

Default Fund Manual

Calculation Methodology of the Contribution
Quota to the Default Fund

Agricultural Commodities Derivatives Section

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1.0 Foreword

This document is a guide to the calculation of the Contribution Quota to the Default Fund for the Agricultural *Commodities* Derivatives Section.

The Total Amount (α) of the *Default Fund* has to be allotted among all Participants to the Agricultural *Commodities* Derivatives Section¹; for this reason a Calculated Contribution Quota (QC_x) is calculated for each participant, on the basis of the average of the Initial Margins deposited in a certain former period (τ) for this Section². This amount is then compared at first with the Contribution Quota Due of the previous period ($QD_{x_{old}}$) to avoid petty adjustments, and then with the Contribution Quota max e min. The Contribution Quota QD_x must be deposited in cash (Euro).

¹ In this document the term "Participants" refers to Participants to the Agricultural *Commodities* Derivatives Section. Therefore Participants to Sections other than Agricultural *Commodities* Derivatives Section are excluded.

² In this document the term "Initial Margins" refers to Initial Margins calculated on open positions pertinent to the Agricultural *Commodities* Derivatives Section. Therefore Initial Margins calculated on positions pertinent to Sections other than Agricultural *Commodities* Derivatives Section are excluded.

2.0 Parameters

The following table indicates the parameters used in the calculation of the Contribution Quota; the official parameters are available on the website (www.lseq.com/ccq) section Risk Management – Default Fund Parameters.

Symbol	Description	Example of valorization
α	Total Amount of the Default Fund to be allotted	€ 35.000.000
P	Periodicity of Calculation	1 calendar month (or fraction)
τ	Observation Period	1 calendar month (or multiples or fraction)
Q_{\min}	Min Contribution Quota	€ 50.000
h	Rounding parameter of the Contribution Quota	thousand of Euro
p	Minimum percentage to modify	0,5%
d	Minimum difference to modify	€ 25.000

3.0 Calculation of the Average Initial Margins (MIx)

1. On the day t , calculate – separately for the house account and for the client account – the average of the Initial Margins deposited by the Participant x in the τ previous months (if $t = 11/03/15$ and $\tau=2$; the period to be considered is between 10/01/15 and 10/03/15) for the Agricultural *Commodities* Derivatives Section;
2. sum up the two values previously calculated in order to assign to each Participant x a unique indicator of the Average Initial Margins (MIx) deposited in the previous τ months.

$$MIx = MIx_{c/p} + MIx_{c/t}$$

4.0 Calculation of the Calculated Contribution Quota (QCx)

1. Calculate the ratio between the Average of the Initial Margins of the Participant x (MIx) and the Total Average of the Initial Margins (MI) given by the sum of all the average values MIx previously calculated for each Participant;

2. multiply the ratio $\frac{MIx}{MI}$ by the Total Amount of the Default Fund (α) to be allotted;
3. set the Calculated Contribution Quota QCx equal to:

$$QCx = \alpha \times \frac{MIx}{MI}$$

5.0 Calculation of the Intermediate Contribution Quota (QIx)

As there is not a Contribution Quota Due of a previous period (QDx_{old}), at the moment of the introduction of the Default Fund this step has not to be executed and the Intermediate Contribution Quota QIx has to be set equal to the Calculated Contribution Quota QCx ($QIx:=QCx$).

1. Compare the Calculated Contribution Quota QCx with the Contribution Quota Due of the previous period (QDx_{old}) to verify if the variation (without the sign) between QCx and QDx_{old} is larger – both as percentage and as absolute value – than the minimum parameters p and d defined:

- a) if the percentage variation $\frac{|QCx - QDx_{old}|}{QDx_{old}}$ between the Calculated Contribution Quota QCx and the Contribution Quota Due of the previous period (QDx_{old}) is larger than p and simultaneously the variation as absolute value $|QCx - QDx_{old}|$ between the Calculated Contribution Quota QCx and the Contribution Quota Due of the previous period (QDx_{old}) is larger than d , then the Intermediate Contribution Quota QIx is set equal to the Calculated Contribution Quota QCx ;
- b) on the contrary, if one of the two previous conditions is not valid, then the Intermediate Contribution Quota QIx is set equal to the Contribution Quota Due of the previous period QDx_{old} .

$$QIx = \text{if} \left\{ \frac{|QCx - QDx_{old}|}{QDx_{old}} \geq p; \text{if} [|QCx - QDx_{old}| \geq d; QCx; QDx_{old}] ; QDx_{old} \right\}^*$$

* Formulas are expressed in the *Microsoft Excel* notation.

6.0 Calculation of the Contribution Quota Due (QD_x)

1. Compare the Intermediate Contribution Quota QI_x previously calculated with the Contribution Quota Min (Q_{min})
 - a) if QI_x is lower than Q_{min} the Contribution Quota Due QD_x is set equal to Q_{min} ;
 - b) if QI_x is larger than Q_{min} the Contribution Quota Due QD_x is set equal to QI_x .
2. the result obtained is rounded to the h -figure.
3. The above can be immediately applied to Individual Clearing Members. The Contribution Quota Due for General Clearing Members on the other hand must be inclusive of Non Clearing Members. Therefore it is assumed equal to the Contribution Quota Due by the General Clearing Member plus the sum of the Contribution Quotas Due by each Non Clearing Member availing itself of that General Clearing Member as of the calculation date.

$$QD_{x_{GCM}} = QD_x + \sum_{i=1}^n QD_{x_{NCM_i}}$$