities	For margin requirements on the cash market	90%	90%
thereof in securities			
Collateral Classes	1	100%	100%
	2	100%	100%
	3	50%	50%
Issuer group	IG1 Central Bank	100%	100%
	IG2 Central Government	100%	100%
	IG3 Corporate and Other Issuers	25%	50%
	IG4 Credit Institutions	25%	50%
	IG5 Regional/Local Government	25%	50%
	IG6 Supranational Issuer	25%	50%
	IG7 Agency – Non-Credit Institution	25%	50%
	IG8 Agency - Credit Institution	25%	50%
	IG9 Other Financial Corporations	25%	50%
Individual issuer	Central Government		
	AAA-AA Rating (S&P)	75%	100%
	A Rating (S&P)	50%	75%
	All others	25%	50%
	Guaranteed by single credit institution Limit acc. RTS Art 42 (4).	10%	n.a.

Table 4: Concentration limits for the composition of the collateral

CCP.A publishes the list of all states, which are currently accepted as issuers of government bonds on its web-site: <https://www.ccpa.at/risk-management/sicherheiten-collateral-policy/>.

CCP.A may also take the total outstanding volume of the issuer in relation to the value in CCP.A's Portfolio for collateral of issuer group 3-9 into consideration, when determining the eligibility of single instruments.

5 Review of the Collateral Composition

5.1 Review of the Securities' Characteristics

The credit and market quality is assessed based on the Single List published by the ECB at the time of delivery or replacement as well as on a monthly basis.

The assessment includes a review of the liquidity class, the reference market as well as the haircuts recommended by the ECB and based on these parameters, the assignment of the deposited collateral to the Collateral Classes is checked, and if necessary, adjustments are made. Any adjustments are recorded in the monthly report.

5.2 Review of Price Volatility

Price volatility of the securities deposited as collateral should be at a significance level of 99% within the price deviations covered by the haircuts. This is given because the calculation of individual potential volatility per security is done at a confidence level of 99%. The monthly review is done within the scope of the monthly revaluation of the haircuts.

In the case of securities of Collateral Class 1, the volatility corridors defined by the trading system limit the potential price fluctuation. Furthermore, the securities are traded in a single intra-day auction; therefore, there is no intraday price fluctuation.

For collateral not traded in the trading system, the prices are made available by OeKB CSD GmbH. The prices are loaded daily into the PAMP system (see "*Margin Calculation Methodology*") and are checked within the scope of the monthly revaluation of the haircuts.

5.3 Review of Concentration Limits

The collateral composition of CCP.A and of the ten largest Members is carried out on a monthly basis.

In the case of limit breach by a Member, the Member is requested to replace the securities within the period defined by CCP.A.

5.4 Review of the Collateral Policy

The Collateral Policy is reviewed at least once a year by the Risk Committee. The review is conducted on the basis of the monthly collateral reports of CCP.A.

6 Wrong Way Risk

Wrong-way risk refers to the risk of correlation of default probability of a Clearing Member and of the (market) risk of a Member's positions (rising exposure at rising default probability or sinking credit rating).

This is the case, for example, when a Member deposits its own issues as collateral. For this reason, CCP.A does not accept any securities as collateral issued by a Member, by an entity belonging to the same group or by an affiliated company of the group (stake >20%).

Furthermore, a higher credit risk factor is assigned to Members with low credit ratings and this increases the collateral (cf. "*Margin Calculation Methodology*").

CCP.A reviews the composition of the collateral (see Collateral Reports) on a monthly basis and may, if necessary, reject securities as collateral for specific Members if there is a correlation between the exposure and the collateral deposited.

7 Reporting

A collateral report is prepared monthly for the management board that contains the following information:

- List of securities deposited as collateral as of the cut-off date and their characteristics
 - Liquidity class
 - ECB haircut
 - Reference market
 - Issuer type
 - Asset type
 - Remaining time to maturity
 - Collateral class
- Composition of the collateral by collateral type and class
- Composition of the collateral by issuer group
- Exceptional events in connection with the collateral deposited such as extraordinary price fluctuations, restrictions to the collateral accepted.

Part B Collateral to cover the contribution to the Default Fund

8 Accepted Collateral for the Default Fund



Figure 2 : Accepted collateral for the default fund

8.1 Immediately Available Collateral – Cash

Only cash collateral in EUR is allowed for the contribution to the default fund. The amount shall be transferred to a dedicated default fund cash account of CCP.A.

8.2 Collateral Not Accepted

Bank guarantees, gold, securities and cash which does not correspond to the listed currencies in 8.1.

8.3 Valuation and Haircuts

Cash collateral in EUR is valued using the current cash value in the respective currency without further haircuts.

Example: If 100.000 € are deposited in cash, then the value of 100.000 € will be accepted as security.

8.4 Limits

As the entire contribution to the default fund will only be deposited in cash (€), no other limits are applied.

8.5 Reporting

The management board is informed about the Participants' individual contribution to the default fund every month.