Month	Chronology of Decisions / Changes given effect to Valuation Methodology in 2016
For the month of **December** - meeting held on 31st Dec, 2016	**SDL valuation methodology as per Ind A.S.** Every tenor will have a spread for the day end valuation of all SDLs maturing in that year. Spread applicable to a tenor will be the average of spreads calculated for that tenor, provided the number of ISINs traded in that tenor for that day is at least three. If 3 traded ISINs are not available in a tenor, 20 days moving average will be taken provided minimum 5 ISINs trades in 20 working days. If a tenor has no day's average or 20 day moving average spread, spreads would be derived for those tenors by taking average of changes in immediate preceding and succeeding tenor spreads and adding/subtracting the changes to/from the previous day spread of the tenor for which proxy spread is required. If only immediate preceding or succeeding tenor spread is available, use the change in that spread. If spreads of immediate tenors are not available, the change in spread (current day traded spread over previous day traded/proxy spread) of the nearest tenor security will be added or subtracted to/from the previous day 6. Treasury bill valuation methodology as per Ind A.S. It was decided in the earlier meeting that yields of non-traded T-Bill will be calculated by linear interpolation method instead of extrapolation. If the T-Bill with the shortest outstanding tenor is not traded, Fixed Repo rate will be used as proxy yield. Discussion took place regarding the proxy yield to be used if the T-Bill with the longest outstanding tenor is not traded. Extrapolation of previous tenor traded T-Bill yield or extrapolation of traded yield of + - 90 day T-Bill and + - 180 day T-Bill were not found to give acceptable results. The extrapolation yields were at much higher/lower levels, when back testing was done. Repeating the yield of previous tenor traded T-Bill as proxy to the longest outstanding tenor T-Bill gave acceptable results in back testing but not recommended by the members of valuation committee because the shape of yield curve will change to a flat one even when the shape of the curve is otherwise raising or falling. After a lot of discussion, it was suggested that the change in yield (current day traded yield over previous day's traded/proxy yield) of previous tenor traded T-bill be added to the previous day traded/proxy yield of last tenor T-Bill to get proxy yield of last tenor T-bill. This will ensue continuity in the shape of the yield curve. 7. Corporate Bond Matrix a) The monthly spread matrix as on 31st December 2016 was discussed. It was pointed out that yields of AAA NBFC for 7, 10, 15 yrs. Tenors and AA NBFC for 2 yr. tenor were out of sync. Yield of 7 yr. & 15 yr. tenors were interpolated / extrapolated. Yield of AAA NBFC for 10 year tenor presents the traded yield of Reliance Capital and yield of 2yr. AA NBFC represents traded yield of ECL Finance Limited. These issuers are not representative issuers through selected as such by the submitters. It was decided to replace the yields with polled yields. With this changes matrix was approved. b) Methodology for calculating spread Matrix: FIMMDA follows the below mentioned steps for construction of fortnightly matrix for corporate bond from the end of month i.e. September-2016. Members were informed that methodology for calculating spread matrix has been documented and published on FIMMDA website. Summery is given below; a. Trades that took place during the past 15 days (fortnight) and 30 days (for month end) are made available to all market participants in the FIMMDA website. b. Two days prior to every polling date, these lists are sent to all identified submitters for identifying segment /rating / tenor wise representative issuers. c. The responses are collected and sent to all identified submitters one day before the polls are given by the submitters. d. Based on the above, data polls are given by the submitters. The poll data are collected and sent to the calculating agent, CRISIL. e. The traded yields of the bonds issued by the identified issuer/s will be used as Level 1 input by CRISIL while calculating spread matrix. f. For the remaining rating/tenor in each segment, CRISIL will use the polled data for constructing the matrix. g. CRISIL does identification of outlier polls based on 2 standard deviations. h. After exclusion of outlier polls, median of remaining polls is used for construction of matrix. i. Final matrix is sent to FIMMDA which after vetting, disseminates to the market. c) Bond Yield Calculator – Discounting factor to be used: Price of a Bond is the sum of present value of future cash flows. To find the present values, the future cash flows are to be discounted using a discount factor. Discount factor is the yield for a particular tenor. The yield may be base/par yield or ZCYC. One can use a single yield for discounting all the future cash flows or use different yields according to the period of cash flow. After discussion, valuation committee members decided that future cash flows be discounted using a constant discount yield which shall be the annualized par yield for the residual tenor of the bond. FIMMDA will be changing the bond yield calculator accordingly. d) Members suggested some changes in the wording of priority sector PTC valuation. The suggested methodology is as under; These Bonds are invested by banks to meet regulatory requirements and the investment decisions are not necessarily for commercial reasons. PSL PTCs are generally held till maturity. So, this results in almost a total lack of secondary market trades to arrive at proper valuation. There is no mechanism to report primary market deals on to a reporting platform. These Bonds will have to be differentiated from normal NON SLR investments as the economic value is different. Investments in RIDF which are similar in nature were classified as HTM (now classified as other assets). In the view of the above and based on discussions in valuation committee meetings in August and September 2016 as well as in the Board meeting dated 29th August 2016, PSL PTC Bonds may be valued at book value. 8. Corporate Bond Trade Repository – Primary Issuance: Recently, NSE has started publishing Trade repository - Primary Issuances on their website. After the discussion member felt that these trades also need to be published by FIMMDA. So now we will be publishing primary issuance trades along with the secondary market trades with the separate heading. 9. Valuation of AT-1 Bonds: Traded spreads during the month of December, 2016 were presented to the members along with the previous month spreads. After discussion, it has been decided to value the AT-1 bonds with the following spreads over corresponding G-sec. Ratings / Tenors 3 to 5 Years 7 to 10 Years AA & Above 150 (180) 238 (232) AA-& Below 351 (376) 347 (343)
For the month of **November** -meeting held on 1st Dec, 2016	5) Define limits for Securities with (**) and (*) It was decided to discontinue the practice of assigning * marks to each security. Instead only Nodal Point securities will be marked as 'Nodal Point' 6. Corporate Bond Matrix: The monthly spread matrix as on 30th November 2016 was discussed and approved by members. 7. Valuation of AT-1 Bonds: Traded spreads during the month of November were presented to the members along with the previous month spreads. After discussion, it has been decided to value the AT-1 bonds with the following spreads over corresponding G-sec. Ratings / Tenors 3 to 5 Years 7 to 10 Years AA & Above 180 (150) 232 (211) AA-& Below 376 (353) 343 (284)

Amendment in the Proxy calculation for 1st Year Paper: Existing Rule

Proxy calculation for 1st Year paper: "If 1st year paper is not traded nor has MOT, and we are unable to use the difference in yield of the immediate succeeding Nodal Point, the proxy will be calculated by using the difference between previous day's 1st Year paper and the 2nd year paper and adding the same to previous day's 1st year paper"

Problem faced : on 13th October, 2016 the proxy for 1st year was calculated in terms of above rule for 1st year proxy. The system gave proxy yield of 6.0264 for 7.49 GS 2017, which was found to be much below the money market yield, whereas the yield of the next tenor paper did not undergo much change. The calculation of proxy for 2017 tenor Nodal Point as per the rule modified on 1st Oct, 2016 was as under

Tenor	Nodal Point	Previous Day Yield (10 - 10- 2016)	Current Day Yield (13- 10 – 2016)	Difference
2017	07.49 GS 2017	6.2891 (proxy)	No Trade/MOT	
2018	07.83 GS 2018	6.5518 (MOT)	No Trade/MOT	-0.2627

i.e. the yield of 2017 tenor was 26.27 bps less than the yield of 2018 tenor. When this difference is added to the previous day yield of 2017 tenor, we get proxy for 2017 tenor as 6.0264 which is much below the money market yield. In addition; this problem will accentuate if no trades take place on the next day in 2017/2018 tenors as the yield may drop further. Hence it is felt necessary to have a relook at the existing rule. Two solutions were offered for discussion

After discussion, it was unanimously decided that when the first-year Nodal Point paper does not trade on a particular day and there is no trade in the succeeding tenor to enable proxy calculation then we may take the yield of traded treasury bill having maturity date closer to the maturity date of the 1st year Nodal Point. The money market yield is converted into a semiannual YTM and taken as proxy input for the 1st year Nodal Point.

For the month of **October** -meeting held on 29th Oct, 2016	**6. Filter criteria for considering trades in Oil Bonds:** Presently for recognition of a traded price, there has to be a minimum of 5 trades totaling at least Rs. 25 Crores. The liquidity in this segment reduced considerably and due to the filter criteria, we are unable to input trades. Presently for SDLs the filter criteria is 1 trade of Rs 5Crs. In G-Sec segment even if one trade for Rs.5 Cr takes place its model generated price is replaced with traded value. So, it has been decided to apply the same rule as criteria for oil bonds as well i.e 1 trade and Rs. 5 Cr. **7.Valuation for securities in When Issued (WI) segment**: Presently, FIMMDA is not providing valuation for these securities. After discussion and the need of the market participants to value their portfolio, it has been decided that FIMMDA will provide valuation. As the announcement for auction of security is presently made in the beginning of the week and WI trading starts from Tuesday till Friday auction result, it has been decided to give valuation for WI security from Tuesday to Thursday based on the closing traded price/yield. On Friday, the closing price of WI security will be the same as the usual securities and so no separate price will be announced. Corporate Bond Matrix: i) The monthly spread matrix as on 29th October 2016 was discussed and approved by members. ii) Dates for publication of fortnightly corporate bond matrix: While the month end valuations are given on the last working day of the month, there is a need to formulate the rule for publication of dates for the first fortnightly. It has been decided that it will be polled and matrix generated on 15th of a month. But if it happens to be a holiday, then polling will be done and matrix generated on the previous working day. Matrix will be uploaded on next working day. 9. Discussion on fixed spread for Corporate Bonds rated below AA-: For bonds rated below AA-, a fixed spread is added to the AA- spread in each segment and that fixed spread is reviewed by the Valuation Committee once in three months.FIMMDA have analyzed the traded spread over the corresponding G-sec (rating wise & segment wise) for the period from 1st August 2016 to 25th October 2016. The ratings of the bonds were cross checked from NSDL & CRISIL website. Analysis of Traded Spreads (Over G-Sec) of bonds rated below AA- (01-August to 25-October 16) Segment / Ratings PSU FIs & Banks Diff. over AA- Corporates Diff. over AA- NBFCs Diff. over AA- AA- 109 (215) 206 (253) 147 (220) A+ 198 (361) 89 (146) 391 (321) 185 (68) 302 (265) 55 (45) A 259 (190) 150 (-25) 321 (366) 115 (113) 172 (444) -75 (224) A- NA (251) NA (36) 650 (458) 444 (205) BBB+ 757 (NA) 551 (NA) 438 (NA) 191 (NA) BBB 1090 (1076) 884 (823) 505 (NA) 258 (NA) BBB- 300 (855) 94 (602) Note: Figures in brackets are spreads of last quarter (1st May 2016 to 25th July 2016) Based on the above analysis, the fixed spreads were decided as under: SPREADS OVER AA- FOR BONDS RATED BELOW AA- RATING FIMMDA Spreads as existing on 31/10/2016 SPREADS DECIDED IN THE MEETING PSU FIs & Banks Corporates NBFCs PSU FIs & Banks Corporates NBFCs AA- As arrived at the end of each month -------- Add following spreads to AA- Spreads -------- A+ 50 75 50 75 100 50 A 50 100 175 100 125 125 A- 50 175 175 100 175 175 BBB+ 75 175 175 100 175 175 BBB 100 200 200 100 200 200 BBB- 125 225 250 125 275 250 The above spreads approved by Valuation Committee members will be valid for next 3 months' fortnightly matrix (end November-2016, December-2016 and end January-2017). 10. Valuation of AT-1 Bonds: Traded spreads during the month of October were presented to the members along with the previous month spreads. After discussion, it has been decided to value the AT-1 bonds with the following spreads over corresponding G-sec. Ratings / Tenors 3 to 5 Years 7 to 10 Years AA & Above 150 (169) 211 (242) AA-& Below 353 (373) 284 (363)

For the month of **September** -meeting held on 1st Oct, 2016	Change in the Proxy determination:
	The no. of such observed cases are very less and the impact is estimated as minimal. The change was implemented w.e.f. 8th September 2016.
	Proxy for the 1st year: As per the methodology, there is no filter for the tenors 1-7 years. In cases where there is no trade in 1st year, as per proxy rules, it was computed from the 2nd year tenor if traded. We have come across case where even the second year was not traded. Earlier, we used to compute the same manually out of the immediately preceding traded tenor (from the 2nd or 3rd year whichever is traded) But in automation, it was found difficult to give a formula for such cases. So, for automation purposes, we amended the rule as under:
	f. Proxy calculation for 1st Year paper: If 1st year paper is not traded nor has MOT, and we are unable to use point©, the proxy will be calculated by using the difference between previous day's 1st Year paper and the 2nd year paper and adding the same to previous day's 1st year paper.
	This also came into effect from 8th September 2016, the day of automation. Even here, the no.of such cases and the likely impact is expected to be minimal.
	The changes are confirmed and approved by the valuation committee members.
	6. Change in methodology of SDL and Special securities: Presently, for arriving at valuations of traded SDLs, firstly, the trades in NDS-OM, NDS-Reported and ODD lots above Rs.5 Cr are all downloaded. The last trade out of all the three sections is identified and is picked up for inputting into the system as a traded yield/price for that security (replacing the model generated price/yield- par yiled+25 bps).
	It is known that NDS-OM is an anonymous platform. NDS reported are bilateral OTC deals, reported after endorsement by both the counterparties. ODD lots being for nonmarketable lots, the price/yield are more related to the size etc. So, it is observed that for selection of trades, first priority shall be NDS-OM, second to NDS-reported and third to ODD lots above Rs.5 Crores.
	
	We are in the process of automation of SDLs as well. For giving formulas for picking up the trades, we wish to implement the rule as under:
	If a SDL is traded on all sections, the last trade on NDS –OM will be selected.
	If a SDL is traded on NDS-OM and any of the other two, last trade on NDS-OM will be selected.
	If a SDL is traded on NDS reported as well as ODD lots, last trade on NDS reported will be selected.
	If a SDL is traded only on ODD lots, ODD lot last trade will be selected.
	We have analyzed the differences in the valuations that may arise on account of the change in the procedure. The differences are minimal in the range of 0.00 to 0.03 bps. The analysis is enclosed.
	The change is explained and after discussion, was approved by the members of the committee.
	The revised procedure will be implemented w.e.f. 3rd October 2016.
	
	Discussion on T-Bill Yield curve:
	Ina move towards implementation of Ind AS recommendations, FIMMDA tried calculation of T .Bill yield curve on the basis of trades happening on NDS-OM as the curve /data attached.
	Suggestions for filling up non traded T-bill are as under:
	-averaging of preceding and succeeding T. Bills traded and applying the yield to arrive at price/yield for nontraded T-Bills. For 364 T. Bills if not traded, it may be computed on the basis of traded difference of preceding T. Bill or an average of the traded differences of 91 day and 812 da day T. Bills. These will be tested and mails sent to participants for their views.
	
	Corporate Bond Matrix:
	i) The monthly spread matrix as on 30th September 2016 was discussed and approved by members.
	ii) Corporate bond matrix generation:
	FIMMDA will be following the below steps for construction of fortnightly matrix for corporate bond from the end of month i.e. September-2016.
	a) Trades that took place during the past 15 days (fortnight) and 30 days (for month end) are available to all market participants in the FIMMDA website.
	b) Two days prior to every fortnight, these lists are sent o all identified submitters for identifying representative issuers for rating / tenor / segment wise.
	c) The responses are collected and sent to all identified submitters on e day before the polls are given by the submitters.
	d) Based on the above data polls are collected and sent to CRISIL, using polls received from polling participants through FIMMDA will observe the following;
	   i. Identification of outlier polls based on 2 standard deviations from median of all polls.
	   ii. Median of polls to be used for construction of matrix after exclusion of outlier polls identified in step 2.
	e) Dissemination of final matrix and consolidated.
	8. Valuation of PSL PTC Bonds:
	
	The valuation issues with PSL PTC bonds were discussed extensively in valuation committee meetings in August and September 2016 as well as in the Board meeting dated 29th August 2016. The gist of the minutes is as under:

These Bonds are invested by banks to meet regulatory requirements and the investment decisions are not necessarily for commercial reasons. PSL PTCs are generally held till maturity. So, this results in almost a total lack of secondary market trades to arrive at proper valuation. There is no mechanism to report primary market deals on to a reporting platform. These Bonds will have to be differentiated from normal NON SLR investments as the economic value is different. Further the cap applicable to banks for Non SLR bonds excludes these bonds, as these are unlisted. Investments in RIDF which are similar in nature are classified as HTM. So, the market participants felt that the PSL PTC bonds may be classified similarly and the Board concurred with the idea.

In the view of the above, PSL PTC Bonds may be valued at book value.

9. Security level Valuation:

FIMMDA have formed core committee for Security level valuations for Corporate Bonds comprising of SBI, PNB, ICICI, HDFC, Kotak, Barclays, I-Sec PD, Axis and SBI DFHI to arrive at methodology for computation of valuations.

FIMMDA asked for traded data of the Corporate Bond portfolio from the identified submitters, which can help understand the possibility of generating such value.

10. Valuation of AT-1 Bonds:
Traded spreads during the month of July were presented to the members along with the previous month spreads. After discussion it has been decided to value the AT-1 bonds with the

Ratings / Tenors	3 to 5 Years	7 to 10 Years
AA & Above	169 (199)	242 (286)
AA-& Below	373 (406)	363 (335)

For the month of **August** -meeting held on 1st Sept, 2016	2. **Continuation of a Selected Nodal Point in a Tenor for input during a month** : The committee decides Nodal Points for the subsequent month for generation of G-Sec curve on daily basis. The Nodal points are selected on the basis of traded data (trades*volume criterion) of the previous month. However on day if a security other than Nodal point has more traded volume then, that paper /security, is chosen as nodal point for that tenor and that day (as per extant rules). Change in input point with different yield changes the yield curve on the specific day with respect to previous day. Par Yield is derived from the G-Sec yield curve on daily basis. This par yield is used for generating model prices of SDL for non-traded securities. Change in G-Sec yield and Par Yield when the input points change, affect the SDL prices. This distortion in price and yield made an impact on the auction day of SDL UDAY Bonds recently. So it was decided in the meeting that once a Nodal Point is decided for a month, it should be taken as input for curve construction throughout the month irrespective of its level of trading volume during the month. However the rule for taking input in tenor where new security is introduced remains unchanged. . Corporate Bond Matrix: i) The monthly spread matrix as on 31st August 2016 was discussed and approved by members. ii) Corporate bond matrix generation: 7. **Security level Valuation** : Member were informed that FIMMDA is contemplating to give security level valuation for Corporate Bonds. In this direction, a core team is invited and formed. The core team will meet and discuss ways and methods of arriving at valuation. 8. **Valuation of AT-1 Bonds**: Traded spreads during the month of July were presented to the members along with the previous month spreads. After discussion it has been decided to value the AT-1 bonds with the following spreads over corresponding G-sec. Ratings / Tenors 3 to 5 Years 7 to 10 Years AA & Above 199 (215) 286 (314) AA-& Below 406 (342) 335 (335) Note: * Figures in brackets are that of last month.
For the month of **July** - meeting held on 30th July, 2016	**The CCIL data for the total trades (NDSOM+ Reported) will continue to be considered for identifying Nodal points in each tenor the minimum threshold being 50 trades and Rs500 crores.** FIMMDA will explore the possibility of getting the time wise deals reported on R.D. segment of NDS-OM so that the last traded yield of Nodal point (NDS-OM & RD combined) can be used for curve generation. 3.**Daily Filter criteria for the month**: We are presently experiencing problems in getting sufficient no. of Level 1 – Traded prices in tenors 2032-2055 i.e. say 16 to 40-year segment. Earlier in June 2016 Valuation committee meeting the Filter criteria for identifying nodal points in each tenor (other than 1-7 year) was reduced from 100 trades and Rs1000 Crores to 50 trades and Rs500 crores. The reduction resulted in adding more number of nodal point in tenor 2032-2055 but the daily traded levels did not pass the daily filter criteria which is the ratio of nodal point to the highest traded security – both in terms of no. of trades & volume. The high turnover of the G-sec on NDS –OM in July 2016 was the reason as July saw the total turnover each day going up substantially due to aggressive trading volumes. The NDS-OM grossed a highest turnover of Rs165, 000 crores on a single day in July 2016. The highest traded security went up a level of about 20-25 000 crores which resulted in the daily filter criteria going up to 10-15 trades and 80-120 crores. But the securities in the 2032-2055 segment continued to be trading in their own normal range of 3-6 trades with a volume of Rs. 30-50 Crores. So, to get more Level 1 inputs for generation of yield curve it was found necessary to rationalize the threshold for these segments. The following data was considered: 1. The threshold for fixing the nodal points on the first day of the month for the previous month is 50 trades and Rs500 crores. Daily numbers translate to 3 trades and 25 crores (20 trading days) 2. The data of no. of trades/volume of nodal points in the segment 2035-2045 for the period July 2015 to 23rd June 2016 which failed to pass the daily filter criteria was studied and shown to the members (annexed) The data showed that the average of no. of trades and volume for securities which failed to pass the daily filter criteria was 3 trades and 30 Crores during this period. So, it has been decided to adopt the following procedure: Daily Filter criteria will be calculated as per the present rule described in the methodology. For the segments 16-40 years, the no. of trades and volume calculated as per the filter criteria or 3 trades and Rs25 crores whichever is less will be the daily filter criteria for considering the securities traded yields to be input into the Matlab yield curve generation. Corporate Bond Matrix: i) The monthly spread matrix as on 30th July 2016 was discussed and approved by members. ii) Corporate bond matrix generation: The methodology of matrix generation was explained to the valuation committee members. In a waterfall mechanism traded spreads are considered first. For that, bonds issued by certain issuers in certain segments/ratings are considered. Rating Segments Issuers AAA PSU/FI/Banks REC and PFC AAA NBFCs HDFC and LIC Housing Finance AAA Corporates Input the last traded yield levels for above mentioned issuers, where available. In case of multiple trades, simple average of last traded yields of same/similar issuer is used for the maturity segment. A band of +/- 0.25 calendar year around the matrix segment is used for considering traded securities. These are level 1 inputs. For the remaining segments and tenors, the polls received from FIMMDA's identified submitters are considered. Outliers in each segment/rating/tenor are removed using median and one standard deviation method. That is, any poll/s which is/are away from the median value by one standard deviation is/are removed as outlier/s. After the removal of the outlier/s, the median is taken as the representative value. After detailed discussion, the committee approved the method of removing the outlier and using the median as representative value. The committee also approved the representative issuers for various segments/ratings as under: Rating Segments Issuers AAA PSU/FI/Banks REC AAA NBFCs HDFC and LIC Housing Finance AA+ NBFCs Sundaram Finance AAA Corporates Nil The traded yields of the bonds issued by the above issuers will be used as Level 1 input for calculating spread matrix. Going forward, it was decided that every fortnight, we circulate the traded data of all bonds during the fortnight/month to the pollers and ask them to identify an issuer in each segment and rating. The traded yields of the bonds issued by the identified issuer/s will be used as Level 1 input while calculating spread matrix.Earlier, in the valuation committee meeting held on 01.07.2015, it was decided that FIMMDA should indicate the names of 2/3 top traded issuers in each tenor/rating/category based on which the submitters would poll. In about 4-5months' time (1st December 2015), the submitters opined that sometimes, a bond trades the most due to various reasons but it may not be a representative of the rating, tenor. So, we discontinued the practice and gave the details of all Bonds traded during the month. The polling was being done for each rating and tenor as per the perception of the submitter (as there could be many bonds in the same tenor and rating). So, the polls vary and sometimes, the difference could be large. So, in the meeting held on 30-07-2016, it was decided that identification of representative issuers may be done by the identified submitters on the basis of traded data 2-3 days before the month / fortnight end. These identified representative issuers name will be shared with all the submitters for polling purpose.One day prior to polling on each fortnight / month, FIMMDA will circulate the traded data of all bonds of the fortnight/month along with the names of the identified representative issuers which could, subject to the individual submitter's policy, be used as a reference issuer/bond for polling in that segment and rating. If the representative issuer is not identified, then the submitters will continue to poll as per their expert judgment/internal policy which will be used for generation of the matrix by CRISIL.

Valuation of AT-1 Bonds:Traded spreads during the month of July were presented to the members along with the previous month spreads. After discussion it has been decided to value the AT-1 bonds with the following spreads over corresponding G-sec.

Ratings / Tenors 3 to 5 Years 7 to 10 Years
AA & Above 215 (167) 314 (185)
AA-& Below 342 (258) 335 (289)
Note: * Figures in brackets are that of last month.

7. Discussion on fixed spread for Corporate Bonds rated below AA-:For bonds rated below AA-, a fixed spread is added to the AA- spread in each segment and that fixed spread is reviewed by the Valuation Committee once in three months. FIMMDA have analyzed the traded spread over the corresponding G-sec (rating wise & segment wise) for the period from 1st May 2016 to 25th July 2016. The ratings of the bonds were cross checked from NSDL & CRISIL website.

It was decided by the committee to fix the fixed spreads as per the traded spreads (after rounding of). Wherever, there was no traded data, or traded spreads were found to be far away from the trend, the gaps were filled in by simple interpolation.

Analysis of Traded Spreads (Over G-Sec) of bonds rated below AA-(01-05-2016 to 25-07-2016)
Segment / Ratings PSU FIs & Banks Diff. over AA- Corporates Diff. over AA- NBFCs Diff. over AA-
AA- 215 (113) 253 (365) 220 (269)
A+ 361 (NA) 146 (NA) 321 (272) 38 (-93) 265 (275) 45 (6)
A 190 (237) -25 (124) 366 (347) 113 (-18) 444 (460) 224 (191)
A- 251 (246) 36 (133) 458 (360) 205 (-5) NA (361) NA (92)
BBB+ NA (754) NA (389)
BBB 1076 (1053) 822 (698) NA (877) NA (664)

Based on the above analysis, the fixed spreads were decided as under:
SPREADS OVER AA- FOR BONDS RATED BELOW AA- RATING FIMMDA Spreads as existing on 31/07/2016 SPREADS DECIDED IN THE MEETING
 PSU FIs & Banks Corporates NBFCs PSU FIs & Banks Corporates NBFCs

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1. Identification of Nodal Points for the Month of July, 2016 –Application of Filter Criteria for selection of Nodal points:Present practice for yield curve generation: Please refer to our methodology document on the website. On the first working day of every month, the FIMMDA Valuation Committee would identify "Nodal Points" (one bond pe calendar year tenor) from the outstanding stock of Government of India Securities. There will be only ONE Nodal Point for a calendar year of maturity (2016, 2017, 2018 …. 2045, 2055 etc). For important input tenors (1-7 and 10 years) the security having the highest product of trades and volume in that Tenor (Trades*volumes) will be selected as Nodal Point without applying any minimum for number of trades and volume. For other tenors, the "Nodal Points" should have had a minimum number of 100 trades and minimum volume of Rs.1000 Crore traded both on the NDS-OM and reported on NDS-OM Reported Deal Section, in the immediate preceding month. If a Nodal Point security fails to meet the above criteria in the subsequent month, it would still qualify to be a Nodal Point if it meets the criteria of 50 trades and 500 Cr, volume. (for the subsequent month only).

The valuation committee will have powers to identify a security for a nodal point even if it fails the filter criteria if it feels that such continuation will aid/improve yield curve generation(Eg: long gap between two nodal points or steepness of the curve between two tenors.)

Problem faced: Trades in longer tenor securities are comparatively less. There is no security outstanding for tenors like 2031,2037,2038, 2046-2054. Out of the remaining long tenor securities if criteria of 100 trades and Rs.1000 cr volume is applied, only few securities qualify for being Nodal Point securities. The yield curve will be better and more qualitative if more input points are used.

Suggestion: It is observed that by reducing the filter criteria, more securities in more tenors will get identified for consideration for inputs for yield curve generation. Reducing the minimum number of trades to 50 and minimum volume to Rs.500 crore will facilitate more securities to qualify for consideration and particularly in the 2030-2045 segment. It indicated possibility of more input points than the present case.

Daily Filter Criteria:
i. The bond selected for curve construction should have traded during the day.
ii. For important input tenors, even a single trade for Rs. 5 crore will enable the nodal point for being considered as Level 1 input. (1-7 years & 10 yrs)
iii. For other tenors, the security selected as nodal point should have reached/ crossed "Filter" set for the month by the Valuation Committee.

For the month of June meeting held on 01st July, 2016

Setting daily Filter Criteria:
Identify the Nodal Point with largest number of Trades (T1) and Volumes (V1) and also the Nodal Point with Minimum Number of Trades (T2) and Volumes (V2) during a month.
The daily criterion is a ratio of: % of T2/T1   and   % of V2/V1
A 3 month moving average of the ratio calculation as above will be used for moderating the volatility in the ratio.
Problem faced: In any month, the Nodal Point with largest number of Trades (T1) and Volumes (V1) is the highly traded 10 year Nodal Point. This is denominator.
While searching for the Nodal Point with Minimum Number of Trades (T2) and Volumes (V2) (numerator), the criteria of minimum 100 trades and minimum volume of Rs.1000 crore is applied. As a result, the filter criteria is the ratio of lowest traded security (subject to minimum 100 trades and volume of Rs.1000 crore) to the highest traded security. When we reduce the minimum number of trades to 50 and minimum volume to Rs.500 crore for selecting nodal point security, we should make necessary changes in the calculation of ratio for daily filter criteria. Otherwise, Valuation of AT-1 Bonds:Traded spreads during the month of June were presented to the members along with the previous month spreads. After discussion it has been decided to value the AT-1 bonds with the following spreads over corresponding G-sec.

Ratings / Tenors 3 to 5 Years 7 to 10 Years
AA & Above   167 (154)   185 (172)
AA-& Below   258 (245)   289 (352)
Note: * Figures in brackets are that of last month.

7. Valuation of PSL compliant PTCs: Further to the discussion held last (1st June) month, FIMMDA sent a mail to all members to let us know details of their purchase during 2015-16. FIMMDA received data from the 3 banks only who are holding the bonds. About 5 PSU banks reported nil holding. Some banks have expressed their inability to provide the data. It was also observed

8. Change in Polling of Corporate Bond below AA+: During the previous valuation committee meetings we were debating whether it is possible to reduce the no. of polls (ratings, tenors, segments) by the identified submitters of polls. In this direction, FIMMDA collated the daily volumes reported by the three exchanges for the years 2014-15 and 2015-16 as published on our website every day. The traded data from the year 2014-15 & 2015-16 was presented for discussion on polling.

Traded Data of Corporate Bond
Sr. No. Rating 2014-15 (%) 2015-16 (%)
1 AAA 80.20 75.88
2 AA+ 6.44 7.76
3 AA 5.43 5.82
4 AA- 3.81 4.80
 5 A+ 1.21 1.46
6 A 1.25 1.09
7 A- 0.46 0.16
8 BBB+ 0.04 0.07
9 BBB 0.00 0.16
10 BBB- 0.06 0.26
11 Other 0.17 0.27
12 NA & No Rating 0.93 2.26

Analysis revealed that while AAA accounts for 75-80%, the trades with ratings of AA+, AA & AA- account for 7-5% each. In fact the percentage of AA- rating improved from 3.81 pc to 4.80 pc. i.e. and we cannot ignore AA- . So it was decided to continue polling for the rating up to AA- till further notice.

Valuation of AT-1 Bonds: Based on Traded data & Methodology, following spreads are approved for AT – 1 Bonds;

SPREADS OVER AA- FOR BONDS RATED BELOW AA-
 RATING FIMMDA Spreads as existing on 31/01/2016 SPREADS DECIDED IN THE MEETING
 PSU FIs & Banks Corporates NBFCs PSU FIs & Banks Corporates NBFCs
AA- As arrived at the end of each month
--------   Add following spreads to AA- Spreads   --------
A+ 25 75 75 25 75 75
A 50 150 175 125 150 175
A- 125 175 200 125 150 200
BBB+ 150 200 225 150 200 225
BBB 175 225 250 175 225 250
BBB- 200 250 275 200 250 275

The above spreads approved by Valuation Committee members will be valid for next 3 month- end valuations (end May -2016, end June -2016 and end July -2016).

For the month of **May** - meeting held on 1st June, 2016	8. Valuation of PSL compliant PTCs: With the requirement of quarterly monitoring of priority sector advances, the issue of PSL compliant PTCs is happening throughout the year and the volume is increasing. The number of banks purchasing these PTCs is also increasing. Hence the members felt that there should be a relook at the valuation of PSL compliant PTCs. Till 31st March 2016, PTCs are valued as tax free bonds i.e., the coupon should be grossed up at the rate of tax applicable to the investor and then the instrument is to be valued as per para 3.7.1 of RBI Master Circular dated 01.07.2015. Spread matrix applicable to NBFC category is used for the relevant rating and tenor of PTCs. After discussion, it was agreed that the spreads applicable to NBFCs category only be used as the issuer SPVs (Special Purpose Vehicles) are floated by NBFCs. Even if the SPV is floated by corporates the spreads applicable to NBFCs category only may be used as the original guidelines are to value them at "worst spreads". Since the budget for 2016-17 has taken out the tax free status of PTCs, the grossing up of the coupon will not happen. Since the coupon is very low, all PSL compliant PTCs may be valued much below par value. Because of the demand for PSL compliant PTCs, the issuers are not increasing the coupon. Therefore, the prevailing yield for PSL compliant PTCs in the primary market is around 6 to 8 % only. Primary market yields and prices are not reflected in the valuation and hence the members suggested to ascertain the primary market yields through polls or collecting issuance details from the purchasers and use the same for valuation.It is informed that the deals are mostly bilateral and the yields are privy to the issuers and the purchasers and all banks may not be ready to share the data. Though certain coupons are informed to Central Repositories like NSDL and CDSL they are not indicative of the yields at which the primary market transactions took place. Secondly, the low yields are due to demand from the banks which have not achieved the priority sector targets and the same yields may not be acceptable to other investors and hence may not represent "Market Yield". There is no trade in secondary market to indicate the secondary market yield / price without which the polling will be near impossible. The banks were requested to share the primary market issuance data for further analysis. Another suggestion emanated during the discussion was excluding the PSL compliant PTCs from valuation as in the case of RIDF (Rural Infrastructure Development Fund). Though PTCs are tradable and RIDF is in the nature of deposits with NABARD, FIMMDA may take up the matter with RBI as both instruments are to meet the short fall in priority sector lending.
For the month of **April** - meeting held on 30th April, 2016	**Valuation of AT-1 Bonds:** **Based on Traded data & Methodology, following spreads are approved for AT – 1 Bonds;** **Ratings / Tenors** **3 to 5 Years** **7 to 10 Years** AA & Above 131 (131) 164 (190) AA-& Below 265 (191) 265 (274) Note:* Figures in brackets are that of last month. **Discussion on PSL compliant PTCs Corporate Bonds Valuation:** The Valuation Committee has decided to send mail to all who has attended the meeting on 30th April, 2016 for their views on Valuation of PTCs in the light of changes proposed in the budget
For the month of **March** -meeting held on 1st April, 2016	**Valuation of AT-1 Bonds**: **Based on Traded data & Methodology, following spreads are approved for AT – 1 Bonds;** **Ratings / Tenors** **3 to 5 Years** **7 to 10 Years** AA & Above 131 (136) 190 (166) AA-& Below 191 (197) 274 (272) Note:* Figures in brackets are that of last month **Discussion on Sovereign Gold Bonds Valuation:** The Valuation Committee has decided to consider previous week's (Monday - Friday) simple average post meridiem (p.m.) closing price for gold of 999 Purity, published by the India Bullion and Jewellers Association Ltd. (IBJA) for valuation of Sovereign Gold Bonds till valuation guidelines are issued by RBI.
For the month of **February** -meeting held on 1st March, 2016	**Discussion on Cubic Spline Methodology** a) The valuation committee noted that maturity date of the traded T-Bill does not impact the yield curve. However the yield of the traded T-Bill is impacting the yield curve up to 1st year tenor. It was decided to continue the present practice of inputting of the recent cut-off yield of 91-Day T-Bill as first input. FIMMDA will do further analysis by inputting all the T-Bill traded yields (crossing the filter). When the residual tenor of traded T-Bill is more than 6 months, the yield is to be input by converting T-Bill yield to G-sec yield. b) All the last traded Government Securities prices/yield on NDS – OM platform will replace the model generated prices/yield in the Valuation sheet irrespective of crossing the filter criteria from 1st April, 2016. **The Inter-scheme trades of Corporate Bonds:** The Valuation Committee has decided not to consider inter scheme transfer deals in corporate Bonds reported on the reporting platforms maintained by the exchanges while consolidating the trades and publishing on FIMMDA platform.