Risk Management Department

This has been superseded by Notification No. RMD/SS/20/07 dated 04-Feb-2022 on Risk Management process for Tri-party Repo (TPR) trades.

No. RMD/SS/19/04 **01/Jan/2019**
FOR INFORMATION OF ALL MEMBERS

Securities Segment: Tri-party Repo

Risk Management process for Tri-party Repo (TPR) trades

In terms of the provisions of chapter VI 'Limits and Margins' of the regulations of the Securities Segment, the Clearing Corporation prescribe requirements of margins for the segment

In this regard, we invite your attention to our Notification No. No. RMD/SS/18/97 dated 28th Sep'2018 which details the risk management process and margining methodology in this segment. Members are advised to take note of the enhancements / modifications in the risk management process. Accordingly, the afore-mentioned notification stands revised as below with the enhancements / modifications underlined therein

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A. **Initial Margin**:

Initial Margin rate shall be uniform for Triparty repo trades of all maturities. In terms of the provisions of Chapter VIII of the Securities Segment Regulations, Initial Margin shall be charged at 0.50% of the net outstanding settlement date-wise second-leg considerations of the tri-party repo trades. While arriving at the net outstanding consideration for a settlement date, offset shall allowed on First in First Out (FIFO) basis between borrow and lend trades with the same second leg settlement date. If there is any interest loss due to such offset, such interest loss is recovered as Initial Margin.

B. Borrowing Limit

1. Borrowing limit (BL) shall be fixed for each member based on their collateral deposits in the form of eligible government securities and treasury bills. The list of securities eligible as collateral and the haircuts applicable thereon shall be revised at the end of every month and the revised list shall be notified. BL shall be computed at the end of each business day after valuing the securities deposited in this regard at CCIL's Mark to

Market (MTM) prices[1] and applying appropriate hair-cuts thereon. Aggregate value of securities contributed by a member, net of haircut, rounded downwards to the nearest rupee shall be set as permissible borrowing limit for such member.

2. Hair cut rate shall be based on a historical simulation based Value at Risk model with a 99% confidence level. A volatility component currently set at 50% of the VaR shall be incorporated in the VaR numbers. The Value at Risk (VaR) numbers so adjusted shall be further subjected to a minimum/ maximum value for securities falling in a particular tenor bucket.

3. The hair cut rate shall be at 5 day VaR adjusted as above and then stepped up using illiquidity multiplicands as indicated below (and rounded up to the next higher integer):

   a. For Liquid-Securities having average of more than ten trades (face value>= Rs.5 crores) per day during previous calendar month – no adjustment to the VaR as per para B(2) above

   b. For Semi-liquid securities having average of 1-10 trades(of face value >=Rs.5 crores) per day during previous calendar month - 1.5 times the adjusted VaR as per para B(2) above

   c. For illiquid securities having average of less than 1 trade (of face value>=Rs.5 crores) per day during previous calendar month - 2 times the adjusted VaR as per para B(2) above.

C. **Online exposure monitoring**:

The exposure monitoring shall be online and on a pre-order basis. This would ensure that orders may be placed only if the Member has sufficient Initial Margin and/or Borrowing limit to support the resultant trades.

D. Mark to Market (MTM) margin

1. Outstanding TPR trades shall be revalued at end of every day using the end of the day (EOD) MTM rates and the loss in value if any will be collected as Mark to Market (MTM) margin. TPR collateral shall also be re-valued at the end of every day using CCIL's EOD MTM prices and the applicable haircuts. Shortfall if any, on account of such revaluation

[1] CCIL's MTM prices are clean prices

of trades / collateral will be payable latest by 9-00 AM on the next business day. The detailed process followed is described in Annexure A (I)

2. In terms of provisions of, Chapter VIII of Regulations for Securities segment, the Clearing Corporation shall revalue all the outstanding TPR trades and /or TPR collateral balances of the members at 12-00 Noon and 3 PM everyday using the latest available rates and prices. If such revaluation indicates substantial erosion in the margins / TPR collateral in the account of any member, then the Clearing Corporation shall impose Intraday Mark to Market (MTM) margin. The detailed process to be followed for assessment of applicability of intraday MTM margin is described in Annexure A(II).

3. Intra-day MTM margin, if applicable, shall be collected immediately. Upon imposition, if there is margin inadequacy/shortfall in securities SGF of concerned member, it shall be the responsibility of such member/s to replenish the shortfall within one hour from the time of imposition; else penal charges will be levied as applicable.

E. Volatility Margin

1. The Clearing Corporation may impose volatility margin in case of a sudden increase in volatility in interest rates. An increase in market volatility as indicated by imposition of Volatility margin in the segment, will result in a corresponding increase in hair-cut rates applicable on the securities deposited towards TPR Collateral. The magnitude of this volatility adjustment to haircut would be equal to the volatility margin imposed in the Securities Segment.

2. Imposition of Volatility Margin will therefore result in re-valuation of the securities deposited towards TPR Collateral. Such revaluation shall be carried out using prices derived from outright trades of the day in these securities. Securities for which traded prices as mentioned above are not available would be valued at the price at which they were last valued. Revised hair cut would be applied on prices at which securities are revalued.

3. Such increase in hair cut rates on account of imposition of Volatility Margin may result in reduction in value of securities deposited as TPR collateral. If it is observed that after such revaluation, the member’s borrowing limit utilisation exceeds the value of the TPR collateral deposited, then it will be the responsibility of the said member to replenish the shortfall within one hour.

4. In case such revaluation of securities results in increase in value of collateral even after applying the increased haircut rate, such increase in value shall be ignored.

5. The adjustment for volatility margin to the applicable haircut shall be temporary and shall be reduced / withdrawn with the reduction / withdrawal of volatility margin in the Securities Segment.

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Annexure A (I)

Triparty Repo trades - Imposition of MTM Margin

I. End of the Day MTM margining process:

(a) All the outstanding trades (i.e. T+1 trades of the day) shall be considered for End of the Day MTM margin computation.

(b) End of the day MTM rates for TREPs shall be worked out as detailed below:

   i. Weighted average rate of last five or such lower number of (if there are less than five trades) T+1 trades (excluding outliers, if any) in the same TREP.

   ii. Weighted average rate of same TREP traded on T+0 basis in case there is no trade in the concerned TREP on T+1 basis on the particular day

   iii. Rate interpolated or extrapolated from TREPs of nearby maturities. In the absence of the same, CCIL's NSS ZCYC rates / market repo rates of the corresponding tenors will be used.

(c) Securities placed by the members in Triparty Repo Collateral, shall be re-valued using CCIL's MTM prices and the applicable haircuts thereon. In case such re-valuation results in a Borrowing Limit Shortfall, i.e. if the value of eligible collaterals is less than the borrowing outstanding, then the Members will have to deposit additional collateral by 9-00 am on the next business day to replenish the shortfall.

(d) MTM loss on TREP trades shall be arrived after allowing full offset between outstanding trades in different TREPs (i.e. MTM gain on position in one TREP shall be set off with loss on position in another TREP). MTM margin will be the net loss amount (Net MTM gains will be ignored).

(e) Margin Shortfall if any, at end of the day will be required to be replenished by 9-00 AM on the next business day.

(f) Failure to replenish the margin shortfall by 9-00 AM on the next business day shall attract penalty in terms of Chapter VI Regulations of the Segment.

Annexure A(II). Assessment and applicability of intra-day MTM margin:

(a) The processes of assessing applicability of intraday MTM margin shall be carried out at 12.00 Noon and at 03:00 PM. Moreover, on volatile days, Clearing Corporation may collect intraday MTM margin at such other time of the day as may be required.

(b) Computation of Intraday MTM Rates

i. Weighted average rate of last five or such lower number (if there are less than five trades) of T+0 trades (excluding outliers, if any) in the same TREPs.

ii. Weighted average rate of same TREP traded on T+1 basis in case there is no trade in the concerned TREPs on T+0 basis on the particular day

iii. Rate interpolated or extrapolated from TREPs of nearby maturities. In the absence of the same, CCIL's NSS ZCYC rates / market repo rates of the corresponding tenors will be used.

(c) All the outstanding TPR trades as at the time of computation (including trades outstanding at previous EoD and new trades concluded on the current day) shall be valued using the MTM rates derived based on the trades concluded on the trading system till the time of intra-day valuation.

(d) Securities placed by the members in Triparty Repo Collateral towards TPR borrowing shall be re-valued using the latest available intra-day MTM prices arrived at for computation of intra-day MTM margin in Securities segment. The value of such securities as at intraday prices and as at previous EoD prices shall be arrived at and loss, if any will be taken into consideration.

(e) Net MTM loss in the portfolio of a member shall be sum of net MTM value depletion on trades and the reduction in value of securities utilised towards Triparty repo borrowing.

(f) If the net MTM Loss arrived at as above exceeds 30% of the sum of the haircut levied on the collaterals under charge and Initial Margin collected at the time of computation of intraday MTM, such net MTM loss shall be the Intra-day MTM margin payable by the member.

(g) If applicable, the Intra-day MTM margin/Gain reduction is collected immediately. Upon imposition, if there is margin inadequacy/shortfall in securities SGF of concerned member, it shall be the responsibility of such member/s to replenish the shortfall within one hour from the time of imposition; else penal charges shall be levied as applicable.

(h) In case the intra-day MTM margin payable by a member at 03.00 PM is lower than the intra-day MTM margin already collected from the members based on prices at 12.00 noon, such excess intra-day MTM margin shall be released by CCIL.

The revised approach, as above shall be effective from **04th Feb'2019**.

For The Clearing Corporation of India Ltd

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Managing Director

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