

Stress test and reverse stress test methodology of BGH forward gas market

I. Stress test

1. The objective of the stress test

Stress tests serve a dual purpose:

- Firstly, to assess the adequacy of the size of the BGH Spot / BGH Forward Collective Default Fund (BCDF) at any given time,
- the appropriateness of the requirements for other financial resources of the KELER CCP.

2. Stress scenarios

For the stress tests run on the BGH forward market, KELER CCP applies the historical and hypothetical stress scenarios of the HUDEX derivative gas market, until a sufficient length of price data is available for the BGH forward market to determine unique stress parameters.

3. Conducting stress tests

Stress testing is carried out daily at clearing member level. The results are aggregated to group level (groups of companies under one ownership structure), but not netted, i.e. only the open risks are added. Stress tests are performed on the net open exposure. Once the results of each stress scenario have been determined, the first largest uncovered exposure or the sum of the second and the third largest uncovered exposure is taken - if the latter is bigger - and compared to the BGH Spot / BGH Forward Collective Default Fund and the other financial resources of the KELER CCP for the purposes of the adequacy assessment.

II. Revers stress test

1. The objective of the reverse stress test

KELER CCP conducts reverse stress tests which are designed to identify under which combinations of market conditions its margining model, default fund and other financial resources would provide insufficient coverage of credit exposures and for which its liquid financial resources may be insufficient.

2. Reverse stress scenarios

KELER CCP applies the same stress scenarios as in Chapter I./2., but modelling extreme market conditions that go beyond what are considered plausible market conditions by increasing/decreasing the original stress parameters.

3. Conducting revers stress tests

KELER CCP run reverse stress test on a quarterly basis for the trading day with the highest stress value in the given quarter. When conducting reverse stress tests, KELER CCP uses different percentage of exchange rate changes to determine, based on the principle of default waterfall, how far exchange rates can go so that the collateral or own funds still cover the value of the potential default.

Default waterfall consists of the following elements:

- the individual collaterals of the defaulting member
- the individual default fund contribution to the Spot / BGH Forward Collective Default Fund (BCDF)
- skin in the game of KELER CCP allocated to the Spot / BGH Forward Collective Default Fund (BCDF)
- the individual contributions to the Spot / BGH Forward Collective Default Fund (BCDF) of the non-defaulting members
- other financial resources of KELER CCP