

RiskAgility Financial Modeller

Powerful financial modelling for life insurers

RiskAgility Financial Modeller and Solutions for Life

RiskAgility Financial Modeller (RiskAgility FM) is part of our Solutions for Life portfolio of integrated software, technology and consulting services – a holistic solution to managing the end-to-end risk modelling process.

For more information on Solutions for Life, turn to page 9 of this brochure or visit: solutionsforlife.willistowerswatson.com



RiskAgility FM

RiskAgility FM is a flexible software solution that enables life insurers to run financial models that accurately reflect their company's products in ways that are easily adapted to their business processes.

RiskAgility FM is built with the latest software technology for enhanced performance and ease of use. The open modelling environment supports accurate calculations today and in the future, as product designs, company practices and regulatory requirements evolve. In RiskAgility FM, modelling functions have been designed so that you can easily adapt the system to your way of doing things, rather than forcing your company to conform to rigid software requirements.

MoSes models can be imported into RiskAgility FM, and we offer a number of regional applications and templates for RiskAgility FM to give you a quick start in modelling product types common in various markets (see box). These applications are fully built out with extensive functionality. Use them as is, or tailor them to reflect your company's distinctive product designs and business practices.

RiskAgility FM: C-ALM

The Central Asset/Liability Management (C-ALM) suite provides a well-structured asset/liability framework for implementing dynamic stochastic projections for profit-sharing business, including monitoring and managing both book and market values of assets. Versions are available for French, German and Italian markets, along with a generic version for other territories within and beyond Europe. These applications provide fully featured modelling templates that enable you to quantify and measure value, economic capital, risk and earnings, and to meet new regulatory demands, such as Solvency II and IFRS.

Why RiskAgility FM?

- Enables your company to deploy sophisticated analytical calculations based on realistic economic principles, thereby improving risk and capital management
- Uses open, transparent applications to help you confidently understand exactly how the calculations model your business
- Flexible software is easily adapted to your products and business processes to increase productivity
- Employs the latest technology for optimal performance and ease of use
- Includes powerful input management tools to link variables to any external sources, including Excel spreadsheets, text files or databases
- Offers the ability to organise variables into user-defined groups that allow assumptions and projections to be managed easily
- Enables easy set up and management of multiple projections by mixing and matching different groups of inputs, run parameters and output parameters
- Provides flexible organisation and orchestration of projections, allowing for dependencies between the projections
- Supports powerful distributed processing in-house with Microsoft Windows HPC, in the cloud with Microsoft Windows Azure or with Willis Towers Watson vGrid – our Software as a Service scalable virtual grid solution designed specifically for use with RiskAgility FM
- Embodies the thought leadership and expertise of Willis Towers Watson

You can use RiskAgility FM for a variety of purposes, including:

- Product development
- Liability modelling
- Asset/liability management
- Reserving
- Market consistent/traditional embedded value
- Pricing of options and guarantees
- Economic capital calculation
- Reinsurance optimisation
- Business planning/forecasting



Separation of modelling functions makes the system easy to use, understand and learn

In RiskAgility FM, we have separated the modelling functions into logical groups. Modellers create reusable objects within these functions that are available throughout the system. This makes it easy to create a modelling process that works well across your business environment.

For example, a modeller can use sensitivity assumptions defined in the Input Manager (Figure 1) to create a series of waterfall projections in the Run Manager (Figure 2) with a few clicks of the mouse.

This separation and grouping of tasks helps you adapt the system to your company's business practices, which makes everyone's job easier, reduces the learning curve, and improves model governance and control.

Modelling functions are organised into groups to easily adapt the system to your company's business practices.

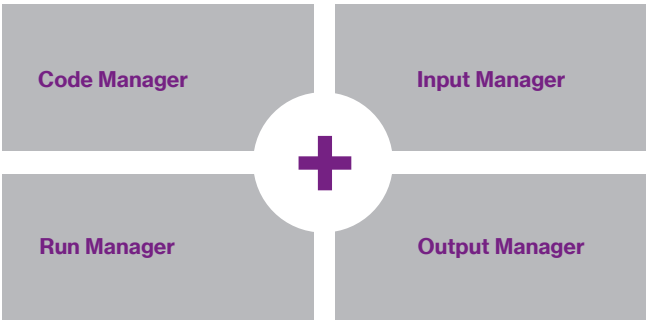


Figure 1. Input Manager showing the expense input page with two assumption sets

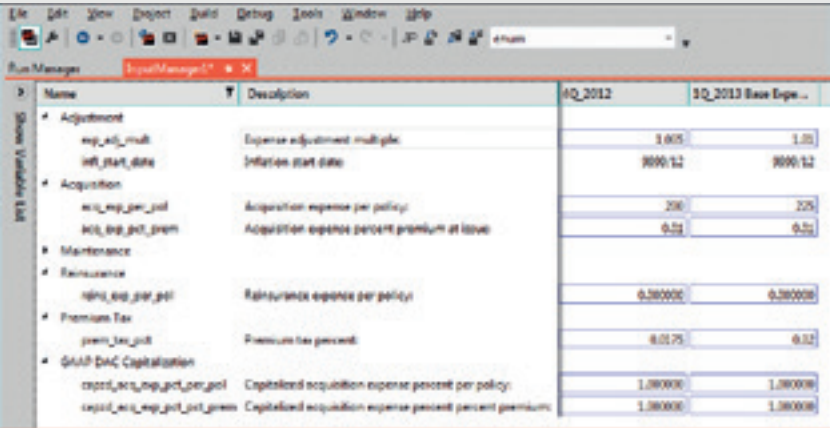
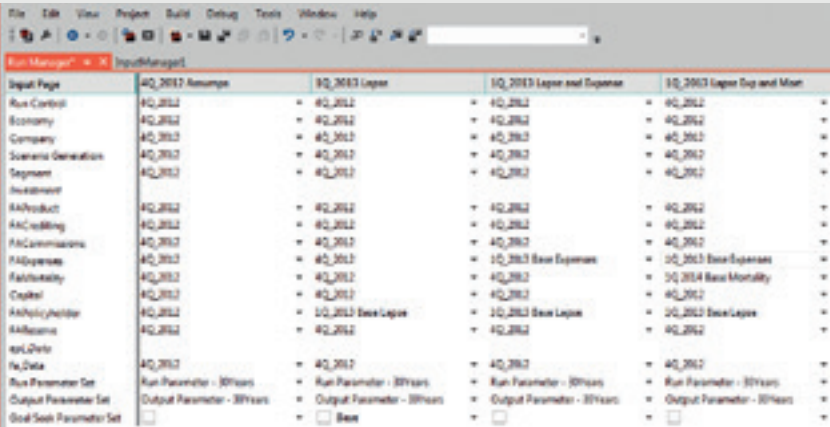


Figure 2. Run Manager showing multiple sensitivities using the assumption sets from the Input Manager





Uses the latest technology

RiskAgility FM uses the latest technology to provide a fresh, modern user interface with powerful features.

RiskAgility FM uses the Microsoft Visual Studio Isolated Shell. This provides powerful advanced capabilities (for example, IntelliSense, robust compiler and debugger integration) for improved ease of use and productivity, with a modern look and feel. IntelliSense (*Figure 3*) speeds up coding by providing auto-completion and syntax guidance. The fully integrated debugger offers abundant features to make it easy for the modeller to step through model code and trace calculations, which makes everyone's job easier, reduces the learning curve, and improves model governance and control.

Modellers will appreciate the fast generate-and-compile capabilities in RiskAgility FM.

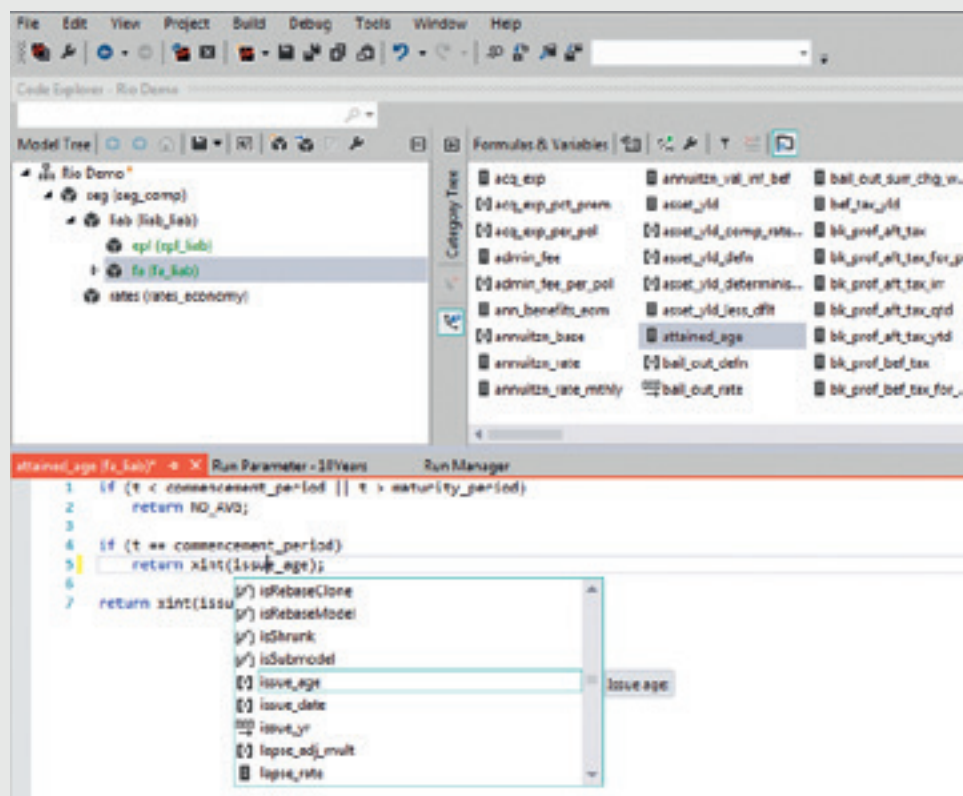
Compile errors provide hyperlinks to the code for easy access and editing.

RiskAgility FM editions

RiskAgility FM will be available in Desktop, Team and Enterprise editions. All editions run any RiskAgility FM model and offer all of the functionality described above. The RiskAgility FM Team and Enterprise editions include increasingly sophisticated version control, audit, security, governance and scheduling functionality on top of that provided by the Desktop edition. These editions allow you to manage and control models, projections and results across your company.



Figure 3. Code Manager showing IntelliSense auto-completion feature



Provides efficient, scalable distributed processing

High-performance grid computing in combination with 64-bit compilation enables you to avoid compromises between accuracy and speed.

RiskAgility FM provides powerful new distributed processing features that deliver actionable results in a fraction of the time of standard distribution approaches. These features allow you to combine multiple projections to define a nested stochastic run, with both the inner and outer loops distributed to the grid to be run in parallel.

With RiskAgility FM, models can be run in your company datacentre using Microsoft Windows HPC, in the cloud with Microsoft Windows Azure or with Willis Towers Watson vGrid – our Software as a Service scalable virtual grid solution designed specifically for use with RiskAgility FM.

This gives you flexible, scalable options for distributed processing so you can get precise calculation results when you need them.

RiskAgility FM can produce either 32-bit as well as 64-bit compilations. The ability to produce 64-bit compilations allows you to utilise considerably more memory for your projection calculation.

Build and use sophisticated financial models for enhanced risk and capital management

RiskAgility FM combines the benefits of a modern, open, flexible modelling system that can be readily adapted to your products and processes, with enhanced distributed processing performance and the latest software technology. RiskAgility FM delivers sophisticated financial analytics to run your business better.

We leverage our experience to bring you innovative solutions

Willis Towers Watson consultants are active in insurance actuarial committees and working groups, and have worked extensively with clients to provide financial reporting and risk management advisory services. Working with our software experts, these industry leaders have leveraged their experience and knowledge to develop innovative financial modelling solutions.



A holistic approach to the wider risk reporting process

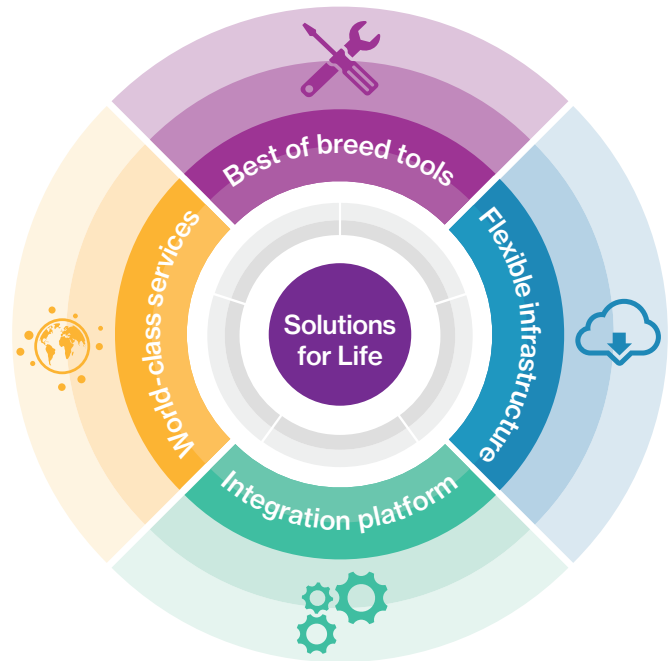
Solutions for Life

Solutions for Life is a comprehensive, integrated portfolio of software tools and consulting services that provide cutting-edge solutions across all areas of the actuarial life modelling process that help save time and money, comply with regulatory demands and optimise legacy systems.

It is made up of four main components:

1. Best of breed software tools
2. Flexible infrastructure
3. Integration capability
4. World-class advisory and support services

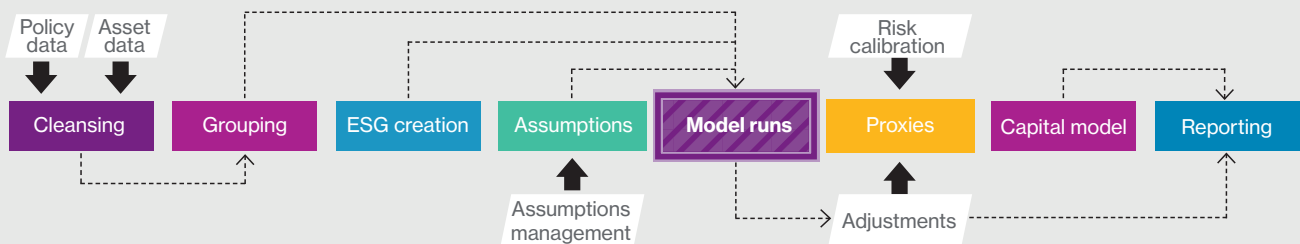
Solutions for Life breaks down barriers, solves problems and provides confidence through accuracy, performance and control, by employing industry thought leadership and advanced technology. For more information visit solutionsforlife.willistowerswatson.com.



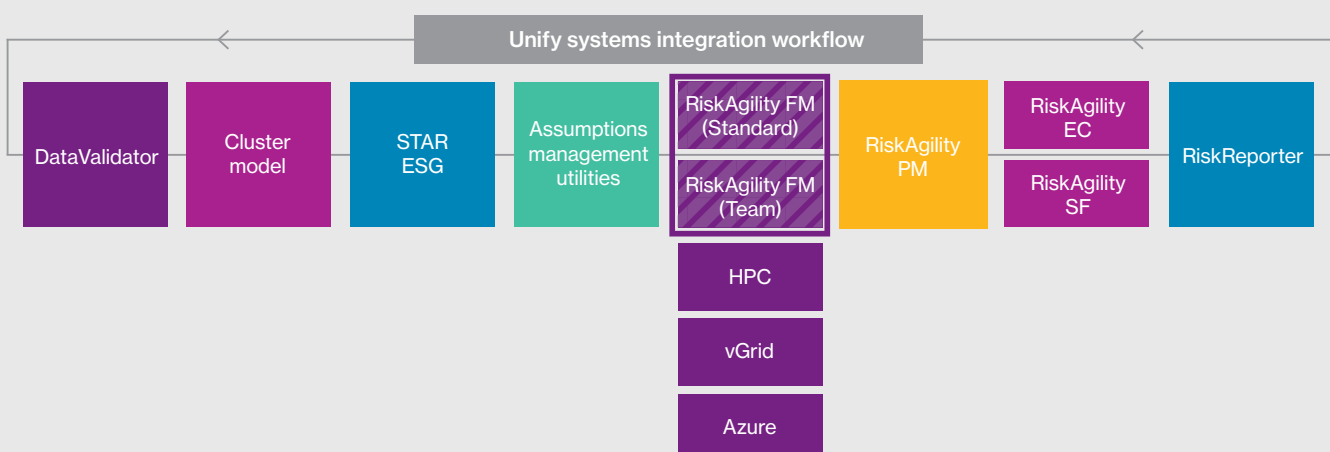
Solutions for Life end-to-end risk reporting process

Figure 4. How RiskAgility FM fits within Solutions for Life and an end-to-end risk reporting process

End-to-end risk reporting process



Solutions for Life tools and platform





With RiskAgility FM, models can be run in your company datacentre using Microsoft Windows HPC, in the cloud with Microsoft Windows Azure or with Willis Towers Watson vGrid.

Solutions for Life software portfolio

Best of breed tools



DataValidator

Validates and cleanses data to prepare it for use in downstream financial modelling and reporting processes, providing easily auditable reports to bring a level of rigour and governance to your data processes.

Emblem

Fits predictive models rapidly to large and complex data sets to reveal underlying patterns in customer data, including claims experience, mortality, and renewals and conversion.

Radar

Decision support and rating engine platform which can be used to assess optimal pricing actions and seamlessly deploy rates in a flexible and agile rating engine that integrates with existing administration systems.

PulseModel

A stochastic multistate mortality/morbidity model informed by detailed medical research combined with expert medical opinions; allows firms to rate business based on various medical risk factors.

STAR ESG

Generates economic scenarios and asset returns under risk-neutral or real-world bases in a globally consistent framework.

RiskReporter

Transforms raw data from multiple internal and external sources to produce validated reports and XBRL in the format required for regulatory reporting, such as Solvency II Pillar 3.

RiskAgility Financial Modeller (RiskAgility FM)

Enables life insurers to run financial models that accurately reflect their company's products and to run them in ways that are easily adapted to their business processes.

RiskAgility Proxy Modeller (RiskAgility PM)

Standardises and automates all stages of the proxy modelling process, reducing the manual effort in what can otherwise be a resource-intensive process.

RiskAgility Economic Capital Aggregator (RiskAgility EC)

Calculates and embeds flexible economic capital models in day-to-day risk management with greater speed and precision.

RiskAgility Standard Formula (RiskAgility SF)

Aggregates the solvency capital requirement using the EIOPA Solvency II standard formula for life, health and PC business across single entities and groups.

Customised applications

Applications and libraries to accelerate model implementation: country- and product-specific applications, ALMs and model-pointing tools.

Flexible infrastructure

vGrid



Combined with RiskAgility FM, vGrid provides fully scalable, on-demand access to compute resource, delivered as a fully outsourced service by Willis Towers Watson.

For more information

Visit solutionsforlife.willistowerswatson.com

Contact software.solutions@willistowerswatson.com

Follow us on Twitter @WTW_ins

Integration platform

Unify



Automates and governs the end-to-end financial modelling and reporting process by integrating multiple software applications into user-defined workflows.

About Willis Towers Watson

Willis Towers Watson (NASDAQ: WLTW) is a leading global advisory, broking and solutions company that helps clients around the world turn risk into a path for growth. With roots dating to 1828, Willis Towers Watson has 39,000 employees in more than 120 countries. We design and deliver solutions that manage risk, optimise benefits, cultivate talent, and expand the power of capital to protect and strengthen institutions and individuals. Our unique perspective allows us to see the critical intersections between talent, assets and ideas – the dynamic formula that drives business performance. Together, we unlock potential. Learn more at willistowerswatson.com.

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WTW-GL-16-PUB-5221

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