



## Risk Management Department

**This has been Superseded by Notification No. RMD/SS/21/37 dated 30-Nov-2021 on Enhancements to the approach followed for computation of Margin Factor/Hair Cut rates**

No. RMD/SS/16/58

01<sup>st</sup> Nov'16

FOR INFORMATION OF ALL MEMBERS

### Securities Segment

#### Enhancements to the approach followed for computation of Margin Factor / Hair Cut rates

As per the provisions of Chapter VII of Securities segment regulations, Clearing Corporation is authorised to improve upon its risk containment measures in place in this Segment.

2. In terms of the above and further to our notification No. RMD/SS/11/01 dated 1<sup>st</sup> March'2011, it has been decided to bring about the under-noted changes in Clearing Corporation's model used for computation of Value at Risk (VaR) based margin factors and haircut rates so as to reduce likelihood of pro-cyclicality.

- i. A volatility component is being incorporated in the VaR numbers which form the basis of the margin factors in the Securities Segment and haircut rates in the Securities and CBLO segments. The component would presently be set at 25% of the VaR for the respective security.
- ii. The Value at Risk (VaR) numbers adjusted as above will be further subject to a minimum value for securities falling in a particular tenor bucket. Moreover, such volatility adjusted VaR will also be subject to a pre-defined maximum value for each tenor bucket. Thus if the VaR adjusted for volatility component is less than (greater than) the minimum (maximum) value applicable for the security then the minimum (maximum) value will be retained as the 'applicable VaR' for all future computations.

3. The process will be as under:

- a) All securities will be divided into tenor-wise buckets based on residual maturity. Each tenor bucket will be divided into two categories -
  - 1) Category I - GOI Securities & T-Bills (Excluding Special Bonds)



2) Category II - STRIPS

- b) The tenor buckets will be 0-3 Months, 3M – 6M, 6M - 1 year, 1-3 years, 3-5 years, 5-10 years, 10-15 years, 15-20 years, 20-30 years and above 30 years.
- c) Minimum value for securities in a tenor bucket will be set at 95<sup>th</sup> percentile lowest VaR (stepped up by the volatility component) and Maximum value for securities in a tenor bucket will be set at 95<sup>th</sup> percentile highest VaR for the bucket in the 10 years preceding the date of the fortnightly revision of margin factors
- d) The minimum and maximum values as computed above for category I will be applicable to *all* securities (Central Government Securities, Treasury Bills and State Government Securities) falling in respective tenor buckets. Similarly Minimum and Maximum values for STRIPS will be calculated separately under Category II.
- e) If the unadjusted VaR itself exceeds the maximum value i.e. the 95<sup>th</sup> percentile higher value, no volatility adjustment will be made and such unadjusted VaR will be considered as the 'applicable VaR' for further computation.

4. The step-up factors for semi-liquid and illiquid securities and an addition of 0.25% towards coupon accrual would continue to be applied to the VaR figures over and above the volatility component to arrive at revised margin factor in the Securities Segment.

5. For Securities Segment, the hair cut rate will be at 3 day VaR adjusted as per para 3 above and (rounded up to next higher integer).

6. For CBLO Segment, the hair cut rate will be at 5 day VaR adjusted as per para 3 above and (rounded upto next higher integer). In this segment, Hair-cut rates of securities will continue to be stepped up using illiquidity multiplicands.



**An Example:**

- i. Suppose for the 5-10 year bucket, the 95th percentile minimum and maximum values observed were 1.1458% and 2.4124% respectively. Based on these values, the minimum and maximum values for 'Applicable VaR' for any security in 5-10 year bucket will be  $(1.1458 \% * 1.25)$  and 2.4124% i.e., 1.4323% and 2.4124% respectively.
- ii. If the VaR of a security in the tenor bucket '5-10 Years' including the volatility component at 25% is below 95<sup>th</sup> percentile minimum value of its tenor bucket, 95<sup>th</sup> percentile minimum value (i.e. 1.4323%) will be treated as the applicable VaR.
- iii. If the VaR of a security in the tenor bucket '5-10 Years' including the volatility component at 25% is between the 95<sup>th</sup> percentile maximum (i.e. 2.4124%) and 95<sup>th</sup> percentile minimum value (i.e. 1.4323%) of this tenor bucket, then VaR adjusted for volatility component will be treated as the applicable VaR.
- iv. If the VaR of a security in the tenor bucket '5-10 Years' including the volatility component at 25% breaches the 95<sup>th</sup> percentile maximum value of this tenor bucket, 95<sup>th</sup> percentile maximum value (i.e. 2.4124%) will be treated as the applicable VaR.
- v. When VaR (without including the volatility component) itself exceeds the 95<sup>th</sup> percentile maximum value, no adjustment for volatility will be made and such unadjusted VaR will be considered as the applicable VaR.
- vi. The VaR arrived at as above will be adjusted for security-wise multiplicands and the 0.25% cushion for coupon accrual to arrive at the margin factor.
- vii. Similar approach will be followed to arrive at the haircuts applicable in the Securities and CBLO segments respectively.

This notification shall be effective from 05th Dec'2016.

**Yours faithfully,**

**For The Clearing Corporation of India Ltd.,**

**Sd/-  
Managing Director**