



# **News Release**

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## **Guy Carpenter Introduces Earthquake Model for Iceland**

Fully Probabilistic Model, Developed with the Iceland Catastrophe Fund (ICF), Is First of Its Kind for the Country

#### London, September 28, 2011

Guy Carpenter & Company, LLC, the leading global risk and reinsurance specialist and a member of Marsh & McLennan Companies (NYSE: MMC), today announced that its GC Analytics® Model Development Team has introduced a new, fully probabilistic earthquake model for Iceland. The model, developed in collaboration with the Iceland Catastrophe Fund (Viðlagatrygging Íslands), local scientific experts and experienced international consultants, provides insurers and reinsurers with a reliable, high-quality tool for managing potential exposures in a fully developed insurance market.

The new Iceland model is based on Guy Carpenter's G-CAT® modelling platform, widely used in the European market. Features of the new model include:

- A hazard module built using state-of-the-art techniques by Cat Risk Solutions, a longstanding firm with a strong track record in developing earthquake models for the insurance market. The firm also worked with experts at the University of Iceland who provided detailed scientific data and peer reviewed all outputs.
- Detailed vulnerability functions derived for 19 classes of Iceland building types by Verkis, Iceland's oldest consulting engineering firm. Verkis worked with detailed data collected from exhaustive damage surveys following the earthquakes of 2000 and 2008.
- Fully classified and geo-referenced building database supplied by the Icelandic Land Registry covering 100 percent of the Icelandic building stock detailing location, use, construction type, building age and reconstruction value.

The scientific research underpinning both the hazard and vulnerability modules has been discussed in peer-reviewed scientific articles that are currently in publication.

The remarkable events that occurred recently in Chile, New Zealand and Japan have underscored the importance of understanding local earthquake risk and post-event planning. The new Iceland earthquake model provides new insight into both of these areas, providing the insurance industry with a better vision of this peril.

#### **QUOTES**

#### Hulda Arnadottir, CEO, Icelandic Catastrophe Fund

"The greatest benefit for the Icelandic Catastrophe Fund is that now we have a unique model which gives us true information, based on previous events, resulting in more reasonable premium on the cover for earthquakes, our highest risk factor. The model also allows us the opportunity to inform our reinsurance companies about expected total cost immediately after an earthquake event."

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#### Simon Hayes, Managing Director, Guy Carpenter & Company

"Guy Carpenter is privileged to support the Iceland Catastrophe Fund, a longstanding client, as it refines its management systems. This new model allows us to quantify the seismic risk in a robust and transparent way, providing certainty and clarity to both the ICF and the reinsurance market. The model confirms the historical view on the earthquake risk to the programme, while at the same time allowing for a more detailed financial analysis and scenario testing."

#### Mark Weatherhead, Manager of GC Analytics® Model Development Team

"The Iceland earthquake model is very pure in its design and requires no calibration or modification. When we combine the incredibly detailed 100 percent exposure information with the excellent work by Cat Risk Solutions and the University of Iceland on the hazard module, together with the perfectly matched vulnerability functions that Verkis developed, we simply let the model run and then directly take output for analysis."

### Dr. Scott Steedman, CBE, Project Coordinator, Steedman Associates

"The situation in Iceland is unique in the world of catastrophe modelling. Here we have detailed building information for 100 percent of the building stock, 100 percent penetration of insurance in the market and a one-to-one match of the building classes to the vulnerability functions. This level of detail and certainty is unprecedented."

#### TAGS/KEYWORDS

Guy Carpenter, insurance, reinsurance, Iceland, earthquake, earthquake model, Arnadottir, Hayes, Weatherhead, Steedman

#### **About Guy Carpenter**

Guy Carpenter & Company, LLC is the world's leading risk and reinsurance specialist and a member of Marsh & McLennan Companies. With over 50 offices worldwide, Guy Carpenter creates and executes reinsurance solutions and delivers capital market solutions\* for clients across the globe. The firm's full breadth of services includes line of business expertise in Agriculture; Aviation; Casualty Clash; Construction and Engineering; Excess and Umbrella; Life, Accident and Health; Marine and Energy; Medical Professional Liability; Political Risk and Trade Credit; Professional Liability; Property; Retrocessional Reinsurance; Surety; Terrorism and Workers Compensation. GC Fac® is Guy Carpenter's dedicated global facultative reinsurance unit that provides placement strategies, timely market access and centralized management of facultative reinsurance solutions. In addition, GC Analytics® utilizes industry-leading quantitative skills and modeling tools that optimize the reinsurance decision-making process and help make the firm's clients more successful. Guy Carpenter's website address is <a href="https://www.guycarp.com">www.guycarp.com</a>.

Guy Carpenter's intellectual capital website, <a href="www.GCCapitalIdeas.com">www.GCCapitalIdeas.com</a>, leverages blog technology, including Real Simple Syndication (RSS) feeds and searchable category tags, to deliver Guy Carpenter's latest research as soon as it is posted. In addition, articles can be delivered directly to BlackBerrys and other handheld devices.

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