Stefan Pohl | Joseph Iranya

The ABC Of Reinsurance

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To Tatjana with love and gratitude

Dr. Stefan Pohl

To Mom and Dad for all the love, guidance and support

Joseph Iranya

Foreword

This book is intentionally called “The ABC Of Reinsurance”.

Does this title suggest that the book is aiming exclusively at beginners in this particular discipline? Similar to elementary school where at the beginning the spelling is carefully learned, then slowly approaching the art of reading and writing?

This would certainly be a short sighted and wrong classification of this book. This book has been written with the aim to cover the extremely exciting, permanently changing, very extensive and multifaceted subject matter of international reinsurance in a single work of around 200 pages, as compact as possible, and in addition containing many practical examples for a better understanding of the various reinsurance practices.

If you do not have time to lose yourself in the granular details of countless specialist articles worldwide, but rather want to read and understand relatively individual contents of reinsurance, I recommend you to acquire this book and work with it.

The authors – two younger people who are actively working in international reinsurance and are obviously facing this subject very much – do not claim to have taken on and worked on all conceivable reinsurance related topics.

No! Dr. Stefan Pohl and Joseph Iranya together had the goal to close a gap that they have identified in the existing reinsurance literature.

Both authors want to make available a book to all those who are interested in the exciting topic of reinsurance. A book, which, on the one hand, deals with all currently relevant reinsurance topics in an easily comprehensible form, but is not too extensive, written in an international language and – on the other hand – both as a printed medium and as an e-book – available at a moderate price and therefore accessible for as many readers as possible.

Personally, I believe that Stefan and Joseph have achieved their goal very well!

I hope you enjoy reading and applying!

Hanover in February 2018 Andreas Grabi

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Acknowledgements

This project would not have been possible without the energy, time and effort of the contributors.

We have been lucky to have learned so much from those with whom we have worked, and that list has now grown far too long to give everyone the proper thanks they deserve by name. With apologies to those whom we have not listed, we would like to single out a few exceptions.

Dr. Stefan Pohl

A special note of thanks to Andreas Grabi for bringing me on board and supporting me in understanding how to increase the group retention level.

For their comments on chapters, lengthy conversations, thoughtful feedback, and blunt constructive criticism, I am grateful to Dr. Ilka von Boehmer, Andrew Cox and Heinz Meier.

Joseph Iranya

A special appreciation goes to Mr. Alex Makata and Mr. Paul Kavuma for introducing me, guiding me and helping me expound my knowledge in the field of reinsurance.

To Jay Sakaria for your thoughtful comments, advice and positive criticism, I will forever be grateful.

DISCLAIMER

Acknowledging our intellectual debts does not absolve us of the responsibility for any errors and omissions. In addition, the opinions and views expressed in this book are ours alone and do not represent the opinions or views of any other individual or institution that we have worked with now or in the past.

1 Introduction and Motivation

Insurance companies insure themselves from the financial costs of losses they would have to pay for the risks they insure, by a process known as **“Reinsurance”**.

> **Reinsurance** is simply the insurance of insurance companies.

However, reinsurance is often perceived as a difficult and complicated field, an area that can only be handled by professionals. But it is not as difficult as it may seem. The complexity surrounding some of its aspects are what make it interesting and just like any other field, the key to negotiating around these complex aspects lies in understanding its basics.

The ABC Of Reinsurance is a concise introduction to the Traditional and the Advanced Reinsurance. It aims to take the fear out of reinsurance and to add the fun in, presenting the subject in a way that is simple to grasp and easy to digest. Its aim is to explain – and demystify – the essential ideas of reinsurance, avoiding the heavy use of maths and formulae. Hence, mathematical derivations and risk theoretical details are omitted on purpose. The calculations and figures in the book are purely to illustrate fundamental concepts, appealing to readers’ common sense.

What was our impetus to write this kind of book?

In December of 2016, Joseph Iranya started to write a blog on LinkedIn about the ABC of Reinsurance in a bid to explain in a simple way the building blocks of reinsurance. Iranya’s LinkedIn blog can be found via the following web link: https://www.linkedin.com/today/author/iranya-joseph-05b32362 (last accessed on February 4, 2018). After each published article, the followers of the blog had the chance to manifest themselves and to address the topics they wished to know in more detail in further articles. One of the followers was Dr. Stefan Pohl.

In April of 2017, we decided to merge all the articles written in Iranya’s blog. After review and rearrangement we enriched each new chapter with many easily understandable illustrations, additional practical examples and exercises including solutions in the appendix to enhance the reader’s experience. With these insights, the reader should be able to probe further into the more complicated parts of traditional reinsurance without greater difficulties.

Why does the book consist of two separate parts?

The **first part** which is the main focus of this book describes in detail the essential methods and techniques of **Traditional Reinsurance** – i.e., Treaty and Facultative Reinsurance, both proportional and non-proportional in nature – including reinsurance pricing and accounting methods. Both the benefits / advantages and limitations / disadvantages of the different reinsurance arrangements are presented. Furthermore, this part shows how two different reinsurance types can complement each other under the same reinsurance program. It contains the contents of Iranya’s blog on LinkedIn. After each chapter, the reader can find some useful references for further reading.

The **second part** of this book deals with **Advanced Reinsurance**. This part is intended to serve as a brief outlook. Firstly, it gives the reader a rough overview of the development of Alternative Risk Transfer Methods such as Securitization. Secondly, in addition to the theory and application of Assumed (Inwards) Reinsurance Arrangements in the first part, it provides the reader with useful insights into the fundamental concepts and principles of Ceded (Outwards) Reinsurance Arrangements, including:

- Retrocession and Reciprocity arrangements,
- Cycles of the Reinsurance Market, Reinsurance Capacity and Retention,
- Fronting and Captive Reinsurance characterising as Agreements not transferring any of the risk, and
- Legacy or Run-Off business representing all discontinued Reinsurance Cessions.

One section is dedicated to Reinsurance Treaty Wordings to make the reader familiar with the meaning and interpretation of the most common Reinsurance Treaty wordings and clauses.

Since (re-) insurance is a global industry, following the 2008 financial crisis, this book addresses also Regulatory Developments as the equivalence between regulatory regimes and global systemically important insurers (G-SIIs).

Typically reinsurance is purchased to influence the underwriting result and risk position on the level of a single treaty, a portfolio or the whole company. Against this background, the latter part of this study guide describes a procedure on how to evaluate and to optimize an existing reinsurance structure, and simultaneously to find an optimal retention level.

In the second part, we abstained from giving many examples and illustrations. Furthermore, we disregarded any practical exercises. Therefore, the additional references, which are added after each section and chapter, are indispensable to the reader for a clear understanding.

Finally, a glossary of commonly used reinsurance terms is appended to strengthen the reader's understanding.

Note

Who should read this book?

This book is the ideal introduction for anyone looking for a short yet scholarly overview of reinsurance.

The simplicity of this book makes it ideal for a beginner in the field of reinsurance. Therefore, it is not only helpful for someone wishing to become either a reinsurance underwriter or a reinsurance buyer in a (re-) insurance solo entity or group, but it is also useful for (re-) insurance underwriters looking to obtain a quick clarity on some reinsurance topic.

How should you read this book?

The reader should not commence with the voluntary second part before successfully completing the mandatory first part.

PART I:
TRADITIONAL REINSURANCE

2 What is Reinsurance?

2.1 Concept of Reinsurance

So what do people mean when they talk about reinsurance?

When individuals want to protect themselves against the financial burden they may face as a result of damage to their property, e.g., to their car or to their house, they would go to an insurer to obtain an appropriate insurance contract.

The insurance policy lays down the terms of the agreement between the insurer and the insured, i.e., how much the insurer would compensate the policyholder in case a loss was to happen, under what circumstances the insurer would be obliged to pay and many other insurance conditions. The contract also spells out how much the insurer will charge the insured for this service (i.e., the insurance premium).

To be able to meet their end of the bargain, the insurer has to offer the same service to multiple policyholders. In that way, the insurer is able to collect a pool from the premiums, which it then can use to pay off the losses suffered by the policyholders. However, in gathering this pool, the insurer's total amount of risk also grows.

What happens when it is faced with a situation where it needs to compensate multiple policyholders but the premiums it collected are not sufficient to meet these claims?

This is the situation where reinsurance steps in. The insurer – now acting as a policyholder itself – insures itself against the financial burden resulting from having to pay for risks, which it had carried in the first place.

> This process of the insurer insuring itself with another party is what is known as **"Reinsurance".**

The idea behind the format of this arrangement is similar to that of a simple purchase or sales agreement.

The party buying the reinsurance cover is the primary insurance company and technically referred to as **"Cedant"** or **"Reinsured"**, while the party selling the reinsurance cover, is technically referred to as **"Reinsurer"**. The cedant buys protection from the reinsurer for the risks it has carried.

Just like in the ordinary insurance policy, the cedant pays a cost to the reinsurer for the service. This cost is known as **"Reinsurance Premium"**.

> Concisely therefore, and akin to an ordinary insurance contract, **Reinsurance is the Insurance of Primary Insurance Companies.**

Reinsurance is an indispensable part of the insurance system. It gives primary insurance companies the ability to write large, accumulated or complex risks. It also makes insurance less expensive enabling policyholders to get insurance services at reduced insurance costs.

2.2 Types of Reinsurance

In general, reinsurance is divided into two broad categories: Treaty and Facultative Reinsurance.

> **Treaty Reinsurance:** The Cedant enters into an agreement to cede a broad category of its risks to the Reinsurer according to agreed reinsurance terms and conditions.

For example, the cedant transfers a part or its entire portfolio of fire business to the reinsurer. In return, the reinsurer agrees to accept all risks ceded to it under this agreement. In this way, the cedant does not have to look for reinsurance on every individual policy that it writes.

This agreement between the cedant and the reinsurer is what is known as a **"Treaty"**. The treaty states especially how the risks will be shared between the cedant and the reinsurer, the method of reinsurance to be used, the duration of the reinsurance period and the scope under the cover of the agreement. The beauty with this type of arrangement is that the cedant is guaranteed protection for all of the risks falling within the scope of the agreement but subject to the terms and conditions agreed upon with the reinsurer.

> Treaty Reinsurance is also commonly referred to as **Obligatory Reinsurance** or **Automatic Reinsurance.**

Treaty Reinsurance is covered in detail in the following chapters 3 to 5.

> **Facultative Reinsurance:** Facultative Reinsurance is the reinsurance for single or individual named risks.

On the one side, the cedant is not obliged to transfer any risk under this arrangement to the reinsurer and decides on a case-by-case basis if and to whom it wants to cede shares of its risks written. On the other side, the reinsurer is also not obliged to accept the risk offered. In other words, the reinsurer "underwrites" the risk and is free in its decision to participate.

The cedant submits to the reinsurer all information regarding the risk being offered. Based on all this information, the reinsurer decides whether to accept or to decline the offer.

Let us consider as an example, a building with a very high insurance value or Probable Maximum Loss (PML). In this case, the cedant does not have sufficient capacity to write this risk, so it seeks additional support from a reinsurer. If the reinsurer agrees to support the cedant, then a **Facultative Contract** is written. Otherwise, the reinsurer may decline and there would be no contract in place.

Normally, a Facultative Reinsurance arrangement is used in the following cases:

- There is no treaty protection available for a particular (i.e., specific) risk.
- The risk in question is hazardous and the cedant (i.e., primary insurer) does not wish to cede it to its treaty.
- There are purely financial or strategic reasons.
- If a risk exceeds the automatic treaty capacity of the cedant, then a Facultative Reinsurance arrangement can as well be sought for the excess part of that risk.

Facultative Reinsurance is looked at in detail in chapter 6.

Key Note

Treaty Reinsurance is used in case of obligatory and broad acceptances, whereas **Facultative Reinsurance** is for optional and individual acceptances.

Treaty and Facultative Reinsurance can be structured under proportional and non-proportional forms of reinsurance depending on the way in which the risks, losses and premiums are shared between the reinsurer and the cedant.

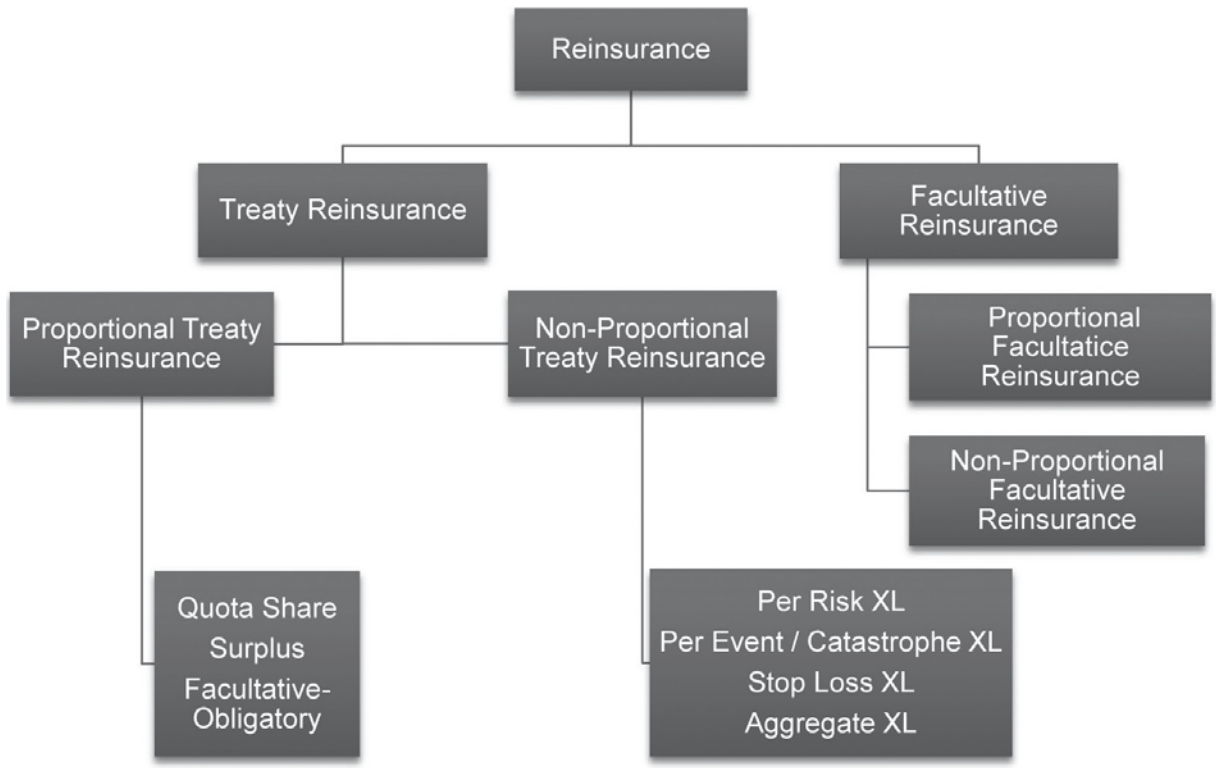

Figure 1: Types and Methods of Reinsurance

Figure one above shows the different types and methods of reinsurance (source: own illustration).

Just as primary insurers, reinsures, too, need protection for the risks they take on from primary insurance companies.

> The process of Re-insuring a reinsurance company is called **Retrocession** and the company that offers this kind of services is called **Retrocessionaire**.

Figure two below shows a typical (re-) insurance risk transfer chain (source: own illustration).

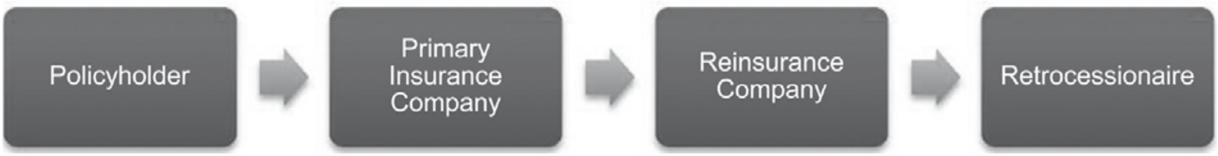

Figure 2: (Re-) Insurance Risk Transfer Chain

2.3 Basic Functions of Reinsurance

Reinsurance is ideally a method of risk transfer from the primary insurance company to the reinsurance company. However, risk transfer is not the only purpose of reinsurance. The four basic functions of reinsurance can be summarised as follows:

1. Stabilize loss experience by smoothening peaks and troughs of loss experience in order to retain capital. Reduce fluctuations due to demographic, social and natural forces.
2. Improve large-line capacity, i.e., create the ability to provide a large amount of insurance under a single policy.
3. Provide catastrophe protection, i.e., limit the net loss amount resulting from a single loss occurrence or a catastrophe event.
4. Provide capital relief, especially in emerging markets with rapid growth in written premium (concerning proportional reinsurance).

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