



भारतीय प्रतिभूति और विनिमय बोर्ड
Securities and Exchange Board of India

CIRCULAR

SEBI/HO/CDMRD/DRMP/CIR/P/2018/111

11 July, 2018

To,

The Managing Directors / Chief Executive Officers
National Commodity Derivatives Exchanges

Sir / Madam,

Sub: Core SGF and standardised stress testing for credit risk for commodity derivatives

1. Vide circular SEBI/HO/CDMRD/DRMP/CIP/P/2016/86 dated September 16, 2016, SEBI had continued norms related to, inter-alia, Settlement Guarantee Fund (SGF) and Stress test to determine adequacy of SGF prescribed by erstwhile Forward Markets Commission for National Commodity Derivatives Exchanges.
2. Vide circular SEBI/HO/CDMRD/DRMP/CIR/P/2018/52 dated March 21, 2018 SEBI had inter-alia prescribed that post transfer of clearing and settlement functions from commodity derivatives exchanges to Clearing Corporations, Clearing Corporations shall be required to comply with the risk management norms prescribed by SEBI for commodity derivatives exchanges.
3. Vide circular CIR/MRD/DRMNP/25/2014 dated August 27, 2014 SEBI had issued norms related to Core Settlement Guarantee Fund, default waterfall, stress testing, back testing etc. for recognised Clearing Corporations and Stock Exchanges.
4. It has been decided that Clearing Corporations clearing commodity derivatives transactions shall comply with the provisions of SEBI circular dated August 27, 2014. The said circular inter-alia stipulated norms for Minimum Required Corpus of Core SGF (MRC) for each segment of each stock exchange at para 7 of the circular. In addition to those norms, minimum threshold value of MRC for commodity derivatives segment of any stock exchange shall be INR 10 Crores.



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5. Further, in light of the different features and concerns of commodity derivatives markets, it has also been decided to prescribe modified standardized stress testing scenarios and methodology (as given in Annexure) for carrying out daily stress testing for credit risk for commodity derivatives. Clearing Corporations shall use the same for carrying out daily stress testing for credit risk in commodity derivatives within three months from the date of issuance of this circular. Till that time, Clearing Corporations may continue using the stress testing norms specified vide circular dated September 16, 2016 for commodity derivatives.
6. This circular is issued in exercise of powers conferred under Section 11 (1) of the Securities and Exchange Board of India Act, 1992, to protect the interests of investors in securities and to promote the development of, and to regulate the securities market.
7. This circular is available on SEBI website at www.sebi.gov.in.

Yours faithfully,

Shashi Kumar

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Annexure

Standardised Stress Testing for commodity derivatives

Part A. Scenarios

Historical Scenarios

1 Peak Historical Return

Price movement in respect of each underlying over the MPOR period during the last 15 years to be considered:

Scenario 1A: Maximum percentage rise over MPOR period

Scenario 1B: Maximum percentage fall over MPOR period

2 Peak historical price volatility

Historical price volatility (EWMA volatility) in respect of each commodity during the previous 15 years is to be considered. Percentage price movement equal to 3.5 times the peak historical volatility adjusted for applicable MPOR period of the commodity shall be considered (subject to a maximum of 110% of the price movement considered for the commodity under the peak historical return scenario):

Scenario 2A: Percentage price rise

Scenario 2B: Percentage price fall

3 Augmented historical

Exchange shall identify top 10 days during the previous 15 years based on average of absolute percentage price change across all commodities witnessed over the MPOR period. For each of the day, exchange shall identify percentage price change in each commodity (in case of unavailability of prices in any of the commodity on any of the identified days, price change equal to applicable initial margin in the commodity to be considered). All the price movements to be scaled up by 10%.

Thus, one scenario corresponding to each of the 10 identified days shall be generated.

Hypothetical scenarios

4 Stressed MPOR

It shall be assumed that liquidation of open positions would require 5 days and percentage price movement equal to 3.5 times current volatility adjusted for 5 day period (i.e., scaling up by square root of 5) shall be considered.

Scenario 4A: Percentage rise over 5 day period

Scenario 4B: Percentage fall over 5 day period

5 Stressed PSR and VSR



Price movement in respect of each underlying to the extent of 1.5 times the normal price scan range (PSR) over the MPOR period and change in implied volatility equal to 1.5 times the normal volatility scan range shall be considered.

Scenario 5A: Underlying price increasing by 1.5 PSR adjusted for MPOR period, volatility increasing by 1.5 VSR.

Scenario 5B: Underlying price decreasing by 1.5 PSR adjusted for MPOR period, volatility increasing by 1.5 VSR.

Exchanges shall carry out stress tests using each of the scenarios given in Part A as follows –

- a. **By stressing positions in all commodities simultaneously**
- b. **By first identifying top 10 commodities based on OI and stressing 1 commodity at a time (ignoring positions in other commodities and the corresponding margins)**

Part B. Methodology

The percentage price movements identified in each of the above scenarios shall be applied to the commodity price on the day for which the stress test is being done. All open positions shall be assumed to be squared up at the theoretical price corresponding to the revised prices/volatility of the underlying in each of the scenarios. For each clearing member, the credit exposure to Clearing Corporation shall be calculated as follows:

- a) The time of stress test shall be end of day
- b) It shall be assumed that clearing member will default in paying the settlement obligations and all outstanding positions will be squared off at the theoretical price corresponding to the revised price/volatility of the underlying in the scenario.
- c) Loss shall be calculated at client portfolio level.
- d) For each client, residual loss shall be equal to → (loss due to close-out of client positions– margin supporting that specific client's positions)
- e) All residual losses (residual profits to be ignored) for all clients shall be grossed to compute total residual losses due to client positions.
- f) Loss due to close-out of proprietary positions shall be considered.
- g) Loss at (e) and loss at (f) and the net pay-in/pay-out requirement of the clearing member shall be assessed against required margins (excluding margin supporting client positions and excess collateral, if any) and other mandatory deposits of defaulting member to calculate credit exposure of Clearing Corporation to the member. Equity scrips as collateral, if any, shall be valued with minimum 20% haircut.



Part C. Coverage

To begin with, for each of the scenarios in Part A, Clearing Corporations shall calculate –

- A. Credit exposure due to simultaneous default of at least 2 clearing members (and their associates) causing highest credit exposure.
- B. 25% of the credit exposure due to simultaneous default of all clearing members.

However, within a year from the deadline of implementation of the circular, for each of the scenarios in Part A, Clearing Corporations shall calculate –

- A. Credit exposure due to simultaneous default of at least 2 clearing members (and their associates) causing highest credit exposure.
- B. 50% of the credit exposure due to simultaneous default of all clearing members.