

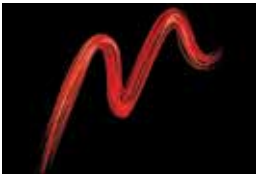
# MoSes

**Risk and financial modeling software**

**for life insurers**

# Towers Watson MoSes

Volatile economic conditions, pending regulatory mandates and increasing scrutiny from rating agencies are driving insurers to use more sophisticated financial modeling to support realistic economic-based valuation and risk analytics.



MoSes enables your company to deploy sophisticated analytical calculations based upon realistic economic principles, thereby improving risk and capital management.

MoSes is a financial modeling system with the sophistication to generate this type of information. On this platform, companies can either use standard MoSes applications tailored to their business or create new models to suit their most exacting needs.

Leading insurers and reinsurers around the world use MoSes, including many of the largest life insurers in the Americas, Europe and Asia. It is also the chosen tool of Towers Watson consultants worldwide.

Why do these companies choose MoSes? It provides the flexibility to tailor sophisticated financial models to their business. Moreover, knowing that MoSes is widely used gives our clients confidence that the software platform and applications have the proven capabilities that they need to measure value, manage risk and safeguard solvency.

## Comprehensive Library of Applications

Towers Watson has developed MoSes applications for several geographies and product types (see sidebar). Our consultants are regularly building and refining applications in the course of their client work and intellectual capital development.

You can use MoSes applications for a variety of tasks, including

- Product development
- Pricing of guaranteed options
- Cash-flow testing
- Reserving
- Reinsurance optimization
- Economic capital calculation
- Liability modeling
- Asset-liability modeling

## A few of Our American MoSes Applications

**U.S. Life Modeling Suite** is a framework for developing financial models for life insurance and annuity products. These applications provide advanced capabilities, including point-in-time and projected PBA for reserves and capital, dynamic GAAP unlocking and revaluations, determination of economic capital, product design and pricing, and asset/liabilities management.

**Variable Annuity Reserves and Capital** provides VA CARVM reserve calculations and RBC C-3 Phase II risk-based capital calculations, as required by the NAIC, for variable annuity products with guarantees.

**Variable Annuity Hedging** calculates point-in-time valuations of variable annuity portfolio fair values, option portfolio sensitivities (“Greeks”), and financial projections of variable annuity

guarantees to enable management of dynamic hedging strategies. This application enables you to quantify hedging strategy effectiveness, the impact on product risk profile, and implications for capital and reserve requirements.

**Economic Scenario Generator (ESG)** lets you project market-consistent economic scenarios describing interest rates, corporate bond spreads, stock and property returns, and other asset prices.

**Mexico Corporate ALM Application** is a multiline corporate model that projects life (traditional and universal type) and non-life business consistent with local regulations, and can also be used for dynamic solvency testing, pricing and EV.

## Flexible and Adaptable

MoSes offers unmatched flexibility to tailor applications, making it ideal for addressing current and future modeling needs. Authorized users can fully customize the application code to model their business.

The flexibility of the MoSes platform is ideal for modeling complex product designs. The modular design capabilities of MoSes give you the ability to cater to different jurisdictions.

## MoSes Applications Are Transparent

Unlike some other financial modeling systems, MoSes applications are completely transparent. You can view all of the application code — no “black box” here. This openness gives you increased confidence that comes from understanding exactly how the applications model your business. And with controlled access, authorized users can edit their MoSes models.

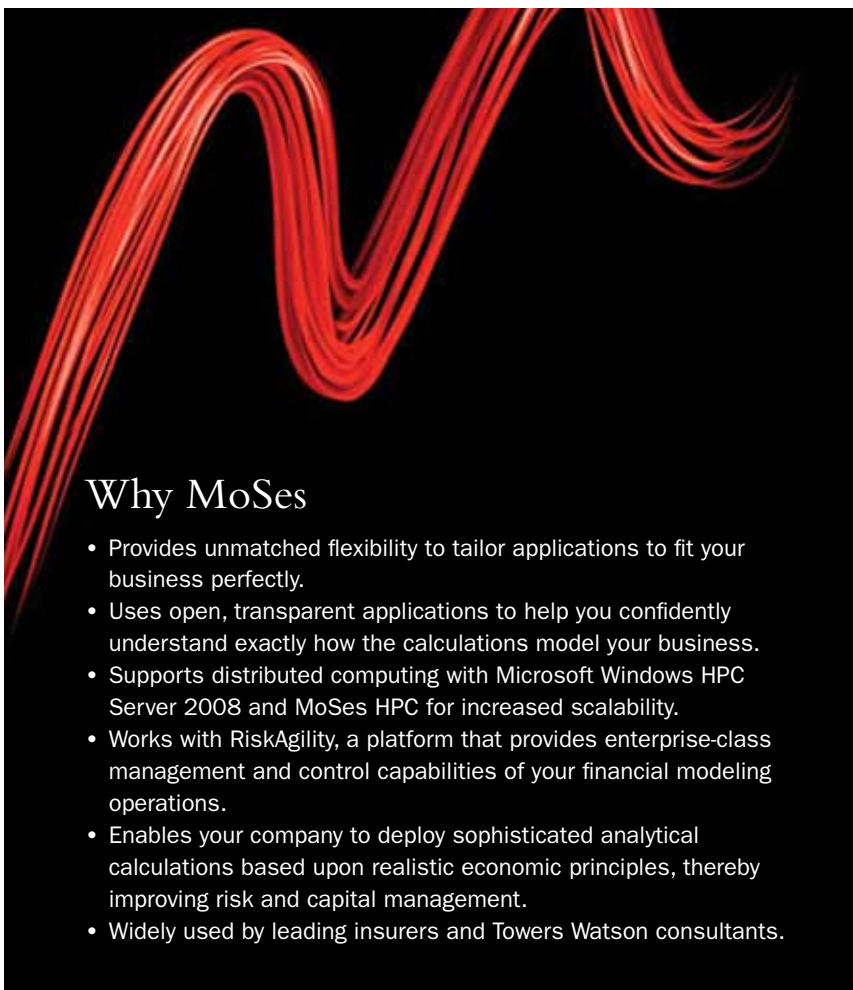
## Usability

Users who develop or modify applications use the Design View, while those who run MoSes financial projections for their work use Task View. You can create user-defined views tailored to provide a simple, purpose-built interface that streamlines workflow. Product development, pricing and corporate modeling actuaries can work with application screens tailored for their tasks. User-defined views can be supplemented with reports and embedded graphs.

## MoSes Supports Distributed Processing With Microsoft HPC

Changing times are forcing companies to run more complex financial calculations faster. To meet these challenges, financial services firms are turning to high-performance computing (HPC) solutions like the Microsoft Windows HPC Server 2008. This grid solution is robust, easy to operate and builds on your existing IT investments.

Towers Watson's MoSes HPC integrates MoSes with Microsoft HPC to provide increased scale for your MoSes applications. By splitting calculations into smaller jobs and running them in parallel across a grid, they finish in much less time. This HPC environment also supports 64-bit processing to help you break down memory barriers that constrain the use of complex models with large data sets and long projection periods.



## Why MoSes

- Provides unmatched flexibility to tailor applications to fit your business perfectly.
- Uses open, transparent applications to help you confidently understand exactly how the calculations model your business.
- Supports distributed computing with Microsoft Windows HPC Server 2008 and MoSes HPC for increased scalability.
- Works with RiskAgility, a platform that provides enterprise-class management and control capabilities of your financial modeling operations.
- Enables your company to deploy sophisticated analytical calculations based upon realistic economic principles, thereby improving risk and capital management.
- Widely used by leading insurers and Towers Watson consultants.

## MoSes Works With RiskAgility

RiskAgility is Towers Watson's enterprise financial modeling software platform for insurance companies. The RiskAgility platform enables data management, scheduling, distributed processing and audit capabilities in a controlled technology environment. RiskAgility will augment the management of your MoSes models to make running projections more efficient, controlled, reliable and easily repeatable.

## Global Support

With 14,000 associates in 37 countries, our geographical coverage gives us local knowledge of culture and language in many of the world's leading business centers, which helps us better understand your business issues and needs.

## About Towers Watson

Towers Watson is a leading global professional services company that helps organizations improve performance through effective people, risk and financial management. With 14,000 associates around the world, we offer solutions in the areas of employee benefits, talent management, rewards, and risk and capital management.

Towers Watson is the world's largest provider of actuarial software. We combine the systems expertise of our software professionals with the actuarial knowledge and thought leadership of our insurance consulting business to develop solutions that help clients measure value, manage risk and safeguard solvency.

**[software.solutions@towerwatson.com](mailto:software.solutions@towerwatson.com)**

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