

Construction of an in-house reserving tool in the context of IFRS17

Credit Insurance

Level of Intervention

- Reserving
- Modelling
- IFRS17

Tools & programming

- R Studio
- SQL

Context & issues

In the context of IFRS 17 transition, a Belgian group insurer decided to develop a full in-house tool to generate the IFRS17 accounting reports available for the different entities across Europe.

The engine directly connected to the data is composed of four main engines : the data engine, the actuarial engine (LIC and LRC), the IFRS engine and the Accounting engine.

Detail of the intervention & realisations

We were responsible for the full development of the actuarial engine regarding the calculation engine and the orchestration of the different calculation steps working in collaboration with a consultancy firm responsible for the development of the Front end and back end.

Different steps of our work were :

- Theoretical proposal regarding the actuarial methodologies for LIC and LRC Cash flows and the architecture/orchestration of the tools.
- Full development of the calculation engine for LIC (Chain Ladder, Bornhuetter-Ferguson, Mack, Bootstrap, ...) and LRC (Loss Ratio approach) and development of an allocation tool to generate CFs at requested granularity level for IFRS 17 purposes.
- Orchestration of the different calculation functions in collaboration with teams responsible for the Front End and Back End.
- Manipulation of data was done using SQL tool whereas actuarial calculations were developed in R Studio.