The Clearing Corporation of India Ltd

Risk Management Department

No. RMD/FX-FF/26/40 **Date: 05/Nov/2026**

FOR INFORMATION OF ALL MEMBERS

Forex Forward Segment
Risk Management Processes and Margining Methodology

In terms of the provisions of chapter V "Margins" of the regulations of the Forex Forward Segment, the Clearing Corporation prescribes requirements of margins on the portfolio of trades accepted for CCP clearing in this segment. In this context, we invite your attention to CCIL's Notification No. RMD/FX-FF/26/32 dated 04/Sep/2026 which details the risk management process and margining methodology for deliverable forward USD /INR trades that are cleared in this segment. Members are advised to please note that apart from the margins already prescribed for this segment, portfolios of deliverable forward trades may henceforth attract a new margin under the head 'Stress Loss Margin'.

Further, it is now proposed to also extend the CCP clearing services to Non-deliverable Forward (NDF) trades in USD/INR and the provisions of Chapter V, 'Margins' shall also apply to portfolios of such NDF trades accepted for clearing.

Members are therefore advised that in the light of these changes, the aforementioned notification No. RMD/FX-FF/26/32 stands revised as below with the enhancements / modifications underlined.

Introduction:

In terms of the provisions of Chapter VIII, of the Regulations of the Forex Forwards Segment, proprietary trades of a clearing member and the trades of each of its constituents shall be considered separately for margining. No offset in margining shall be permitted between a clearing member and its constituents or between different constituents of a clearing member. Where a constituent avails services of multiple clearing members, its portfolio of trades cleared through each such clearing member shall be considered separately for margining, with no offsets permitted. The structure is being extended to include NDF trades, whereby the clearing members of forex forward segment active in NDF sub-segment may clear NDF trades for its clients.

The methodology followed for various Margin computations shall be as under:

I: Initial Margin [Reference Chapter V (B)(1) of the Regulations]

Initial Margin shall be computed on a combined portfolio containing DF and NDF positions with Value-at-Risk (VAR) based setoffs available between the two sub-portfolios subject to some disallowance. All cleared settlement date-wise net US Dollar positions shall be segregated as DF and NDF sub-portfolios. In case of Constituents, the sub-portfolios shall also include positions in spot window.

'Value at Risk (VaR)' computation for DF and NDF sub portfolios shall be computed using respective DF and NDF forward rate curves. IM computation at sub-portfolio level will include a 'calendar spread' component. The applicable total initial margin would be based on margin offset between the DF and NDF sub-portfolios, subjected to certain disallowance factor termed as 'margin offset charge'. VaR, calendar spread components and margin offset component shall be computed as per the following process.

1. ***VaR for each sub-portfolio is computed by simulating 1000 price scenarios for respective curves as under:***

   Historical returns series of deliverable forward exchange rates for the past 1000 days are determined for standard tenor points [2D, 9D, 16D, 1M to 12M, 15M, 18M, 24M, 36M]. This includes

   a) 750 consecutive volatility scaled (EWMA) returns from the most recent period. These returns are the rolling period return, where scaling is as under
      - Exponentially Weighted Moving Average (EWMA) volatilities are calculated for each standard tenor point.
      - For each tenor point, Historical return series of these 750 days are scaled by multiplying each return by the ratio of current EWMA volatility and the historical EWMA volatility.

      AND

   b) 250 consecutive un-scaled returns from the period with the high market volatility termed as "stress period". These returns are identified from the past historical period starting from Oct'2002 and are reviewed on a monthly basis.

      Computations detailed in para (a) to (b) above is also repeated for Clearing Corporation's sovereign Zero Coupon Yield Curve for the standard tenors.

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

d) The hypothetical values of the portfolio as above are then compared with the current MTM value of the portfolio to arrive at a notional profit and loss series for DF and NDF sub-portfolios.

e) Value at Risk for DF and NDF sub-portfolios is derived for respective P/L series at 99% Confidence level *(termed as Y1 & Z1 respectively)*

f) Further, each of the notional P/L in the above series of DF and NDF is netted to arrive at net P/L series at combined portfolio level.

g) Value at Risk for combined portfolio is derived from the above netted series at 99% Confidence level using a holding period of **five** days *(termed as X1)*

Initial Margin	DF+NDF	DF	NDF
Portfolio VAR (PVAR)	X1	Y1	Z1
Long LVAR (LVAR)		Y2	Z2
Short VAR (SVAR)		Y3	Z3
Calendar Spread Benefit		Y4 = MAX (Y2-Y1, Y3-Y1)	Z4 = MAX (Z2-Z1, Z3-Z1)
Calendar Spread Margin		$Y5 = R1_{(DF)}$ x Y4	$Z5 = R1_{(NDF)}$ x Z4
Calendar Spread Margin Total	CSMT = Y5 + Z5 *[where, R1(DF) & R1(NDF) are respective Calendar spread margin factors]*		
Cross margin benefit	CMB = Max (Y1-X1, Z1-X1, 0)		
Margin offset charge	MOC = R2 x CMB *[where, R2 = Margin offset charge factor]*		
Portfolio Initial margin	**X1 + CSMT + MOC**		
Applicable Initial margin	**IM as above adjusted for Margin Step-up factor**		

2. Spread margin is computed separately for DF and NDF sub portfolios as a component of their respective Initial Margin. Spread 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.

3. Margin Offset Charge (MOC) shall be applied to disallow the benefits arising from any offsetting positions between DF and NDF sub-portfolios to a certain degree. MOC shall account for any break in historical relationship between various tenors on DF and NDF curves. The margin

offset charge factor shall be set at 20%. of the portfolio level margin benefit, which shall be computed as the higher of – (a) the amount by which the portfolio VaR for DF portfolio exceeds the portfolio VaR for the combined portfolio (Y1-X1), (b) the amount by which the portfolio VaR for DF portfolio exceeds the portfolio VaR for the combined portfolio (Z1 – X1) and (c) zero.

4. Minimum Initial Margin: P&L for the respective sub-portfolios and at the combined portfolio level shall be computed using a fixed return of 2% (minimum IM component). The associated calendar spread components and margin offset charge shall also be computed using similar methodology as discussed above.

5. The **applicable Initial Margin** is **higher** of the

a) Combined Portfolio VaR based margin (including spread margin on DF & NDF sub portfolios and MOC) **and**

b) Combined Portfolio Minimum IM (including spread margin on DF & NDF sub portfolios and MOC),

and scaled further on account of member specific credit grade linked margin step-up (applied if any) as explained below.

6. **Step up in Initial Margin for weaker entities:** In terms of Para A (4) of Chapter VIII of the Regulations of the Forex Forwards Segment, CCIL may collect higher applicable Initial Margin from members having lower Counter-party Risk Assessment (CPRA) grades. In addition to the CPRA grading linked margin step-up, the Clearing Corporation may also levy higher margins in case of any regulatory action against the member or deterioration in its financial position or some adverse market report. Such additional step-up factors if imposed on a Clearing Member, shall also apply to all its constituents. Alternatively, Constituent/s may be charged a higher step-up factor than applicable for its Clearing Member.

II: Volatility Margin [Reference Chapter V (B)(3) of the Regulations]

Clearing Corporation is entitled to impose volatility margin in case of significant volatility in Rupee/US Dollar Forward exchange rate. The process for Imposition of Volatility Margin in Forex Forward Segment is already in place w.e.f 01st Dec'09. If applicable, the Volatility Margin would be applied on all Members and their Constituents. The detailed methodology followed for tracking

the applicability, imposition and withdrawal of volatility margin is given hereunder for the information of Members.

A) ***Applicability of Volatility Margin:***

i. One day's change in the forward rates for standard tenor's viz. 1 Month, 3 Month, 6 Month, 9 Month and 12 Month will be assessed on an online basis during market hours.

ii. Forward rates, for current day, for aforesaid tenors, will be arrived dynamically during the market hours by using two components namely

a) Spot rate from traded quotes on Fx Clear Platform available on real-time basis and
b) Forward premia for standard tenors inferred from trades reported to CCIL.

Thus, for the period from 9.00 AM to 10 AM, the forward rates will be derived using latest available spot rate from Fx Clear and Premia sourced at 9.00 AM and likewise for the other time slots till end of market hours.

iii. One day's change in the forward rates (i.e. 1 day return) will be arrived at by calculating the logarithmic returns of current day rates as arrived above to the EOD MTM forward rate of the previous business day.

iv. One day's return as arrived above will then be compared with the trigger level of respective tenor set at the beginning of every month [i.e. 99th percentile highest return from past 1000 days unscaled returns (this include 250 consecutive returns representing most volatile days over the period of past 10 years)].

v. In case the current day's return is greater than respective trigger level for at least 2(two) out of the 5(five) tenors, volatility margin will be treated as applicable.

B) ***Imposition of Volatility Margin:***

If imposition of VM is triggered as per the process mentioned above, the highest of such ratio out of the ratios for five above mentioned tenors will then be identified and rounded up to the next higher multiple of 5%. The quantum of Volatility Margin (%) will be set as under:

Volatility Margin % = 50% of (Highest percentage minus 100%).

Illustration: Let us say that the highest percentage out of 5 tenors is ***132.26 %*** and is rounded up to next higher multiple at 5% i.e. ***135.00%.*** Then, the volatility margin applicable will be at 50%

of ***35.00%*** (135% - 100%) i.e. ***17.50 %*** of applicable Initial margin for overall portfolio (cleared DF and NDF trades) as explained above.

C) Complete Withdrawal of volatility margin

i. 95th percentile highest returns (from the 1000 returns as stated in Para A (iv) above) are identified for each of the tenors mentioned above as trigger levels at the beginning of the month.

ii. Volatility margin, already in force, is withdrawn if returns for all tenors on a day are below their respective trigger level till the end of the business day. Volatility margin in force is withdrawn at the end of the day.

D) ***Partial Withdrawal of volatility margin***

i. Required Volatility Margin levels will be re-assessed for the current date and immediately previous business date as per the process detailed in para 'II-A' above. Higher of the two values will be taken as reference level.

ii. If the Volatility Margin already imposed is higher than the reference level as per (i) above, the Volatility Margin will be reduced to the reference level subject to a minimum of 2.5% of applicable Initial Margin

iii. Partial withdrawal is done at the end of the day.

Illustration for partial withdrawal:

Illustration: 1

Day 1 - VM imposed @ 15%
Day 2 - Notional VM applicable @ 10%
Day 3- Notional VM applicable @ 5%

At the end of Day 3, the higher of the values on day 2 & day 3 was 10%, Hence, Volatility Margin will be reduced to 10% of Initial Margin.

Illustration: 2

Day 1 - VM imposed @ 15%
Day 2 - Notional VM applicable @ 10%
Day 3- Notional VM applicable @ 15%

At the end of Day 3, the higher of the values on day 2 & day 3 was 15%; it is same as the Volatility Margin in place. Hence, there will be no reduction in Volatility Margin

Illustration: 3

Day 1 - VM imposed @ 15%
Day 2 - Notional VM applicable @ 10%
Day 3- Notional VM applicable @ 20%

At the end of Day 3, the higher of the values on day 2 & day 3 was 20%; it is higher than Volatility Margin in place. Hence, Volatility Margin will be increased to 20% of Initial margin.

E) Volatility margin is charged as percentage of Initial Margin and is blocked from member's common Collateral (MCC) account. If applicable, it is imposed immediately, after notifying the members.

III: MTM valuation and MTM Margin computation [Reference Chapter V (B)(2) of the Regulations]

i. The Spot USDINR Exchange rate used for the end of the day MTM margining in Forex Forwards Segment will be the rate of the last Inter-bank Outright Spot trade (of value USD 0.50 Million or more) concluded till 3:30 PM on the Fx Clear Dealing Platform operated by Clearcorp Dealing Systems (India) Limited. In case the afore-mentioned spot rate is identified as an outlier or is not available on the aforesaid source latest by 3:45 PM, the latest available rate from standard market source will be taken as applicable end of the day (EOD) MTM spot rate under intimation to the members of this segment.

ii. Forward rates for standard tenors would be derived as under:

iii.

A: Deliverable Forward Curve:

- USD/INR Forward Premia is inferred at the above time from the following:
    - Trades concluded bilaterally and reported to CCIL &
    - Trades executed on CCIL's FX-clear platform.

- Forward rates for tenors up to 12 months are arrived at by adding latest Forward Premia inferred as above, to the Spot Rate derived as per para III (i) above. MTM rate for Cash and Tom position is arrived at by subtracting premia for the respective tenors as available from Fx Clear platform, from the above Spot rate.

- Forward rates for tenors beyond 12 months are derived using Fx Clear Closing Spot rates (as above) with USD SOFR OIS swap curve sourced from standard market data sources and Modified MIFOR swap rates published by FBIL.

B: Non - Deliverable Forward Curve:

- Forward rates for standard tenors are arrived at by adding Forward Premia of respective tenors from standard market data sources to the spot rate derived as per para III (i) above.

iv. Forward Rates for other tenors are arrived at through linear interpolation / extrapolation of the rates available for the tenor points immediately preceding and succeeding such tenor.

v. If rates from above sources are unavailable or there is a valid reason to believe that any such rate available, do not represent the rate prevailing in the market, CCIL may use any or all rate (/s) from any other standard market source.

vi. Rates arrived as above are treated as mid-rates. Half of the bid-offer spreads for the respective tenor is added to such mid-rates to arrive at MTM rates for valuing sale positions. Similarly, half of the bid-offer spreads for the respective tenor, is deducted from such mid-rates to arrive at MTM rates for valuing buy positions. At present, bid offer spread is treated as NIL.

vii. Complete offset shall be provided between MTM loss and MTM gain across all settlement dates and across deliverable and non-deliverable trades.

viii. If the aggregate of MTM value of all such settlement date-wise positions shows MTM gain, then the concerned member's MCC/constituent's margin account is credited with the MTM gain amount reduced by a prescribed haircut and the same is allowed to be treated as Margin Made Available. The hair-cut on MTM gains will be 5%. Such margin made available can be used against margin requirements in the Forex Forwards segment as well as in any other segment which draws margins from the MCC.

ix. If the aggregate of MTM value for all such settlement date-wise positions shows MTM loss, same is to be collected as MTM margin from concerned member/constituent by blocking free balance available in his margin account to the extent required.

x. If the total MTM margin payable by a member/constituent on any given day is less than the MTM Margin for positions that will be in the spot window on the next day, then the MTM margin charged to such member will be equal to the MTM margin payable on the aforesaid positions.

xi. Any increase in MTM margin or reduction in MTM gain is affected immediately on assessment of the same at the end of the day.

IV: Intraday MTM Margin collection / MTM Gain (Credit) Reduction

i. All outstanding/cleared trades across DF and NDF sub portfolio as at the time of computation of intraday MTM margin will be considered for assessing applicability of intraday MTM margin. Any intra-day reduction in MTM gain on a member/constituent portfolio will be also treated as intraday MTM loss.

ii. If the loss in portfolio value is higher than 30% of sum of Initial Margin, volatility margin, concentration margin and Stress loss margin collected from the member, such loss is collected as intraday MTM Margin or intraday MTM gain reduction or both.

iii. The processes of assessing applicability of intraday MTM margin as explained above is carried out at 12.00 Noon.

iv. Forwards rates for MTM valuation of DF and NDF portfolio for Intraday MTM Margin computation shall be arrived in the same manner as described in para III(i &ii) above.

v. If applicable, the Intra-day MTM margin/Gain reduction shall be collected immediately from Member's Common Collateral account.

vi. In case the intra-day MTM margin payable by a member as per the subsequent assessment (if carried out) is lower than the intra-day MTM margin already collected as part of prior such assessment during the day, such excess intra-day MTM margin will be released by CCIL.

V: Concentration Margin [Reference Chapter V (B)(4) of the Regulations]

i. Concentration Margin (CM) shall be levied on a member/constituent in the event of any of the following two parameters exceeding certain pre-specified threshold(s):

a) Initial margin of the member/constituent
b) Gross position of the member/constituent across its DF & NDF Portfolio.

ii. Each of the above parameters shall have two sets of thresholds, hereinafter referred to as Level 1 thresholds and Level 2 thresholds.

iii. The threshold levels corresponding to each parameter shall be determined based on a certain percentage of average daily value of the two parameters cited in (i) above, computed across all members and constituents in the preceding month. These percentages are as tabulated below:

	Level 1 thresholds		**Level 2 thresholds**	
Parameter →	**Initial Margin (IM)**	**Gross Position**	**Initial Margin (IM)**	**Gross Position**
For imposition	8%	8%	15%	15%
For partial reduction/ withdrawal*	6%	6%	13%	13%

*as may be applicable

iv. At the end of each month, the threshold values in money terms, applicable for subsequent month shall be determined and intimated to the members / constituents through a report.

v. CM will be levied at 15% of total applicable IM, in the event the 'Level 1 threshold for imposition' corresponding to any one or both of the parameters is breached.

vii. However, CM will be levied at 20% of total applicable IM, in the event the 'Level 2 threshold for imposition' corresponding to any one or both of the parameters is breached. In such case, CM shall continue to be in force at '20% of IM' till such time that the IM and/or the Gross Position of the member/constituent, as the case maybe, drops below the 'Level 2 threshold for reduction / withdrawal' of the respective parameter. CM shall be revised from '20% of IM' to '15% of IM' when such 'Level 2 threshold(s) for reduction / withdrawal' is attained.

viii. Furthermore, CM shall continue to be in force at '15% of total applicable IM' till such time that the IM and/or the Gross Position of the member/constituent, as the case maybe, drops below the 'Level 1 threshold for withdrawal' of the respective parameter. CM shall be fully withdrawn when such 'Level 1 threshold(s) for withdrawal' is attained.

ix. In the event, Portfolio Compression exercise is carried out for the segment, the threshold levels for remaining days in the month (after Portfolio Compression Day) shall be revised based on Initial Margin and Gross Position levels at the End of the day of Portfolio Compression exercise. Similarly, month end (month end following the Portfolio Compression Day) computations of thresholds for imposition and withdrawal of CM will be based on the values post Portfolio Compression date.

x. The above-mentioned threshold rates and the rate at which the Concentration Margin is collected shall be reviewed by CCIL on an annual basis or more frequently, if required, and the same will be advised to members.

xi. Concentration margin, if applicable, shall be blocked from the MCC. Imposition of Concentration Margin may result in margin shortfall.

VI: Stress Loss Margin (SLM): [Reference Chapter V (B)(5) of the Regulations]

i. SLM shall be levied on a member, if the largest stress loss (across all scenarios) on deliverable forwards portfolio of such member and its constituents exceeds a pre-defined threshold level. The threshold shall be 45% of the average of daily Cover 2 stress losses at start of the month, over a look-back period of six months. The daily Cover 2 stress losses used for this purpose shall be adjusted to remove the effect of SLM collected from respective members. The threshold value shall be reviewed on monthly basis.

ii. On a given day, SLM to be imposed on a member shall be determined by calculating 'Computed SLM value' and 'Applicable SLM value'. The 'Computed SLM value' shall be the difference between the largest stress loss of the member (across all stress scenarios) for the previous business day and the threshold level.

iii. The 'Applicable SLM value' to be levied on a member shall be equal to the highest Computed SLM value over three days (retention period).

iv. The retention period is the number of days for which the Computed SLM shall persist, unless revised upwards on account of subsequent increase in the daily highest stress loss of the member.

v. SLM, if applied, would form part of total margin requirement to be blocked from the available balance in Member common Collateral account of concerned member.

vi. SLM shall be applicable on members only. There shall be no SLM requirement from the constituents.

vii. SLM shall be applicable on deliverable forwards (DF) portfolios only.

VII: Replenishment Level and Rejection Level

[Reference Chapter V (A) (3) of the Regulations] Clearing Corporation shall make a margin call to the member when the margin utilisation exceeds 90% of the margin made available for this segment. (i.e. if the available MCC is lower than the amount of Total Margin x 100 / 90). Moreover, Clearing Corporation will stop acceptance of further trades if such trades will cause the margin utilisation to exceed 95% of margin made available for this segment.

VIII: Margin Shortfall

i. A Margin shortfall arises when the margin requirement of a member / constituent exceeds the margin made available in MCC /constituent's margin account. Margin shortfall may be recorded on imposition of Intraday MTM margin/ reduction in MTM credit, imposition of Volatility margin, concentration margin or Stress Loss Margin, or due to increase in Initial Margin requirement. In the event of a margin shortfall in a constituent's account, Clearing Corporation shall block the margin account of its Clearing member to the extent of the shortfall. Such blocking could result in a margin shortfall in the account of the clearing member.

ii. Failure by a member to replenish such margin shortfall, within one hour from the time of imposition shall invite levy of penal charges, as applicable.

iii. If the aforesaid margin shortfall is recorded at the time of end of the day margin re-valuation process, same would be required to be replenished by 09-00 AM on the next business day to avoid levy of penal charges.

The revised approach, as above shall be effective from **07th Dec'26**

For The Clearing Corporation of India Ltd

Sd/-

Managing Director

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