**Top 8: Negative Interest Rate / Impact Of Low Interest Rate Environment**

- Impact possible rising interest rates could have on lapses

**21 September 2017**

**Copenhagen, IC meeting**

# Challenges Resulting from Rising interest Rates

1. Steepening of the yield curve can cause valuation concerns
2. Sudden increase might expose companies to increasing probability of lapses

1. What is the reason for valuation concerns?
    a. Local GAAP regulation
    b. Legal and contractual obligations
    c. Solvency II:
        i. Policyholder behaviour
        ii. Management actions
        iii. Hedging activities
        iv. Requirements from SII regulation: risk mitigation, loss absorbing capacity …

# Challenges Resulting from Rising interest Rates

1. Steepening of the yield curve can cause valuation concerns
2. Sudden increase might expose companies to increasing probability of lapses

<u>2. What is the reason for threats resulting from a sudden increase?</u>

a. Legal and contractual obligations
b. Policyholder options, e.g. surrender value
c. Local GAAP regulation
d. Fiscal regulation

# Challenges Resulting from Rising interest Rates - UK

Lapses linked to a rise in interest rates are not an issue in U.K. like they are in some mainland Europe markets.

# Challenges Resulting from Rising interest Rates - Finland

- The Finnish experience is that the problem could be policyholder behaviour. It is also true that the market is more and more becoming unit linked which decreases the possible impacts.
- When looking at policyholder behaviour it seems that it is now fairly well adapted to current economic reality. If interest rates would rise it would directly influence what individuals have to pay monthly for their mortgages (In Finland mortgages are to a very large extent floating rate which means rising interest rates would play a role quite quickly).
- In rising interest rates there would apparently be an expectation of higher wages, but this would not play an immediate role. Therefore if interest rates were to rise there would be lapses in policies and possibly also surrenders.
- Another thing is what rising interest rates would mean for the balance sheets of insurers – and here they differ from one another depending on the duration of their holdings.

# Challenges Resulting from rising interest Rates - France

**What is the reason for valuation concerns?**

The key factor is the modelling of policy behavior in Life Insurance.

The valuation models are mainly based on a difference between the discretionary participation rate and an asset market rate. Although economically credible, the definition of thresholds remains statistically unreliable due to a lack of data.

Given that a sudden rise of interest rates is a crisis scenario in Life Insurance, many insurers have considered it in their ORSA in addition to the mass lapse SCR. In that way, they defined Management Actions, among which:

- Selling equities
- Buying hedging assets such as caps

To be fully efficient, these management actions require to be applied during the shock. Thus, insurance companies need to define a process in which quick decisions can be made.

# Challenges Resulting from Rising interest Rates - France

**What is the reason for threats resulting from a sudden increase?**

The main risk associated with a sudden rise in interest rates is the occurrence of a massive lapse wave in Life Insurance requiring from insurance companies to sell bonds in loss and thus incur financial losses.

However, mitigating mechanisms exist in France:

- Fiscal regulation : advantageous taxation on realized gains prevents insurance companies from competition from banking products (new premium underwritten after the age of 70 have a higher tax rate for beneficiaries in case of death, surrenders in the first 8 years of the contracts have also a higher tax rate)
- Local GAAP regulation : profit sharing reserve and capitalisation reserve

Conversely, the context of low interest rate has led insurers to adapt their financial management in order to face with the dilution of the financial performance of their portfolios, for example:

- Moving towards more profitable but more risky securities such as HY corporate bonds
- Increasing the maturity of their reinvestment, and thus the duration of assets
- Maintaining an important share of stocks in their asset allocation

Added with the current policy of the ECB, which artificially reduced the market volatility, the probability of a combined shock scenario (interest rate, credit spreads, equity) is rising.

# Challenges Resulting from Rising interest Rates - France

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**<u>Why the situation differs in Europe according to the country?</u>**

The situation **<u>may not exist</u>** in some countries for the following reasons

- The insurance products that are sold or that remain in portfolio are unit-linked and no more euro guaranteed.
- There are no surrender values in the euro contracts (the contracts have fixed term or are used for pension).
- The duration of the euro contracts is very low (less than 4 years); The impact of an increase of rates has less weight as the yearly lapse rate is over 20% and the duration of assets is also short.
- The surrender value is reduced by the loss occurred when the insurer have to realized loss when selling bonds, or by the evolution of a bond index.

# Challenges Resulting from Rising interest Rates - France

The SAPIN II Law:

The law on transparency, the fight against corruption and the modernisation of economic life, the so-called "Sapin 2 Law", which came into force on 11 December 2016 in France, includes a series of measures intended to reinforce the regulation and stability of the financial sector, among which:

- Limiting surrenders of life insurance contracts in the event of “serious crisis” such as a sudden rise of interest rates.
- Controlling the yields of life insurance policies by giving the power to the High Council for Financial Stability (HCSF) to intervene in the rules on the creation and release of the profit sharing reserve.
- Reinforcing the powers of the National Supervisor (ACPR) in order to prevent the occurrence of crises liable to affect insurance companies

# Challenges Resulting from Rising interest Rates

## Why the situation is of great importance in Germany

Endowment policies and annuity policies with guaranteed interest rates and regular premium payment(!) still dominate portfolios of most life insurance companies.

Surrender values are guaranteed and based on technical provision calculated according to local GAAP. Only minor adjustments are possible.

Long duration of contracts and duration gap between assets and liabilities are constituting a risk.

Management has to make adequate decisions to reduce this risk.
Important determinants

- Age of contracts (higher guaranteed interest rates in the past),
- tax advantages for certain products,
- biometric protection constituted by disability riders

These have to be considered if policyholder behaviour is modelled

# Challenges Resulting from Sudden Increase in interest Rates

Several publications in Germany have tried to model the risk of a rise in interest rates.

**Interest rate risk of life insurers – evidence from accounting data**

Axel Möhlmann (2017)

(https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Discussion_Paper_1/2017/2017_05_15_dkp_10.pdf?__blob=publicationFile)

**Rising Interest Rates, Lapse Risk, and the Stability of Life Insurers**

Elia Berdin, Helmut Gründl, Christian Kubitza This version: July 2017

(http://www.icir.de/fileadmin/Documents/Research/Working_Papers/Berdin__Grundl__Kubitza__2017_07_.pdf)

**Lethal lapses - how a positive interest rate shock might stress German life insurers**

Feodoria, M. and F□orstemann, T. (2015).

(https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Discussion_Paper_1/2015/2015_06_22_dkp_12.pdf?__blob=publicationFile)

# Challenges Resulting from Sudden Increase in interest Rates

These studies from Bundesbank or ICIR have been (or will be) analysed by DAV and discussed with the authors.

The models and the publication are analysing a real risk for the life insurance undertakings.

They are too simple to model management actions, portfolio structure and policyholder behaviour. This leads to an overestimation of the risk exposure of undertakings.

Results are quoted in financial stability report.

DAV will contact the authors to discuss such not considered issues and the consequences concerning the results.

We need further investigation concerning this issue.

# Challenges Resulting from Rising interest Rates

- How do you want to proceed?
- What would be of interest for a discussion with EIOPA or politicians?
  - In this way, we should answer to these questions:
    - Is the current Solvency II framework adapted to post-shock situation : standard calibration of Lapse mass risk, new risk(s) not included in Standard Formula?
    - Are the recovery plan, finance scheme and supervisory powers adapted to post-shock situation?
    - How the current low interest rate context increase the sensitivity of insurers to a sudden rise of interest rates?
- If further work is needed - who should be in charge for this task?

# ECB Financial stability review May 2017

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**A sharp and unexpected rise in interest rates triggered by a shift in risk premia could, however, have a detrimental impact on insurers.**

Such an abrupt repricing could stem from political uncertainty leading to higher credit risk premia. In such a scenario, widening credit spreads and mass rating migration could force some insurers to liquidate parts of their portfolios. The reason is that widening credit spreads and falling bond prices would reduce the value of insurers' assets and thus their available operating capital. At the same time, credit rating downgrades would increase the required solvency capital. Hence, in order to restore their solvency capital ratios, insurers would be forced to sell assets with a deteriorating credit quality. Moreover, defaults – should they occur – would trigger actual losses on insurers' balance sheets. The LTG measures under Solvency II, particularly the volatility and matching adjustments, were designed to mitigate the impact of widening credit spreads and, more generally, of short-term price movements on insurers' assets, especially if those are unrelated to default. However, their effectiveness under adverse market and economic shocks is yet to be tested in practice

https://www.ecb.europa.eu/pub/pdf/other/ecb.financialstabilityreview201705.en.pdf?60c526239a8ecb2b6a81cfedd898cc0d

# Deutsche Bundesbank
# ECB Financial stability review 2016

Three quotes (p.56, 57)

- *If interest rates rise above enterprise-specific critical levels, it is rational for policyholders to lapse their policies.*

- *The longer the maturity of fixed-income assets, the more sensitive their fair values become to an increase in interest rates. If interest rates were to rise above enterprise-specific critical levels, the fair value of investments would then drop to a level so low that the surrender values on aggregate would be underfunded. Looking beyond the benefits of having insurance cover against biometric risks, the loss of tax advantages and the cancellation fees, it would, in this case, be rational for policyholders to lapse their life insurance policies.*

- *From a financial stability perspective, the continued persistence of the low-interest-rate environment is presently the main source of threat. However, this is no reason to lose sight of the threat of a significant increase in interest rates, especially since it could be mitigated if surrender values were sensitive to interest rates.*

https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Financial_Stability_Review/2016_financial_stability_review.pdf?__blob=publicationFile