

SA-CCR – Why a re-calibration is necessary

December 7, 2018

The Industry Quantitative Impact Study (QIS) conducted in May 2018¹ relying on real portfolios confirmed the potentially punitive impact of the Basel Committee’s standardised approach for measuring counterparty credit risk exposures, finding that implementation of the framework would lead to a total increase of €172 billion in RWAs and consequently additional regulatory capital of €14 billion (just considering participating banks). In this briefing note, we outline the key findings and propose viable recommendations.

Introduction

The Standardised Approach for Counterparty Credit Risk (SA-CCR), a methodology to calculate the exposure amount of derivative contracts used in calculations of capital and other metrics, is a replacement for two existing ‘simple’ and outdated non-modelled exposure methods – the Current Exposure Method (CEM) and the Standardized Method (SM). While its introduction was intended to replace an outdated methodology (CEM and SM), SA-CCR could risk to be itself already outdated if the new regulations mandating clearing and collateral exchange are not properly taken into consideration.

Whilst SA-CCR is intended to address some of the long-standing criticisms of the CEM and SM approaches, it still has several shortcomings, including its calibration and lack of recognition of margining and netting which result in significantly overstated exposures. This could severely impact the availability and pricing of hedging products for end users. This is especially important, considering SA-CCR will be used more broadly in the Basel III standards than was originally designed, including the leverage ratio, the large exposure framework, clearing exposures and the output floor. It could be noted that a capital uplift from the implementation of SA-CCR runs counter to the Committee’s broad intentions “not to increase overall regulatory capital” with respect to the standardised approach to credit risk, as stated by Secretary General Coen in his 2016 remarks at the Institute of International Finance annual meeting².

¹ The study has analyzed data submitted by 18 G-SIBs and internationally active banks based in Europe, United States, Switzerland and Japan. All data submissions were completed on a best-efforts basis, reference date December, 2017.

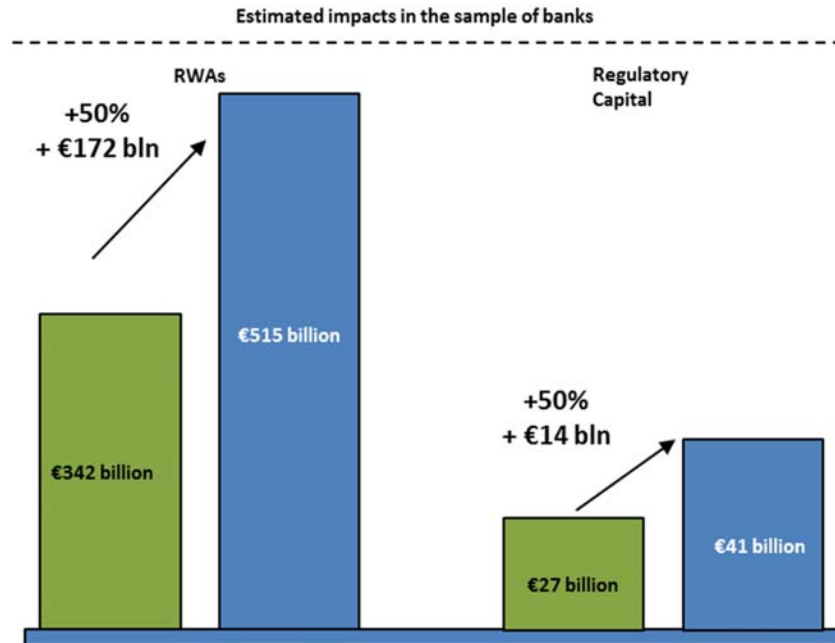
² <https://www.bis.org/speeches/sp161007.htm>

Moreover, the full impact resulting from the implementation of SA-CCR remains untested by regulators. It is therefore imperative that the shortcomings of SA-CCR be remedied as well as a full impact study on its calibration and its aggregate impact performed before it is transposed into regional and national laws and implemented by supervisors.

Aggregate SA-CCR Impacts

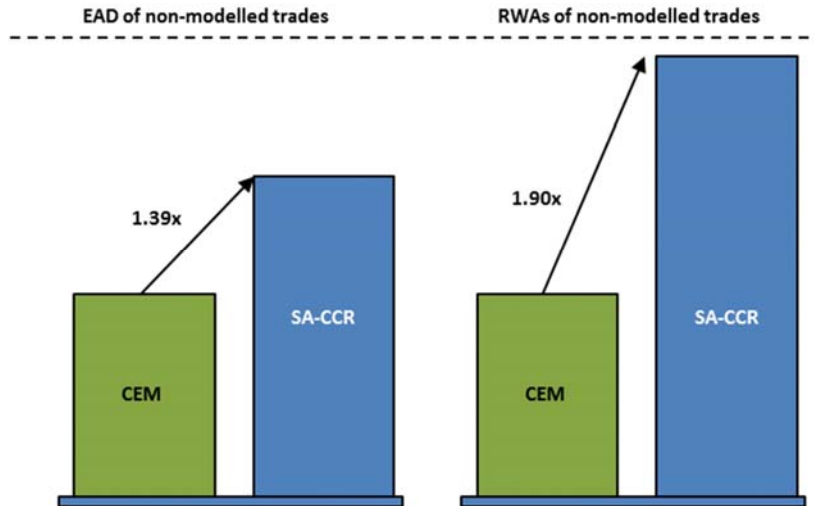
SA-CCR will be used in many areas across the prudential framework and will affect all banks and users of derivatives. The full impact of SA-CCR has not been previously assessed and the impact of SA-CCR's interactions with other areas of the prudential framework were not properly considered. Indeed, SA-CCR will:

- Replace CEM in the leverage ratio and may affect the calibration of the leverage ratio as a non-risk based backstop measure.
- Be part of an output floor for capital requirements. In this light the SA-CCR becomes relevant for all banks regardless if they are fully Internal Model Method (IMM) approved or if they have part of their portfolios under SA-CCR.
- In some regions, replace internal models in the large exposure framework risking, creating un-level playing fields across regions.
- Be used for the Central Counterparty ("CCP") hypothetical capital calculation and in the calculation of exposures for the CVA risk capital requirements.
- Be used to calculate EADs used in the BA-CVA approach as a fallback to IMM.

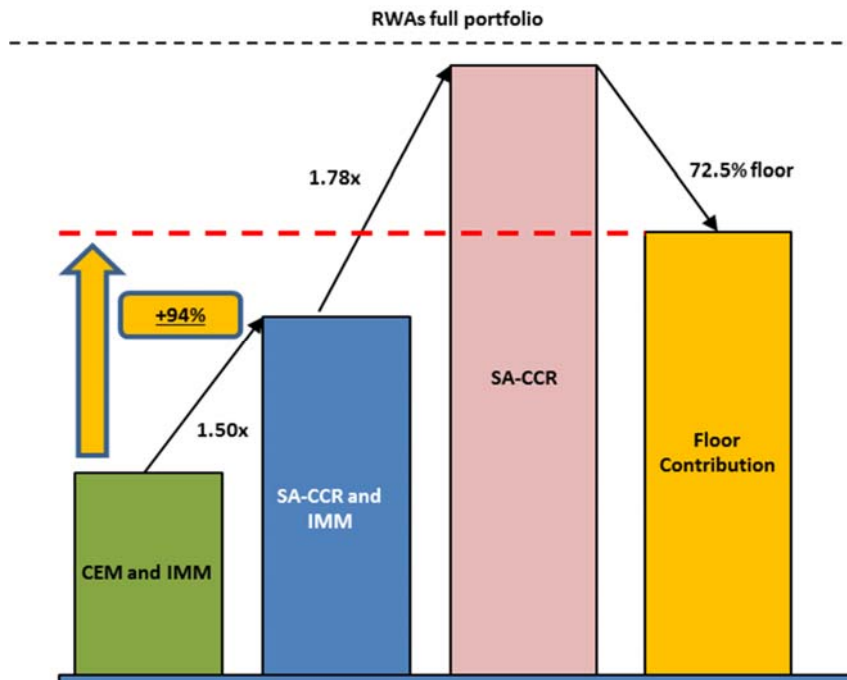


In May 2018, the International Swaps and Derivatives Association (ISDA), the Global Financial Market Associations (GFMA) and the Institute of International Finance (IIF) (the “Associations”) partnered with the Global Association of Risk Professionals (GARP) to conduct a quantitative study to assess the impact of the introduction of SA-CCR. The study highlights the higher calibration of SA-CCR versus CEM and IMM which becomes even more relevant when considering the impacts and interactions with other areas of the prudential framework.

Specifically, under SA-CCR the exposure at default (EAD) of non-modelled trades would result on average **1.39 times** the EAD of the same population under CEM. This translates to an average **1.9 times** increase in Risk Weights Assets (RWA) when incorporating revised Basel III risk weights (RWs). Overall revised RWAs, considering the full portfolio and applying SA-CCR and IMM with the revised RWs, are **1.5 times** the current RWAs considering the full portfolio and applying CEM and IMM with the current RWs. When comparing the IMM portfolio calculated under SA-CCR with the same portfolio assessed relying on internal models, RWAs are **71% higher** on average.



With respect to the Output Floor, the full portfolio RWAs calculated under SA-CCR and applying revised Standard Credit RWs would result in significant impacts—**1.78 times** the full portfolio RWAs calculated under SA-CCR and IMM and applying Internal Credit RWs.



In relation to the recognition of initial margin (IM) in SA-CCR's potential future exposure (PFE), the study shows that the average PFE under SA-CCR with the recognition of IM would be reduced only by **15%** compared to the PFE under SA-CCR without the recognition of IM (multiplier set equal to 1).

Finally, the study evidences that only **25% of Banks** participating in the Industry QIS would select the same largest exposure under SA-CCR and IMM. This percentage falls down respectively to **12.5%** and **5%** when considering second and third largest exposures assessed under SA-CCR and IMM.

Industry recommendations

The above-mentioned increase in exposures and risk weighted assets and the further downsides (including the poor recognition of initial margin and identification of large exposures) derive from a number of key factors in the design and calibration of SA-CCR.

Firstly, the **alpha factor is set at 1.4** – the original value set by the Basel Committee for IMM in 2005. This calibration is based on studies dating back to 2003, and does not reflect the current market environment, in particular the shift towards increased clearing and collateralization and the larger portfolio diversification effects. In addition, the alpha factor of 1.4 was not originally designed to apply to a standardized methodology, but rather to account for model risk (including assumptions implicit in the IRB framework)³ and severe market moves that could affect the use of an internal model to calculate exposures.

Consequently, the Industry strongly believes that the usage and calibration of the alpha factor should be revisited to better reflect current market and regulatory environments and considering the overall conservative calibration of the framework and stands ready to support the Basel Committee in performing such analysis.

Secondly, addressing the following points⁴ would be required to improve the risk sensitivity of SA-CCR and align it to the requirements for uncleared margin requirements (UMR) and other regulatory developments since its design:

1. **Multiple credit support annexes (CSAs) under one qualifying master netting agreement are penalized**, SA-CCR requires banks to divide a netting set into sub-sets to align with the CSAs, thereby undermining the legal agreement that allows net settlement in the event of default, and thus reducing netting. This will become a bigger

³ See BCBS publication (<https://www.bis.org/publ/bcbs116.pdf>)

⁴ Please refer to <https://www.isda.org/a/hTiDE/isda-sa-ccr-briefing-paper-final1.pdf> for further details on the impacts deriving from a study conducted on the Basel Committee's own hypothetical portfolios.

issue as more counterparties are phased into the UMR, typically a separate UMR compliant CSA is added to the netting agreement. Simple modifications would make the treatment of multiple CSAs applied to a single netting set more consistent with market practices. This also poses an issue in the client cleared context given a client could have trades that settled-to-market (STM) and trades that are collateralized-to-market (CTM). A particular example is a client cleared exposure where listed equity options (under CTM) and equity futures (under STM) are traded under one agreement. Another example could arise from the introduction of the LCH SwapAgent model where the two counterparties would channel a subset of their trades through a SwapAgent which would facilitate all payment obligations related to these trades. While all trades would be subject to one single ISDA master netting agreement, trades handled through LCH SwapAgent would be considered STM while the other trades would still be subject to a standard VM CSA and therefore considered CTM preventing netting of futures and options under the same legal netting agreement

2. **PFE multiplier:** under SA-CCR, IM is recognized through the PFE multiplier formula, which allows a bank to reduce the aggregate add-on. This formula results in a far more conservative recognition of IM than CEM, where a dollar-for-dollar offset of PFE after haircut adjustments is allowed. Given the expected future increase in IM requirements with the phase-in of more counterparties under UMR and replacement of legacy trades with new trades, this impact is expected to grow and therefore, a more risk-sensitive recognition of IM is needed. While we appreciate the theoretical foundations for the PFE multiplier as set forth in Basel working paper No 26 “Foundations of the standardised approach for measuring counterparty credit risk exposures”⁵, we believe that a crucial assumption in this paper is not met when looking at real data. In equation 37, the paper equates volatility with the SA-CCR add-on. Based on the 20 largest netting sets that are subject to SIMM IM, industry data shows that the ratio of SIMM IM to SA-CCR Add-on is **0.81**. For calculating the ratio, the industry recalculated the SA-CCR add-on to exclude legacy trades that are scoped out of UMR to allow for a like for like comparison. Given that SIMM IM is calculated at a 99percentile, the IM to volatility ratio should be around 2.33 under normal distribution assumptions. This means that the SA-CCR add-on is too conservatively calibrated to be used unadjusted in the PFE multiplier. A simple fix could be to remove the “2” in the denominator of the PFE multiplier to adjust for the conservative nature of the SA-CCR add-on and ensure a more risk-sensitive recognition of IM. Given that the IM to SA-CCR add-on is above 2.9 (i.e. $2.33 / 0.81$), this adjustment would still ensure a conservative calibration. The industry also looked at other alternatives, such as replacing the exponential function with a normal distribution and / or replacing the current floor with a simple floor which does not impact the slope of the recognition function. However, none of these alternatives would yield more risk-sensitive results given the small ratio of IM / SA-CCR or in other words the conservative calibration of the SA-CCR add-on.

⁵ https://www.bis.org/publ/bcbs_wp26.htm

Moreover, the modified SA-CCR implemented for leverage ratio purposes fully omits the offset to potential future exposure provided by initial margin, including when margin is posted in a custodial account and thus cannot be leveraged by the pledge beneficiary. This penalizes trading with IM, as leverage is incurred for the balance sheet consumption of the IM posted with no offsetting benefit on the PFE.

Third, a number of technical deficiencies should be addressed. One particular area relates to improvements in the recognition of diversification benefits across and within certain asset classes, e.g. FX and IR in order to increase the consistency with the actual risk to which banks are exposed and to being better aligned with market practices.

The industry is committed to produce additional quantitative impact assessment on any items raised above and potentially additional ones if not already provided.

Finally, the Industry believes that banks should be allowed to use IMM in evaluating large exposures since, as shown by the study, SA-CCR does not follow the ranking of IMM and so does not allow an adequately risk sensitive identification of large exposures. As such banks could potentially increase concentration in exposures that are actually worse when measured under IMM.

Conclusion

The need to replace CEM and SM with a more up-to-date, risk-sensitive methodology is clear, and the Basel Committee's objectives in developing SA-CCR were fundamentally sound. However, the results of the Industry QIS clearly confirm that implementing the framework as currently calibrated is likely to have far-reaching negative consequences.

While the transposition process in major regions is at an advanced stage⁶, we strongly believe that focusing on a few simple modifications such as recalibrating the alpha factor, allowing the netting of multiple CSAs under the same qualifying master agreement and amending the PFE multiplier formula to better recognize collateral received could significantly improve the alignment between actual levels of exposures, risk and capital requirements resulting from SA-CCR, and result in a far more effective and truly risk-sensitive framework. The Industry would welcome the opportunity to support the regulatory community in undertaking the analysis to address the issues raised above and providing where needed targeted quantitative evidences. In that direction, the Industry would like to plan to conduct further targeted analysis and provide to the regulatory community the consequent results and conclusions as needed.

⁶ Some jurisdictions have already fully adopted SA-CCR: Japan, Switzerland, Argentina, Indonesia, Singapore, Saudi Arabia.



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