CRO Forum perspective on the Solvency II risk margin

I. Background

By industry consent, the risk margin is far too high and too volatile, and work undertaken by the CRO Forum ("CROF") as far back as 2008[1] has supported the view. This is an important issue for (re)insurance undertakings across EEA jurisdictions – for the entire industry, according to EIOPA figures, the total risk margin was c. €190bn in Q1 2020[2], significantly reducing insurers' capacity to take on risks and invest in the economy in addition to being a significant and inappropriate source of balance sheet volatility.

As part of the 2018 Solvency II Standard Formula review, the European Commission ("the Commission") asked EIOPA to also review the Risk Margin. However, EIOPA chose to conduct a very narrowly focussed review, only considering the CoC rate. During the consultation response, the CROF put forward a number of arguments supporting a reduction in the CoC rate from the current 6% to 3%, a position which was supported across industry. In its final advice to the Commission however, EIOPA proposed no change to the CoC rate and so this was left unchanged.

For the 2020 Solvency II review, the Commission has asked EIOPA to assess the appropriateness of the risk margin, without challenging the approach based on the cost of capital. In its initial advice, EIOPA proposed no changes should be made to the Risk Margin. During the initial consultation phase, the CROF and wider industry argued for a reduction in the CoC rate, allowance for group diversification in the Risk Margin calculation, and the introduction of a lambda parameter which reduced future projected SCRs. Following this, EIOPA introduced a lambda parameter in its March 2020 holistic impact assessment exercise, together with a floor (in bold below):

$$RM = CoC \cdot \sum_{t\geq 0} \frac{SCR(t)\cdot \boldsymbol{max}\left(\boldsymbol{\lambda^t}, \mathbf{0.5}\right)}{\left(1+r(t+1)\right)^{t+1}}, \text{ where } \lambda = 0.975, \text{ and } CoC = 0.06.$$

While EIOPA's introduction of the lambda parameter and acknowledgement that the risk margin is too high and volatile, particularly for long-term business, is a positive development which the CROF welcomes, EIOPA have not proposed any changes to the 6% CoC rate or proposed changes to allow for group diversification. In addition, no justification has been provided for the proposed value of 0.975 for lambda. We consider this to be too high as its impact on the risk margin is minimal and therefore the magnitude of the change is not sufficient to address the issues around the risk margin's excessive size and volatility[3]. Furthermore, no justification for the imposition of an arbitrary floor of 0.5 has been provided.

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[1] Chief Risk Officer Forum, "Market Value of Liabilities for Insurance Firms", July 2008.

[2] Source: EIOPA Insurance statistics for solo entities (link).

[3] For example, a high lambda can imply that a cost-of-capital rate is being charged on capital required to fund a building being destroyed more than once, or policyholders lapsing more than once, which is clearly not possible. Similarly, for very long life and health products, such as pensions and annuities, a lambda close to one

It is noteworthy that, for some long-dated portfolios the impact on the risk margin alone due to changes introduced to the extrapolation methodology for interest rates more than offsets the impact from the introduction of the lambda parameter with the floor - resulting in a net increase in the risk margin. In all therefore, EIOPA's proposed changes do not go far enough. Specifically:

- The cost-of-capital rate used is too high
- The lambda parameter and floor are too high
- There is no allowance for diversification

Correcting for these flaws could release more than **€100bn** of capital that will ultimately serve society and the economy better.

II. Consideration of EIOPA's proposed update to the Risk Margin calculation

As discussed above, EIOPA have responded to industry feedback during the initial consultation phase to introduce a lambda parameter in the March 2020 holistic impact assessment exercise, together with a floor:

$$RM = CoC \cdot \sum_{t \geq 0} \frac{SCR(t) \cdot \boldsymbol{max}(\boldsymbol{\lambda^t}, \mathbf{0.5})}{(1+r(t+1))^{t+1}}, \text{ where } \lambda = 0.975, \text{ and } CoC = 0.06.$$

The cost of capital approach to calculate a risk margin is an attempt to approximate as closely as possible an amount necessary to determine a market or transfer value. It is effectively the best estimate of the cost of the non-hedgeable risks where the best estimate liabilities already capture the costs of the hedgeable risks. Therefore, it is essential that the risk margin does not harbour any prudence in its calculation in line with the best estimate liabilities. Any prudence in the Solvency II framework should be captured via the SCR calibrated at a 99.5th percentile, not in the valuation.

While the introduction of the lambda parameter is a welcome development, a number of issues remain with EIOPA's proposed update to the Risk Margin formula that harbour the risk of adding additional prudence in the calculation resulting in a too high and too volatile risk margin. This section summarises the main issues which still need to be resolved in order to bring the level of the Risk Margin to more appropriate and manageable levels. We would note that the volatility issue is amplified by any prudence that is already embedded in the calculation elsewhere – and hence amendments which reduce the Risk Margin should also mitigate against undue volatility.

Cost-of-capital rate

The level of the cost of capital, currently set at 6%, was already highlighted by the CROF and wider industry, as part of the Solvency II 2018 Standard Formula review, as being excessive for the purposes of setting the Solvency II Risk Margin. There are a number of flaws in EIOPA's derivation of this which mean that it is too high and inconsistent with Solvency II specifications:

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can be shown to imply a cost-of-capital being charged on more capital than is needed to fund all policyholders living for ever. Significantly lower levels of lambda would be required to avoid such perverse outcomes.

- It uses the wrong assumptions: It does not reflect the capital structure of insurance companies (assuming only equity funding and ignoring bond financing). It is therefore not a true cost-of-capital measure: the cost-of-capital rate of 6% is based on a cost of equity, and not a weighted average cost of capital ("WACC"), which is lower – the current SII cost-of-capital rate makes no allowance for this. The WACC can either be calculated explicitly, or through the use of an unlevered beta, which corresponds to the estimated beta of companies if they were to hold no debt, and therefore corresponds to an estimate of the WACC.
- It incorrectly captures asset risk: the reference undertaking is closed to new business and is not assumed to hold any risky assets. Therefore, any estimate of the cost-of-capital rate should be adjusted downwards to reflect this. However, the current SII cost-of-capital rate does not make full allowance for this. In particular, no allowance has been made for the fact that asset risk is a significant contributor to equity return volatility for insurance corporations and so, by making no allowance for this, the Solvency II cost-of-capital rate, which is meant to capture only pure insurance risks, is biased upwards.
- It is backward, not forward-looking: use of backward-looking risk premiums results in an upward bias since firms which fail leave the index and hence the impact of this is not captured – leading to an upward bias in estimated returns. Forward-looking estimates are therefore more consistent with both SII regulations and a range of expert studies – which support at least a 2% downward adjustment to take account of these effects.

The cost-of-capital rate should be forward-looking and reflect pure insurance risk only as well as the funding structure of insurance companies

Calibration of lambda parameter

The introduction of the lambda parameter into the Risk Margin is a welcome development. However, EIOPA have not justified the level of 0.975 that they are proposing for lambda, which is too high and does not appropriately reflect the evolution of risks over time. In addition, the imposition of an arbitrary floor of 0.5 has not been justified and reduces the effectiveness of the proposal to reduce balance sheet volatility.

If the lambda parameter and floor are set inappropriately, they will not recognise the risk dependence over time inherent in insurance products. For example, in the case of lapses, exposure significantly reduces after a lapse stress while for some multi-year general insurance products maximum payout clauses would reduce future SCRs following the occurrence of an insured event.

Another way to consider the lambda parameter is that it introduces a time-dependent cost-of-capital rate that converges to a long-term value. For insurance risks, one would expect that this would tend towards zero as the market beta of insurance risk is close to zero, and any asymmetric information, requiring a premium, would dissipate over time[4]. The lambda parameter could then be calibrated by

[4] When a book of business is transferred, the transferring insurer will have more information over the nature of the risk than a third party acquiring the business, resulting in a premium in the form of a positive cost-of-capital rate. However, we would expect the informational asymmetry, at the point of transfer, over the nature of risk in subsequent years to decline – naturally leading to a reduction in the forward cost-of-capital rate.

considering the amount of time by which most of the asymmetric information premium (e.g. 95%) has dissipated.

On its own, the proposed value of 0.975 implies that, even after 100 years, a significant proportion of the premium due to information asymmetry remains, which does not appear reasonable. In addition, the imposition of an arbitrary floor in EIOPA's proposal means that the forward cost of capital rate would always remain highly positive, which is not aligned with the notion of diversifiable risks in an efficient market.

The high lambda and floor also limit the effectiveness of the lambda parameter to reduce inappropriate balance sheet volatility. For example, we estimate that for a 30-year product, EIOPA's parameterisations (lambda of 0.975 and a floor of 0.5) would only result in a c.20% reduction in volatility relative to the current risk margin regulations. On the other hand, a lambda of 0.9 with a floor of 0.5 would result in nearer a c. 40% reduction in volatility relative to the current risk margin and a lambda of 0.9 with no floor would result in a c. 55% reduction in volatility relative to the current risk margin, while a lambda of 0.8 with no floor would result in a c. 75% reduction in volatility relative to the current risk margin. Any action taken by EIOPA to improve the proposal would therefore be more effective if it addressed both areas.

The current level of the lambda parameter and corresponding floor are too high and reductions in both are required to effectively reduce the level and volatility of the risk margin.

Group-level diversification

Diversification is the key fundamental principle of insurance – by spreading risks across products and policies, insurers can offer policyholders peace of mind and fulfill an essential public need. This is recognised in the SII regulations, which explicitly recognise diversification for the purpose of calculating capital requirements. This is also recognised for the risk margin at local entity level, where the risk margin (which is based on capital requirements) permits diversification between risks in its calculation.

However, **counter-intuitively**, diversification between risks at **group level** is **not** permitted when calculating the risk margin. This contrasts with other areas of the Solvency II text and practical experience – where there are many examples where groups have transferred its policies as a whole. By not allowing for diversification between life and non-life business within the same entity, or between different entities within a group, the current approach to calculating the risk margin has the effect of artificially increasing the projected SCRs at group-level and hence leads to an overinflated risk margin.

The risk margin calculation should recognise the fundamental principle of insurance and recognise diversification at group level