This has been Superseded by Notification No. RMD/SS/21/27 dated 01-Sept-2021 on Default Fund (revised and updated)

No. RMD/ SS/16/21 **04th Jul'16**

FOR INFORMATION OF ALL MEMBERS

Securities Segment
Stress Test Methodology for Default fund

In terms of the provisions of Chapter XIV, "Default Fund" of the Regulations of the Securities Segment, it has been decided that Clearing Corporation shall maintain a dedicated Default Fund in respect of its Securities Segment.

2. As stated in Clause B therein, the size of the fund will be determined by the Clearing Corporation on the basis of Stress Tests conducted by it. The methodology followed for the process of stress test involves subjecting each Member's trade portfolio to different scenarios of risk.

3. The approach followed by CCIL for stress testing entails three parts:

a) Stress Scenario.
b) Simulation of values of trade portfolios and collateral of all entities (clearing participants) using Stress Scenarios.
c) Identification of the highest possible loss in the account of a member and its affiliates under stressed conditions and, also identification of possible loss under knock out effect (explained in para 'C' below) under such scenario.

<u>A. Stress Scenario:</u>

i. Risk Factors considered for formulating stressed market conditions are as under:

a. Overnight MIBOR
b. Zero rates for under noted tenors:
1 month, 3 month, 6 month, 1 year, 3 year, 10 year, 20 year, 30 year zero rates. (In respect of zero rates for tenors of 3 Months and 6 Months, the higher

of the shift arrived from CCIL Zero Coupon Yield Curve and from MIBOR linked Swap rate is taken as reference.)

c. USD/INR spot rate, 1 month, 3 month, 6 month, 9 month & 1 year forward rates.

d. Swap rates for under noted tenors:
1 month, 2 month, 1 year, 2 year, 3 year, 5 year, 7 year and 10 year swap rates.

ii. Four highest movements in absolute terms (2 highest positive & 2 highest negative movements) in each of the risk factors are recorded.

iii. For each of such movement in each risk factor, corresponding movement observed in other risk factors on that date is also recorded.

iv. As each risk factor generates four scenarios, the total number of scenarios to be considered is 92 (i.e.23*4).

v. The changes in market risk factors corresponding to each of these scenarios are scaled up by 50% (to create an extreme but plausible environment)

vi. Scenarios are reviewed at the end of each month

[*Change in rate applicable for the respective risk factor has been termed henceforth as "Shift Parameter"*]

B. Simulation of trade portfolios and collateral of the entities under above-mentioned Stress Scenarios.

1. Based on the scenarios generated above, stress-testing in Securities Segment is carried out by following the under-mentioned steps;
   - Revaluation of outstanding positions (including outstanding leg of repo trades) under stress scenarios.
   - Revaluation of securities deposited in securities segment SGF under each stress scenario
   - Assessing Notional loss for each member under each scenario.
2. All outstanding positions (including outstanding leg of repo trades) of a member at the end of settlement day are considered.
3. Securities are valued at stressed model prices under each stress scenario as well as at end of the day model prices.

4. The difference in portfolio valuation under stress scenarios and that using end of day model prices is used to determine portfolio profit or loss under each stress scenario.
5. Securities deposited towards margin requirements in Securities segment SGF are also valued using the stressed model prices under each scenario. This revalued SGF (after deducting margin requirements for other segments), is compared against required margins (initial margin and volatility margin). The lower of two is then considered as available margin.
6. The portfolio losses, if any, under each scenario are then set-off against the available margins to determine CCIL credit exposure towards the entity.

C. Highest such exposure across all scenarios from the default of an entity and its affiliates will be taken as a component for arriving at the corpus for the Default Fund. It is also presumed that under such a stress event, if there is a default by a large market participant, entities having short term credit rating of CCIL5 or below may also fail to honour their obligations (termed as Knock out Effect). Hence, to take care of this aspect, possible highest losses from 5 such entities of credit rating of CCIL 5 or below under such scenario will also be taken as the other component of the required corpus of the Default Fund.

This notification shall be effective from 05th Aug'16.

Yours faithfully,

For The Clearing Corporation of India Ltd.,

Sd/-

Managing Director