Valuation of money market and debt securities by Mutual Funds

1.0 Objective:

1.1 This Board memorandum seeks to review the regulatory norms for Mutual Funds for valuation of money market and debt securities with residual maturity upto 60 days and proposes to introduce guidelines for Mutual Funds on valuation of money market and debt securities which are rated below investment grade.

2.0 Background:

2.1 During September-October of 2008, in the wake of global financial crisis, the debt market in India had witnessed very tight liquidity conditions because of various reasons including advance tax outflows, suppliers' credit withdrawal partly due to the freezing of western credit markets, risk aversion in the market, etc. Due to the liquidity crisis, Mutual Funds faced huge redemption pressure but there were very few buyers for assets of even the highest credit quality. During the said period, the valuation of debt and money market instruments with residual maturity of below 182 days was done on amortization basis, which was at variance with the fair value of these instruments in such volatile markets. The practice of amortization further accentuated the issue.

2.2 In 2010, the valuation guidelines were modified by SEBI such that all money market and debt securities were to be valued at the weighted average price at which they are traded on a particular valuation day. Securities with residual maturity of upto 91 days (reduced from 182 days) which were not traded on a particular valuation day, would have to be valued on amortization basis and securities with residual maturity of over 91 days which were not traded on a particular valuation day would have to be valued at benchmark yield/ matrix of spread over risk -free benchmark yield obtained from agency(ies) entrusted with the said role by AMFI.

2.3 Few other practices where securities were not valued at their realizable price subsequently came to the notice of SEBI, such as inter-scheme transfer of debt securities at book value based on amortization basis disregarding their realizable price, thereby enabling Mutual Funds to provide instant liquidity to mainly institutional and corporate investors in the short term debt fund and liquid funds at a NAV different from the realizable value of the underlying assets.

2.4 The above practices showed that Mutual Funds were able to value the securities at a price which is not reflective of its fair or market value. However, if the assets of the Mutual Fund schemes are valued at a price higher than the fair or market value, then investors unfairly pay more upon purchase of units or are unduly benefitted by receiving more on redemption of units thereby impacting the remaining investors in the scheme. Further, in the reverse scenario of valuation at a price lower than the fair or market, investors are unduly benefitted by paying less upon purchase of units thereby impacting the remaining investors or those that unfairly receive less on redemption of units.

2.5 In view of the above, in order to address the mis-pricing risk and to reduce the vulnerability of short term debt oriented schemes to redemption pressure, in its Board meeting dated January 28, 2012, SEBI decided to further tighten the valuation guidelines. Towards this objective, the following steps were taken:

2.5.1 The overriding and overarching principles of fair valuation were introduced which *inter-alia* state that:

2.5.1.1 The valuation of investments shall be based on the principles of fair valuation i.e. valuation shall be reflective of the realizable value of the securities/assets. The valuation shall be done in good faith and in true and fair manner through appropriate valuation policies and procedures.

2.5.1.2 The policies and procedures approved by the Board of the Asset Management Company shall identify the methodologies that will be used for valuing each type of securities/assets held by the mutual fund schemes.

2.5.1.3 The assets held by the mutual funds shall be consistently valued according to the policies and procedures. The policies and procedures shall describe the process to deal with exceptional events where market quotations are no longer reliable for a particular security.

2.5.1.4 The responsibility of true and fairness of valuation and correct NAV shall be of the Asset Management Company, irrespective of disclosure of the approved valuation policies and procedures i.e. if the established policies and procedures of valuation do not result in fair/ appropriate valuation, the Asset Management Company shall deviate from the established policies and procedures in order to value the assets/ securities at fair value.

Provided that any deviation from the disclosed valuation policy and procedures may be allowed with appropriate reporting to Board of Trustees and the Board of the Asset Management Company and appropriate disclosures to investors.

2.5.2 Further, the residual maturity limit for amortization of money market and debt securities was reduced from 91 days to 60 days. This measure was implemented through issuance of circular to the Mutual Fund industry in February 2012.

2.6 In July 2013, the RBI raised short-term interest rates and reduced the liquidity adjustment facility (LAF) for each bank from 1% of its Net Demand and Time Liabilities (NDTL) to 0.5%. This led to an increase in yield of debt and money market instruments. There was increased redemption in debt oriented schemes more specifically in liquid schemes. As a contingency measure to address the liquidity requirements of Mutual Funds, RBI, in consultation with SEBI, provided a special re-finance window to commercial banks for Mutual Funds and similar to 2008, SEBI decided to increase Funds' borrowing limit, on a case-to-case basis from 20% of the net assets to 40% of net assets of Mutual Fund schemes. However, since the valuations were being done based on the principles of fair valuation (i.e. based on realisable value), the incentive for large investors to redeem first was relatively low and thus, Mutual Funds were less vulnerable to redemption pressure. It was noted that no Asset Management Company (AMC) utilized the above mentioned additional borrowing limit or RBI's special liquidity window.

3.0 Rationale for review:

3.1 The recent defaults on debt obligations by a few entities particularly in September, 2018 and subsequent volatility in the debt and money market instruments issued by NBFCs and HFCs had resulted in redemption pressure on debt Mutual Fund schemes, more specifically on liquid schemes. During this period, the net inflows to the industry reduced. In October 2018, there was a partial recovery in flows in response to the stabilization of the market. The details are as given below:

(In INR Cr.)

Open Ended Income / Debt Oriented Schemes	**Funds mobilized**	**Repurchase/ Redemption**	**Net Inflow (+ve)/ Outflow (-ve)**	**AUM as on month-end**
August, 2018				
Liquid/ Money Market	18,91,070	17,19,962	1,71,107	6,04,266
Gilt	149	432	-283	8,964
Other Debt Schemes	40,402	41,712	-1,310	5,99,457
Total	**19,31,621**	**17,62,106**	**1,69,514**	**12,12,687**
September, 2018				
Liquid/ Money Market	16,27,150	18,38,200	-2,11,050	3,94,774
Gilt	115	1,083	-968	8,018
Other Debt Schemes	23,640	58,053	-34,412	5,64,071
Total	**16,50,905**	**18,97,336**	**-2,46,430**	**9,66,863**
October, 2018				
Liquid/ Money Market	22,71,942	22,16,646	55,295	4,54,432
Gilt	217	507	-290	7,820
Other Debt Schemes	21,052	57,227	-36,175	5,30,729
Total	**22,93,211**	**22,74,380**	**18,830**	**9,92,981**

3.2 From an analysis of Asset under Management (AUM) of open-ended debt oriented schemes, it is observed that the AUM declined from INR 12,12,687 Cr. as on 31st August, 2018 to INR 9,92,981 Cr. as on 31st October, 2018 i.e. a decline of around 18% over a period of 2 months. In case of liquid and money market schemes, the AUM had declined by around 25% during the same period. This was despite the fact that the total exposure of Mutual Fund schemes to the IL&FS group was only approx. INR 5,200 Cr. (including debt issued by SPVs of IL&FS) as on 31st August 2018 i.e. around 0.35% of the debt AUM of the Mutual Fund industry.

3.3 Thus, it was observed that a credit event in even one issuer/group could lead to significant liquidity risk in the entire industry, which in turn could lead to further volatility in the market. In such a scenario, valuations which are not reflective of the realizable price of an asset may encourage first-mover advantage associated with redeeming at the onset of market volatility, at the cost of the remaining investors and may also exacerbate redemption pressure on the fund.

3.4 Another observation made during the aforementioned event of downgrade of debt securities issued by IL&FS and its subsidiaries was that different valuation practices have emerged across Mutual Funds. The percentage of haircut applied across Mutual Funds to such securities has varied with a wide range. There is also variation in when these haircuts have been applied. All AMCs have not applied the haircut immediately on the day of the credit event, thereby creating uncertainty among the unit holders. Further, such practice may also have resulted in first mover advantage with certain investors taking advantage of the gap between the credit event and date of taking the haircut, by redeeming at a higher NAV.

3.5 In this backdrop and in order to have an understanding on the prevailing liquidity scenario and the risk management mechanisms being used to deal with the emanating liquidity risk for Mutual Funds, SEBI had a meeting with various Mutual Funds and Association of Mutual Funds in India (AMFI) on September 28, 2018. One of the suggestions that emerged from the discussion was with respect to reduction in the residual maturity limit below which valuation of money market and debt securities based on amortization is permitted, from the existing 60 days to 30 days. Another suggestion that emerged was on uniform valuation of money market and debt securities which are rated below investment grade, by obtaining the valuation prices for such securities from valuation agencies appointed by AMFI.

4.0 Consultative process:

4.1 The aforementioned issues on valuation of money market and debt securities with residual maturity less than 60 days and rated below investment grade, were taken up for deliberation in the Mutual Fund Advisory Committee (MFAC) meetings held on November 12, 2018, November 20, 2018 and January 24, 2019.

5.0 Extant regulatory provisions and recommendations of MFAC:

5.1 <u>Valuation of money market and debt securities with residual maturity upto 60 days:</u>

5.1.1 <u>Extant regulatory norms and current practice:</u>

5.1.1.1 As per the current regulatory framework, all money market and debt securities with residual maturity of upto 60 days shall be valued at the weighted average price at which they are traded on the particular valuation day and in case such securities are not traded on a particular valuation day they shall be valued on amortization basis, provided that such valuation shall be reflective of the fair value of the securities and all investors are treated fairly.

5.1.1.2 As per the current practice, these securities are generally valued based on amortization as long as the amortised price is within ±0.10% of the reference price (computed based on matrices obtained from valuation agencies plus applicable spreads). In case the price of a particular security falls outside the band of ±0.10%, the amortization price of the security shall be adjusted to bring it within the ±0.10% band. For calculation of reference price, the valuation agencies provide the yield matrix (for a particular rating and maturity bucket) with residual maturity up to 60 days. However, issuer specific changes are not captured in the yield matrix. The discretion of changing the spreads, in order to capture a change in the credit rating or credit profile of the issuer or in case of market trades / AMC's own trades, lies with the individual AMCs.

5.1.2 Analysis:

5.1.2.1 In one of the meetings of MFAC, few members were of the view that a sensitivity analysis may be conducted by back-testing data of liquid schemes of few Mutual Funds in order to gauge the impact of mandating mark to market for debt securities with residual maturity upto 60 days.

5.1.2.2 Accordingly, a back-testing exercise had been carried out by the valuation agencies and Mutual Funds for liquid schemes of the top 10 fund houses. The exercise had been carried out based on data for 3 months (August 2018 to October 2018) for the following 4 scenarios:

5.1.2.2.1 Amortization prices, adjusted with threshold of ±0.10% for money market and debt securities with residual tenor of upto 30 days with mark-to-market of securities with residual maturity above 30 days.

5.1.2.2.2 The above scenario, but adjusted with threshold of ±0.05%.

5.1.2.2.3 The above scenario, but adjusted with threshold of ±0.025%.

5.1.2.2.4 Full mark-to-market of all money market and debt securities.

5.1.2.3 A brief summary of the results of the back-testing exercise is placed below:

5.1.2.3.1 In case of most Mutual Fund schemes, significant volatility measured in terms of standard deviation (s.d.) of daily returns is introduced in all the 4 scenarios mentioned above, as compared to the volatility based on present valuation practice. The following table shows the range of increase (in % terms) in standard deviation (s.d.) of daily returns in all 4 scenarios for which back-testing was conducted as compared to the standard deviation of daily returns based on present valuation practice of amortization of money market and debt securities with residual maturity of upto 60 days, adjusted with threshold of ±0.10%:

S. No.	Scenario	Range of increase in s.d. as compared to s.d. based on current valuation practice
1.	Full mark-to-market of all money market & debt securities	33% - 529%
Amortization prices upto 30 days and MTM for all money market and debt securities above 30 days		
2.	Threshold of 0.025%	21% - 443%
3.	Threshold of 0.05%	18% - 437%
4.	Threshold of 0.10%	18% - 437%

5.1.2.3.2 It may be observed from the above table that the increase in standard deviation of daily returns is highest in the scenario of full mark-to-market of all money market & debt securities and ranges from 33% for a particular liquid scheme to upto 529% for another liquid scheme. In the other 3 scenarios also, there is an increase in the standard deviation of daily returns as compared to the standard deviation of daily returns based on present valuation practice.

5.1.2.3.3 Further, another observation from the back-testing exercise was that as per the current valuation practice, all the 10 liquid schemes had positive returns on all days for which the exercise had been undertaken. However in the scenario of full mark-to-market, all 10 schemes would have had negative returns on at least 1 day with the number of days being even higher for few schemes. In the other 3 scenarios also, 9 out of the 10 schemes would have generated negative returns on at least 1 day.

5.1.2.4 It may thus be inferred from the above results of the exercise that the existing valuation practices being followed for valuation of money market and debt securities with residual maturity of upto 60 days may not be reflective of the realizable value of the assets at all times which could mean that true returns are not being passed to investors on a daily basis.

5.1.3 Recommendations of MFAC:

5.1.3.1 During deliberations in MFAC, it was felt that the Net Asset Values (NAVs) of Mutual Fund schemes should move closer to their realizable market value, so as ensure fair treatment to all investors and reduce the incentive to large investors to take the first mover advantage by redeeming during tight liquidity situations. Towards this objective, the MFAC made the following recommendations:

5.1.3.1.1 The residual maturity limit of amortization may be reduced from present 60 days to 30 days.

5.1.3.1.2 The band of ±0.10% (maximum difference maintained between reference price and valuation price) may be reduced to ±0.025% and reference price may be taken as security level price given by the valuation agencies as against the current practice of using reference price derived from matrix.

5.1.3.1.3 Mutual Funds may be provided a time-period of 90 days for implementation of the above proposed valuation mechanism.

5.2 Valuation of money market and debt securities rated below investment grade:

5.2.1 Current practice:

5.2.1.1 As per the existing practice, the valuation agencies appointed by AMFI provide security level pricing of debt securities with residual maturity more than 60 days. Mutual Funds generally take the average of the prices provided by these agencies for valuation.

5.2.1.2 In case a security has been rated below investment grade, the valuation agencies stop providing security level pricing and the discretion on valuation of such securities lies completely with the individual AMCs.

5.2.1.3 As mentioned at point 3.4 above, during the recent event of downgrade of debt securities issued by IL&FS and its subsidiaries, different valuation practices emerged across Mutual Funds. The percentage of haircut applied across Mutual Funds to such securities varied across a wide range. There is also variation in when these haircuts have been applied. All AMCs have not applied the haircut immediately on the day of the credit event, thereby creating uncertainty among the unit holders. Further, such practice may also have resulted in first mover advantage with certain investors taking advantage of the gap between the credit event and date of taking the haircut, by redeeming at a higher NAV.

5.2.2 <u>Proposed framework for valuation of securities below investment grade:</u>

5.2.2.1 Subsequent to the aforementioned IL&FS case, a discussion was initiated with the valuation agencies and members of the Mutual Fund industry on having uniformity and consistency in the industry for valuation of money market and debt securities rated below investment grade.

5.2.2.2 In this respect, the valuation agencies have stated that while valuation of securities above investment grade is based on market price, valuation of securities below investment grade would be based on a framework of probability of default along-with loss given default.

5.2.2.3 Further, valuation agencies have stated that for calculation of the valuation price, the valuation agencies would need to conduct a detailed issuer-specific evaluation which would take into account financial, operational, structural and collateral information about the security and the issuer. For this purpose, the valuation agencies would also share an information requirement sheet with the AMCs seeking information on the issuer. The valuation agencies have mentioned that the exercise of price computation would be completed within approximately two weeks of receipt of required data from AMCs. It is however noted that Mutual Funds invest in unlisted money market and debt securities where there is no obligation on the issuer to make continuous disclosures. In case of such investments, AMCs may thus find it challenging to obtain required data from issuers and provide the same to valuation agencies. Therefore, there is a need to assess and address the risk of lack of continuous disclosures by such issuers.

5.2.2.4 During the interim period from the migration of the security to sub-investment grade till the valuation price is computed by the valuation agencies, indicative haircuts (sector and rating-wise) provided by the valuation agencies, in consultation with AMFI, would be applied across the industry. Further, these haircuts may be updated and refined at regular intervals, based on the experience going forward and availability of additional data on historical recovery rates.

5.2.2.5 Further, during the interim period, in case there is any trade (of a minimum threshold as determined by valuation agencies) reported on trade reporting platforms and where the traded price is more conservative than the price post standard hair-cuts, such transacted price may be considered for valuation till the date of valuation report from the valuation agencies.

5.2.3 Recommendations of MFAC:

5.2.3.1 The above framework was deliberated in meetings of the MFAC.

5.2.3.2 The committee recommended that in order to have uniformity and consistency across the Mutual Funds industry, the valuation agencies appointed by AMFI shall provide an indicative haircut for securities rated below investment grade. This indicative haircut will continue from date of credit event till the valuation agencies provide final valuation price. The committee noted that Mutual Funds need to follow “Principles of Fair Valuation” as such Mutual Funds are responsible for fair valuation. Therefore Mutual Funds can deviate from the indicative haircuts provided by the valuation agencies subject to recording of detailed rationale for such deviations.

6.0 Proposal

6.1 Taking into account the recommendations of MFAC, the following is proposed with respect to valuation of money market and debt securities:

6.1.1 <u>For valuation of money market and debt securities with residual maturity upto 60 days:</u>

6.1.1.1 Reduction in the residual maturity limit for permitting amortization based valuation from existing 60 days to 30 days. This limit may be further reduced at an appropriate time based on market conditions.

6.1.1.2 Reduction in the threshold maintained between reference price and valuation price to ±0.025%. Further, reference price may be taken as security level price given by the valuation agencies as against the current practice of using reference price derived from matrix.

6.1.1.3 Mutual Funds may be provided a time-period of 90 days for implementation of the above proposed valuation mechanism.

6.1.2 <u>For valuation of debt and money market securities rated below investment grade:</u>

6.1.2.1 The valuation agencies appointed by AMFI may provide valuation of debt and money market securities rated below investment grade.

6.1.2.2 Considering that post occurrence of a credit event, the valuation agencies may take time to provide valuation of securities below investment grade, the agencies may provide indicative haircuts for securities rated below investment grade. These indicative haircuts may continue from date of credit event i.e. migration of the security to sub-investment grade till the valuation agencies compute the valuation price. Further, these haircuts may be updated and refined at regular intervals, based on the experience going forward and availability of additional data on historical recovery rates.

6.1.2.3 Further, in terms of SEBI (Mutual Funds) Regulations, 1996, since AMCs are responsible for fair valuation, they may deviate from the indicative haircuts and/or the valuation of debt and money market securities rated below investment grade provided by the valuation agencies subject to recording of detailed rationale for such deviations, appropriate reporting to the Board of AMC and Trustees and appropriate disclosures to investors.

6.1.2.4 Also, during the interim period between date of credit event and receipt of valuation price from valuation agencies, in case there is any trade (of a minimum threshold as determined by valuation agencies) reported on trade reporting platforms and where the traded price is more conservative than the price post standard hair-cuts, such transacted price may be considered for valuation till the date of valuation report from the valuation agencies.

6.1.2.5 In case of any trade (of a minimum threshold as determined by valuation agencies) reported after the valuation price is computed and where the traded price is more conservative than the computed price, the valuation agencies may take into account such trade and revise the valuation price accordingly.

6.2 The Board may consider and approve the proposals at paragraph 6.1 above and may authorize the Chairman to take steps to implement the proposals by issuance of circular, with consequential and appropriate changes, as may be required in this regard.