



Extracting value from your business — capital models in the legacy sector

Paul Hewett and Rob Collinson
explain how to tackle the challenges
facing run-off companies.



The biggest change to the UK insurance market in the past decade has debatably been the formal recognition by the regulator that the risks faced by insurance entities are complex and cannot be adequately described in terms of premium income or reserves held. Having acknowledged the need for capital requirements to more closely reflect the risks facing the business, the FSA introduced one of the world's first fully risk-based capital regulatory requirements in 2003 with the inception of the ICAS regime.

Arguably, firms have primarily focused upon compliance with regulation. However, over time, FSA advice to firms has increasingly focused upon the principle of 'embedding'. Under this approach, the capital model and all the considerations and processes around it are used to inform the day-to-day decision-making of an organisation. Looking forward, the embedding approach has been embraced and further extended within the Solvency II framework as the 'use test'.

To date, risk-based capital regulation has impacted relatively lightly upon firms within the legacy sector. Whilst all UK firms must have an ICA available, those businesses wishing to undertake some material transaction are required to undertake a review of capital which must be presented to the FSA.

Capital modelling platforms can offer considerable strategic benefits beyond mere regulatory compliance. In this article, we consider a possible application for legacy companies.

An example – inwards commutations

Two of the key drivers of value within a run-off company include the ability to identify profitable commutation opportunities and the rate at which the supporting capital may be removed from the organisation and usefully applied elsewhere.

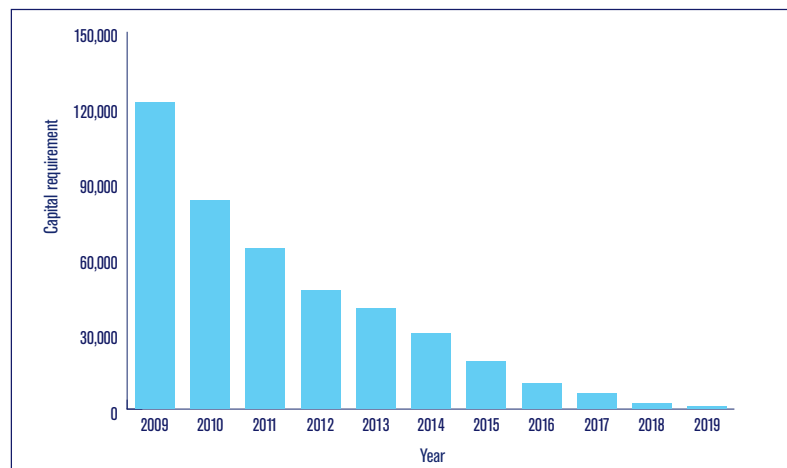
Typically within a run-off company, capital is held so that the percentage payment on claims will only fall below the desired value (100 per cent for solvent run-offs) in extreme conditions (say one in 200). However, as time progresses, if the performance of the firm has been broadly as expected then the requirement for capital will decrease as the scale of the uncertainty surrounding future claims payments reduces.

An appropriate capital model will reflect this behaviour and, as a result, may be used to prepare a schedule demonstrating the timescales under which capital may be removed from the business. This is of particular benefit for those firms looking to set appropriate prices for portfolio transfers into or out of the company and requiring regulatory sign-off.

Figure 1, below, sets out a typical capital repatriation schedule for a run-off company. From this we can see that the resources required in order to maintain solvency falls by 50 per cent within two years, but thereafter the reduction in capital is considerably slower.

However, a key benefit of an appropriate capital model is the ability to test a range of scenarios. In this case, we consider the commutation of a significant proportion of liability. Figure 2 sets out the capital requirement schedule following commutation during 2008.

Figure 1 | Capital repatriation schedule – no commutations



In this case, it can be seen that the total capital requirement of the business is materially lower than the pre-commutation position for all years post-2008, implying that this deal allows for a significant release of capital.

The final decision of whether to commute the business now depends crucially upon the cost at which this can be achieved. This analysis enables the calculation of the maximum price at which such a deal is appropriate.

Reinsurance and outwards commutations

The example shown in the previous figures illustrates how we can use capital models to assist with managing a run-off company's inwards commutation strategy. However, similar principles can be applied to aid in the understanding of the risk-reward trade-off surrounding outwards reinsurance commutations.

Whereas the analysis of an inwards commutation is focused on the resulting change in the company's insurance risk, an outwards commutation must also consider the

potential reduction in the credit risk through crystallising the liabilities at an earlier date. The modelling process must therefore be able to combine a model of the insurance liabilities flowing to a contract or group of contracts with the creditworthiness of the reinsurance companies involved.

In addition to assisting with the commutation strategy, a capital model can be used in pricing a reinsurance commutation by enabling us to consider the value of the contract to the company as a whole, in terms of the expected additional claims cost, but also the impact upon the capital requirement.

For example, when pricing a commutation on an excess of loss reinsurance contract, it would be typical to initially model the anticipated recoveries on the contract at a range of different risk percentiles. The required price would then be chosen based upon a particular point or average in the distribution.

However, this technique only considers the risk on the book of business covered by the individual

contract in isolation. Using a capital model, we can simulate the change in the economic capital requirement caused by removing the risk protection provided by the contract, and taking into account all the correlations and dependencies which have been built into the model. If these results showed that the contract in question had only a marginal impact on capital (for example, if the contract covers a relatively small book), you may be prepared to price at a lower percentile level than you would for a contract which has a more material impact on capital.

Summary

This article has provided a brief illustration of the benefits of capital models to legacy organisations. The modelling platform may be used to inform a wide range of strategic decisions including the strategy surrounding and the pricing of commutations, asset allocation and the pricing of portfolio transfers. The use of such models will undoubtedly become more widespread and it is likely that failure to embrace this opportunity will be a significant competitive disadvantage.

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Figure 2 | Capital repatriation schedule – post commutations

