

To: Solvency II Working Group
From: Prudential Team
cc:
Date: 04-04-2019
Reference: ECO-SLV-19-052

Subject: Summary of EIOPA report "YE2017 Comparative Study on Market and Credit Risk Modelling"

Comments:

The secretariat has read EIOPA's [report](#) "YE2017 Comparative Study on Market and Credit Risk Modelling".

Members will find below a summary of key points, with elements requiring particular attention in bold.

Summary

- Goal of the study:
 - Conducting comparative studies on IMs outputs efficiently, up to date overview of the modelling approaches
 - This report is part of an ongoing process of monitoring and comparing internal market and credit risk models
 - Support the supervision of models and foster convergence of supervisory approaches

- What is new compared to the last one:
 - Tools were refined to enhance the analysis of combined risks:
 - also explored interest rate down shocks via a simplified liabilities portfolio consisting of short positions in zero coupon bonds
 - started to explore the modelling of dynamics of GBP and USD
 - relied on synthetic assets instead of real assets, aiming to remain stable (support comparison over time and limit effort of execution)
 - qualitative scores for the test assets were collected to indicate both the modelling quality and exposure relevance of the respective asset
 - introduction of synthetic assets, intended to be stable over time, and the assessment of the relevance of these assets in terms of exposure and modelling for the participants

- Main findings:
 - Overall, parts of the observed variations can be attributed to issues of data relevance and to risk management preferences
 - Credit risk charges for sovereign bonds across groups of modelling approaches show:
 - relatively low variation for DE, NL, AT, BE, FR
 - greater variation for IE, PT, ES, IT
 - Credit risk charges for corporate bonds: the deviation becomes substantial for BB-rated bonds. This demonstrates the variety of modelling assumptions being taken by firms, particularly for low rated bonds, for which the exposure materiality is generally low.

- Equity risk: low variation in the risk charges for the major equity indices. However, risk charges applied to the strategic equity participation show higher dispersion
 - Real estate: risk charges applied to the 5 real estate investments vary to larger extent compared to equity. However, model calibrations might be more focused on the risk profile of the actual portfolio than on publicly available indices
 - At the date of the previous study, 5 participants did not model negative rates. Now all models have been adapted to incorporate it
 - NCAs, companies and "further stakeholders" need tools, such as European comparative studies, to be provided with a necessary overview of model calibrations
- Actions from EIOPA/NCAs:
- Variations could be partly attributable to model and business specificities already known by NCAs, but also indicate a **certain need for further supervisory scrutiny**
 - Insights, methods and tools developed for analysis, comparison, data processing and data quality checks as well as collaborative experience will feed into supervision of the on-going appropriateness of IMs under the SRP and enhance consistency of supervision
 - **NCAs gave feedback on the set-up of the study itself and potential future improvements**
 - **Companies were asked to provide written feedback** on the results and their opinion
 - **Feedback meeting: NCAs started discussing and challenging companies**, based on feedback statements
- Examples of topics:
- 3 outliers for interest rate risk figures: seeking better understanding
 - Credit spread risk: a variation in credit risk charge is observed between companies (certain submissions included higher credit risk charges for covered corporate bonds than for unsecured bonds)
 - Variation of risk charges for property and strategic participations: being "looked into"
 - Data quality and improvements of the coverage of single submissions
- **Some companies have already planned to incorporate observations** from the study in their regular model validation activities that could trigger model changes in some cases: **at least one has planned a model change** based on the outcome of the YE 2015 study
- Next studies:
- NCAs appreciated the insights gained from the year-end 2015 study and acknowledged the findings identified: **EIOPA decided to perform regular studies on the market and credit risk modelling in IMs starting from year-end 2017**
 - The project group will enhance annual analysis based on feedback from NCAs' interactions with companies for the next editions to "further support on-going internal model supervision". Group supervisors are encouraged to inform about the study and discuss relevant insights with other NCAs.
 - Data requested for future studies will follow "as closely as possible" the same scope and extent. However, **EIOPA plans to include an analysis of derivatives and extend the analysis of foreign currencies in year-end 2018**
 - In the longer term, such tool should also allow for the analysis of changes, models, approaches and calibrations over time and spot potential trends