Internal models

What are internal models?

The Solvency II framework requires insurance companies to hold enough capital to cover unexpected losses, which are driven by the risks companies are exposed to.

To measure these risks, companies can use either a standardised approach set by regulators or their own internal model.

Under the standardised approach, companies apply standard risk measures. Internal models, on the other hand, allow companies to estimate the risk themselves. The more risk an insurance company bears, the more capital it needs.

Internal models are statistical tools that use available historical data, such as the Company's own business experience or market information, in order to simulate future financial outcomes. The models are tailored to the individual risk profile of the Company and therefore allow risk to be measured more accurately.

Companies use Internal Models:

- To calculate their minimum capital requirements and solvency capital requirements, and to more efficiently allocate their capital resources.
- As risk management tool, for day-to-day decision-making and for forward looking risk management (e.g. purchase of reinsurance, pricing of policies, investment portfolio allocation, etc.).

Companies that decide to use internal models are subject to initial approval following prescribed processes from supervisory authorities. After approval, supervisors continue to monitor the appropriateness of the model. All major changes made to the models need a prior approval.

Oversight and Internal Model comparative studies

EIOPA engages with national supervisory authorities:

- to better understand, monitor and provide feedback on their internal model supervisory approach, with intention to improve quality and European consistency;

- to provide technical assistance for the assessment of internal model applications, on request and in case of need.

Internal Model Comparative Studies contribute to EIOPA's objective of supervisory convergence regarding Solvency II internal models. EEA-wide studies are valuable tools complementing individual internal model analysis and studies at national level.

EIOPA currently runs three Internal Model comparative studies:

1. Market and Credit Risk Comparative Study (MCRCS)

- MCRCS 2021
- MCRCS 2020 > YE2020 Report
- MCRCS 2019 > YE2019 Report
- MCRCS 2018 > YE2018 Report
- MCRCS 2017 > YE2017 Report

2. Non-Life Underwriting Risk Comparative Study (NLCS)

3. Study on Diversification in Internal Models

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