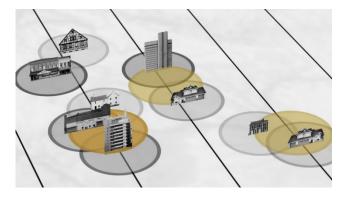# OverLab
Calculating with fire under solvency II

The assessment of fire risk has become increasingly important under the European su-pervisory regime solvency II. With OverLab, Meyerthole Siems Kohlruss has developed an intelligent method for determining the largest concentrations of fire risk, which can be used flexibly and in a risk-appropriate manner by property insurers to enhance their risk management.

In accordance with the standard formula under solvency II, the capital requirement for fire risk is defined by the sum insured of the largest fire risk concentration. The building group with the highest cumulative sum insured whose buildings are fully or partially located within a radius of 200 meters serves as the exposure.

Other radii may may also be of interest for the Own Risk and Solvency Assessment (ORSA). As an important instrument of the governance system under solvency II, the ORSA is used for the company's own risk and solvency assessment, whereby devia-tions from the standard model and stress scenarios are being justified and analyzed. In addition to varying circle radii, the building groups with the second-highest, third-highest, etc. cumulative sum insured may also be of interest for the ORSA in addition to the building group with the highest fire risk concentration.

So how can these groups of buildings be identified and how high is their cumulative sum insured? Answering these questions is a numerical challenge, but Meyerthole Siems Kohlruss has developed an efficient method with OverLab.

With OverLab, virtual circles are drawn around the fire-in-sured risks. The largest fire risk concentrations are deter-mined efficiently based on where the circles overlap.

Your advantages

> OverLab is integrated into the tied-and-tested ARI-ANE software and can be licensed or purchased as a service.

> OverLab requires the geocoded addresses and sums insured of a fire-insured portfolio as input. We provide support with data validation and geocoding.

> The geocoordinates of the circle centers with the highest fire risk concentrations as well as the coordinates of the risks within these fire accumulations are the output. We provide support in processing the results and creating maps.

> We also provide support with recommendations on the reinsurance structure and calculate the regulatory risk relief.

Example

Meyerthole Siems Kohlruss selectively applied OverLab to fire-insured portfolios. Before reinsurance, fire risk concentrations with a cumulative sum insured of up to 1.000% of the gross premium were found for homeowners' comprehensive insurance. The highest loss ratios were observed among fire insurers with regionally concentrated portfolios. These at times immense capital requirements can be significantly reduced by slight modifications to the reinsurance structure.

Meyerthole Siems Kohlruss

Meyerthole Siems Kohlruss was founded in Cologne in 1998 as the first German actuarial consultancy and supports insurance companies in strategic decisions and operational processes. The focus is on data pools, pricing, telematics, cyber, sustainability, balance sheet valuations, reinsurance, Solvency II and IORP II.

Contact

Eva Remberg
Meyerthole Siems Kohlruss
Phone: +49(0)221 42053-0
E-Mail: eva.remberg@aktuare.de

Paul Schankweiler
Meyerthole Siems Kohlruss
Phone: +49 (0)221 42053-0
E-Mail: paul.schwankweiler@aktuare.de

info@aktuare.de
www.aktuare.de