

## Countering liabilities risk in life insurance

### Background

New discounting schemes for the liability risk in life insurance are introduced all over Europe. The old, fixed technical rate is then replaced by market discounting (known as fair values) based on interest rate curves. This frees us from an arbitrary, administratively set rate, but opens for considerable random fluctuations in pension valuations due to random fluctuations in the interest rate. If the pension follows the future development of the price level, inflation is another source of risk.

### Objective:

Firstly, to present fair value discounting, provide examples of the fluctuations that follow from this kind of valuation, and demonstrate how additional risk due to rising prices can be studied. Secondly, to discuss how these sources of error can be reduced by clever investment strategies.

### Material:

Section 3 and 6 from Chapter 15: “Integrating risk from many sources”, possibly also Section 5.

### Main points:

The presentation (45 minutes) should cover

- Fair value accounting
- Inflation modelling
- Computations run on two artificial portfolios with different duration. Net assets, taking investments into account, should be added. Strategies must then be chosen, for example in terms of equity and/or a suitable mix of bonds. A model for financial assets such as David Wilkie’s will then be needed. An R implementation is available on request.