MILLIMAN BRIEFING NOTE

Ultimate Forward Rate

Revised EIOPA methodology

Overview

On 4 April 2017 the European Insurance and Occupational Pensions Authority ("**EIOPA**") published its final decision on the methodology for the annual calculation of the Ultimate Forward Rate ("**UFR**") for each currency.

The UFR is used in the derivation of the discount rates used to calculate technical provisions for liabilities in the relevant currency.

For most currencies the UFR will reduce from 4.20% to 4.05% on 1 January 2018. The current UFRs will apply for solvency assessments as at 31 December 2017.

All other things being equal, a reduction in UFR will increase the technical provisions and the Solvency Capital Requirement ("**SCR**").

Milliman has prepared this summary of the key features of the final methodology and the changes made to proposals set out in Consultation Paper CP16/03 in April 2016 (link).

Background

The derivation of the UFRs that have been in use since 1 January 2016 was set out in a 2010 paper for the fifth Quantitative Impact Study ("**QIS5**") (link). This paper did not specify a methodology for use in future calculations of the UFRs.

Article 47 of the Delegated Regulation on Solvency II (link) requires that UFRs are determined in a transparent, prudent, reliable and objective manner that is consistent over time.

EIOPA's decision on the calculation methodology follows a public consultation triggered by the publication of the consultation paper "**CP16/03**" in April 2016 (link), and the completion of an impact analysis.

Four documents have been published:

- The specification of the methodology used to derive the UFR (link);
- The calculation of the UFRs that will apply from 1 January for 2018 (link);
- The results of the impact analysis of changes to the UFR (link); and,
- Responses to questions received during the consultation period (link).

Methodology

For each currency a "**Target UFR**" will be calculated each year and compared to the existing UFR (the "**Old UFR**").

- If the Target UFR is within 0.15% of the Old UFR then there will be no change in UFR (i.e. the "New UFR" is set equal to the Old UFR).
- If the Target UFR is higher than the Old UFR by at least 0.15% then the New UFR will be set equal to the Old UFR + 0.15%.
- If the Target UFR is lower than the Old UFR by at least 0.15% then the New UFR will be set equal to the Old UFR - 0.15%.

The New UFRs will be announced each year by the end of March, and will be applied from 1 January of the following year.[1]

Each Target UFR is to be calculated as the sum of the **expected real rate** (which is the same for every currency) and a country specific **expected inflation rate**.

EXPECTED REAL RATE

The expected real rate is calculated as the unweighted average of the annual real rates of interest observed since 1961.

The observed annual real rates of interest are calculated as the average of the rates for Belgium, Germany, France, Italy, the Netherlands, the UK and the US.

CP16/03 had proposed a weighted average, with greater weight given to more recently observed rates, which have been negative since 2010.

Using an unweighted average will slow the downward trend in the average that will result if future rates are low or negative.

EXPECTED INFLATION RATE

Expected inflation rates are based on the inflation target set by the relevant central bank for each currency.

- 1% is used where the target is less than or equal to 1%.
- 2% is used where the target lies between 1% and 3%.
- 3% is used where the target is greater than or equal to 3% and less than 4%.
- 4% is used where the target exceeds 4%.

[1] CP16/03 originally proposed that any changes to UFRs would be reflected in June of the same calendar year and thereafter.

Where an inflation target is not set for a particular currency the default rate is 2%. A different rate may be used if both past inflation experience (measured as the average of the annual rates applying over 10 years) and projected future inflation rates indicate that the long-term annual rate is expected to be at least 3%, or not more than 1%.

For the majority of currencies, including sterling and the euro, the Target UFR is 3.65% for 2017[2]. However, due to the 0.15% cap, the UFR will only reduce to 4.05% for these countries from 1 January 2018.

A minimum threshold and cap on annual changes to UFRs of 0.2% was proposed in CP16/03. The impact analysis published by EIOPA indicates that a reduction of 0.2% would have had a small impact on the average SCR ratios calculated for each country at 31 December 2016.

However, the adoption of 0.15%, rather than 0.2%, and the other changes to the original proposals, suggest that consideration of average SCR ratios may not give the full picture.

EIOPA Impact Analysis

The analysis considers the impact of a 0.2% ("**Scenario 1**") or a 0.5% ("**Scenario 2**") reduction in the UFRs on the solvency position of 336 insurance and reinsurance undertakings at 31 December 2016.

Averaged across all 336 undertakings:

- Technical provisions increased by 0.10% under Scenario 1 and by 0.24% under Scenario 2.
- Own funds eligible to cover the SCR reduced by 0.6% under Scenario 1 and by 1.5% under Scenario 2.
- The SCR ratio reduced from 203% to 201% under Scenario 1 and to 198% under Scenario 2.

The countries for which the average SCR ratio had the largest relative decrease under Scenario 1 were:

- Netherlands (-3.7%);
- Germany (-2.4%);
- Austria (-1.6%);
- Norway (-1.4%);
- Poland (-1.3%); and
- France (-1.0%).

The average change across all countries was a decrease in the SCR of 1.0% ((203% - 201%) / 203%).

For Ireland, the average SCR ratio of 152% was unchanged in Scenario 1 and reduced to 151% in Scenario 2.

There was no change under either scenario to the average SCR ratio calculated for the UK.

Under the EIOPA methodology for deriving yield curves, risk-free interest rates are extrapolated to the UFR after the last liquid point. This point is 50 years for the UK, but 20 years for many European countries. As a result, the euro yield curve starts moving upwards to the UFR much earlier than the GBP yield curve.

The effect on technical provisions of a 0.15% decrease in the UFR, and hence SCR ratios, for GBP denominated liabilities is therefore small.

[2] This is calculated from annual real rates of interest from 1961 to 2016 (which have an unweighted average of 1.65% after rounding), and data on inflation targets sourced on 6 and 7 March 2017.

How Milliman Can Help

Our consultants have been involved in advising our clients on Solvency II issues since its conception. We have undertaken a range of work for clients across all three pillars of Solvency II. Our services include:

- Independent review of Solvency II balance sheet, technical provisions and SCR;
- Independent review and gap analysis of Solvency II requirements;
- Preparation and review of SFCR and RSR;
- Independent review of QRTs;
- Solvency II training.

Milliman also has a range of software available to support companies in the ongoing Solvency II requirements including:

- Solvency II Compliance Assessment Tool (link)
- Milliman Star Solutions - Vega®: An automated Pillar 3 reporting and standard formula aggregation system (link)
- Milliman Star Solutions - Navi®: A liability proxy modelling tool (link)

As a result, we have a wide range of experience that can be brought to bear to benefit your business.

Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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