AAE Survey of the low interest rate environment

1) Introduction

The persistent low interest rate environment presents a major challenge to the insurance sector in Europe. All life insurers offering products with guaranteed interest rates or having such contracts in their portfolio are affected by this macro-economic situation. Moreover, Solvency II will come into force on 1st January 2016. The requirements of Solvency II already show positive effects on insurance undertakings and their portfolio of products, independently of the ongoing and necessary discussion of adequate valuation parameters.

Throughout Europe, actuaries check that the insurers are able to fulfil their obligations even in a period where capital markets offer low interest rates over long time. At the same time, in their capacity as actuarial function holders, they will help to see that the Solvency II requirements are met. Therefore, the umbrella organization of the actuarial associations in Europe, the AAE, has conducted a survey in its European member associations in order to examine the interplay of the low interest rate environment with the new Solvency II requirements.

In June 2015, we evaluated the first results from this survey and outlined a draft report (Appendix 1). At that time, our conclusions were based on the responses from fourteen actuarial associations. During the summer 2015, the feedback from seven more countries completed the picture (Appendix 2). However, the lessons we learnt from the first responses remain valid. This enabled us to get a deeper understanding of how low interest rates affect European insurance markets. To provide additional insight on some more detailed aspects, we selected a number of actuarial associations forming a representative cross-section and asked them for some additional information on their markets. The results from this second survey are presented in this document.

2) Results from the survey

a) Structure of business in European markets

For a better understanding of the facts presented in the following paragraphs, let us first recall some basic information on the business structure in the markets that participated in our second survey.

Comparing the average guaranteed interest in inforce business with the highest guaranteed interest rate in new business shows a very significant reduction of the interest rate level in all markets (Figure 1).

In all countries, there is a strong tendency towards new products compliant with Solvency II requirements. The guaranteed interest rates vary mostly between 0.5% and 2.0%. It is interesting to note that within the UK life insurance market, almost all new long-term savings business is unit linked, with no guaranteed growth rates and no guaranteed annuity rates at retirement. Also note that in Austria, the guaranteed interest will be 1.0% from 1st January 2016 on. Moreover, Denmark has seen up to 16% guaranteed interest rates in the 1970ies, but most of them have run out by now.

In the light of low interest rates, another quantity of interest is the proportion of single and regular premiums in new business (Figure 2) and the average term to maturity in inforce business (Figure 3).

Note that some values differ from the values that EIOPA published in its financial stability report for December 2015. This requires further clarification.

b) Different types of substantial interest rate guarantees

On closer inspection, there are basically eight types of substantial interest rate guarantees emerging within European markets:

Type 1 Substantial interest rate guarantees granted without possibility to change the terms and conditions of existing contracts

Type 2 Substantial interest rate guarantees granted without possibility to change the terms and conditions of existing contracts plus additional guarantees by options for business in force

Type 3 Substantial interest rate guarantees where, from the strictly legal point of view, the terms and conditions of existing contracts may be changed, without that this would be exercised in practice

Type 4 Substantial interest rate guarantees granted with possibility to change the terms and conditions of existing contracts in consideration of a floor, a criterion for depreciation etc.

Type 5 Substantial interest rate guarantees that can be changed within a supervisory process (last exit)

Type 6 Substantial interest rate guarantees backed by sponsor support (e.g. in pensions business)

Type 7 Substantial interest rate guarantees backed by other protection schemes (e.g. provided by the industry or by public authorities)

Type 8 No substantial interest rate guarantees are given.

We were interested in which type(s) of dominate(s) the business in the different markets (Figure 4).

c) Options

In most European markets, there are a number of options on the guaranteed interest rate which policyholders can execute unilaterally. Basically, there are four different types of options:

- Options on increasing premiums
- Options on premature surrender
- Options on prolongation of guarantees
- Options on conversion to annuities

The persistent low interest rates have different impact on the guarantees granted with above options (Figure 5). As a rule, these options are subject to a considerable pressure exerted by low interest rates.

d) Local GAAP mechanisms for reduction of interest rate risk

In some countries, there exist mechanisms in their local GAAP that require a reduction of interest rate risk. In Belgium for instance, there is the so called “knipperlichten” system that is calculated on the basis of the average rate of 10-year Belgian government bonds. Austrian life insurers calculate an additional reserve (“Zinszusatzrückstellung”) by a simplified formula given by their supervisor. German undertakings have to establish additional reserves (“Zinszusatzreserve”) for contracts with a guaranteed interest rate if that is higher than a reference rate. This reference rate is calculated as a ten years arithmetic average of a reference period of ten years of zero-coupon-Euro-swap rates with a duration of ten years. However, like in Austria, financing this additional reserve is a great challenge because of the unexpected dramatic decrease of the yields available from capital markets and as a direct implication of the reference rate. Undertakings may need to use hidden reserves in their assets to finance this additional expenditure.

e) LTG measures under Solvency II

Most countries follow Solvency II requirements in their local statutory accounting framework so that a divergence appears rather unlikely. In some countries, however, this may be possible as local accounting requires additional reserves without taking into account Solvency II transitional measures, see above. Therefore, it is an interesting question to ask which of the long term guarantee measures (volatility adjustment, matching adjustment, transitional measure on risk-free interest rate, transitional measure on technical provisions) will be used to a large extent as from 1st January 2016. Figure 6 provides some information on this.

f) Impact on capital investments and insurance payments

As a consequence of Solvency II requirements, life insurers will be focussing on safe and long-term investments for the non-hedged traditional business. As a consequence, with higher inflation rates in the future, investment performances and insurance payments could detach from this development.

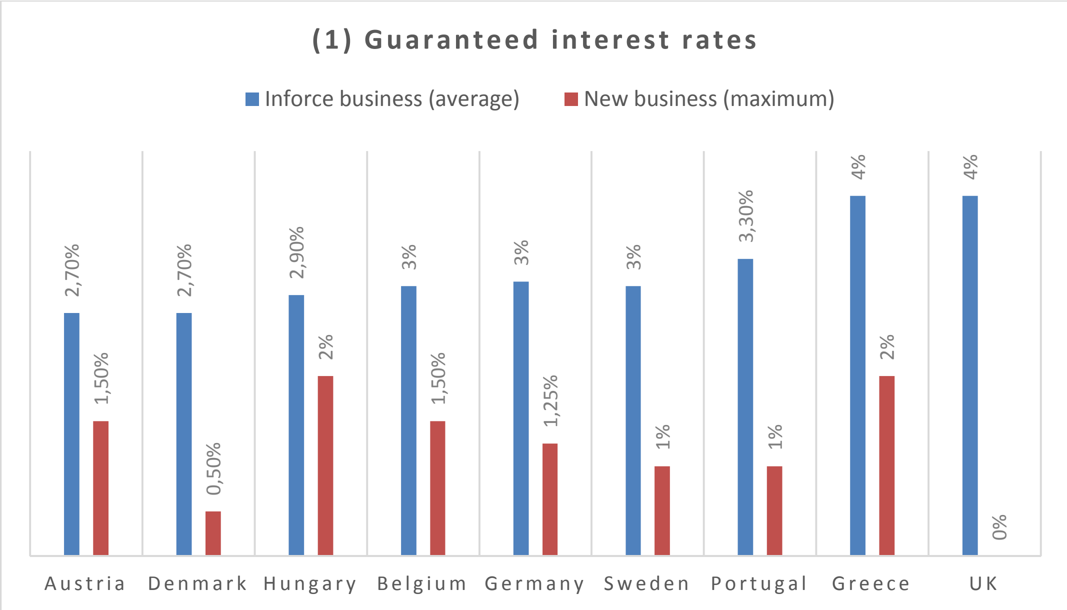
3) Conclusion

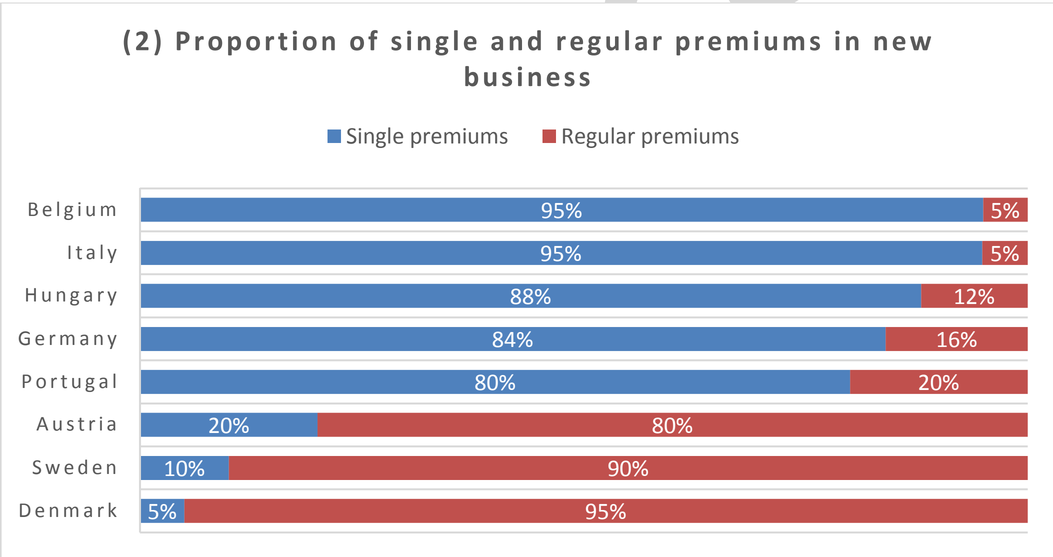
The persistent low interest rates have a discernible influence on life insurance markets. For new business, the markets seem to have learnt their lessons and show the necessary reactions. However, an argument not to increase the pressure resulting from valuation could result from acknowledging the absence of a deep, liquid and transparent market for long durations, and the liability driven investment strategy. A stable valuation requirement during this period of low interest rate would allow companies to improve their resilience under reliable conditions and would prevent from a proactive behaviour. Ongoing discussions on negative interest rates, the ultimate forward rate or the last liquid point could prove counterproductive in this context.

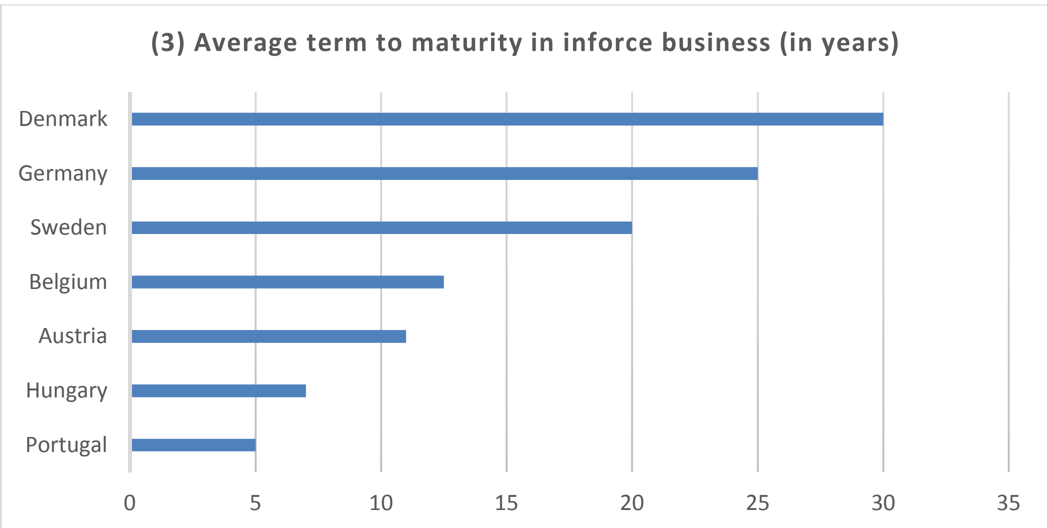
It is important to note that implicit options in insurance contracts could lead to a heavy burden. Moreover, low interest rates have important influences on the local GAAP an on the asset management. In particular, there appears to be a need for long-term assets providing attractive terms, e.g. infrastructure investments. These could ensure that policyholders benefit from real value developments in order to compensate for inflation.

Taking into account the specific situation of existing policyholders is one of the major contributions to consumer protection – an issue that both the supervisor and AAE want to focus in future.

Charts and tables







(4) Domination of substantial interest rate types in European markets

	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8
Austria		●						
Belgium	●							
Denmark					●			
Germany	●	●					●	
Greece		●						
Hungary	●							
Italy	●							
Portugal	●							
Sweden	●		●					●
UK								●

(5) Impact on persistent low interest rates on given options

	Options on increasing premiums	Options on premature surrender	Options on prolongation of guarantees	Options on conversion to annuities
Austria	●●●	●●●	○	◐
Belgium	○	◐	○	◐
Denmark	○	●●	◐	◐
Germany	●●●	●●●	○	◐
Greece	◐	●●	○	●
Hungary	●●	●	○	○
Italy	●●	●●	○	●
Portugal	●●	●●●	●	●●●
Sweden	●	●●	●	●

Impact of persistent low interest rates ● insignificant, ●● noticeable, ●●● important;
◐ Options exist only for part of the portfolio; ○ No such options

(6) LTG measures used to a large extend

	VA	MA	static TM	dynamic TM
Belgium	●		●	●
Denmark	●			
Germany	●		●	
Greece				●
Hungary	●		●	
Italy	●			
Portugal	●			
UK	●	●	●	●