9-10 KELER CCP's Announcement

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: 7th August 2023

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

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

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)= 2,1
  - For HUDEX/Gas (CEEGEX / HUDEX/Gas KGA) = 1,1

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

Members' contribution rate:

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

where:

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

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

- $\mathrm{DF}_{\mathrm{CM_i}}$: the amount of the contribution of the single members, rounded up
- $\mathrm{DF}_{\mathrm{Min}}$: the minimum contribution to the default fund
- DF: the necessary size of the default fund
- ϕ: -3 for CEEGEX / HUDEX/Gas KGA; -6 for TEA and KGA
- $\mathrm{w}_{\mathrm{CM_i}}$: the members' contribution rate
- $\mathrm{IM}_{\mathrm{CMi}}$: the sum of the single clearing member's initial margin requirement in the previous month before the calculation
- $\sum \mathrm{IM}_{\mathrm{CM}}$: the sum of every clearing members' initial margin requirement in the previous month before the calculation
- $\sum_{CMs\ where\ MC_i=0} IM_{CM}$: 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
- in case of TEA and KGA the minimum contribution to the guarantee fund is currently 5 million HUF.

Remarks:

- 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.
- in case of TEA at the calculation of margin requirement the variation margin collateral is part of the Initial margin

II. TP Collective Guarantee Fund requirements

Determination of the necessary size of the TP Collective Guarantee Fund

The Determination of the necessary size of the Trading Platform (TP) Collective Guarantee Fund is based on the ‘bottom-up’ methodology, meaning the sum of the Clearing Members’ calculated individual guarantee fund contributions define the final size of the guarantee fund.

Determination of the contribution of a single clearing member for TP Collective Guarantee Fund

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

- Guarantee fund requirement is based on the average of the previous three months’ calculated Balancing Clearing turnover margin. The three months’ average multiplied by 45% is the guarantee fund contribution of the Clearing Member. Only Balancing Clearing turnover margin is used in the calculation, other margin or collateral requirements (e.g. Additional Financial Collateral) are not taken into account.
- Frequency of guarantee fund calculation: Monthly
- Minimum guarantee fund contribution:
    - For only Balancing Clearing members: 15,000 EUR
    - For Balancing Clearing and Trading Platform members: 30,000 EUR.

III. General Guarantee Fund requirements

Stress testing the adequacy of the level of guarantee funds

The regulations regarding the size of the guarantee funds require stress testing on a daily basis to determine whether the size of the guarantee fund was sufficient. **If the size of the guarantee fund was insufficient according to the stress tests, then KELER CCP either decrees to conduct an extraordinary recalculation, or to collect additional financial collateral from its clearing members.**

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 regarding 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.

Extraordinary recalculation of the guarantee funds

In case of the size of the guarantee fund is insufficient for **TEA, KGA and CEEGEX / HUDEX/Gas KGA**, KELER CCP based on its General Business Rules can also 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 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.

IV. Other provisions

KELER CCP has the right to amend this Announcement and publishes the amended Announcement on its website 5 days before the effectiveness.

Budapest, 1st August 2023.

KELER CCP Ltd.