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# XXX and AXXX Reserve Relief Solutions: History and Current State

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*The views expressed in this article are solely those of the author and do not reflect the views of either his employer or the Society of Actuaries.*

In order to keep up with competition, more and more companies utilize various XXX and AXXX solutions available in the reinsurance market place to help reduce the strain on XXX or AXXX deficiency reserves and perhaps reduce the strain on risk-based capital requirements as well.

Solutions to reduce the strain on XXX reserves started in the middle of the last decade. Some early solutions such as securitization were eliminated and dissolved due to complication and cost of maintenance. Other solutions continue to evolve and develop new forms.

It is difficult to evaluate which solution is best. It depends on many internal and external forces. The size of the company, its ability to negotiate in the reinsurance market place, and the regulator all plays a big part in determining the feasible options.

This article outlines the different solutions, but does not compare and contrast them. Instead, it attempts to break down the approach in a systematic way to enable readers to identify the options for their companies.

In general, there are two main ways of providing XXX and AXXX solutions—the asset side approach and the liability side approach. There has been a third approach—the product design approach. This approach has led to many discussions and brought the ethics of the pricing actuaries into question.

## ASSET SIDE APPROACH

Early developed solutions were from the asset side. The early solutions used a third party to fund the deficiency reserve. The third party could be a bank providing the funding in the form of letter of credit, or it could be outside investors providing the funding in the form of securitization.

The issue with the letter of credit is the evergreen status. Many banks will not or are not able to issue a letter of credit that is evergreen. And regulators often hesitate to accept a limited term

(commonly three to five years) promise to pay note to support long term policyholder liabilities.

Securitization ran into problems in the late 2000s due to the financial crisis. The securitization assets dropped significantly in value and caused a lot of tension among investors.

The assets supporting the deficiency reserve will only get called when (a) the mortality for the underlying policies is worse than expected, or (b) the asset returns are lower than expected and/or the asset defaults are higher than expected. Based on these premises, a new form of solution appeared by utilizing a reinsurer to take on the mortality risk and utilizing a bank or derivative markets to take on the interest rate risk and credit default risk.

## LIABILITY SIDE APPROACH

In the last few years, many companies have utilized solutions from the liability side. There are two basic approaches from the liability side.

The first approach is to reduce the deficiency reserve by either ceding the reserve out to a third party reinsurer or negotiating with the state of domicile that a lower reserve is appropriate. A simple coinsurance agreement with a reinsurer will transfer the deficiency reserve to the reinsurer. An experience refund mechanism will return the profits from the reinsurer back to the ceding company.

The second approach is to transfer the deficiency reserve risk to a third party such as a reinsurer. This approach basically is based on the same premises as described in the asset approach section above. The deficiency reserve will be required when the experience is worse than expected. The liability, therefore, can be split into at least two tranches (or more if a company wants to refine the process and control the cost)—the expected tranche and the higher than expected tranche. A reinsurance agreement with a reinsurer is put in place so that the reinsurer is responsible for all the claims for the higher than expected tranche. This concept is similar to the tranche concept of receiving interest payments on the asset side. Instead of lining up in order of priority to receive interest, the concept is to line up in order of priority to pay the claims.

## COMBINATION APPROACH

In addition to developing XXX and AXXX solutions from either the asset side or the liability side alone, companies should have no problem developing their XXX and AXXX solution by combining the asset side approach and liability side approach. Although there may be some overlap, there is certainly no limitation on using one approach.

## HOW ABOUT CAPTIVES?

Many XXX and AXXX solutions start out based on a captive design. Captive structure in isolation does not provide the relief.

However, there are states that allow captives to have a permitted practice of setting up a regulatory reserve that is different from the NAIC guidelines.

Recent adoption of AG 48 provides guidelines to captives for the purpose of reserve relief. AG 48 provides a methodology (Actuarial method) used to determine the required level of Primary Security. Actuarial Method follows principle-based reserving (PBR) and results in a reserve that is lower than the XXX/AXXX reserves, but not as low as the economic reserve. This provides some degree of reserve relief to the companies.

In addition to getting reserve relief between the XXX/AXXX reserve and the Actuarial Method reserve by taking advantage of AG 48, companies also utilize reinsurance (such as a stop loss arrangement similar to the second approach on the liability side) to get reserve relief from the AG 48 reserve level down to the economic reserve level.

### WHAT DOES THE FUTURE HOLD?

Ten years ago, nobody foresaw the use of stop loss to provide reserve relief and the implementation of AG 48 for captives.

Similarly, it is difficult to predict how AG 48 may evolve in the near future and what other regulations may be implemented to shape future reserve/surplus relief solutions. Even with the coming implementation of PBR, companies will still likely employ captives to bring reserves down to the economic reserve level. Mortality-based derivatives have been discussed for many years. Maybe one day mortality-based derivatives will be traded as widely as interest-based derivatives are traded today. ■



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