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To,

ALL FIMMDA MEMBERS

VALUATION OF INVESTMENTS AS ON 31ST MARCH 2011

In accordance with the RBI Master Circular no. DBOD No BP.BC.18/21.04.141/20010-11 dated July 1, 2010, FIMMDA jointly with PDAI has been publishing certain rates for valuation of government securities, bonds and debentures, swaps where the government securities have been used as a benchmark.

FIMMDA has issued guidelines / clarifications in respect of the methodology to be followed for valuation at periodical intervals. The guidelines applicable for valuation as on 31st March 2011 have been consolidated for the benefit of the market participants and are given in the **Annexure**.

The rates/prices to be used for the valuation will be published separately.

Yours truly,

C.E.S. Azariah
Chief Executive Officer

ANNEXURE

GUIDELINES / CLARIFICATIONS FOR VALUATION OF INVESTMENTS

The participants should ensure that the valuation of the investment portfolio is in accordance with the guidelines / circulars issued by the Reserve Bank of India both for Banks and Primary dealers with particular reference to:

- i. RBI Master Circular- Prudential norms for classification, valuation, and operation of investment portfolio by banks dated July 1, 2010. (Para 3.5)
- ii. RBI Master Circular - Operational Guidelines to Primary Dealers dated July 1, 2010.(Para 6.4 (i) & (iv))

VALUATION OF GOVERNMENT SECURITIES

Central Government Securities, which qualify for SLR

The prices as well as the yield curve for all Central Government Securities are published by FIMMDA.

For valuation of all other securities **FIMMDA's Par/Base Yield Curve**, which is derived from the Central Government Securities yield curve should be used. The Par/Base Yield Curve starts from three-month tenor. The yield for three-month tenor would also be applicable for maturities less than three months.

Central Government Securities, which do not qualify for SLR

The Central Government Securities, which do not qualify for SLR shall be valued after adding 25 basis points (bps) to the Base Yield Curve. (Ref: note to para 3.7.1 of RBI Master Circular for banks dated July 1, 2010)

State Government Securities

The curve on which state government securities are valued is arrived at after adding 25 basis points (bps) to the Base Yield Curve.

Treasury Bills

For Banks: These securities will be valued at carrying cost. [Para 3.6.1 (iii) of RBI Master Circular for banks dated July 01, 2010].

For Primary Dealers and Banks PDs: These securities will be valued on mark to market basis.
(Para 3.8 of Master Circular for PD's dated July 01, 2010)

Other SLR bonds / securities

Other eligible SLR bonds will be valued similar to the state government securities.

VALUATION OF BONDS AND DEBENTURES, OTHER THAN GOVERNMENT SECURITIES

GENERAL

1. FIMMDA will publish the Annualised Base Yield Curve and a matrix of credit spreads across maturities and credit ratings for

- i) PSU, FIs
- ii) Banks
- iii) NBFCs
- iv) Corporates

[Change: The fourth category of the matrix of credit spreads has been added]

2. Yield and credit spreads for intermediate tenors for each curve may be arrived by linear interpolation.
3. The spreads must be added to the base yield corresponding to the residual maturity and not the original maturity.
4. Bonds with a remaining maturity of less than six months are valued on the 3-month base yield curve plus the relative extrapolated credit spread.
5. For Bonds with residual maturity of more than 15 years, the spread of 15 years as shown in the matrix of credit spreads should be added to the yield of applicable maturity (as per the base yield curve).
6. FIMMDA may from time to time stipulate different spreads for any specific category if warranted.
 - * Currently the following spreads will apply:
 - *Supra-national ADB Bonds would be valued at zero spread over the respective annualised gilt yield.*
7. Valuation of Tax free bonds guaranteed by Central Government and State Governments

(e.g. IIFCL bond). (Please see para 5 under “Bonds and debentures having special features).

BONDS AND DEBENTURES, WHICH ARE RATED BY A RATING AGENCY

1. The rated bond is to be valued by adding the credit spreads to the Base Yield Curve (corresponding to the coupon frequency).
2. Where the issuer under consideration has two or more different ratings, from different rating agencies, the lowest of the ratings shall be applicable.
3. A rating is considered as valid only if it is not more than 12 months old as on date of valuation.

UNRATED BONDS / BOND MIGRATED TO ‘UNRATED’ CATEGORY DURING ITS TENOR:

Bonds and debentures, which are NOT rated by a rating agency or have become ‘unrated’ during their tenor, but a corresponding rated bond of the issuer exists, then:

1. The unrated bonds will be valued by marking up the credit spread by a minimum of 20 % over the equivalent rated bond of similar tenure.
2. For the above purpose, “corresponding” would mean, if the unrated bond has a maturity of ‘t’ years, the rated bond should have a maturity not less than $t - 0.5$ years. For example, if the unrated bond has a residual maturity of 3 years, then the rated bond to be treated as corresponding should have a maturity of at least 2.5 years.

BONDS, DEBENTURES AND PREFERENCE SHARES WHICH ARE NOT RATED BY A RATING AGENCY, AND NO CORRESPONDING RATED BOND OF THE ISSUER EXISTS

Anyone of the two methods, mentioned below, may be adopted.

Method I

1. A quick rating can be obtained from the authorized credit rating agencies.
2. The credit spread to be added to the annualized yield curve for this notional rating will then be marked up by 25%.

Method II

1. The spread over the sovereign risk free yield curve, at the time of issue, marked up by 25% will be the applicable credit spread.

2. The credit spreads thus arrived at OR the current credit spreads of AAA bond of similar residual tenor, whichever is higher, should be taken and applied over the above base yield curve for valuation.
3. SGL Data available from 1st January 1996 at the RBI's website (www.rbi.org.in) should be used for arriving at the credit spreads at the time of issue.
4. In case of issues prior to January 1, 1996 the bonds will be valued at cost.

Bonds and debentures, which have become 'unrated' during its tenor, and NO corresponding rated bond of the issuer exists. In such a case highest amongst the following three spreads should be taken as the credit spreads:

1. Compute the spread over the sovereign yield curve, at the time of issue, marked up by 25%.
2. Compute the spread for the last known rating of the bond from the current spread matrix.
3. The current spread for AAA bond of similar tenor.

The value, thus arrived should be applied over the base yield curve for valuation.

BONDS / DEBENTURES HAVING SPECIAL FEATURES

1. Floating Rate Bonds

Floating Rate Bonds are instruments where the coupon rate is variable and is calculated using a certain predetermined methodology. Crucial to the concept of a floating rate bond is the "Benchmark Rate", which is a market determined interest rate, used for the computation of the coupon rate from time to time. The frequency at which the coupon rate is reset is called the reset frequency, while the frequency at which coupon payment takes place is the coupon payment frequency.

Method of Valuation of Floating Rate Bonds

- 1) Compute the forward benchmark rate for each reset date.
- 2) Using the same find the coupon (benchmark plus markup, if any) and the cash flows on the interest payment dates.
- 3) Discount these cash flows by any one of the following methods:
 - i. Discount each cash flow using the Zero-Coupon Yields for that cash flow adjusted for the credit spread corresponding to the rating of the bond.
 - ii. Discount all cash flows by the G-Sec YTM for the full maturity of the bond adjusted for the credit spread corresponding to the rating of the bond.

The zero-coupon rates may be arrived at using any recognized source viz. CCIL, FIMMDA -

Bloomberg, etc.

Computation of the forward rate

$$(1 + R_1)^{T_1} \times (1 + F)^{(T_2 - T_1)} = (1 + R_2)^{T_2}$$

Where,

R_1 = zero rate for time T_1 ,

R_2 = zero rate for time T_2 ,

F = forward rate for period $(T_2 - T_1)$ at time T_1

While the above formula is most accurate, an approximation may be made as follows:

$$F = (R_2 \times T_2 - R_1 \times T_1) / (T_2 - T_1)$$

2. Bonds with Call and Put Options:

Where bonds have simultaneous call and put options (on the same day) and there are several such call & put options in the life of the bond, the nearest date should be taken for Price/YTM calculation.

- a. Only Callable Bonds: Bonds, which are only callable by the issuer, will be valued at yield-to-worst basis.
- b. Only Puttable Bonds: Bonds puttable by the investor should be valued at yield-to- best basis.

3. MIBOR linked Bonds:

For bonds linked to MIBOR, the Overnight Index Swap (OIS) market quotes will be used to convert MIBOR into fixed rate for the outstanding tenor. The spread over MIBOR (as per the original terms of the issue) will be added to arrive at the notional fixed coupon. Then the bond will be valued similar to a fixed coupon bond and the valuation methodology given above for corporate bonds/debentures should be followed.

4. Bonds with Floor and Cap:

Bonds with a Collar spread of 25 basis points or less will be valued like a fixed coupon bond with the coupon being the average of the cap and floor. (**Rationale:** *If the Collar spread is small*

the likelihood of the bond hitting the cap or the floor is higher and the bond would behave like a fixed coupon bond)

For bonds with higher collar spread, the banks should separately value the collar through any recognized model and account for the changes in the P & L account as per rules.

5. Tax-Free Bonds:

In case of Tax Free bonds, the coupon will be grossed up by a factor equal to the income tax rate applicable for the holder. Thereafter, the bond will be valued as per para 3.7.1 of RBI Master circular mentioned above. As per rules governing tax-free bonds, to get tax-free status, these bonds are to be registered in the name of the holder claiming the tax break. Merely holding the bond with the transfer from and /or post-dated cheque/ warrant will not entitle the holder, tax-free status.

6. Preference Shares

Preference shares should be valued as per Para 3.7.3 of the RBI Master Circular (for banks) mentioned above.

However since dividend on Preference shares is Tax free in the hands of the investor, the valuation treatment indicated in Para 5 above (for Tax free bonds) will be applied with the proviso that the Preference share is not valued above its redemption value. (Ref Para 3.7.3 (f) of the RBI Master Circular for banks)

7. Priority Sector Bonds:

Priority sector bonds issued by Financial Institutions and Public Sector Undertakings should be valued as a corporate 'AAA' rated paper.

8. Unrated Government guaranteed Non-SLR bonds

They are those bonds that are issued outside the approved market-borrowing programme may be valued as follows:

- a. Spreads over the sovereign risk free yield curve, at the time of issue, will be applicable.
- b. The spread shall be marked up by 15% if the issue is more than 12 months old.
- c. SGL data, available from January 1, 1996 at RBI website (www.rbi.org.in), should be used for arriving at the credit spreads at the time of issue. In case of debenture/ bond issued prior to January 1, 1996 the bonds will be valued at cost.

9. Valuation of Securitised Paper

All Securitised papers would be valued on the basis of the Base Yield Curve and the applicable spreads as per the spread matrix relative to the Weighted Average Maturity of the paper.

10. Valuation of Security Receipts / Pass through Certificates issued by Reconstruction Company / Securitisation Company

Such instruments will be valued as per Net Asset Value (NAV) given by the issuing Reconstruction Company / Securitisation Company.

The valuation of PTC should be done depending upon the mix of the assets which constitute the securitized paper. Thus, if the assets fall purely under any FIMMDA: Valuation Committee s - 8 - one of the 3 categories, the valuation should be done as per the spread applicable to that category. In case there is a mix of categories on the underlying assets of the PTC, the worst valuation applicable should be used. Thus, as per current valuation, if there is a mix of all three categories, then the valuation of NBFCs (being the worst) should be used.

In case of retail underlying assets (e.g. Housing loans, Car loans, Motorcycle loans etc) the matrix applicable to corporate should be used.

11. Valuation of Perpetual Bonds

Perpetual Bonds should be valued at yield to worst basis (inclusive of the applicable spread) where the final maturity of the bonds will be taken to be the longest point on the Base Yield Curve and the applicable spread would be that which is available for the longest tenor for the corresponding rating.

- i) You have to consider the cash flow of the security relating to the longest point on the Government Securities yield curve.
- ii) If the securities have a Call Option by the issuer and there is a step-up coupon after the call option, the cash flow should be considered with the step-up coupon after considering the regular coupons upto Call Option date.

Note: For a perpetual bond with single/multiple call option, compute the price for all option dates till the longest point on the base yield curve. Use the price which is the lowest for valuing the bond.

For securities where the residual maturity is more than 15 years, the spread of 15 year should be added to the yield (as per the base yield curve) of applicable maturity.

[Change: The word "banks" has been deleted as perpetual bonds have been/may be issued by institutions other than banks]

12. Valuation of coupon bearing and non-coupon bearing Deep Discount Bonds:

The coupon bearing Deep Discount Bonds would be valued as:

- i) Zero Coupon Bonds (Without the coupons)
- ii) The individual coupon flows would be valued as Zero Coupon STRIPS.
- iii) The grossed up present values of (i) + (ii) above would be the price of the coupon bearing Deep Discount Bond at which the bond would be marked to market.

13. Valuation of Commercial Paper / Certificate of Deposits:

Commercial Papers/Certificate of Deposits of tenor less than one year should be valued at carrying cost.

14. Valuation of Venture Capital Funds:

To be valued as per para 3.9 of RBI Master Circular dated July 1, 2010.

15. Valuation of Corporate Bonds Traded In The Market

FIMMDA issues a tenor -wise, industry classification -wise, rating -wise, matrix on month-ends for valuation of Corporate Bonds. This matrix is to be used for valuation of bonds which have not traded in the market.

With the advent of the Reporting Platforms for reporting of Corporate Bonds traded in the market, FIMMDA is now able to analyse and disseminate the spreads of Corporate Bonds traded in the market.

To enable a finer valuation of Corporate Bonds traded in the market, the following methodology would be used from March 31, 2011:

- i. Whenever a Corporate Bond is traded, and reported, the 'traded spread' (of the weighted average traded yield) of that bond, over the G.Sec Par/Base Yield curve would be used for valuing the bonds of all other bonds of similar rating of the particular Corporate in the particular traded tenor. (Thus, if AAA bond of 'Power Grid Corporation' (PGC) maturing in 2014 has traded with a spread of 150 bp over the G.Sec Par/Base Yield, all PGC bonds maturing in 2014 would be valued with a spread of 150 bps over the G.Sec Par/Base Yield.)
- ii. If more than one bond of the particular corporate with the same rating has been traded in that tenor, the higher traded spread would be used for valuing all other similar rated bonds of that corporate in that particular tenor. (Thus if AAA, 8.84 % PGC -2014 has traded with a spread of 150 bps and 8.70 % PGC -2014 has traded with a spread of 100

- bps, all other PGC bonds maturing in 2014 would be valued with a spread of 150 bps)
- iii. If the spread as shown above is higher than the spreads as indicated by the FIMMDA matrix for illiquid bonds, then the latest FIMMDA matrix spreads would apply. (Thus, if the spread for AAA PSU, spread for 2014, is shown as 125 bps in the FIMMDA Corporate Bond valuation matrix, all other PGC bonds would be valued at a spread of 125 bps)
 - iv. For applying the above methodology, the traded spread should be the latest available traded spread and not more than 15 days prior to the date of valuation.

[Change: Entire Para 15 has been added]

(Rationale: To bring the valuation of corporate bonds closer to market traded yield and prices and move away from polled yields and prices)

16. Valuation of staggered redemption bonds:

Staggered redemption bonds would be valued as under:

Approach	Discounting rate	Spreads
Treat as a plain-vanilla bond with residual maturity equal to weighted average maturity of principal flows	As per weighted average maturity	As per weighted average maturity

17. Valuation of Swaps:

a. FIMMDA publishes the following benchmarks on a daily basis.

- i. FIMMDA-NSE MIBID/MIBOR
- ii. FIMMDA-Reuters MIFOR
- iii. FIMMDA-Reuters MITOR
- iv. FIMMDA-Reuters MIOIS
- v. FIMMDA-Reuters MIOCS
- vi. FIMMDA-Reuters Commercial Paper
- vii. FIMMDA-Reuters Treasury Bill

Where these benchmarks are used for swap transactions, the same will be used for valuing the swap.

b. In respect of the others, the same should be valued at the same benchmarks that were used at the time of entering into the swap transaction.