ISDA/AFME response to the DG FISMA consultation document on the proportionality in the future market risk capital requirements and the review of the original exposure method

The International Swaps and Derivatives Association ("**ISDA**") and Association for Financial Markets in Europe ("**AFME**") welcome the opportunity to respond to the consultation paper on the proportionality in the future market risk capital requirements and the review of the original exposure method ("**OEM**").

We have summarised the key points raised in our response below:

I. Proportionality in the market risk framework + simplified Standardised Approach ("SA")

The undersigned associations are supportive of a market risk capital framework that employs the use of proportionality for smaller or simpler financial institutions. In particular, we believe that institutions that maintain small trading books benefit from a simplified prudential framework. However, we would caution against expanding the thresholds so as to capture firms with sizeable trading books. In particular, there is a risk that if the threshold is extended to include those banks with significant trading books and engaged in market making businesses, that those institutions could end up with exposures to undesirable, undercapitalized market risk, and create an un-level playing field for market participants. We, therefore, believe that the current thresholds that have to be met in order for institutions to avail themselves of the derogation in the Capital Requirements Regulation ("**CRR**") are adequate.

Furthermore, we believe there may be merit in modifying the new SA in order to simplify it for smaller institutions that enter into market risk exposures in order to hedge their own funds, manage their liquid asset buffers and for other risk management purposes. However, we believe that firms that seek to offer market-making services to third parties should apply the new SA. The SA is based on metrics and inputs typically used in trading book risk management, independently of their use for capital requirements, and banks that operate market-making operations should already be using these inputs to effectively manage their associated market risk, irrespective of their size.

We also believe that it is crucial that the European Commission ("**EC**") focus its efforts on ensuring that the SA – as agreed by the Basel Committee on Banking Supervision ("**BCBS**") in the final Fundamental Review of the Trading Book ("**FRTB**") framework – is calibrated and designed in a way so as not to negatively impact the way large banks intermediate in capital markets.

In particular, we believe that, as it stands, there exists a large cliff effect between standard rules and internal models, which given the uncertainty around internal model suitability tests and the potential for the SA to serve as a capital floor, will result in punitive capital impacts.

	SA to IMA[1]
Interest rate risk	3.0
Credit spread risk	2.0
Equity risk	4.1
Commodity risk	2.9
Foreign exchange risk	6.2

We believe that the SA needs to be recalibrated so as to reduce the gap to internals models. Specifically, we urge the EC to examine the risk weights and in areas of the framework including FX, Rates, covered bonds, US agencies, and emerging markets.

We also urge the EC to examine the effects of not recognising the effect of positive gamma on reducing risk in the SA, which we believe has distorting effects and can materially overstate risk and capital requirements of a desk, risk-class, and a bank on a consolidated basis.

It is also crucial that the EC scrutinise the requirements of the FRTB, which we believe are not fit for purpose and will significantly impact the ability of banks to serve as market makers in securitisations.

We are actively engaging with the European Banking Authority (EBA) in order to provide them with analysis on the potential impact that the new market risk framework may have on different trading activities (market making in particular) as well as on market liquidity by type of instrument or activity. We are also highlighting to the EBA the main outstanding interpretational issues in the requirements that warrant clarification before the framework is implemented.

We reiterate that the coherent calibration and design of the SA and the market risk framework in general, and consistency in the calibration between the standardised approaches and internal models, is essential to developing a more robust capital framework, and is important for Europe at a time when it is focused on recovery and on developing the CMU. However, the same comments are valid globally and – because international consistency remains important – the Associations urge the EC and European members of the Basel Committee to take the changes that result from the Commission's final analysis back to the Basel Committee to obtain the necessary revisions of the global FRTB.

II. Possible Review of the Original Exposure Method ("OEM")

We believe it may be appropriate to allow smaller institutions, especially those who use derivatives for risk management purposes only, and are not operating market-making operations, to benefit from an alternative derivatives exposure measure – such as the OEM – due to the potential costs associated with implementing the standardised approach to counterparty credit risk ("**SA-CCR**").

[1] Results based on data contributed by 21 banks, refreshing earlier QIS4 analysis based on final FRTB rules

III. Replacement of CEM (MtM method) and SM with SA-CCR

We are broadly supportive of the introduction of the BCBS SA-CCR in the CRR, in particular, for use within the:

- Large exposures framework;
- Leverage ratio framework;
- Central Counterparty (CCP) hypothetical capital calculation, as already included in the final Basel standards for capital requirements for CCP default fund contributions; and
- Calculation of risk-based capital requirements as a replacement for the Mark-to-Market method ("**MtM method**" – otherwise known as the current exposure method ("**CEM**") – and the standardised method ("**SM**")

We believe that SA-CCR addresses to a great extent the industry concerns over CEM's shortcomings in relation to issues on diversification, netting and differentiating between margined and un-margined netting sets. As a result, SA-CCR is a more risk-sensitive measure than CEM and will perform better as a measure of exposure.

However, we note that SA-CCR was finalized in 2014, and significant progress has been made at Basel level on other related regulations, such as Fundamental Review of the Trading Book (FRTB). We believe that the SA-CCR framework, as agreed at international level, can benefit from enhanced calibration and that improvements made in the development of the FRTB should be leveraged to refine and improve the SA-CCR framework. In the annex to this response we set out suggestions for improved calibration of the framework and also highlight parts of the final BCBS text that require further consideration. We would also recommend that the SA-CCR supervisory parameters be subject to recalibration so as to reflect changing market conditions. To avoid market disruption and to allow for planning at the firm level, the industry believes it will be necessary that this process is well-defined and transparent and allows for a phase-in period for transitioning to the new parameters.

But these concerns are not limited to Europe, and we urge the Commission to discuss their findings with Basel Committee members – with whom we have shared our concerns as a part of our response to the consultation on *Reducing variation in credit risk-weighted assets – constraints on the use of internal model approaches* – with a view to addressing these concerns on a global basis. We also believe it would be beneficial for the Commission to ensure that the ability to review the use of SA-CCR in CRR be included in the final framework, should changes be forthcoming at the global level.

It is also important to note that we believe that the introduction of SA-CCR should be tailored dependent on its use within the capital framework. For example, in the leverage ratio should be implemented so that it recognises the exposure-reducing effect of initial margin (IM) received from counterparties for client-cleared transactions, particularly as that margin is not used to increase the bank's leverage. Treating IM for client clearing as additional exposure, as under the current leverage ratio framework, unnecessarily acts against client clearing businesses, and contradicts the G20 mandate, by creating an economic disincentive for clearing brokers to offer clearing services.

This response does not address in detail SA-CCR implementation in the context of the Credit Risk rules, for standardised approach and internal models, which have not yet been finalized at Basel level. However, we would caution against any suggestion that SA-CCR be introduced as a floor in the future to the internal

models framework, as we believe the floor would undermine the use of internal models in the capital framework. We also reiterate that we continue to support the ability of firms to use validated internal models for calculating exposures. Internal models provide market participants the potential to alleviate the unavoidable deficiencies of standardised methods due to the need for simplification, better captures risks, properly accounts for diversification and hedging, and adapt more swiftly adaptation to the changing market environment.. In particular, a floor which is based on SA-CCR – which is still a notional based measure of risk – will encourage banks to reduce notionals but not necessarily reduce risk. There could be less transparency on where risks are being built up as the use of standardised approach floors could mask risk taking. We believe it is imperative to once again reiterate the importance of risk-sensitivity to the capital framework and the internal risk monitoring and management performed by credit risk departments.

We would welcome the opportunity for continued engagement with the European Commission on these areas over the coming weeks.

Yours sincerely,

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ANNEX A – Calibration suggestions on the SA-CCR Framework

The industry is broadly supportive of the introduction of SA-CCR in the CRR, which we believe is a more appropriate measure of counterparty credit risk than the CEM. However, in order to ensure the sound functioning of SA-CCR in the CRR, the industry has identified several areas where SA-CCR appears to suffer from deficiencies resulting from its standardised nature. We highlight below a number of additional issues relating to SA-CCR and its application as a floor to IMM, and make suggestions aimed at improving SA-CCR's risk sensitivity:

- The existing formulation in SA-CCR will allow some reduction of PFE resulting from the posting of IM, however the level of reduction will not be in line with the level of risk mitigation provided by the IM. In the formulation, the PFE will not fall accordingly as it is dependent on the exponential multiplier which is significantly more conservative than the model-based multiplier (BCBS WP26). We understand the choice of the exponential multiplier is based on MTM value of real netting sets being likely to exhibit heavier tail behavior than the one of the normal distribution. While fatter tails than those implied by a normal distribution do exist, the conservative calibration of the AddOnAggregate calculation already compensates this. This means that the introduction of the exponential multiplier constitutes a double count of fat tails. This is even more problematic as the 5% floor and the application of collateral haircuts to the collateral values (please see below's comment) introduce additional factors in reducing the risk mitigating benefits of overcollateralization. This undermines the stated regulatory efforts to increase the level of collateralization of exposures as a means to decrease counterparty credit risk. This has become even more important for the industry given the margin requirements for uncleared derivatives and the associated considerable funding costs. The same calibration issue also applies when derivative transactions are not in a netting set, where the non-netting set transactions will receive relatively high add-ons but the multiplier will provide little relief. As such, even transactions with significantly negative MTM will have large add-ons even when there is little chance of them to go in-the-money. The industry therefore thinks that the PFE multiplier is overly conservatively calibrated and results in a punitive treatment of IM, leaving in all instances the multiplier meaningfully higher than it should be. We therefore believe that SA-CCR should be made more sensitive to over collateralization and negative MTM.

- Under SA-CCR, the collateral haircut approach is used to reflect the volatility of collateral where market price volatility and foreign exchange haircuts are applied to incoming and outgoing collateral as appropriate. Generally, such a simplistic approach seems problematic as on the one hand it models the volatility of collateral in isolation of other collateral or the overall trade population and does not recognize any diversification benefits while on the other hand it fails to reflect the uniqueness of certain types of collateral. Given the goal to align SA-CCR with IMM as much as possible, it seems prudent to incorporate the impact of the future volatility of collateral into the SA-CCR PFE calculation. A more comprehensive discussion of the approach is provided below. While we understand that SA-CCR is final, such an amendment should not be considered a change to SA-CCR as the reflection of collateral volatility is not part of the methodology on how to calculate exposures for derivatives and the suggested approach in fact aligns with the SA-CCR methodology.

- Industry participants would strongly prefer to be given the option of using their own internal model delta adjustments since these calculations are approved by national regulators as part of the market risk framework and better aligned with their internal risk management engines and reporting systems. We understand that reluctance to move ahead with such an approach has led the BCBS into an intermediate solution of introducing a Black-Scholes delta with supervisory volatility in SA-CCR. Although the formula in the final standard is better aligned with options theory, it has the drawback that it is operationally complex to implement at the trade level for certain products such as caps and floors. Deriving the P in the formula for a cap typically requires that a bank determines a new at-the-money cap level for each trade individually and determines forward levels for each leg in the cap in a very deal-specific way.

- In relation to the add-on rules for foreign exchange derivatives covered in paragraphs 170-171 of the SA-CCR framework[2], it is not clear whether netting is allowed for triangular FX trades in which the exposures are flat. In appendix B we provide an illustrative example of the following triangular FX exposure situation where this issue arises: EUR/USD-USD/GBP-GBP/EUR. The industry suggest that the BCBS allows for netting of cash flows in each currency to a single amount and then use the net buy amount converted to the domestic currency as the effective notional.

Add-on formula for foreign exchange derivatives:

In relation to the add-on rules for foreign exchange derivatives covered in paragraphs 170-171, it is not clear if netting is allowed for triangular FX trades in which the exposure are flat. For example a bank enters into three FX forwards with the same counterparty all with the same maturity:

	BUY	SELL
TRADE 1	EUR 7	USD 10
TRADE 2	USD 10	GBP 5
TRADE 3	GBP 5	EUR 7
Net	0	0

The cash flows at maturity net down to 0, so there is no risk. However, if netting is not allowed the capital will be held against the portfolio. The same is also true where the cash flows do not net down to zero, the trades can still be collapsed to net cash flows in each currency:

	BUY	SELL
TRADE 1	EUR 8	USD 10
TRADE 2	USD 10	GBP 5
TRADE 3	GBP 4	EUR 7
Net	EUR 1	GBP 1

[2] http://www.bis.org/publ/bcbs279.pdf

The industry suggests to allow netting of cash flows in each currency to a single amount and then use the net buy amount converted to the domestic currency as the effective notional. For the above case the three trades would net to a single trade in the EUR/GBP hedging set with an effective notional of EUR 1 converted to the domestic currency.

Incorporation of collateral modelling into SA-CCR:

Instead of using the collateral haircut approach, the impact of future collateral volatility can be integrated into the SA-CCR PFE calculation by including collateral into the various asset classes based on the underlying risk factor(s) that drive(s) the value. For example, collateral in the form of a corporate bond can be modeled as a total return swap on that corporate bond. Equally, equity collateral can be included as an equity derivative and gold as a commodity derivative. Any foreign exchange mismatches can be reflected in the add-on for foreign exchange derivatives.

By reflecting the future volatility of collateral in the add-on calculation, no haircut needs to be taken into account for the calculation of NICA in the context of determining RC and the PFE multiplier. This ensures a consistent treatment between derivatives collateral by including both with their unadjusted actual market value in the calculation. Generally, it should not be expected that there is more uncertainty associated with the market value of collateral compared to the market value of a derivative that would justify a different approach. In fact, given the requirements of financial collateral and the generally much simpler pay-off structures, the collateral market value should be considered more rather than less stable compared to the derivative market value. Therefore, the risk mitigating benefits of collateral and a negative market value of a derivative should be treated consistently with respect to NICA and the impact on PFE and RC. Under SA-CCR, such a treatment can be viewed as the closest equivalent to joint modeling of collateral and derivative exposures under the internal models methodology (IMM). This means that this alternative approach can ensure a closer alignment with IMM in modeling future collateral changes. Conceptually, this represents the accurate way of taking into account uncertainty around the future value of the collateral as RC should be purely a reflection of the current value while only the PFE component should consider market shocks that affect the value of collateral and the derivative population. In addition, the multiplier models already the impact of future MtM changes of the netting set on the degree of overcollateralization and therefore, a haircut on the collateral would represent a double count. Below we show sample calculations comparing collateral haircut and the alternative.

The netting set consists of a single name equity derivative. The netting set is daily margined with no threshold, MTA amounts. The IA collected from the counterparty is 10% of equity notional and is posted by the counterparty in the form of a main index equity security.

Trade #	Nature	Underlying	Direction	Notional	Market Value
1	Equity swap	SN Equity	Long	100,000,000	0

EAD = alpha * (RC + multiplier * $AddOn^{aggregate}$)

Collateral haircut approach:

RC = max(V – C; TH + MTA – NICA; 0) = max(0 – (10,000,000 * (1 – 0.15)); 0 + 0 – (10,000,000 – (1 - 0.15))) = 0

The collateral received is reduced by the haircut of 15% for main index equity positions based on a margin period of risk of 10 days.

The $\text{AddOn}^{\text{Aggregate}}$ calculation is as follows:

$$EffectiveNotional_k^{(Equity)} = \sum_{i \in Entity_k} \delta_i * d_i^{(Equity)} * MF_i^{(type)}$$

$$EffectiveNotional_k^{(Equity)} = 100{,}000{,}000 * 1 * 1.5\sqrt{\frac{10}{250}} = 30{,}000{,}000$$

$$AddOn(Entity_K) = SF_k^{(Equity)} * EffectiveNotional_k^{(Equity)} = 9{,}600{,}000$$

$$AddOn^{(Equity)} = \left[\left(\sum_k \rho_k^{(Equity)} * AddOn(Equity_k)\right)^2 + \sum_k \left(1 - \left(\rho_k^{(Equity)}\right)^2\right) * (AddOn(Entity_k))^2\right]^{\frac{1}{2}} = 9{,}600{,}000$$

Given the fact that there is only one equity trade in the portfolio:
$\text{AddOn}^{\text{Aggregate}} = \text{AddOn}^{\text{Equity}} = 9{,}600{,}000$

$$multiplier = min\left\{1; Floor + (1 - Floor) * exp\left(\frac{V - C}{2 * (1 - Floor) * AddOn^{aggregate}}\right)\right\}$$
$$= min\left\{1; 0.05 + (1 - 0.05) * exp\left(\frac{0 - (10{,}000{,}000 * (1 - 0.15))}{2 * (1 - 0.05) * 9{,}600{,}000}\right)\right\}$$
$$= 0.65$$

EAD = alpha * (RC + multiplier * $\text{AddOn}^{\text{aggregate}}$) = 1.4 * (0+0.65*9,600,000) = 8,683,943

Alternative approach

RC = max(V – C; TH + MTA – NICA; 0) = max(0 – 10MM; 0 + 0 – 10) = 0

In contrast to the collateral haircut approach, no haircut is applied to the collateral in the RC formula under the alternative approach.

The basic formula for calculating the effective notional is:

$$EffectiveNotional_k^{(Equity)} = \sum_{i \in Entity_k} \delta_i * d_i^{(Equity)} * MF_i^{(type)}$$

The equity derivative has the following effective notional and individual AddOn:

$$EffectiveNotional_k^{(Equity)} = 100{,}000{,}000 * 1 * 1.5\sqrt{\frac{10}{250}} = 30{,}000{,}000$$

$$AddOn(Entity_K) = SF_k^{(Equity)} * EffectiveNotional_k^{(Equity)} = 9{,}600{,}000$$

The equity collateral has the following effective notional and individual AddOn:

$$EffectiveNotional_k^{(Equity)} = 10{,}000{,}000 * 1 * 1.5\sqrt{\frac{10}{250}} = 3{,}000{,}000$$

$$AddOn(Entity_K) = SF_k^{(Equity)} * EffectiveNotional_k^{(Equity)} = 960{,}000$$

$$AddOn^{(Equity)} = \left[\left(\sum_k \rho_k^{(Equity)} * AddOn(Equity_k)\right)^2 + \sum_k \left(1 - \left(\rho_k^{(Equity)}\right)^2\right) * (AddOn(Entity_k))^2\right]^{\frac{1}{2}} = 9{,}883{,}805$$

Given that there is an additional long equity position in the form of collateral in the portfolio the AddOn increases compared to the collateral haircut approach. The collateral has the same directionality as the long equity derivative position.

Given the fact that there are only equity positions in the netting set:
$AddOn^{Aggregate} = AddOn^{Equity} = 9{,}883{,}805$

As the volatility of the collateral is modeled as part of the AddOn, no haircut is applied.

$$multiplier = min\left\{1; Floor + (1 - Floor) * exp\left(\frac{V - C}{2 * (1 - Floor) * AddOn^{aggregate}}\right)\right\}$$
$$= min\left\{1; 0.05 + (1 - 0.05) * exp\left(\frac{0 - 10{,}000{,}000}{2 * (1 - 0.05) * 9{,}883{,}805}\right)\right\}$$
$$= 0.61$$

EAD = alpha * (RC + multiplier * $AddOn^{aggregate}$) = 1.4 * (0+0.61*9,883,805) = 8,410,005

Alpha Parameter

BCBS [3]Working Paper no 26

EAD = α (RC + PFE)
-where the multiplier alpha is set to the default IMM value α = 1.4.

While the Current Exposure Method (CEM) also represents exposure as the sum of the RC and the PFE terms, Equation (1) differs from EAD using CEM in two important respects:

- The SA-CCR incorporates the multiplier alpha that (conceptually) converts EEPE into a loan equivalent exposure (see ISDA-TBMA-LIBA (2003); Canabarro, Picoult and Wilde (2003); and Wilde (2005)).
- The CEM specifies RC and PFE only for the unmargined case, while the SA-CCR includes formulations of RC and PFE that differ for margined and unmargined cases.

Industry Comment

In working paper No 26 the BCBS details the foundations for the standardized approach for measuring counterparty credit risk exposures. The SA-CCR makes use of the alpha factor that is presently used when calculating the modelled exposure for counterparty credit risk. The alpha factor is used to account for the correlation between exposures, the correlations of exposures and credit events (wrong-way risk), and portfolio granularity. BCBS has set the alpha to 1.4 referencing the ISDA documents written on the subject in 2003.

The industry believes that the results of the study are no longer representative and a recalibration of alpha should be performed for the following reasons:

- The study found only 33% of total exposure was collateralized; as a result the study was focused around uncollateralized exposures. As markets have evolved the number of collateral agreements has increased. Additionally, new regulation which will be active when SA-CCR is applied will

[3] http://www.bis.org/publ/bcbs_wp26.pdf

require collateral agreements to be in place for the majority of counterparties. As such an alpha based primarily on uncollateralized exposures is not relevant.

- When calculating the impact on alpha of mixed collateralized and uncollateralized portfolios the study assumed only counterparties on the "same side of the book" would be collateralized. As the use of collateral agreements has increased is it likely that both exposures to market counterparties and customers will be collateralized.
- The base case was based on a hypothetical portfolio of 200 counterparties and 3 risk factors for which the alpha was 1.08. Given the growth in the derivative market both the number of counterparties and risk factors have increased. The recomputed analytical value with 1500 counterparties and 10 risk factors is 1.01.
- The ISDA study was not based on real portfolios and assumed no correlation between exposure and credit events. A more recent study on a real portfolio shows alpha remains below 1.2 even when the correlation between exposure and credit events is stressed to 75%.

Industry Suggestions

a) Alpha should be recalibrated in the Counterparty Credit Risk capital framework to reflect the new capital markets environment
b) For the purposes of the Leverage Ratio we believe that the Alpha should not apply to the replacement cost and should be set to one. We also believe that the Alpha may require recalibration in the application of SA-CCR to other parts the capital framework.