THE CLEARING CORPORATION OF INDIA LTD

Risk Management Department

This has been Superseded by Notification No. RMD-FX-FF-20-71 dated 30-Dec-2020 on Risk Management Process and Margin Methodology

No.RMD/FX-FF/17/32

FOR INFORMATION OF ALL MEMBERS   **20th Dec'2017**

Forex Forward Segment

Initial Margin Computation – Change in Methodology

Further to our Notifications No. RMD/FX-FF/09-20 dated 5th Nov'09, No. RMD/FXFF/11/05 dated 14th Jul'11 and RMD/FX-FF/12/17 dated 08th Aug'12 issued in terms of Chapter V (B) and Chapter VIII(C) of the Regulations of the Forex Forwards Segment, members are hereby advised that the methodology for computation of Initial Margin for Forex Forwards Segment is being revised. The updated methodology for computation of Initial Margin in this Segment is detailed below. The changes being implemented are underlined.

2. Portfolio for computing Value at Risk (VaR), and Spread Margin will comprise of all settlement date wise net US Dollar positions (including positions in Spot Window to the extent not accepted in the USD/INR settlement segment on account of inadequate Exposure Limits)

3. *VaR will be computed by simulating <u>1000 price scenarios</u> as under:*
Historical returns series of forward exchange rates for the past <u>1000 days</u> will be worked out for standard tenor points. This will include

   a) <u>750 consecutive volatility scaled (EWMA) returns from the most recent period. These returns will be the rolling period return, where scaling will be as under</u>

   - Exponentially Weighted Moving Average (EWMA) volatilities will be calculated for each standard tenor point.
   - For each tenor point, Historical return series of these 750 days will be scaled by multiplying each return by the ratio of current EWMA volatility and the historical EWMA volatility.

     AND

b) <u>250 consecutive un-scaled returns from the period with the high market volatility termed as "stress period". These returns will be identified from the past 10 year historical period and would be reviewed on a monthly basis.</u>
Computations detailed in para (a) to (b) above will be repeated for Clearing Corporation's sovereign Zero Coupon Yield Curve for the standard tenors.

c) Hypothetical values of the portfolio of outstanding trades will then be simulated using the modulated returns and un-scaled returns, as mentioned above.

d) The hypothetical values of the portfolio as above will then be compared with the current MTM value of the portfolio to arrive at a notional profit and loss series.

e) Value at Risk will be derived from the above series at 99% Confidence level using a holding period of 2 days.

4. Spread margin as a component of Initial Margin is equal to 20% of difference between portfolio VaR (i.e. the VaR computed considering all settlement date-wise net US Dollar positions) and the higher of (a) The VaR computed considering only settlement date-wise net USD buy positions and (b) The VaR computed considering only settlement date-wise net USD sell positions. In case the portfolio VaR exceeds both (a) and (b), no Spread margin is charged.

5. **Minimum Initial Margin** at the portfolio level is computed at the rate of 2% of the net currency position (i.e. considering all settlement date-wise net US Dollar positions)

Spread margin as a component of Minimum Initial Margin is equal to 20% of the difference between minimum Initial Margin at the portfolio level and the higher of:

a) The Minimum Initial Margin computed considering only net USD buy positions, and

b) The Minimum Initial Margin computed considering only net USD sale positions.

For both (a) and (b) above, the rate applied for the Initial Margin computation would be 2%. The Sum of "Portfolio Minimum IM" and "Spread Margin" (as above) is the applicable Minimum Initial Margin.

6. Initial Margin charged to the member would be the higher of the VaR based margin (including spread margin) and the applicable minimum initial margin as per para 5 above.

7. As a consequence of (3) above, and further to our Notification No. RMD/FX-FF/13/13 dated 08th May'13 on methodology for tracking the applicability and imposition of Volatility Margin, the trigger levels for assessing the applicability of volatility margin referred to in para A(iii) of the aforesaid Notification will henceforth be based on 99th percentile highest return from past 1000 days unscaled returns, (including the 250 returns from the period of high volatility) as against the current practice of considering the 99th percentile highest return based on past 500 days returns.

The revised model for Initial margin computation will be effective from **01st Feb'2018 as part of end of the day margin computation process.**

Yours faithfully,

For The Clearing Corporation of India Ltd.,

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Managing Director

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