No two insurance companies are alike. But every company — whether it’s a less complex organization or a major multi-national — can utilize capital modeling to more effectively assess key risks, benchmark risk profiles, inform risk tolerances, allocate capital, meet regulatory and rating agency requirements and strategize for the future. Guy Carpenter understands that capital modeling is not one size fits all and provides a complete range of economic capital modeling solutions that can be tailored to your resources and preferences for customization and risk-based decision support.

Companies of every type — big or small, a recent start-up or an industry veteran — can benefit from Guy Carpenter’s solutions.

- For less complex companies new to capital modeling, our GC Projector™ helps with financial projections, stress testing and rating agency evaluations.
- Many small and medium-sized companies benefit from BenchmaRQ®, a service providing standardized capital modeling results for individual and peer companies. Clients can add customized enhancements with BenchmaRQ® +.
- Those companies developing their own more sophisticated models use MetaRisk®, the industry’s leading timeline-based capital modeling software, and MetaRisk® Reserve™, which measures reserve risk.
- Insurers with existing models in other platforms turn to Guy Carpenter for model validation to fulfill ORSA requirements and for reporting to board committees responsible for ERM governance.

Effective capital modeling is critical for today’s insurers to address the ever-increasing expectations of all stakeholders, from regulators and rating agencies to board members and policyholders. Guy Carpenter’s full range of solutions, in-depth industry knowledge and experience, and unparalleled support as a trusted advisor can help your company further develop and customize your capital model to assist with important risk-based decisions.

Guy Carpenter’s capital modeling solutions are designed to meet the needs of a wide spectrum of insurers. Whether your firm’s needs are less complex and you are new to the process or you represent a large company with a fully developed in-house model, Guy Carpenter can work with you to customize and implement the solution that best serves your unique needs.
Flexible Economic Capital Modeling Solutions

Capital Modeling Solutions for the Full Spectrum of Insurance Company Needs

Increasing Accuracy, Customization and Support for Risk-based Decisions

Deterministic Modeling
- Manage downside risk
- Financial planning and capital management
- Produce financial projections and overlay stress testing
- No risk parameterization

Initial Capital Modeling
- Develop understanding of capital model usage
- Use the model for risk profile analysis, peer benchmarking, validating risk tolerances and improving ERM/ORSA processes
- Moderate risk parameterization

Capital Model Ownership
- Comprehensive assessment of company-specific risks
- Building and validating of customized stochastic models
- Solvency assessment, capital allocation decisions, strategy formulation
- Fuller risk parameterization

Model Validation

Mitigate Risk → Create Opportunities

Guy Carpenter Solution

Increasing Value-Creation
## A Complete Range of Solutions to Fit Your Needs

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<th>Solution</th>
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<td><strong>GC PROJECTOR™</strong></td>
<td>Deterministic multi-year model that projects financials and provides insights into key metrics to assist with business planning, stress testing and rating agency evaluations.</td>
<td>Smaller regional insurers with less complex modeling needs seeking to manage their risk downside using deterministic assumptions and with limited resources to run the model.</td>
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<tr>
<td><strong>BENCHMARQ®</strong></td>
<td>Standardized pre-built stochastic model using industry data and proprietary risk models. Simulates one year of company performance and provides financial statements associated with various outcomes.</td>
<td>Mid-sized companies that desire substantial risk-based information and a better understanding of using stochastic capital models but do not have resources to build one at this time. Also, companies with internal models that want to compare modeling outcomes.</td>
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<tr>
<td><strong>BENCHMARQ®+</strong></td>
<td>Customized version of BenchmarQ that includes company-specific enhancements.</td>
<td>Companies that need specific, customized enhancements in their modeling, yet are not prepared to own and maintain an in-house model.</td>
</tr>
<tr>
<td><strong>METARISK®</strong></td>
<td>Customized single or multi-year stochastic model that assists clients in building a fully parameterized model that provides a comprehensive assessment of risks. Powerful software application for capital modeling, in addition to reinsurance evaluation, catastrophe management, assumed reinsurance pricing, capital allocation and curve-fitting.</td>
<td>Primarily large companies, but also smaller and medium-sized ones, that typically have internal modeling capabilities and seek comprehensive assessment of company-specific risks.</td>
</tr>
<tr>
<td><strong>METARISK® RESERVE™</strong></td>
<td>Stochastic Reserving Software that enables companies to quantify reserves and measure reserve risk through generalized linear modeling. Integrates seamlessly with MetaRisk or can be used on a standalone basis.</td>
<td>Companies seeking a clearer picture of their reserve risk and variability.</td>
</tr>
<tr>
<td><strong>MODEL VALIDATION</strong></td>
<td>Independent evaluation of a company’s existing capital model by comparing it to a parallel model developed by Guy Carpenter.</td>
<td>Companies with fully developed internal models that require validation and consulting services.</td>
</tr>
</tbody>
</table>

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About Guy Carpenter

Guy Carpenter & Company, LLC is a leading global risk and reinsurance specialist. Since 1922, the company has delivered integrated reinsurance and capital market solutions to clients across the globe. As a trusted and valuable reinsurance broker and strategic advisor, Guy Carpenter leverages its intellectual capital to anticipate and solve for a range of business challenges and opportunities on behalf of its clients. With over 2,300 professionals in more than 65 offices around the world, Guy Carpenter delivers a powerful combination of broking expertise, strategic advisory services and industry-leading analytics to help clients achieve profitable growth. For more information on Guy Carpenter’s complete line of business expertise and range of business units, including GC Specialties, GC Analytics®, GC Fac®, Global Strategic Advisory, GC Securities®, Client Services and GC Micro Risk Solutions®, please visit www.guycarp.com and follow Guy Carpenter on LinkedIn and Twitter @GuyCarpenter.

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