CRR3 - SA-CCR: Increasing risk sensitivity and reflecting market developments

Executive Summary

As part of the Regulation (EU) 2019/876 ("CRR2")[1], the Current Exposure Method (CEM) and the Standardized Method (SM) for the calculation of Counterparty Credit Risk (CCR)[2] as applied to derivatives transactions, have been replaced with a new Standardized Approach for Counterparty Credit Risk (SA-CCR). While more risk-sensitive, SA-CCR, in its current design and calibration, will lead to disproportionate increases in capital requirements for banks[3] and significantly increased costs for end-users (e.g. corporates – including SMEs, pension funds, etc.) who typically use non-cleared derivatives to hedge risk, and benefit less from the improvements, made through the introduction of SA-CCR, in capturing portfolio netting benefits.

The importance of SA-CCR is not only in calculating capital requirements for CCR. SA-CCR will be used in many areas across the prudential framework, such as for calculating capital requirements for CVA risk, for Large Exposures framework[4] and for the Leverage Ratio. It will affect all banks and users of derivatives and the impact will not be restricted to those that apply standardized methodologies only. This impact will become even more pronounced in CRR3, as SA-CCR will also contribute towards the calculation of the newly introduced Output Floor (OF)[5].

Notably, a recent analysis[6] conducted by the Deutsches Aktieninstitut (DAI) with the support of KPMG, estimates that, under the current SA-CCR calibration, when considering the impacts of the OF, the additional hedging costs for the sample of 16 non-financial end-users could rise by between €112 and €167 million per year, depending on the average corporate rating assumption. This equates to a 200% increase in costs related to capital requirements.

If EU policymakers do not conduct a review of SA-CCR prior to its implementation, which we believe to be necessary, we urge European authorities to consider alternative measures that will offset the undue impact of SA-CCR.

SA-CCR: A Brief Primer

The introduction of SA-CCR, following its formulation by the BCBS[7], was meant to address a number of deficiencies in the CEM and SM methods in the calculation of CCR – and measures the risk of a counterparty to

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[1] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0876

[2] Counterparty credit risk (CCR) is the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows.

[3] According to ISDA-GFMA estimates, the exposure calculated under SA-CCR will be significantly higher than under both IMM (1.9 – 2.5 times higher) and CEM (2-4 times higher). This is before considering the impact of the Output floor. (See: Link)

[4] https://www.bis.org/fsi/fsisummaries/largeexpos.pdf

a derivative contract defaulting. In particular, the risk-sensitive logic of the new framework was intended to address the following deficiencies in the previous framework:

- Lack of differentiation between margined and non-margined derivatives transactions;
- The inability of the supervisory add-on factor (under CEM) to have captured the volatilities observed over stress periods;
- Limited recognition of netting benefits.

SA-CCR, which applies to OTC derivatives, exchange-traded derivatives, and long settlement transactions, is designed to respond to these challenges by introducing a more risk-sensitive approach in the calculation of two components: replacement cost (RC) and potential future exposure (PFE). This is handled through the recognition of excess collateral in the calculation of PFE, as well as through the introduction of a wide set of add-ons developed for the five asset classes used in the calculation of CEM (interest rate derivatives, foreign exchange derivatives, credit derivatives, equity derivatives, commodity derivatives).[8]

Significantly, the sum of the RC and PFE are then multiplied by the alpha factor, which in 2005 was calibrated at 1.4 by the BCBS.

In terms of its mathematic representation, the EAD[9] (exposure at default) is thus calculated as follows, according to Article 274 of CRR2:

$$EAD = alpha \times (RC + PFE)$$

Implementing SA-CCR in the European Union

The original publication of the rule, as described above, took place in 2014 at Basel level, and was introduced in the EU as part of the second iteration of the Capital Requirements Regulation ("CRR2")[10].

While SA-CCR is intended to be more risk-sensitive, its current design and calibration will lead to disproportionate increases in capital requirements for banks and significantly increased costs for end-users (e.g. corporates – including SMEs, pension funds, etc.) who typically use non-cleared derivatives to hedge risk and benefit less from the improvements in capturing portfolio-netting benefits.

SA-CCR does not reflect certain changes made by the Basel Committee[11] and its calibration is outdated. At the same time, the EBA's planned review of SA-CCR is scheduled with a deadline of mid-2023, long after it is due for implementation in June 2021. As such, it is critical that the disproportionate impacts arising from the current design and calibration of SA-CCR are addressed in the meantime, particularly for end-users, in order to avoid penalizing the competitiveness of EU corporates.

Indeed, the unadjusted SA-CCR would limit the ability of end-users to hedge risks, because the increased capital requirement of SA-CCR will constrain banks' capacity to support their demand for derivative products at an acceptable cost. This is problematic because EU corporates typically use non-cleared derivatives to hedge their commercial risks, which entail the highest capital charge in SA-CCR. Yet, corporates do not have the complex collateral management systems to support margining, and they are not required to do so by the European Market Infrastructure Regulation (EMIR). Hence, end-users would be left with no affordable alternatives to hedge their structural commercial risks, which will affect their financial strengths and

[5] Please refer to AFME's dedicated position paper on the Output Floor.
[6] https://www.dai.de/files/dai_usercontent/dokumente/positionspapiere/191213%20Position%20Paper%20Basel%20IV%20Implementation%20Deutsches%20Aktieninstitut.pdf
[7] https://www.bis.org/basel_framework/chapter/CRE/52.htm?inforce=20191215
[8] A different methodology is followed for the calculation of the add-ons for each asset class, based on the number of "hedging sets" per asset class. For more information, please refer to the BCBS's analysis of SA-CCR, available here: https://www.bis.org/publ/bcbs279.pdf
[9] The EAD refers to the total value a bank is exposed to when a loan defaults.
[10] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0876
[11] In particular section CRE 52.74 of the consolidated Basel III framework on the treatment of multiple margin agreements and multiple netting sets

competitiveness. These implications will set off in a context where the economy is looking to recover from the effects of COVID-19, and to attract investment to meet the EU's growth objectives in the medium-long term.

If EU policy makers do not resolve the calibration of SA-CCR prior to its implementation, via the EBA's review or otherwise, we urge to the European Commission and the co-legislators to consider alternative measures in the CRR3. Additionally, beyond the EBA's planned review, a review should ideally take place at Basel to ensure consistency and the development of a level-playing field.

SA-CCR is worth particular attention in the upcoming third iteration of the Capital Requirements Regulation ("CRR3") proposal, not only due to its stand-alone impact, but also because its impact would be strongly amplified through the future constraint of the Output Floor, as well as through its broad use in the prudential framework – e.g. Leverage Ratio, CVA risk, Large Exposure.

As a subject of the CRR3, and barring the welcome reviews by the EBA or through Basel, the following areas require attention:

1. Application and Calibration of the alpha factor

2. Adequate recognition of initial margin (IM)

3. Recognition of diversification benefit across hedging sets within an asset class

4. Recognition of Margining and Netting

1. Application and Calibration of the alpha factor

The alpha factor, which has the impact of increasing exposures by 40%[12], was originally calibrated to 1.4 in 2005, at international level. It was meant to account for model risk in internal models, but is not warranted in a Standard Approach, it no longer reflects current market environment, and it is not aligned with EMIR.

Hence, the scale of the increase in exposure that the alpha factor entails for SA-CCR is unwarranted and leads to a capital requirement for banks that is not representative of the risks associated. The EU policymakers should reconsider the alpha factor to ensure it accounts for the risk the SA-CCR framework is meant to cover. Specifically:

- The alpha factor should not apply at for transactions with end-users. Such treatment for transactions with end-users would be consistent with BCBS-IOSCO Margin Requirements for Non-Centrally Cleared Derivatives ("UMR")[13] exemptions for end-users and with the actual risk posed by end-users. We have proposed that this change be made immediately, on a temporary basis, as part of the Securitization Quick Fix Package[14] to avoid a cliff effect on bank counterparty credit capital requirements on implementation of CRR2 and its impact on the hedging activity by end users and on the real economy. Should this review not be considered in this Quick Fix Package, we urge the regulator to consider alternative avenues to resolve this issue before June 2021. The High Level Forum Report on Capital Market Union recently stated than an overly conservative SA-CCR would have detrimental impact on the availability and cost of financial hedges to end-users, and recommended the Commission that note be taken of the final implementation of SA-CCR in the US. Therefore, it should be noted that in its US implementation, the Federal Reserve has adapted SA-CCR methodology in order to address some of the shortcomings in the international framework, and in particular the removal of the alpha factor for derivative contracts with commercial end-users (cf. §5). Beyond the immediate change in the Securitization package, it is paramount that the removal of the alpha factor be implemented on a

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[12] 40% is the difference between the current calibration of alpha = 1.4 versus neutralising its impact by setting it to 1.

[13] Basel Committee on Banking Supervision, Margin Requirements for Non-Centrally Cleared Derivatives (Sept. 2013), *available at* https://www.bis.org/publ/bcbs261.pdf.

[14] Please refer to AFME's paper on the topic, available at
https://www.afme.eu/Portals/0/DispatchFeaturedImages/Recalibration%20SA-CCR%20to%20mitigate%20increased%20hedging%20costs%20for%20end-users.pdf

permanent basis in CRR3 in the Output Floor, where SA-CCR has a very high unwarranted impact for EU banks and corporates.

- The alpha factor should not apply to the RC for the purposes of calculating risk-based CCR capital requirements, or the Leverage Ratio. A derivative is recorded at its mark-to-market value on the balance sheet - by its nature this value is not subject to additional model uncertainty and represents the true replacement cost. There is no justification therefore to apply a factor which increases the exposure value further and is meant to account for model risk. The RC should rather reflect the on-balance sheet exposure, consistent with the treatment of loans, overdrafts, securities or any other balance sheet exposure.
- The alpha factor as it applies to the PFE for the purposes of risk-based capital requirements should be recalibrated. The Basel II standards were implemented in the E.U. in 2008 and at that time set the alpha factor at 1.4 for the purposes of the Internal Model Method (IMM). However, certain of the rationales for this alpha factor value for the purposes of IMM do not apply to SA-CCR.

2. Adequate recognition of initial margin (IM):

To calculate the PFE component of the exposure value of a derivative in SA-CCR, banks are permitted to take into account collateral that the counterparty has posted to cover losses in the event of a default i.e. the counterparty failing to pay the amount due. This can be made up of initial margin, representing the minimum amount of collateral that needs to be posted to enter a trade, and the variation margin, which is intended to cover losses from movements in the market value of the trade.

SA-CCR recognises IM through the PFE multiplier formula, however formula results in a far more conservative recognition of IM, than done through CEM. This means that a disproportionate amount of IM needs to be posted to reduce the exposure value in SA-CCR. The lack of adequate recognition of IM results in overstated exposures and therefore unduly conservative capital requirements. Given the expected future increase in IM requirements with the phase-in of more counterparties under the uncleared margin requirements and replacement of legacy trades with new trades, this impact is only expected to grow. The conservative calibration of the SA-CCR aggregated amount ("Add-on") should thus be adjusted significantly to improve recognition of IM in the PFE multiplier.

3. Recognition of diversification benefit within an asset class:

SA-CCR calculates the overall exposure of a portfolio of derivative on a net basis. This means that where there is a netting agreement in place, a group of transactions are viewed together, such that losses arising from one position are offset by gains in another, subject to certain limitations. One of these limitations is that netting is only permitted for derivatives in certain sub-groups with similar risks, called "hedging sets" – e.g. interest rate derivatives are sub-divided by reference currency, and foreign exchange derivatives are sub-divided by currency pair.

SA-CCR does not reflect any diversification benefit across these sub-groups (hedging sets) for interest rates and foreign exchange derivatives, i.e. the positive exposure value of one hedging set cannot be offset with a negative exposure value of another hedging set. This is overly conservative and risk insensitive, and significantly overstates the exposure value compared to internal model approaches, where some degree of diversification is assumed. A way to address this would be to incorporate correlation parameters across hedging sets which would enhance risk sensitivity without an increase in complexity.

A particular issue arises in the context of FX transactions[15], SA-CCR calculates exposure values separately for each currency pair (e.g. EUR/USD), even in the case where the overall FX exposure, considering currency pairs together, is nil (FX Triangulation). As an illustration, for equal volumes in EUR/USD, USD/GBP, GBP/EUR

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[15] FX Transactions refer to any transactions for the purchase, by one party, of an agreed amount in one currency against the sale by it to the other party of an agreed amount in another currency.

currency pairs, SA-CCR capital charge computation adds the three exposure volumes separately, despite the fact that they offset perfectly and there is no residual risk.

4. Recognition of Margin and Netting

Another key limitation in SA-CCR is that it does not sufficiently recognize margining as a form of risk mitigation, nor does it sufficiently recognize netting – both omissions leading to significantly overstated exposures. This is despite the fact that margining and netting arrangements can significantly reduce risk associated with derivatives exposures.

Margining and Netting: A Closer Look

One of the key deficiencies of the SA-CCR framework is its lack of sufficient recognition of margining and netting as risk mitigants.

Margining refers to extending a collateral, deposited with a counterparty, in order to protect against some of the credit risk that may arise from entering into a derivative contract. It is meant to cover, in case of default, the exposure linked to changes in the market value of a derivatives portfolio.

Netting refers to the practice of combining multiple financial obligations arising from different contracts into a single net obligation amount. It can thus allow for loses arising from one position to be compensated by gains in another, as long as the overall net obligation amount is met. A netting set is the group of transactions covered by a netting agreement.

A netting set may be subject to multiple margin agreements. While the netting set is subject to a legally-enforceable bilateral netting agreement, SA-CCR requires banks to divide a netting set into sub-sets to align with the margin agreements, undermining the legal agreement which allows net settlement in the event of default and reducing netting. This issue is increasingly common given new margin rules for uncleared derivatives (UMR) transactions.

Another application is the presence of settled-to-market (STM)[16] and collateralized-to-market (CTM)[17] trades in the same netting set. As margined and unmargined trades do not net in exposure calculations under current SA-CCR rules even when covered by the same qualifying master netting agreement (QMNA), the risk mitigating properties of such STM transactions are not appropriately reflected in a portfolio context versus margined/CTM transactions e.g. in situations where margined/CTM exposures are risk managed with STM hedge transactions.

EU standards should better reflect netting in the replacement cost and potential future exposure between all contracts within a qualifying master netting agreement (QMNA)[18], regardless if the contracts are CTM or STM, or part of different margin agreements or unmargined. This would also create consistency between exposure models across the CRR2 framework, as models such as the Internal Model Method (IMM) or the Current Exposure Method (CEM) recognize netting at the netting set level, rather than at the level of the margining set, and would therefore create a consistent treatment independent of model choices.

Final Report of the High-Level Forum (HLF) for the Capital Markets Union (CMU)[19]

In the Final Report of the HLF for the CMU, it was recommended that note be taken of the final implementation of SA-CCR in the US. In addition to amending the alpha factor as previously highlighted, additional items of note from the US implementation are:

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[16] STM is where the trade's exposure is reset daily to zero through settlement of mark-to-market i.e. a payment is posted equal to the market value of the open position to net the exposure to zero.

[17] CTM is where the variation margin is treated as reducing the exposure (credit protection). The collateral called does not necessarily equal the market value of the open position, but the collateral required will be calculated relative to the exposure.

[18] Basel allows for netting under SA-CCR of transactions covered by a Qualifying Master Netting Agreement ("QMNA")

[19] https://ec.europa.eu/info/news/cmu-high-level-forum-final-report_en

- An allowance for decomposition for commodities, credit and equities indices. This would allow for each component of an index to be treated as a separate derivative contract, recognizing the benefit brought on by each different component of the index and is consistent with FRTB.

- Maintaining the option to use IMM as an alternative to SA-CCR for calculating the exposure value of derivatives in the context of Large Exposure

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AFME and ISDA recommendations on SA-CCR

The Industry would recommend a review of SA-CCR by EU policymakers before its implementation, and ideally, a review at Basel-level. In the absence of such a review, the following considerations should be taken into account in the context of the CRR3, and the Securitization Quick Fix, when so noted:

- Removal of the alpha factor from SA-CCR, at a minimum – the industry seeks alignment to the US approach, by proposing a temporary removal of the alpha factor as it applies to contracts with non-financial end-users, as part of the Securitization Quick Fix Package[20]. The removal should be considered on a permanent basis in the CRR 3 package.

- Better recognition of initial margin (IM), to reflect its risk-reducing properties.

- Better recognition of diversification benefit across hedging sets within an asset class, in particular on FX.

- Allow netting across multiple margin agreements / credit support annexes (CSAs) and unmargined trades under one qualifying master netting agreement.

- Consider the implication of the clarifications in the US implementation of SA-CCR, allowing for decomposition of commodities and index hedges, as well as allowing the option to use of IMM as an alternative to SA-CCR in the context of Large Exposure.

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[20] https://www.afme.eu/Portals/0/DispatchFeaturedImages/Recalibration%20SA-CCR%20to%20mitigate%20increased%20hedging%20costs%20for%20end-users.pdf