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**FBF RESPONSE TO THE BCBS CONSULTATION PAPER ON THE CREDIT
VALUATION ADJUSTMENT RISK: TARGETED FINAL REVISIONS (BCBS d488)**

The French Banking Federation (FBF) represents the interests of the banking industry in France. Its membership is composed of all credit institutions authorised as banks and doing business in France, i.e. more than 340 commercial, cooperative and mutual banks. FBF member banks have more than 38,000 permanent branches in France. They employ 340,000 people in France and around the world and serve 48 million customers.

The FBF welcomes the opportunity to comment on the consultation (BCBS d488)¹ on the Basel “Credit Valuation Adjustment risk - targeted revisions”. Please find below our main comments.

¹ Please see : <https://www.bis.org/bcbs/publ/d488.htm>

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A. Issues raised by BCBS d488

The FBF appreciates the amendments brought by the BCBS d488 on targeted revisions of the CVA risk framework. The alignment of relevant parts of the revised CVA risk framework with the minimum capital requirements for market risk (risk weights, index buckets, aggregation formula), is appreciated.

Nevertheless, some issues should be considered:

a. Calibration between SA-CVA and BA-CVA

The introduction of the consultative document states “the Committee is [...] considering revising the calibration of the basic approach (BA-CVA) in order to have an appropriate relative calibration between the SA-CVA and the BA-CVA” [MAR50.14]. Regulators view on the appropriate ratio between a more advanced SA-CVA and a less sophisticated BA-CVA is left unclarified. In our view, the use of a more risk sensitive approach should be incentivised. The use of a rougher BA-CVA should therefore lead to more conservative own funds requirements, while remaining commensurate with risks.

b. Materiality of the CVA risk brought by SFT

Institutions will appreciate more information on the CVA risk material threshold leading to an exclusion of some securities financing transactions (SFTs), as explained in the Introduction of the consultative document. As it stands, it seems that it will be left with National Competent Authorities (NCA), which may lead to differing requirements across jurisdictions.

More importantly, for institutions elected to calculate a CVA own funds requirements for its repo-like transactions, we believe that the capital charge should be limited to that of the counterparty credit spread risk (CCS) when using the SA-CVA. Indeed:

- CCS risk constitutes the bulk of the CVA risk while SFTs CVA is small compare to that of derivatives. Hence, other than CCS risk on the SFT perimeter is really of second order magnitude.
- Implementing the full SA-CVA for SFT exposures represent a significant amount of work. Limiting the SA-CVA on SFTs to CCS would greatly reduce the implementation operational burden and costs.

c. Index bucket

We welcome the introduction of the concept of qualified indices and of qualified indices buckets as well as the changes to the aggregation formula. However, alone, those improvements will not suffice to overcome the poor recognition of macro-hedging benefits in CVA risk reduction.

Indeed, our analyses show that **qualified indices provide limited capital relief: 29% maximum for sector indices, ≈12% maximum for cross-sectors indices.**

Empirical experiences together with theoretical evidences have shown that the **capital relief should be much larger for diversified portfolio hedges with diversified indices.** What follow is a proposal to significantly improve the framework in term of hedge benefit recognition.

General structure of our proposal

Our proposal applies to the counterparty credit spread risk class. It is based on the current Basel text and requires only minor adaptations. As evidenced thereafter, it is also easy to operationalise as no added complexity is introduced.

Our proposal relies on MAR50.50 whereby:

- Non-qualified indices must be decomposed
- At a bank's discretion, a qualified index may either be decomposed or undecomposed
- When a qualified index is undecomposed it is either assigned to a sector bucket (one of bucket 1 to 7), if over 75% of its constituents belong to that bucket, or, otherwise, assigned to the cross-sectors bucket (bucket 8)

The case of qualified sector index hedges

When considering a sector bucket (bucket 1 to 7) qualified index (i.e. a qualified index whom over 75% constituents belong to that index) hedging exposures within that bucket:

- Exposures assumed to be made of N names of equal weighted sensitivities. The exposures total weighted sensitivities is WS^{Expo} . All exposures are assumed to be correlated at ρ_{name} , i.e. all are assumed to be on the same tenor and of the same credit quality. For simplicity, the disallowance parameter term is omitted.
- The bucket capital is :

$$K_b^{Unhedged} = WS^{Expo} \cdot \sqrt{\rho_{name} + \frac{1 - \rho_{name}}{N}}$$

- The exposures hedged with a qualified sector index bucket capital is:

$$K_b^{Hedged} = \sqrt{\rho_{name} \cdot (WS^{Expo} - WS^{Hedge})^2 + (1 - \rho_{name}) \cdot \left(\frac{WS^{Expo^2}}{N} + WS^{Hedge^2} \right)}$$

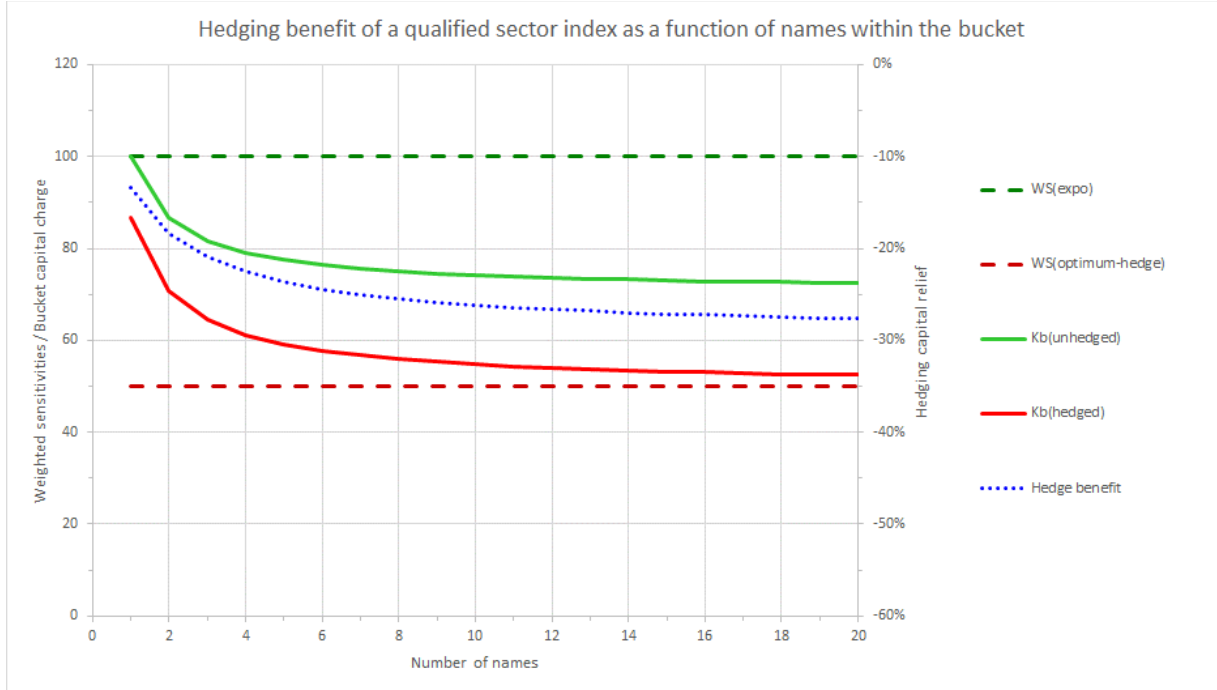
- The maximum hedge benefit is reached for an optimum qualified sector index hedge weighted sensitivity of :

$$WS_{Optimal}^{Hedge} = WS^{Expo} \cdot \rho_{name}$$

- The bucket of the exposures hedged with the optimum weighted sensitivity of qualified sector index is :

$$K_b^{Hedged} = WS^{Expo} \cdot \sqrt{\rho_{name} + \frac{1 - \rho_{name}}{N} - \rho_{name}^2} = \sqrt{K_b^{Hedged^2} - (\rho_{name} \cdot WS^{Expo})^2}$$

With a correlation between names of $\rho_{name}=0.5$, using the optimum number of qualified sector index hedge, the maximum capital charge relief is -29.3% when the portfolio of names is highly diversified.



For a highly diversified portfolio of names, the capital relief should be significantly higher. Actually, omitting the disallowance parameter, in the case of an index which itself is highly diversified, the relief should tends toward -100% as the index correlation with the portfolio of exposures should tends toward 1.

The reason why the hedging benefit is limited is because the hedge is represented as a single name where, in fact, being an index, it should be itself be represented as a diversified portfolio of exposures.

In fact, if the exposures are made of N^{Expo} names and the index of N^{Index} names, the above formula may be generalised as follow:

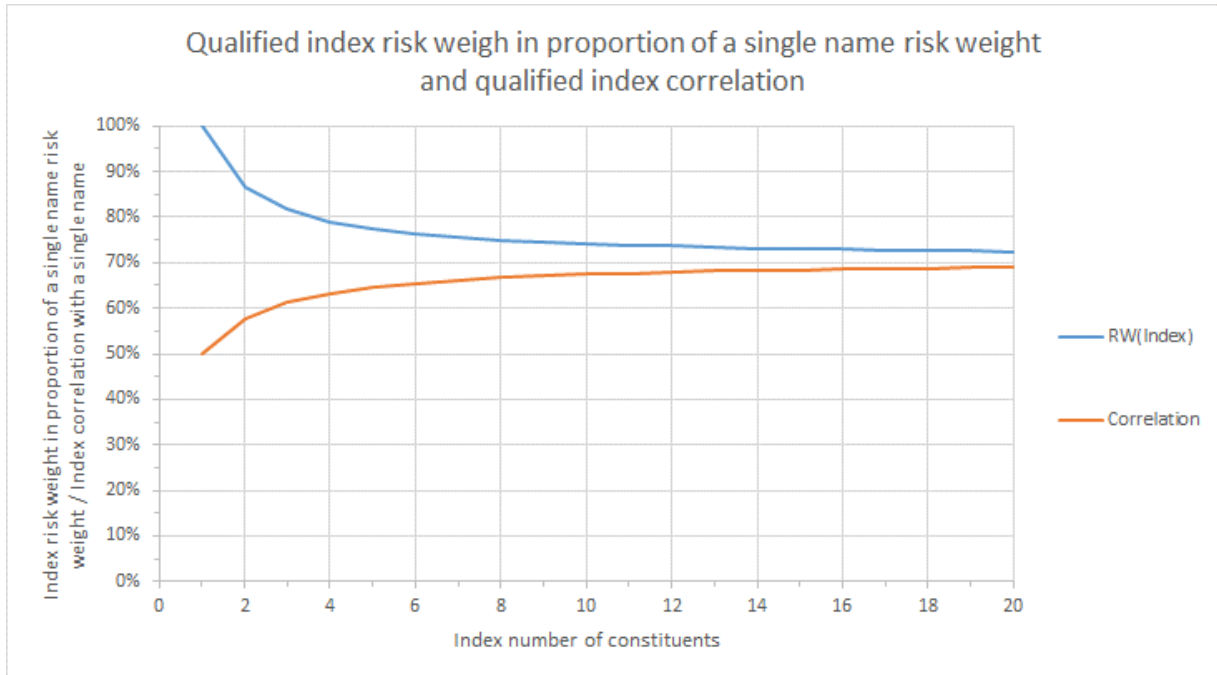
$$K_b^{Hedged} = \sqrt{\rho_{name} \cdot (WS^{Expo} - WS^{Hedge})^2 + (1 - \rho_{name}) \cdot \left(\frac{WS^{Expo^2}}{N^{Expo}} + \frac{WS^{Expo^2}}{N^{Index}} \right)}$$

$$WS_{Optimal}^{Hedge} = WS^{Expo} \cdot \frac{\rho_{name}}{\rho_{name} + \frac{1 - \rho_{name}}{N^{Index}}}$$

We have, as one would have expected that when N^{Expo} and N^{Index} increases, the optimal weighted sensitivity of the qualified sector index hedge tends toward the exposure sensitivity and the bucket capital tends toward zero (since here we have an asymptotic unrealistically high number of exposure names and index constituents and we have disregarded the disallowance parameter).

However, if the institution intention is not to decompose the qualified sector index, we shall therefore find the relevant index risk weight and index correlation with single name exposures. We can show, still under the above assumption that:

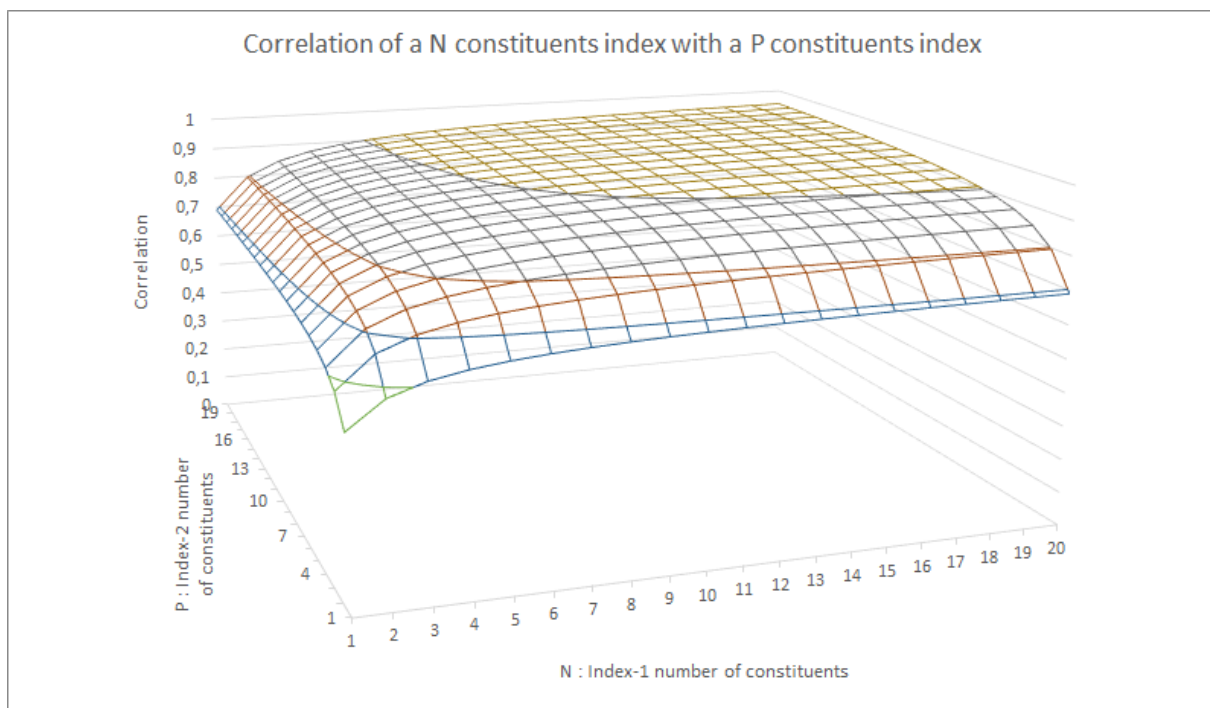
- The qualified sector index risk weight should be:
- $RW_{Index} = RW_{name} \cdot \sqrt{\rho_{name} + \frac{1-\rho_{name}}{N^{Index}}}$
- The qualified index correlation with a single name exposure should be:
- $\rho_{Index} = \frac{\rho_{name}}{\sqrt{\rho_{name} + \frac{1-\rho_{name}}{N^{Index}}}}$



There may be different indices in within the sector and we shall be defining as well the index-to-index correlation.

- The correlation between a qualified sector index of N constituents with a qualified sector index of P constituents is equal to

$$\rho_{N,P} = \frac{\rho_{name}}{\sqrt{\rho_{name} + \frac{1-\rho_{name}}{N}} \cdot \sqrt{\rho_{name} + \frac{1-\rho_{name}}{P}}}$$



-
- It is apparent that the correlation between two qualified indices increase quickly from ρ_{name} toward 1 as the number of constituents increases. With $\rho_{\text{name}}=0.5$, two indices, each with 4 constituents are correlated at 0.8 and two indices with 9 constituents have a correlation of 0.9.

From the above we conclude that, if the qualified sector index is not decomposed and is included in the bucket calculation as a single name exposure (as per MAR50.50), we recommend setting for qualified sector index:

- A risk weight of ≈ 0.7 times the risk weight of the bucket
- A correlation between qualified sector index to single name correlation to ≈ 0.7
- A correlation between two qualified same-sector indices of $\approx [0.8 - 0.9]$

This approach may appear a little bit over-engineered. Besides, having long and short positions within a bucket with high correlations may lead to a negative term under the square root because the correlation matrix is not semi-defined positive.

We therefore recommend a **three-step approach** whereby:

- First a bucket capital charge with only single name exposures (CVA sensitivities together with single name hedges and decomposed non-qualified indices) is calculated
- Second, the sector qualified indices capital charge is calculated
- Third, the resulting bucket capital charge is offset with the qualified sector indices capital charge.

The third step is performed with a usual quadratic formula. Given that the bucket is highly diversified and can be considered as equivalent to a position on a sector index, using the above calibration, we suggest that the supervisory parameters are set to:

- Within step-2

- Inter-qualified indices correlation is set to a value between 0.8 and 0.9 (for simplicity, and in reference with bucket-8 intra-correlation, a correlation of 0.8 could be used)
- Qualified indices are risk weighted at 0.7 times the bucket supervisory risk weight
- Within step-3, the correlation between the exposures bucket capital charge with the qualified sector indices is set to a value between -0.8 and -0.9 (the sign is to reflect that the bucket positions is overall long while the qualified sector indices are short positions). Again, for simplicity and reference to bucket-8, a correlation of 0.8 may be preferred.

The case of qualified cross-sector index hedges (bucket 8)

The approach taken for qualified sector indices could be replicated for cross-sectors qualified indices that a bank has chosen not to look-through:

- Step-1: The capital requirements for each sector bucket 1 to 7 is calculated according to the three-steps approach depicted above
- Step-2: A capital charges for all sector buckets 1 to 7 is calculated according to BCBS d488
- Step-3: The capital charge of bucket-8 is calculated according to BCBS d488
- Step 4: The overall capital charge is calculated with a usual simple quadratic formula between buckets 1-7 and bucket 8 using a consistent correlation of -0.8 (again the sign is to reflect the buckets 1-7 long position versus a bucket 8 short position)

d. Multiplier m_{CVA} under MAR50.41

The m_{CVA} multiplier should be set at 1 since:

- The industry believes that level of model risk in calculation of CVA sensitivities is not higher than in calculation of sensitivities of market value of trading book instruments;
- SA-CVA conservativeness is already achieved through:
 - The removal of an internal model approach: standardised approaches are by nature more conservative;
 - The conservative calibration of risk weights [MAR50.56-MAR50.77];
 - A hedging disallowance, 'R' [MAR50.35];

The Basel Estimates have shown that CVA risk is subject to a significant uplift in capital requirement. Even under the foreseen alignment with the final FRTB text and a multiplier set to one, are own funds requirements significantly increased.

B. Additional topics that should be addressed in the final version of the CVA risk framework

a. Deviation between the regulatory CVA and the accounting CVA

We believe that capitalising a hypothetical regulatory CVA distinct from the true accounting CVA distorts the essential link between economic risk and capital requirement. We think that the Prudent Valuation is a more suitable framework to impose high quality standards on accounting CVA than the CVA risk charge. In that respect, we note that CVA remains the only market risk in the Basel framework where the accounting measure is not used as an input of the capital requirement calculation.

The main sources of divergence between accounting CVA and regulatory CVA can be classified in 2 categories:

i. Parameters

1. Loss Given Default (LGD)

We acknowledge there is a broad-based adoption of market-implied parameters in accounting CVA including PDs, recovery rates and diffusion parameters. The Basel Committee logically imposes a regulatory CVA based on market-implied parameters. We note that some flexibility is granted to use different LGDs in specific cases where “the bank can demonstrate that the seniority of the derivative exposure differs from the seniority of senior unsecured bonds”².

We advocate that banks should be able to use different LGDs for certain specific type of exposures, e.g. because they are secured (such as covered bonds, funds or project finance vehicles) or because their nature does not permit the reliance on the credit market (see for instance the uncertainty around political intervention in the context of sovereign exposures), subject to being able to demonstrate that the use of such parameters are properly governed and validated within the credit institution.

2. Margin Period of Risks (MPoR)

The final Basel standard imposes a regulatory CVA based on “9+N business days” margin period of risk (MPoR) where N is the remargining period (except for SFTs and centrally cleared clients’ trades [MAR 50.5]). This prescribed MPoR is overly conservative, not commensurate with the risk truly incurred and not consistent with accounting CVA practices. Different banks may use different MPoR assumptions; however, the vast majority are using 5 or fewer business days. Hence, while in principle true P&L variability should be capitalised, i.e. the accounting CVA variability, as a second best option we advocate that the prescribed supervisory MPoR is set to no more than 5 business days for derivative transactions. It will help narrow the gap between accounting and regulatory CVA.

² <https://www.bis.org/bcbs/publ/d424.pdf>

ii. Perimeter

1. Securities Financing Transactions (SFTs)

Fair-valued SFTs are included in the revised CVA capital charge on a mandatory basis by default even though:

- These instruments are not necessarily captured in accounting CVA;
- SFTs are mostly collateralized short-term transactions of marginal regulatory CVA;

Besides including SFT in the SA-CVA framework would be burdensome in particular with respect to exposure sensitivities.

We therefore advocate for SFTs exemption from CVA capital charge. As a fall-back, the SA-CVA should be limited to the counterparty credit spread risk (CCS).

b. Proxy hedges with Sovereign CDS

In some specific cases, proxy hedges are strongly penalized. This is typically the case for:

- ✓ Financial institutions strongly tied to their sovereign;
- ✓ Emerging country corporates strongly linked to their sovereign.

When duly justified to supervisors, the recognition of proxy single name hedges should be allowed where the CDS reference name and the counterparty are not in the same bucket while they however share the same underlying economic risk.

To illustrate, let's take a very simple example with a 1000k€ credit sensitivity on an investment grade financial institution backed by a Sovereign in bucket #2 (for example Group *Caisse des Dépôts "CDC"* or Group *Agence Française de Développement "AFD"* in France, Bank of China or China Construction Bank in China):

- ✓ When the exposure is unhedged, the capital required is 62.5k€ as the risk weight in bucket #2 is 5%;
- ✓ If the exposure is **fully hedged with a Single Name CDS referencing the Sovereign** name backing the financial institution, the capital required is 61.5k€, therefore, the **hedge efficiency is almost nil**:
 - Assuming the CVA multiplier is set to 1, this hedging strategy would lead to a 49k€ capital requirement.

To achieve an appropriate level of hedge recognition, we propose that when a financial institution or a corporate is strongly linked to its Sovereign and is hedged with the related Sovereign CDS single name, the hedge could be mapped to the related sector bucket of the exposure and treated as a single name sensitivity in that bucket (a similar treatment is provided in [MAR50.50]).

c. Sensitivity of the CVA framework on financial counterparties exposures

We are concerned by the limited risk sensitivity of the revised CVA framework on financial counterparties. Financial counterparties are captured in a single credit bucket consistently with the FRTB approach. Yet, the financial counterparties in the counterparty credit spread component are very different from the issuers of instruments in the trading book. Financial names in the CVA book usually include several thousand names which are also much diversified e.g. insurance companies, asset managers, pension funds and mutual funds which are pivotal to the real economy.

A distinction should be made between various types of financial counterparty within the CCS financial bucket (no. 2). In the same way as sovereigns and local government are attributed distinct risk weight within bucket 1, we see fit to purpose to distinguish four types of financial counterparties within buckets 2:

- Financial counterparties which should be assigned lower risk weights than the existing bucket 2 risk weights:
 - o Prudentially regulated financials (banks, insurance companies, ...);
 - o Regulated funds (Pension funds, UCITS, regulated mutual funds, ...);
 - o Covered bonds (i.e. counterparties transacting derivatives whose purpose is to hedge the market risk of covered bonds and which are *pari passu* with corresponding covered bonds debt) where risk weights aligned with the ones for covered bonds bucket in FRTB framework (MAR 21.53) would be more representative of underlying CVA risk;
- Other financial counterparties which would be assigned the existing risk weights applicable to bucket 2 counterparties (respectively 5% and 12% for IG and HY financial counterparties [MAR50.65]).

d. Sensitivity of the CVA framework on creditworthiness of counterparties

We are also concerned by the limited risk sensitivity of the revised CVA framework to the credit worthiness of counterparties. The current Basel III standardized CVA approach (finalized in 2011) has a much more granular approach to defining the risk weights for counterparty credit spreads with 8 credit quality steps (AAA, AA, A, BBB, BB, B, CCC) than the CVA revised framework that accounts only for 2 credit quality steps (IG and HY/NR). Such a reduced granularity in credit quality steps results in increasing significantly the risk weights compared to the current standardised approach as well as decreasing the risk sensitivity of the CVA framework and is an issue that contributes to the significant uplift in CVA capital requirements having a potential heavy impact on end-user.

e. Exposures to clearing member

We fully support the Basel proposal to exclude exposures to clearing members for centrally cleared transactions when the conditions for a CCR risk weighting at 2% or 4% are fulfilled.