RAISING GENERAL INSURANCE RISK MODELING PERFORMANCE

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Today's modeling challenge

Today's non-life insurers face growing pressure to deliver strong commercial business strategies while meeting the demands of regulators and management boards for greater forecasting capacity and control of risk and capital.

They are becoming increasingly accountable for delivering accurate and up-to-date risk metrics – in greater detail, shorter timeframes and with limited resources.

This analysis depends crucially on a connected chain of processes that start with preparing complex input data before applying sophisticated models, and culminating in management and risk dashboards and regulatory reports.

On the input side, much of the effort involves preparing data for import – converting data formats and setting appropriate model input parameters and assumptions.

When using the modeling software, insurers require capital models and reserving calculations that are flexible, transparent and easy to manage.

On the output side, general/P&C insurers likewise need to collate results into a suitable database, and transform them into easily understood interactive risk/commercial strategy dashboards.

Insurers' strategies

As a consequence, non-life insurance firms are increasingly viewing risk and financial modeling as an end-to-end process challenge. Not only must capital models and reserving calculations be fit for purpose, there must also be tools and support in place for the surrounding data processes and ongoing analysis and reporting.

In turn, these need to be supported by strong risk and model governance policies and controls to provide confidence to both internal and external stakeholders.

FIS' response

FIS helps actuaries, risk managers and information officers meet their needs by extending its long-standing expertise in risk modeling and data management to general/P&C insurers globally with a new solution – Prophet GI.

Prophet GI delivers full, stochastic reserving and capital modeling solutions, and helps companies of varying size and complexity manage their overall financial modeling process more efficiently and with greater control. It reduces the operational risk related to data and input definition and the difficulty of diagnosing any errors, thereby helping firms focus on value-adding activities.

Usable out of the box, the capital model and reserve calculation tools equip actuaries with rapid development and production capabilities to accurately meet their business demands.

PROPHET GI APPLICATIONS

Prophet GI can be used to meet a range of important risk modeling and business needs:

- Quantification of economic and regulatory capital
- Setting and managing appropriate reserves
- Pricing of insurance products at the portfolio and individual contract level
- Blending catastrophe model output
- Assisting with strategic and business planning
- Facilitating capital allocation decisions

- Assessing reinsurance strategies
- Analyzing corporate structures/determining suitable capital
- Viewing the firm's overall risk profile
- Setting performance targets
- Asset liability management/determining asset strategies
- Portfolio optimization
- ORSA modeling

Prophet GI benefits

Prophet GI offers actuaries and their firms a complete end-to-end solution to their risk modeling needs, including efficient end-to-end data process management, enhanced business intelligence, extensive services, and the cost efficiency of a managed hosted service option. Insurers can benefit specifically from:

- **Meeting regulatory requirements** – Prophet GI helps manage increasing reporting requirements with fast performance, transparency, control and comprehensive functional coverage and transparency.

- **End-to-end process efficiency and control** – Prophet's data management capabilities, from import data conversion through to business intelligence, simplify the end-to-end process, and offer greater control and auditability. These can also help reduce over-reliance on spreadsheets and the risk of errors that this entails, thereby increasing confidence in model results.

- **Greater insight into risk** – Visualized business intelligence capabilities available with Prophet GI help actuaries and risk managers quickly understand and share the meaning of important risk metrics.

- **Reliability of support** – as one of the world's leading software and process management firms, FIS has a proven track record of successful service to the insurance industry. Specifically, Prophet is a well-established, leading software platform relied on by over 10,000 users worldwide.

- For multi-line/composite insurers, consolidation benefits arising from using a **single modeling platform:**
  - Reduced overall costs and simplified maintenance
  - The ability to use a single set of coding skills for non-life and life capital modeling
  - Simplifying and improving data management processes and aggregation
  - Consistent treatment of assets
  - Access to common data paradigms for both

INPUTS AND OUTPUTS

Users are provided with all major financial modeling outputs:
- Financial statements, e.g. cash flow statements, revenueaccounts and balance sheets
- Profit distributions
- Analysis of claims versus other variables
- Business plans
- Capital allocation
- Business unit performance
- Risk performance (e.g. combined ratio and loss ratio)
- Capital and surplus
- Deterministic and stochastic claims reserves

Likewise, key third-party data can be imported:
- Economic scenario data from the main providers
- Output from major catastrophe vendor models

Key features

As an operationally efficient approach to financial modeling, Prophet GI has a number of distinct characteristics:

- **Quick to deploy** – either as an application hosted and managed by FIS or deployed on premise, Prophet GI is easily integrated into the business' IT system, as proven at hundreds of insurers who already use Prophet.

- **Ready to go** – works out of the box and within a rapid development environment.

- **Intuitive and easy to use** – based on Microsoft Windows-style navigation, a special user interface toolset (Prophet Forms) that allows the user to easily manage inputs and run settings for capital modeling, and to interrogate results.

- **Focused design** – pre-configured libraries designed by FIS' general insurance capital modeling and reserving experts for the specific needs of industry analysts.

- **Flexible** – Prophet's modular approach allows for flexibility of capital and reserving model design.

- **Fast** – even on a single machine, Prophet GI can produce results quickly. Insurers with greater analysis needs can take advantage of Prophet's scalability for high-performance computing in the Prophet Enterprise environment.

- **Transparent** – the software uses Prophet's easily understood and modifiable code, with no need for other programming languages. It allows users to investigate and understand clearly how specific results are produced.

- **Integrated** – with additional libraries, customers can extend their financial modeling with Prophet beyond general insurance to other business lines, such as Life, Health and Pensions, as well as for ALM. Prophet offers a single integrated modeling platform across the entire business.
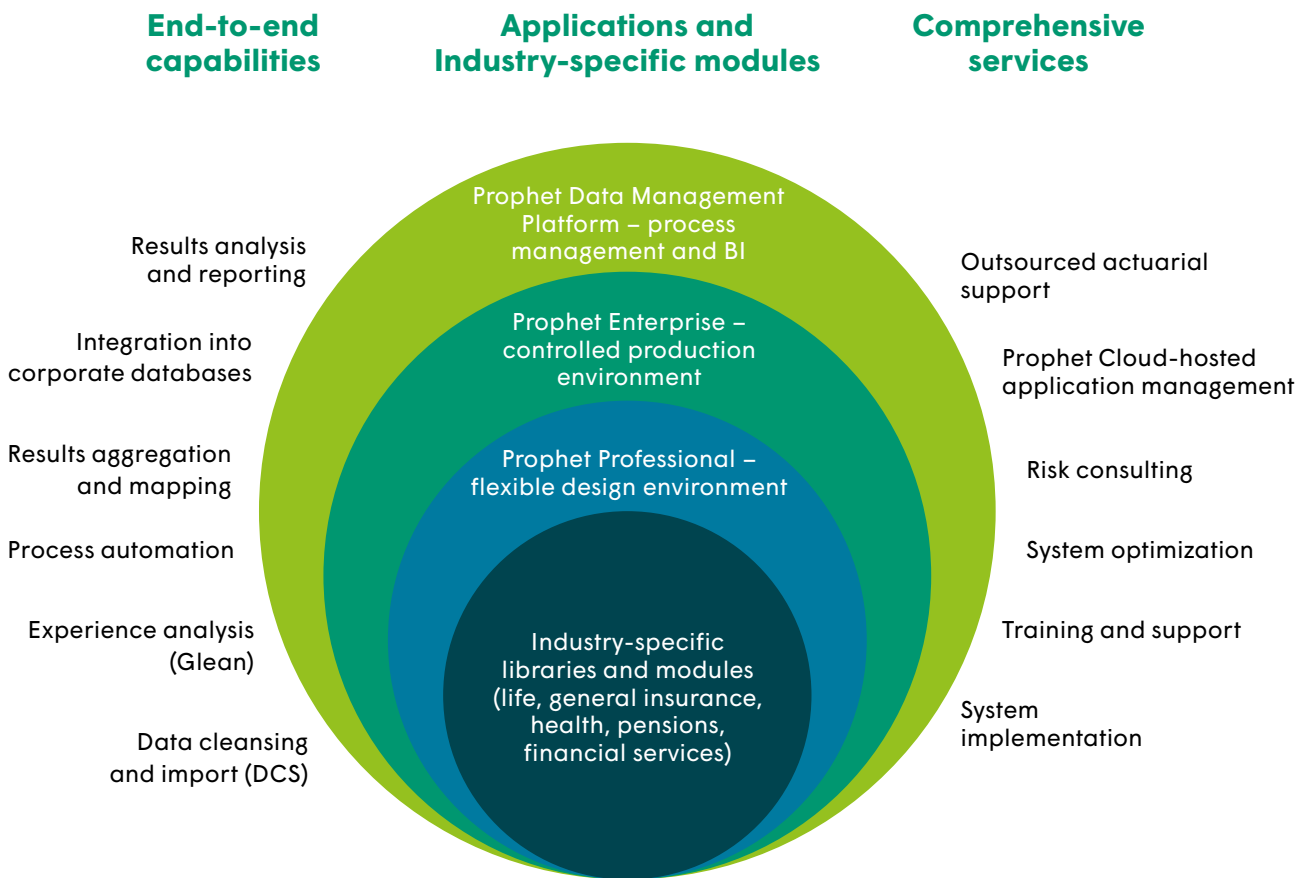
Integrated into the Prophet Platform

Consistent with all major Prophet solutions, Prophet GI is based on the Prophet platform and industry-specific actuarial libraries and modules. Similarly, FIS provides a range of functional capabilities and services that span all application environments.

These can be used not only for modeling general insurance, but also other business classes, such as Life, Health, Pensions and Financial products, offering a single, consistent risk modeling platform.

Prophet solution architecture

End-to-end capabilities

Applications and Industry-specific modules

Comprehensive services

Results analysis and reporting

Integration into corporate databases

Results aggregation and mapping

Process automation

Experience analysis (Glean)

Data cleansing and import (DCS)

Prophet Data Management Platform – process management and BI

Prophet Enterprise – controlled production environment

Prophet Professional – flexible design environment

Industry-specific libraries and modules (life, general insurance, health, pensions, financial services)

Outsourced actuarial support

Prophet Cloud-hosted application management

Risk consulting

System optimization

Training and support

System implementation

End-to-end modeling with Prophet applications

Prophet's application environments are complementary and suit insurers according to their size and the complexity of their modeling needs:

Prophet Professional – delivers the essential capital model design and calculation functionality, applying these to the actuarial libraries at its centre, specifically here the Prophet GI capital modeling and reserving libraries.

Prophet Enterprise – executes the models developed in Prophet Professional and delivers scalable production capabilities. It enables the centrally managed production of consistent and auditable management information and financial reports, and allows IT best practices to be applied to risk modeling.

Prophet Data Management Platform – enables users of Prophet to automate data production (including checks on accuracy and completeness), and transform data into easily consumable formats for use in business intelligence and regulatory reports, as well as for integration into corporate databases.

Additional software tools support the early stages of risk analysis, complementing overall end-to-end process management.

Data cleansing and import – Prophet's Data Conversion System (DCS) helps users extract information from policy and claims data files and databases and convert, clean and validate these for use in Prophet. It produces model point files from company policy data, as well as tables which can be further processed by Glean (see below). The Data Conversion System supports high-quality and fast analysis while providing an audit trail of changes made to the data.

Experience and Pricing analysis – to support users in selecting relevant risk factors and levels, Glean serves as a complementary tool. Glean is an experience analysis, data mining and generalised linear modeling (GLM) application that helps users understand their data, using a wide range of techniques. It can be used in any situation where past experience needs to be analysed.

Supporting services

FIS offers a comprehensive range of services to help its customers gain full value from the software.

Solution Implementation – professional services teams help define and implement the optimal system for each customer, managing the process with insurers from initial vision and scope, to design, configuration, implementation, testing and delivery. Customers benefit from rapid deployment of a user-accepted system, as well as from subsequent efficient, fast upgrades.

User Training and Support – FIS' in-house actuarial and technical experts deliver training for certification, and a helpdesk provides dedicated troubleshooting, documentation and support to customers worldwide.

System Optimization – FIS provides services to review and optimize the Prophet system to meet changing customer requirements. Services include model optimization, process calibration and validation, as well as the calibration and setting of regulatory stress tests.

Prophet Cloud – customers can use their Prophet application through a FIS managed-hosted service, in a customized public cloud environment to provide cost-efficient scalable performance when needed, or in an on-premise private cloud environment. FIS works with leading cloud service providers to deliver a seamless service.

Outsourced Actuarial Support – FIS' in-house actuarial teams provide outsourced actuarial process support, including asset-liability modeling, reserving, capital management and modeling, and dynamic financial analysis.

Risk Consulting – Risk management and modeling experts assist in identifying and implementing best-practice processes. These include advanced model validation processes and business use test support in the field of business planning and FLAOR/ORSA within a Solvency II environment.

Insurance Risk AWARDS 2015
WINNER
Best actuarial
modelling software

Insurance Risk AWARDS 2015
WINNER
Best data management
service provider

About FIS' Prophet solution

FIS' Prophet solution is a leading actuarial modeling system that helps insurance and financial services firms develop more profitable products faster, improve risk management decisions, and meet their reporting responsibilities efficiently. Prophet provides comprehensive coverage across life, general insurance, health and pensions for all major insurance markets on a single platform, providing common models, code, assumptions and reporting capabilities, plus end-to-end data management and business intelligence. It offers actuaries an easy-to-use, flexible product design environment combined with a controlled, enterprise-level production environment, enabling the fast delivery of accurate, auditable and clearly presented information to risk managers, senior management and regulators. Prophet can be deployed on-premise, hosted or on the cloud, and is relied on by more than 10,000 users at over 850 customer sites in more than 65 countries.

About FIS

FIS is a global leader in financial services technology, with a focus on retail and institutional banking, payments, asset and wealth management, risk and compliance, consulting and outsourcing solutions. Through the depth and breadth of our solutions portfolio, global capabilities and domain expertise, FIS serves more than 20,000 clients in over 130 countries. Headquartered in Jacksonville, Florida, FIS employs more than 55,000 people worldwide and holds leadership positions in payment processing, financial software and banking solutions. Providing software, services and outsourcing of the technology that empowers the financial world, FIS is a Fortune 500 company and is a member of Standard & Poor's 500® Index. For more information about FIS, visit **www.fisglobal.com**

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