EIOPA-BoS-17/269

25 October 2017

Update on Internal Model Consistency Projects

1. Background

1.1. The *EIOPA Opinion on the preparation for Internal Model applications* (April 2015) recommended that National Competent Authorities (NCAs) should carry out comparative studies on the NCA level and contribute to and make use of corresponding studies on the EU level coordinated by EIOPA. Furthermore provision for comparative studies, where undertakings are required to run their models on relevant benchmark portfolios, is included in Article 122 of the Solvency II Directive.

1.2. The EIOPA Opinion also covered the modelling of Sovereign Exposures and stated that EIOPA would collect data and carry out a follow-up study to assess the treatment of Sovereign Exposures in internal models in Member States.

1.3. Against this background EIOPA has been running three related internal model consistency projects. This Update summarises the work carried out, the current status and the next steps.

2. Internal Model Consistency Projects

Market and Credit Risk Benchmarking Study

2.1. The project obtained outputs from undertakings with internal models that include market and credit risk. All internal models included in the study were models approved for calculating the Solvency Capital Requirement (SCR).

2.2. Market risk is usually, and in some cases also credit risk, modelled using a Monte Carlo approach involving a sufficiently high number of simulations. These form the basis to derive the Solvency Capital Requirement (SCR), which is defined to be the 99.5% (or 1 in 200 year) one-year VaR of the undertaking's basic own funds.

2.3. The project requested, where available, information for each of the simulations within the internal models. In each scenario, undertakings supplied the value of particular individual assets (e.g. a specified French government bond) and of benchmark portfolios made up of several different types of asset and/or currencies.

2.4. The project analysed relevant aspects of risk associated with interest rates, credit spread, equity and real estate and compared the calibrations of different aspects of market and credit risk individually and in combination across the participating undertakings.

2.5. The project also collected information about the methodologies for modelling market and credit risk, partly to understand which practices are common and partly to help the group to understand the model outputs and possible reasons for differences between undertakings.

2.6. NCAs are currently reviewing the position of their undertakings within the benchmarking analysis in order to decide appropriate follow-up with the undertakings.

2.7. EIOPA expects to publish in Q1 2018 a report on this first comparative study under Solvency II, which was based on “Day 1” (31 December 2015) calibrations.

Modelling of Sovereign Exposures

2.8. This project looked at both quantitative and qualitative aspects of the modelling of Sovereign Exposures and collected information from NCAs and selected undertakings.

2.9. The project found that, where Sovereign Exposures were being modelled in an internal model, the modelling was by and large consistent with the approach taken for similar, non-sovereign instruments.

2.10. The observed variation in the calibrations of the risk from Sovereign Exposures across undertakings is currently subject to review by the NCAs. The follow-up of these quantitative observations is being included in the follow-up of the Market and Credit Risk Benchmarking Study.

Modelling of Dynamic Volatility Adjustment

2.11. This project looked at both quantitative and qualitative aspects of dynamic modelling of the Volatility Adjustment (VA), that is, where the model anticipates changes of the VA that would apply in a simulated scenario within the SCR calculation.

2.12. With the aim of increasing supervisory convergence, the project is currently working towards a common view, taking into account the different approaches to modelling a dynamic VA and their risk management implications.

3. Future Comparative Studies on Market and Credit Risk Modelling

3.1. Aiming at supervisory consistency and convergence, EIOPA expects to carry out annual comparative studies on the modelling of market and credit risk for next few years. Drawing on the lessons from running the first comparative study, it is expected that future exercises will have a shorter overall timespan and, in due course, will be producing insights before the following year-end.

3.2. The next study will be based on end-2017 calibrations. EIOPA aims to finalise the content and format of the data request to undertakings before the end of this year.