Using R in Insurance: Examples from Lloyd's

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We propose to present about how the Analysis team of Lloyd's is using R in its operations. The poster focuses on 4 areas: statistical modelling, visualisation, usage of *R* and *LaTeX* to create management information, and collaboration via R packages.

Statistical modelling: Understanding the volatility of the risks insured at Lloyd's is crucial for pricing, business planning and capital setting. The Analysis team uses R to fit loss distribution to the historical data and Monte Carlo simulation to review the performance of syndicates and the market.

Visualisation: Data visualisation can help to provide early insight into favourable or unfavourable development of the business environment. The Analysis team uses **lattice** and **googleVis** to visualize the results of our work in a form that is easy to disseminate. As an example, we introduce the *Statistics Relating to Lloyd's* document, and how to use the **googleVis** package to display some of its information.

Using *R* and *LaTeX* to create management information: In a market with over 80 syndicates it is necessary to automatise the creation of performance reports for management information**.** Our team plays back Benchmarking reports which allows management and underwriters to view their own performance in the context of competitors. These reports are being produced using *R* and *LaTex*, among other software tools.

Creating internal R packages: For easier availability and dissemination teams in Lloyd's create packages of their R functions. This includes both packages tailored to a specific task and general packages to be used to comply with internal branding guidelines.

References

Lloyd's (2010). Statistics Relating to Lloyd's, http://www.lloyds.com/stats/.