WEDNESDAY OCTOBER 24 2007

BADEN BADEN

Class Report

PROPORTIONAL REINSURANCE

DAY 3

COVER FOCUS

Proportional positives

Proportional reinsurance is becoming less fashionable than its non-proportional counterpart but sometimes trends can disguise the good features of what isn't in fashion. Emmanuel Becache and David Waddell consider the virtues of proportional as one of two highly effective risk transfer tools

Proportional and non-proportional are complementary and effective covers with which to grow and manage a risk portfolio, to be utilised and combined depending on need. Our focus here is proportional, purely as a review of one of those options.

Proportional has its disadvantages. Principally, it transfers more premium than non-proportional and can be more difficult to administer in the case of surplus treaties, where a share of all premiums and losses must be calculated per policy and claim.

The current move away from proportional is being driven by consolidation and healthy profits, especially in mature markets, and by the desire to hold onto premium income.

Reinsurers have in the past led a similar trend by withdrawing the availability and increasing the cost of proportional covers; this has generally been a reaction to unexpectedly high losses, such as after 9/11, and/or to sustained soft markets when terms and risks were considered as unacceptable.

Regulatory change in Europe, namely Solvency II, may tempt more insurers away from proportional programmes by reducing the current capital relief advantage that proportional has over other reinsurance forms. Under Solvency I, the amount of capital held to support unexpected risk deviations reduces according to the average level of reinsurance ceded in the last three years, up to a maximum 50% cession. Proportional reinsurance has thus provided higher solvency relief compared to other forms of reinsurance. With Solvency II, capital requirement will be based on an economic approach and all reinsurance contracts with risk transfer will deliver specific levels of efficiency in this respect. This however does not mean that proportional no longer makes sense – proportional will still deliver capital relief and any changes in cover type need to consider all the features that make one or the other the better solution at that time.

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Impact on proportional reinsurance.

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Increasing underwriting capacity and adequacy of cover.

ANALYSIS

Despite the fact that proportional may no longer have an automatic capital relief advantage compared to non-proportional under Solvency II, proportional will continue to deliver economic capital relief to the cedant, maximised, as it is now, for particular portfolio types. The effect is shown in *Figure 1*, right.

Economic capital is the capital that a company must hold to face all its risks. To evaluate the economic capital needed for a particular line of insurance business, the profit and loss distribution by line of business is estimated. The capital need is then given by the quantile at a certain level of probability, the Value at Risk (VaR).

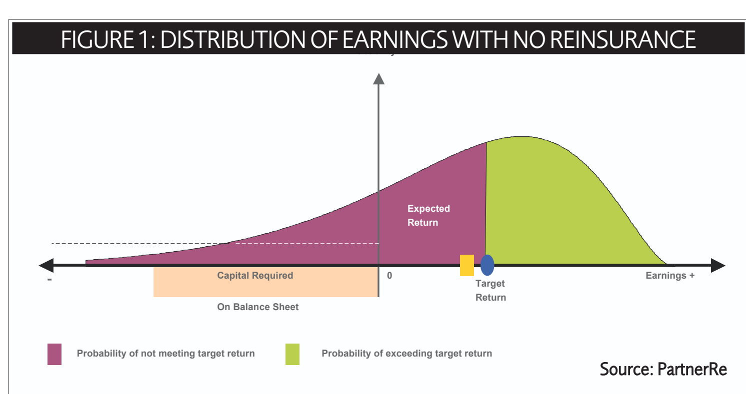


FIGURE 1: DISTRIBUTION OF EARNINGS WITH NO REINSURANCE

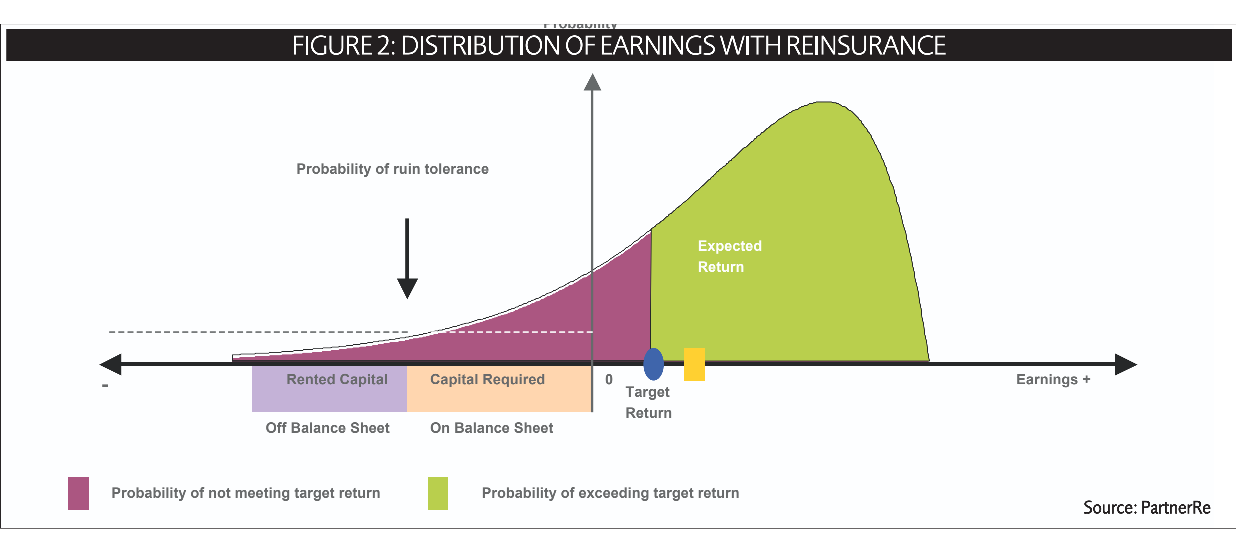
Source: PartnerRe

RISK MANAGEMENT

Delivering capital relief

In the case of a quota share for a specific line of business, a fixed part (X%) of premiums and losses is ceded to the reinsurer. In that case, and for that line of business, the profit and loss distribution is proportionally modified and the reinsurance cost considered (*see Figure 2, right*).

FIGURE 2: DISTRIBUTION OF EARNINGS WITH REINSURANCE



Source: PartnerRe

ANALYSIS

Evaluating quota share reinsurance

We can then consider the following capital needs:

$$VaR_{\text{net of prop reinsurance}} = (1\text{-}X\%) \times VaR_{\text{gross of prop reinsurance}} + \text{cost of reinsurance}$$

The cost of reinsurance is the result of:

Expected premium ceded to reinsurers
- expected losses transferred to reinsurers
- commission received from reinsurers
+ loss of investment income due to the cash flow transfer to the reinsurer
+ capital for the reinsurance credit risk

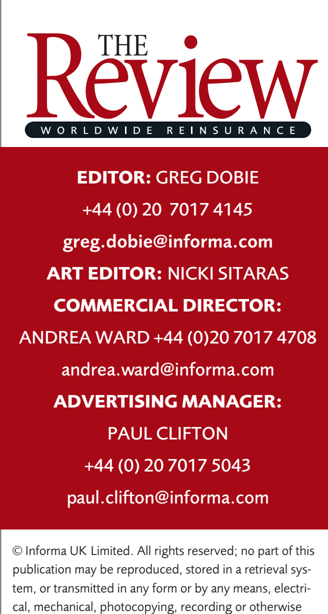
In this respect, the quota share provides capital relief to the cedant if:

$$\text{Cost of reinsurance} < X\% \times VaR_{\text{gross of prop reinsurance}}$$

Based on this outcome, the capital relief to the cedant from the quota share is enhanced if:

- The cost of reinsurance is low. For example, a highly rated reinsurer would reduce the credit risk cost component
- The VaR gross of reinsurance is high. In the case of a homogeneous portfolio, this is particularly true when there are a low number of policies and as a consequence the volatility of earnings remains relatively high due to the frequency risk.

From a capital relief perspective, proportional reinsurance is therefore a particularly strong contender for developing lines of business.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BENEFITS

Capacity and cover pluses

Focusing on the negatives of proportional cover can obscure the many areas where it can actually be more attractive, such as when increasing underwriting capacity, for example.

Proportional capacity allows the cedant to write larger lines than it could write on a net basis. It also provides protection for frequency losses (only Stop Loss and Aggregate Excess of Loss do this). Then there is also the surplus relief effect; the cedant can write more business without increasing its capital if capital requirements are based on the net portfolio.

Adequacy of cover is the other main area where proportional can be the favoured risk option. For example, per risk and event EML/PML errors are automatically covered up to the treaty limit. With non-proportional, an extra cover for this risk would need to be bought.

Proportional covers also do not rely on an occurrence definition for liability risk. In spite of clauses such as the ACOD and Series clause, there is a potential for disagreement over which losses may be accumulated as one loss occurrence in non-proportional treaties.

Finally, there are no issues to re-evaluate the adequacy of the remaining cover. Non-proportional covers often provide only a limited number of reinstatements. In some cases – for example, if there are a number of losses within a short period of time and proper evaluation of the claims have not yet been made, or if the initial estimates are too low – the cedant may not immediately know when its requirements have been used up and thus may be under protected for subsequent losses.

Shock losses such as 9/11 have led to reinsurers withdrawing the availability and increasing the cost of proportional covers in the past

PRICE COMPARISON

Calculating cost control

A cost comparison for proportional and non-proportional is complex because of the different covers provided and market practices regarding premium and loss allocation. The following points are made to indicate some of the possible considerations:

- Operating Expenses: The cedant earns commissions, which may offset costs.
- Controlling premium level: Costs are controlled throughout the duration of a treaty as there are no reinstatement premiums, as in non-proportional.

Based on the 'follow the fortunes' element of proportional covers, terms do not tend to vary as greatly as non-proportional from one renewal to the next if there is a large loss.

Cash flow is improved because premiums are generally due in arrears; in contrast to 'up front' deposit premiums for non-proportional treaties.

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IN BRIEF

For the reinsurer, whether proportional or non-proportional is the better solution will depend on the expected return for the given risk. As the experience on a proportional treaty is shared, inadequate returns apply to both parties. In a soft market, for example, the profitability of proportional can be at risk and cost a lower commission ratio.

The shared experience of the cedant and reinsurer in proportional business also requires a close and transparent relationship, of which quality data, actuarial projections, underwriting strategy and the rates of the cedant are an integral part. This is a positive aspect for reinsurers, who then have a very complete understanding of the risks that they are assuming.

The markets fluctuate. We remain constant.

In soft markets and hard, the way a reinsurer approaches risk is critical. Reinsurers must be able to offer high quality capacity, continuity of offer and the assured ability to pay claims. In short, provide value for their clients.

At PartnerRe, our balance sheet is the best place to find evidence of this value. There, through soft and hard markets, you'll see asset quality, strong reserving and financial strength – all evidence of long term stability.

We believe you can't provide value without transparency. Well managed reinsurers keep no secrets as to their approach to risk and their financial strength. By being transparent about both, we at PartnerRe give clients the information they need to make the most informed reinsurance buying decisions.

Markets fluctuate. When it comes to providing value for our clients we remain constant.

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