17th April 2018

THE CLEARING CORPORATION OF INDIA LIMITED

Risk Management Department

Consultation Paper

[A] Proposed revision in methodology for sizing of the Default Fund in the Rupee Derivatives and the Forex Forwards Segments

And

[B] Restructuring the composition of collateral towards Default Fund in all segments

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[A] Proposed revision in methodology for sizing of the Default Fund in the Rupee Derivatives and the Forex Forwards Segments

1. Introduction

1.1 Central Counterparties (CCPs) maintain prefunded resources to cover the potential losses arising from participant default. These comprise of the CCP's own funds set aside for this purpose (known as the CCP's 'Skin in the Game') and a Default Fund contributed by members under the principle of loss mutualisation. The quantum of the Default Fund is generally based on the hypothetical losses on member portfolios under stress conditions. An individual member's contribution to the Fund is generally structured such that members with the riskiest portfolios contribute proportionately higher to the fund.

1.2 Presently, CCIL has a Default Fund structure in all the segments where it offers CCP clearing services to its members viz.

- Forex Forwards
- Rupee Derivatives
- Forex Settlement
- Securities Segment
- CBLO Segment

1.3 Presently, CCIL maintains sufficient prefunded resources to cover highest stress loss arising from default of a single participant and its affiliates under extreme but plausible market conditions. These resources include CCIL's contribution earmarked for various segments from its own Settlement Reserve Fund (SRF) constituting CCIL's skin-in-the-game and member contributed default fund. The size of default fund is based on the highest stress loss in the preceding six months period along with highest stress losses of five weak entities.

1.4 The above structure is expected to ensure that CCIL would generally have adequate pre-funded resources to cover potential stress scenarios that include default of a single participant and its affiliates that would potentially cause the largest aggregate credit exposure for CCIL in extreme but plausible market conditions.

2. Prefunded default handling resources in the Rupee Derivatives and the Forex Forwards Segments

2.1 Principle -4 of PFMI provides guidance in regards to the minimum resources that should be maintained by a CCP for coverage against losses arising out of participant defaults.

PFMI - Explanatory note 3.4.19. states, *"In addition to fully covering its current and potential future exposures, a CCP should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios involving extreme but plausible market conditions. Specifically, a CCP that is involved in activities with a <u>more-complex risk profile</u> (such as clearing financial instruments that are characterised by discrete jump-to-default price changes or that are highly correlated with potential participant defaults) or that is <u>systemically important in multiple jurisdictions</u>, should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. Determinations of whether a CCP is systemically important in multiple jurisdictions should include consideration of, among other factors, (a) <u>the location of the CCP's participants</u>, (b) the <u>aggregate volume and value of transactions that originate in each</u>*

jurisdiction in which it operates, (c) the proportion of its total volume and value of transactions that originate in each jurisdiction in which it operates, (d) the range of currencies in which the instruments it clears are cleared or settled, (e) any links it has with FMIs located in other jurisdictions, and (f) the extent to which it clears instruments that are subject to mandatory clearing obligations in multiple jurisdictions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to (see Principle 2 on governance), the amount of total financial resources it maintains."

2.2 The products cleared by CCIL do not exhibit complex risk profile, and CCIL does not offer clearing in multiple jurisdictions. Therefore, CCIL is required to maintain resources as per the 'Cover 1' requirement for all clearing segments, i.e. to cover default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure in extreme but plausible market conditions.

2.3 RBI has however observed that in the Rupee Derivatives segment and the USD INR Forex Forwards segment, CCIL clears trades for longer residual maturities and thus the resultant stress losses are significantly higher than that in cash segments. Therefore, it has recommended that for these two segments, the 'Cover 2' standard may be phased in by CCIL over the next 2 years.

2.4 A survey of best risk management practices at global CCPs indicate that quite a few global CCPs providing clearing services for OTC derivative products conservatively size their resources at Cover 2 levels.

2.5 European Union (2012) and Commodity Futures Trading Commission (2013) regulatory frameworks require systemically important CCPs in their respective jurisdictions to adhere to cover 2 standards.

3. Proposal

3.1 In the light of above considerations, it is proposed to raise the target coverage requirement in Forex Forwards and Rupee Derivatives segments to cover potential stress scenarios that includes default of the **two** participants and their affiliates that would potentially cause the largest aggregate credit exposure for CCIL in extreme but plausible market conditions.

3.2 Accordingly, the quantum of member contributed Default Fund will be calculated as the combined highest exposure on account of two participants and their affiliates in the previous six months period along with stress loss on account of five weak entities in the segment.

3.3 CCIL's skin-in-the-game for the segment will be pegged at 25% of member contributed Default Fund[1], subject to total skin-in-the-game requirement across all clearing segments not exceeding the balance in Settlement Reserve Fund (SRF). At present, the balance in SRF is INR 1,000 Crores.

3.4 Further, in the event combined highest stress loss on account of two participants and their affiliates exceeds notified threshold[2], additional contributions will be immediately called from the members.

3.5 The solvency resource requirement for Cover 2 for derivative products will be gradually phased in over two year period. It is proposed to reach a target of Cover '1.5' by end of first year and reach a target of Cover 2 by end of second year. Cover 1.5 is arrived at by considering the scenario wherein the sums of highest stress loss on account of a member and its affiliates and 50% of the second highest stress loss on account of a member and its affiliates is maximum. Such sum will be considered for the determining the default fund quantum.

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[1] Presently CCIL's Skin in the Game is pegged at a fixed percentage of the balance in its Settlement Reserve Fund (SRF). We invite attention to our Consultation Paper titled '*Proposal to Resize CCIL's 'Skin in the Game' and Restructure Default Waterfall*' issued on 9th Nov'16. The paper discussed our proposal to peg CCIL's skin-in-the-game for the segment at 25% of the member contributed Default Fund in that segment. Regulatory approvals are in place and we expect this change to be implemented shortly.

[2] If CCIL's stress testing reveals that the highest stress loss on account of a participant and its affiliates exceeds 95% (parameterized) of CCIL's pre-funded resources (i.e. 95% of the amount earmarked for the segment from SRF and member contributed default fund) under any stress scenario, additional default fund contributions are called from all participants of the segment to the extent by which the stress loss exceeds 95% of pre-funded default handling resources.

Part B: <u>Introduction of a minimum cash component in the member contributed Default Fund</u>

1.0 Introduction

CCIL accepts contributions towards Default Fund in the form of Cash and/or all government of India securities (excluding special securities) and Treasury Bills. There is no minimum cash requirement for default fund. Many of the Government of India securities eligible for default fund are semi liquid and even illiquid in nature.

2.0 Understanding the effect of stress in market conditions on Default Fund

2.1 In the event of a default under normal market conditions, the defaulter's margins and Default Fund contributions will normally be adequate to cover the losses arising from such default. The need to access member contributed Default Fund and other elements of default waterfall arises only in the event of participant(s) default during stressed market conditions.

2.2 Collateral which is illiquid in nature will possibly become even more so in a stress situation. CCIL would thus find it difficult to liquidate the same and realize the proceeds.

2.3 Moreover, on account of stress in market conditions, there could be a significant fall in value of these securities, thereby reducing the coverage required to be provided by the Default Fund.

2.4 However, if at least a part of the collateral is in the form of cash, in the event of a default, wherein the losses on account of the defaulter are required to be met using member contributed Default Fund, CCIL would be able to utilize the cash available in Default Fund.

3.0 Proposal

In order to address the issues mentioned above, following are being proposed:

3.1 The contribution towards Default Fund would continue to be made in the form of cash and securities. Members would however be required to maintain a minimum of 5% of their default fund requirements in the form of cash contributions. Members have the option to maintain their entire Default Fund contribution in the form of Cash. The balance Default Fund contribution can be held in the form of specified GOI dated securities and/or Treasury Bills from amongst a list of eligible securities notified by CCIL from time to time.

3.2 Applicable VAR based haircuts for securities in Default Fund shall be arrived at by assuming 5 day holding period (instead of 3 day holding period VAR based haircuts as is currently used). These would be further scaled up by illiquidity multiplicands in line with the extant practice for determining haircuts on securities deposited as collateral in the CBLO segment. A stress period is likely to result in an increase in liquidation period of securities and so a 5 day holding period is being proposed against a 3 day holding period to determine VAR based haircuts.

3.3 Proposed revision in applicable haircuts on securities will help in cushioning the fall in the value of securities in Default Fund on account of stressed market conditions.

3.4 The process for interest computation on default fund contributed by members will be uniform for all segments. Interest payments will be at quarterly rests (at the end of every calendar quarter) on the average cash balances during the relative period at a rate not exceeding 100 basis points lower than the weighted average of 91 day Treasury Bills' cut off yields at the last three auctions held before the relevant interest payment date.

- All Members and other interested entities are requested to send their comments and feedback on the above proposals in para A-3 and para B-3. The feedback may be sent to us latest by 31st May 2018 at rmd@ccilindia.co.in for attention of Chief Risk Officer, CCIL with subject as "*Consultation Paper: Revision in methodology for sizing of the Default Fund in the Rupee Derivatives and the Forex Forwards Segments and Restructuring the composition of collateral towards Default Fund in all segments*".

- If any clarification is required on any aspect of this paper, please feel free to contact Mr. Kausick Saha, Chief Risk Officer, at 61546441 or Mr. Nandan Pradhan, AVP, Risk Management Dept. at 61546422.

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