



# CC&G Basel III

Reporting for “own funds requirements for exposures to a CCP”



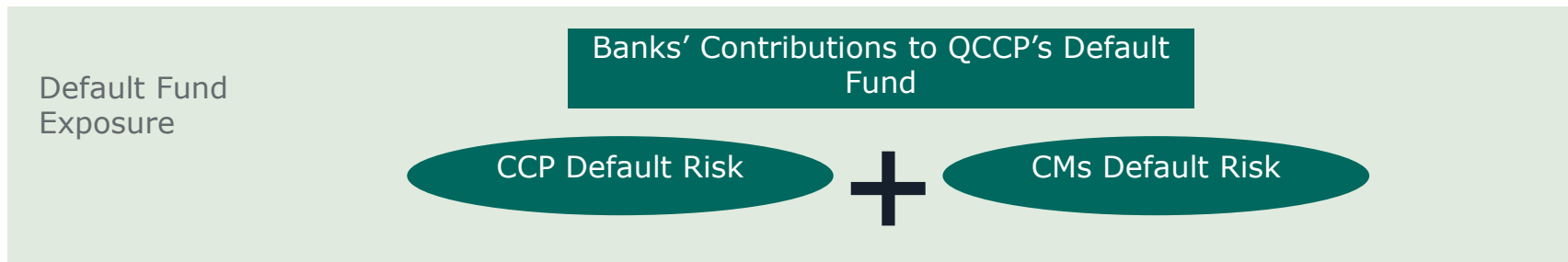
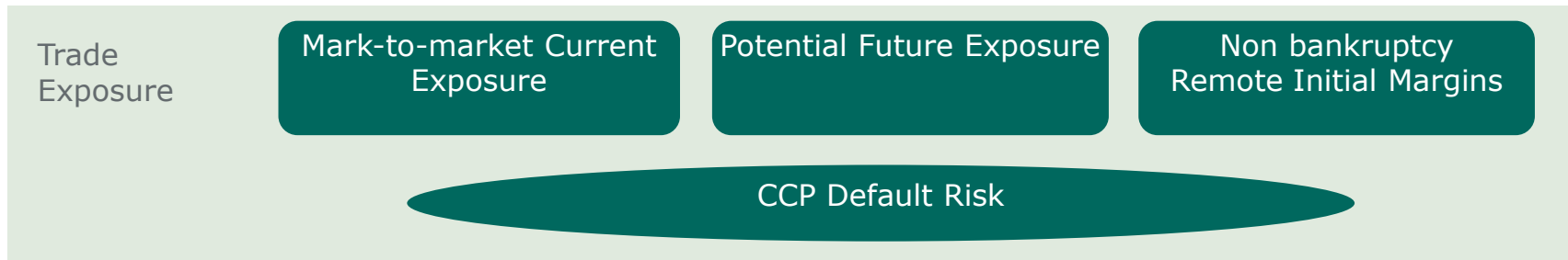
CC&G

A EURONEXT COMPANY

March 2021

# Bank Exposures to a CCP

The Basel Committee has identified two macro-types of banks' exposures to CCPs:



# The Interim Rules: A general Overview

Banks can choose between two methods to calculate their capital requirement:

<b>Method 1:</b>	2% RW against 'Trade Exposure' + Pre-funded Default Fund multiplied by 'C-Factor' (provided by CCP)
<b>Method 2:</b>	Minimum of: a) 2% RW against 'Trade Exposure' + 1,250% RW against pre-funded Default Fund b) 20% RW against 'Trade Exposure'

CCPs are required to calculate and publish "*on a monthly basis at a minimum*" a C-Factor so that Members can calculate their capital requirement under Method 1

Under "Interim Rules" currently in place, C-Factor is generated by measuring total default provisions of the CCP against "Hypothetical Capital" ( $K_{CCP}$ ) calculated from trade data using the Current Exposure Method (CEM)

"Final standards" will become effective as of 28<sup>th</sup> June 2021

# Capital Treatment of IM Exposures to QCCPs

- A CCP is assumed to be “Qualified” (QCCP) under the CPSS-IOSCO Principles
- The **Capital Charge on Trade Exposures** reflects the risk of default of the Qualified CCP (QCCP), which is assumed to be very low. As such, this exposure receives a **risk-weight of 2%**
- If the collateral is posted in a way that is **“bankruptcy remote”** from the CCP (i.e. if the CCP defaults, the Clearing Member does not lose the collateral), **the risk weight applied to the collateral is 0%**
- **A 0% risk weight is applied to margins collected by CC&G,** both under “Interim Rules” and “Final Standards”

# Capital Treatment of DF Contributions

- Under “Interim Rules”, Capital Requirements for the Default Fund Exposures are calculated in three steps:
  - Calculation of the “Hypothetical Capital”, ( $K_{CCP}$ ), that a QCCP would have to hold if it had bilateral trades to all its Clearing Members
  - Calculation of the “Aggregate Capital Requirements” ( $K^*_{CM}$ ) for all the Clearing Members of a QCCP, comparing the “Hypothetical Capital” to the CCP’s own loss-bearing capital contributed to the default fund ( $DF_{CCP}$ ) and the default fund contributions of the Clearing Members ( $DF_{CM}$ )
  - Allocation of the “Aggregate Capital Requirements”, ( $K_{CMi}$ ), to individual Clearing Members, based on each Clearing Members’ default fund contribution multiplied by a risk weight (“C Factor”) that takes into account the granularity and concentration of the CCP
- Under “Final Standards”, a different approach will be adopted to calculate Capital Requirements for the Default Fund Exposures for Repos and Reverse Repos transactions

# Results for Fixed Income and Equity Derivatives asset classes

- C-factor results highlight **very low risk weights** to calculate each CM Capital Requirement (namely, C-factors below 0.3%)
- The prudential amount of CC&G Default Funds contributes to have very low levels of C- factors
- **Central Clearing through CC&G allows significant savings in Capital Requirements**

Reference Date	C-factor under Interim Rules (official data)	
	Fixed Income	Eq. Derivatives
30/09/2016	0,22%	0,24%
30/12/2016	0,24%	0,23%
31/03/2017	0,23%	0,21%
30/06/2017	0,23%	0,21%
29/09/2017	0,23%	0,21%
29/12/2017	0,23%	0,22%

# CC&G monthly reporting

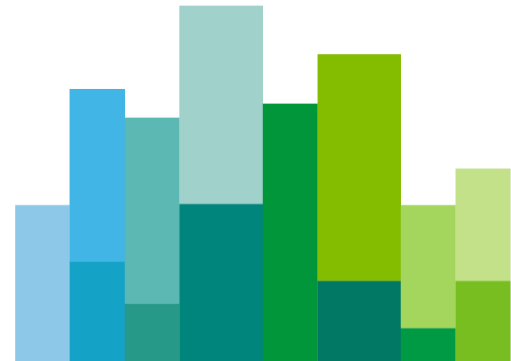
- CC&G calculates, on a monthly basis, the figures required to calculate Basel III capital requirements for default fund exposures to CCPs.
- Basel III parameters are available to CC&G's direct Clearing Members through the **ICWS** platform.
- CC&G Client Services department ([client.services@lseg.com](mailto:client.services@lseg.com)) will help on any issues with credentials and retrieving reports.

Repo and Reverse Repo Transactions asset class			Report example
Ref:	Basel Parameter	Description	Value
01	KCCP	Hypothetical capital of the CCP	41.839
02	DFCM	Sum of clearing members' pre-funded default fund contributions	3.681.009.900
03	DFCCP	Total amount of the CCP's own pre-funded financial resources that it is required to use to cover its losses following the default of one or more of its clearing members before using the default fund contributions of the remaining clearing members	13.282.104
04	N	Total number of clearing members	57
05	Beta	Concentration factor	0,4897
06	DFCCM	Sum of clearing members' contractually committed default fund contributions	5.521.514.850
07	Initial Margin	Total amount of initial margin	10.647.815.439,89

# Appendix

## Coefficient Calculation Technical Details

---





# Default Fund Exposures: $K_{CCP}$

- Under **Interim Rules**, the “Hypothetical Capital Requirement” of the CCP due to its counterparty credit risk exposures to all of its clearing members and their clients, is equal to:

$$K_{CCP} = \sum_{CM_i} \max(EBRM_i - IM_i - DF_i; 0) * RW * CR$$

The same methodology is applied by “Interim Rules” and “Final Standards” for repos and reverse repos

- $RW$  is a risk weight of 20%;
- $CR$  is the capital ratio of 8%;
- $EBRM_i$  is the exposure value to  $CM_i$  before risk mitigation;
- $IM_i$  is the initial margin posted by  $CM_i$ ;
- $DF_i$  is the prefunded default fund contribution by  $CM_i$ ;

**1. For derivatives**,  $\sum \max(EBRM_i - IM_i - DF_i; 0)$  is calculated as the bilateral trade exposure the CCP has against the  $CM_i$ , using the *Current Exposure Method* (CEM);

**2. For SFTs (repos)**,  $\sum \max(EBRM_i - IM_i - DF_i; 0)$  is calculated according to *Financial Collateral Comprehensive Method*.

# Default Fund Exposures: $K_{CMi}$

- Calculation of the “Capital Requirement for each Clearing Member”

$$K_{CMi} = \max \left( K_{CCP} \times \frac{DF^{pref}}{DF_{CCP} + DF_{CM}^{pref}} ; 8\% \times 2\% \times DF_i^{pref} \right)$$

Default Fund Exposures under  
“Final Standards”

- $DF_{CM}^{pref}$  is the total prefunded default fund contribution from clearing members
- $DF_{CCP}$  is the Skin in The Game of the CCP
- $DF_i^{pref}$  the prefunded default fund contributions provided by Clearing Member  $i$

# Default Fund Exposures: $K_{CM}^*$

- Calculation of the “Aggregate Capital Requirement for all Clearing Members”

$$K_{CM}^* = \begin{cases} c_2 \mu (K_{CCP} - DF') + c_2 DF'_{CM} & \text{if } DF' < K_{CCP} \quad (i) \\ c_2 (K_{CCP} - DF_{CCP}) + c_1 (DF' - K_{CCP}) & \text{if } DF_{CCP} < K_{CCP} \leq DF' \quad (ii) \\ c_1 DF'_{CM} & \text{if } K_{CCP} \leq DF_{CCP} \quad (iii) \end{cases}$$

Default Fund Exposures under  
“Interim Rules”

- $DF'_{CM} = DF_{CM} - 2 \cdot DF_i$
- $DF_{CCP}$  is the Skin in The Game of the CCP
- $DF' = DF_{CCP} + DF'_{CM}$
- $c_1 = \max\left(\frac{1.6\%}{\left(\frac{DF'}{K_{CCP}}\right)^{0.3}}; 0.16\%\right)$
- $c_2 = 100\%$
- $\mu = 1.2$

# Default Fund Exposures: $K_{CMi}$

- Calculation of the “Capital Requirement for each Clearing Member”

$$K_{CMi} = \left[ 1 + \beta \frac{N}{N-2} \right] \frac{DF_i}{DF_{CM}} K^*_{CM}$$

Default Fund Exposures under  
“Interim Rules”

$$\beta = \frac{A_{Net,1} + A_{Net,2}}{\sum_i A_{Net,i}}$$

$$A_{Net} = 0.15 A_{Gross} + 0.85 \cdot NGR \cdot A_{Gross}$$

$N$  is the number of Clearing Members



**CC&G**

A EURONEXT COMPANY



**Manuel Sforza**  
**Risk Policy Associate**

Telephone: +39 06 32395 666

[CCG-rp.group@euronext.com](mailto:CCG-rp.group@euronext.com)

Via Tomacelli 146, 00186 Rome,  
Italy



This publication is for information purposes only and is not a recommendation to engage in investment activities. This publication is provided "as is" without representation or warranty of any kind. Whilst all reasonable care has been taken to ensure the accuracy of the content, CC&G does not guarantee its accuracy or completeness. CC&G will not be held liable for any loss or damages of any nature ensuing from using, trusting or acting on information provided. No information set out or referred to in this publication shall form the basis of any contract. The creation of rights and obligations in respect of services provided by CC&G shall depend solely on the applicable rules and /or contractual provisions of CC&G. All proprietary rights and interest in or connected with this publication shall vest in CC&G. No part of it may be redistributed or reproduced in any form without the prior written permission of CC&G. CC&G disclaims any duty to update this information. Unauthorised use of the trademarks and intellectual properties owned by the Company or other Companies belonging to Euronext Group is strictly prohibited and may violate trademark, copyright or other applicable laws.