LCH.CLEARNET

Notice | Fixed Income

RISK NOTICE 2015-018 | 05th February 2015

RISK NOTICE

LCH.Clearnet 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

Definition of the Cap and Floor of the Default Fund (defined in Articles 2 and 3).

Definition of the "Minimum Contribution" to the Default Fund (defined in Article 4)

Definition of the Default Fund size calculation (defined in Annex).

Definition of the Default Fund contribution (defined in Annex)

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 **200,000,000** 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.

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Annex

This annex aims at:
- Providing the method and parameters used for the calculation of the so-called "STLOIM"
- Presenting how the size of the Default Fund is set and how the individual contributions of the Clearing Members are calculated.

1. Daily StressTest Loss Over Initial Margin (STLOIM)

$$STLOIM_D = StressTest\ Scenario\ _D - Initial\ Margin_D$$

"STLOIM" means in respect of each fixed income Clearing Member and any day, the stresstested loss (calculated by LCH. Clearnet SA for a given scenario determined by LCH.Clearnet SA) in excess of Initial Margin, which could be incurred by LCH. Clearnet SA in respect of that fixed income Clearing Member's fixed income business if that fixed income Clearing Member became a Defaulting Member on that day.

2. Size of the Default Fund

The theoretical size of the Fixed Income Default Fund will be determined using the following formula:

$$DF_{Theo\ size} = \underset{\mathbf{60\ days}}{\boldsymbol{Max}}\ (\boldsymbol{STLOIM_{1+2}}) \times \mathbf{1,1}$$

"STLOIM1+2" means the sum on any given day, of the STLOIMs for the largest and second largest fixed income Clearing Members on that day on the same scenario.

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

EGCplus Default Fund floor amount:
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:

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

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

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

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

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

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

Then we have to consider two different cases:

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

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

b) At least one member's contribution is above $\frac{\text{DF Floor}}{\text{nb members}}$

The final contribution will be defined iteratively by the process detailed below.

1st step: initialisation

Let's,

$$C_1 \geq C_2 \geq \cdots \geq C_n \ the\ descending\ \boldsymbol{DF\ Ctrb_{Mbr}}$$
$$n_0 = 0$$
$$n = nb\ members$$
$$n_1 = \min\left\{i \in [\![1, n]\!], C_i < \frac{DF_{floor}}{n}\right\}$$

2sec step: iteration

while $n_0 < n_1$,

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

3th step: Final $n_1 = n_0$

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

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.

$$DF\ Final\ Ctrb_{Mbr\ i} = \max\left(DF\ Final\ Ctrb_{Mbr\ i}, \text{Minimum Contribution}\right)$$

If the $\sum_{\text{Mbr unfloored}} DF\ Final\ Ctrb_{Mbr\ i} + \sum_{\text{Mbr floored}} DF\ Final\ Ctrb_{Mbr\ i} > DF_{size}$

We will restart the contribution calculation on the unfloored member until the sum of the contribution would be equal to the $\boldsymbol{DF_{Size}}$.

Case A:
We substitute $\boldsymbol{DF_{unfloored\ Size}}$ to $\boldsymbol{DF_{Size}}$ in equation (1).
Case B:
We substitute $\boldsymbol{DF_{unfloored\ Theoritical\ Size}}$ to $\boldsymbol{DF_{Theo\ Size}}$ in equation (2).
We substitute $\boldsymbol{DF_{unfloored\ Size}}$ to $\boldsymbol{DF_{Floor}}$ in equation, when computing the threshold ($\frac{\text{DF Floor}}{\text{nb members}}$)

Where

$$\boldsymbol{DF_{unfloored\ Theoritical\ Size}} = \boldsymbol{DF_{Theo\ Size}} - \sum_{\text{Mbr floored}} DF\ Final\ Ctrb_{Mbr\ i}$$
$$\boldsymbol{DF_{unfloored\ Size}} = \boldsymbol{DF_{Size}} - \sum_{\text{Mbr floored}} DF\ Final\ Ctrb_{Mbr\ i}$$

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