

## Reinsurance Basics

In many ways, reinsurance is an enigma with a frequently esoteric language, a chameleon-like ability to change structure and, at least according to an occasional regulator, a Medusan capability to turn otherwise viable markets to stone. However, at its most fundamental level, reinsurance is a simple concept.

In this and future articles I will share the basics learned over almost four decades as a reinsurance underwriter and broker. I will try to avoid the words “often, sometimes, frequently, usually, etc.,” by referencing what I consider to be “standard practice.” Doubtless, others will disagree and their comments are solicited.

Notwithstanding many efforts to obfuscate the concepts, there are really only two methods by which reinsurance is provided: treaty and facultative. In addition, reinsurance essentially fulfills only four fundamental functions: financing, stabilization, capacity and catastrophe protection. Lastly, these functions of reinsurance are provided in only two basic flavors: proportional and non-proportional. While there are relative advantages and disadvantages of various combinations of methods, functions and flavors, that discussion will be postponed to later articles.

Before launching into a wordy description of the methods, functions and flavors, it’s only fair to note that the basic building blocks of reinsurance can be assembled into many different patterns. It’s not unusual for the needs of a carrier to be met through a combination of types of reinsurance, some of which are named after their “creators.” Others are relabeled entirely, e.g., “finite” reinsurance which focuses on the basic reinsurance function of financing. However, having promised “basic” and, despite having introduced terms such as “facultative,” we can safely leave the discussion of combinations and permutations to subsequent articles.

The two methods by which reinsurance is provided are treaty and facultative. Treaty reinsurance is a formal written contract between a reinsurer and an insurer which describes the terms and conditions under which the reinsurance is provided. Treaty agreements are binding on both parties. Once negotiated, the insurer must reinsure all the specified risks with the reinsurer and the reinsurer must provide reinsurance on all risks in accordance with the treaty’s parameters. Risks which are reinsured are said to be “ceded” or transferred from the insurer to the reinsurer.

The alternative to treaty reinsurance is facultative (fac) reinsurance, in which both insurer and reinsurer have the “faculty,” the ability, option or prerogative, to transfer risk – or not – as they chose. It is the opposite of treaty. The insurer is not required to submit a risk to the reinsurer and the reinsurer is not obligated to accept the risk from the insurer. Of course, the industry often appears incapable of leaving well enough alone, so the terms “facultative obligatory” or “semi-obligatory treaty” are sometimes used. The reader should feel free to ignore these terms.

As mentioned, the four basic functions or tasks of reinsurance are financing, stabilization, capacity and catastrophe protection. Financing originally referred solely to “unearned premium reserve relief.” Just as an army travels on its stomach, an insurance company grows based on its surplus, the amount by which its assets are greater than its liabilities.

Similar to a widget manufacturer which borrows against its inventory to finance growth, an insurance company can borrow against the equity in its unearned premium reserve fund. The insurance company has equity because accounting rules require it to book the expense portion of its written premium immediately. However, the company is only allowed, by the same rules, to recover those “pre-paid” expenses as the premium is “earned” over the course of the policy period. So, from day one, there is

a mismatch between insurance company assets (earned premium) and liabilities (prepaid expense). This mismatch reduces the company's surplus which, in turn, limits the amount of business it is allowed to write. One solution is to structure a reinsurance agreement which provides for sharing of risk by transferring a portion of the unearned premium reserve in exchange for a commission which covers all or part of the pre-paid expense. The insurance company is therefore able to increase its surplus and finance its growth.

The stabilization task performed by reinsurance arises from the inherent volatility associated with the business of insurance. Given a large enough sample of similar risks subject to similar frequency and severity of loss, actuaries and other pricing specialists can provide well defined estimates of loss. However, much of the insurance business is subject to the "Law of Small Numbers," where the mix of business is complex and ever changing from year to year, risk to risk and territory to territory among other factors. With fewer similar exposures, loss prediction becomes less certain and fortuity is apt to rear its ugly head. Despite its best intentions, the results of an insurance company almost inevitably show swings in results from measuring period to measuring period.

One way to address this volatility and "smooth out" the results of an insurer over time is to structure a program in which a "bank" is established with the reinsurer when the business is unexpectedly profitable. This fund can then be drawn down in periods when the insurance company's results are worse than anticipated. Stabilization can be performed on a carrier's entire book or on a single line of business, territory, state, etc. While some stabilization plans have been criticized in recent years, the criticism is properly leveled only when the carrier's intention is to deceive third parties to the contract.

The third basic service potentially performed by reinsurance is provision of capacity. Regardless of the extent of an insurance company's assets, there are risks of sufficient size and complexity that the carrier does not have the resources to write the policy limits on its own. In a different era or market, the required capacity might have been provided through a subscription policy, with a number of insurers each taking a share of the policy. However, where the carrier wants to provide the capacity on its own "paper," reinsurance can be structured to provide the desired limits. Capacity reinsurance can level the playing field, allowing smaller companies to compete more effectively with larger carriers.

Catastrophe reinsurance is a basic function of reinsurance very much in the forefront of discussion over the past several years. While Andrew / Katrina / Rita, etc. highlight the necessity of protecting against a disproportionate accumulation of property losses, the events of September 11<sup>th</sup>, 2001 were a draconian reminder of the frequency and severity of loss which has become possible, if, hopefully, not probable in this century. Catastrophes are perhaps the most dramatic example of the Law of Small Numbers in action. Despite our best efforts at prediction, protection, remediation and evacuation, events which produce loss of catastrophic proportions will always occur. Global warming proponents even forecast an increase in catastrophic events going forward. Catastrophe reinsurance is, therefore, an essential part of a carrier's program.

It was a deliberate decision to discuss the two flavors or forms of reinsurance last: proportional versus non-proportional. If introduced prior to the discussion on the basic services theoretically performed by reinsurance, there was a significant chance the dialogue would bog down in multiple examples of how the various functions of reinsurance can be provided by various combinations and permutations of proportional and non-proportional covers. It's difficult enough to try to separate the relative contributions of financing, capacity, stabilization and catastrophe protection without further complicating the issue with how much of each is or can be provided by which type of proportional and / or non-proportional program. Suffice it to say that there are several types of each while simply describing the covers in broad strokes.

Proportional reinsurance is also called Pro Rata<sup>1</sup> reinsurance. At its most basic, a carrier places a specified portion (percent) of a risk with a reinsurer together with the same portion of the original premium and collects the same portion of loss from the reinsurer. The reinsurer typically allows the ceding company an expense commission on the premium ceded.

Essentially, there are two types of pro rata reinsurance: quota share and surplus share. The principal difference between the two is that all of the insurance company's subject business is ceded proportionately in a quota share program, while a surplus share agreement only reinsures risks above a specific size (surplus of a specified attachment point), but collects proportionally for losses on all risks ceded.

Non-proportional reinsurance is called Excess of Loss, sometimes abbreviated XOL or XL. In XOL programs, the carrier places a specified dollar or percentage amount excess of (above) an agreed retention for a negotiated premium and collects losses on the same basis from the reinsurer. Excess of loss contracts pay excess losses on the basis of some combination of risk, occurrence, accident or aggregate. On an "each risk" basis, the carrier recovers losses excess of a deductible which applies to each risk involved in the same occurrence. For example, each property damaged or destroyed in Hurricane Katrina in Mississippi would be assessed a separate deductible under a per risk contract.

In an "each accident" or "each occurrence" contract, loss recoveries are based on the total of losses above a specified deductible or retention applying to the accident or occurrence, regardless of the number of risks involved in the accident or occurrence. For example, only one retention would apply if a dozen of the insurance company's insured trucks were to be involved in the same accident. Aggregate XOL, as the name implies, provides reinsurance recovery when the total of subject losses exceeds a predetermined amount. A number of permutations on the theme of XOL reinsurance are possible.

In summary, despite the best efforts of reinsurers and intermediaries to make the subject appear arcane and indecipherable to all but a select few, the basics of reinsurance are quite simple. Reinsurance is provided through one of two mechanisms: treaty and facultative. There are four tasks accomplished by reinsurance: financing, capacity, stabilization and catastrophe protection. Finally, there are two types of reinsurance: proportional and non-proportional.

*The author, James A. Warters, is Vice President and Northeast Regional Manager for Preferred Reinsurance Intermediaries of Columbia, South Carolina. When visiting the home office, he can be reached through the receptionist at 803-790-4800. His office is in Rockaway, New Jersey, 973-586-3105.*

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<sup>1</sup> Pro rata is Latin for "according to the calculated (share)" for the edification of any unrepentant classical scholars and / or lawyers.