Member Notification

RISK NOTICE 2019-172   4th September 2019

LCH SA publishes hereinafter a Notice informing Clearing Members of the Default Fund for Transactions executed on the Triparty Repo Clearing System, pursuant to Instruction V.4-2

THE DEFAULT FUND FOR TRANSACTIONS EXECUTED ON THE TRIPARTY REPO CLEARING SYSTEM

Article 1

The date of calculation of Default Fund size and Clearing Members contributions ("Contribution Determination Date") mentioned in Articles 2, 12 and 16 of Instruction V.4-2 is the latest Clearing Day of each month (position at end of day). The contributions are called on the morning of the 4th Clearing Day of each month.

Until further Notice, the following provisions shall apply:

Article 2

The cap mentioned in Article 13 of Instruction V.4-2 is set at **500,000,000** Euros.

Article 3

The floor mentioned in Article 14 of Instruction V.4-2 is set at **40,000,000** Euros.

Article 4

The "Minimum Contribution" mentioned in Article 16 of Instruction V.4-2 is set at **2,500,000** Euros.

Annex

This annex aims at:

- Presenting how the size of the Triparty Repo Default Fund is set and how the individual contributions of the Clearing Members are calculated.

1. **Daily Stress Test Loss Over Initial Margin (STLOIM)**

$$STLOIM_D = Stress\ Test\ Scenario_D - Initial\ Margin_D$$

"STLOIM" means in respect of each triparty repo Clearing Member and any day, the stress tested loss (calculated by LCH SA for a given scenario determined by LCH SA) in excess of Initial Margin, which could be incurred by LCH SA in respect of that triparty repo Clearing Member's Triparty Repo Transaction if that triparty repo Clearing Member became a Defaulting Member on that day.

2. **Size of the Default Fund**

The size of the Triparty Repo Default Fund will be determined monthly on the Contribution Determination Date using the following formula:

$$DF_{Theo\ size} = \underset{60\ days}{Max}\ STLOIM_{1+2} \times 1.1$$

"$STLOIM_{1+2}$" means the sum on any given day, of the STLOIMs for the largest and second largest triparty repo Clearing Members on that day using the same scenario.

EGCplus Default Fund cap amout:

The Default Fund size will be capped at the amount set out in Article 2.

EGCplus Default Fund floor amout:

The Default Fund size will not fall below the floor amount set out in Article 3.

$$DF_{size} = Min(Max(DF_{Theo\ size}, Floor), Cap)$$

3. **Contribution Calculation**

For each member and day *i* after a netting by ISIN on basket 1 and 2 we define:

$$Haircut_{Mbr}^{day\ i} = \sum_{Isin} |Haircut_{Isin}|$$

A. If $DF_{Theo\ size}$ is above the Floor:

The Default Fund contribution for each Clearing Member will be equal to

$$DF\ Final\ Ctrb_{Mbr} = \frac{Haircut_{Mbr}^{Average\ 60\ days}}{\sum_{Mbr} Haircut_{Mbr}^{Average\ 60\ days}} \times DF_{Size} \quad (1)$$

B. If $DF_{Theo\,size}$ is below the Floor, we define

$$DF\,Ctrb_{Mbr} = \frac{Haircut_{Mbr}^{Average\,60\,days}}{\sum_{Mbr} Haircut_{Mbr}^{Average\,60\,days}} \times DF_{Theo\,size} \quad (2)$$

Then we have to consider two different cases:

a) All member's contributions are below $\frac{DF_{Floor}}{nb\,members}$, the final contribution will be equal to

$$DF\,Final\,Ctrb_{Mbr} = \frac{DF_{Floor}}{nb\,members}$$

b) At least one member's contribution is above $\frac{DF_{Floor}}{nb\,members}$, the final contribution will be defined iteratively by the process detailed below:

1st step initialisation

Let's,

$$C1 \geq C2 \geq \cdots \geq Cn\ the\ descending\ DF\,Ctrb_{Mbr}$$
$$n_0 = 0$$
$$n = nb\,members$$
$$n_1 = min\left\{i \in [\![1,n]\!], C_i < \frac{DF_{floor}}{n}\right\}$$

2nd step: iteration

While $n_0 < n_1$,

$$n_0 = n_1$$
$$n_1 = min\left\{i \in [\![n_0,n]\!], C_i < \frac{DF_{floor} - \sum_{i<n_0} C_i}{n - n_0 + 1}\right\}$$
$$DF\,Final\,Ctrb_{Mbr_i} = C_i$$

3rd step: Final $n_0 = n_1$

$$\forall i \geq n_0, DF\,Final\,Ctrb_{Mbr_i} = \frac{DF_{floor} - \sum_{i<n_0} C_i}{n - n_0 + 1}$$

$$\forall i < n_0, DF\,Final\,Ctrb_{Mbr_i} = C_i$$

EGCPlus Contribution floor amount:
The contribution size will not fall below the Minimum contribution amount set out in Article 4. In that case they will be floored.

$$DF\,Final\,Ctrb_{Mbr_i} = max(DF\,Final\,Ctrb_{Mbr_i}, Minimum\,Contribution)$$

If the $\sum_{Mbr\,unfloored} DF\,Final\,Ctrb_{Mbr_i} + \sum_{Mbr\,Floored} DF\,Final\,Ctrb_{Mbr_i} > DF_{Size}$

We will restart the contribution calculation on the unfloored members until the sum of the contributions would be equal to the DF_{Size}.

Case A:

We substitute $DF_{unfloored\ Size}$ to DF_{Size} $in\ equation$ (1).

Case B:

We substitute $DF_{unfloored\ Theoretical\ Size}$ to $DF_{Theo\ Size}$ $in\ equation$ (2).

We substitute $DF_{unfloored\ Size}$ to DF_{Floor} in equation, when computing the threshold $\frac{DF_{Floor}}{nb\ members}$.

Where

$$DF_{unfloored\ Theoretical\ Size} = DF_{Theo_{Size}} - \sum_{Mbr\ floored} DF\ Final\ Ctrb_{Mbr_i}$$

$$DF_{unfloored\ Size} = DF_{Size} - \sum_{Mbr\ floored} DF\ Final\ Ctrb_{Mbr_i}$$

For further information please contact:

LCH RepoClear Market Risk