

## News Release

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### **Guy Carpenter and EQECAT Collaborate to Pioneer A Probabilistic Flood Insurance Risk Model for Germany** Model to Address Growing Industry Need to Better Manage European Flood Exposures

#### **Munich, Germany, June 11, 2004**

Guy Carpenter & Company, Inc. and EQECAT announced their intention to jointly develop the “DACH Flood” software, an accumulation tool that will allow users to assess their exposure to flood in Europe using a fully probabilistic modelling approach. The model, which will concentrate initially on the German-speaking areas of Europe, is being developed in response to the increasing value of insured losses due to floods in Europe in recent years.

European flood risks have recently become a matter of growing concern for the insurance industry. Record losses in events such as the Odra 1997 and August 2002 Central European floods have clearly demonstrated the requirement for software tools to better manage growing flood exposure in Europe. Guy Carpenter and EQECAT have responded to this need with a joint initiative to develop the “DACH Flood” model. The first phase of the model is due for completion in Spring 2005 and will cover river flooding in Germany (D); subsequent extension of the model to include Austria (A) and Switzerland (CH) is planned, and further extension to a pan-European model is also being considered.

As the global market leader in the development of catastrophe risk transfer products and risk management tools, Guy Carpenter has led the way in developing analytical models to achieve a greater understanding of natural perils for capital allocation and risk pricing. The company’s strong position in the German market has enabled it to be the first company to recognize the need for a flood accumulation model in the insurance/reinsurance market. For its collaborator in this initiative, Guy Carpenter has chosen EQECAT, an ABS Group Company and a leader in the development of software to estimate financial losses from natural events. EQECAT provides over fifteen years of catastrophe modelling experience and has a team of experts in the field of natural hazard risk assessment, including hydrologists, meteorologists, engineers and statisticians with proven flood modelling experience.

Jan Störmann, Managing Director of Guy Carpenter in Munich, commented, “I am excited about our collaboration with EQECAT on this extremely important development for the

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German insurance industry. The development of a probabilistic model is badly needed in the German market for control of underwriting and accumulation risk.” Störmann also noted the potential international impact of the development: “The reinsurance capacity available for flood coverage in Europe depends on the availability of a fully probabilistic European flood model. DACH Flood is a major step forward not only in Germany but also for the international reinsurance market,” said Störmann.

Richard Clinton, President of EQECAT, also expressed excitement about working with Guy Carpenter to create a new and innovative product for the industry. “This project combines the strong insurance/reinsurance expertise of Guy Carpenter with EQECAT’s technology leadership to create a new product for the insurance industry that will change the way companies manage flood exposure. This innovative model will enable insurers and reinsurers to manage flood risk with the same level of confidence as other major perils” said Clinton.

The project takes flood modelling in Germany a step further than the existing ZÜRS flood zonation model, allowing a re/insurer to assess correlations between flooding in different regions. Unlike ZÜRS, the DACH Flood model will not provide flood zonation maps, but instead a fully probabilistic flood event set, which will allow the user to calculate PML accumulations for the entire region.

DACH Flood is the first commercially available model to utilize a probabilistic, multi-country, central European rainfall event set to model potential flood losses. The model is developed using a modular approach, which, combined with the extensive European rainfall event set, means that the model can easily be extended to include further territories. Flood hazard is modelled using a rainfall-runoff approach, and flood intensity at a given point is quantified using water depth, flow velocity and the effect of debris impacts. These parameters are related to damage using a series of vulnerability functions developed using engineering data, academic studies and insurance claims information. The user may import either single site (lat/long) or aggregate (postcode, cresta zone, etc.) information; for aggregate data, a detailed built environment model is used to determine exposure. The flood model is being extensively calibrated against gauge station and historical flood data gathered in Germany, and further detailed validation and peer review will be undertaken with assistance from hydrological experts in the field of flooding in Germany. Loss analysis and benchmarking have already begun in co-operation with several German primary insurers.

The major goals of the DACH Flood project are to:

- Provide the international insurance market with a robust, fully-probabilistic platform for the assessment and management of flood risk in Europe.
- Provide a tool to facilitate pricing of both single risks and aggregate exposures.
- Provide a tool to facilitate the decision-making process for risk transfer strategies.

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- Provide loss estimates that can be used in Dynamic Financial Analysis for capital allocation/management and portfolio optimization.

The main contacts for the project are:

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For additional information, please log on to [www.absconsulting.com](http://www.absconsulting.com), or [www.EQECAT.com](http://www.EQECAT.com).

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