



## Prophet Unit Linked Library

The iWorks 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.

## 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
- 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
- Solvency margins
- 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 valuation 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

## Analysis of Movements Module

A separate module is available for the Unit Linked Library to analyse the actual movement in surplus and embedded value profits.

The following are the main features of this module:

- Summaries of actual and expected policy movements, for each category of policy status
- Revenue accounts based on both actual and expected policy movements
- Analyses of the movement in embedded value over the inter valuation period
- Analyses of the effect on surplus arising from the differences between actual and expected policy movements
- Analyses of the effect on the embedded value arising from the differences between actual and expected policy movements

## 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

## Variable Annuity Module

A separate module is available for the Unit Linked Library.

The following are the main features of this module:

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

## About SunGard

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## 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 modelling, as well as emerging 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.

## Summary

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

### Contact Us

For sales enquiries:

Telephone: +44 (0)1932 757575  
Email: [prophet.sales@sungard.com](mailto:prophet.sales@sungard.com)

For support:

UK & Europe  
(excluding France, Switzerland, Germany and Austria)  
Telephone: +44 (0)1932 757555  
Helpdesk email: [prophet.helpdesk@sungard.com](mailto:prophet.helpdesk@sungard.com)

France  
Telephone: +33 1 44 71 8080  
Helpdesk email: [prophet.helpdesk@sungard.com](mailto:prophet.helpdesk@sungard.com)

Switzerland  
Telephone: +41 44 560 8425  
Helpdesk email: [prophet.helpdesk@sungard.com](mailto:prophet.helpdesk@sungard.com)

Germany and Austria  
Telephone: +49 69 70768 400  
Helpdesk email: [prophet.helpdesk@sungard.com](mailto:prophet.helpdesk@sungard.com)

Asia/Pacific  
Telephone: +65 6416 1490  
Helpdesk email: [sgap.iworks.support@sungard.com](mailto:sgap.iworks.support@sungard.com)

The Americas  
Actuarial Resources Corporation  
Telephone: +1 (913) 451 0044  
Helpdesk email: [prophet@arcval.com](mailto:prophet@arcval.com)

[www.sungard.com/iworks/prophet](http://www.sungard.com/iworks/prophet)