

KELER CCP's Announcement - No. 32/2021

Requirements of Guarantee Funds

Regards to the

- Exchange Settlement Fund (TEA): in respect of multinet settlement
- Collective Guarantee Fund (KGA): in respect of derivative settlement
- CEEGEX / HUDEX/Gas Collective Guarantee Fund (CEEGEX / HUDEX/Gas KGA): in respect of CEEGEX and HUDEX/Gas market settlement
- Trading Platform Collective Guarantee Fund (TP KGA): in respect of Balancing and TP clearing

Effective from: 8 April 2021

I. TEA, KGA, CEEGEX / HUDEX/Gas Collective Guarantee Fund requirements

Introduction

Regulation (EU) No 648/2012 of the European Parliament and of the Council, and Commission delegated Regulation (EU) No 153/2013 defines mandatory standards with regards to the calculation of guarantee funds. According to these regulations the results of KELER CCP's daily stress tests are the basis of the calculation as follows:

The guarantee fund “shall at least enable the CCP to withstand, under extreme but plausible market conditions, the default of the clearing member to which it has the largest exposures or of the second and third largest clearing members, if the sum of their exposures is larger.”

The exposures are the results of the daily stress test calculations, based on different scenarios of extreme but plausible market conditions. The amount of the exposures depends on the difference between the calculated variation margin and the initial margin.

Calculation method of the guarantee funds

The calculation is based on two steps:

- Determination of the necessary size of the guarantee fund
- Calculation of the contributions of the single clearing members

Frequency of the calculation:

- The size of the guaranteed fund is calculated on the first settlement day of the month.
- In case of insufficient size of the guarantee fund, KELER CCP can order extraordinary recalculation, anytime during the month.

Determination of the necessary size of the guarantee fund

$$DF = \max \left\{ \max_{[t, t-t_{63}]} (x_i); \min \left[\max_{[t, t-t_{63}]} (x_i) * p.k.; DF_{(CM-1)} * p2 \right]; \mu(x_i)_{[t, t-t_{63}]} + \alpha \sigma(x_i)_{[t, t-t_{63}]}; DF_{(CM-1)} * p1 \right\}$$

Where:

- DF: The result of the calculation which determines the necessary size of the default fund
- $DF_{(CM-1)}$: the actual value of the guarantee fund, the day before the calculation is conducted
- t: the last trading day before the current calculation
- t_{63} : the 63rd trading day before the day of the current calculation
- x_i : the result of the daily stress tests, the amount of the default of the clearing member to

which KELER CCP has the largest exposures or of the second and third largest clearing members, if the sum of their exposures is larger

- μ : expected value (calculated as arithmetic mean)
- σ : standard deviation

Other parameters:

- $\alpha = 3$
- $p1 = 0.9$
- $p2 = 1.1$
- p.k.:
 - For capital market (TEA, KGA)= 1.4
 - For HUDEX/Gas (CEEGEX / HUDEX/Gas KGA) = 1

Determination of the contributions of the single clearing members for TEA and KGA

Members' contribution rate:¹

$$DF_{CM_i} = \text{round up}(\max\{DF * w_{CM_i}; DF_{Min}\}; \phi)$$

where:

$$w_{CM_i} = \frac{IM_{CM_i}}{\sum IM_{CM}}$$

- DF_{CM_i} : the amount of the contribution of the single members, rounded up
- DF_{Min} : the minimum contribution to the guarantee fund
- DF : the necessary size of the default fund
- ϕ : -6
- w_{CM_i} : the members' contribution rate
- IM_{CM_i} : the sum of the single clearing member's initial margin requirement in the previous month before the calculation with regards to the appropriate market (multinet spot, derivative)
- $\sum IM_{CM}$: the sum of every clearing members' initial margin requirement in the previous month before the calculation with regards to the appropriate market (multinet, derivative)

Parameters:

- in case of TEA and KGA the minimum contribution to the guarantee fund is 5 million HUF

¹ $\sum DF_{CM_i} > DF$, because of the rounding up method, the clearing members who pays the minimum contribution, and because of KELER CCP also pays the minimum contribution.

Determination of the contributions of the single clearing members for CEEGEX / HUDEX/Gas KGA

Members' contribution rate:

$$DF_{CM_i} = \text{round.up}(\max\left\{\left(DF - \sum MC_i * DF_{min}\right) * w_{CM_i}; DF_{min}\right\}; \phi)$$

where:

$$w_{CM_i} = \frac{IM_{CM_i}}{\sum_{CMs \text{ where } MC_i=0} IM_{CM}}$$

$$MC_i = \begin{cases} 1, & \text{if } \frac{IM_{CM_i}}{\sum IM_{CM}} \leq \frac{DF_{min}}{DF} \\ 0, & \text{if } \frac{IM_{CM_i}}{\sum IM_{CM}} > \frac{DF_{min}}{DF} \end{cases}$$

- DF_{CM_i} : the amount of the contribution of the single members, rounded up to thousand EUR
- DF_{min} : the minimum contribution to the default fund
- DF : the necessary size of the default fund
- ϕ : -3
- w_{CM_i} : the members' contribution rate
- IM_{CM_i} : the sum of the single clearing member's initial margin requirement in the previous month before the calculation
- $\sum IM_{CM}$: the sum of every clearing members' initial margin requirement in the previous month before the calculation
- $\sum_{CMs \text{ where } MC_i=0} IM_{CM}$: the sum of those clearing members' initial margin requirement in the previous month before the calculation who are not paying the minimum contribution, so where $MC_i=0$
- MC_i : if the clearing members' contribution is the minimum amount it's value is 1, otherwise 0

Parameters:

- in case of CEEGEX / HUDEX/Gas KGA the minimum contribution to the guarantee fund is currently 15 000 EUR

Remarks:

- KELER CCP's contribution to the guarantee funds is the prevailing minimum contribution parameter.
- The prevailing minimum size of the fund with regards to every guaranteed market (multinet, derivative, HUDEX/Gas derivative) is the multiplication of the minimum contribution parameter and the number of the clearing members.

The backtest of the size of the guarantee funds

The regulations, regard to the size of the guarantee funds, require to conduct a back test on a daily basis to determine if the size of the guarantee fund is sufficient? If according to the backtest, the

size of the guarantee fund is insufficient, then KELER CCP either decrees to conduct an extraordinary recalculation, or to collect additional financial collateral from its clearing members.

Extraordinary recalculation of the guarantee funds

In case of the size of the guarantee fund is insufficient, KELER CCP based on its General Business Rules can decree the extraordinary recalculation of the funds, in which case the calculating method is the same as the one applied during the regular calculation.

In case if there was additional financial collateral collected from the clearing members, and at the same time an extraordinary recalculation of the guarantee funds is necessary, then the clearing member will get back its additional financial collateral as soon as the clearing member fulfills the necessary contribution to the guarantee fund.

Imposing additional financial collateral

In case of the size of the guarantee fund is insufficient KELER CCP can decree to impose additional financial collateral from its clearing members among these principles:

- The stress scenarios are identified, which leads to the insufficient size of the guarantee fund.
- The clearing members are identified whose exposures are the reason for the insufficiency based on the stress test results.
- KELER CCP can order to collect additional financial collateral from the identified clearing members, to terminate the insufficient size of the guarantee fund. The sum of the imposed additional financial collateral is enough to cover the exposures calculated with different scenarios in the daily stress test.

Deadlines regard to the additional financial collateral:

- The deadline to meet the additional financial collateral requirements is the next settlement day.
- The amount of the additional financial collateral can be modified on a daily basis, if necessary, and it is valid till the next change, or the new calculation (recalculation) of the guarantee fund.
- In other cases the blocked additional financial collateral remains blocked for minimum 5 settlement days, and if the size of the guarantee fund is sufficient and the insufficiency is no longer available, then the blocking is resolved.

II. TP Collective Guarantee Fund requirement

In case of Balancing Clearing and Trading Platform Clearing Members KELER CCP defines the Trading Platform Collective Guarantee Fund (TP KGA) contribution based on the following:

- TP KGA's percentage rate: 35 %.
- TP KGA requirements are calculated from the average of the sum of "turnover margin" (actual month and the previous two months for both Balancing Clearing and Trading Platform) and "additional financial collateral" requirement (previous three months).
- Minimum: for Balancing Clearing members 15,000 EUR.
- Minimum: for Balancing Clearing and Trading Platform members 30,000 EUR.

KELER CCP's contribution: 15,000 EUR.

Budapest, 1 April 2021

KELER CCP Ltd.