



Prophet Asset and Liability Strategy Library

With ever-changing markets and more regulatory demands on life insurance companies around the world, there is an increasing need for insurers to carry out Asset Liability Modelling (ALM) to investigate the relationships between their assets and their liabilities. The guarantees implicit in many life insurance products, the volatility in financial markets and lower levels of interest rates require that this modelling is carried out on a stochastic basis. New developments such as International Financial Reporting Standards (IFRS), Market Consistent Embedded Values (MCEV) and Solvency II are some of the drivers for this. Other drivers are the desire on the part of many companies to carry out economic capital calculations, management of risk and to gain the many other benefits that a company can achieve from having a much better insight into their business.

The iWorks Prophet Asset Liability Strategy (ALS) Library enables customers to deliver on their stochastic ALM requirements and to help them achieve a more complete understanding of their company.

The ALS library is purpose built for market consistent ALM and is well placed for upcoming regulatory environments of Solvency II and PBA.

Features

Product Features

The following are the main features provided by the Asset Liability Strategy (ALS) library.

The model captures:

- The dynamic links between assets and liabilities, particularly powerful in evaluating path dependent liabilities influenced by potential management actions.
- Extensive asset calculations over a wide range of assets
- Flexible liability modelling
- Complete flexibility of calculation intervals, monthly, quarterly, six monthly, annual and any combination thereof. All is controlled by the user by parameters, the code is generic.
- Standard interfaces are available for leading Economic Scenario Generators (ESG) such as those provided by Barrie & Hibbert and Deloitte. Interfaces to other ESG providers are easily constructed.
- Several reporting values methods for different regions
- Dynamic reserving
- Dynamic lapse rate investigations

ALS Supports:

- Asset liability modelling studies
- Stochastic pricing, for example realistic balance sheets for insurers
- Risk based capital exercises, including Internal Capital Assessments (ICA)
- Economic Capital
- EEV / MCEV
- Product pricing
- Strategy work

Liability Features

A unique feature of the ALS library is the choice of the liability approach and that the user can choose one of three approaches to modelling liabilities:

'Internally' Modelled Liabilities

This method for modelling liabilities gives the fastest per policy runtimes. It allows the user to model the liabilities within the ALS product.

The following business can be modelled in this way:

- Insurance Funds
- UK style participating business including guaranteed annuity options
- Continental style participating funds e.g. revalorisation
- French specific Funds, e.g. Fund PB
- German specific Funds, e.g. RfB
- Dutch U-rate business
- Unit linked
- Occupational Pensions Schemes
- Insured Pensions Schemes



'Externally' Modelled Liabilities

This approach allows the ALS library to read in liability information from existing liability products created using the following libraries:

- International
- Conventional
- Unit Linked
- Deutsch
- Other libraries are supported through links to the Summary Library
- Currently developing links to the US library and US Health library, in partnership with Actuarial Resources Corporation.

A third approach is 'Cashflow Flexing'

This approach involves reading up cashflows from existing liabilities (created using Prophet or another system) and adjusting these deterministic cashflows to reflect management decisions and policyholder reactions. This approach is popular in some regions and is suitable for particular types of business.

Asset Types Modelled

- Equity
- Property
- Government bonds
- Corporate bonds
- Options
- Floating Rate Bonds
- Swaps
- Swaptions
- Mortgages
- Callable Bonds
- Caps & Floors
- Index linked bonds
- Cash

Dynamic Linkage Features

- Asset Strategy – flexible investment strategies
- Specific asset profiles can be purchased
- Prioritisation and order of gains realisation
- Dynamic lapse rates
- Dynamic crediting rate / Profit Sharing / Reversionary and Terminal Bonus Rates
- Smoothing Rules
- Policyholder take-up rates guarantees and options
- Target % asset share at maturity
- Customised decisions

Special Features

- Ability to model base level products
- Ability to enter known historical economic data for the first few months of the projection
- Flexibility over the format of the economic data
- Flexibility in specifying asset data
- On-line table and context sensitive documentation
- Extensive tutorials and ALS user manual

Multiple reserving bases specified by the user, including:

- Statutory
- Premium basis
- Projected realistic balance sheet / fair value using simulation within Simulation

Multi-currency

- Assets are multi-currency
- Multi-currency Corporate structures are possible by modelling business denominated in different currencies in different ALS products.

