



PROPHET US LIFE AND ANNUITY 360 LIBRARY

RISK MODELLING AND VALUATION FOR US LIFE INSURERS

Understanding and managing risk

There is unprecedented demand for life insurers to understand the risks inherent in their portfolio of business. Products continue to grow in complexity, and regulators continue pushing towards more advanced model-based reserving approaches. Sound financial models that accurately reflect the features and risks of the insurance business have never been more important.

The Prophet US Life and Annuity360 Library is central to FIS' Prophet risk solution for life insurers in the US, and contains the actuarial code required for valuing and modeling all the main products and features common in the US marketplace.

The library is designed to be included in fully dynamic runs, allowing for a complete ALM model to be projected when used in conjunction with Prophet's Asset Liability Strategy Library, thereby reflecting the realistic interaction between assets and liabilities. Stochastic analysis is at the core of risk management for many insurance products, and the US Life and Annuity 360 library is designed to take advantage of Prophet's robust stochastic processing capabilities.

The US Life and Annuity 360 library also contains the latest regulatory changes to allow users to stay up to date in the ever- changing world of insurance valuation. Users can use the same model to report STAT, Tax, and GAAP reserves, as well as project out

those same reserves, reducing the need for multiple software platforms.

As with all Prophet libraries, the code and its structure are intuitive. Actuaries can quickly build, modify and extend their models using Prophet's own simple code, without the need for additional coding languages or skills. And because of its transparency, managers can readily understand what drives certain model results.

Key features

Product types

- Traditional life
- Flexible premium universal life
- Fixed premium universal life
- Equity indexed universal life
- Interest sensitive whole life
- Flexible premium variable universal life
- Fixed premium variable universal life
- Equity indexed annuities
- Fixed or variable deferred annuity
- Fixed or variable immediate annuity

Experience features

- All common mortality tables
- Withdrawals with any skewed incidence
- Taxation

General product features

- Regular or single premiums
- Level or non-level premiums
- Level or non-level death benefits
- Single life, joint life, or last-survivor
- Guarantees including GMDB, GMAB, GMIB and GMWB/GLWB
- Participating or non-participating
- Participating features
- Factor based dividends
- Formula based dividends
- Cash dividend option
- Reduce premium dividend option
- Accumulations dividend option
- Paid-up additions dividend option

Rider features

- Other insured (child, family)
- LTC rider on UL products
- Chronic care
- Accelerated death benefits
- Accidental death benefits
- Return of premium
- Waiver of premium (monthly deduct, specified premium, or plain waiver of premium)
- Estate protection
- First to die/second to die
- Dividend reinvestment riders (one year term, reduced paid up)
- Option to purchase paid up benefits
- Whole life/term additions

Participating features

- Factor based dividends
- Formula based dividends
- Cash dividend option
- Reduce premium dividend option
- Accumulations dividend option
- Paid-up additions dividend option

Valuation features

- Statutory reserves (including PBR calculations)
- Deficiency reserves

- All standard methods
- Reflect actuarial guidelines
- Tax reserves
- U.S. GAAP reserves
- FAS60
- FAS97
- FAS120
- FAS133
- FAS97LP

Reinsurance features

- Yearly Renewable Term (YRT) or Risk Premium Reinsurance
- Coinsurance
- Modified coinsurance

Goal seeking features

- Goal seeking to determine premium rates to achieve a predefined level of profitability

Valuation features

- Valuation code locked from user changes *
- Model point valuation outputs *
- Pre-built audit files
- Integration with projections allows calculation of reserves at future points in time
- Monthly releases for updates to valuation code *
- Regression testing on client products/cells *

* Features only available with vendor maintenance contract

Reporting features

- Standard pricing measures
- Statutory and GAAP financial reports
- Discounted profits, at three rates of discount
- Analysis of future surplus / margins

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.

About FIS' Prophet solution

The Prophet Solution from FIS™ 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.

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