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EIOPAs tasks in the supervision of Internal Models

An internal model is an alternative method to calculate the Solvency Capital Requirements (SCR) when the standard formula (SF) does not appropriately capture the underlying risks. Also, in specific cases, other methods could suffice to align the risk profile to the capital requirements, such as the application of Undertaking Specific Parameters, capital add-ons, change in risk profile, or even pillar II measures.

The use of an internal model for the calculation of the SCR of an insurance undertaking (or an insurance group) is subject to supervisory approval. The application of these models should not only better capture the underlying risk profile, but also improve the risk management system.

Solvency 2 allows for flexibility to develop an internal model, for instance on i) the number of risks in scope, ii) how dependencies between risks are modelled, and iii) the use of expert judgement, especially where sufficient empirical data is lacking.

This flexibility also creates challenges for both EIOPA and national supervisors. EIOPA faces additional challenges, as one of its strategic goals is to improve supervisory convergence. On the one hand, EIOPA is not a direct supervisor, therefore access to data and documentation is more difficult. On the other hand, EIOPA carries out supervision at European level, confronting diversity of national markets and risk taxonomy. Finally, the fairness between internal models and standard formula must also be taken into account.

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To place Internal Models into perspective, the number of solo undertakings authorized to use an internal model is 150 out of 2444 insurance undertakings per year-end 2020. However, in volume, measured in terms of assets, technical provisions or SCR, this represents around 40% of the total assets. Group internal models even represent 50% of the total assets.

This article sets out how the main tasks of EIOPA's Internal Model Unit (IMU), consisting of seven members of six nationalities, contribute to improve supervisory convergence.

COMPARATIVE STUDIES

The IMU initiates comparative studies at European level in collaboration with national supervisors in order to foster convergence of supervisory practices and analyse whether models appropriately reflect the underlying risk.

By no means, these studies serve to force convergence of models or model outcomes. A variability of model outcomes could be well justifiable due to e.g. differences in underlying exposures.

Undertakings benefit from these comparative studies as it leads to a better level-playing field via an enhanced harmonization of supervision and results could promote model improvements.

Before each study, EIOPA's steering bodies approve a mandate defining the objectives of the study. A working group, consisting of national supervisors and EIOPA staff, carefully prepares the necessary data request and informs relevant stakeholders.

Participating undertakings receive preliminary and final feedback on the results of the study to understand their relative position in the European sample. Measures should be taken in case individual results do not appropriately reflect the underlying risks. Results of comparative studies have already led to model improvements via a number of model changes.

To date, the main studies focus on the modelling of market and credit risk (MCRCS), non-life underwriting risks (NLCS) and diversification. The objective of the annual MCRCS study is to compare risk charges for a selection of predefined asset portfolios and highlight the causes of potential differences between internal models. The other studies focus on the individual risk exposures.

The NLCS study aims for a fair evaluation of non-life underwriting risks and their development over a five-year time horizon. This exercise covers internal model results from the Solvency 2 implementation in 2016 to the first annual submission in 2020, including an assessment of the impact of COVID-19 on internal model users.

The study on diversification aims to gain an overview of current market approaches and on best effort basis, analyse and compare the levels of diversifications. This study is split in two phases due to its complexity. Phase one of the study was launched in October 2020 and phase two is expected to be launched in the third quarter of 2021.

Even though these studies focus on different areas, they also embed similarities. For instance, both the NLCS and Diversification study focus on analysing dependencies between risks on the participants own portfolios. Therefore, consistency and validation checks are included to link these studies, and to ensure there is no duplication of data requests. The indicative timeline for finalization of these two studies is mid-2022, when undertakings will receive the final feedback. EIOPA's single programming document and its annual work program also describe these data requests.

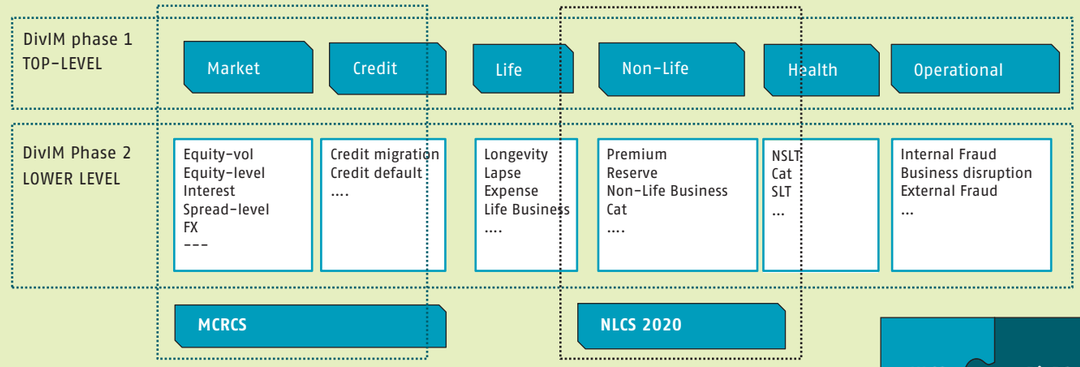


Figure 1: Interlinkages between current EIOPA modelling studies

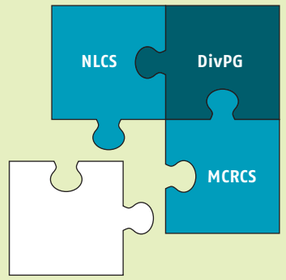
These comparative studies also reflect elements of EIOPA's envisaged IM reporting templates. The future IM QRTs are expected to come into force at year-end 2022 and will establish a common taxonomy across the industry, further fostering supervisory convergence. EIOPA aims to base its requests on these templates whenever possible. In addition, EIOPA expects that national supervisors will use these templates and share data at European level to better monitor the evolution of model outputs over time.

COMPARABILITY OF NATIONAL SUPERVISION

EIOPA liaises with national supervisors in different contexts. The IMU regularly visits national supervisors with the aim to understand the supervisory and regulatory framework in the context of Internal Models. National supervisors receive tailored recommendations to ensure greater harmonization and common understanding of supervision of internal models.

EIOPA identifies and shares good practices with national supervisors. A supervisory handbook reflects part of these practices to support national supervisors on a wide range of internal model topics. In addition, 'colleges of supervisor' meetings take place when insurers have subsidiaries in at least two countries of the European economic area. EIOPA's IMU regularly participates in these meetings on, for instance, the assessment of major model changes.

Following the review of the regulation founding the European Supervisory Authorities, EIOPA can also assist, upon request, national supervisors in their decision related to the approval of Internal Models. For instance, a national supervisor could ask EIOPA for a "second opinion", or could delegate part of the assessment to EIOPA (note that the internal model decision cannot be delegated).



Finally, the role of EIOPA also extends to international discussions. In particular, EIOPA supports the use of internal models as an alternative method for calculating the International Capital Standard.

CONCLUSION

Internal models are broader than just a calculation engine. Since the approval of Solvency 2, a number of initiatives led to noticeable improvement of supervisory convergence. Still further work is needed on supervisory convergence, especially in areas that are not yet explicitly addressed, as for instance modelling of life and operational risks, or modelling of the loss absorbing capacity of deferred taxes, and of course the use-test. EIOPA is well aware that studies on these areas require resources from all stakeholders; therefore, new initiatives in the medium term are subject to careful prioritization and require extensive consultation.

Since the initial approval of internal models, numerous model improvements took place via model changes. Although internal models bring great benefits, EIOPA is also aware of the risk of model drift, namely that the capital requirement does not remain reflective of the risks to which undertakings are exposed. The life of internal models is not a long quiet river and therefore EIOPA's initiatives remain necessary in order to improve supervisory convergence. ■

References:

- Current modelling studies at EIOPA:
  - https://www.eiopa.europa.eu/market-and-credit-risk-comparative-study-ye2020_en
  - https://www.eiopa.europa.eu/content/non-life-underwriting-risk-comparative-study-internal-models_en
  - https://www.eiopa.europa.eu/content/study-diversification-internal-models_en
- https://www.eiopa.europa.eu/sites/default/files/publications/administrative/eiopa-bos-21-033-revised-single-programming-document-2021-2023.pdf
- Consultation on supervisory reporting and public disclosure | Eiopa (europa.eu)