TRAINING

MARKET VALUATION METHODS FOR LIFE INSURANCE.

How to apply the valuation techniques of modern financial economics to life insurance?
How to compare classical pricing of life insurance with market valuation?
How to look at a life insurance product in terms of embedded options?

Purpose

In the context of IAS norms and Solvency 2 requirements, modern valuation of life and pension contingencies is a crucial point. Instead of using classical and static tools for estimating liabilities (classical and deterministic first actuarial order basis), market consistent principles are to be used. In particular, options embedded in the products must be considered and are of first importance. But unfortunately, market prices are generally not observable for insurance products and life options. As a consequence, we have to adapt the marked to marked approach relevant in modern finance and move to a marked to model technique with the main constraint of staying nevertheless as consistent as possible with market principles.

The purpose of the seminar is to present basic principles of such modern valuation methods especially designed for life insurance.
A special focus will be made on the estimation of the main financial options embedded in a life insurance and a pension plan (bonus option, surrender option, switching options…).

Trainer

Pierre Devolder has a Master's degree in Mathematics, a Master's degree in Actuarial Science and a PhD degree in Mathematics (ULB). He worked for more than 20 years in the insurance industry as well as having various academic positions in Belgium and abroad. Since 2003 he is president of the Institute of Actuarial Science of UCL. He is professor of finance and pensions and specialized in the study of financial risk and its influence on the valuation of insurance products. He is founder and chairman of the board of Reacfin SA

Pre requisite knowledge

- Good practice of life insurance products and principles
- Basic principle of options
- Basic knowledge in stochastic finance is highly recommended

Organisation

The workshop will take place on two days and will be held in English.
Exercise with computer (Excel) will be organized. Participants are invited to take a laptop with them.

Program

Introduction

Part 1: Basic tools

- Classical valuation of Life insurance
- Financial products
- Risk neutral valuation and deflators in finance
- A first optional view of life insurance

Part 2: Classical life insurance with participation

- A first discrete model
- General valuation of bonus
- Surrender options
- Solvency requirements

Part 3: Unit-linked insurance products

- Basic principles of unit linked
- A first discrete model
- Maturity options
- Lookback options
- Switching options

Part 4: Fair value and stochastic interest rates

- Stochastic models of interest rates
- Option valuation under stochastic interest rates
- Valuation of life insurance with participation under stochastic interest rates

Information

Location: Hôtel Mercure - Boulevard de Lauzelle 61 B-1348 LOUVAIN LA NEUVE
Date: Friday 20th March (1st day) and 27th March (second day) between 9:00 and 17:00
Language: English
Costs: 1.800€ VAT excluded for both days. A discount of 150€ VAT excluded will be granted for each registration received before 20th February.

Registration form available on www.reacfin.com