

**Annex – I*****Operational Guidelines for Reckoning the Market Value of Collateral in Repo/Reverse Repo transactions with RBI***

1. The guidelines mentioned hereunder will be applicable to all types of Repo/Reverse Repo transactions with RBI including Liquidity Adjustment Facility (LAF), variable rate operations and Marginal Standing Facility (MSF).
2. All SLR-eligible Government of India dated Securities/ State Development Loans (SDL) and Treasury Bills (T-Bill) are eligible for Repo/Reverse Repo transactions with RBI.
3. The valuation of securities used as collateral would be based on market value of the securities w.e.f. November 26, 2016.
4. The data published by Fixed Income Money Markets and Derivatives Association of India (FIMMDA) regarding price/yield of G-Secs/Treasury Bills on a daily basis (on all working days when the G-Secs are traded) would be used for valuation.
5. For all the Repo/Reverse Repo operations carried out on any day, the applicable prices for valuation of securities would be based on the FIMMDA prices published on the previous working day.
6. For calculating the dirty price (clean price + accrued interest) of the G-Secs, '30/360' day count convention would be used.
7. For calculating the price of the T-Bills, the 'Actual/365' day count convention would be used.
8. T-Bill prices for intermediate tenors would be derived using linear interpolation on the FIMMDA T-Bill yields data for the available tenors.
9. The initial margin for Central Govt. Securities and SDLs will be at 4 per cent and 6 per cent respectively, subject to review in future.
10. If for any reason the FIMMDA price/yield files of the day is not available, the latest available previous data would be used for valuation.
11. The yield/price would be approximated by rounding-off to 4 decimals. The collateral to be exchanged both in case of Repos and Reverse Repos would be in multiples of 10,000 (after rounding up) to ensure that such transactions are not under-collateralised.
12. Illustrative examples for valuation based on market value for Central Government Securities /SDLs, T-Bills and STRIPS, respectively are furnished below.

**Illustration A: Valuation of Central Government Securities /SDLs**

- i. *Example:* For a successful bid of Rs.100 crore in RBI Term Repo auction on 06/09/2016, a participant provides a Central Govt. security, 8.33% GS 2026 (maturity date- 09/07/2026, date of last coupon – 09/07/2016).
- ii. The price of the security published by FIMMDA on 02/09/2016 (03, 04 and 05/09/2016, G-Sec market was closed) is Rs.108.6792.
- iii. Accrued Interest from 09/07/2016 (date of last coupon) to 06/09/2016 (date of Repo transaction) for 57 days would be Rs.1.3189 (8.33 x 57/360).
- iv. Accordingly, the dirty price of the security would be Rs.109.9981 (108.6792+1.3189). Therefore, the face value (F.V.)of securities to be debited from Repo Constituent (RC) account after applying 4% margin and rounding-up to multiples of 10,000 would be Rs.94,54,80,000 (1.04 x 100,00,00,000 x 100 / 109.9981).
- v. The mechanism for computing the dirty price for the SDLs would be on similar lines with the applicable initial margin.

**Illustration B: Valuation of T-Bills**

- i. FIMMDA publishes benchmark yields (YTM & Discount Yield) only for select tenors (7, 14, 30, 60, 90, 120, 150, 180, 210,240, 270, 300, 330 & 364 days). For residual maturities, linear interpolation would be used to derive the yield. For example if the yield of 10 days residual tenor ( $T_x$ ) has to be derived, then the FIMMDA yields of 7 days ( $T_1$ ) and 14 days ( $T_2$ ), respectively would be used. For residual tenor less than 7 days, the 7 day YTM would be used.
- ii. Formula for Linear Interpolation of yield at tenor  $T_x$  ( $T_1 < T_x < T_2$ ) = Yield for  $T_1$  + [{"Yield for  $T_2$  - Yield for  $T_1$ "} / ( $T_2 - T_1$ )] x ( $T_x - T_1$ ).
- iii. Price = 100 / (1 + YTM in percentage x days to maturity of the T-Bill / 365).
- iv. *Example:* For a successful bid of Rs.100 crore in a Term Repo auction on 06/09/2016, a participant provides a 364 day T-Bill maturing on 16/09/2016 (residual maturity of 10 days). As per data published in the FIMMDA on 02/09/2016 (3, 4 & 5/09/2016, G-Sec market was closed), the YTM for 7 day tenor is 6.4138% and the YTM for 14 day tenor is 6.4232%. Based on linear interpolation for 10 days, the YTM would be 6.4178% and accordingly, the price can be derived as Rs.99.8245.
- v. Therefore, the F.V. of the particular T-Bill to be debited from RC account of the participant after applying 4% margin and rounding-up to multiples of 10,000 would be Rs.104,18,30,000 (1.04 x 100,00,00,000 x 100 / 99.8245).

**Illustration C: Valuation of STRIPS**

- i. FIMMDA publishes the prices of STRIPs on a daily basis.
- ii. *Example:* For a successful bid of Rs.100 crore fund in RBI Term Repo auction on 06/09/2016, a participant provides a principal STRIP 'PS 02 JAN 2020' (maturity - 02/01/2020). The FIMMDA price on 02/09/2016 (on September 3,4 and 5, 2016, G-Sec market was closed) is Rs.79.7749. Therefore the F.V. of securities to be debited from RC account of the participant after applying 4% margin and rounding-up to multiples of 10,000 would be Rs.130,36,70,000 (1.04 x 100,00,00,000 x 100 / 79.7749).

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## Annex-II

### **Operational Guidelines for Re-Repoing of securities received under RBI Reverse Repo**

1. To enable the re-repoing of securities received in the RBI Reverse Repo auctions, the participants would be able to transfer the securities from their Reverse Repo Constituent (RRC) Account to their SGL account.
2. Re-repoing of securities will be permitted subject to the conditions prescribed in [RBI circular FMRD.DIRD.5/14.03.002/2014-15 dated February 5, 2015](#). Additionally, conditions prescribed hereunder will also apply for re-repoing of securities received in RBI Term Reverse Repos.
3. For the purpose of Re-Repo, the participant would be able to withdraw securities from the RRC account up to two working days (i.e. days when G-Sec market is functional) prior to the 2<sup>nd</sup> leg settlement date of the concerned Term Reverse Repo.
4. Re-Repo of securities received in overnight Reverse Repo auctions is not allowed.
5. The amount of securities which the participant can withdraw from its RRC account will be net of the margin amount, ascertained at the 1<sup>st</sup> leg of the transactions (currently 4% for Central Govt. securities and 6% for SDLs). If multiple securities are provided in the RBI Term Reverse Repo auctions, margin would apply security-wise for withdrawal from the RRC account as illustrated below:

<b>Illustration A: Maximum amount of securities which can be withdrawn for Re-Repo</b>
<ol style="list-style-type: none"> <li>i. On 06/09/2016, a participant has offered Rs.400 crore in a 8 day RBI Term Reverse Repo auction (2nd leg settlement on 14/09/2016) and has received Rs.94,54,80,000 F.V. of Central Govt. security 8.33% GS 2026, Rs.103,96,40,000 F.V. of Central Govt. security 6.97% GS 2026, Rs.104,18,30,000 F.V. of 364 day Treasury Bill with residual maturity of 10 days and Rs.130,36,70,000 F.V. of principal STRIP 'PS 02 JAN 2020' , from RBI in the 1st leg (the securities are the same as given at Annex-I).</li> <li>ii. The securities can be withdrawn for Re-Repo on any day from 06/09/2016 to 09/09/2016 (because on 10, 11 &amp; 13/09/2016 G-Sec markets are closed and the securities can be used for Re-Repo only up to two working days (i.e. days when G-Sec market is functional) prior to the 2nd leg settlement of the Term Reverse Repo).</li> <li>iii. The maximum amount of securities allowed to be withdrawn for the purpose of Re-Repo, during the tenor of the RBI Term Reverse Repo after excluding applicable 4% margin and rounding-down in multiples of Rs.10,000 would be, Rs.90,91,10,000 F.V. of Central Govt. security 8.33% GS 2026, Rs.99,96,50,000 F.V. of Central Govt. security 6.97% GS 2026, 100,17,50,000 F.V. of 364 day Treasury Bill with residual maturity of 10 days and 125,35,20,000 F.V. of principal STRIP 'PS 02 JAN 2020'.</li> </ol>

6. Participant has to ensure that same set of securities (type, ISIN number and face value) received at the 1<sup>st</sup> leg of the transactions are returned at the time of 2<sup>nd</sup> leg settlement. Under no circumstances different securities or combinations thereof would be accepted.
7. The 2<sup>nd</sup> leg settlement for RBI Reverse Repos takes place at the start of the day on the settlement date. Therefore, participants should ensure that the same set of securities are available in the RRC account by the end of the penultimate day.
8. *Default in 2<sup>nd</sup> leg Settlement:* If the participant does not make available the same set of securities at the time of the 2<sup>nd</sup> leg settlement of the Term Reverse Repo, it would be treated as default. A report would be made available in the 'MYDOWNLOADS' section of e-kuber portal to such defaulting participants and the participant would be allowed to make available sufficient securities latest by 5:30 pm of the same day for settlement. Penal provisions will apply for the default.

<b>Illustration B: Default in 2nd leg Settlement</b>
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| <ol style="list-style-type: none"> <li>i. The participant has withdrawn the maximum securities permitted for Re-Repo as per the details given at Illustration A above, i.e. Rs.90,91,10,000 F.V. of Central Govt. security 8.33% GS 2026, Rs.99,96,50,000 F.V. of Central Govt. security 6.97% GS 2026, 100,17,50,000 F.V. of 364 day Treasury Bill with residual maturity of 10 days and 125,35,20,000 F.V. of principal STRIP 'PS 02 JAN 2020'.</li> <li>ii. The participant has to ensure that all the above mentioned securities are available in its RRC account by end of the day on 12/09/2016 (for 2<sup>nd</sup> leg reversal on 14/09/2016 because 13/09/2016 is a holiday).</li> <li>iii. Any shortfall would be treated as default. For example, if out of the above, the participant has provided Rs.80,91,00,000 F.V. of Central Govt. security 8.33% GS 2026, Rs.99,96,50,000 F.V. of Central Govt. security 6.97% GS 2026, 100,17,50,000 F.V. of 364 day Treasury Bill with residual maturity of 10 days and 125,35,20,000 F.V. of principal STRIP 'PS 02 JAN 2020'.</li> <li>iv. This shortfall of Rs.10,00,00,000 F.V. of Central Govt. security 8.33% GS 2026 would be treated as default and the 2nd leg settlement of Term Reverse Repo for the concerned participant would be withheld. Further, the participant would be subjected to penal provisions.</li> <li>v. System would generate a report for such defaulting participants and it would be made available in 'MYDOWNLOADS' of the participant. The defaulting participant should make available the shortfall amount of concerned securities i.e. Rs.10,00,00,000 F.V. of Central Govt. security 8.33% GS 2026 in the RRC account latest by 5:30 pm on the same day i.e. 14/09/2016 and confirm to RBI, so that the 2nd leg settlement can be completed in respect of the participant.</li> </ol> |
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9. If, even after such notification, the defaulting participant is unable to provide the securities for settlement within the stipulated time, exception handling mechanism would be triggered in the following manner.

9.1. The system would check the RRC account and debit the securities to the extent available (out of the securities given by RBI in 1st leg of the transaction).

9.2. The shortfall Rupee amount would be arrived at by applying the dirty price (clean price + accrued interest) based on the latest available FIMMDA price of the respective securities to the shortfall amount in face value terms of individual securities.

**Illustration C: Computation of shortfall amount in Rupee terms**

- i. Continuing with illustration B above, where the shortfall is Rs.10,00,00,000 F.V. of Central Govt. security 8.33% GS 2026.
- ii. Consider that the price of the Central Govt. security 8.33% GS 2026 as per the FIMMDA file of 12/09/2016 (because on 13/09/2016 G-Sec market is closed on account of holiday) is Rs.108.8468.
- iii. Accrued Interest from 09/07/2016 (date of last coupon) to 14/09/2016 (date of 2nd leg settlement) for 65 days would be Rs.1.5040 ( $8.33 \times 65/360$ ).
- iv. Accordingly, the dirty price of the security would be Rs.110.3508 ( $108.8468 + 1.5040$ ).
- v. Therefore the amount of shortfall in Rupees terms would be Rs.11,03,50,800.

9.3. The shortfall Rupee amount would be recovered from the balances available in respect of the defaulting entities in the following chronological order:

9.3.1. From the Rupee amount deposited by the participant in the first leg of the Reverse Repo transaction.

9.3.2. From the Interest payable to defaulting entity on account of the Reverse Repo transaction.

9.3.3. From the current account of the participant maintained with RBI.

9.4. Additionally, penalty would be levied as mentioned below.

**10. Penalty for default**

10.1. If sufficient securities are not made available in the RRC account at the time of 2nd leg settlement of the Reverse Repo transaction, it would be treated as a default.

10.2. Default in any issue of RBI Term Reverse Repo would be treated as one default. For example If there are three RBI Term Reverse Repo issues outstanding for settlement on 15/09/2016 {(i) a 15 day Term Reverse Repo initiated on 31/08/2016, (ii) a 14 day Term Reverse Repo initiated on 01/09/2016 and (iii) a 13 day Term Reverse Repo initiated on 02/09/2016}

and a participant defaults on all the three issues on 15/09/2016, then the number of defaults would be counted as three.

- 10.3. Failure of the defaulting participant to offer satisfactory explanation within five working days of such default, shall make the participant liable to pay graded monetary penalties subject to a maximum penalty of Rs.5 lakhs per default as under:

<b>Sl. No</b>	<b>Applicable to</b>	<b>Monetary penalty</b>	<b>Illustration [Penal amount on Rs.5 crore default]</b>
1	First three defaults in a financial year (April to March)	0.10% (10 paise per Rs.100 FV)	Rs.50,000/-
2	Next three defaults in the same financial year	0.25% (25 paise per Rs.100 FV)	Rs.1,25,000/-
3	Next three defaults in the same financial year	0.50% (50 paise per Rs.100 FV)	Rs.2,50,000/-

- 10.4. The monetary penalty would be debited directly from the current account of the concerned participant with RBI.

- 10.5. On the tenth default in a financial year, the eligible entities will be debarred from accessing the Repo/Reverse Repo/MSF auctions of RBI during the remaining part of the financial year. In the next financial year, upon being satisfied that the said participant has effected improvements in its internal control systems, RBI may grant specific approval for accessing these facilities.

- 10.6. The defaulting participant shall make appropriate disclosure, on the number of instances of default as well as the quantum of penalty paid to the Reserve Bank during the financial year, under the "Notes to the Accounts" forming part of annual financial statements.

- 10.7. The Reserve Bank reserves the right to take any action, including temporary or permanent debarment from accessing any of the Repo/Reverse Repo/MSF auctions of RBI as it may deem fit, for violation of the terms and conditions notified by RBI from time to time.

11. Participants are advised to make necessary operational arrangements to comply with the above stipulations.

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