

# PVK STUDIES 20

## REINSURANCE AND REINSURERS: RELEVANT ISSUES FOR ESTABLISHING GENERAL SUPERVISORY PRINCIPLES, STANDARDS AND PRACTICES

AN ISSUES PAPER ON REINSURANCE INITIATED BY THE  
INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS

R.C.L. Bakker,  
D.N. Davies, et al



# pvk studies

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An Issues Paper on reinsurance initiated by  
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April 2000

**R.C.L. Bakker, D.N. Davies, et al**

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# Preface

Throughout the world there are differences amongst the national supervisors, sometimes substantial, in approach to insurance and reinsurance supervision. At the same time, insurance and in particular reinsurance companies increasingly are active on a world-wide scale. A certain degree of co-ordination of regulation and supervision thus is a prerequisite for the proper functioning of both insurance markets and supervision. The International Association of Insurance Supervisors (IAIS) is the obvious world-wide institution to facilitate and organise the discussions between the national supervisors in order to improve their mutual understanding and exchange of information on their supervisory systems. Amongst many other activities, the IAIS has over the years agreed on a series of supervisory Principles and Standards, supporting the national supervisors and international co-operation.

The reinsurance market in particular is characterised by its global nature. In recent years, the supply side of the reinsurance market has shown a clear trend towards further concentration. In a global and competitive market, with a growing use of complex risk transfer products, insurers and reinsurers must continually monitor and assess the overall soundness of the counterparties to whom they cede business. Reinsurance regulation and supervision, on the contrary, is predominantly of a local, i.e. national, nature. The question thus arises to what extent the regulation and supervision of reinsurance and reinsurers should be co-ordinated or even harmonised.

It is for this reason that the IAIS Technical Committee in January 1998 installed a Working Group on Reinsurance. The mandate of the Working Group was to draw up an Issues Paper on Reinsurance, analysing the issues that need to be taken into account in a discussion on establishing a minimum regulatory position with respect to the supervision of the primary insurer's reinsurance policy and any direct supervision of reinsurers. The Issues Paper may also serve as a step towards the drawing up of supervisory Principles and Standards. The Working Group consisted of supervisors from Germany (Lutz Janke), Guernsey (Steve Butterworth), the Netherlands (Rob Bakker), Switzerland (Peter Streit), UK (Nigel Davies) and USA (Alessandro

Iuppa), and was later extended with representatives from Singapore (Lim Shu Chiau) and the European Commission (Michael Thom).

Rob Bakker of the Netherlands, chair of the Working Group, and Nigel Davies (UK), together with other members, elaborated the Working Group's findings in the present Issues Paper on Reinsurance. They would like to thank Harrie Teeuwen of the Netherlands for editorial assistance and, especially, Jane Lamb of Canada for reviewing and improving the final draft.

I am delighted to be able now to present the IAIS Issues Paper to a wider audience. From a Dutch perspective, our commitment to the issue of reinsurance supervision was an extra reason for the Verzekeringkamer to publish the Issues Paper on Reinsurance in its research series 'vk studies'.

I am convinced that it is in the best interest of all parties concerned that this Issues Paper is now given much broader publicity, and that it will amongst both IAIS members and many others further encourage and enhance the discussions on the future shaping of the supervision of reinsurance and reinsurance companies.

Prof. dr. Arend Vermaat

*Chairman Verzekeringkamer*

*Vice-President IAIS*

# Summary and recommendations

## Considerations

The world-wide rationale for regulating and supervising the reinsurance policy of primary insurers and/or reinsurers themselves is the financial protection of the policyholder, the consumer of insurance products. Thus a basic question is whether regulating and supervising reinsurance and reinsurers contributes to this protection.

One of the findings of a survey carried out in 1998 was that there are substantial differences in the regulation and supervision of reinsurance among the countries belonging to the IAIS. In almost every country, the reinsurance policy of primary insurers is supervised. Many of the countries also supervise reinsurers, some through a simple system of licensing, some with an approach that is comparable with the supervision of insurers. There are different opinions on the added value of supervising reinsurers, and how to do it. The approach taken depends on historical and local market conditions.

In general, in a system of direct supervision, reinsurers have to be licensed, providing a legal basis for the supervisor to carry out solvency analysis, on-site inspections and fit and proper testing, to require annual accounts and business reports, to apply supervisory sanctions, and so on. A registration system, that comprises some of the tools of direct supervision, is still regarded as direct supervision, although a less stringent form.

In recent years, the supply side of the reinsurance market has shown a clear concentration trend. The number of reinsurance companies controlling a substantial part of the world market has gradually been decreasing, to less than ten players today. Despite this concentration trend, there are also many small reinsurance companies operating solely in local markets and often with stable customer relationships.

Apart from this current concentration trend and as a result of the reinsurers' need in many cases for world-wide access to the reinsurance market, there is an abundance of risk-seeking capital being offered. New players and new risk transfer products put price pressure on traditional reinsurance products.

Frequently, these often well capitalized newcomers are domiciled in off-shore regions.

The combination of severe competition and continuous entry of new suppliers leads, among other things, to product innovation and, according to textbook economics, to bankruptcies. Product innovators have concentrated on introducing new risk transfer products, mixing elements of traditional reinsurance products and capital market products.

Provided there are no financial consequences for the consumers because of insurance company failures, the liberalization of reinsurance and capital markets has positive effects in the form of lower prices, more insurability and more product variety.

In a competitive market and with the use of complex risk transfer products, insurers and reinsurers must continually monitor the soundness of the counterparties to whom they cede business. It is questionable whether insurance undertakings – and the insurance supervisors – still have adequate insight into the professionalism and appropriateness of the leading representatives of the reinsurance companies, and in the risk exposure policy of globally active reinsurance companies. In other words, one may question whether it is sufficient merely to supervise the reinsurance of the primary insurer, and not the reinsurers themselves.

## Conclusions

- 1) The supervision of the reinsurance policy of primary insurers is a vital part of the assessment of the solvency of primary insurers.
- 2) The alternative risk transfer product market is likely to grow, with the traditional boundaries between (re)insurance and banking breaking down. This phenomenon has emerged in those countries where it is permitted to combine insurance and reinsurance activities in one insurance or financial group, or even within one legal entity. The speed with which alternative risk transfer (ART) products are being introduced, however, differs among countries. Generally, most of the risks assumed by reinsurers are still based on traditional reinsurance contracts.

- 3) It is increasingly complicated for a supervisor to assess to what extent the insurance risks – underwriting, timing and investment risk – are transferred to reinsurance companies. It is, therefore, increasingly difficult to judge how much credit for reinsurance may be taken into account by insurance companies and what effect the credit could have on the solvency of the reinsurance company.
- 4) Supervisors are challenged to cope with strong concentration tendencies in reinsurance markets. At present there is probably insufficient insight – on the part of the insurance supervisors – into the risk exposures of reinsurance companies that operate world-wide.
- 5) Even though, as a result of the ongoing concentration trend, the reinsurance markets are becoming more global, the (re)insurance supervisors do not exchange information about reinsurers and reinsurance activities in a systematic or co-ordinated way.
- 6) Fraud risks and systemic risks may occur in the complex markets of risk transfer products because of insufficiently transparent (retro)cession processes, jeopardising the financial interests of consumers anywhere in the world.
- 7) Supervisors in emerging countries face the dilemma of whether to ensure domestic insurers are adequately covered by having access to large non-domestic reinsurance companies or to invest the reinsurance premium in domestic reinsurers. This was discussed at the IAIS Conference in Cancun in 1998 and in the Working Group's view should continue to be discussed.
- 8) Especially in economies that are in transition, supervisors often have insufficient experience with the ins and outs of the numerous forms of risk transfer. According to the IAIS Insurance Supervisory Principles, every supervisor should eventually comply with high standards of supervisory expertise. However, in a stage of transition, a temporary option could be that these countries make substantial use of the assessments of reinsurers by world-wide private market rating institutions.

- 9) In those countries where reinsurance companies are not licensed, fit and proper testing cannot be done. From a prudential viewpoint, the argument that fit and proper testing of leading representatives of reinsurance companies is less important than testing those who are active in insurance companies, is not very convincing.
- 10) In general, it is the Working Group's belief that arguments supporting direct supervision of reinsurers are stronger than those that do not promote direct supervision.

## Recommendations

The Working Group on Reinsurance complied with the request of the Technical Committee to draft an Issues Paper on Reinsurance that focuses on the differences between insurance and reinsurance from a supervisory viewpoint. The Working Group recommends to the Technical Committee that:

*As soon as the Issues Paper has been adopted, the Technical Committee should establish a Reinsurance subcommittee and that this subcommittee be asked, as a sequel to the Issues Paper, to develop principles and standards on reinsurance.*

Based on its work to date, the Working Group also recommends to the Technical Committee that:

- 1) A harmonized single licensing system for reinsurance activities (similar to the current model of insurance supervision in the European Union) is the ideal to work towards. In practice, and in order to keep pace with the current reinsurance market trends, the IAIS should encourage mutual recognition of supervisory principles and practices among (re)insurance supervisors. A starting point would be to make use of the results of the survey by the Insurance Law and Regulations subcommittee.
- 2) A discussion on the benefits of regional mutual recognition should be the first step in a long-term approach to harmonizing supervisory principles and standards. Regions could be:

- North America, Australia and New Zealand, gradually extended with the countries of Middle and South America;
- Japan and other Asian countries;
- the European Union, countries belonging to the European Economic Area and Switzerland, gradually extended to Middle and East European Countries; and
- South Africa and other African countries.

Alternatively, it may be easier for jurisdictions with similar markets conditions to recognize each other's supervisors approach. Accordingly, some of the regions proposed above may be combined. Also, offshore centres may be deemed to constitute a 'region'.

An important task for a Reinsurance subcommittee would be to work on ways to facilitate mutual recognition – for example, by scheduling meetings on a regional basis.

- 3) A database of all reinsurance companies in the world should be created and maintained. This database should be freely accessible and linked to the Internet site of the IAIS. Authorization to make changes should be strictly limited to the IAIS secretariat. The information about the reinsurance companies may be limited at first to, for instance, legal name, address, how to get additional information, country activities, members of the executive board, and supervisory authority.

Those reinsurance companies that are not directly supervised should be invited to co-operate on a voluntary basis. The rating agencies could also be invited to supply their information to the IAIS reinsurers database. However, where credit ratings are provided, the agency making the assessment should be specified and the IAIS should be able to check the quality of the information they provide.

- 4) To improve and up-date information about reinsurance companies, a licensing or registration system for reinsurance companies should become obligatory. This would also enable supervisors to have some influence on the fit and proper qualities of the leading representatives.

There is a tremendous increase in new risk transfer products, that blend banking and insurance products into complex financial products. The Working Group's view is that, in principle, the introduction of new products has advantages; in any case, it would be impossible to prohibit these developments. All supervisors must keep pace with market dynamics and, where necessary, develop skills to supervise these risk transfer products. It could be a task of a Reinsurance subcommittee to organize regular workshops to exchange information and discuss new developments.

Disclosure of these products should be enhanced so that they are sufficiently transparent, especially where they are complex. The accounting and valuation should properly reflect all possible commitments and rights. Solvency requirements should take the characteristics of these products fully into account.

- 5) In proceeding toward mutual recognition, it is of the utmost importance to stimulate self-regulation by and co-operation with (associations of) reinsurance companies. To start, the Working Group proposes discussing three items with the industry:
- Does the current concentration trend actually increase systemic risks in reinsurance markets?
  - Does the industry support an IAIS 'database on reinsurance companies'?
  - What are the requirements for licensing reinsurance companies and what sanctions are relevant for supervisory action in a situation of doubtful fit and proper outcomes?

# 1 Introduction

## 1.1 Mandate of the Technical Committee

The Working Group on Reinsurance should examine and report the differences between an insurance company and a reinsurance company, primarily seen from a supervisor's viewpoint and objectives. Although IAIS member countries have different legal and supervisory structures, all insurance companies in every jurisdiction are supervised. Every insurer needs to be licensed. Every insurer is obliged to inform a supervisor, regularly and on request, about its present and foreseeable future financial situation. On-site inspections play an important role in assessing the overall security of an insurer. To promote general confidence in financial markets, leading representatives of insurance companies are subject to fit and proper tests.

With the ultimate aim of protecting the policyholder, supervisory work focuses on effective and efficient checks on how insurance companies control the risks related to the investments (assets) and to the liabilities, as well as to minimizing the mismatch between them.

Because there was agreement about the importance of these issues, this is where the IAIS started its standard-setting work. For example, it developed the general supervisory principles and supervisory standards on licensing and on on-site inspections.

Both insurance and reinsurance are about risk transfer. Some countries do not consider differences between insurance and reinsurance to be significant and make no distinction between supervising an insurer or a reinsurer. Thus all principles and standards of the IAIS with respect to supervising insurers could also apply to reinsurers. Others, that see a significant difference, take different approaches.

Although countries acknowledge the importance of the supervisory issue concerning reinsurance, there are distinctive levels of supervisory approach. In many countries, insurance and reinsurance activities are allowed to be undertaken by a single, separate legal entity: either an insurer or a reinsurer.

The Working Group on Reinsurance recognized that it would not suffice to restrict its work merely to stating the differences between insurers and reinsurers from the risk transfer point of view. Considering the actual differences in supervisory practice among the IAIS countries, the Working Group tried to assess a minimum regulatory position with regard to the reinsurance policy by primary insurers and/or with regard to reinsurers themselves. The Technical Committee supported this suggestion and agreed with an adjusted mandate.

## 1.2 Delimitation and extension of the mandate

The Working Group asked the Accounting Subcommittee to handle the issues related to reinsurance accounting. In addition,

- the Group on market conduct should consider the supervisory aspects of reinsurance distribution;
- the Emerging Markets Committee should consider the supervisory aspects of Lloyd's, since it provides much of the reinsurance cover for emerging countries;
- the Exchange of Information Committee should consider the advantages of having efficient information exchange about reinsurers. It is not considered relevant to the mandate of the Working Group. Exchange of information on reinsurance supervision should not depend on the system of reinsurance supervision itself.

The Technical Committee requested the Working Group on Reinsurance to monitor fraud aspects related to reinsurance, in co-operation with the Insurance Fraud Subcommittee.

## 1.3 Working Group on Reinsurance

Participating members in the Working Group on Reinsurance are Germany, Guernsey, the Netherlands (chair), Singapore, Switzerland, United Kingdom, United States of America, and the European Commission.

## 1.4 Coherence with existing IAIS principles, standards and guidance papers

Reinsurance supervision-related items have been considered in IAIS documents<sup>1</sup> already adopted:

- *Insurance supervisory principles*, page 7: specifically addresses supervisors in jurisdictions where reinsurers are not subject to the same supervisory rules as insurance companies;
- *Principles applicable to the supervision of international insurers and insurance groups and their cross-border establishments*, page 11: recommends the imposition of financial or other requirements on reinsurance contracts as a condition for credit being given for reinsurance ceded by primary insurers;
- *Supervisory standard on Licensing*, page 27: sets out basic principles of the insurance company's reinsurance policy;
- *Supervisory standard on On-site inspections*, page 41: describes the need for an evaluation of the technical conduct of reinsurance business;
- *Guidance on insurance regulation and supervision for emerging market economies*, page 65: recommends establishing a method for the collection and monitoring of information relating to reinsurance companies, among other things.

## 1.5 Differing assessments

Consideration has to be given to the economic, social, juridical and regulatory environment that reinsurers face. The approach taken by the responsible supervisory authority can affect the economic environment (i.e., the level playing field issue). While the model of home country control is an obvious choice, problems may arise. For example, the valuation techniques supplied to the reinsurance may be less stringent than those applied to insurance companies.<sup>2</sup>

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<sup>1</sup> The combined paper of the IAIS: Insurance principles, standards and guidance papers (October 1998), contains all documents that are approved during the annual conference in Cancun, Mexico on 1 October 1998.

<sup>2</sup> Room for different assessments may stem from the local supervisor's view on the element of prudence incorporated in calculating the technical provisions.

Uniformity in assessing the reinsurer's security will therefore be essential to a world-wide acceptance of a system of supervising reinsurers. The positive effects for the policyholder are by no means negligible. Given the concentration of world-wide operating reinsurers<sup>3</sup>, converging supervisory principles and standards would lower supervisory overhead cost, and produce more awareness about systemic risks in reinsurance markets, less uninsurability, more sound competition, and lower prices for insurance products<sup>4</sup>.

## 1.6 Objective of the Issues Paper

There are disadvantages when supervisors' assessments of the security of world-wide operating reinsurers are different. The regulation and supervision of reinsurers should be a single licensing system based on mutual recognition and harmonized requirements. Given a set of core standards, either the supervisor in the jurisdiction where the reinsurer is domiciled, or ideally a goal world-wide supervisory institution, does the work.

The IAIS recognizes that the goal of a single licensing system is out of reach at present. However, given the increasing global nature of the reinsurance market and the need to monitor at least the financial strength of reinsurers, the IAIS should work towards this goal by promoting closer co-operation between regulators and supervisors and considering the advantages and disadvantages of a system of regional supervisors on reinsurers (for instance, one supervisor for the US or for the EU).

The objective of the Issues Paper is to discuss relevant issues related to reinsurance and reinsurers' supervision for the purpose of:

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- 3 For some recent information about the huge concentration tendencies on actual reinsurance markets as well as an overview of concentration with reinsurers: The global reinsurance market in the midst of consolidation, Swiss Re, sigma, no 9/1998.
  - 4 According to a recent study of St Paul's Re using a 'life-cycle model analysis', the effect of regulation and market restrictions on market growth till 2010 is considered to be substantial. The market will increase to a total of between \$220 billion and \$ 260 billion, where the difference in forecast is attributed to regulatory changes and deregulation.
  - 5 Insurance concepts will generally be of help to develop and stabilize economic markets. In particular, this would apply to emerging countries. Besides the providing of reinsurance cover, reinsurers may offer other value added by setting up these insurance markets. Therefore, it is of utmost importance for supervisors of emerging countries to familiarize themselves with the essentials of the insurance and reinsurance process. From an educational point of view, this Issues Paper could help to fill this gap. More specifically, these countries may be given opportunities that

- clarifying the differences between insurance and reinsurance from a viewpoint of supervision;
- education<sup>5</sup>; and
- beginning to assess minimum regulatory standards (positions) for reinsurance as well as reinsurers, given the approaches to supervision taken by IAIS members.

## 1.7 Emerging economies

Lack of capacity for risk coverage is a big problem that hinders emerging countries in developing their insurance markets. To protect the domestic reinsurers, foreign reinsurers may not always be allowed to offer the professional services considered necessary by the domestic insurers. Arguments for an emerging country to opt for market liberalization may not have been considered thoroughly, and inappropriate regulation constraints may exist.

It would be worthwhile for all supervisors, especially from emerging economies, to become fully informed of the relevant supervisory aspects related to the world-wide reinsurance market. This would allow them to assess the advantages of professional reinsurance coverage for domestic insurance markets.

During the Annual Conference of the IAIS, in Cancun, Mexico, in September 1998, a workshop dealt with the supervisory aspects of reinsurance in emerging countries. It was recognized in the workshop that, in principle, supervisory demands in emerging countries on the insurance and reinsurance companies are not different from the supervisory demands in relatively wealthy countries. There was discussion about what should come first in the eyes of a supervisor: adequate coverage for the risk that insurers have assumed, or investment of the reinsurance premium in the emerging country<sup>6</sup>. The consensus was that “the primary role of reinsurers is to provide adequate coverage of insurance risks. There should be no rules or limitations on international capital transfers for foreign and domestic reinsurers”.

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enable them to judge the necessity of regulation of reinsurance and reinsurer and what minimum positions would be needed.

<sup>6</sup> Refer also to Insurance regulation and supervision in economies in transition, OECD Proceedings, Paris 1997.

## 1.8 Set-up of this Issues Paper

This paper is structured as follows. In chapter 2, after summarizing the necessary information about reinsurance as a form of risk transfer, the supervisory scope is stated. Chapter 3 provides an overview of how reinsurance transfers risk. In addition, other forms of risk-reducing techniques for an insurer *vis-à-vis* reinsurance are discussed. A description of captive reinsurance concludes chapter 3.

Chapter 4 deals with the importance of professional management of reinsurance companies. The chapter investigates fit and proper testing of the management of reinsurance companies that are not being supervised (not being licensed). Chapter 5 gives an overview of legal and organizational forms of reinsurance companies. The aspect of sector separation deserves special supervisory attention. Chapter 6 provides a starting point for regulatory principles related to reinsurance as well as to reinsurers. Acknowledging conditional factors that influence supervision, this chapter describes a minimum regulatory position with respect to reinsurance supervision.

## 2 Reinsurance: definitions, functions and supervisory scope

### 2.1 Definitions

Throughout this paper a number of definitions and key words will be used in describing the concepts of reinsurance and its supervision. Some are described here; for more general insurance terminology, refer to the glossary. The definitions of reinsurance were drawn up by the Group, conforming as much as possible to the OECD wordings<sup>7</sup> on this subject.

#### **Insurance**

Insurance can be defined as an economic activity for contractually reducing risk for the policyholder against premium. In effect, insurance spreads risk through pooling, in that loss by an individual policyholder is compensated for at the expense of all the other policyholders insured for the risk in question. Insurance can be offered on a sound basis when the pooled risks are sufficiently stable for the determination of a proper premium rate, such as when the law of large number works for the independent risks.

#### **Insurance contract**

Legally binding bi-/multilateral agreement between the risk-transferring entity (buyer of the contract or policyholder) and the risk-assuming company (seller of the contract) to indemnify the buyer under specified circumstances.

#### **Insurer**

An insurer is a company that offers protection through the sale of an insurance contract to a risk-transferring policyholder. If the risk-transferring policyholder is not an insurer itself, the risk-assuming insurer is called the primary insurer.

#### **Reinsurance**

Reinsurance is a form of insurance where the primary insurer reduces the risk by sharing individual risks or portfolios of risks with a reinsurer against a

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<sup>7</sup> See OECD: *Draft Glossary of insurance policy terms*, 1998.

premium. The sharing may be proportional or cover losses in excess of a fixed amount or percentage (per case or per portfolio). Reinsurance also spreads risk through pooling, in that the loss by a single primary insurer is compensated for at the expense of all other (primary) insurers reinsured for the risk in question.

### **Reinsurer**

A reinsurer is an insurer that offers protection through the sale of a reinsurance contract to a risk-transferring policyholder who is an insurer. If the risk-transferring policyholder is a (re)insurer itself, the risk-assuming insurer is called the reinsurer, and the risk transfer is known as (retro)cession.

### **Co-insurance**

Co-insurance is a form of insurance whereby two or more primary insurers enter into a single insurance contract to cover a risk in agreed proportions of the total premium. Each primary insurer is directly liable to the policyholder for its own portion.

### **Special-purpose vehicle**

A special-purpose vehicle is a legal entity that assumes risks transferred from (re)insurers in order subsequently to arrange their coverage by issuing bonds to the capital markets. In most cases, securitization is the sole activity of the special-purpose vehicle. Depending on the way of managing the risk transfer, the special-purpose vehicle has to be considered either as a risk-neutral intermediate entity or an actual risk-bearing entity (reinsurer).

### **Basis risk**

Basis risk occurs when an insurer's or a reinsurer's actual claims liabilities are not (fully) met by the reinsurance recoverable in a case where reinsurance has been arranged by way of securitization. Generally, the securitized amount of reinsurance will be assessed by a fixed amount or an index-linked volume.

## **2.2 Functions of reinsurance**

The general function of reinsurance is to reduce volatility, and thus the uncertainty of the insurer's pricing risks, by pooling. This is done to increase

the probability of survival of the insurer over a given time. In purchasing reinsurance, insurers seek to improve their financial performance and security. There are five primary functions of reinsurance:

### **Capacity**

Reinsurance provides flexibility for insurers in the size and types of risk and the volume of business they can safely under-write. It will allow the insurer to enter into new business, expand to or withdraw from a class or line of business and/or geographical area within a short period.

### **Expertise**

Reinsurers supply assistance to insurers in specialized areas where the insurer may have little or no experience. The qualified members of staff of a professional reinsurer will offer services regarding the production process to new insurers in particular and/or to insurers taking up new business lines or expanding their area of operations to foreign countries.

### **Stability**

Properly structured reinsurance programs will assist insurers by limiting wide fluctuations in underwriting results. As a consequence, the limited risk spread will allow the insurer to reduce the required amount of security funds and/or its own funds, and hence the solvency margin. The aspect of security funds is directly related to the increasing importance of the shareholder value by the return on investment.

### **Financial**

Reinsurance assists in financing insurance operations as an alternative to increasing an insurer's capitalization. In this regard, the insurer may have the asset backing of many large reinsurers.

### **Protection**

Associated with stability, reinsurance provides for protection against the potentially large accumulations that can result from catastrophic events; for example, earthquakes, bush-fires and cyclones.

## 2.3 Supervisory scope concerning reinsurance in a nutshell

As stated in chapter 1, reinsurance will be dealt with as a class of risk transfer. The type of risk transferred and the effect of supervisory regulation on risk buyers (mostly reinsurers) and risk sellers (mostly insurers) are summarised in Table 1.

**Table 1** *Risk transfer possibilities and the effect of supervisory regulation on risk buyers and sellers*

<b>Risk seller (ceding party)</b>	<b>Nature of risk transfer</b>	<b>Risk buyer (assuming party)</b>
Credit for reinsurance: – Reduction factor – Collateral	<i>Traditional reinsurance</i> Underwriting risk Timing risk Investment risk	Prudential solvency capital
General: – No credit for reinsurance – Discounting possibilities (matching)	<i>Non-traditional reinsurance</i> Credit risk Liquidity risk Etc.	General: – Prudential solvency capital

The centre part of Table 1 reflects the nature of the risk transfer, divided into traditional and non-traditional reinsurance. The dotted line indicates that, in practice, the distinction between both forms of risk transfer is not always clear. For sake of clarity – and in line with the definition – reinsurance relates to every form of risk transfer<sup>8</sup>.

Through a reinsurance arrangement the seller cedes a (mix of) risks to the buyer against a premium; it buys risk coverage. From a supervisory perspective, the seller is permitted to reduce its own funds (and solvency margins), depending on the specific conditions in a reinsurance contract.

<sup>8</sup> Chapter 3 addresses risk transfer possibilities.

The buyer assumes the risks and will have to secure its claims paying ability by means of sufficient technical provisions and solvency capital. Depending on regulatory laws, another possibility of securing the assumed risks – apart from solvency capital – is that a buyer pledges collateral to the disposition of the seller.

In most cases, the seller of risk (buyer of additional coverage) is an insurer, and the buyer of risks a reinsurer. However, in the case of retrocession, the situation could be different, depending, amongst other things, on the lines of business<sup>9</sup>.

## 2.4 Actual supervisory practice within the IAIS

Under the auspices of the IAIS, a questionnaire was sent to each member in December 1996 to gather information on the actual and future approach to supervision of reinsurance and reinsurers<sup>10</sup>. Each member was to distinguish the reinsurance supervision in its country using five main types, or 'levels':

0. no supervision at all;
1. supervision on reinsurance is restricted to ceded reinsurance of primary insurers only;
2. the supervisor is authorized to request non-public information about a domestic reinsurer;
3. every reinsurer doing business with a domestic insurer is licensed;
4. uniform licensing should be extended with additional requirements for the insurer or the reinsurer<sup>11</sup>.

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<sup>9</sup> See chapter 5 for an overview of ceding and assuming parties.

<sup>10</sup> R.C.L. Bakker & H.J.M. Teeuwen: 'The IAIS Survey on reinsurance supervision. An overview of the findings', The Geneva Papers on risk and insurance, 23 (No. 89, October 1998), 612-623. Refer to the continuing work of the IAIS Insurance Laws, Regulations, Practices & Standards Subcommittee with respect to questions about reinsurers.

<sup>11</sup> To indicate the present situation, only alternatives 0-3 could be selected; level 4 would apply only to future expectations.

Table 2 summarizes the answers, distinguishing between present and expected future level of supervision.

**Table 2** *Anticipated reinsurance supervision world-wide, relative to main level per country*

Options of supervision world-wide		Number of countries						Average main level
		By present and future main level						
		0	1	2	3	4	Total	
Sustained disparities	Present	1	5	10	7	-	23	2.0
	Future	0	2	14	5	2	23	2.3
Trend toward harmonization	Present	2	4	12	10	-	30	1.9
	Future	0	3	14	8	5	30	2.5

Those countries that expect a continuation of disparities expect, on average, an increase in the future level of supervision, from 2.0 to 2.3. The countries that foresee a trend toward harmonization also expect a 'higher' level of reinsurance supervision, from, on average, 1.9 to 2.5.

In addition, countries that believe in sustained disparities in supervision expect the difference among countries to lessen. However, countries that anticipate world-wide harmonization do not seem to agree on a very specific level of harmonization at this time.

### **Supervision in the near future**

The survey was primarily aimed at gaining insight into the main levels of supervision, both present and anticipated. However, the IAIS members were given the opportunity to specify the current and expected supervisory approach in some detail. Six elements were mentioned most often and should be considered important in discussions about a possible review of reinsurance supervisory systems.

The six elements are:

- only domestic reinsurers have to submit annual accounts to the supervisor;
- rating agencies' information is used to evaluate foreign insurers;

- the supervisor may practise on-site inspections at the reinsurers' premises;
- domestic reinsurers follow the same rules for disclosure of financial information as primary insurers;
- the principles of supervising reinsurers are the same as for primary insurers;
- the supervisor assesses the reinsurers' solvency.

Obviously, the first two elements are found more in relation to the main level 1, the supervision on ceded reinsurance of primary insurers. The last two elements relate more frequently to the main level 3 of direct supervision of reinsurers.

## 3 Risk, reinsurance and related areas of risk transfers

### 3.1 Introduction

Depending on economic market analysis, experience, actuarial skills and professional judgement, every insurer has to identify and analyse the risks that can threaten its assets or earning capacity and decide whether it will transfer, reduce or retain the assumed policyholder's risks. It is rational for each insurer first to optimize its retention<sup>12</sup>, secured with own funds or equity.

However, reinsurance may function as a substitute for an insurer's funds. This will depend on several factors including the extent to which reinsurance may be considered as a substitute for own funds by the supervisory authority. Other considerations also play a role, such as taxes, return on equity, adaptation to changing risk conditions and so on.

In some jurisdictions a risk-reducing instrument for an insurer is the maintenance of equalization reserves. The supervisor decides whether to take these reserves into account in assessing the solvency of an insurer<sup>13</sup>.

In a number of jurisdictions a non-domestic reinsurer is obliged to pledge collateral in the jurisdiction where the ceding insurer is domiciled. The use of collateral is discussed later in this chapter, as is the establishment of captives to provide insurance or reinsurance.

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<sup>12</sup> Given the market forces of competition, an insurer is continuously confronted with a trade-off between the policyholder's risk as a source of profit (or surplus) and its primary *raison d'être*: the fulfillment of its financial obligations to policyholders.

<sup>13</sup> The reducing of risks relates also to how effectively and professionally the insurer is managed. This will be dealt with in chapter 5.

## 3.2 Risk transfer between ceding and assuming insurers

### 3.2.1 Traditional risk transfer

Traditional reinsurance contracts may be classified into a few categories which are characterized by the combination of the type of contract and the way of determining the amount of the risk transfer.

#### Types of contract

The contracting partners mutually agree on the type of contract:

- With a facultative reinsurance contract, the insurer is free to offer any risk for reinsurance, and the reinsurer is free to assume it. This type of reinsurance is mainly used for non-standard risks where the hazards involved must be considered carefully.
- With a treaty reinsurance contract, it is agreed beforehand that the insurer will cede, and the reinsurer will assume, all risks insured by the insurer that come within the terms of the reinsurance contract.
- Occasionally, the facultative and treaty elements of contract are combined to constitute the facultative treaty reinsurance contract. Within the terms of such a contract, the insurer is free to offer any risk insured, whereas the reinsurer is obliged to assume each risk submitted.

#### Determination of the amount of risk transfer

Reinsurance contracts can be divided into proportional and non-proportional contracts:

- In the case of proportional contracts, the amount of risk transferred to the reinsurer is predetermined from the characteristics of the original policy's risk exposure. The reinsurer follows the insurer in both premiums and claims on a pro rata basis. The risk transfer may apply to the terms of the original policy as a whole (pure quote share) or only to the amount of exposure in excess of the insurer's net retention (surplus treaty).
- With non-proportional contracts, the amount of risk transferred is determined after claims have occurred. The risk transfer is not related to the original policy's characteristics. The amount of transferred risk is determined afterwards by the share of the claim(s) in excess of the insurer's net retention, either on each individual risk (excess of loss treaty) or on a portfolio of risks (stop loss treaty).

### 3.2.2 Alternative risk transfer

Variants of the more traditional products have emerged within the last ten to fifteen years. Their characteristics include the assumption of limited risk by the reinsurer, multi-line and multi-year period, sharing of the result with the primary insurer and the explicit inclusion of future investment income as a pricing consideration. Such contracts are referred to as finite risk reinsurance or financial reinsurance (FR).

Within the last three years, further novel forms of risk transfer have emerged, generically referred to as Alternative Risk Transfer (ART). ART is characterized by the provision of bespoke funding arrangements for perceived areas of risk and may involve the participation of the capital markets or the use of derivative instruments. Certain ART techniques will therefore involve the blurring of the traditional distinction between insurance, reinsurance and capital market operations. This is a primary reason why this report considers (traditional) reinsurance as a subspecies of the general class of risk transfer arrangements.

New types of product continue to emerge. The number of capital market participants is increasing. As capital market investors become more familiar with insurance risk, the potential for growth in size and diversity of ART products will increase. ART shows that the traditional boundaries between insurance and banking are breaking down. This, together with the international nature of the business, poses a challenge for the insurance regulator on its own and the way co-operation could grow among financial supervisors.

The following is a list of the various forms of non-traditional risk transfer, including alternative forms of risk financing, starting with those most familiar to practitioners in the traditional market<sup>14</sup>.

#### Finite Risk

This category contains a diverse range of products whose key features were outlined in paragraph 23. The principal desired effect of finite risk reinsurance

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<sup>14</sup> With reference to chapter 2, the definitions regarding non-traditional reinsurance will need to be widened through the identification of its great variety of forms, so that the IAIS members may improve their understanding of them.

is to insulate the primary insurer from the peaks and troughs of volatile underwriting results during the period of the contract. For this reason, timing risk is at least as important an element of FR as underwriting risk. The needs of each primary insurer will be slightly different, and this has given rise to a wide variety of FR products. There are two broad categories of FR, retrospective and prospective covers. The former will provide protection against a more rapid deterioration of old-year reserves than expected, the latter serves to smooth current and future premiums and claims patterns<sup>15</sup>.

### **Securitization**

Securitization of risk is achieved by the formation of a special-purpose vehicle (SPV), to which risk is ceded by means of a reinsurance contract. The SPV is funded by the issue of bonds to the capital markets. By this means, the risk assumed by the SPV is collateralized by cash. On maturity of the bonds, the funds retained by the SPV are distributed to the investors.

Reinsurance contracts are constructed in a manner that is acceptable both to the cedent and to the investors. They fall into two broad categories:

- An ultimate net loss (UNL) contract is one in which the SPV follows the fortunes of the cedent. Earlier securitizations fell into this category.
- A trigger contract is one whereby a predetermined sum is payable to the cedent on the occurrence of a specific event, such as an earthquake of a certain magnitude within a specific region.

This second method appears to be gaining popularity because it provides clarity to investors. It does, however, introduce basis risk whereby the performance of the reinsurance and the performance of the underlying risk portfolio are not exactly matched.

### **Dual Trigger Policies**

These are risk transfer instruments that respond on the occurrence of two predetermined events, one a conventional insurance event, and the other a traditional financial market event such as an adverse movement in interest

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<sup>15</sup> A more detailed description of the nature and variety of FR contracts is found in Swiss Re, sigma, no. 5/1997: *Alternative risk transfer via finite risk reinsurance: an effective contribution to the stability of the insurance industry*.

or foreign exchange rates. These policies are designed to provide cover for companies that believe they can withstand losses on their risk portfolios but would experience difficulty if the losses coincided with events that crystallize asset risk. Integrated risk finance programs such as these are reported to be increasing in popularity in some IAIS member countries.

The providers of such cover would normally hedge their assumed interest or exchange rate exposure by means of options or forward contracts in the event that they were not naturally hedged.

### **Contingency Funding Products**

These can best be explained by means of two examples: the Catastrophe Equity Put Options and the Surplus Notes.

- Catastrophe Equity Put Options are a form of post-loss funding that provides capital in the event of a catastrophic loss. This type of contract is best illustrated by the following example:

A three-year cover with a premium of \$2.35m per annum that would allow access to \$100m in convertible preference shares in the event of a single \$200m loss or an aggregate loss of \$250m in any one year.

Such contracts may save a company from insolvency, but at the expense of a dilution in ownership and perhaps of control for the management of an insurer and thus the supervisor.

- Surplus Notes are a form of risk financing typically involving the formation of a trust which is financed by the issue of notes to the capital markets. The trust will be for the benefit of an insurance company, which may call on the funds for a number of reasons, including the financing of large increases in reserves or the financing of an acquisition.

Drawing on the fund would typically mean conversion of the trust notes to notes in the company. This form of financing is of particular use to mutual companies whose access to capital is restricted.

### **CBOT**

The Chicago Board of Trade is a market for trading options on the movement of the PCS index, that is related to property damage in the U.S. It provides a means of hedging liabilities on exposures acquired in underwriting U.S. catastrophe risk or mitigating the downside of purchasing securitized catastrophe risk through the mechanism described previously under securitization.

Note that no insurable interest is needed to trade in these instruments.

The movement of the indices is unlikely to reflect the exact performance of the underlying risk. For this reason, buying these options for hedging purposes will mean accepting basis risk.

### **Risk Portfolio Swaps**

An example of a risk portfolio swap has recently been reported. It involved a swap of exposure between the property books of two companies, only one of which contained catastrophe risk, on the occurrence of a defined trigger.

### **CATEX (Catastrophe Exchange)**

This is an electronic risk exchange tool that was set up in New York in 1997. It enables subscribing reinsurers, insurers and brokers to post the different types of risk that they wish to exchange and, in turn, view the risks offered by other subscribers. Members may exchange risk at prevailing CATEX prices. Risk may be offered anonymously to test market reaction to prices.

CATEX is a distribution mechanism rather than a novel form of risk transfer; this is confirmed by its status as a licensed intermediary. It is understood, however, that CATEX has aspirations to open its membership to capital market participants, and this is relevant to the broad topic of ART.

## **3.3 Reinsurance as a substitute for own funds**

### **3.3.1 The function of own funds**

Own funds are the difference between the assets of a firm on the one hand and its debt, financial obligations and provisions on the other. This means

that own funds correspond to the firm's owners' share in the book value of the assets. Company law in most countries sets a minimum for own funds, particularly in the case of joint stock companies. This means that the owners of the company are under an obligation to leave part of their assets in the company as a guarantee. Own funds can be used to meet financial obligations not covered by the current operating result, or by other assets such as bonds, loans, and so on.

Own funds not only cover obligations arising from insurance activity, but also obligations to creditors who are not policyholders. In particular, own funds guarantee that losses in value on capital installations, and losses arising from management mistakes, do not impinge directly on creditors' claims.

The traditional view is that substantial own funds are the mark of a healthy financial position, and therefore a characteristic of creditworthiness. Creditors may assume that in economically difficult times and even if a company is temporarily making a loss, their claims are covered.

Risk theory models show that the probability of collapse of an insurer can be expressed as a function of total capital resources available. As own funds increase so the probability of collapse declines – but by ever smaller amounts. This consideration also confirms that over-capitalization is an inefficient risk strategy.

The primary objectives of traditional reinsurance are to smooth the profile of risk (by eliminating peaks in risk) and to make good the primary insurer's risk compensation where it is insufficient (e.g., because of a small portfolio) by arranging for risk compensation to take place at the reinsurer's level, rather than the primary insurer's. The use of own funds to cover peaks in risk or an inadequate risk portfolio is not recommended, since in some circumstances this can lead to rapid exhaustion.

For newly established insurance companies in particular, reinsurance serves as an aid to financing, in that – for instance in the case of quota treaties – the reinsurers share proportionally both in costs and the formation of actuarial provisions. This financial co-operation may be expected to prove

less expensive, more flexible and more targeted than the provision of large equity, especially since reinsurance treaties can be more easily adapted to changing conditions than can own funds.

Generally, one of the main advantages of reinsurance is its flexibility: the reinsurance treaty is seldom long-term, and can be adapted more easily to new circumstances than can the provision of own funds. Against that, reinsurance offers no cover for loss on investments, or losses that are a consequence of management mistakes. For these, the firm must turn to its own funds.

### **3.3.2 Constitution of own funds and reinsurance cover**

Own funds should be constituted from resources that the firm has generated itself, i.e., through retained profits. In some jurisdictions own funds include subordinated loans, in so far as they satisfy certain conditions (for instance in the context of the Third Insurance Directives of the European Union). Increases in share capital are relatively burdensome since they require changes in statutes and authorization by a shareholders' meeting; moreover, in some countries, taxes must be paid on increases in capital.

Shareholders wishing to see the highest possible direct return on capital may resist increasing share capital or establishing reserves from retained profits.

The capacity of the reinsurance market fluctuates. Own funds are therefore indispensable for the insurer to be able to cope at all times with ups and downs in business results.

Own funds can only replace reinsurance cover to a limited extent. Conversely, in the EU's solvency margin (reduction factor) and in the NAIC's risk-based capital (credit risk factor), reinsurance is counted only to a limited extent as a replacement for own funds. Own funds and reinsurance have particular functions that are not fully interchangeable.

## **3.4 Risk reducing by means of equalization reserves**

Because of the erratic nature of the insurance business, claims experience can be subject to considerable fluctuations. Consequently, underwriting

results vary significantly and unforeseeably, especially in classes covering risks arising from natural perils (e.g., storm, hail, frost) or large risks. Reinsurance is the most important instrument used to protect the ceding insurers' portfolio from these fluctuations. Another precaution that can be taken in financial years with a favourable claims experience, is the establishment of reserves. Some countries require the setting up of a technical provision (i.e., an equalization reserve) for this purpose. Tax treatment depends on the country concerned.

An equalization reserve is usually set up in relation to the insurer's net retention (*after* reinsurance). The calculation of the reserve amount is based, directly or indirectly (by taking account of the underwriting results) on the net losses; i.e., the *net claims ratios* of a reference period, comprising a certain number of previous years, are compared with the net claims ratio of the current financial year. By using a net basis, the ceding insurer has some scope to determine the amount of this reserve. Carefully designing the reinsurance arrangements and/or the corresponding procedures for setting off amounts receivable from and payable to the reinsurer can influence the amount and the development of the net claims ratio.

By an adequate combination of reinsurance and the equalization reserve, tax-deductible reserves may be set up for years with a high amount of claims. The equalization reserve is therefore an additional buffer and may mitigate the peaks of the claims experience remaining after reinsurance. It is, however, *not able to replace* reinsurance. It is subject to calculation which, in certain cases, limits the amounts to be taken from the assets available. Moreover, if the equalization reserve is run off completely, no assets are available for the years to come. Apart from meeting the technical requirements, at least to a certain degree, the insurer may also influence its tax burden by choosing the appropriate arrangement.

### **3.5 Use of credit for reinsurance (collateral considerations)**

The primary purpose of insurance regulation (supervision) is financial solvency. This is valid for both primary insurers and reinsurers. 'Supervision of reinsurance' laws should be directed toward preserving the solvency of

reinsurers and their cedents. Such supervision must focus on the collectability of the reinsurance asset with the purpose of protecting the interest of insureds, claimants, ceding insurers, assuming insurers and the public generally.

Among the models for effective supervision of reinsurance companies is the process that extends credit for reinsurance on the ceding insurer's financial statements. Credit for reinsurance is given either by increasing the assets or reducing liabilities.

To qualify for credit, ceding insurer's must meet certain supervisory requirements. These may include the holding of collateral to secure the obligation. Other options could be:

- The reinsurance is ceded to an insurer licensed in the ceding company's location of domicile.
- The reinsurer is an accredited company. The establishment of an accredited company can be achieved by establishing standards for the reinsurer. The standards can require that the accredited reinsurer submit to the jurisdiction and examination authority of the ceding company's domicile; that the reinsurer is licensed in the ceding company's domicile; that the reinsurer file a copy of its annual financial statement with the cedent's regulatory body and that it maintain a minimum policyholder surplus, e.g. \$20 million in the U.S.
- The reinsurer is domiciled in a 'substantially similar jurisdiction', submits to the examination authority and maintains a minimum policyholder surplus.
- The reinsurer is an acceptable trust fund insurer. To qualify as such, the form of the trust and any amendments should be approved by the supervisory authority of the jurisdiction where the trust is domiciled or by the supervisor of another jurisdiction with substantially similar regulation who has accepted regulatory oversight. The form of the trust should be filed in every jurisdiction in which the ceding insurer beneficiaries of the trust are located; contested claims are considered valid and enforceable upon final order of a court of competent jurisdiction; and the trust vests legal title to its assets in its trustees for the benefit of the assuming insurer's ceding insurers. A single assuming insurer trust should

maintain a minimum level trustee surplus (i.e., \$20 million), and the assuming insurer's liabilities attributable to reinsurance ceded by the ceding insurers.

- A group including incorporated and individual unincorporated underwriters, (e.g., the Lloyd's U.S. trust), should maintain a trustee surplus to be held jointly for the benefit of the domiciled ceding insurers of any member of the group.
- A group of incorporated underwriters under common administration should maintain a trust fund in an amount not less than the group's several liabilities attributable to business ceded by domiciled ceding insurers to any member of the group. Additionally, a trustee surplus must be held jointly for the benefit of the domiciled ceding insurers of any member of the group and an aggregate surplus and satisfy a seasoning requirement. The group must submit itself to a court of competent jurisdiction of any state and appoint the enacting state's commissioner for service of process.

The preceding reinsurance supervisory methodology has been used in the US for a number of years. The use of collateral requirements is grounded in sound solvency regulation. International reinsurance activity can be difficult to track. Non-domestic reinsurers may not be subject to the same strict reporting laws as domestic reinsurers. Non-domestic financial reports may cover different time intervals, state values in different currencies, and present results in different formats. Additionally, international reinsurance may present unique and difficult collection problems. The use of collateral funds can enhance the domestic supervisor's comfort level with the reinsurer's ability to meet its financial obligations to ceding insurers and their requisite policyholders.

The disadvantages of the collateral system should, however, also be addressed. Collateral, for the benefit of certain classes of policyholder, may act to the detriment of other classes of policyholders on the winding up of a company; collateral requirements create classes of preferential creditors.

Along with the collateral issue, some jurisdictions (e.g., Switzerland, Germany) have special regulations to protect policyholders' capital. In the case of reinsurance of life business, the primary insurer has to design a

special (insurance liabilities related) fund (in Germany called Deckungsstock), which remains with the primary insurer (security deposit). Because of this regulation, there is no reinsurer's credit risk for the policyholders.

## 3.6 Captives

### 3.6.1 Types of captive reinsurance

In order to explore the subject of supervision of captive reinsurance it is necessary to understand the rationale used in the formation of captives and to explain briefly what a captive insurer and a captive reinsurer are.

A captive (re)insurance company is an insurer established by an industrial or commercial company, or group of companies, to participate in the (re)insurance of the risks of that company, or group of companies.

Captives are established because:

- insurance at stable, reasonable rates is not available;
- companies are willing and able to self-insure at a price more equitable in relation to their own loss experience;
- companies can gain direct access to the reinsurance market.

Reinsurance captives are established because of:

- an inability to operate on a direct basis for political reasons;
- legislation barring a risk from being covered by a direct writing captive insurer; and
- the desire to participate in the program while leaving the general administration and claims handling to the direct writer.

In general, the supervision of captive reinsurance is no different than the supervision of captive insurance, except that the supervisor must consider:

- reinsurance by a captive reinsurer of a direct-writing insurance company;
- retrocession from a captive reinsurer to the commercial reinsurance market;
- reinsurance of a primary insurer by a captive reinsurance subsidiary (or associated company).

### 3.6.2 Reinsurance of a primary insurer by a captive reinsurer

The captive reinsurer will have been formed to participate in insuring the risks of the parent group. It will be necessary to assess whether the funds available to the captive reinsurer can meet the present and future liabilities and the ability to do so depends on the complexity of the insurance and reinsurance program.

The assessment of future liabilities may be finite (i.e., there may be aggregate stop-loss protection or finite policy limits) or may be subjective (the calculation of a worst-case scenario bearing in mind spread of risk, lead time before payment of claims and other underwriting considerations). Some insurance supervisors will require prior notification of material changes in the insurance and reinsurance programs and can therefore track the exposures on a prospective basis; others take a retrospective approach.

As a general rule, the captive reinsurer should be supervised as a stand-alone operation, divorced from any associated company support such as a loan to the parent company. On first glance, it may seem that this policy is too onerous if the captive reinsurer is reinsuring only group risks. However, the captive may be insuring third-party risks (but related, such as customer risks such as credit life), risks where there are third-party claimants of the insured (liability or casualty risks) who are relying on insurance being in place, or even pure parental risks such as business interruption where third parties would rely on the insured being fully covered.

The captive reinsurers are normally, but not always, managed by authorized insurance managers who will have the responsibility of putting in place a whole of the insurance and reinsurance program. This will include first insuring with a primary insurer, then making arrangements with the captive reinsurer, and then, where applicable, establishing a retrocession program. Sometimes the insurer and lead retrocessionaire are the same company. The insurance supervisor of the captive reinsurer and the authorised insurance manager will have to verify that all the companies within the program are suitable to take their respective risks even though some of them may be in a different jurisdiction.

### **3.6.3 Retrocession from a captive reinsurer to the commercial reinsurance market**

The supervisor, if any, of the commercial retrocessionaire would normally be comforted by the fact that captive retrocessions involve the financial participation of the original insured and that the materiality of the exposure would be less than that found if the captive reinsurer were not involved in the program.

### **3.6.4 Reinsurance of a primary insurer by a captive reinsurance subsidiary (or associated company)**

The *Principles applicable to the supervision of international and insurance groups and their cross-border establishments* were issued by the IAIS in September 1997 (see paragraph 8). The principles contain a statement to the effect that they do not cover the activities of pure reinsurers, which are directly supervised in some jurisdictions but not in others. This gap may be partly filled by the close interest most supervisors take in the quality of the reinsurance programs placed by the primary insurers they supervise, or by the imposition of financial and other requirements on reinsurance contracts as a condition for credit being given for reinsurance ceded by primary insurers.

The supervisor hosting the captive reinsurance subsidiary should contact the supervisor of the insurance parent asking whether there are any areas of concern.

During the supervision process (of both supervisory regimes) the consolidated position should be assessed with particular regard to both double gearing – i.e., using capital twice – and the assessment of the technical reserves within the subsidiary. The requirements of the two jurisdictions may be different; for example, the parent's jurisdiction may prohibit the discounting of loss reserves while the subsidiary's jurisdiction may permit discounting.

Primary insurance affects use of captive reinsurance. As when there is no captive reinsurance involved, the primary insurance must pay 100% of the claim should, for any reason, the reinsurance program prove to be ineffective. Most insurers prefer to take a small front-end risk, the captive reinsurer

to participate as appropriate, and for the insurer to act as retrocessionaire for the excess layers. This type of program ensures that the insured participates in the working layers and therefore has a financial interest in the risk. It also means that the insured would be actively involved in risk management, including putting in place loss-prevention procedures that provide additional comfort to the supervisor of the primary insurer.

### 3.6.5 Conclusion

Issues related to the prudential supervision of captives are summarized here.

- The captive reinsurer is supervised in exactly the same manner as the captive insurer.
- The captive, where possible, should be supervised on a risk profile basis; specifically the captive retention and the security of retrocessionaires should be assessed to ensure that sufficient funds are available to meet liabilities as they fall due. Where this method of supervision is not possible, because of program complexities, a solvency calculation based on premium income volumes will have to suffice.
- The captive should generally be structured on a stand-alone basis; i.e., without inter-group loans as assets. This is because those who have control or substantial control of the companies involved may prejudice the realization of the assets of one company to the benefit of the other, either with respect to the value of the assets or to the speed of realization. However, the supervisor should have discretion to approve related-party assets where adequate grounds have been established.
- Captives may retrocede a substantial premium percentage; normally there is no maximum cession limit. In view of this, particular care must be taken when reviewing the reinsurance programs and the security of the reinsurers used.
- Where possible, the captive should be supervised on a prospective basis.
- The captive should be genuinely operating within the jurisdiction where it is licensed. Some of the functions – for example, claims handling – could be outsourced to specialists.

# 4 Management of insurers and reinsurers

## 4.1 Introduction

Increasingly supervisors should focus their attention on the quality of the management of a (re)insurance company. It is essential to have reliable and professional managers especially in those jurisdictions where there is strong competition on (re)insurance markets and where the supervisory system is rules based. Even where there is price control on (re)insurance products (as is the case in a number of jurisdictions with emerging economies<sup>16</sup>), it is still of utmost importance to supervise the quality of the management.

This chapter compares the management methodologies of primary insurance companies and reinsurance companies to determine whether there is a need of supervising the management of reinsurance companies. The distinctions in management methodologies are drawn by reference to issues or factors that face each type of business. They are classified into three broad categories: 1) pervasive factors, 2) market factors and 3) internal factors, specific to the management issues of personal line, commercial line and reinsurance business.

Apart from the actual supervisory system – either ex ante via price control or ex post via solvency assessment – a statutory basis is required to supervise the quality of the management. Supervisory sanctions are usually based on licensing. The ultimate sanction of a supervisor is to withdraw a licence in the case of mismanagement. However, as all (private) insurance companies need to have a licence, Table 2, paragraph 19, makes it clear that, in a number of IAIS member countries, reinsurance companies are not supervised and need not be licensed. This chapter also considers the possibility of supervising the management of reinsurance companies that are not licensed<sup>17</sup>.

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<sup>16</sup> Depending on specific conditions in some jurisdictions (availability of market skills, sufficient infrastructure, etc.), there could be sound reasons for a supervisor to have legislative ex ante powers for price and policy control on insurance products.

<sup>17</sup> It is assumed that a primary insurance company will be no less professional or expert in its handling of accepted reinsurance business than a pure reinsurer; that is, all lines of business will be managed by appropriately trained, qualified or experienced staff.

In general, a reinsurer accepts that the primary insurer is responsible for the terms and conditions of the primary cover; that is to say, the latter will make the decisions regarding calculation of price, acceptance of risk and handling of claims. However, it should be noted that there appears to be a trend for reinsurance companies to control the source of their business. They may do this by buying ceding companies, or otherwise imposing conditions on the business accepted by cedents, and auditing their underwriting functions. Reinsurance companies may also offer other value-added services. These include advice to new companies on the production process or advice to existing companies on starting up new business lines or expanding their areas of operation to new countries, in particular pointing out the supervisory requirements and benefits reinsurance management can provide.

## 4.2 Comparison of the management of insurance and reinsurance companies

Below is a survey of the impact that pervasive market and internal factors have on insurance management. Considerations on each management-related issue are stated first in a more general sense and, if needed, more specifically with regard to:

- the respective types of direct personal line insurance (PI);
- direct commercial line insurance (CI);
- reinsurance (Re) business.

The comparison between commercial line and reinsurance is more substantial than between personal line and reinsurance.

### 4.2.1 Pervasive factors

#### **Susceptibility to economic cycle**

Similarities exist between commercial line writers and reinsurers with respect to the way in which they manage their businesses, having regard to the economic cycle.

PI: Recession may give rise to a higher incidence of fraudulent claims.

CI: Recession leads to fewer companies buying large quantities of insurance. Alternatively a recession may give rise to an increased incidence of claims.

Re: If recession decreases the amount of insurance bought in the commercial sector, there will be an obvious decrease in the requirement for reinsurance.

### **Effect of fiscal regime**

Tax considerations have a large bearing on the way in which reinsurance and commercial line business is conducted.

CI: Large corporations will seek to maximize the tax efficiency of their risk management programs.

Re: Minimizing the tax burden is particularly important to reinsurance arrangements that rely on achieving a certain level of investment income.

### **Susceptibility to geographic or climactic factors**

Reinsurers may accumulate large quantities of exposure to disasters at uneconomic prices.

PI: Property insurance is difficult to obtain and expensive in areas prone to natural disasters.

CI: There is little or no effect on liability lines, but commercial property insurance is subject to same market constraints as those for domestic property.

Re: The price of catastrophe reinsurance is strongly influenced by the laws of supply and demand. In a soft market, reinsurers may be forced to offer this cover at uneconomic rates on line.

### **Effect of regulation and public disclosure**

Regulations exist to protect the interests of the policyholders from badly managed or inadequately funded companies and to ensure, as far as is deemed necessary, fair and open competition among those companies.

PI: The rationale for regulation is to protect the consumer who is unable to make an informed judgement on the relative strength of insurance companies. Regulation in this sector is, therefore, likely to be intrusive. Indeed, in some countries regulation extends to the prescription of fair contractual terms and ensuring the correct payment of claims.

CI: Considerations that apply to personal line writers would also apply to the smaller end of the commercial line market. The larger corporate buyers of insurance would be better able to choose a strong company to supply their insurance needs.

Re: Considerations that apply to the larger end of the commercial line market also apply to the reinsurance market, where public disclosure of the financial status of the company facilitates comparative judgements.

## 4.2.2 Market factors

### **Domestic or international market**

Reinsurers mainly operate in a global market, whereas personal line insurance is a domestic product. Commercial line business may be conducted either globally or domestically.

Pl: Almost entirely a domestic market phenomenon.

Cl: Small to medium-sized corporations are likely to buy insurance in the domestic market. Large multi-national buyers look to large multi-national insurers to meet their insurance needs.

Re: The reinsurance market is international, with a great deal of cross-border activity.

### **Standard or bespoke policies**

Reinsurers and commercial line insurers are likely to be flexible in their dealings with customers. They are especially flexible on pricing during a soft market situation. Management of the risk assumed is simpler when a company offers only standard products.

Cl: Small or medium-sized buyers may be offered standard products at standard prices. Large buyers of insurance will often be able to negotiate terms and conditions with their insurers.

Re: The terms and conditions of almost all reinsurance contracts are subject to negotiation. During the negotiations, the reinsurer's information about *recent* claims is often not sufficient.

### **Price competition**

Competition is endemic in all free markets.

Pl, Cl, Re: Consumers are increasingly able to shop around for the best cover and price.

### **Market concentration and consolidation**

The endemic trend to consolidate is especially marked for large commercial line business and reinsurance.

Pl: A large number of companies compete in what is the mass market portion of the insurance industry. Consolidation is occurring among larger companies.

Cl: Larger global commercial insurers are consolidating and reorganizing in

order to meet customer needs of greater security and geographical spread.  
Re: Widespread consolidation and increasing market concentration is motivated by the need to make more efficient use of capital and to gain market share.

### **Pace of product innovation**

The pace of product innovation is probably faster than at any other time.  
Most radical innovation is occurring in the reinsurance sector.

PI: Competition leads to evolution of products, but, because of mass market nature of this sector, the products on offer at any time are usually standardized.

CI: There is an increasing importance of tailoring products to the specific needs of customers.

Re: There is rapid product innovation with the more novel forms of risk transfer imitating those available in the financial markets.

### **Free market or tariff market<sup>18</sup>**

Tariff products are more common in the personal line sector. At the other end of the scale, supply and demand considerations are a large element in the determination of reinsurance prices.

PI: Tariff products are useful in assisting the development of emerging markets and economies and especially where the regulator believes them to be in the interests of the consumer.

CI, Re: Tariff products are rare.

### **Stable customer base**

Companies in all business sectors make great efforts to retain a stable customer base.

PI: There is an increasing tendency to shop around on an annual basis for the best cover. This is facilitated by the emergence of call centres. In some countries, consumers must give three months' notice if they wish not to renew a policy; this acts as a disincentive to change insurer.

CI: Larger commercial insurers are taking necessary measures to improve customer services; e.g., setting up a matrix structure to offer a specialist service by line of business to a global market. Closer customer relationships are being formed.

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<sup>18</sup> Not related to supervision on an *ex ante* or *ex post* basis, but to the degree of room for negotiations among market parties!

Re: Reinsurers are taking steps similar to those described for commercial insurers in an effort to offer bespoke products and additional value-added services in order to establish closer ties with customers.

#### **Rating and credit assessment**

Lack of professional insurance knowledge at the retail end of the industry is one of the prime reasons for the regulation of insurance.

Pl: Typically, retail customers will be unaware of how to assess the creditworthiness of an insurance company.

Cl: The smaller, unsophisticated buyers of commercial insurance are in a similar position to personal line buyers. The larger corporate buyers will be in a position to choose their preferred insurer(s) with whom they will be equal professionally.

Re: Parties to a reinsurance contract will usually be equal in knowledge and professional quality and be able to make informed judgements about the good standing of their trading partners.

### **4.2.3 Internal factors**

#### **Management of aggregate exposure**

This is a business-critical task for all companies. It increases in complexity with geographical diversity and with a higher proportion of bespoke or reinsurance policies.

Pl: Monitoring of aggregate exposure is managed with relative ease where the portfolio comprises standard policies with easily definable policy limits.

Cl: Aggregate exposure management is more complicated when there are large numbers of bespoke policies in the portfolio.

Re: Exposure management is a business-critical issue for (re)insurance portfolios, which may, for example, assume large quantities of exposure to natural or man-made catastrophes. (Re)insurers may accumulate large exposures to a particular risk from a large number of customers and under a variety of different covers.

#### **Degree of judgement used in setting reserves**

Degree of judgement, hence accuracy of reserves when initially set, will depend on the nature of the uncertainties inherent in the policies written. The greatest degree of judgement is involved in reserving for international

reinsurance business.

PI: This entails mainly short-tail lines of business whose outturn may be accurately predicted by statistical or actuarial methods. However, where these lines traditionally suffer a low incidence of claims, the setting of reserves is more difficult. Likewise, certain lines of business (e.g., liability) are inherently more difficult to reserve than others.

CI: There is a higher proportion of business whose outturn is not as capable of being predicted as accurately as for personal line business. Commercial lines will, for example, contain larger liability covers.

Re: There is a still higher proportion of long-tail business. Because reinsurance is a global business, exposures may arise in many jurisdictions, increasing the degree of legal risk to the reinsurer. The reinsurer often depends on the cedent to provide data from which to calculate reserves. This information may be insufficient or untimely or both.

#### **Complexity of administration**

Factors include whether the company operates as a multi-location and/or multi-currency and/or multi-jurisdiction business.

PI, CI, Re: Any of the three types of business could include these factors.

#### **Reliance on specialist staff**

There will be an increasing need for people with sufficient knowledge and skills related to the risk management aspect of both traditional and new (re)insurance products.

PI: In certain businesses, or parts of them, the selling and servicing of standard policies may be reduced to clear non-judgemental procedures that do not need specialist staff. Non-specialist staff should, however, be appropriately trained, qualified or experienced.

CI: The level of complexity of policies written predicates a degree of specialization.

Re: Reinsurance needs specialist underwriters, lawyers, claims managers and auditors.

#### **Reliance on technology**

A company that does not keep abreast of technology will lose viability. There have been technological advances in distribution mechanisms (call centres and Internet) and administration systems that reduce cost.

Pl: There is an increasing proportion of personal line business sold through call centres, which in turn demands that underwriting be reduced to a simple menu-driven process. However, call centre technology applies to a limited section of the market and has different degrees of penetration in different countries.

Cl, Re: Underwriting of large commercial risks and reinsurance using an electronic medium has not proved popular.

#### **Capital rationing and reinsurance**

All businesses exist to survive and to make profit. Their intention is therefore to assume risk whose costs are absorbed by 1) premium income, and 2) reinsurance cover without having to impinge too far or too often on capital. The limiting factors on the quantity of business written are, therefore, the extent of reinsurance and the level of capital. Capital may also be consumed in providing the collateral needed to assume risk in certain jurisdictions.

Pl, Cl, Re: Any of the three types of business could include these factors.

#### **Use of derivatives and ART**

Novel forms of risk transfer are growing in number and level of sophistication.

Use of financial derivatives to assist in managing of the investment portfolio or foreign exchange exposure is limited only by local legislation.

Cl: There is an increasing interest in ART techniques on large commercial line business.

Re: The reinsurance sector leads the way in developing ART products; the number and variety of deals continue to grow.

### **4.3 Possibilities of fit and proper testing in the case of non-licensed reinsurance companies**

Insurers have to be reliable. They manage the financial interests of their clients over a long period. In this respect, it is important to exclude any kind of fraud. Fraud prevention could be supported by developing fit and proper testing instruments.

Evidently, if reinsurers within a jurisdiction are submitted to direct supervision the same fit and proper requirements would apply. In the case of a

non-licensed reinsurer, however, fit and proper testing will need special attention.

Primary insurers should assess the security of the reinsurers with whom they deal. Generally they are restricted to using general market information as well as their own experience with the company. It would be helpful to have more structured information available about the fitness and propriety of the management of reinsurers. Consideration should be given to establishing a register of the leading executives and staff of reinsurers, such as is done for accountants and actuaries. Because financial management is not specific for the insurance industry, this register may also include members of other financial sectors. Supervisors must also consider ways to exchange information on fit and proper testing and other non-public issues<sup>19</sup>.

## 4.4 Conclusions

Table 3 summarizes, in the Working Group's view, the relevant management differences between insurers and reinsurers from a supervisory viewpoint with respect to pervasive market and internal factors. In addition, the table indicates how these factors could be supervised, either indirectly via the reinsurance policy with the insurer, or directly, by supervising the reinsurers themselves.

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<sup>19</sup> The OECD Group of governmental experts on insurance solvency decided to form a Task force on reinsurance information exchange. In the opinion of some member countries, the authorization of the exchange of reinsurers' information between supervisors should be strictly limited to basic information only, because the confidentiality aspect involved depends on different local laws and regulations. Any more extended database on reinsurers' information should rather be set up by the reinsurers themselves.

**Table 3** *Reinsurance management factors that are relevant to get regular supervisory attention*

Reinsurance management factor of relevance	Attention possible through	
	indirect supervision	direct supervision
Pervasive factors – Public disclosure <sup>20</sup>	Limited	Limited
Market factors – International/cross border – Bespoke policies – Risk product innovation – Credit assessment	Limited Yes Yes Yes	Yes Yes Yes Yes
Internal factors – Risk exposure management – Accuracy of reserves – ART	No No No	Yes Yes Yes
Fitness and propriety	No	Yes

Four items in Table 3 indicate that supervision is possible only through direct supervision of the reinsurer.

Except for one factor – the risks that are involved with the growing international nature of reinsurance – the market factors related to the management of a reinsurance company may be indirectly supervised; i.e., by supervising the reinsurance policy of the (primary) insurer.

According to Table 3, internal factors deserve special attention. Those factors require sound technical bases to ensure the fairness of both insurance and reinsurance agreement. With respect to risk transfer, reinsurance concentrates on reducing the risk spread in the tail of the risk distribution. The greater the risk, the more sophistication needed. This may disadvantage the equality of insurer and reinsurer because of information discrepancies.

Where there is a discrepancy in the information available between the insurer and reinsurer, one of the parties may be disadvantaged. This

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<sup>20</sup> Public disclosure is important. Influential powers from a supervisor are, however, rather limited. The disclosure aspect forms a part of the work of the IAIS Accounting subcommittee.

problem may be diminished if the reinsurer is supervised and, in particular, subject to fit and proper testing.

There are many similarities, but also some differences, in the management aspects between an insurer and a reinsurer. Regulations exist to protect the interests of the policyholders from badly managed or inadequately funded companies and to ensure, as far as is deemed necessary, fair and open competition among those companies. Subjecting reinsurers to fit and proper tests could help extend this protection.

To conclude, this chapter indicates, from a management perspective, that the distinction between primary insurance and reinsurance companies may be breaking down. This is similar to the way that the barriers between reinsurance and banking or investment management are breaking down. From a supervisor's point of view, the question is whether (on behalf of the policyholder) such blending should provoke further regulation. The next chapter points to the same conclusion from a viewpoint of composite business (i.e., insurance and reinsurance by one legal, licensed entity).

## 5 Legal and organizational form

### 5.1 Introduction

This chapter deals with the legal and organizational forms of insurers and reinsurers within the context of their economic activities. First, insurers and reinsurers are compared and the issue of whether companies should be allowed to write both insurance and reinsurance is discussed along with the issue of whether reinsurers should be allowed to write both life and non-life business. After that, the position of the reinsurer as a legal entity within a financial conglomerate is considered and compared with stand-alone reinsurers.

### 5.2 Sector separation for insurers and reinsurers

A primary insurer is not necessarily confined to primary insurance only. Its activities may also cover ceded reinsurance. Similarly, reinsurers may be permitted to offer primary insurance coverage. In that case, however, the Working Group believes such an insurer should be considered as a primary insurer in first place.

In assessing cross-over activities between insurance and reinsurance, the separation of (re)insurance between life and non-life is also taken into account. Member countries' practices with respect to licensing risk transfer by line of business vary.

In most countries, life insurers may not sell non-life insurance, nor is it permissible for non-life insurers to sell life insurance. This separation of the sectors extends also to reinsurance business written by life insurers. Non-life insurers may, in principle, conduct indemnity reinsurance and, with special authorization, life reinsurance. Separation of the sectors is not an issue in those countries where combined insurers are permitted.

Further, in most countries, primary insurers are authorized to conduct reinsurance business. It is expected that by so doing the primary insurer will be better able to reduce variance in risk, although a case-by-case examination would be necessary to verify this. The Working Group has found no

separation of the sectors for professional reinsurers.

Should there be sector separation in the case of reinsurance business by primary insurers?

It could be argued that life insurers should conduct reinsurance only in their own insurance branch, for the following reasons:

- The risks, both of mortality and long life, are well identified statistically and slow to change; there are small fluctuations in risk. Indemnity risks do not generally satisfy these conditions; accordingly there is a possibility that long-term life insurance policies will be put at risk by poor indemnity reinsurance results.
- Because of the separation of sectors in direct insurance, a life insurer does not have the expertise to conduct the risk assessment necessary for indemnity reinsurance.

For non-life insurers, however, life reinsurance may stabilize the overall risk, and for that reason, no reservations of principle exist in respect of combining it.

Should there be separation of the sectors in professional reinsurance?

Although separation of the sectors applies to primary insurance, there seems never to have been any question of separating the life insurance and non-life insurance sectors for professional reinsurance companies. The reasons for this are not clear; however, the following reasons may have played a role:

- For professional reinsurers, the diversification of risk by insurance branch and area of activities is a necessity. Life reinsurance offers an opportunity to diversify in this sense. Pure life and pure endowment assurance are, moreover, readily calculable risks and relatively stable in time.
- The failure of reinsurance companies affects other insurers first, not individual policyholders. Since the failure of a primary insurer would directly affect policyholders, regulation at that level tends to be highly prescriptive.
- Also, a reinsurer depends on the law of large numbers; i.e., risk compensation occurs only where business volume is large. Confining a reinsurer to life reinsurance or to indemnity reinsurance would stand in the way of the rapid creation of a sufficient volume of business.

With respect to the first reason, the reinsurer must take care to avoid any positive correlation between personal and property risks, which would arise, for instance, if both property and life risks were covered by the same reinsurer in a country particularly exposed to earthquakes.

The second argument – failure – is questionable. The failure of a reinsurer can put a primary insurer at risk, as well as policyholders, through the primary insurer.

Still, experience with reinsurers to date seems to confirm that the absence of sector separation for professional reinsurers does not represent a special source of danger for the insurance industry.

### 5.3 Reinsurer as part of a financial conglomerate

#### The reinsurer's position as a legal entity within a financial conglomerate

Discussions within the Working Group centred around the question of whether supervision of reinsurance companies (which, as legally independent companies are part of a financial conglomerate or insurance group) can differ from supervision of 'pure' reinsurers, which are not part of a group.

Insurance supervisory authorities differ on whether supervision should be conducted at the level of the individual insurance company ('solo' supervision) or also at the level of the financial conglomerate or an insurance group ('solo plus' supervision). The insurance supervisory authorities, which consider 'solo' supervision of insurance companies indispensable, believe that this differentiation is essential.

The criteria for 'solo' supervision of a reinsurance company are always the same, whether or not the company is part of a group. The regulations governing 'solo' supervision of reinsurance companies vary considerably at the international level. However, a decision should be taken on the question of submission of reinsurance companies to 'solo' supervision and the supervisory system to be selected. This question is independent from the question of whether the supervisory measures of 'solo plus' supervision in a financial conglomerate or insurance group should be extended to include reinsurance companies. Including reinsurance companies in 'solo plus' supervision, such

as in the calculation of group solvency to avoid double or multiple gearing of own funds within a group, does not necessarily mean that the companies also have to be subject to 'solo' supervision – of their solvency, for instance. This is also the underlying idea of a new Directive of the European Parliament and Council on the supervision of insurance companies in an insurance group.

### **Multiple gearing**

One of the main objectives of 'solo plus' supervision is to avoid the double or multiple gearing of own funds. The risks accepted by reinsurance companies in a financial conglomerate or an insurance group are similar to those accepted by the supervised insurance companies of these groups. Frequently, risks of the supervised primary insurance companies are reinsured with the reinsurance companies of a group. Therefore, to avoid double or multiple gearing within a financial conglomerate or an insurance group, the risks accepted by the reinsurance companies should be included in the calculation of the solvency requirements for the whole group. This applies irrespective of whether each individual reinsurance company is subject to 'solo' supervision.

'Solo plus' supervision of financial conglomerates and insurance groups also takes into account intra-group transactions. These may pose special financial risks due to the interdependence of the supervised companies within a group. Intra-group transactions include contracts concluded by the supervised companies with the reinsurance companies of the group.

Since 'solo plus' supervision of financial conglomerates and insurance groups constitutes a supervisory function for the insurance supervisory authorities separate from 'solo' supervision of insurance and reinsurance companies, the Joint Forum should, for the time being, continue to be responsible for examining any related problems.

# 6 Supervision of reinsurers and reinsurance

## 6.1 Introduction

This final chapter provides regulatory principles for the supervision of reinsurance as well as reinsurers. Among the IAIS countries, both regulatory systems are practised.

Previous chapters set out the major issues relating whether a supervisor should confine its work to the reinsurance policy of the primary insurer or whether the supervisor should extend its work in supervising reinsurers as well.

The following section gives an overview of issues related to the supervision of reinsurance as well as of reinsurers. As a minimum, the supervisor should review reinsurance policies in the business plans of insurers. If the supervision of reinsurance risks is to be harmonized, it is important to analyse – apart from historical and idiosyncratic jurisdictional arguments – the methodological considerations.

Of late, the role of rating agencies has become more important. The information provided by these agencies could be helpful in assessing the security of reinsurers, especially for emerging countries.

## 6.2 Attention points in supervising reinsurance and reinsurers: an overview

Reinsurance risk transfer is part of the ongoing relationship between the insurer and reinsurer. Table 4 provides an overview of this process from a supervisory point of view.

The overview starts with supervising the business plan of an insurer as the sole item that is related to the primary insurer. It finishes with those items entering into consideration only when the reinsurers are subject to supervision.

**Table 4** Overview of reinsurance risks related to supervisory attention points

Issue of insurance supervision in view of consumers' risks transferred to insurer	In the case of reinsurance purchased by a primary insurer	In the case of supervision of reinsurer
Content of business plan	Need of reinsurance <ul style="list-style-type: none"> <li>– at business start</li> <li>– on business extent</li> </ul>	Program of business <ul style="list-style-type: none"> <li>– lines of business</li> <li>– assumed risk diversification</li> <li>– geographical spread of assumed risk</li> </ul>
Retention policy	Adequacy of risk spread <ul style="list-style-type: none"> <li>– (number of) reinsurers</li> <li>– type of risk transfer</li> <li>– amount of deductibles</li> <li>– catastrophe covers</li> </ul>	Adequacy of risk spread <ul style="list-style-type: none"> <li>– retrocession type of risk transfer</li> <li>– catastrophe covers</li> </ul>
Reduction of solvency requirements	Allowance for reduction <p>for developed country insurer:</p> <ul style="list-style-type: none"> <li>– filing reinsurer</li> <li>– official reinsurer's rating preferred</li> </ul> <p>for emerging country insurer:</p> <ul style="list-style-type: none"> <li>– filing reinsurer</li> <li>– home state reinsurer's licence preferred or official reinsurer's rating required</li> </ul>	Allowance for reduction <p>for all insurers:</p> <ul style="list-style-type: none"> <li>– filing reinsurer</li> <li>– adequacy of reinsurer's financial strength</li> <li>– licensing of reinsurer's management</li> <li>– collateral required in the case of captive reinsurer</li> </ul>
Reduction for ceded reinsurance provisions	Allowance for reduction <ul style="list-style-type: none"> <li>– see reduction of solvency</li> <li>– provisions depositing system obliged</li> <li>– collateral system preferred</li> </ul>	Allowance for reduction <ul style="list-style-type: none"> <li>– see reduction of solvency</li> </ul>
Financial strength		Adequacy presumes obligatory application of international accounting standards in annual reinsurer's reports
Fraud and supervisory arbitrage		Licensing requirements to include specified topics of fit & proper for management of reinsurer
Accounting standards	Allowance for discounting provisions <sup>21</sup>	Harmonized accounting standards as applicable to insurers

<sup>21</sup> The IAIS Accounting subcommittee should address this issue.

## 6.3 Minimum regulatory position: supervising the business plan of an insurance company with respect to reinsurance policy

### 6.3.1 Content of the business plan

The business plan lays down the actuarial framework, and, to some extent, the commercial setting in which the insurance activity is to be conducted. The business plan of new insurance firms gives the supervisory authority valuable indications of whether the technical pre-requirements for conducting insurance business are likely to be satisfied, and whether an operating licence can be issued. The business plan for these new insurance firms comprises in particular:

- description of the purpose of business (are non-insurance activities included?) and its organization;
- information on the products offered and how and where they will be marketed;
- information necessary to assess solvency; i.e., information on the size of equity;
- information on the source of funding ('real' assets, reliability of capital provider);
- budgeted profit and loss account and balance sheet for the next three business years;
- information on actuarial provisions and reinsurance.

### 6.3.2 The role of reinsurance in the case of new insurance firms

Newly established insurance companies are faced with particular difficulties:

- Their insurance portfolio is initially too small to provide risk compensation in the medium term. The law of large numbers does not yet apply.
- In life insurance particularly, there are substantial establishment and initial expenses in the first business years.
- New insurance firms often lack experience in assessing risks correctly.

These deficiencies can be remedied, in part at least, through appropriate reinsurance treaties. The reinsurer can cover large fluctuations in risk, share in the establishment cost and initial expenses through quota treaties, and, as

a service, advise the direct insurance company on the assessment of newly underwritten risks (e.g., by providing guidelines for underwriting, suggesting tariffs for increased risks, and so on).

### 6.3.3 Requirements of reinsurance

Insurance companies should be able to point to the following reinsurance protection elements in their business plan:

- The name and country of registration of the reinsurer or reinsurers, attaching their most recent financial statements. The supervisory authority has to ensure that treaties concluded with reinsurers who are not known in the industry receive extra attention (e.g., perhaps requiring retrocession policy).
- The type of reinsurance treaties foreseen (e.g., optional or mandatory, proportional or non-proportional) and information about which insurance portfolios these treaties apply to.
- Information on the amount of the deductible.
- The term of the treaties entered into and the notice required to terminate. Care must be taken to ensure that reinsurance treaties can be adapted to the rapidly changing circumstances of the first years of business.
- Estimates of the likely cost of premiums for reinsurance and the likely reinsurers' commissions. These should be included in the budgeted profit and loss account of the primary insurer.
- Plans for spreading risk. It could be desirable to choose at least two reinsurers who are independent of each other, rather than to rely on a single reinsurer. It is up to the supervisor to decide whether exemptions from this rule are acceptable. The supervisory authority has to watch for reinsurers who are part of the same group as the primary insurer. In such cases, the primary insurer's profits can be skimmed through reinsurance treaties with excessive premiums, to the detriment of policyholders. If the group as a whole gets into financial difficulties, the reinsurance protection is also impaired.

## 6.4 Supervising reinsurance companies: some methodological considerations

IAIS member countries have to weigh the advantages and disadvantages of supervising reinsurers directly<sup>22</sup>. Will there be added value once all additional costs are taken into account? The most decisive issues are set out below. The final decision can not be made by analysis alone<sup>23</sup>.

### 6.4.1 Reasons to have direct supervision of reinsurers

#### Importance of licensing

By requiring the licensing reinsurers, supervisors obtain:

- an overview of the companies engaged in reinsurance in a country (e.g., to control activities in money laundering);
- assurance that minimum capital and management requirements are met;
- a direct and established access to any information regarding the reinsurance business.

#### Reinsurance market dynamics

When there is a large supply of risk-bearing capital, new reinsurers will enter the market and reinsurance premium rates will come under pressure. This is a cyclical pattern that is typical for the reinsurance market. Under these circumstances, it will become increasingly difficult for a primary insurer to assess the reinsurer's security. Especially in a rapidly changing reinsurance world, supervisors should be able to discuss the nature and types of risk transfer with the reinsurer in a way that is not obligation-free to the reinsurer. In directly supervising reinsurers, the supervisor will be concerned about what is meant exactly by reinsurance in comparison to other innovative financial arrangements.

#### Level playing field for reinsurance activities

Considerations should be given to the differences in the playing field. While jurisdictions may not explicitly regulate reinsurers, they may be regulated indirectly, for example:

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<sup>22</sup> See also the report of the European Commission, Insurance Committee, *The supervision of reinsurance undertakings: An Assessment*, Document XVI/2090/98.

<sup>23</sup> Licensing systems vary from country to country. In making choices, several member countries believe it would be appropriate to focus on the minimum criteria a reinsurer must satisfy rather than to aim at establishing a legal basis by means of a licensing system for reinsurers.

- Where the primary insurer engages in direct insurance business and reinsurance business within the same legal entity, both activities will be regulated.
- Similarly reinsurers may be supervised by virtue of being part of a regulated financial conglomerate.

#### **Fit and proper testing**

The reinsurer's activity is essential in the comprehensive chain of risk spread sought by the consumer. Therefore, fit and proper principles should be applicable to all management activities in the risk spread process beyond the primary insurance sector, including the reinsurance sector.

### **6.4.2 Reasons not to have direct supervision of reinsurers**

#### **Different opinions about reinsurer's security between ceding insurer and supervisor**

The respective assessments of a reinsurer's security by a ceding insurer and a supervisor do not differ in principle. The objectives of both are similar. Supervisors must ensure that the ceding insurer is always able to meet its obligations under the insurance contracts so that the interests of the policyholders are safeguarded. The ceding insurer's objective is to ensure its continuity and to make profits. Both require the ceding insurer's financial situation to be stable; this, in turn, depends to a considerable degree on the reinsurer's performance. In practice, however, assessments may differ.

The security of a reinsurer is assessed by careful analysis of its annual accounts in accordance with generally accepted principles, as well as by checking any other information available (e.g., national legislation in the country of the head office, ratings by rating agencies). Various guidance notes and recommendations to this effect have been published recently<sup>24</sup>. There are, however, no definite and uniform procedures for the analysis of the annual accounts or for any further checks. Moreover, there is wide scope for discretion, and so ceding insurers and insurance supervisors may arrive at different results regarding a reinsurer's security. For example, the insurance supervision may set stricter requirements on capital adequacy or the

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<sup>24</sup> OECD: *Recommendations of the council on assessment of reinsurance companies*, C(98)40, May 1998.

admissibility of investments. Moreover, the supervisor and the insurer may set different quality requirements (scope and intensity) for the checks to be conducted. Further uncertainties arise in long-tail business when assumptions about future periods must be assessed. The assessment is complicated even further if the reinsurer is part of a financial or other type of conglomerate.

Different assessments of a reinsurer may also be attributed to the fact that the supervisor and the ceding insurer use different bases of information. If the reinsurer is required to submit its accounts to the supervisory authority, the supervisor may have more information (e.g., regarding IBNR reserves) than the ceding insurer. Consequently, the supervisory authority is able to identify reinsurance risks (e.g., inappropriate allocations to technical provisions, risks related to investments (participating interests) and receivables, as well as risks related to the insured portfolio) sooner. Alternatively, the ceding insurer may be better informed about the reinsurance markets and the practices prevailing on those markets.

From the ceding insurer's point of view, purchasing reinsurance is not only a means of safeguarding its existence, it is also a cost factor. It is, therefore, conceivable that for financial reasons, the ceding insurer chooses a secure – but not necessarily the most secure – reinsurer. As outlined previously, the assessment of a reinsurer's security includes some uncertainties, especially if long-tail risks are to be reinsured. In order to limit the risk of default of the reinsurer, a ceding insurer may wish to spread its reinsurance cover to more than one reinsurer but be reluctant to do so because of the costs.

If the ceding insurer and the reinsurer belong to the same insurance group, reinsurance cover required by the group's ceding insurers is usually obtained from the group's reinsurer who is then in charge of checking the security of reinsurers that do not belong to that group. Generally, there will be no differences between the reinsurer's and the ceding insurer's assessments. Smaller ceding insurers, who are often not able to make a thorough analysis themselves, have reinsurers assessed by large reinsurance brokers; the ceding insurers then check the assessment. In practice, however, brokers may not have up-to-date information.

### **Operational obstacles and supervisory cost**

To avoid multiple assessments of the same reinsurer's security, a system of home country control, including an adequate system of information exchange, would be desirable. Given such a system of reinsurer supervision, there will always exist some arbitrariness in a local supervisor assessing the reinsurer's security. A lack of uniformity may seem inevitable and would impede level playing field conditions. So, as a precondition, there should – in the long run – be world-wide compliance to one uniform system of security assessment of reinsurers.

The ongoing development and introduction of new financial products widens the field of the reinsurer's activities beyond the borders of traditional reinsurance. The supervisor of (re)insurers will have to broaden its scope to these fields of alternative risk transfer activities. Because of the complexity, it may not be feasible or cost-effective to expect each local supervisor to have the necessary skills to assess reinsurer products.

### **Supervisor's dilemma**

A local authority supervising both the primary insurer and the reinsurer may have a conflict of interest with regard to the issue of secrecy.

A possible solution could be a regime with some regional, highly professional reinsurer supervisors working together in a system of single licence and home region control. Reinsurers working solely in their locally supervised home markets could be exempted from this 'supra-vision'. Despite the huge obstacles, this possible solution is worth considering. In addition, while from a national perspective collateral requirements are desirable, dropping these requirements could enhance the effectiveness of a world-wide reinsurance system.

## **6.5 Private market supervisors: rating agencies**

The role of rating agencies is becoming more and more important. These private 'supervisory activities' of rating agencies have already begun contributing a disciplinary effect in the (re)insurance market. Although IAIS members cannot endorse the validity of these independent credit evaluations, they do provide a useful indication of the absolute and relative security of various reinsurers in the global market place.

When establishing requirements for non-domestic reinsurance companies, supervisors should consider using such ratings in conjunction with other solvency standards. The criteria that primary insurers use to select reinsurers include financial strength ratings published by several rating agencies. A primary insurer that selects only highly rated reinsurers, in conjunction with other criteria, is less likely to have problems with uncollectable reinsurance and will spend less time and resources evaluating its reinsurers<sup>25</sup>.

Although not intended to be a comprehensive representation, the following commercial organizations do rate insurers and reinsurers: A.M. Best Company; Standard & Poor's Corporation; and Duff & Phelps Credit Rating Corp. A very brief overview of the processes used by A.M. Best Company and Standard & Poor's Corporation follows.

Best's Ratings are based on a comprehensive evaluation of a company's financial strength, operating performance and market profile against A.M. Best's quantitative and qualitative standards. The quantitative evaluation is based on an analysis of each company's reported financial performance for at least the past five years, using over 100 key financial tests and supporting data. These tests, which vary in their importance depending on a company's characteristics, measure a company's absolute and relative performance in three critical areas: leverage/capitalization; profitability; and liquidity. A company's quantitative results are compared with standards of its peer composite as established by the A.M. Best Company for property/casualty and life/health insurers. Peer standards are based on the performance of many insurance companies with comparable business mix and size. In addition, industry composite benchmarks are adjusted annually for underwriting, economic and regulatory market conditions to ensure the most effective and appropriate analysis. The interpretation of these quantitative measurements involves incorporating more judgemental, qualitative considerations into the process<sup>26</sup>.

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<sup>25</sup> *Principles of Reinsurance (Vol 2)*, 2nd Edition, 1995, Malvern, Pennsylvania: Insurance Institute of America, p 201.

<sup>26</sup> *Best's Key Rating Guide®, Life and Health Edition*, 1999 Edition, Oldwick, New Jersey: A.M. Best Company, 1994, p xiii.

A Standard & Poor's Insurer Financial Strength Rating is a current opinion of the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. Standard & Poor's employs two approaches when rating the financial strength of insurer: interactive ratings, and 'pi' ratings. The difference between the two reflects the amount and type of information the analysts are expected to receive. Interactive financial strength ratings are published only after a thorough review, which includes an extensive interview with the management. The 'pi' subscript indicates that the insurer has not voluntarily subjected itself to Standard & Poor's most rigorous review. Therefore, the analysis is based on an insurer's published financial information and other data found in the public domain<sup>27</sup>.

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<sup>27</sup> *Standard & Poor's Property/Casualty Insurance Ratings Criteria*, 1999, New York, New York: McGraw-Hill Companies, Inc., pp 10-11.

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