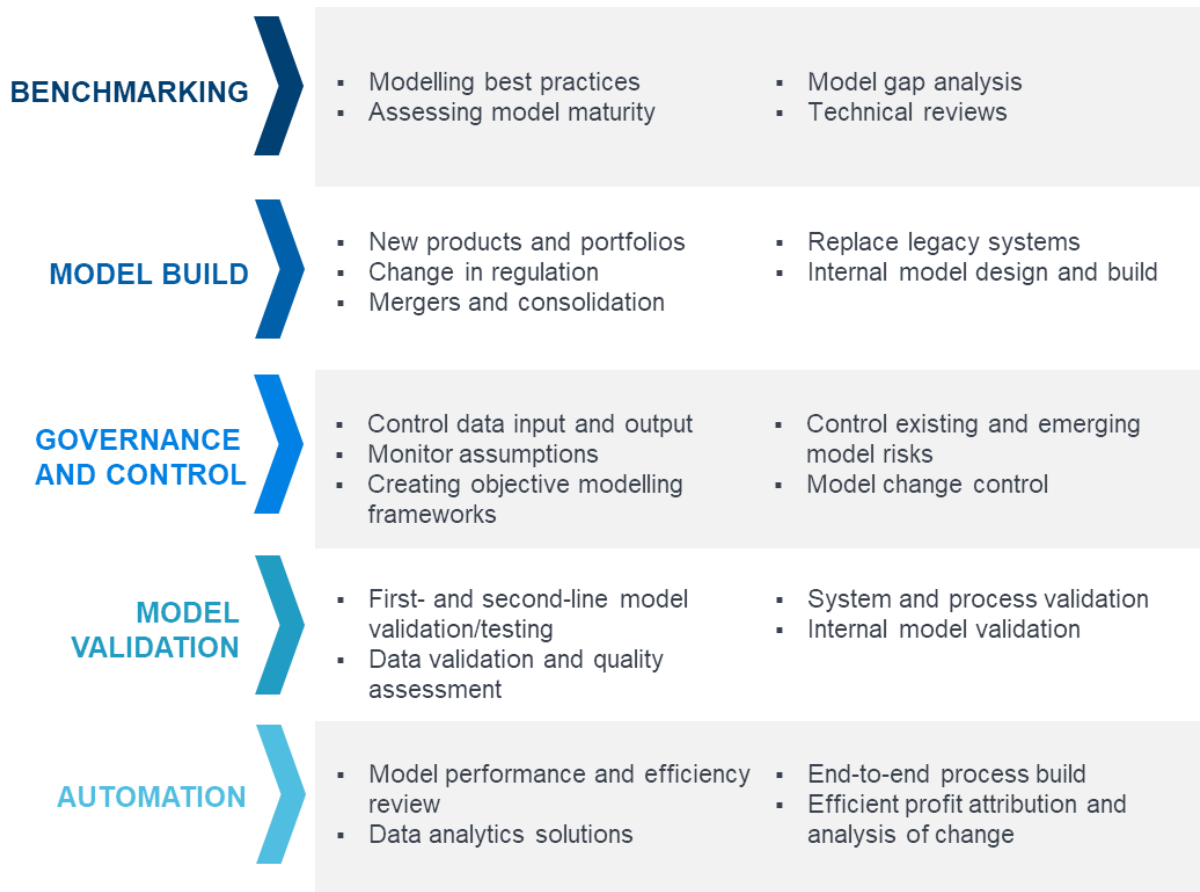


Risk and financial models are key tools for (re)insurers, supporting essential functions, including pricing, reserving, budgeting, and risk and capital management. Whether building a model from scratch or reviewing and improving existing models, Milliman can assist you with innovative, accurate and efficient modelling solutions across a range of platforms.

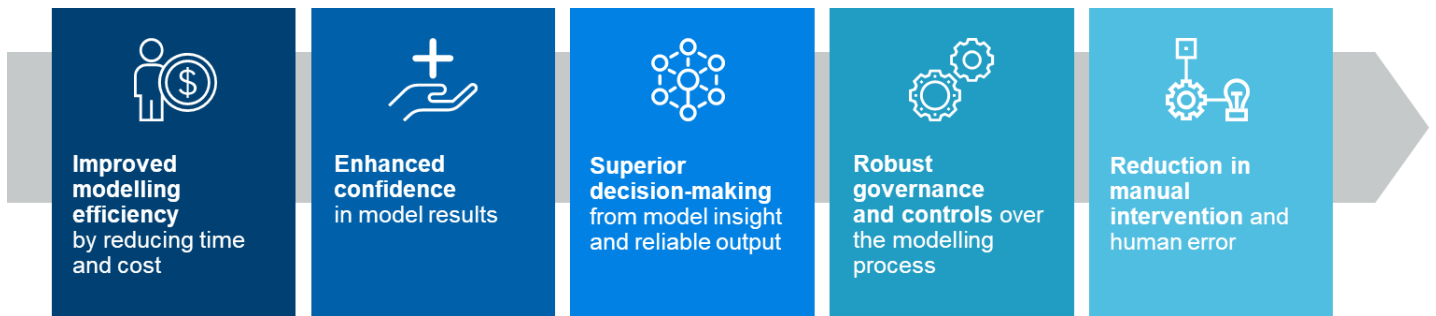
## Focus areas for risk and financial models

Making the most effective use of models and ensuring that they are robust and fit-for-purpose is a continuous process. Many functions, including actuarial, risk management, and finance, all rely heavily on risk and financial models. At Milliman, we focus on these key areas to help develop and improve modelling solutions that meet your changing needs:



## Real client outcomes

Our deep risk and financial modelling experience and advanced technology offers tangible and significant benefits.



## A proven track record

At Milliman, we have helped clients tackle a broad range of modelling challenges ranging from a completely new model build to implementing better modelling practices.

Our consultants draw on years of modelling expertise to bring strategic insights and advice to clients who face ongoing modelling challenges. These case studies illustrate our approach and client benefits across a range of modelling challenges:

	THE CHALLENGE	OUR APPROACH	CLIENT BENEFITS
<b>BENCHMARKING</b>	Review a client's approach to implementation and testing strategy for a new global modelling platform.	Produce a full technical model review and evaluate the client's approach to model testing and comparison to industry best practice.	<ul style="list-style-type: none"> <li>Improved confidence in model code and input control.</li> <li>A reliable benchmark for future testing.</li> <li>Actionable recommendations to improve model reconciliation.</li> </ul>
<b>MODEL BUILD</b>	Replace an inefficient reserving model.	Develop an end-to-end reserving model for the client's entire book of business, capable of producing results on multiple assumption sets.	<ul style="list-style-type: none"> <li>Efficient process to meet reporting deadlines.</li> <li>Improved confidence in model results.</li> </ul>
<b>GOVERNANCE AND CONTROL</b>	Review controls in place around a model as part of a Thematic Review by the Central Bank of Ireland.	Assess the model to identify key risks and review the controls in place to mitigate the risks.	<ul style="list-style-type: none"> <li>Improved control environment.</li> <li>Confidence in model results.</li> <li>Improved documentation.</li> </ul>
<b>MODEL VALIDATION</b>	Validate reserving and capital models to meet client's Model Risk Policy.	Review baseline testing. Create independent cashflow model to validate the client's results. Backtesting and sensitivity analysis.	<ul style="list-style-type: none"> <li>Confidence in model accuracy.</li> <li>Ensure ongoing appropriateness of model.</li> </ul>
<b>AUTOMATION</b>	Automate an inefficient legacy IFRS discounted cash flow model.	Build a new efficient model with innovative data visualisation and version control features.	<ul style="list-style-type: none"> <li>50% time and cost saving.</li> <li>Improved insight into results.</li> <li>Reduced operational risk through version control.</li> </ul>

## Tailored modelling solutions for all (re)insurers

We can support you with modelling expertise on a range of proprietary and open source modelling platforms. Case studies from our award-winning platforms: Milliman Mind and Milliman Integrate illustrate the client benefits of using our innovative software:

### SOFTWARE

### CASE STUDY

## Milliman Mind

Milliman Mind is an innovative modelling platform that automatically converts Excel spreadsheets into powerful financial models with all the capabilities and controls of more expensive systems.

[milliman-mind.com](http://milliman-mind.com)

Financial and risk models are often designed in Excel, which makes them user friendly, but run times are slow and model controls are a real issue.

Milliman Mind can easily convert existing Excel models into powerful C# models hosted on the cloud that integrate with clients' databases and provide rigorous auditability and traceability including:

- Dramatically improved run times through cloud computing
- Improved model controls.
- Audit trail and version control capabilities inbuilt.
- Dashboard building features for data visualisation.
- Team-working capabilities.

## Milliman Integrate®

Milliman's Integrate modelling platform provides tiers of service ranging from simple calculations and basic modelling to a complete actuarial transformation, with an automated end-to-end solution from initial data integration to advanced reporting and storytelling.

[integrate.milliman.com](http://integrate.milliman.com)

Milliman Integrate use cases:

- Provide increased computational power for BAU activities.
- Make actuarial transformation a reality.
- Provide value by assimilating models following growth through acquisitions.

For example, we worked with the largest insurance consolidator in the UK to carry out a complete modelling transformation through rationalisation of reporting platforms and standardisation and harmonisation of logic, data and processes leading to significant client benefits, including:

- Number of models reduced from 77 to 1
- Over 900 manual processes reduced to 44
- Person days to produce quarterly results reduced by 95%
- New blocks of business assimilated more easily

## Our unique offering



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

[milliman.com](http://milliman.com)

### CONTACT

For further information, please contact the consultants below or your usual Milliman consultant.

Andrew Kay  
[andrew.kay@milliman.com](mailto:andrew.kay@milliman.com)

Gillian Tucker  
[gillian.tucker@milliman.com](mailto:gillian.tucker@milliman.com)

Aisling Barrett  
[aisling.barrett@milliman.com](mailto:aisling.barrett@milliman.com)

 [linkedin.com/company/milliman-ireland](https://www.linkedin.com/company/milliman-ireland)