Spot / BGH Forward Collective Default Fund (BCDF)

1. General rules of default fund calculation

The following aspects are taken into consideration during the default fund calculation:

- to cover the risks arising from the stress test with high reliability,

- since members will not be able to calculate their contribution to the default fund in advance, it should not, as far as possible, be subject to sudden large fluctuations in any direction,

- react relatively quickly to stress test risks and not be penalized too long for the impact of a major stress risk in the past,

- in line with the requirements of EMIR, the default fund should cover the largest default risk or the sum of the second and third default risks stemming from the daily stress tests, whichever is the greater,

- consider the procyclical effects where possible.

2. Practical implementation of the default fund calculation

KELER CCP uses the following formula to calculate the size of the BCDF:

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

$$\left. + \alpha\, \sigma(x_i)_{[t,t-t_{63}]}; DF_{(CM-1)} * p1 \right\}$$

Where:

- DF: the result of the calculation which determines the necessary size of the default fund
- $DF_{(CM-1)}$: the value of the default 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 on day i (the highest uncovered stress value or the sum of the second and third highest uncovered stress values, whichever is higher)
- μ: expected value (calculated as arithmetic mean)
- σ: standard deviation
- $\alpha = 3$[1]
- p1 = 0,9
- p2 = 1,1
- p.k.: procyclicality correction (to consider procyclical effects)

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[1] In case of normal distribution, the probability of a probability variable falling within three times the standard deviation of the mean is 99.73%.

The size of the default fund is therefore the maximum of the following values:

- the maximum of the daily stress test results for the three months preceding the current month,

- the average of the stress test results for the three months preceding the current month, plus three times the three-month standard deviation,

- 90% of the default fund of the previous month,

- the maximum of the daily stress test results of the three months preceding the current month multiplied by the value of the procyclicality correction or 110% of the default fund of the preceding month, whichever is the lower.