Margin Calculation Methodology

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Margin Calculation Methodology	41	Chapter VI	Approved by management, to be regularly reviewed by risk committee

*EMIR =Regulation (EU) 648/2012, ** ESMA RTS = *Regulation (EU) 153/2013

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Change Log

Version	Date	Change Description
V3.0	6.06.2014	derivatives market has been removed; update of current parameters used for margin calculation (min price history, default value): anti-procyclicality margin buffer; new flat risk factors for bonds, certificates and warrants; description of bulk factor determination for these product categories (look-back period, holding period and reached confidence levels); outlook regarding margining for product categories for bonds, certificates and warrants
V3.1	14.07.2014	Update of risk factor for product category bond, Section 2.2.3
V3.2	01.12.2014	Reduction of holding period from T+4 to T+3 due to introduction of settlement period T+2

Content

1 Introduction

According to EMIR Art 41 CCP.A calculates initial margins to cover the exposure of CCP.A arising from market movements, mainly contributing to market risk and more general counterparty credit risk of the clearing of CCP.A towards its members.

This document describes the methodology, process, parameters of the margin calculation for all cleared instruments ("CCP.A eligible instruments") traded on Wiener Börse's markets.

For all cash market instruments (equities, bonds, structured products) CCP.A uses the same “risk based margining” algorithm, but with different parameters.

Chapter 2 of this document describes the margin methodology as well as the determination of the main model parameters: the Risk Factor and the Credit Risk Factor.

The Risk Factor is determined using the following parameters required by ESMA

- Confidence Interval (Reg. (EU) 153/2013, Art. 24)
- Time Horizon for the Calculation of Historical Volatility (Reg. (EU) 153/2013, Art. 25)
- Time Horizon for the Liquidation Period (Reg. (EU) 153/2013, Art. 26)

Furthermore, CCP.A’s margin model uses an additional Credit Risk Factor which is set on member basis.

The document also explains how CCP.A approaches Portfolio Margining (Reg. (EU) 153/2013, Art. 27) and how CCP.A limits procyclicality effects (Reg. (EU) 153/2013, Art. 28).

Chapter 3 describes the process timing, frequency and monitoring of the margin calculation as well as the procedures for margin calls.

Chapter 4 summarizes all model parameters, which are subject to be reviewed by the risk committee on a regular basis.

The collateral policy of CCP.A (eligible collateral, determination of haircuts, collateral limits, etc.) is described in "*Collateral Policy*".

2 Margin Methodology

2.1 Risk Based Margining

CCP.A is calculating the margin requirement of a clearing member on margin account level for net positions held therein, distinguishing each instrument. Netting is done on ISIN level for all open (i.e. not yet settled) positions.

This chapter describes

- how the initial margin is calculated for a net position in a single instrument
- how this methodology is used to calculate the margin on margin account level
- CCP.A’s approach towards portfolio margining and correlations between instrument

- methods used to avoid procyclicality

2.1.1 Definition of "Potential Loss"

In case of a default, CCP.A has to close the non-segregated[1] positions of the defaulting clearing member, e.g. sell or buy the respective financial instruments.

In case the defaulting member has a short position, CCP.A has the obligation to deliver (versus payment) securities to the buyer concurrently receiving the original settlement amount from the buyer. If the defaulting member fails to deliver the securities to CCP.A, CCP.A must buy them on the market. In case that the price is higher than the original price, CCP.A would suffer a loss (market risk).

In case the defaulting member holds a long position, CCP.A has the obligation to pay the original settlement amount to the seller concurrently receiving the respective securities. If the ultimate buyer fails to pay the settlement amount to CCP.A then CCP.A must draw on its liquidity pool to compensate the seller for the purchase. CCP.A will then subsequently sell the securities received on the market to cover the liquidation loss. If the price of that sale is lower than the original price, CCP.A suffers a loss.

Accordingly, the ultimate objective of initial margin calculation is to estimate the potential loss that is due to such forced liquidation of positions, leaving the central counterparty potentially in deficit.

*<u>Definition</u> : Potential Loss := position parity (+/-) * (initial value of position - liquidation costs)*

where the position parity is (+1) for a long position (from member view, e.g. member was buying) and (-1) in case of a short position.

2.1.2 Risk Based Margin Components

To estimate the potential liquidation costs, CCP.A utilizes standard risk based margining.

The general margin calculation approach consists of the following steps. The first step is the determination of the Initial Value ("IV") of the position.

$$IV = Q * P_t$$

where "*Q*" equals the quantity of the position (negative for short position, positive for long position) and "*Pt*" is the original price on trading day.

Current Liquidation Value ("*CLV*") of the position is determined by using mark-to market valuation.

$$CLV = Q * P$$

where "*Q*" equals the quantity of the position (negative for short position, positive for long position) and "*P*" the last available market price.

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[1] *Explicitly segregated positions of registered clearing clients of the defaulting clearing member will not be taken into account and be transferred to another clearing member.*

The next step is to calculate the Additional Margin ("*AM*") which covers the risk of adverse price movements until the time of liquidation. The calculation is based on the historical volatility of an instrument (estimated extend of future price movements) and the actual market price. With these parameters the anticipated worst case price of the instrument can be deduced.

For cash market instrument the value is linear depending from its market price, therefore in case of a member's short position a price up movement will reflect the worst case (from CCP.A's view). In case of a member's long position a price down movement will reflect the worst case for CCP.A

Therefore the additional margin is calculated as

$$AM = Q*P*RF$$

in case of short positions, assuming an upside price movement and

$AM = Q*P*(-RF)$for long positions, assuming a downside price movement.

"*RF*" equals the Risk Factor or Margin Parameter determined using historic volatility. The Risk Factor calculation algorithm will be described in detail later on.

The Liquidation Costs ("LC") are determined by adding the Additional Margin to the Current Liquidation Value of the position:

$$LC = CLV + AM$$

The Risk Based Margin ("*RBM*") for a position in a single instrument "i"is then calculated as

$$RBM_i = max[(IV_i\text{-}LC_i);0]$$

2.1.3 Initial Margin per Member Margin Account

To compute the margin per margin account, CCP.A calculates the Risk Based Margin amount for each netted position on instrument level. The sum of these values is the risk based margin per margin account.

This amount is multiplied by an individual Credit Risk Factor "CF" per member, which reflects the different risk category of a member. The risk category is set by CCP.A on the basis of yearly member credit ranking and/or on publicly available information on a clearing member.

The Initial Margin "IM" per clearing member's margin account is computed according to the formula$IM_{account} = CF * \sum_i (RBM_i)$

for all instruments "i" which are held in the given margin account.

The initial margin calculation formula above involves the two most important parameters in margining: the Risk Factor "RF" (used for calculating the additional margin of individual instruments) and the overall Credit Risk Factor "*CF*".

The Credit Risk Factor is composed of the main general margin buffer amounting to 25% and the individual risk category of the member, ranging between 0 and +30%.

2.1.4 Portfolio Margin and Correlations between Instruments

The margin is calculated on member margin account level. CCP.A does not consider correlations between instruments. The margin requirement on instrument level is always equal or greater than zero.

There is no positive offset for margin requirements in case of a profitable position (e.g. a position where the current liquidation would lead to a profit for the CCP.A).

2.1.5 Procyclicality Rules

To limit procyclicality[2] effects, Reg. (EU) 153/2013, Art. 28 suggests the following methods:

a) Applying a margin buffer of at least 25% to the calculated margin
b) Assigning at least 25% weight to stressed observations in the look-back period
c) Ensuring the margin requirement is not lower than those using a volatility estimated over a 10-year look back period

CCP.A has implemented method a). The margin buffer amounts to 25% and is applied on the total calculated margin requirement per margin account. In periods when calculated margin requirements are rising significantly, this margin buffer can be temporarily exhausted.

2.2 Model Parameters and Input Data

2.2.1 Risk Factor Algorithm for Equities

The actual calculation of the Risk Factors is done within the "Automatic Procedure for Margin Parameter" ("PAMP"), which was developed by the Italian CCP (CC&G). The PAMP documentation (comp. Sec. 6.1 – List of Further Documentation) provides information on all parameters, functions and methodologies which are available. The parameters used by CCP.A are to be found in Sec. 5.

Basically PAMP calculates the historic volatility taking into account historic price variations (real distribution) and, in addition, the statistic variation following the assumption of normal distributed price variations. Both methods can be applied using several sets of parameters (look back period, confidence interval and holding period). Each method and parameter set delivers a respective Risk Factor.

CCP.A can define a range (cap and a floor) for the final Risk Factor. This can be applied to groups of instruments or on single instrument (ISIN) level.

Step 1:

Based on a price history, PAMP calculates the price variation for a given holding period "h" compared to the price at "t". The price variations "PV" are defined as

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[2] *Market practices related to market-sensitive valuation techniques appear to have contributed to an increase in the procyclicality of leverage in the financial system. There are policy options that could mitigate these procyclical mechanisms. These include quantitative limits on leverage, steps to support better measurement and pricing of risk through the cycle (in particular funding liquidity risk), and measures to mitigate procyclical effects that mark-to-market valuation may have on incentives and decision-making.*

$$PV := \frac{Price_t}{Price_{t-h}} - 1$$

Step 2:
Real distribution approach of price variations - based on the chosen time series to be analysed (typ. 600 days) and the confidence level (99%) to be covered through the calculation the risk management sets the number of expected price variations in and out of the confidence interval. Depending on the settings PAMP will analyse the price variations starting with the last available price (current CCP.A setting) or a different date.

Step 3:
After calculating the series of price variations they get sorted by their absolute values. From this ordered set the Minimum Margin Value "*MinMar*" (the highest observed variation inside the confidence interval) and the Maximum Margin Value "*MaxMar*" (the smallest observed variation outside the confidence interval) is being derived.

Step 4:
Standard distribution approach: in addition to the above analyses a normal distribution of the price variations is assumed with positive and negative price variations. The standard deviation of the observed distribution "σ" is used to derive the 99 % value of the 'normal distributed' price variations, by multiplying the measured standard deviation "σ" of the observed distribution with the factor 2,57583 (i.e. the 99% quantile of the standard deviation). The parameter derived from this analysis is defined as Normal Margin Value "*NorMar*".

Step 5:
The Risk Factor "*RF*" of a given instrument "*i*" is then as follows.

$$RF_i = \max(MinMar;\ MaxMar; NorMar)$$

All parameters are rounded as specified in the PAMP parameter Rounding Precision "*RP*".

Step 6:
The Risk Factor analysis can simultaneously be performed for an instrument on more than one set of parameters (e.g. for different look back periods), still delivering one "R*F*" for the instrument analysed. The respective resulting Risk Factor is then defined as the maximum of the individual Risk Factors per parameter set.

Step 7:
Finally, the predefined cap and floor values for the Risk Factors are applied to the calculated "*RF*". If the parameter falls in the allowed floor/cap interval for Risk Factors, then the Risk Factor derived through the procedure of Steps 1-6 is fixed. Otherwise the respective floor or cap settings overwrite the calculated "*RF*" accordingly.

2.2.2 Example

CCP.A is currently using the following parameters for equities:

	Parameter Set 1	**Parameter Set 2**
Look back period	1 year	600 days

Holding period	3 days	3 days
Confidence interval	99%	99%
Risk Factor Floor (RF_Floor)	5%	5%
Risk Factor Cap (RF_CAP)	99%	99%
Risk Factor Default (when price history < 100 days)	25%	25%

Remark: EMIR requires a holding period of at least 2 days and a confidence interval of at least 99%.

For a given look back period of 600 days[3] and a required confidence interval of 99% there are 594 events of the distribution within the confidence interval and 6 outside of the confidence interval.

The table below shows the sorted price variations "*PV*" (absolute values). Position 6 (the 1st outside the confidence interval) represents the Maximum Margin Value, position 7 (the last inside the interval) the Minimum Margin Value.

ABS(PV)	Sorted Position
16,00%	1
15,40%	2
12,18%	3
11,95%	4
11,45%	5
11,02%	**6**
10,44%	**7**
9,04%	8
8,92%	9
…	….

Having defined the Rounding Precision set to 2 decimals,

MaxMar = 11,02; *MinMar* = 10,44

Assume the standard deviation of all variations for 600 days is 0.02798, so the

NorMar = 2,5758 * 0,02798 = 7,71%

For comparison, a parallel analysis of the PV series based on a holding period of 253 days delivers the following set of parameters:

MaxMar = 12,18; *MinMar* = 11,95; *MinMar* = 6,01

[3] In case of a look back period of 253 days, events out would be 3, thus position 3 would deliver the "MaxMar" and position 4 the "MinMar".

Thus (comp. Step 7), the final Risk Factor will be:

$$RF = \max(RF^{600}; RF^{253}) = 12{,}18\%$$

with $RF^{600} = \max(11{,}02\%;\ 10{,}44\%;\ 7{,}71\%)$ and $RF^{253} = \max(12{,}18\%;\ 11{,}95\%;\ 6{,}01\%)$).

2.2.3 Risk Factor Algorithm for Bonds, Certificates and Warrants

More than 97% of the turnover cleared by CCP.A is executed in equities and equity-like instruments. In general, due to their liquidity equities are attributed with high quality (continuous) time series data. For margin calculation of these most important cash products CCP.A applies the risk factor calculation based on volatility distributions of the single instrument as described in 2.2.1.

Beside equities CCP.A clears the product categories *bonds*, *warrants* and *certificates,* which are marked by high number of instruments (>9.000) but very low volume. Due to the poor-quality price data a dynamic risk factor computation based on price variations of the single instrument will not deliver reliable results, therefore CCP.A applies a specific flat risk factor - bulk risk factor per category[4]. For the analysis purpose price volatility data of all instruments in a given category has been consolidated.

Look-back period

The currently used bulk risk factors have been derived from historical (t+4) analyses of price data during a look-back period which includes the most extreme market conditions observed during the last 30 years. On the Austrian market this was autumn/winter 2008, the period after the Lehmann's collapse.

Holding period

CCP.A clears all products within t+2. Therefore margining the products with 99% confidence level for a holding period t+2 would be the minimum as required by EMIR Art. 41. To be on the safe side CCP.A uses a holding period of t+3 for risk factor determination of *equities* and equity like instruments.

CCP.A has conservatively chosen to base the risk factor determination of *certificates* on the t+4 volatility distributions and for *bonds* on the t+6 volatility distributions (that means two / four more days for possible close-out). Only for *warrants* a holding period of t+3 is used, because the t+4 99% confidence level price variation is 118% and it seems unreasonable to request more than 100% margin for a cash product.

[4] *The rational of applying individual versus bulk risk factors for the different product categories is mainly given by the fundamental differences in liquidity in the four categories and, to the lesser, also by the vast difference in number of products, affecting risk exposure and data quality.*

Currently used flat rates

CCP.A compiled volatility data per product category: 0.5 m bond price variations, 3.3m certificate price variations and 1.8m warrant price variations[5] from the beginning of 2008 and derived 99% confidence levels for each of the t+1, t+3, t+4 and t+6[6] distributions.

In addition, CCP.A has analysed the distribution of corporate bonds with a maturity more than 5 years separately, because long term corporate bonds have a higher volatility as government bonds.

The historic analyses performed for the 3 product categories showed that the following Bulk Risk Factors currently used by CCP.A are conservative and well above the long-time 99% confidence levels:

category	bulk risk factor	holding period	confidence level
Bonds	9.5%	t+6	99,46%
Certificates	35%	t+4	99,20%
Warrants	99,99%	t+3	99,00%

Outlook

Such analyses will be performed on a regular basis and if needed the bulk risk factors will be adjusted. Changes of the Bulk Risk factors are proposed by the CRO and are reported to the General Management and the Risk Committee.

However, in order to provide higher efficiency to the clearing members, CCP.A intends to change the bulk margining method for certificates and warrants by gathering and applying the Price Without Turnover (PwT) Price estimates for the instruments. For this purpose simulations must be performed in order to evaluate, if the respective time series are suitable for individual application. Also the system's performance must be increased to cope with the high number of calculated instruments. The benefits and the efforts/costs regarding this change must be taken into consideration too. Keeping the very low turnover figures in mind, this effort may not pay off. If the turnover in bonds, warrants or certificates significantly rises or other events occur, which dramatically change the risk situation arising from clearing of these product categories, CCP.A will introduce appropriate measures for risk factor calculation on single instrument basis.

2.2.4 Price Feed

For Risk Factor calculation PAMP requires a daily price feed to build up a price history. CCP.A imports the daily closing price for each instrument. CCP.A receives the daily closing price from the exchange via file. In case that no actual close price is available on a given clearing day the last available price already imported in PAMP is used to build the daily price history.

5 For bonds only real trading prices were used, for warrants and certificates also Price without Turnover (PwT) prices were used.
6 T+6 holding period was used only for bonds, because of the very low number of prices.

If the historic price series is shorter than the predefined Minimum Length Price Series (CCP.A's setting is 100 days), the calculation is skipped and the Default Risk Factor of 25% (CCP.A setting) is applied.

2.2.5 Credit Risk Factor

According to the result of the credit rating, each participant is designated to a rating category. The CCP.A management defines a rating surplus for each risk category.

Additional surpluses to cover additional risks can be added or multiplied to the rating surplus in order to achieve a single Credit Risk Factor per member.

2.2.6 Parameters currently used by CCP.A in PAMP

Equities:

	Parameter Set 1	Parameter Set 2
Look back period	1 year	600 days
Holding period	3 days	3 days
Confidence interval	99%	99%
Risk Factor Floor (RF_Floor)	5%	5%
Risk Factor Cap (RF_CAP)	90%	90%
Min length price series	100	100
Default RF (in case of less prices)	25%	25%

Bonds:

	Parameter Set 1	Parameter Set 2
Look back period	1 year	600 days
Holding period	3 days	3 days
Confidence interval	99%	99%
Risk Factor Floor (RF_Floor)	9.5%	9.5%
Risk Factor Cap (RF_CAP)	9.5%	9.5%
Min length price series	n.a.	n.a.
Default RF (in case of less prices)	8%	8%

Certificates:

	Parameter Set 1	Parameter Set 2
Look back period	1 year	600 days
Holding period	3 days	3 days
Confidence interval	99%	99%

Risk Factor Floor (RF_Floor)	35%	35%
Risk Factor Cap (RF_CAP)	35%	35%
Min length price series	n.a.	n.a.
Default RF (in case of less prices)	35%	35%

Warrants:

	Parameter Set 1	**Parameter Set 2**
Look back period	1 year	600 days
Holding period	3 days	3 days
Confidence interval	99%	99%
Risk Factor Floor (RF_Floor)	99,99%	99,99%
Risk Factor Cap (RF_CAP)	99,99%	99,99%
Min length price series	n.a.	n.a.
Default RF (in case of less prices)	99,99%	99,99%

The Credit Risk Factor per rating category:

Rating category	**Rating surplus**	**operation**	**Additional surplus**
1 to 5	10%	+	25%
6 to 7	20%	+	25%
8	30%	+	25%

Example: for a clearing member in rating category 6 the Credit Risk Factor is accordingly *CF* = 1.45 (i.e. 1 + 20% + 25%), for a member in rating category 3, *CF* = 1.35.

2.2.7 Confidence levels

By applying conservative risk parameters on different levels in its margin methodology CCP.A is using effective confidence levels well above 99,50% when margining its cleared products.

Calculation of confidence levels for all product categories as of May 2014:

		2008		Vola applied	CL (effect)	Procyclicality Shield		Credit Rating applied	
		99% **(T+4)**	CL (T+3)		T+3	1,25 applied	CL (eff.)	CL (eff.)	
								10%	30%
Equities	RV	**24,33**	**99,123%**	*indiv.*	*99,123%*	*indiv. * 1,25*	99,422%	**99,542%**	99,781%
Bonds (T+4)	RV	*6,68*	*99,103%*	*7,5%*	*99,222%*	*9,4%*	*99,346%*	*99,444%*	*99,638%*
(T+6)*	RV	7,94	99,254%	**8,0%**	99,262%	10,0%	99,511%	**99,614%**	99,820%
Certificates	RV	33,91	99,158%	35,0%	99,198%	43,8%	99,468%	**99,591%**	99,839%
Warrants	RV	118,48	99,189%	100,0%	99,004%	125,0%	99,487%	**99,607%**	99,845%

*) because of the relatively small dataset (~ 500k prices) CCP.A chooses as reference a longer close out period (t+6 instead of t+4)

3 Margin Calculation Process

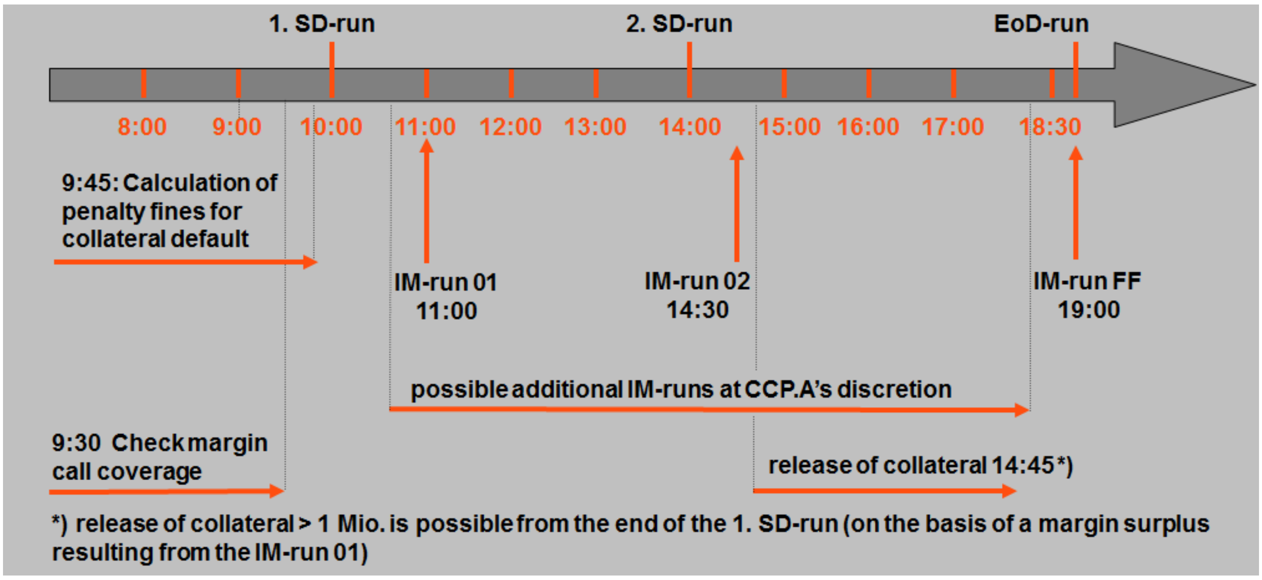
3.1 Timing and Frequency

The “Risk Factors” are calculated and updated on a daily basis. Margin calculation is done several times during the day upon each change in open positions (after new trades have been loaded or positions, which have reached the settlement date, have been settled). Margin Calls are generated after each margin run.

Currently CCP.A performs two margin runs during the day (IM-Run 01 and 02) and the final margin run (FF) at the end of the day. At each margin run, the current position is calculated taking into account all trades, which are not settled by that time. This includes trades from previous days, pending positions and new trades from the current trade date.

Immediately after each margin run the clearing members can view their updated margin and collateral values in the GUI and receive the margin reports (ISO messages or files in proprietary format SICS). The below time data are benchmarks when members will receive the details of performed IM-runs. CCP.A reserves the right to perform further IM-runs if necessary

- 11:00 – IM-run 01 excluding all balances fulfilled in the
  - 1st settlement-cycle and including all new trades
  - concluded up to that time
- 14:30 – IM-run 02 excluding all balances fulfilled in the
  - 2nd settlement-cycle and including all new trades
  - concluded up to that time
- 19:00 – IM-run FF including all trades of the trading day



3.2 Margin Call Procedures

After each margin run, the margin requirement is compared with the pledged collateral (valued according to the collateral policy). The reconciliation will end in one of the following results:

- Margin Call
- Margin Deficit
- Margin Surplus

3.2.1 Margin Call

A margin call is created if

margin requirement - pledged collateral > threshold.

During the final margin run at the end of the day, the threshold is zero, and a margin call is created whenever the collateral is not sufficient to cover the margin requirement. During Intraday Margin Runs, the threshold is the tolerance limit for intraday margin debit. The parameter is set as an absolute value or as percentage share of the margin requirement.

The current tolerance limits of CCP.A are EUR 50.000,00 (this is the minimum default fund contribution by each participant) or 10 % of the margin requirement.

In case of a margin request and margin calls, the member has to deposit additional collateral to fully cover the margin requirement. Intraday Margin Calls have to be fulfilled in the timeline[7] specified in the call by CCP.A.

3.2.2 Margin Deficit

A margin deficit is created after an intraday margin run, if

margin requirement - pledged collateral ≤ threshold.

[7] *Usually the timeline or intraday calls is 2 hours, unless stipulated otherwise in individual cases. Margin requests at the end of the day have to be covered until 10:00 a.m. on next trading day.*

As there is no threshold during the EOD margin run, there are no margin deficits at the end of the day. In case of a margin deficit, the participant receives a warning, but increase of collateral is not required.

3.2.3 Margin Surplus

A margin surplus is created after each margin run, if

margin requirement ≤ pledged collateral

Up to the amount of the surplus collateral can be released upon request after the 2nd Intraday Margin Run. Collateral surplus higher than 1.000.000€ can be released upon request after the first Intraday Margin Run. CCP.A does not automatically release collateral.

3.3 Monitoring

The daily processing of each Margin Run is closely monitored by CCP.A via the Clearing System Frontend. In case of any errors during the process, error notifications are automatically generated and sent to the operations team.

CCP.A periodically (at least monthly) generates risk reports to monitor the development of the margin requirements. These reports enable CCP.A to identify unusual changes on margin levels (e.g. margin requirements drops or rises significantly during a period) or changes in distribution of margin requirements on member level.

The average margin requirements as well as the number of collateral transactions are also monitored by CCP.A during the calculation of collateral management fee according to CCP.A's Price List.

CCP.A prepares quarterly "Risk Reports" for CCP.A management, displaying the margin development during the last 3 months compared with the figures of the previous period. This reports contains, amongst others

- the average margin requirement per member
- the average total daily margin requirement of all members
- the maximum margin requirement by the largest participant.

These reports are available since the company's launch of operations in 2005.

Starting with January 2013, CCP.A also provides monthly reports for FMA including figures on distribution of margin requirements amongst members (e.g. 10th largest participants), collateral composition and other information.

4 Model Parameters

Process	Parameter	effective Value	last update	last review
Risk factor on ISIN level	Confidence interval	99%	01.02.2005	28.04.2014
	Holding period	3 days	01.12.2014	01.12.2014

	Time horizon for look back period	600 Days, 1 Year	01.02.2005	28.04.2014
	Risk factor cap	99%	15.04.2013	28.04.2014
	Risk factor floor	5%	01.02.2005	28.04.2014
	Minimum price length for risk factor calculation	100 days	16.05.2014	28.04.2014
	Default risk factor in case of less prices	25%	16.05.2014	28.04.2014
Anti-procyclicality on market level	Margin buffer	25%	13.05.2014	13.05.2014
Credit risk factor	Rating surplus per risk category	10 - 30 %	2008	15.04.2013
	Operation to generate credit risk factor cash market	+	15.04.2013	15.04.2013
Intraday margin call threshold	Fixed threshold: amount in €	50.000 €		15.04.2013
	Dynamic threshold: % of margin requirement	10%		15.04.2013