

IFRS 17: THE RISK ADJUSTMENT

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Introduction

The Risk Adjustment forms an important part of the balance sheet under all IFRS 17 models. It's defined as:

The compensation an entity requires for bearing the uncertainty about the amount and timing of the cash flows that arises from non-financial risk as the entity fulfils insurance contracts.

But what does that mean in practice?

If I offered you the choice between taking £100 no strings attached, or playing a game whereby we flip a fair coin; tails means you get £90 and heads you get £110, which would you choose?

A basic net present value approach would conclude that the two options are equal: they have the same *expected value*. The first option is a guaranteed £100; the second will result in £90 half the time and £110 the other half, so on average it gives £100.

But this approach doesn't tell the full story. We don't get to play this game enough times that your wins and losses on the second option even out over the long term. As in life and in business, we play this game only once. How you value the second option, therefore, comes down to how you value risk.

If you are risk averse then the potential upside of the additional £10 will be outweighed by the potential loss of £10 should the coin come out tails. If you examine your situation and consider your risk appetite, you may then believe that the potential for loss reduces how you value the second option. Despite the expected value being £100, the potential for loss, perhaps, means that you would only sell or buy this contract for £98. That is, compared to a *guaranteed* £100, you view this uncertain outcome as less valuable: you perceive the uncertainty as a cost. You've just assessed an IFRS 17 risk adjustment of £2.

But, like many things, the IFRS 17 risk adjustment is a matter of perspective. In the extreme, if you absolutely had to have at least £95 in order to achieve your goals, then the mere potential of only getting £90 may lead you to value that option as worthless - essentially calculating a risk adjustment of £100. Likewise, if you were risk seeking, you may consider the potential to get £110 to be exciting enough that you consider a fair price for that contract to be £103, thereby calculating an IFRS 17 risk adjustment of -£3.

In all cases we have measured the risk adjustment as a differential from the probability weighted, best estimate value.

In Insurance

Insurance contracts are generally less predictable than our previous example, but the principles remain the same. Under IFRS 17 we calculate the best estimate cash flows but then we must include an adjustment to incorporate our perception of the cost of the uncertainty.

The IFRS 17 standards do not prescribe the method of this calculation and entities are free to value the risks as they see fit. However, there are some requirements in the standards and some recommended methods have been suggested.

In order for risk adjustments to be readily compared across entities, all insurers must disclose the confidence level at which the risk adjustment has been calculated. They must also disclose and justify the methodology behind the calculation. This will be something that auditors will be especially interested in and so all entities should prepare a principled and detailed justification for their choices.

The methods that the market has suggested include:

Value at Risk

The value at risk (VAR) measurement should be familiar to those entities running stochastic models under Solvency II. And, indeed, the standard formula has been calibrated as a VAR model.

At its heart a VAR method seeks to answer the question "Given some probability value, what is the level of outcome such that larger outcomes are less probable than this value?". Usually the VAR is expressed in terms of 1 less this probability value.

In other words, the "best estimate" outcome is often some average expected outcome. If we consider all the possible outcomes for a group of insurance contracts, we would expect roughly half to be worse than the best estimate. Thus, the best estimate is a 50% value at risk: It's the value at which the probability of a worse outcome is 50%.

Solvency II considers a 99.5% Value at Risk: The SCR (Solvency Capital Requirement) is intended to be the value at which the probability of getting a worse result is $1 - 99.5\% = 0.05\%$.

VAR measures naturally drop out when an insurer has a stochastic model; however, more basic, deterministic models can be calibrated to output results at a particular confidence level through the reliance on certain approximations and assumptions.

Tail VAR

One disadvantage of VAR measures is the lack of information on the far extremes of the outcome distribution. The Tail VAR (TVAR) approach aims to provide additional information in this region.

TVAR can be thought of as the average outcome of the subset of outcomes above a certain level. That is, given that the results are worse than a certain point, what's the average result?

The TVAR threshold level is the VAR at the stated probability. Thus a 99.5% confidence level TVAR is the average of the outcomes that are larger than the 99.5% VAR.

Cost of Capital

This approach will be familiar to Solvency II insurers as the method by which the Solvency II Risk Margin is calculated.

In the context of IFRS 17 this would be the cost of raising capital to be held against an adverse outcome of a certain probability.

For many smaller insurers, the cost of capital approach may be appealing due to the potential for leveraging existing Solvency II calculations. Note, however, that the Solvency II Risk Margin as calculated is not a perfect drop-in for the following reasons:

- The Solvency II Risk Margin is calculated by a prescribed 6% cost of capital rate. The IFRS 17 risk adjustment should be calculated using the entity's actual own cost of capital.
- The Risk Margin under Solvency II includes the non-hedgeable part of the SCR. In effect this makes the scope of risks covered by the Risk Adjustment and the Solvency II Risk Margin very similar, i.e. insurance risk and other non-financial risks such as lapse and expense risk. However IFRS 17 explicitly excludes any allowance for operational risk.
- The Risk Margin under Solvency II is net of reinsurance. However, under IFRS 17 both a gross Risk Adjustment and the amount of Risk Adjustment passed to the reinsurer must be estimated separately.

Impact on Profits

Two insurers alike in every way but risk appetite, offering identical products, will differ in the reported profit to be released through the Contractual Service Margin (CSM). The more risk averse will report a smaller CSM. The CSM is a measure of future profits and will be covered in a forthcoming article.

Though over time, the risk adjustment will be updated to reflect the future expectations. Both companies will update the risk adjustment and the ultimate total profit that emerges will be the same.

One potential difference that could emerge is the possibility of the risk adjustment being large enough to make an otherwise profitable group of contracts into onerous contracts. Entities should be aware of this possibility and plan accordingly.

Conclusion

Whatever approach is chosen, the entity will have significant work to do to document and justify the approach and assumptions. As with other concepts in IFRS 17, what appears the simplest choice from a computational perspective may require more effort from a disclosure and justification perspective. We believe that insurers should be prepared to re-evaluate their risk appetite and risk tolerance statements that form part of the overall risk management framework to ensure that their approach to risk in IFRS 17 is consistent.

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