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WHY FASB IS RIGHT AND IASB IS WRONG ABOUT RISK ADJUSTMENTS IN INSURANCE COMPANY ACCOUNTS

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While the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) have been working together on a new accounting standard for insurance contracts, the outcomes will not be identical. A major difference in the exposure drafts issued by the two standard setters in 2013 is that IASB includes a risk adjustment as part of the fulfilment value of liabilities, whereas the FASB does not.

This article looks at how the IASB's proposed definition of the risk adjustment might be calculated in practice. It concludes that any method is fraught with problems and it is unlikely that insurers could produce an answer that complies with the standard and helps investors understand their business.

Further, the article goes on to argue that while the principle of a risk adjustment is excellent from the perspective of aiming to provide relevant information, it raises issues of whether it can be calculated in a meaningful way and also whether it is consistent with other accounting standards. FASB appears to have the right answer: don't have a specific risk adjustment at all!

We start with the definition of the risk adjustment in the IASB exposure draft (ED) issued in July 2013 (paragraph B76):

"The risk adjustment measures the compensation that the entity would require to make the entity indifferent between:

(a) fulfilling an insurance contract liability that has a range of possible outcomes; and

(b) fulfilling a liability that will generate fixed cash flows with the same expected present value as the insurance contract."

If we are considering a stock insurer, we would expect it to be indifferent between two liabilities that had the same effect on shareholder value. This implies that the risk adjustment is the extent to which risk reduces the firm's shareholder value. More generally, to encompass mutuals, it is the effect of risk on a firm's objectives.

Now accounting standards are meant to help produce financial statements that are useful to investors and other stakeholders. So having a risk adjustment that provides information to investors about the impact of risk on shareholder value scores very highly and is, in principle, an excellent idea.

To help calculate it, it is useful to think what this risk adjustment means in practice. An insurer that is financially weak may be prepared to pay more to eliminate risk than would a strong insurer. This is because the weak insurer would gain more from greater certainty as it is more exposed (than a strong insurer) to financial distress if business results are adverse. This is similar to the finding in many research articles (Powell & Sommer, 2007) that, other things being equal, weakly capitalized insurers tend to reinsure more than do strong insurers. And an insurer that writes large amounts of new business may be prepared to pay more to eliminate risk because of concerns that if risks turn out badly, then reduced financial strength would mean lower new business profitability. Hence the risk adjustment may well be relatively high for an insurer that was financially weak and/or wrote large volumes of new business.

This is not surprising. The 2013 IASB ED says (paragraph B77(b)): "the risk adjustment also reflects... both favourable and unfavourable outcomes in a way that reflects the entity's degree of risk aversion." And weak insurers may have a high aversion to risk, leading to a high risk adjustment and high fulfilment value.

The IASB has examples in paragraph B82 about the risk adjustment being higher if, for example, there is a wide probability distribution of losses, but it does not appear to appreciate that whether an insurer is indifferent between risks also depends on the business context: large, strong firms will have a different aversion to risks compared to small or weaker firms.

The IASB doesn't plan to rule on exactly how insurers should calculate the risk adjustment as it believes the standard should stick to principles rather than place restrictions on practice. This also allows for the possi-

bility of some innovation as techniques develop. It did, however, set out three methods that could be used when it issued an earlier ED in 2010. It is useful to examine these and see if, in practice, an actuary could use them to produce an answer consistent with the risk adjustment as now defined.

The first of the three methods is the "confidence level method." Given the probability distribution of claims, some percentile is chosen so that the claims are X percent likely to be less than the liabilities reported in the accounts (i.e., using Value at Risk, VaR). The excess of this value over the expected value is the risk adjustment. There was no suggestion, though, as to how an insurer would choose what X would be.

While the probability distribution of losses is important, this needs to be complemented by an understanding of how risk affects the insurer's objectives in order to establish what the insurer would be willing to pay to eliminate the risk. That means understanding issues such as how risk affects taxes, expenses, financing costs, dealings with regulators, and the willingness of brokers to recommend insurers that have a high risk profile. These are difficult issues. The theory of how risk affects a firm's shareholder value through matters such as potential financial distress has been extensively discussed by several researchers. But the practice is more of a problem. While, in principle, the risk aversion of an insurer would depend on matters such as its financial strength, it is not easy to quantify this. Insurers usually concentrate on modeling their existing business, and on profits, solvency and embedded value. They may not do the more complex modeling of shareholder value, incorporating goodwill and the value of the put option to default. And building such a model isn't easy because the sensitivity of shareholder value to risk isn't well understood.

A second possible approach is to use tail value at risk (TVaR), where the TVaR is the average of the T% worst losses. TVaR is arguably better than VaR as it is a coherent risk measure, although this benefit comes at the cost of requiring more information about the probability distribution of losses. But how does an insurer choose T?

The problem is ... it is difficult for insurers to say how risk affects shareholder value.

Both VaR and TVaR were among the approaches to risk adjustments considered by the International Actuarial Association Risk Margin Working Group (RMWG, 2009). At that stage the IASB had not settled on the definition of risk adjustment, and the RMWG was therefore not tasked with working out how to apply in practice the risk adjustment that the IASB now proposes. However, it did comment that, if looking to use VaR or TVaR to determine the risk element of a transfer value of a liability, no theory or practice has been developed to decide what X or T should be used. Another acknowledged difficulty is that there is usually insufficient or no information on the effect of extreme events, although some judgment-based methods attempt to address this.

The third method mentioned by the IASB in the 2010 ED is the cost of capital approach. The IASB explained this by saying that an insurer could eliminate uncertainty in its liability, or at least produce a high degree of certainty, by holding more capital, but this has a cost. The risk adjustment would be calculated as the extra capital (C) multiplied by the annual cost of capital for the insurer (i), over the period of the liability. It will be appropriate to review the methodology because the new ED has a different definition of risk adjustment. In any event, though, C and i would reflect the insurer's own risks and financial position; for example, borrowing costs will be higher for financially weak firms. So, while Solvency II envisages a cost of capital with C as the regulatory capital requirement and i as a fixed rate for all insurers, defined variables are inappropriate for the risk adjustment in the IASB's ED. The IASB ED is meant to reflect each insurer's risk aversion and should not be based on regulatory capital formulae.

The problem is that none of the three methods above gets a grip on the fundamental issue: that it is difficult for insurers to say how risk affects shareholder value.

One further method mentioned but not pursued by the RMWG (2009) was the utility estimation approach of Buchanan (1997). His idea was to adjust the liabilities to reflect the extent to which there is a dislike of risk. He focused on utility functions that reflect risk; knowing that utility functions differ between individuals, he considered a compromise utility function broadly reflecting the general users of accounts. However, he commented that in view of the lack of information about utility functions (i.e., the relationship been risk and individuals' utility), it was not an idea that could be implemented in practice.

The question that the IASB's ED raises is whether there is a sufficient understanding of the relationship been risk and firms' shareholder value to incorporate a risk adjustment. It is therefore worthwhile re-thinking whether the IASB'S proposal makes for a sound accounting standard.

As drafted, the ED looks inconsistent with other accounting standards. Although standards are designed with a view to producing financial statements that meet users' needs, they do not aim to result in the balance sheet showing shareholder value. Goodwill (at least if internally generated) is not normally included as an asset. So it seems odd that the risk adjustment reflects the effect of risk on, among other things, goodwill.

In its basis for conclusions, IASB recognises that there are objections to a risk adjustment, including the proposition that "no well-defined approach exists for developing risk adjustments that would meet the objective and provide consistency and comparability of results" (paragraph BCA94(a)).

A further argument is that even if measurement tools are developed, "it is not possible to perform direct back tests to assess retrospectively whether a particular risk adjustment was reasonable" (paragraph BCA94(c)).

These difficulties appear all the greater in the light of the global financial crisis 2007-09. There are examples of both banks and insurers (AIG is one; see Frankland et al, 2013) that quoted a VaR that was shown by subsequent events to be far below losses that actually occurred. Insurers in the European Union face having to calculate a 99.5% VaR as their capital requirement under Solvency II, sometimes thought of as needing an identification of a 1-in-200 year event. Yet one major insurer said, "Over the last century it could be argued that the [UK] economy … has suffered 6 one in two hundred year events" (Aviva, 2009). So, in addition to the difficulties in understanding the impact of risk on shareholder value, there are also problems in assessing the probability distribution of claims, at least in the tails.

The IASB supports the inclusion of a risk adjustment by arguing that an explicit risk adjustment will give greater insights and lead to a more appropriate profit recognition pattern. The trouble is that there won't be any insights or better profit recognition if there isn't a suitable way to calculate risk adjustments.

In conclusion, the IASB may have been ambitious in including a risk adjustment as it has done. The FASB has been pragmatic and realistic in proposing to go ahead without it. Actuaries working for insurers subject to IASB rules face a difficult challenge if the IASB proposal proceeds as planned. ■

References

Aviva (2009). Policyholders' future security and risk appetite, in The Policyholder Advocate's Report, paragraph 16.12.

Buchanan, R. (1997). Utility estimation. Paper presented to 28th ASTIN/AFIR colloquium at Cairns.

Frankland, R. et al (2013). Difficult risks and capital models. Paper presented to the Institute and Faculty of Actuaries, London.

Powell, L.S. & Sommer, D.W. (2007). Internal versus external capital markets in the insurance industry: The role of reinsurance. Journal of Financial Services Research, vol. 31, pp. 173-188.

Risk Margin Working Group (2009). Measurement of Liabilities for Insurance Contracts and Risk Margins. An International Actuarial Research Paper.