



PROPHET INTERNATIONAL LIBRARY

Life risk modeling for continental European insurers

Overview

The Prophet International Library is primarily designed to be used anywhere in continental Europe except for France and Germany where separate libraries exist.

This library can be used in many regions and is rich in specific regional features, allowing for different reserving, tax, experience and reinsurance features to suit a wide range of companies and regions. Embedded Values and Market-Consistent Embedded Values can be calculated with this library.

The library can be run stochastically and has goal seeking features for pricing. It can easily be customised through the open and flexible development environment to cater for company specific features.

When used with other libraries, in particular the Asset Liability Strategy Library, the International Library models can be used as part of the wider risk management of the company.

Experience Features

- Most common mortality tables, including AIDS
- Withdrawals, with any skewed incidence
- Spread maturity dates
- Optional paid-up policies
- Stochastic decrements
- Five components to build up overall investment return
- Allowance for tax on a number of bases

General Product Features

- Whole life, endowment and term assurance
- Pure endowment, with or without return of premiums
- Annuities
- Choice of policyholder participation - profit sharing, reversionary bonus, revalorization and cash bonus
- Unit Linked products
- Regular or single premiums
- Level or increasing premiums
- Fixed or variable benefits
- Single life or joint lives

Valuation Features

- Statutory reserves
- Market consistent valuations
- Projection of cash flows on multiple different bases
- simultaneously
- Bonus reserve valuation
- AIDS deficiency reserves
- Statutory valuation reserves on a second basis
- Option to restrict calculations to statutory reserves
- Option to interpolate reserves

US GAAP Module

A separate module is available for the International Library to value contracts on a US GAAP basis.

The following are the main features of this module:

- FAS 60
- FAS 97 for limited payment contracts
- FAS 97 for universal life-type contracts
- FAS 97 for investment contracts
- FAS 120
- Purchase GAAP
- SOP 03-1

Reporting Features

- Discounted profits, at three rates of discount
- Best estimate liability
- Discounted revenue accounts and accumulation of profits
- Calculation of profits in accordance with International Financial Reporting Standards
- Breakeven month and internal rate of return
- Analysis of future surplus / margins

Reassurance Features

- Original terms (co-insurance)
- Risk premium (yearly renewable term)
- Financing

Goal Seeking Features

- Goal seeking to determine premium rates or unit allocation rates as appropriate to achieve a predefined level of profitability
- Goal seeking to determine self-supporting bonus/profit sharing rates

Dynamic Features

- Automatic output of the values which need to be passed from one dynamic loop to the next
- Any input assumption can be changed to make it calculate dynamically, by being read from a variable calculated in a higher level or ALM product in the previous dynamic loop

Country-Specific Product Features Netherlands

- Savings mortgage ('spaarhypotheek')
- Guaranteed profit sharing
- Initial discount ('rentestandskorting')
- Activated initial expenses ('geactiveerde eerstekosten')

Italy

- Bonus applied to either premiums and benefits or just to benefits
- Initial commission incentive
- Solvency margin based on reserve excluding expense reserve

Optional Calculation Features

- Rebasing to determine projected reserves which allow for experience assumptions to apply until each valuation date
- Separate non-unit and unit revenue accounts
- Calculation looping to repeat the calculation of mathematical reserves on a number of alternative bases
- Calculation of IFRS on Amortised Cost and Fair Value basis
- Calculation of IFRS Liability Adequacy Test
- Calculation of proposed IFRS fulfilment cash flows, risk adjustment and contractual service margin

Variable Annuity Module

A separate module is available for the International Library.

The following are the main features of this module:

- Guaranteed Minimum Death Benefit (GMDB)
- Guaranteed Minimum Withdrawal Benefit (GMWB)
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- Guaranteed Minimum Accumulation Benefit (GMAB)
- Guaranteed Minimum Income Benefit (GMIB)
- Multi-fund functionality
- Annuity conversion
- Reserving
- Pricing
- 'Greeks'
- Nested Stochastic

Benefits

The International Library allows customers in continental Europe to model their non-linked and linked life assurance policies at a very detailed-level, Prophet's flexible open code architecture and tabular inputs enable all company specific contract level data and formulas to be included. The library has an extensive database of actuarial formulas maintained by a large team of actuaries. Products can be built quickly using a wizard selecting key product, experience, reserving and reporting

Most typical features are provided as standard. The library also includes goal seeking routines for pricing, different types of reinsurance and allows for stochastic projections.

The Variable Annuity and US GAAP modules can also be added to this library.

The results from this library can be used to provide market consistent embedded values (MCEV), economic capital, IFRS, local principles-based solvency modeling, as well as risk-based capital regulations, such as Solvency II.

When used with other libraries, in particular the Asset Liability Strategy Library, the International Library models can be used as part of the wider risk management of the company. This allows you to utilise the same code used for product pricing and embedded values in the wider ALM and risk management of the company.

The library supports the use of Prophet's Nested Structures feature to embed one model within another.

Summary

Comprehensive, extensive, easily customisable purpose-built actuarial library for pricing and statutory reserving and can be used for the liability component of overall ALM.

About FIS' Prophet solution

FIS' Prophet solution is a leading enterprise-wide actuarial modeling system that helps insurance and financial services companies meet reporting responsibilities, improve risk management, and develop more profitable products faster. Prophet uses customizable actuarial libraries for all major product types, including regional variations. It provides the transparency, performance and control required by today's actuaries and risk managers through integrated financial modeling and data management capabilities. Prophet is used by more than 9,000 users at over 730 customer sites in more than 65 countries. www.fisglobal.com

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