EIOPA Consultation Paper on the Opinion on the 2020 review of Solvency II

LTG Measures: extrapolation of the risk-free rate term structure

In October 2019, EIOPA published a consultation paper on its opinion on the Solvency II 2020 review. This briefing note summarises the section of the consultation paper on the extrapolation of the risk-free rate term structure. EIOPA has requested stakeholders to provide feedback on this consultation paper by 15 January 2020.

Overview

On 11 February 2019, the European Commission (**EC**) issued a formal Call for Advice[1] to the European Insurance and Occupational Pensions Authority (**EIOPA**) on the review of the Solvency II Directive. This relates to the full review of the Solvency II rules required by the end of 2020 (**2020 Review**) as required by the Solvency II Directive.

On 25 June 2019 EIOPA published a first wave of consultation papers on its proposals for the 2020 Review regarding supervisory reporting and public disclosure and Insurance Guarantee Schemes. Milliman has written briefing notes on each of these papers (available here).

On 15 October 2019 EIOPA issued a second wave of consultation entitled “Consultation Paper on the Opinion on the 2020 review of Solvency II” (the **CP**). This was accompanied by an impact assessment document including an assessment of the combined impact of the proposed changes. The CP is 878 pages long and covers a wide range of topics as follows:

- Long-Term Guarantee (**LTG**) and equity risk measures
- Technical Provisions (**TPs**)
- Own Funds
- Solvency Capital Requirement (**SCR**)
- Minimum Capital Requirement (**MCR**)
- Reporting and disclosure
- Proportionality
- Group supervision
- Freedom to provide Services (**FoS**) and Freedom of Establishment (**FoE**)
- Macroprudential policy
- Recovery and resolution
- Fit and proper requirements

Milliman has produced a briefing note giving a summary of EIOPA’s proposals in the CP (available here) and separate briefing notes covering each of these topics in more detail.

This briefing note covers the extrapolation of the risk-free rate term structure under the LTG and equity risk measures.[2]

Extrapolation – Highlights

Potential rule changes are being proposed with the aim of mitigating the risk of underestimation of TPs and avoiding inappropriate risk management incentives brought on by a mismatch between TPs and a fully market consistent value of liabilities. The impact on the stability of solvency positions and macroeconomic financial stability are also important considerations.

Whilst EIOPA acknowledges there are conflicting objectives in setting an extrapolation approach, particularly with regards to market consistency versus stability of the interest rate term structure, it states that making no change to the current extrapolation approach would result in the following:

- Underestimation of TPs, undermining policyholder protection
- Inappropriate incentives for risk management
- Continuation of current supervisory concerns on the long-term viability of (re)insurers providing insurance guarantees beyond 20 year duration

PILLAR 1 PROPOSALS

EIOPA is consulting on a possible change to extend the starting point for the extrapolation of risk-free interest rates for the Euro i.e. extending the Last Liquid Point (**LLP**) from 20 years currently to 30 years or 50 years.

EIOPA is also consulting on a possible change to the extrapolation methodology that would take into account market information beyond the LLP.

These options are being considered as mutually exclusive approaches. Ultimately, EIOPA has not appeared to endorse any particular option at this point.

[1] Formal request to EIOPA for technical advice on the review of the Solvency II Directive

[2] Earlier in 2019 we also published a detailed research paper on the extrapolation of the risk-free rate curve

EIOPA also proposes to change the LLP for certain non-Euro currencies in light of its updated assessment of the depth, liquidity and transparency of the swap and bond markets in those currencies.

PILLAR 2 PROPOSALS

EIOPA proposes that National Supervisory Authorities (**NSAs**) have the power to limit or prevent dividend payments or capital distributions where it is shown that a move to a more market-consistent extrapolation would put a (re)insurer in financial difficulty.

PILLAR 3 PROPOSALS

It is proposed that the Regular Supervisory Report (**RSR**) and the Solvency Financial Condition Report (**SFCR**) show the impact of sensitivities in relation to changes in the LLP and the Ultimate Forward Rate (**UFR**).

Background to the proposals to change extrapolation of the risk-free rate

The market-consistent valuation principle is fundamental to Solvency II. On this basis, undertakings must value their liabilities using discount rates implied by market-based risk-free interest rates. Nonetheless, beyond the LLP the specification of the risk-free interest rate term structure for each currency is based on an extrapolation to the UFR.

EIOPA is charged with setting the risk-free interest rate term structure on an ongoing basis. The three main components of the extrapolation methodology are the LLP, the UFR and the speed of convergence to the UFR. Since the outset of Solvency II in 2016, the LLP for the Euro currency has been set to a duration of 20 years, with convergence to the UFR over the following 40 years.

With continued low long-term market interest rates, pressure is mounting to lower the impact of non-market elements in the risk-free interest rate term structure i.e. to use discount rates more closely aligned to the underlying market-implied swap rates across the term structure.

The European Systemic Risk Board (**ESRB**) has called for the following changes to the Euro currency risk-free term structure:

- Increasing the LLP from 20 to 30 years.
- Extending the convergence period of the LLP to the UFR from 40 years to 100 years.
- Blending the extrapolated part of the curve partly with market data.

EC request to EIOPA

The February 2019 EC request to EIOPA called for a gathering of evidence on criteria to determine the LLP for all currencies in the EU. The EC set out its focus as being on ensuring stability of the LLP in different market situations, including market crisis situations and periods of increasing interest rates. EIOPA was asked to provide evidence on the value of the LLP against the following criteria:

- The depth, liquidity and transparency of swap and bond markets in each relevant currency.
- The ability of (re)insurers to match with bonds the cash flows which are discounted with non-extrapolated interest rates in a currency.
- For all relevant maturities, the cumulative value of bonds with maturities larger than or equal to that maturity in relation to the volume of bonds in the market.

Where EIOPA suggests changes to the LLP, it must provide an impact assessment on the volatility of (re)insurers' Own Funds and solvency coverage ratios, as well as on financial stability.

EIOPA's consultation

EIOPA notes that NSAs have not emphasised the need to reassess the current derivation of the UFR or the choice of the speed of convergence. Therefore, the consultation is focused on the LLP, particularly for the Euro.

EIOPA's consultation outlines a number of issues which are relevant for an assessment of the setting of the LLP for the Euro.

Issue 1 – Underestimation of TPs

In the current low interest rate environment, the difference between the UFR and the level of swap rates at the 20-year, 30-year or 50-year maturity is large, resulting in a large difference between the observed level of swap rates and the extrapolated rates. This raises the concern that the TPs are underestimated, as interest rates for long-term liabilities are discounted with interest rate assumptions which are too optimistic. In a situation where a transfer of liabilities is necessary (e.g. where a (re)insurer no longer complies with its SCR and/or MCR), EIOPA believes that this leads to the risk that TPs may not be sufficient to transfer the liabilities.

Issue 2 – Risk Management Incentives

Where the extrapolated risk-free interest rates differ from the market rates, (re)insurers need to decide whether to hedge the risk as it is reflected in their solvency balance sheet or to hedge the risk that actually exists in the financial markets.

Any deviation of the interest rate term structure used for the valuation of TPs from observable market prices may give the wrong incentives for adequate risk management.

EIOPA cites one NSA's concerns as an example. It was identified that ALM considerations and the resulting decisions are particularly relevant when the SCR ratio falls below a threshold i.e. after an SCR breach, a (re)insurer matching its liabilities beyond the LLP may be forced to reduce the amount of cash flow matching as this leads to higher regulatory Own Funds volatility and may thus further weaken its solvency position.

Issue 3 – Stability of Solvency Coverage Ratios and Financial Stability

EIOPA highlights two conflicting situations of relevance to considerations about stability of solvency coverage ratios:

- Where (re)insurers are closely matched for all maturities, a deviation of the interest rate curve for the valuation of TPs from market information increases the volatility of Own Funds.
- On the other hand, where (re)insurers have very long-term liabilities and are not closely matched with corresponding assets, an early start of the extrapolation increases the stability of TPs and Own Funds.

EIOPA also cites concerns that (re)insurers may exhibit pro-cyclical investment behaviour when interest rates fall i.e. (re)insurers buy long-term swaps in order to improve their matching and reduce their interest rate risk charge, putting further pressure on swap rates.

In view of these concerns, EIOPA then puts forward a number of proposals which are summarised in the following sections of this note. Ultimately, the extrapolation section of the consultation paper poses one question to stakeholders:

> *"What is your view on the options on the last liquid point for the Euro (including the alternative extrapolation method) set out in this section?"*

PILLAR 1 PROPOSALS

Firstly, it should be noted that EIOPA is already charged with making an assessment on an ongoing basis of the depth, liquidity and transparency of swap and bond markets (the 'DLT assessment') in forming a view about the LLP. Indeed, EIOPA is proposing changes to the LLP for some non-Euro currencies without needing any legislative changes under the 2020 Review. The following table summarises those proposals:

	Status quo on instruments used and LLP	DLT assessment implication
CHF	Swaps, LLP 25	New LLP 10
CZK	Swaps, LLP 15	New LLP 10
HUF	Government bonds, LLP 15	Change to swaps, new LLP 10
PLN	Government bonds, LLP 10	Change to swaps, LLP 10
RON	Government bonds, LLP 10	New LLP 15
USD	Swaps, LLP 50	New LLP 30

Table 1: EIOPA proposal for non-Euro currencies

The results of the DLT assessment for the Euro show that Euro swap rates are deep, liquid and transparent to up to a maturity of 50 years, and that the 30-year maturity is even more deep and liquid than the 20-year maturity.

Given this DLT assessment for the Euro, and to address the highlighted issues in the current extrapolation approach, EIOPA proposes the following five options:

Option 1: No change to the extrapolation approach.

Option 2: The LLP for the Euro stays at 20 years and additional safeguards are introduced in Pillar 2 (risk management) and Pillar 3 (reporting and disclosure).

Option 3: The LLP for the Euro is increased to 30 years, together with the introduction of the additional safeguards as under Option 2.

Option 4: The LLP for the Euro is increased to 50 years.

Option 5: An alternative extrapolation method is applied for the Euro as well as additional safeguards under Pillar 2 and 3. This option is also under consideration for non-Euro currencies.

The alternative extrapolation method will incorporate market data beyond the LLP. A DLT assessment will measure the reliability of data beyond the LLP, providing weight to the data included.

The impact of the proposed options on the interest rate term structure for the Euro is presented in the following graph:

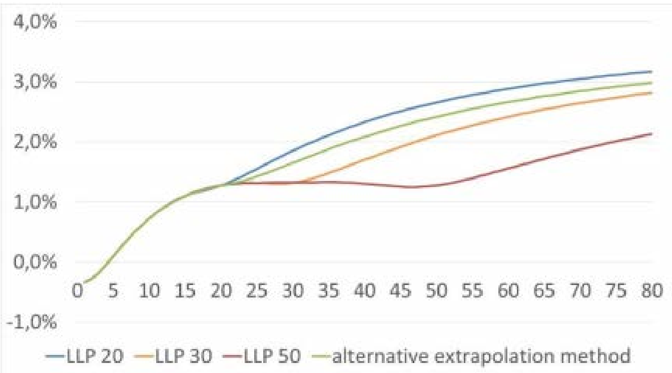

Figure 1: Spot rates at 31 December 2018 market conditions

The proposed changes would have a big financial effect on (re)insurers with exposure to long-duration, Eurozone liabilities, making it more difficult for firms to viably sell long-term insurance with guarantees at the market interest rate levels experienced in recent years.

EIOPA presents the impact of the proposed options on the solvency ratio of (re)insurers with long-term liabilities. The results of the analysis vary across countries, highlighting that Germany and the Netherlands experience the largest impact (decrease in solvency ratio) for each of options 1-4.

Applying Option 3 (LLP of 30 years), large reductions are observed in the average solvency ratios as at year-end 2018. For Germany, the average solvency ratio decreased from 457% to 347%, and in the Netherlands from 212% to 144%. For the other countries in the Euro area, the average impact is a decrease of 11% in the absolute solvency ratio.

EIOPA outlines how each of the options would address the issues in the current extrapolation and provides its assessment of the pros and cons of each option. EIOPA has not appeared to endorse any particular option at this point.

PILLAR 2 PROPOSALS

EIOPA proposes that where a more market-consistent extrapolation of the interest rate term structure results in a (re)insurer being unable to cover its SCR, the (re)insurer should be required to report to the NSA that any dividend payments or capital distributions made will not put the protection of policyholders at risk. The NSA would then have the power to limit or prevent dividend payments or capital distributions where necessary.

The proposal to potentially restrict dividend payments or capital distributions may prompt firms to reconsider the level of their solvency coverage ratio buffers.

PILLAR 3 PROPOSALS

EIOPA proposes that (re)insurers should be required to perform sensitivity analyses on an extension of the LLP for the Euro to 50 years and include the results in the RSR and the SFCR for transparency and to encourage market discipline.

It is also proposed that (re)insurers include within the SFCR a sensitivity analysis on the UFR used in the extrapolation of the risk-free interest rates. The sensitivity would show the impact on the TPs, SCR, MCR and Own Funds of a downward shift in the UFR of 100bps.

The proposed changes with regard to disclosure will increase the amount of work required in preparing a firm's SFCR.

The increased level of disclosure will be of benefit to different stakeholders, particularly the sensitivity analysis of the UFR which can have a material impact on the solvency coverage for some companies.

Milliman

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