

Promoting Consistency

Basel III trading book capital requirements will see greater use of standardised approaches than ever before. As a result, a number of banks are using ISDA's benchmarking initiative to make sure their approach is consistent with industry standards and meets the expectations of regulators

Basel III has been more than a decade in the making, from the very earliest agreement to strengthen capital requirements in 2009, to the decision in March 2020 to delay implementation of the final parts of the package as a result of the coronavirus pandemic. Throughout many years of drafting and the increasing technical complexity of the framework, the overarching objective to set consistent and risk-appropriate capital requirements has remained paramount.

Achieving consistent implementation

of risk-based capital requirements across jurisdictions and institutions requires strong commitment from both market participants and regulators. Nowhere is this more evident than in the recent evolution of standardised approaches to calculating trading book capital requirements. As the use of internal models is scaled back under Basel III, standardised approaches are set to become more widely used, underscoring the importance of benchmarking exercises to ensure consistent and accurate implementation.

“The global financial crisis revealed how the variability of capital models led to different outcomes in capital levels, so standardisation of modelling options became a key principle in the development of the Basel III trading book capital requirements. Standardised approaches have evolved from a simple look-up table to calculate capital requirements to more risk-sensitive models that can be used as a credible alternative to internal models,” says Panayiotis Dionysopoulos, head of capital at ISDA.

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Standardised approach 2.0

The final components of Basel III now due for implementation by January 1, 2023 include the Fundamental Review of the Trading Book (FRTB) and revisions to the credit valuation adjustment (CVA) framework. In both cases, standardised approaches will be more widely used than ever. In the revised CVA framework, the option to use internal models has been removed entirely, leaving banks to choose between the standardised approach and the basic approach, while the FRTB places much greater emphasis on standardised methodologies.

The new standardised approaches to trading book risk capital are no longer basic formulae that can be used as a simpler alternative to internal models. Whether calculating capital for market risk, CVA risk or counterparty credit risk, a Basel III standardised approach is a much more complex calculation framework that requires significant time, resources and expertise to implement. The transition to these new standardised approaches is taking place over the course of a relatively short time

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frame – just a few years – and banks recognise the need to work proactively with the rest of the industry to ensure implementation is both accurate and consistent.

Some form of benchmarking is the best way to deliver this consistency. Regulators including the European Banking Authority have deployed benchmarking for many years to make sure internal-models-based approaches lead to comparable outcomes across institutions and jurisdictions. For the benchmarking of the new standardised approaches, an industry-led exercise was established to help banks interpret the rules and develop their approaches.

In 2018, the ISDA Standardised Approach (SA) Benchmarking initiative was launched to support accurate and consistent implementation of standardised approaches under Basel III. Now in its third phase, the exercise focused initially on the FRTB, but with the standardised approach to counterparty credit risk (SA-CCR) and CVA risk frameworks following close behind. So far, 55 banks, including 23 global systemically important institutions, have participated in the benchmarking exercise.

“While FRTB-SA is a standardised approach, it is much more complicated than previous standardised approaches and we realised early on that there would be benefit in benchmarking across industry participants. ISDA SA Benchmarking provides the opportunity to increase industry understanding of regulation, influence future policy-making and reduce costs through coordinated implementation,”

says Holger van Bargaen, head of theoretical backtesting and quantitative development in risk methodology at Deutsche Bank.

Testing implementation

The ISDA SA Benchmarking initiative comprises two distinct components – the unit test and the hypothetical portfolio exercise.

we will help the banks to investigate and fix the bugs in their implementation. Every entity we have engaged with has benefitted from the unit test because it gives a very clear early indicator of any issues that need to be addressed, saving costs and resources later on,” says Dionysopoulos.

After the unit test has been completed, the hypothetical portfolio exercise is a more detailed, time-consuming process in which banks carry out the end-to-end capital calculation with a set of hypothetical trades and submit them to ISDA to run the benchmarking. A final report is prepared at the end of this process to analyse the results and explain any variances.

“The final report at the end of the hypothetical portfolio exercise includes the median capital charges across the participating banks and each bank can see how its results compare to the wider bank distribution. This gives banks a clear idea of whether or not their implementation is in line with the industry. If there is a wider dispersion than expected, this could mean either that banks have taken a different interpretation of a regulatory matter, or there is a natural dispersion of the regulatory sensitivities computed by the banks due to differences in pricing models or parameters,” says Lorenzo Gianferrari-Pini, executive director, market risk methodology at UBS.

Given the technical complexity of the new standardised approaches, participation in the benchmarking exercise goes hand-in-hand with regular working group discussions, as well as surveys that are carried out where necessary to gather feedback on specific →



The unit test gives banks a prescribed set of input sensitivities, bucketing and other reference data that they run through their standardised approach engine. The results are then compared to ISDA’s golden source results and any differences are flagged for further investigation.

“If you have a prescribed set of inputs and formulae, then you will get a prescribed set of results. Where the results don’t match,

“The platform provided by ISDA assists market participants to share their understanding of the technical requirements, which will encourage a consistent build across market participants”

Faizel Jeena, South African Reserve Bank

→ issues. With less than two years to go until the implementation deadline, it is becoming increasingly important for banks to make sure they are on track and aligned with the required standards. For those that have participated already, the benchmarking exercise has provided a valuable opportunity to validate their work.

“We made a strategic decision several years ago to update our market risk infrastructure and to use a standardised

approach under the FRTB rather than internal models. ISDA SA Benchmarking allowed us to carry out a very effective sanity check on our implementation and we used it as an early warning system for potential issues,” says Patricia Enzi, head of market risk analysis at Zürcher Kantonalbank.

Enhanced oversight

While banks might be the most obvious

beneficiaries of any industry benchmarking initiative, 16 regulators have also had some involvement in the exercise so far, using it to monitor implementation among banks in their jurisdictions and inform their own decision-making processes.

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VIEW FROM THE OFFICIAL SECTOR

David Phillips, head of traded risk measurement at the UK Prudential Regulation Authority, gives his perspective on ISDA Standardised Approach (SA) Benchmarking

IQ: What is your experience of the ISDA SA Benchmarking initiative, having been involved from the very beginning?

David Phillips (DP): I have been very impressed with what has been achieved so far and the rapid expansion in scope and number of firms involved in each successive phase. When we first began discussing the idea with ISDA, we had in mind a more limited exercise. However, the time and energy invested by ISDA – and the industry working group – has helped to maximise the overall value of the exercise. Two areas in particular I would highlight are the development of a consistent data model to allow intermediate results to be shared, and the use of industry surveys to provide insight into the variability in key model inputs.

IQ: What would you say are the main challenges associated with the implementation of the Fundamental Review of the Trading Book standardised approach (FRTB-SA) and other standardised approaches?

DP: The FRTB-SA is in many ways similar to a first-generation value-at-risk model, albeit one that is entirely specified – and

calibrated – by regulators and is designed to incorporate additional prudence in a number of areas. Therefore, it is more sophisticated than the existing standardised approach. All firms will need to apply the FRTB-SA to all of their positions, even those for which they have internal model approval, and therefore its implementation will need to be robust and performant.

IQ: How important is it that the FRTB-SA is implemented consistently across the industry and how can this consistency be achieved?

DP: A consistent implementation of the rules is always important. In this case, the FRTB-SA has an expanded role in the new rules, and this has increased regulators’ interest in ensuring consistency. Firstly, it is a component in the floor on internal model capital requirements to be introduced in Basel 3.1. Secondly, it is a fallback when trading desks fail the internal model tests. Finally, it is a common benchmark model that can be used to compare firms.

IQ: Given many banks operate in multiple jurisdictions, how important is cooperation at the Basel level to maximise efficiencies?

DP: International cooperation will always be important, and the Basel Committee on Banking Supervision is a key cornerstone of this. On benchmarking, there has been good discussion between

across market participants. This is particularly important when one considers a transaction between two counterparties, which should result in a largely consistent capital requirement when applying the standardised approach,” says Faizel Jeena, head of the risk support department in the Prudential Authority at the South African Reserve Bank.

Having ISDA leverage its membership and quantitative expertise to deliver benchmarking has been particularly valuable for regulators, Jeena adds. “It certainly is a benefit to have ISDA coordinate this exercise and provide the industry outcomes for inspection and subsequent discussions related to participant-wide performance and levels of readiness. The unit tests and hypothetical portfolios allow for unified testing protocols with standardised inputs and outputs for comparability. As a regulator, this allows for a standardised comparison across market participants and the seamless identification of outliers.”

While nearly half the institutions that have participated so far are global systemically important banks, benchmarking is just as valuable for smaller entities, many of which


will almost certainly rely on the standardised approach rather than using internal models. For banks that do not operate significant trading books, developing, testing and maintaining a standardised model may involve disproportionate costs and resources, so a popular option is to buy an off-the-shelf solution from a technology vendor.

Given the large number of banks around the world that may be using technology vendors to support their capital calculations, ISDA has made its unit tests available for vendors to licence for use in their own products. So far, eight vendors – ActiveViam, Avera AI (Area 120 at Google), AxiomSL, Calypso, Finastra, FIS, MSCI and Murex – have licensed the ISDA SA unit tests. The licensing programme operates in the same way as for the ISDA Standard Initial Margin Model (ISDA SIMM), with vendors certifying to ISDA that their software generates outputs that conform to the expected results of the relevant unit tests.

“Just as it has been for the ISDA SIMM, the vendor licensing programme is an absolutely crucial component of deploying

ISDA SA Benchmarking as the industry standard. By licensing it to vendors, we can essentially reach many more banks and ensure a consistent implementation is achieved across the industry, from the largest to the smallest entities,” says Dionysopoulos.

As the final Basel III standards are transposed into law and banks scale up their preparations for implementation in 2023, the value of benchmarking will become increasingly apparent. As the scope expands from the FRTB to SA-CCR and CVA, it is expected that more entities will look to leverage its benefits.

“Without some form of benchmarking, there is definitely a higher operational risk of divergence from industry standards. If a firm were to take a specific interpretation of the rules, it would face significant challenges to identify any deviation from industry consensus and to understand the impact without benchmarking. It is quite clear that implementation needs to be thoroughly tested before the deadline, and using the framework that ISDA has developed and maintained centrally is the most efficient way of doing this,” says Deutsche Bank’s van Bargaen. 

regulators, although it is important to note that this particular initiative is outside of the auspices of Basel.

IQ: How does the ISDA SA Benchmarking initiative help to achieve consistent and accurate implementation of the FRTB-SA?

DP: In a number of ways. Most obviously, by providing a golden source against which banks can compare the output from their implementation for a wide range of pre-specified risk profiles. Given the same inputs, banks should generate very similar (if not the same) outputs. And this is largely what we have seen from the finalised benchmarking results. The process of coming to a collective agreement on the golden source also identified a number of potential issues with the rules, which could then be clarified with regulators. But, of course, differences can also come from different inputs, and investigating the sources and degree of variability has been another major contribution.

IQ: Why is ISDA well-placed to offer this initiative to the industry and regulators?

DP: ISDA maintains good contacts with those banks with the most significant trading books and therefore those most affected by the FRTB. It has been able to bring those banks together

to form effective industry working groups and provide the organisational impetus and thought leadership to steer this forward. This has helped to ensure that each phase of the benchmarking initiative has achieved improvements relative to earlier phases. ISDA has also maintained good working relationships with the expanded set of international regulators now interested in this process.

IQ: How important is it that this initiative is widely used and extended to other areas? Where should the priorities be?

DP: There are a number of new standardised approaches being introduced in the near term. In addition to the FRTB-SA, there is also the new standardised approach to counterparty credit risk (SA-CCR) and the revised credit valuation adjustment capital charges. Given the success of industry benchmarking for the FRTB-SA – both for banks and for regulators – we are keen to see the exercise expanded to incorporate testing of these additional measures. For SA-CCR, we have seen the results from the pilot phase and look forward to the outcome from the first full exercise in 2021. An interesting area for future development would be to investigate to what extent the capabilities developed through this exercise can be translated to the benchmarking of internal models.