

ECONOMIC SCENARIO GENERATOR AND APPLICATIONS

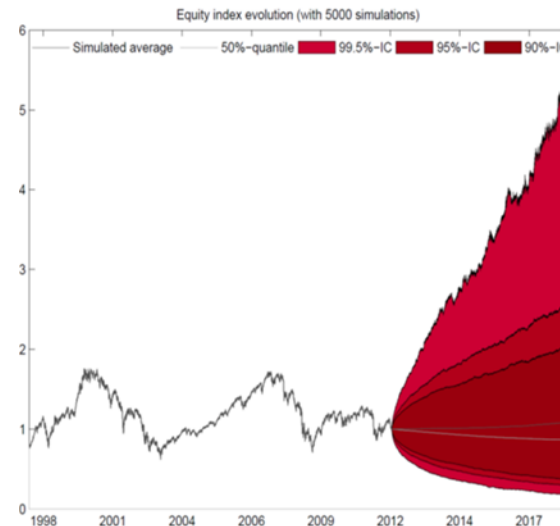
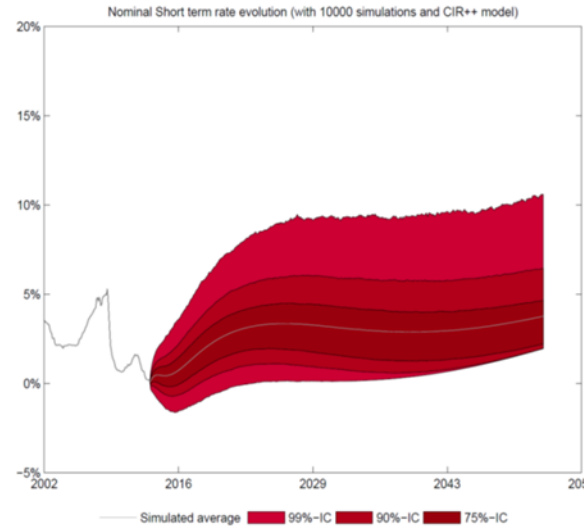
All dummy numbers & graphs for illustrative purposes only

Client Situation

- Large Belgian insurance group (in the BEL 20) : valuation of a quarterly reported complex asset/liability on the balance sheet
- Worker's compensation insurer : valuation of insurance liabilities
- Belgian Life insurer : development of a full ALM model
- Belgian Life insurer : valuation of structured products using Monte-Carlo techniques

Issues

- Provide market consistent and arbitrage-free pricing of asset/liability using Monte-Carlo techniques
- Provide potential future scenarios evolution of the economic and financial world for risk management purposes
- Provide sensitivities w.r.t. to several risk drivers



Reacfin Contribution

- Provide risk neutral or real world scenarios of main market risk drivers : interest rates, inflation, default and spreads, equity, real estate, ...
- Use of Stochastic Advanced market model (Heston, LMM, JLT,...) and their interdependence.
- Complete documentation on the models: methodology, calibration, simulations and testing
- Incorporation of the scenario outputs in the structure of your model
- Possibility to provide a simulation tool rather than scenarios

Results & Benefits

- Improved risks quantification & business considerations & Management
- Quantitative approach for dependences between risk drivers
- Accurate pricing of market products than with the usual interest rates model or than with the well-known Black & Scholes model
- Expert idea of the potential future scenarios evolution of the economic and financial world (+ stress tests) and their probability of occurrence.