



PROPHET UNIT-LINKED LIBRARY

Unit-linked product risk modeling for life insurers and pension providers

The Prophet Unit-Linked Library allows companies to model unitised products and is typically used in the UK, South Africa and Asia. The library allows for liability product types and reserving features in these countries.

Embedded values and market consistent embedded values can also be calculated with this library, which can be run stochastically and dynamically 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 liability models can be used as part of the wider risk management of the company.

Key features

Product features

- One or two unit types, with or without actuarial funding
- With or without deductions from units
- Reviews of sum assured or premium
- Unitised with profit
- Rider benefits and bonus units
- Life or pensions
- Mutual or proprietary

General product features

- Regular or single premiums
- Level or increasing premiums
- Fixed or variable benefits
- Single life or joint lives

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

Reassurance features

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

Goal seeking features

- Goal seeking to determine unit allocation rates to achieve a predefined level of profitability
- Goal seeking to determine self-supporting bonus / profit sharing rates for with profit products

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

Valuation features

- Market consistent valuations
- Projection of cash flows on multiple different bases simultaneously
- Statutory reserves
- Bonus reserve valuation
- AIDS deficiency reserves
- Deferred acquisition costs
- Statutory valuation reserves on a second basis, normally for resilience calculation purposes

- Option to restrict calculations to statutory reserves
- Discounted cash flow (sterling) reserves
- Calculation of sterling reserve as greater of premium paying and paid-up reserve
- Calculation of unitised with profit reserves in accordance with the UK valuation regulations
- Net premium reserves

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

Optional calculation features

- Rebasing to determine projected sterling reserves which allow for experience assumptions to apply until each valuation date
- Calculation of historic and future asset shares
- Separate sterling and unit revenue accounts
- Calculation of IFRS on a Fair Value basis
- Calculation of IFRS Liability Adequacy Test
- Calculation of proposed IFRS fulfilment cash flows, risk adjustment and contractual service margin

US GAAP module

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

The following are the main features of this module:

- FAS 97 for universal life-type contracts
- Purchase GAAP
- SOP 03-1

Benefits

The Unit-Linked library allows customers to model their unit-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 features, lending itself to very rapid implementation.

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, US GAAP and Analysis of Movement 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 Unit Linked products 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

A comprehensive, extensive, easily customisable, and purpose-built actuarial library for pricing and statutory reserving, which 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