

RESPONSE TO THE BASEL COMMITTEE CONSULTATIVE DOCUMENT

Issued for comment by 27 September 2013

Consultative Document Regarding the Capital Treatment of

Bank Exposures to Central Counterparties

NASDAQ OMX welcomes the opportunity to respond to consultative documents 253 and 254 distributed in June 2013 by the Basel Committee on Banking Supervision. As part of the European Association of Clearing Houses (EACH), NASDAQ OMX has reviewed the corresponding response from EACH and we are fully supportive of it. This document serves to expand upon and complement the arguments and points that NASDAQ OMX has particular experience or expertise with. We fully invite the BIS to contact us if there are any points below that require further clarification.

Q1. Which of these two proposed methodological approaches best satisfies the objectives which the capital treatment seeks to achieve and why?

Both the ratio approach and the tranches approach are similar in effect, albeit we believe the tranches approach can be refined more readily so as to be useful. Both approaches subject banks to a capital charge on their contribution to CCP capital. Both methodologies constitute a capital charge on capital. We find this aspect of the rule to be counterintuitive, and therefore we caution the committee about the unintended consequences on taxing capital in such a way, including:

- a) Redistributing capital away from CCP Default Funds and towards individual Banks
- b) Creating a headwind for CCPs to collect capital contributions to guard against a systemic risk event, thus making it harder for CCPs to collect the capital that we find prudent and appropriate
- c) Making CCPs more dependent on the financial health of Banks
- d) Providing a dis-incentive for banks to contribute capital to CCPs.

The potential unintended consequences above do counteract what in our view is the well-intended purpose for banks to properly reserve against CCP default fund replenishment. We do agree that some reserve should be made against potential default fund calls, but this reserve must be risk weighted on equal footing to other bank capital charges.

We will now describe an alternative capital framework which has as a goal to incentivize CCPs to be well capitalized, whereas by mutualizing risk amongst members or providing their own capital. We believe any capital charge associated with default fund exposures to a CCP should be based on the following principles:

1. Assess high capital charges to banks only in the case the CCP is undercapitalized, and in the amount that compensates for the capital shortfall, appropriately distributed amongst members

2. Any other capital charges should be proportional to the credit risk inherent to the Default Fund. These capital charges are meant to be available in case a member needs to replenish the Default Fund. This can be accomplished by:
 - a. Rewarding CCPs with adequate aggregate capitalization
 - b. Giving credit to CCPs own contribution to the waterfall by lowering charges on a bank's Default Fund contributions when the CCP contributes capital that is junior or *pari-passu* to members' contributions
 - c. Capital above and beyond the hypothetical capital should not incur any capital charges because such funds further enhance the financial standing of the CCP
 - d. Utilizing the hypothetical capital (K_{CCP}) as the standard measure of capital adequacy
 - e. Utilizing credit-risk sensitive risk weights

We use the tranche approach combined with the standard risk-weight approach in this proposed framework, such that the methodology can be more readily compared:

$$\begin{aligned}
 K_{CMi} &= 8\% \left(\frac{DF_i^{pref}}{DF_{CM}^{pref}} \right) \cdot \{ rw_2 \cdot (K_{CCP} - DF_{CCP}^{pref}) + rw_1 \cdot DF_{CM}^{pref} \} & \text{if } DF_{CCP}^{pref} < K_{CCP} & \text{Case (i)} \\
 &= 8\% \left(\frac{DF_i^{pref}}{DF_{CM}^{pref}} \right) \cdot \{ rw_1 (K_{CCP} - DF_{CCP}) \} & \text{if } DF_{CCP} \leq K_{CCP} \leq DF_{CCP}^{pref} & \text{Case (ii)} \\
 &= 0 & \text{if } DF_{CCP} \geq K_{CCP} & \text{Case (iii)}
 \end{aligned}$$

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With $rw_1 = 20\%$ to 150% , depending on the credit quality of the CCP

$$rw_2 = 1250\%$$

Note $RLDF$ is substituted by K_{CCP} ($NIMM$), in order to provide a consistent methodology for all CCPs, as discussed in our answer to Q2 below. We applied the risk weight levels in such a way as to incentivize CCPs to contribute capital. Bank capital charges exceed 100% only when the CCP is undercapitalized, as in case (i), and only in proportion to the CCP capital shortfall, as measured by a standardized metric, K_{CCP} ($NIMM$). In the case where the CCP is well capitalized, the portion of the member's default fund contribution that is needed to meet the hypothetical capital requirement is the one that is assessed a capital charge proportional to rw_1 . If the CCP is well capitalized by this measure, capital charges are only assessed in order for the bank to maintain reserves against the unlikely event that the default fund is utilized and needs to be replenished. These replenishment charges are proportional to rw_1 , which is a function of the credit quality of the CCP, preferably measured by their public credit rating. Lastly, in the case where the CCPs own capital alone meets the hypothetical capital requirement, we believe it is not necessary to apply a capital charge as the member contributions themselves represent a surplus of capital. In general, we believe that the capital charges assessed this way will not interfere with the efforts of the CCP to collect adequate collateral for its Default Fund, as the charge is not so large as to dis-incentivize banks from contributing capital. At the same time, and most importantly, this framework incentivizes CCPs to appropriately size their aggregate capital, contribute their own capital to the waterfall, as well as provide as much surplus of capital as desired without an additional capital charge to that surplus.

Q2(a). *What are the pros and cons of using the greater of the minimum Cover* level required by the CPSS-IOSCO PFMI or the hypothetical level of default resources calculated using NIMM as a model for calculating the relative risk of clearing members contribution to QCCP default funds?*

Pros: The Cover* level is sensitive to concentration risk.

Cons: 1. There is no objective standard to calculate the Cover 1 or Cover 2 across different CCPs, as it is based on the IOSCO principle of “extreme but plausible market conditions” and covering top exposures as measured by each CCPs *internal model*. By contrast, the NIMM method represents a standardized quantitative approach.

2. CCPs with a more conservative calculation of their own exposures than their competitors would be penalized by a larger capital charge than their competitors. Some CCPs are more conservative than others in stress testing, even if the CCPs cover for the same number of defaults. This is because conservative CCPs are likely to have Cover 1 or Cover 2 numbers that are substantially greater than $K_{CCP}(NIMM)$. Therefore, all things being equal, a conservative CCP would have a higher RLDF than an aggressive CCP with the same exposures. Conversely, more aggressive CCPs, which may underestimate their exposures in their Cover calculation, would be rewarded by a lower capital charge than their competitors -- albeit with $K_{CCP}(NIMM)$ as a floor. This effect would be compounded by the capital charge to trade exposures, such that conservative CCPs would be in a competitive disadvantage as they would attract higher Bank capital charges. This runs squarely against the purpose of financial reform as agreed upon the G20, which is meant to favor clearing at CCPs with sound risk management and conservative capitalization.

3. All else being equal, CCPs in jurisdictions which have more conservative regulators would have larger capital requirements with Cover* if their exposure calculations themselves are over-conservative, and they would also get penalized with higher capital charges. Moreover, simple random variations in the way in which the international rules are applied would have undue influence. And since this is a highly internationalized market, we would probably see a migration towards the least conservative regulators.

4. Using Cover* would provide an incentive for CCPs to have their exposure and Cover* calculations as close as possible to the NIMM-based K_{CCP} , or else CCPs could be at a serious competitive disadvantage.

Today, a CCP can benefit from having more conservative exposure calculations than its competitors as it can afford the CCP better protection than its competitors. In a financial crisis, the best capitalized CCPs are more likely to survive and outdo their competition, in exchange for the higher cost of funding a larger default fund. Using Cover* as a basis for bank capital charges would penalize CCPs which manage their capital conservatively with higher capital charges.

Also, it should be noted that CCPs utilize their exposure calculations not just to manage their risk but also to explain to members the size of their default fund contribution. Therefore, the norm is for CCPs to be capitalized up to a nominal buffer above the Cover 1 or Cover 2 requirements. For example, assume

we have two CCPs A and B, with the same risks and the same amount of capital. CCP A has a conservative Cover* model with a small buffer, while CCP B has have an aggressive Cover* model with a large buffer, however, let us assume in this case that at the end they both have the same level of capital. The Cover* rule would penalize CCP A with higher capital charges than CCP B, because the rule does not follow a standard exposure metric, and this is why the Cover* metric is not equitable.

In summary, the use of the Cover* calculation, as proposed, has several unintended consequences which make it a less than optimal approach. We strongly recommend for the committee to utilize the NIMM method exclusively.

In addition, it is possible to construct a Cover(NIMM) model using the exposures calculated with the NIMM method. This would be an alternative way to capture concentration risk while using a standardized and equitable methodology.

Q2(b): Should the Committee consider any adjustments to NIMM to improve its measurement of derivative exposures in the context of CCPs?

First, we find that the capital charges for interest rate instruments should be a function of the credit rating of the underlying government, to reflect the actual risk involved.

Secondly, we believe the equation on paragraph 85 of the NIMM consultative document should be modified to produce a steeper capital charge decrease with margin collateral. The rationale behind this is that the *AddOn* has been calibrated to cover most of the risk of the trades, and therefore a collateral amount equal in magnitude to the *AddOn* should cover the majority of the risk. In the current proposal, a collateral amount the size of the *AddOn* only reduces the risk by one third. Moreover, the current implementation of the NIM requires four times the *AddOn* amount to be able to reduce the exposures multiplier to ~16%. We believe the *AddOn* amount should reduce the exposure by 60% and two times the *AddOn* amount should reduce the multiplier to ~16% (thereby reducing the exposure by 84%), such that equation in paragraph 85 should read:

$$\text{Multiplier} = \min \{ 1; \text{Floor} + (1 - \text{Floor}) * \exp ((V - C) / ((1 - \text{Floor}) * \text{AddOn}^{\text{aggregate}})) \}$$

Where the 2 coefficient has been removed in order to give more credit to over-collateralization. Assuming the 5% floor is the same in either case, Figure 1 below shows the effect of the above proposed multiplier formula compared to the original multiplier on paragraph 85.

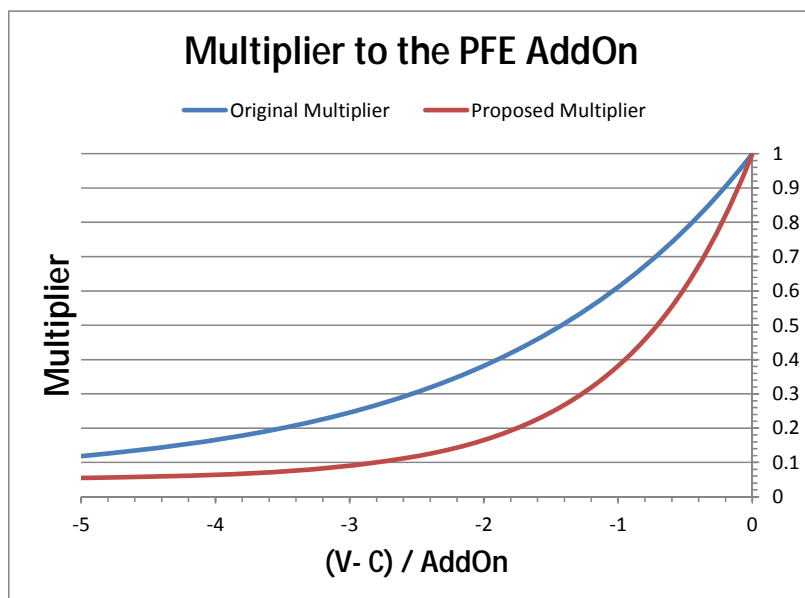


Figure 1. Multiplier contemplated in the NIMM method to give credit to overcollateralization, shown next to the multiplier proposed herewith (red line). The multiplier reduces exposure as measured by the *AddOn* in proportion to the amount of collateral (C) relative to the mark-to-market value of the position (V).

Q2(c). Would it be better to use only one of these measures, or are there other suitable alternatives?

Yes, absolutely, it is better to use NIMM exclusively because all CCPs can abide to a consistent and equitable quantitative risk methodology to measure their capital adequacy. Using NIMM, all CCPs would be using the same method, and this would avoid any potential regulatory arbitrage. This would not suffer from the multiple problems with the Cover* methodology that is internal to each CCP. Given that the committee has spent considerable time refining the NIMM methodology for measuring capital adequacy, it makes a lot more sense to use the NIMM that to use disparate CCP methodologies. If a measure of concentration risk is desired, BIS may construct an exposure metric based on NIMM to calculate Cover 1 or Cover 2.

Q3(a). What risk weights / capital charges would best achieve, or appropriately balance, the objectives set out in Section II.C? In particular, how would possibly lower values ensure that clearing members are capable of absorbing losses in times of stress without the drawing down of the default funds threatening the viability of the non-defaulting members who have contributed to them?

Please refer to our proposal in Q1 for our proposed default fund contribution capital charge formula for K_{CMI} which:

- a) Promotes central clearing by providing a lower capital charge on capital when a CCP is properly capitalized, as measured by the $K_{CCP(NIMM)}$ standard only

- b) Encourages CCPs to request supplemental capital from banks, that is above and beyond the $K_{CCP}(NIMM)$, since the capital charge to banks is zero after that level of capital is met, therefore promoting robust risk management practices at CCPs
- c) Applies significant capital charges to banks that trade with an under-capitalized CCP. These capital charges would ensure that the bank exposures to such a CCP would be adequately capitalized. If a CCP has a capital shortfall, the equation in Q1 would imply that the shortfall would have to be covered by the banks trading with that CCP anyway
- d) For the part of the bank's default fund contribution which does carry a capital charge, the risk weight is appropriately sized according to the credit quality and historical experience of CCPs, which have had extremely rare incidences of losses that draw into a default fund. As long as the bank's contribution is used to cover $K_{CCP}(NIMM)$, typically the capital charge should be an investment-grade type capital charge, rather than a junk-bond type capital charge.
- e) Is simpler than the tranches approach proposed in the consultative document

We believe that the best way to avoid a default that threatens the viability of non-defaulting members is by strengthening the CCP default fund itself, not spreading the capital around in individual banks. This is because the default fund can be used to cure any member's default, and individual bank capital is held at each institution in isolation. Bank capital is useful for the bank to protect itself against default, while **the CCP's default fund capital is there to protect the financial system**. It should be noted that the default fund is the last resort set of funds available against a severe systemic default scenario, and therefore it should be where most supplemental capital resides, and where the member's pooled resources reside. In conclusion, capital in the default fund is a much more effective and efficient tool against systemic risk than capital in an isolated bank. Historical experience has demonstrated this time and again.

Q3(b). How would the proposed 1250% risk weight affect incentives to use central counterparty clearing?

Such a high risk weight should only apply in a situation when the CCP is under-capitalized. If applied as broadly as is contemplated in the consultative document, a 1250% risk weight will discourage banks from central clearing, as it essentially doubles the capital contributions that banks post to CCPs, and it makes bilateral trading more attractive by comparison. In addition, such a blanket measure would dilute CCP resources by moving capital from the CCP to the banks. As explained above, given that CCPs draw upon their default funds extremely rarely, and given that a risk weight of 1250% is equivalent to a junk-rated credit near default, it is difficult to justify in most circumstances other than plain and simple under-capitalization.

Given the G20 mandate to encourage derivatives clearing, we feel that taxing the capital that CCPs hold in the default fund will impair CCPs from collecting the capital that they need to operate safely. At best, such policy redistributes capital away from CCPs and into banks, therefore reducing the capital available to support the systemic risks that CCPs may face. A risk weight of 20% to 150% based on the credit rating of the CCP is in line with the actual credit risk that banks face to such deposits, especially given that the default fund is placed at very senior part of the capital structure. It is more senior than a CCPs

“skin in the game”, the default fund collateral from the defaulted member, and the margin collateral of the defaulted member. Better yet, our proposed tranching approach described in our answer to Q1 uses a 1250% risk weight only when it is truly needed: if the CCP is under-capitalized.

CCPs do not generate any risk themselves, but they centrally control leverage in the market and set clear rules and procedures to manage a member’s default. Albeit it is desirable for banks to have reserves in order to cover default fund calls, the proposed risk weights are so high that they would put pressure on CCPs to lower or at least drastically control any growth to their default fund requirements. It should be noted that trading in derivatives has significantly decreased in the last few years and liquidity levels remain anemic due to the capital costs involved.

Lastly, we should clarify that the risk weight levels are certainly dependent on how conservative $K_{CCP}(NIMM)$ really turns out to be compared to the average CCPs capital. This includes the risk weights that we proposed in Q1. As such, the risk weight levels should be monitored, calibrated, and adjusted based on the results of the QIS.

Q4: The Committee invites comments on this potential risk sensitive approach to capitalising trade exposures to CCPs.

We support the answer from EACH regarding Trade exposures. We agree that most QCCPs (qualified CCPs) have their capital just above Cover*, so as drafted this rule will lead to a 5% risk weight for most QCCPs. NASDAQ OMX supports the idea of a risk sensitive approach, but we suggest that the framework give credit to QCCPs that are a few 10ths of percent above their capital requirement, and that the default risk weight is set to its original value of 2% for well-capitalized QCCPs. As currently drafted, the trade exposures capital requirement provides a benefit to over-capitalized CCPs, but only at extreme over-capitalization of two, three, or more times the K_{CCP} level. A formula that provides better incentives to well-capitalized CCPs while still penalizing under-capitalized QCCPs follows:

$$RW_{TE} = \min \left[\max \left\{ 2\% \left(\frac{K_{CCP}(NIMM)}{DF_{pref}} \right)^2, 1\% \right\}, 20\% \right]$$

This way, a QCCP which has half the capital than $K_{CCP}(NIMM)$ would have a risk weight of 8%, while a QCCP which is over-capitalized by 50% would have a risk weight of 1%. A QCCP which has less than 28% of the required hypothetical capital will hit the risk weight ceiling of 20%. This formula was calibrated such that a QCCP with capital equal to the hypothetical capital has a risk weight of 2%, which maintains the attractiveness of clearing compared to bilateral trading and retains the levels proposed in the initial Basel III draft.

Q5: Do you consider it appropriate to treat initial margin, where a QCCP has legally enforceable rules that make initial margin a senior claim to variation margin in the event of losses in excess of default resources, differently from other trade exposures by retaining a fixed 2% risk weight on initial margin posted in a non-insolvency remote manner?

We believe it makes sense to give initial margin a preferential treatment, given its key role in controlling systemic leverage in derivatives positions. However, NASDAQ OMX in no way has any claim, and is not planning to have a claim to the initial margin posted by members in the case of another member's default, as this contravenes EMIR regulations. In addition, we believe that clearing members will be very sensitive to variation margin haircutting, since this breaks the CCP guarantee of the trade. Given that most users view CCPs as a fundamental tool to guarantee and safeguard trades, we believe this would not be viable. Therefore, NASDAQ OMX would not be able to take advantage of this discounted risk weight as is currently contemplated.

Q6: Do the proposed approaches to capture commitments to top up default funds in the capital treatment of exposures to QCCPs satisfy the objectives which the capital treatment seeks to achieve? Are there ways in which the proposed capital treatment of commitments could be improved? Is the proposed α value of 0.5 appropriate?

CCPs have the important role of managing systemic risk, therefore in our opinion CCPs should have great flexibility when it comes to setting up mechanisms to replenish their capital in times of stress. As drafted, we believe that the proposed capital charges on assessment powers cannot be justified given the risk, especially because assessment powers are even less likely to be utilized than the default fund. Furthermore, given that the objective is to strengthen the risk management of CCPs, it is desirable to incentivize capital commitments from members, which the current proposal does not achieve. It should be noted that under current IOSCO rules, assessment powers cannot be used to cover regulatory capital, and therefore represent one of the mechanisms used to replenish CCP capital. CCPs in general should seek other mechanisms that can either complement or enhance such commitments, such as insurance paid by either members or the CCP. It is possible for members to purchase insurance on their assessment powers, therefore transferring the risk away from the bank, so the committee should also consider such a possibility. Given that assessment powers are meant to enhance the capital adequacy of the CCP, we recommend that no capital charge is needed.

With regards to RW_{TE} , one way that the proposed capital treatment of RW_{TE} could improve is by factoring in other capital commitments that a CCP may have at hand, such as a parental guarantee, an insurance policy, etc. Finally, our opinion is that the value of $\alpha = 0.5$ is adequate in the calculation of RW_{TE} .

Consultative Document regarding the non-internal model method (NIMM) for capitalizing counterparty credit risk exposures

Q1. Should the Basel Committee replace the CEM and SM with the NIMM in all areas of the capital framework? What are the benefits and drawbacks of using the NIMM in each of these areas?

We believe the NIMM method is a clear improvement over the CEM. We opine with regards to the use of the NIMM for the calculation of the CCP hypothetical capital, as it is the only application which is directly relevant to NASDAQ OMX.

Q2. Is the proposed approach of retaining the general structure of the CEM with respect to replacement cost and the potential future exposure add-on appropriate? Is the division of the broad asset classes appropriate?

We believe the general structure is sound and the broad division of asset classes is appropriate with regards to the products which NASDAQ OMX covers.

Q3. Are there specific product types that are not adequately captured in the outlined categories?

We believe that optionality or volatility exposure within each asset class is largely missed in the current framework, as the *vega* exposure of a *delta*-neutral portfolio would not be assessed any risk charge. We recommend that the committee carefully consider a way to measure this aspect of portfolio risk in an appropriate manner.

Q4. Does the above approach reflect the replacement cost of margined transactions? Are there any other collateral mechanics that the Basel Committee should consider?

The replacement cost of transactions in the context of a CCP is correctly captured.

Q5. Of the options under consideration for recognising offset across hedging sets, which treatment is preferred? What number of maturity buckets is appropriate to consider?

Partial offsetting across maturity buckets corresponds best to reality, as a parallel shift in rate curves is not an uncommon occurrence in the interest rate markets. We feel that three maturity buckets is roughly appropriate, and we regard this as the minimum number of buckets required to capture rates dynamics with some fidelity.

Q6. Is the proposed approach of using a different methodology for determining the add-on for each asset class appropriate? Is each proposed add-on methodology for each asset class effective at capturing the main risk driver of that asset class?

We believe that in theory the methodology proposed seems reasonable, but we have not done sufficient testing to contribute a detailed opinion on every asset class. However, we can make an important observation regarding the case of the electricity market, on which NASDAQ OMX has many years of experience as a CCP. We caution that the proposed *AddOn* is overly simplistic, because the volatility of a power derivative is strongly dependent on:

a) The delivery period, as longer delivery periods tend to significantly reduce the overall price volatility of contracts, and

b) The time to delivery, as contracts that are near delivery are generally traded more often and are therefore more volatile than contracts that are far from delivery. For example, monthly delivery contracts that are several months away from delivery are less volatile than monthly contracts that are a few days from delivery. Similarly, contracts whose time to delivery is a multiple of its delivery period have less volatility than contracts whose time to delivery is less than the contract's delivery period.

We feel that the calculated *AddOn* for power is over-conservative based on the observed volatility of the contracts that NASDAQ OMX trades, which have predominantly annual or quarterly delivery periods and are therefore not as volatile as the *AddOn* for electricity contracts suggests.

Q7. Are the proposed minimum time risk horizons for each transaction category (unmargined, non-centrally cleared, centrally cleared) appropriate? Should the Basel Committee consider factors other than the IMM for determining the appropriate time risk horizon for the NIMM (eg harmonising with other international or national legislation)?

While some centrally cleared contracts would certainly require 5-days of MPOR, these apply chiefly to less liquid asset classes such as interest rate swaps and certain commodity derivatives. For example, NASDAQ OMX clears extremely liquid futures contracts that reference equity indices which trade with sufficient daily volumes to readily justify a 2-day MPOR. Therefore we strongly recommend the committee find a way to factor in the liquidity of the specific product into the MPOR assumption. An example of such method to properly calibrate the MPOR for a particular product or class of products (with measurement units in parenthesis) can be the following:

$$\text{Liquidation ratio (\# days)} = \frac{\text{Open interest (\# contracts)}}{\text{Average Daily Volume } \left(\frac{\text{\# contracts}}{\text{day}}\right)}$$

First apply the above formula to each product or product class for each member of the CCP, and then sort the results in descending order of Liquidation ratio to assess a reasonable MPOR, even after stressing for lower-than-average volumes. If the CCP can hedge a contract via markets outside the CCP, we may also factor in the daily volumes of those markets if the CCP can use them to hedge an outstanding position of a defaulted member.

Q8. Do the suggested formula and 5% floor appropriately recognise the benefits of overcollateralisation?

We believe the floor is an appropriate tool to capture basis risk. However, we believe that the function does not give sufficient credit to collateralization at the *AddOn* level. In order to give proper credit, the exponent in equation 85 should be divided by $(1 - \text{Floor}) * \text{AddOn}$ instead of $2 * (1 - \text{Floor}) * \text{AddOn}$. Otherwise exposures will be quite large, as only collateralization of four times the *AddOn* will reduce the exposure materially. Please see our answer to Q2(b) and Figure 1 above, where we explain this in more detail. Note: There seems to be a typo in the formula in section 85, which should read $(1 - \text{Floor})$ multiplied times the exponential function.

Q9. Is the proposed approach to aggregate across asset classes appropriate?

Yes, we believe this is appropriate. Netting across asset-classes only makes sense for un-levered portfolios. For levered portfolios, correlations across asset classes can fluctuate so much under extreme but plausible market conditions that it is unadvisable and potentially dangerous to assume netting effects.

Q10 & Q11.

We do not have a comment on these last two questions.