Insurance Europe views on EIOPA's interest rate risk proposals

Summary

In its advice to the European Commission on specific items in the Solvency II Delegated Regulation, EIOPA provides an own initiative recommendation to change the modelling of interest rate risk in the standard formula. This paper explains why **the European Commission should reject EIOPA's recommendation for the 2018 Review and deal with this issue in the 2020 Review.**

- ***The 2020 Review is the only appropriate time to make changes to the interest rate SCR for technical and political reasons.***
- ***The proposed calibrations are extreme and exacerbate the existing problems and concerns for long-term business and investment.***
- ***There is no urgency to make a change now because Solvency II has sufficient conservatism and information through standard reporting and stress testing to ensure companies exposure to low interest rates are well understood and customers will be protected.***
- ***EIOPA's simplified impact assessment has a number of weaknesses and can significantly underestimate the impact of the proposed changes. A better assessment is required before a decision on such an important calibration can be made.***
- ***EIOPA's proposal to adopt a shifted approach goes in the right direction but is only one aspect of any changes to be made and further work is needed to ensure that the outcomes would be consistent with the calibration objectives of the framework. In particular, key issues such as calibration of the shift, whether or not there should be an floor on negative rates and how to do the extrapolation can only be finalised along with any changes to the VA and MA made as part of the 2020 Review***

Further details

The 2020 Review is the only appropriate time to make changes to the interest rate SCR for technical and political reasons.

How to correctly set discount rates to value liabilities so they would reflect the real economics and also ensure appropriate risk management was one of the fundamental issues of concern during the development of Solvency II. Significant concerns remain over the methods chosen and the damage that is being done to insurer's ability to continue and to develop their long-term business. The 2020 review will review this key aspect of Solvency II and examine key questions such as:

- Are the current adjustments to the risk free rate (VA and MA) suitably designed and calibrated to reflect the long-term business and avoid artificial volatility?
- Is the UFR methodology currently applied by EIOPA appropriate?
- Should the possibility of negative interest rates be capitalised for and if so, how should the floor be set?

It is not possible to separate the concerns and methodological issues relating to setting interest rates for valuing current liabilities and those for setting for the 1 in 200 stress scenario for the interest rates SCR calculation.

The Omnibus II compromise was agreed against the background of the current interest rate calibration. The long-term guarantee measures (LTG measures) agreed by the European legislators

would have been designed differently if the calibration for interest rate risk required capitalisation for extreme negative rate environments. It is inappropriate to make piecemeal changes to important parts of the framework where there is significant interlinkage with other important aspects and where the changes have such a significant impact on the industry.

Therefore the 2020 review is the only appropriate time to make changes to the interest rate SCR methodology and calibrations.

The proposed calibrations are extreme and exacerbate the existing problems and concerns for long-term business and investment.

Solvency II's existing approach to interest rates and interest rate risk is already very conservative and already creates significant issues for long-term business and therefore long-term investment. This is because it generally[1] requires insurance companies to value their liabilities under the assumption that their investments will only generate a near risk-free level of return.

They also have to assume that the current low interest rate environment will persist over the long-term and that the risk-free rate will stay low for the next 20 years[2]. These assumptions are overly pessimistic and completely unrealistic. For example, while Solvency II assumes as a base case that 10-year Euro risk free rate will be 1.3% in 2020, the ECB staff assumption of a ten-year Euro government bond is 1.9% in 2020.[3]

Insurers are not earning as high returns as in the past but are still earning significantly above risk free rates. Of course there is risk that insurer's investment returns could worsen but this is captured by the very significant capital charges for market risk.

This pessimistic view of the interest rate environment creates excessive provisioning for insurers in the baseline scenario. For a company that is in reality investing in a very safe AA-rated portfolio of bonds, the Solvency II approach will increase the value of liabilities by over 20% for a 20 year maturity portfolio relative to the real economics. This could be as large as 50% for a very long-term pension type product. This clearly makes it problematic to write such long-term business and is why the current methodology needs to be reviewed in the 2020 Review.

The interest rate risk stress scenario requires insurers to hold additional capital to cover the possibility that the baseline scenario deteriorates even further. EIOPAs proposed changes result in an extreme scenario which assumes interest rates stay negative on average until 2029. Aside from valid questions over whether or not this is appropriate or even possible scenario, the underlying assumption that insurers would invest all their assets at such negative rates is clearly unreasonable. Forcing companies to manage their business to cope with such assumed situations and investment behaviour would have a further very negative impact on their ability to continue to write long-term business.

There is no urgency to make a change now because Solvency II has sufficient conservatism and information through standard reporting and stress testing to ensure companies exposure to low interest rates are well understood and customers will be protected.

[1] Matching adjustment portfolios are an exception but represent only 15% of business. Transition measures do mitigate this problem but are by definition temporary and in order to qualify for their use companies have to prove they can cope with out transition measures over the long-term.

[2] For the Euro – other currencies have other periods eg sterling denominated liabilities it would be 50 years not 20 years.

[3] Page 4, March 2018 ECB staff macroeconomic projections for the euro area

There will be a need to examine and possibly change the interest rate SCR methodology and calibration along with the wider look at interest rate methodology in the 2020 Review. However, there is no prudential urgency to make changes now as part of the 2018 Review.

In addition to the pillar 1 capital requirements, insurers have to provide significant and detailed reporting as part of pillar 2 and pillar 3 of the Solvency II framework. The ORSA and RSR processes are available for supervisors to assess the resilience of individual insurance companies to further falls in interest rates and how companies plan to deal with such events. Similar information is also made public as part of an undertaking's SFCR.

Stress tests can, and are, also used by supervisors to assess the impact on the insurance industry of a prolonged period of low or negative interest rates. These stress tests have demonstrated the industry to be sufficiently resilient to significant interest rate shocks. For example, the EIOPA 2016 stress test exercise assessed the impact of a "low for long" scenario and showed that, even in this extreme interest rate scenario, the insurance industry could continue to meet its liabilities. A similar scenario, and outcome, is envisaged for the 2018 stress test exercise.

Therefore customers remain well protected.

EIOPA's simplified impact assessment has a number of weaknesses, can significantly underestimate the impact of the proposed changes. A better assessment is required before a decision on such an important calibration can be made.

EIOPA has only carried out a very simplified impact assessment which is not sufficiently robust to support a change of this magnitude. In particular:

- It has too narrow a scope and does not consider the consequences for policyholders or the wider economy.
- It does not consider the impact on other aspects of the SII framework eg. the transitional measures.
- It uses an unsuitable proxy methodology which underestimates the impact in non-euro currency markets, such as the Norwegian Krone and Swedish Krona.
- It uses simple rather than weighted averaging to aggregate the results which underestimates the impact at country level and EU-level.
- It does not provide a quantitative assessment of the additional capital requirements in monetary terms.

Even ignoring the underestimation inherent in the simplified impact assessment, EIOPA's analysis also recognises that many companies would experience reductions in solvency levels far higher than the average – for example EIOPA's analysis states that 10% of companies would experience a fall of 90 percentage points or more – something that could cause further unnecessary de-risking or worse and is not in the interests of their policyholders.

While a comprehensive and thorough impact assessment is required to ensure a full understanding, analysis from a number of companies across Europe supports our concerns that EIOPA's simplified impact assessment has significantly underestimated the impact of the proposed changes.

For example, one company has calculated that the EIOPA methodology underestimates the impact on its solvency position by 90% (the company analysis showed a drop of 71 percentage points whereas EIOPA's simplified methodology indicates a decrease of 37 percentage points). Similarly, at country level, one association has calculated that the use of a simple average underestimates the impact by around 50%.

Before such an important change is made a proper impact assessment is needed and should include:

1. An impact assessment which directly assesses the impact of the shifted approach (i.e. based on the same approach used by EIOPA in their assessment of their draft advice options) and including the cumulative impact of the proposals in conjunction with changes in the UFR.
2. Assessing the impact with and without transitional measures. This is very important because insurers using these measures have developed their capital management plans based upon the existing regulation. The increased capital requirements may result in non-compliance with the eligibility criteria and require significant reassessment of capital plans.
3. Assessing the impact on all interest rate markets ie non-euro currencies as well.
4. Consideration of the consequences of the proposed changes on the availability and pricing of products.
5. Consideration of the impact at different points in time, not only 31/12/2016, when the interest rate risks and asset/liability profiles will be different and thus the impact will be different.

The Appendix contains further explanation of the weaknesses with the simplified impact assessment and analysis from a range of companies.

EIOPA's proposal to adopt a shifted approach goes in the right directionbut is only one aspect of any changes to be made and further work is needed to ensure that the outcomes would be consistent with the calibration objectives of the framework. In particular, key issues such as calibration of the shift, whether or not there should be an floor on negative rates and how to do the extrapolation can only be finalised along with any changes to the VA and MA made as part of the 2020 Review.

EIOPA's proposed calibration of the shifted approach provides factor based stresses for both the liquid and extrapolated parts of the interest rate term structure. This assumes that in the stress scenario the illiquid part of the interest rate curve would be different to that which would be calculated using the Solvency II extrapolation methodology. It also assumes that the UFR could move by more than is stipulated in EIOPA's own UFR methodology.

These assumptions result in an overestimation of the true interest rate risk. They are also both clearly inconsistent with the key aspects of the Solvency II framework.

Further explanation of these issues and the additional work required to achieve a calibration consistent with the objectives of the Solvency II framework is included in the Appendix.

Appendix

Impact assessment

Insurance Europe does not believe that that the impact assessment provided by EIOPA is sufficiently robust in terms of scope, methodology or presentation of results to support its recommendation and calls on the Commission to undertake a full and comprehensive impact assessment for all currencies.

Analysis and anecdotal evidence from 9 markets raises significant concerns about the EIOPA proposal. Multiple insurers from across Europe have also provided a comparative analysis of the EIOPA simplified methodology and the true impact which is expected.

Scope

As a headline figure, EIOPA have estimated that the increased capital requirements for undertakings affected by the proposal will result in an estimated aggregate breach in the SCR of around EUR 150m.

From a simple regulatory point of view, it may appear that the proposals will not have a significant impact in terms of increased capital requirement.

However, the proposed changes will clearly result in the affected insurers performing significant capital raising for the following reasons.

1. EIOPA's assessment does not consider the consequential impact on insurers applying the transitional measures. These provide insurers with a period of 16 years over which to transition to the full Solvency II requirements subject to a set of eligibility criteria. Insurers using these measures have, correctly, developed their capital management plans based upon the existing regulation. The increased capital requirements may result in non-compliance with the eligibility criteria and require significant reassessment of capital plans.

2. EIOPA have also assessed that there will be no cost to policyholders from the implementation of the recommendations. However, it is difficult to see how such a significant change in capital requirements would not increase the shift to "capital-light" product offerings and/or impact the pricing and availability of products.

3. EIOPA's calculation assumes that insurers target an SCR ratio of 100%. In practice, insurers might have internal capital targets significantly above 100%. Any substantial increase in capital requirements because of changes to the regulation will require these insurers to plan for an increase back to their target levels.

Methodology

EIOPA's quantitative assessment is primarily based upon the results of a data request which assessed the impact of its two original proposals; Proposal A (the symmetric 200bp minimum shock) and Proposal B (the combined approach).

As the shifted approach was not included in the data request, EIOPA have linearly approximated its impact. The approximation linearly interpolates the impact of the existing calculation and the proposal B, using the 10-year tenor as a reference point. This estimates the impact of the shifted approach proposal to be c.66% of the impact of proposal B.

For some markets with relatively high interest rates, this methodology does not correctly capture the differential between Proposal B and the shifted approach or the typical asset and liability profiles of the life insurance sector of these markets.

Other companies have provided analysis which further questions the effectiveness of the proxy methodology to calculate the impact.

Comparison of shifted approach impact on solvency levels – EIOPA proxy vs. true impact

Insurer	EIOPA proxy*	True impact
A	-17%	-29%
B	-18%	-28%
C	-73%	-83%
D	-37%	-71%
E	-29%	-40%
F	-24%	-41%
G	-19%	-30%
H	-57%	-58%
I	-38%	-63%

*** some figures are estimates**

Presentation of results

In addition to the assessment of the level of the capital breach, EIOPA have provided details of the average impact, both at country level (on an anonymous basis) and at European level.

EIOPA claim that the average impact for life insurance undertakings at EU level will be a reduction of 14 percentage points in their SCR ratio. However, the use of simple averaging to derive this figure results in an underestimation of the true impact. This is because the use of simple averaging betrays the fact that it is generally the larger markets (with more insurers) which are relatively more affected by the proposals.

EIOPA's 14% figure is also inconsistent with its subsequent analysis which provides the impact based on different percentiles[4]. Using these figures, it can be shown that the absolute minimum average EU impact could be is 18%. The true average impact will be greater than this.

This calculation approach will have also created discrepancies at country level where a weighted averaging approach should have been used. The analysis carried out by one national association shows that the use of a simple average underestimates the impact by around 50%.

Furthermore, EIOPA have not quantified this drop in the SCR ratio in terms of the actual amount of capital, neither by country nor in aggregate. This figure is necessary to fully understand the impact this proposal will have on the insurance sector and consequently the wider economy.

Further work needed on the calibration of shifted approach

Insurance Europe supports further investigation and formal consultation on the shifted approach. In particular on the following issues:

Post-shock extrapolation of the risk-free curve

EIOPA's proposal is to calculate all tenors of the stressed risk-free curve using a relative shift, ie applying the parameters to both the liquid and illiquid part of the curve.

EIOPA's proposal is economically incorrect and creates an inconsistency with the calculation of the liabilities. Should a 1 in 200-year stress materialise, only the liquid part of the curve would be affected. The illiquid part of the curve would then be derived using the extrapolation methodology. Therefore, the proposed stress scenario is not possible in reality.

All the main stakeholders who responded to the EIOPA consultation support an interest rate risk methodology which is consistent with the valuation of liabilities and determines the illiquid part of the stressed curve through extrapolation.

[4] Page 481 of EIOPA advice

A post-shock extrapolation methodology is permitted for internal model firms under Article 121 (2) of the Solvency II Directive which states that methods used are "consistent with the calculation of technical provisions". This effectively requires internal model users to extrapolate the illiquid part of the post-shock interest rate curve.

Calibration

EIOPA's proposed calibration of the relative shifted approach is overly prudent and requires further consideration.

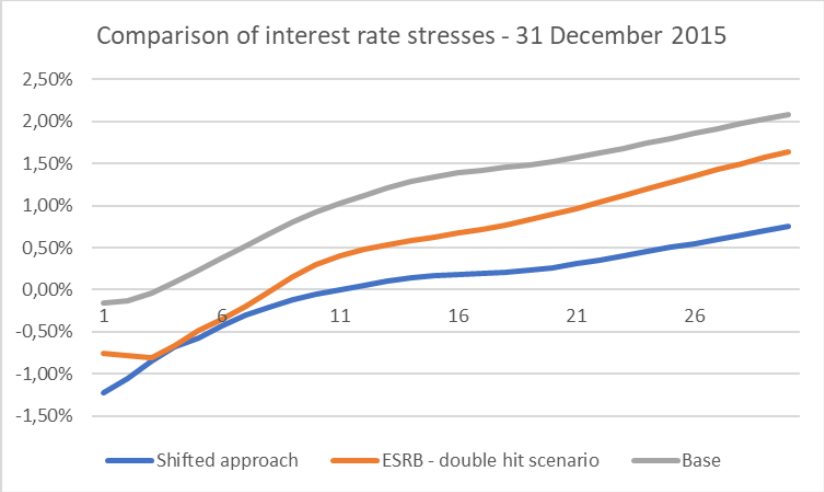
The proposed calibration is also inconsistent with the design of the Ultimate Forward Rate (UFR). EIOPA's recent advice to the EC advised that the UFR should be updated to reflect changing market conditions but should only vary by a maximum of 15 basis points per annum. Analysis of the stress curves provided by the EIOPA's shifted approach shows that the average "UFR" rate in the stress curves varies by between 35-55 basis points[5].

EIOPA has calibrated the stresses based on each individual tenor of the term structure. The probability of a simultaneous decrease of all tenors is much lower than the 0.5% probability of the decreases in the individual tenors. Therefore, the downward risk of all tenors decreasing is inevitably overestimated; a fact demonstrated by EIOPA's multivariate testing[6] which shows the historical probability of the entire stressed term structure not breaching the observed term structure one year later to be significantly in lower than the 0.5% probability level required by the SII framework.

The stress factors were also calibrated based on euro rates. This results in an over calibration for some non-euro markets such as the Norwegian Krone and Swedish Krona. Back-testing of EIOPA's proposal, provided by Finance Norway, shows that EIOPA's proposed interest rate down stress appears to overestimate the likelihood of large downward interest rate moves on the Basic RFR curve from current levels, both for maturities in EUR over 20 years, maturities in SEK over 10 years, and for all maturities in NOK[7].

A comparison of EIOPA's proposal with a calibration of a 1 in 200-year shock provided by the ESRB further demonstrates its conservativeness. The chart below shows the comparison of the down stress curve generated by EIOPA's proposal along with the down stress curve provided by the ESRB as part of the 2016 stress test exercise.

[5] The "UFR" rates in the stress curve are not constant. The variation is calculated as the average of the difference between the pre-stress UFR (ie 4.2%) and the forward rates for 60-120 year tenors.
[6] Annex to chapter 7 – Multivariate testing against historic data
[7] See attached technical paper, Finance Norway Technical paper on Shifted approach



Market risk correlations

Interest rate risk is a significant driver of overall market risk for a large number of undertakings. An event which is considered significant enough to justify its recalibration should also be significant enough to justify the recalibration of the correlation matrix for market risk.