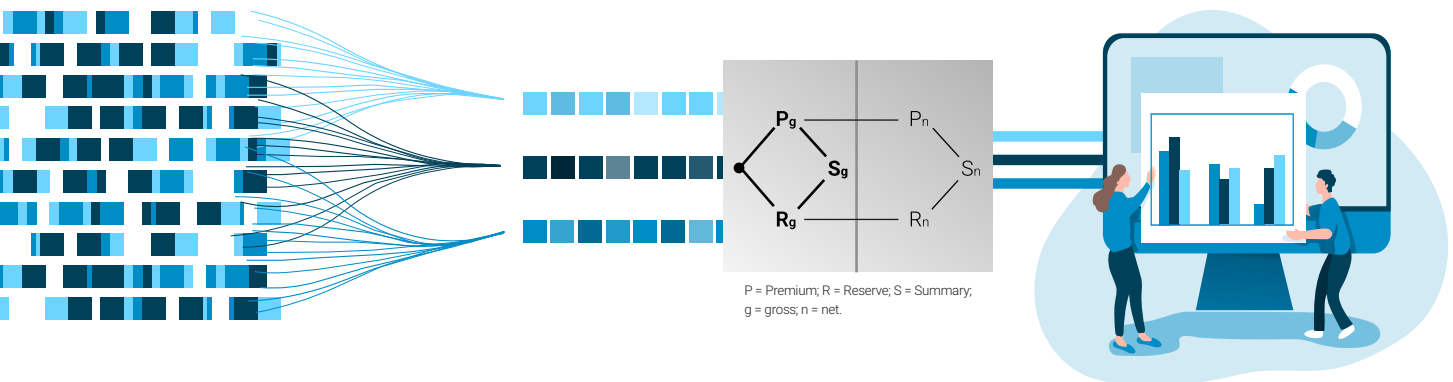


Premium & Reserve Risk Estimation

Demanding requirements solved with a smart and flexible solution

Local underwriters parametrize P&R risk distributions and the correlations among their local lines of business. Gross losses are simulated on this basis, where strong focus lies on large claims. The reinsurance model is applied at a granular level to bring gross losses to their net representation. The model serves Internal Model (IM) and regulatory regimes SST SII.



CHALLENGES

Data and process flow from the parameterization to the report.

Uniform stochastic model serving different company hierarchies.

Specific calculations for **different regulatory regimes** (SST SII IM).

Perform post processing **Sensitivity and Analysis of Change** (AoC).

FEATURES

Integration of AoC in quarterly reports

ReIns proportional and non proportional contracts

Involvement of local units in the parameterization.

Separation of ReIns model for Large Claims

One model for 3 hierarchies and 3 regulatory regimes.

SOLUTIONS

Generalization of hierarchy definitions for the implementation.

Vectorized implementation using sparse matrices and parallel calculation.

Split the flow into **optional modules** that can be inserted depending on the Regime (SST SII IM).

Generic post-processing Scenario analyses fitting multiple purposes (e.g. **Sensitivity** and **AoC**) and **Regimes**.



“ This project sits at the very core of Insurance and Reinsurance risk, and it has been crucial to work in close collaboration with experienced actuaries to enable its success. We have faced and overcome many complex problems that are common to this industry.