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School of Law

The Development from Traditional Reinsurance to Alternative Risk Transfer in Current Law

by

Chao-Chih Lin

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ABSTRACT

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THE DEVELOPMENT FROM TRADITIONAL REINSURANCE TO ALTERNATIVE RISK TRANSFER IN CURRENT LAW

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Reinsurance is a contract between a primary insurer and one or several reinsurers, who may use retrocession contracts to cede risk even further. There is a certain connection but no contractual relationship between the parties.

The first part of this thesis embraces the issues arising from reinsurance transactions, first of all, the principal arrangement methods of reinsurance, facultative cover and treaties based on either proportion or non-proportion. Current proportional reinsurance agreements can be divided into quota share and surplus cover; as well as combined quota share and surplus cover. Non-proportional reinsurance agreements can be divided into excess of loss cover and excess of loss ratio cover (stop loss reinsurance). Secondly, several issues of reinsurance, including the insurance interest on reinsurance, utmost good faith applied to reinsurance transactions, incorporation by reference and the clauses in common use, are stated and resolutions investigated. Thirdly, the supervisory methods for reinsurance transactions and the EU's milestone passing of the Reinsurance Directive 2005 are analysed.

Insurance risks can also be spread by various non-traditional methods, termed 'Alternative Risk Transfer' (ART), dealt with in the second part of the thesis. After an introduction, an examination of how ART transactions are currently carried out is made. In general, current ART products can be categorised into self-insurance, financial reinsurance, catastrophe bonds, derivatives and contingent capital instruments etc. Secondly, several legal and regulatory issues arising from ART transactions will be addressed and resolved. This section will use comparative law, especially looking at the quality, detail and reputation of US law. The UK Financial Services and Markets Act 2000 (FSMA 2000) created reforms worthy of investigation, and useful as a reference for further development of legal and regulatory frameworks in other countries.

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ABBREVIATIONS

AAA	American Academy of Actuaries
ADC	Adverse Development Covers
APRA	Australian Prudential Regulation Authority
ARF	Alternative Risk Financing
ART	Alternative Risk Transfer
BCOE	Bermuda Commodities Exchange
CAT	Catastrophe
CBOT	Chicago Board of Trade
CDD	Cooling Degree Days
CEA	Comité Européen Des Assurances; European Federation of National Insurance Associations
CME	Chicago Mercantile Exchange
COB	Conduct of Business Sourcebook (FSA Handbook)
CP	Financial Services Authority's Consultation Paper
CRESTA	Catastrophe Risk Evaluation and Standardizing Target Accumulations
CSN	Contingent Surplus Note
DJIA	Dow Jones Industrial Average
EEA	European Economic Area
EU	European Union
FASB	Financial Accounting Standards Board (US)
FQS	Finite Quota Share
FSA	Financial Services Authority
FSF	Financial Stability Forum
FSMA 2000	Financial Services and Market Act 2000
GAAP	General Accepted Accounting Principles
GCCI	Guy Carpenter Catastrophe Index
HDD	Heating Degree days
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
ILS	Insurance-linked Securities
IPRU	Interim Prudential Source Book: Insurers (FSA)
ISO	Insurance Standards Organisation
IUA	International Underwriting Association
LIBOR	London Interbank Open Rate
LPT	Loss Portfolio Transfer Agreement
MIA 1906	Marine Insurance Act 1906

NAIC	National Association of Insurance Commissioners (US)
NCAD	Notice of Cancellation at Anniversary Date
NRSROs	Nationally Recognized Statistical Rating Organizations (US)
OTC	Over-the-Counter
PRIN	Principle for Business (FSA Handbook)
SAP	Statutory Accounting Practices
SEC	Federal Securities and Exchange Commission (US)
SLT	Spread Loss Treaty
SPR	Special Purposes Reinsurer
SPV	Special Purpose Vehicle
S&P	Standard & Poor
TD	Time and Distance Policy
TREIP	Taiwan Residential Earthquake Insurance Pool
TRIA	Terrorism Risk Insurance Act (US)
UK	United Kingdom
US	United States
1933 Act	Securities Act 1933 (US)
1934 Act	Securities and Exchange Act of 1934 (US)

Chapter I Introduction

1.1 Background

Reinsurance is a contract between a primary insurer and one or several reinsurers. There is a clear connection between the underlying insurance and the reinsurance to which it relates, but there is no contractual relationship between the assured and the reinsurers and the purposes of the two contracts are quite different. The reinsured's intention is to spread risk by way of the reinsurance contract, so that some or all of a portfolio of liability can be transferred to one or more reinsurers, thereby guaranteeing solvency in the event of large claims. Reinsurers can also purchase reinsurance to spread the risk even further. Following the development of commercial doctrines and practices, the reinsurance business has been prospering under a network of types of coverage.

Historically, in 1746, an act to regulate insurance on ships belonging to British subjects Great Britain and on merchandise and effects was enacted; this legislation effectively outlawed reinsurance.[1] This is no longer the case today; no underwriter or insurance company can conduct business without reinsurance protection.

As stated above, the most significant function of reinsurance is to distribute risks. Other functions, such as stabilisation of profits, obtaining business, increasing profits and reducing reserves are facilitated by it.[2] If underwriting risks are distributed, the original can enjoy relatively stable profits, and the provision of indemnities to policy holders can be guaranteed. Consequently, the insurer is able to reduce reserves. The reinsurer is unlikely to cede all of the liability (other than in exceptional circumstances, where the insurance is simply a fronting operation).

Conventional reinsurance is by no means the only way to manage insurance risks. Insurance risks can also be spread by various non-traditional methods. In general,

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[1] R. H. Brown & P. B. Reed, *Marine Reinsurance*, (1980) London Witherby, p.2
[2] R. Riegal, J.S. Miller, *Insurance Principle and Practices*, 5th ed., p.96

where the management of insurance risks is by means of non-conventional placement, the product or programme can be called "Alternative Risk Transfer" (ART). Self insurance via captives, which take advantage of alternative reinsurers, is often used; it can be treated as one of the ART strategies closest to the traditional reinsurance method. More and more ART products have been created to cope with the requirements of reinsurance enterprises. Financial reinsurance, an early innovative financial product, which has more or less deviated from the domain of conventional reinsurance, can be treated as a milestone of ART development. Since the 1990's, a new tendency in risk management mechanisms that combine insurance and capital fields, such as insurance risk securitisation and derivatives, has developed. The financial capacity of the reinsurance markets is limited; it needs the capacity of the capital market to fulfil demands greater than those of the traditional reinsurance area. Nowadays, although conventional reinsurance still plays a decisive role apart from ART, the ART markets provide extra capability to cover any insufficiency in both the insurance or reinsurance markets.

1.2 The aims and objectives of the thesis

This thesis revolves mainly around legal issues arising from the operations of traditional reinsurance to the transactions of alternative risk transfer. Basically, the aims of the thesis will be fulfilled in two ways: the first is to evaluate existing mechanisms, and the second is to develop a coherent conceptual framework for presenting and developing the area of law. Both traditional reinsurance and ART have a more international character than other types of insurance. The research objectives can be approached by means of analysis from the viewpoint of a comparison of law and practice in the UK and the US, since these two countries have developed and crystallised reinsurance doctrines. The following chapters and sections of the thesis provide background from traditional reinsurance to ART, and issues emerging from it, for which solutions may be found.

1.3 The content and structure of the thesis

1. Introduction

Chapter 1 states the background, the aims and objectives and the structure of the thesis.

Traditional Reinsurance

2. Forms and types of reinsurance

Chapter 2 will examine various categories of reinsurance contracts. In the modern industrial and commercial world, reinsurance treaties and facultative contracts have come into widespread usage. A number of methods for increasing the efficiency of reinsurance have been applied, implying obligations for leading underwriters, pooling arrangements and brokerage in the domain of reinsurance.

(1) Facultative and treaty reinsurances

The first section of Chapter 2 analyses why and how a facultative reinsurance contract is transacted, its characteristics and the nature of risks involved. Basically, under a facultative contract, the reinsured and the reinsurer are at liberty to deal with their cession and reinsurance business under an agreement that is not necessarily pre-negotiated. In spite of the fact that treaty reinsurance is gradually taking over the reinsurance market, facultative reinsurance cannot be totally replaced. After having arranged a reinsurance treaty, facultative contracts still act as supplements if the treaty arrangement cannot alone effectively distribute the overall risks.

The second section deals with treaty reinsurance, which generally indicates that the reinsured and the reinsurer cede and accept the reinsurance business according to the treaty's stipulations, which the two parties have agreed in advance. The chapter considers the three methods of placing treaty reinsurance, namely by obligatory treaty, non-obligatory treaty and facultative/obligatory (fac/oblig) reinsurance treaty.

(2) Proportional and non-proportional reinsurances

Sections 3 and 4 of Chapter 2 examine proportional reinsurance and non-proportional reinsurance. Proportional reinsurance may be sub-categorised into quota share and surplus share reinsurance; non-proportional reinsurance can be subdivided into excess of loss reinsurance and excess of loss ratio reinsurance (stop loss). A proportional contract puts emphasis on the size of risk and a non-proportional one focuses on the size of loss. Facultative reinsurance and treaty reinsurance can be made on this basis. Operations, conditions, characteristics and applications and any other process in various sorts of contracts are significant in reinsurance. Other issues arise in practice, such as defining risk and loss, decision retention and cession, combined, multi-type reinsurance, and the like.

3. Features of reinsurance

Chapter 3 analyses the features of reinsurance, focusing on legal issues. The legal principles in direct insurance can be analogically applied to reinsurance, unless that principle is in conflict with the fundamental nature of reinsurance. The most important features deserving analysis are as follows.

(1) Insurable interest

No insurance policy is valid without insurable interest. The first task is to ascertain what the subject matter of reinsurance is, because insurable interest exists in the subject matter. The point at issue is whether the subject matter reinsured is the original insurance's subject matter. The second point is in relation to when the insurable interest must attach. The significant *Feasey* case,[3] which raised a number of new issues in insurable interest, will be examined and commented upon in this chapter.

[3] *Feasey v. Sun Life Assurance Company of Canada and Phoenix Home Mutual Lift Insurance Company* [2003] Lloyd's Rep IR 693 (CA)

(2) Utmost good faith

The principle of utmost good faith operates in all insurance contracts, including reinsurance contracts. Non-misrepresentation and disclosure are at the core of utmost good faith. MIA 1906 s. 18(2) states that "every circumstance is material which would influence the judgment of a prudent insurer in fixing the premium or determining whether he will take the risk". The issues relating to "what constitutes materiality and influencing judgment" are the subject of interpretation. The waiver of reinsurers and the consequence of remedies for breach in the duty of utmost good faith will be analysed in this chapter.

(3) Conditions and terms of reinsurance agreements

Basically, a reinsurance contract is an independent contract rather than one that is subordinate to a primary contract. However, the terms and conditions stipulated in primary insurance policies are commonly incorporated into reinsurance agreements. There is a doubt as to how to incorporate the provisions of an underlying insurance in a reinsurance contract. The greatest problems revolve around the "full reinsurance"[4] clause and related provisions. Cases have varied in their approach over time, and there is confusing authority as regards claims co-operation and control provisions, dispute resolution provisions, inspection clauses, duration clauses and so on. This stage of the research reviews the issues and suggests solutions.

4. Regulating reinsurance transactions

Chapter 4 will discuss the issues resulting from regulating reinsurance transactions, especially focusing on the regulation of reinsurers. There are several methods for regulating reinsurers. They include licensing reinsurers, monitoring reinsurers' forms of organisations, restricting reinsurers' scopes and fields of reinsurance businesses, maintaining reinsurers' financial soundness and so on. Basically, one single country's controllable power is restricted to its territory. Each country has its own regulatory rules. No international standard was available for regulating

[4] The full reinsurance clause is in two parts: warranted same terms and conditions as original, and follow the settlements.

reinsurance. However, matters changed after the EU Reinsurance Directive 2005 was enacted. This directive gradually created sharp and harmonised reinsurance regulations for the EU Member States, and also had international impacts. The principal provisions of the EU Reinsurance Directive will be analysed in this chapter.

The freedom of financial markets is an international tendency. However, free markets for reinsurance without any proper supervision not only imperils the reinsurance markets, but also endangers direct insurance undertakings, due to insurance companies relying on reinsurance undertakings to brace their underwriting capacities. Therefore, the supervision of reinsurance is worthy of investigation.

Alternative Risk Transfer (ART)

5. The current types of ART products and methods

The content of Chapter 5 includes the description of currently available products in the ART market, especially focusing on individual product development backgrounds, characteristics, nature and so on. Possible roles in ART programmes will be taken into account. Further, the chapter will annotate the functions of related parties who might be entitled to legal rights or have obligations imposed on them. The legal relationships between each party in ART products will be analysed. Difficulties will be highlighted and solutions proposed.

The current types of ART can be roughly divided into four categories,[5] namely self-insurance, financial reinsurance, securitisation of insurance risk (including CAT bonds, CBOT PCS options, weather derivatives and so on) and contingent capital instruments; new modules are continually made available. Basically, self-insurance

[5] The final classification of ART is not yet conclusive. From the viewpoint of the risk transfer function, according to the Non-Life Insurance Institute of Japan (Seminar 27/11/98), reported by K. U. Schanz, "The Convergence of Re/insurance and Capital Markets – the Financial Services Industry Reinventing Itself" deemed that current types of ART could be alternatively divided into three categories. The first is alternative solutions, which provide new products such as Loss Portfolio Transfers (LPTs) or Adverse Development Covers (ADCs), instead of traditional insurance. The second is alternative absorbers, under which the risk accepters substitute for the conventional insurer; the securitisation of insurance risk is representative work. The third alternative is sales channels, which change the route of risk flow, for example to create a captive insurer for drawing back to the original way of risk self-retention; hence, the main function of captive insurers is risk control, while tax relief and economising premiums are less important.

and financial reinsurance tend to operate in the insurance market using a number of alternative techniques; the other types seem to be carried out in the capital market. In fact, the ART methods are not entirely in the nature of either insurance or capital.[6] Significant value lies in the efficiency of risk transfer, insurance capacity and the scope of the underwriting business, which can be enhanced via ART functions. Moreover, if the insurance market combines with capital markets through a specialised reinsurance facility operating ART transactions, the underwriters acquire additional protection.

6. The legal and regulatory issues arising out of ART

In Chapter 6, a number of legal and regulatory issues will be analysed, especially focusing on financial reinsurance contracts and CAT bonds and the Financial Services and Market Act 2000 (FSMA 2000).

(1) The issues resulting from financial reinsurance

In order to provide more diverse products, to meet the demand of consumers as well as to improve the efficiency of the insurers, increased flexibility in regulatory controls is possible. To meet the trend of liberalisation of the insurance market and with a view to keeping market discipline, the settlement of appropriate regulatory schemes will be investigated. Due to some insurers abusing financial products to "paper over" their actual accounts, in recent years, the solution of regulatory control has become worthy of concern. The most notorious event was the insolvency of a leading Australian insurer, HIH Insurance Ltd. Zurich Financial Services Group, Hannover Re and American International Group Inc. were also investigated by the regulatory authorities, because they were involved in misusing finance insurance. A better way to deal with this situation needs to be devised.[7]

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[6] The transition from the insurance area to the capital field progresses step by step. According to priority, it may involve finite risk reinsurance, catastrophe bonds, contingent surplus notes, catastrophe equity puts, catastrophe swaps, Chicago Board Options Trade options (CBOT PCS) and the Bermuda Commodities Exchange's options (GCCI). See C. Y. Chen, *Alternative risk transfer* (02/2000), The Insurance Advisory Board (Taiwan), diagram 3-2, which was provided by Sean G. Wastie, Financial Service Authority Adviser of the Insurance and Friendly Societies Division.

[7] Due to the ease of making a fraudulent account on financial statements by way of financial reinsurance, the "Reinsurance and Other Forms of Risk Transfer Subcommittee" of the IAIS (International Association of Insurance Supervisors) on December 2004 published a document,

(2) Issues resulting from securitisation of insurance risk

This stage will clarify the legal and regulatory issues resulting from insurance risk securitisation, especially focusing on catastrophe bonds. The typical structure of catastrophe bond transaction involves bondholders, special purpose vehicles, ceding companies and so on. Their possible roles will be taken into account in this section.

The most obvious feature of insurance linked bonds is that the regime needs an SPV (Special Purpose Vehicle) for issuing bonds. Basically, the SPV in a typical insurance securitisation regime is affected under two sorts of contractual relationship, namely contracts with ceding companies and contracts with bondholders. There are doubts as to the kind of contract between the SPV bond issuer and the cedant/ceding insurer, and the kind of contract between an SPV bond issuer and investing bondholders. CAT bonds are insurance linked securities. The US securities laws involved in launching CAT bonds are worthy of concern, due to there being volumes of securities transacted on the US market. Analysis will be made in this section.

(3) ART transactions under the supervision of the UK Financial Services and Markets Act 2000

FSMA 2000 brought a material reformation of the UK supervisory regime for financial products. Subsequently, the FSA (Financial Services Authority), which was given statutory powers by the FSMA 2000, made progress towards integrated prudential standards for more flexible access to the regulation of insurance, securities, investment businesses and other. The FSA became the only regulator supervising all financial sectors in the UK. In other words, the single regulatory structure was formed. It is worthwhile conducting research on how to regulate various ART forms under the single regulatory regime. The guidelines on how the FSA treats ART products and how to achieve an appropriate legal and regulatory regime will be discussed in this section.

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proposing to formally issue the "Guide Paper on Finite Reinsurance". Its intention was to give material guidance to regulators all over the world. (See http://www.iaisweb.org)

7. Conclusions

After generalisation of contents and disputes, which have been analysed, some inferences can be drawn and several suggestions and expectations will be addressed in the final chapter.

PART I TRADITIONAL REINSURANCE

Chapter II Forms and types of reinsurance

2.1 Facultative reinsurance

The domain of reinsurance has evolved into a complex system, an early example of which was facultative reinsurance.[1] In early commerce, insurance was rare, as a result of infrequent opportunities for insurable contractual bargaining. In immature markets, non-uniformities and unexpected conditions led to randomness in the conclusion of insurance contracts; hence, a cycle of cover had to follow potential losses on individual haphazard risks.[2]

The Italian Gustav Crucigar's reinsurance policy in A.D. 1370 can be treated as embryo reinsurance, this transaction being classified as facultative.[3] By the early nineteenth century, no other mode operated other than the facultative. Thus, facultative reinsurance has been in effect for a long time, and although treaty reinsurance has gradually taken over, it remains essential for the spread of specific risk, especially for supplements to cover insufficiencies in treaty reinsurances or other forms of reinsurance protection.

2.1.1 Facultative reinsurance transactions

To tackle the huge amount of risk involved in a single direct policy or the excess limit of one risk, the ceding of business on a facultative *ad hoc* basis is common and the related terms and conditions of agreements are extemporaneously determined for the occasion. Placement can be under a proportional or non-proportional facultative

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[1] R. Carter, L. Lucas & N. Ralph, *Reinsurance*, (4th ed, 2000) Reaction Publishing Group, p.88
[2] See A. Felsted, "Special Report-Energy Insurance: overcapacity hits the offshore sector hard", *Lloyd's List,* (October 28, 1999), p.9
[3] R. H. Brown & P. B. Reed, *Marine Reinsurance*, (1st ed, 1981), London Witherby & Co Ltd, p.2

reinsurance scheme, but major facultative transactions are normally in the form of proportional reinsurances. The reinsured holds a proportion of the risk for himself by way of retention and then cedes the balance to the reinsurer and the calculation of premium can be effected by deducting the reinsured's share, plus commission, from the amount of the original premium. Facultative reinsurance agreements commonly play decisive roles in the following circumstances.

(1) Excess of reinsured limits of treaties

In the case of limits of amount, geographical areas, or overstepping of the capability, in respect of the insurers' existing reinsurance arrangements, a facultative mechanism can be set up. For instance, if the value of a hull is beyond the limit of the automatic treaty, the ceding company will seek extra protection by means of facultative reinsurances.[4]

(2) Coverage for exclusion provisions

By way of illustration in the context of marine war risks insurance, it may happen that that the vessel sails for places described in "Current Exclusions" set out in the form of War Risk Trading Warranties.[5] The underlying insurance may have provided extended cover on payment of additional premium and if the reinsurance follows the original policy's provisions which contain the exclusions, facultative reinsurance can be additionally arranged to cede the additional risk.

(3) Accepting new or high-risk business[6]

When creating a new insurance mode, transactions may be not plentiful enough in the initial business stage, especially with a high amount of insured underwriting. If the insurer would like to have his new business ceded, this may prove difficult with lack of experience and recorded data. The risk makes it hard to make an actuarial valuation; hence, the initial issuing may result in potential destabilisation. In this

[4] *Groupama Navigation et Transports and Others v. Catatumbo C.A. Seguros* [2000] 1 Lloyd's Rep. 266 QBD (Comm. Ct)
[5] *Black King Shipping Corporation v. Massie (The Litsion Pride)* [1985] 1 Lloyd's Rep. 437
[6] C. Y. Chen, *Reinsurance: theory and practice*, Best Wise Co., Ltd, Taiwan, (Feb.2002) pp.390-398

circumstance, the reinsurer normally prefers to accept a facultative reinsurance arrangement rather than reinsurance treaties. Moreover, as far as high-risk reinsurance is concerned, for example, when a cargo is being loaded and unloaded within the duration of a cargo insurance, the cargo insurer may instantly require a facultative reinsurance policy to cover the hazardous risks.[7]

(4) Business risks which the insurers are unwilling to cede via their existing treaties

In modern insurance circles, market competition is growing rapidly. In order to solicit customers or businesses, underwriters may sometimes bend the rules to accept somewhat unstable and poor quality risks. However, with the intention of avoiding any effects on the overall achievements of reinsurance treaties, underwriters can choose to assign unfavourable risks through facultative reinsurance placing.

2.1.2 The nature of risks of facultative reinsurance

In the light of the early cases,[8] a facultative policy can unquestionably be treated as a form of insurance.[9] Most legal doctrines of insurance can be applied by analogy. The position may be summarised as follows. In the first place, the process of placing facultative reinsurance agreements indicates that primary insurers cede their exceptional business to reinsurers where there is no antecedent form of reinsurance engaged, and reinsurers are entitled to use their judgment to select acceptable business. Moreover, as regards the method for accepting, whether the terms and conditions of the reinsurance should be adjusted or not, the reinsurer can deliberate upon the nature of the risk, his own bearing ability, the situation of pre-aggregated risks and so on. This is also known as "specific reinsurance" or "retail reinsurance".[10] Secondly, dealing with the ceding of risks, the scope and the

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[7] C. Y. Chen, ibid

[8] *Delver v. Barnes*, (1807) 1 Taunt 48; *China Traders Insurance Co. v. Royal Exchange* Assurance Corporation [1898] 2 Q.B. 187; *Australian Windows Fund Life Assurance Society v. National Mutual life Association of Australia Ltd* [1914] A.C. 634; *Re London County Commercial Reinsurance Office* [1922] 2 Ch. 67

[9] R. Merkin, (Eds), *What Is Reinsurance?* (1998 ed) LLP, p.11, states "... whether reinsurance is treated in the same way as insurance and in some jurisdictions it may be the case that particular types of reinsurance are regarded as ordinary insurance contracts (e.g. facultative reinsurance), whereas others (e.g. treaty reinsurance, stop loss contracts) are treated in some other way..."

[10] K. Thompson, *Reinsurance* (4th ed), p. 65

quantity of reinsurance will depend on the reinsured's own decision. Normally, having considered the condition of risk aggregation and the amount of the retention, the reinsured can take up matters with reinsurers one by one. Thirdly, the most frequent use of facultative cover is to reinforce the treaties where there is a deficiency in the sharing of risks. In other words, a facultative reinsurance contract will be operated to provide capacity over the limits of a treaty contract. In the case of excessively centralised and huge risks on a treaty basis, the reinsured can use it to protect his treaty from potentially adverse risks.

2.1.3 Characteristics of facultative reinsurance agreements

There are several characteristics of facultative reinsurance, as described below.

2.1.3.1 Separate contract

The case of *Delver v. Barnes* [11] produced a reinsurance contract's early definition, in which Mansfield CJ defined "... a new insurance effected by a new policy on the same risk which was before insured in order to indemnify the underwriters from their previous subscriptions; and both policies are to be in the existence at the same time." From a modern point of view, this definition merely mentions the execution of a policy of facultative reinsurance following reinsurance and does not really take the matter much further. Nevertheless, the case lays down the principal concept that reinsurance is independent from the contract of underlying insurance. In practice, the underlying terms are frequently carried across into the reinsurance; hence, it can be said that the liabilities under direct policies more or less mirror facultative reinsurance agreements in English law. Nevertheless, facultative reinsurance can be regarded as separate from the primary insurance.[12]

A difficulty in this argument arises when third parties are concerned. In principle, there is no privity of contract between reinsurers and the original insured.[13] This has

[11] (1807) 1 Taunt 48
[12] *Forsikringsaktieselskapet Vesta v. Butcher* [1989] AC 852
[13] *Delver v. Barnes*, ibid.

been regularly held to be the case in English law.[14] The early case of *Nelson v. Empress Assurance Corpn* [15] decided that the reinsurer was not liable to a third party in the process of a lawsuit filed by the original assured. Equally, *Johnston v. Salvage Association* [16] and *Clover, Clayton & Co, Ltd v Hessler & Co (Swift Steam Ship Co, Third Parties)* [17] referred to salvors and shipwrights not being entitled to add reinsurers as parties to an action against direct underwriters. More recently, in *Grecoair v. Tilling*,[18] it was held that a reinsurer who participated in negotiations for the placement of the original risk and who then controlled negotiations with the assured following a loss, had not accepted any direct liability to the assured itself and that the reinsurance remained a distinct contract. Moreover, much facultative reinsurance is placed on a fronting basis. Many facultative contracts provide for 100 per cent reinsurances, largely due to regulatory requirements of other jurisdictions which prevent anyone other than local insurers writing the business. For example, a local insurer may seek London market reinsurers to accept the full amount of the reinsured's liability. Those reinsurers act in effect as fronting companies for London market, so that the reinsurers are the direct insurers in reality, but not in law. Even in this situation, there is no cause of action by the assured against reinsurers in the event that the reinsured becomes insolvent.

However, this principle is not without exceptions. Section 9(2) of the *Marine Insurance Act 1906* (hereafter, MIA 1906), stipulates that "Unless the policy otherwise provides, the original assured has no right or interest in respect of such reinsurance". In other words, the original assured does not in the usual course of events have right to make a claim directly against the reinsurer although it is contemplated that the policy may otherwise provide. As regards reinsurance policies governed by the law of certain US states, in particular New York, a cut-through clause[19] is often incorporated, stating that in the event of the insurers' insolvency, the

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[14] Third parties do not affect contracts of reinsurance. See section 1 (5) of Third Parties (Rights against Insurers) Act 1930

[15] [1905] 2 KB 281

[16] (1887) 19 Q. B. D. 458

[17] [1924] 18 Ll.L. Rep. 293

[18] [2005] Lloyd's Rep IR 151

[19] The wording is not always the same owing to it having to fit in with individual requirements. Sometimes, it may be called a "claim payment agreement". For instance, in marine reinsurance, the clause stipulates "Otherwise subject to the terms, exclusions, provisions and conditions contained in the policy or endorsed hereon, ...insurance company, (hereinafter call "reinsurer") hereby agree that at the

reinsurance will make direct payment to the assured. Such a clause in England is now enforceable by the assured, as a result of the abolition of privity by the *Contracts (Rights of Third Parties) Act 1999*; hereafter, the assured can obtain protection more or less if "cut-through" is constituted in the fronting programmes. But, there is a major doubt as to whether a cut-through clause is valid under English insolvency law as it operates to give priority to the assured over other unsecured creditors of the insurers. The law still lacks authoritative interpretation on this point.

2.1.3.2 Considerable latitude

Under a facultative arrangement, the entire arrangement is optional function. The ceding insurer and the prospective reinsurer are thus possessed of their respective liberties to offer and to accept or reject reinsurance; simply, the insurer "may" offer and the reinsurer "may" accept the reinsuring business. A distinction between pure facultative reinsurance and facultative/obligatory reinsurance at this stage needs to be noted. In the latter case, the placing is rather different[20] and the contract operates — in the same way as direct insurance open covers – somewhere between facultative and treaty reinsurances. Like an obligatory treaty, the reinsurer is obliged to accept all the reinsured's offers on the terms of the prearranged facility, although the reinsured is not required to cede anything at all. Simply expressed, the reinsured "may" offer to cede; while, the reinsurer "must" accept the offers. Such contracts are all but unobtainable in the London market at the present time, given the risks to the reinsurers of adverse selection. The implications of this type of contract are considered below.

2.1.3.3 Case-by-case transactions

An obvious difference between the two categories is that a treaty agreement protects against multiple risks of a certain type, while a facultative reinsurance is for a single

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time any claim arises before the shipment at the port of loading under the policy the reinsurer shall pay 100% of the claim amount directly to the shippers the portion of loss which the reinsured shall be liable to pay to the shippers. Survey and other fees shall be settled by the reinsurer directly to the shippers, surveyors and/or persons concerned. It is also hereby agreed and understood that any such payment by the reinsurer made directly to the shippers shall fully discharge and release the reinsurer hereon from any and further liability hereunder."

[20] For further details, see R. Carter, L. Lucas & N. Ralph, *Reinsurance*, ibid, pp. 328-330

risk or a sole policy of underlying insurance, undertaken by each underwriter individually rather than on the terms of a pre-arranged framework agreement.

A point of confusion should here be clarified, in relation to line slips, under which an underwriter will accept without further consideration a proportion of a defined class of risk. *Balfour v. Beaumont* [21] provided an explanation regarding the operation of line slips, concluding that the line slip subscription did not embrace a facultative reinsurance contract. Specifically, there was no binding agreement between the assured and the insurer,[22] and the line slip itself was just an agency agreement between underwriters. For example, at Lloyd's, having been granted authorities from other syndicates, the leading syndicate is entitled to accept risks of a specified nature and an ascertained amount on behalf of the others; thus, a broker can arrange the risk sharing by accessing this one syndicate only.[23] When the underwriters who have subscribed under a line slip issue the "off-slip", the risk placement has been carried out.[24] Both line slips and facultative reinsurance involve distributing risks; however, the distinction is respectively between "horizontal and vertical risk sharing".[25]

2.1.3.4 Distinct coverage

The creation of facultative reinsurance can be brought about in a fashion much simpler than treaty reinsurance. To take an example from the London market, it is usual to adopt a "Slip Policy", which is a single cover sheet affixed to the original policy and which brings in the terms of that policy.[26] In most circumstances, the use of facultative reinsurance can avoid the accumulation of risks, by merely underwriting a single risk based on an original policy.[27] For the sake of commercial certainty, the reinsurers can obtain the advantage of simply understanding what risk they are

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[21] [1984] 1 Lloyd's Rep. 272
[22] *Touche Ross & Co and others v. Colin Baker* [1992] 2 Lloyd's Rep 207
[23] R. Merkin, *Colinvaux & Merkin's Insurance Contract Law*, Volume one, (4th ed, August 2002), Sweet & Maxwell, paragraph A-0295
[24] *Denby v. English and Scottish Maritime Insurance Co. Ltd* [1999] Lloyd's Rep. I. R. 343
[25] N. Legh-Jones, T. Birds and D. Owen, (eds) *MacGillivary on Insurance Law*, (10th ed, 2003) Sweet & Maxwell Ltd, p.964
[26] J. Butler & R. Merkin, *Bulter & Merkin's Reinsurance Law*, (Issue 59, April 2003) Sweet & Maxwell, Para. A-0016
[27] L. H. Detlef, "Some observations on the facultative reinsurance contract" in *International Insurance Law Review 1998*

exposed to if they carry out the placement of facultative reinsurance; as a result, the accumulation of risk will be infrequent.

Nevertheless, there is a potential predicament to specific covering in major contracts of facultative reinsurance. Having arranged *ad hoc* for particular, peak and especially hazardous risks, the reinsurers have difficulties in spreading risks again, even though the premium profits may be high. On the other hand, if the reinsurers are cautious with underwriting, they will prefer to only accept petty cessions, but the premium income may be insufficient to cover administrative spending. It is awkward for a reinsurer to devise a successful business strategy.

2.1.3.5 Dealing with contingencies of requirements

The contingency measure of reinsurance is an important consideration. For example, in marine cargo insurance, it is possible to obtain "increased value" cover. Without specific provision, the cargo seller can be regarded as having performed the obligation to insure the goods on condition that the prime cost of the freight prepaid together with the cost of loading and discharging are treated as the total amount insured. However, the seller is not liable to insure for a value greater than the invoice price. The flexible method in practice is that the buyer promptly arranges additions to increase value, as with marine insurance.[28] This insurance placement is divorced from the insurer's reinsurance treaty cover; therefore, the placement of facultative reinsurance can be provided to cover for this sort of risk.[29] However, if reinsurance timing is neglected, the insurer will suffer from an unprotected period from the issuing of direct policy to the placement of the facultative reinsurance.

2.1.3.6 High administrative costs

Compared with reinsurance treaties, which generally provide for automatic cession, the parties to a facultative reinsurance negotiation must deal with placement and renewal separately, so that the facultative account cannot be rendered in the whole but

[28] V. Dover, *A Handbook to Marine Insurance* (5th ed, 1957) p.77

[29] From the reinsurer's points of views, handling the fragmentary cessions the reinsurance underwriter could be under pressure, because dealing with a mass of ceding businesses, the facultative subscriptions of reinsurers becomes a time-consuming enterprise.

instead must be dealt with piecemeal. From the monetary point of view, the reinsured's administrative costs will be greater. On the other hand, the reinsurers' administrative costs and commission rates for reinsurance placed on a facultative basis become lower, even if generally a no-profit commission is operated.[30]

2.1.3.7 Achieving back-to-back facultative cover

The final point concerns the constitution of back-to-back facultative covers. Reinsuring individual risks or single direct policies may be achieved by simple and brief wordings. This typically consists of, as previously noted, a slip policy which purports to incorporate the terms of the underlying policy by means of the "full reinsurance clause". This provides that the terms of the reinsurance are "as original" and that reinsurances will "follow the settlements" of the reinsured (The matter will be discussed in greater detail in Chapter III). By contrast, treaty reinsurances which usually provide for cover against the reinsured's whole or partial account of claims for losses[31] require more complex wording, including accounting and inspection provisions. Nowadays, although English law generally recognises that insurance and reinsurance agreements are to be back to back, and - as a distinct concept – that the general effect of the "as original" wording is to incorporate the coverage of the direct policy into the reinsurance. Incorporation and the back-to-back presumption cannot override an express provision in the reinsurance policy, at least where there is no equivalent provision in the underlying insurance contract. That limitation aside, the presumption of back to back cover in facultative reinsurance is a powerful one. By contrast, in the case of non-proportional reinsurance, *Axa Reinsurance v. Field* [32] states that the presumption of back-to-back cover has no application. In brief, where there is a different wording used in a non-proportional contract, it is to be assumed that a different interpretation is intended.

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[30] R. Carter, L. Lucas & N. Ralph, ibid, p.320
[31] *Axa Reinsurance (UK) Plc v. Field* [1996] 2 Lloyd's Rep 233
[32] [1996] 3 All ER 517

2.2 Treaty reinsurance

Following the development of commerce, treaty reinsurance was gradually developed to overcome the defects of facultative reinsurances. Treaty reinsurance protects a ceding insurance company against losses under a book of business; by contrast, facultative reinsurance applies coverage for an individual risk or segment of a policy. The two methods of reinsurance can be likened to "wholesale" versus "retail".[33] There are various types of treaty reinsurance modes, including, most importantly, quota share reinsurance, surplus reinsurance, excess of loss, and stop loss reinsurance. Moreover, each mode can be combined with others;[34] hence, the operation of complete treaty reinsurance may be multifarious. In the initial placing of treaty there is need for individual risk review; treaty engagements require considering every possible circumstance such as the historic record of the ceding companies, expert attitude to claims control, general background and planned objectives etc. Under an agreement of treaty reinsurance, the reinsured can be granted prospective protection while the reinsurer can expect profit through previous estimation.

2.2.1 Methods of placing treaty reinsurance

Regarding the advantages of placing treaties, both parties can manage similar risks and have further benefits in the classification of business. There is no need for each risk to be placed by a separate contract; as a result, the time consumption and cost of repeatedly processing reinsurance policies can be kept down. Transacting treaty reinsurance includes two main steps: first of all, treaties are engaged by the parties; secondly, the reinsureds cede a number of risks falling within the coverage, while the reinsurers accept these risks in accordance with the pre-agreed treaties. The methods of placing treaties can be various; however, three main types are available.

(1) Obligatory treaties, the distinctive feature of which is that all the risks matching the terms of the treaty are automatically covered on acceptance by the reinsured;

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[33] George J. Biehl, "Reinsurance: a petri dish for disputes", *The RHA review volume 9*, (4th Quarter 2002), p.1

[34] The complex can be mixed Quota share/Surplus, Surplus/Excess of loss, Quota share/Excess of loss, Excess of loss/ Quota share etc.

the reinsurer is not allowed to refuse to undertake any particular risk, while the reinsured is not entitled to reserve the beneficial risk for himself. This type of treaty, while putting the reinsurers at the mercy of the reinsured to some extent, nevertheless gives the reinsurers the protection of a balanced portfolio not subject to adverse risk selection and the reinsurers are also free to demand that the reinsured retains a part of the risk for its own account. There will normally be an obligation on the reinsured to inform the reinsurers of acceptance of risks, by means of regular "bordereaux", but those documents have nothing to do with the ceding of the risk and are simply there for information purposes.

(2) Non-obligatory treaties are when the ceding company is free to seek cover from the treaty while the reinsuring company is free to accept or reject the reinsurance. In this type of case the treaty serves purely to establish machinery under which risks can be presented and accepted on a mutual facultative basis. Notification here serves a quite difficult purpose, in that it constitutes an offer by the reinsured to cede a risk to the reinsurers. In this kind of case, expressing how individual reinsurance can be arranged, it is more suitable to regard it in nature as "a contract for reinsurance" than "a contract of reinsurance".[35]

(3) A fac/oblig reinsurance treaty which (as described above) has the features of mixed facultative cover and obligatory treaty, under which the reinsurer must accept all declarations of risk, while the reinsured has no obligation to declare every risk which potentially falls within the treaty, and they are similar to operating brokers' open covers in primary insurance. The reinsureds have options; by contrast, reinsurers only acquire business convenience and enable large numbers of similar risks to be underwritten without the need for individual presentations. In practice, it can be an expediency to solve a specific accumulated risk in a particular business, a loss and certain duration.[36] This type is suitable to apply when there is faith in the cooperative relationship between the treaties' parties and in recent years market conditions have militated against the

[35] J. Butler & R. Merkin, *Butler & Merkin's Reinsurance Law*, (Issue 59, April 2003) Sweet & Maxwell, Para. A-0040

[36] *Phoenix General Insurance Co. of Greece S.A. v. Administration Asigurarilor de Stat* [1986] 2 Lloyd's Rep. 552 describes an aviation contingency business which was covered by a fac/oblig reinsurance type.

existence of such faith. Under a facultative obligatory contract the reinsured will again be under an obligation to notify to the reinsurers by means of regular bordereaux, but failure to notify means that the contractual mechanism for the allocation of risks to the treaty has not been satisfied and it will not be open to the reinsured to make a declaration after he has become aware of a loss, or possibly even after a loss has occurred of which he is unaware. In *Aneco Reinsurance Underwriting Ltd v. Johnson & Higgins Ltd*,[37] the treaty was a marine excess of loss cover written on a fac/oblig basis. The Court of Appeal was of the opinion[38] that a fac/oblig was no more than a standing offer, under which the contractually binding obligation was created between the reinsureds and the reinsurers and the obligation arose by every declaration.[39]

The points made in the above paragraphs can be illustrated by two recent cases. *Glencore v. Alpina* [40] concerned a fac/oblig open cover, under which the policyholder, Glencore insured against cargo losses. Glencore failed to make a declaration to the policy, and – having become aware of a cargo loss – subsequently sought to declare the risk under the open cover and to claim the value of the cargo from the insurers. Moore-Bick J held that the insurers were not liable: Glencore was not required to make any declaration, and the cover was invoked only where a declaration was actually made. Accordingly, a failure to declare was fatal to a claim, and a declaration could not be made once the assured had become aware of loss. By contrast, in *Glencore International AG v. Ryan-The Beursgracht*,[41] the assured Glencore placed a charterers' liability open cover at Lloyd's, under which the underwriters would accept all vessels chartered by Glencore during a period of time. The underwriters were automatically at risk as soon as a charter risk was accepted by Glencore. The open cover required Glencore to declare risks in monthly bordereaux. The Court of Appeal held that, although there was an implied innominate term that declarations would be made with a reasonable time, the risk attached automatically

[37] [1998] 1 Lloyd's Rep. 565
[38] *Citadel Insurance Co. v. Atlantic Union Insurance Co. S.A* [1982] 2 Lloyd's Rep. 543
[39] R. Carter, L. Lucas & N. Ralph, *Reinsurance*, (4th ed, 2000) Reaction Publishing Group, p.114 describes treaties, where the ceding company requires to take action before its liabilities under policies are insured; for instance, it is necessary to cede surplus lines by an approach using bordereaux, the treaties would value as the contracts enrol into separate cataracts of reinsurance.
[40] [2004] 1 Lloyd's Rep 111
[41] [2001] EWCA CIV 2051

with or without a declaration, and a late declaration made in good faith did not permit the reinsurers to treat their liability as discharged. Although the above two cases of open covers related to primary insurance, they are directly relevant by analogy to reinsurance treaties written on these bases.

2.2.2 The features of treaty reinsurance

In mapping out reinsurance treaties, there are several characteristics which are dissimilar to fixing facultative reinsurance. The obvious points are stated below.

2.2.2.1 Foundation agreements

A reinsurance treaty may contain customary trading essentials, such as the mode, the scope of coverage and exclusion, the reinsurance and profit commissions, the bordereaux submitting, the territory of business, the statement of account, the variation in exchange rate, the currency type etc. These are agreed between the parties in advance; thereafter, the two parties will follow the pre-agreed program to have their business reinsured and take advantage of the efficiency. In principle, reinsurance treaties can be regarded as framework agreements for future assumption of risks.[42] Analysing in detail, this issue can be examined by the constructions of treaties. Most reinsurance treaties are construed as obligatory. As noted above, however, it is possible to use non-obligatory and fac/oblig treaties, although the former are less common and the latter are rarely if ever found.

2.2.2.2 Covering categories from single to complex

A reinsurance treaty is generally limited by one unified type of insurance, restricted by class, eg, marine, accident, fire, aviation reinsurance etc; by contrast, "bouquet" reinsurance treaties are extraordinary.[43] Here, a multitude of treaty contracts are

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[42] Barlow Lyde & Gilbert's *Insurance handbook* (2nd ed, 2000), p.229, states that reinsurance treaties are not contracts of reinsurance but rather framework agreements from a strict point of view.

[43] Bouquet reinsurance treaties used to be widely accepted in quota share reinsurance from the late 1970's to the early 1980's; afterwards, it was gradually used less. Besides the markets of the United States, some European countries occasionally transact; the international reinsurance market has seldom been seen.

offered by a reinsured as a package and the reinsurer agree to accept the same proportion of each reinsurance contract which forms part of the bouquet.

2.2.2.3 Stable enterprises

A reinsurance treaty is able to cover many more businesses, perhaps up to many thousands; the insurance premiums in some treaties are adequate to cope with a few total losses. Occasionally, even if the subject matter reinsured suffers from misfortunes to leading several claims of total losses, it is insignificant in the context of the entire capacity of the treaty.

2.2.2.4 Continuous agreements

A reinsurance treaty takes effect on the date stated and continues in force until expiry; nevertheless, if there is express provision to that effect, the agreement may be terminated by either party presenting a notice of termination. A treaty will often be for an extended period, often up to three years, and is regarded as continuous although there is frequently provision for cancellation or at least renegotiation of the premium at the anniversary date.[44] In the event that notice is given, during the period of notice, the reinsurer remains liable for the cessions to which liability has attached.

2.2.2.5 No presumption of back-to-back cover

The consequence of incorporation as regards facultative contracts is the assumption that the terms of direct policy are incorporated into the facultative contract and then can be treated as a "back-to-back" construction. As there is no presumption of "back-to-back" cover in the case of non-proportional reinsurances, in particular excess of loss treaties, there is no necessary connection between the duration of a reinsurance treaty and its original policies.[45] The reinsured and the broker should be aware of whether or not the treaty's expiry is before the primary insurance, in order to

[44] See *Charman v. Gordian Run-off* [2004] Lloyd's Rep IR 373

[45] *Axa Reinsurance v. Field* [1996] 3 All ER 517 states that the presumption of back-to-back cover did not extend to non-proportional treaties, supposing different wording was used, it might be assumed having a different intention.

avoid lack of cover.[46] As already commented, obligatory treaties are generally terminable on an annual basis,[47] but the option to terminate is not always taken up. This is important, as annual rearrangement of a treaty is inconvenient.

2.2.3 Issues resulting from advancing treaties

There is a series of commonly applied clauses and special features in treaty insurance, which will be illustrated in chapter III. This paragraph will focus on the facilities for increasing the efficiency of treaties; several decisive concepts and instruments have been brought into the domain of reinsurance. The most significant may be as follows.

2.2.3.1 Implied obligations in treaties

Although reinsurance treaties contain express terms, the wording may nevertheless be confined to accounting and related matters and not deal with the day to day obligations of the reinsured. Common law has intervened by implying terms for the protection of reinsurers into treaties at least where those are obligatory from the reinsurers' point of view. The leading authority is *Phoenix General Insurance of Greece v. Halvanon Insurance*,[48] in which Hobhouse J laid down the principle requirements for the reinsured, which are:

> (a) to maintain full and proper records and accounts of risks accepted; (b) to investigate all claims and confirm that they fall within the terms of reinsurance; (c) to properly investigate risks offered to them before acceptance; (d) to keep full, proper and accurate accounts showing the amounts due and payable by the parties; (e) to ensure that all amounts owning to the reinsured have been collected and promptly paid; and (f) to obtain, file or otherwise keep in a proper manner all accounting claims, documents and records and to make those reasonably available to the reinsurers.

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[46] *Youell v. Bland Welch & Co Ltd (No.2)* [1990]2 Lloyd's Rep. 431
[47] Swiss Re, "Basic forms of reinsurance", *An introduction to reinsurance*, (1996), p.20
[48] [1985] 2 Lloyd's Rep 599

While this case concerned a fac/oblig treaty, it can be assumed that other forms of obligatory treaties are similarly subject to implied terms.[49] Any breach of duty is not, however, repudiatory, of the treaty itself,[50] although it may permit the reinsurers to reject claims in relation to a particular cession.[51] However, the judgment in *Phoenix* was doubted by *Bonner v. Cox Dedicated cooperate Member Ltd.*[52] The facts concerned Lloyd's Syndicate, whose business included writing risks in the energy market. They subscribed to an Open Cover for the 1999 year, operated by AON. Under the Cover the subscribers agreed to be bound by risks accepted by the leading underwriter. In 1999, it was reinsured by two reinsurers. The Court of Appeal in *Bonner v. Cox* held that the reinsured under a non-proportional treaty did not owe the reinsurer a duty to write treaty business prudently, reasonably carefully or in accordance with market practice. The reinsurers' protection is by means of the reinsured's pre-contractual duty of disclosure, by the express terms of the reinsurance contract and by the reinsured's need to keep a good reputation in the market. The Court of Appeal in *Bonner v. Cox* defined the *Phoenix* case and distinguished proportional from non-proportional reinsurance. However, it was left open as to whether a reinsured under a proportional contract owes a duty of care to the reinsurer. The reasonable analysis might be that *Phoenix* has involved a quota-share reinsurance contract, under which there is a joint venture connection between the reinsured and its reinsurer. Thus, a reinsured under a proportional contract might owe various implied duties to the reinsurers as held in by Hobhouse J in *Phoenix v. Halvanon.*

2.2.3.2 Leading underwriters

When placing a reinsurance agreement, especially by way of treaty, the number of reinsurers may be many and each subscription can be either equal or, more commonly, different in size.[53] The contract's internal connection to the multi-subscribers is

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[49] Barlow Lyde & Gilbert, "Disclosure of material facts on renewal" *The review - Legal guide to the renewals season*(2003), p.20

[50] *Baker v. Black Sea and Baltic General Insurance* [1995] LRLR 261

[51] By analogy with *Alfred McAlpine v. BAI (Run-off)* [2000] Lloyd's Rep IR 352

[52] [2005] EWCA Civ 1512

[53] A list of underwriting members of Lloyd's can be attached in insurance or reinsurance contracts, in which case the typical wording may be "...We the Assurers, Members of the syndicates, whose definite numbers in the after-mentioned List of Underwriting Members of Lloyd's are set out in the attached Table, hereby bind ourselves each for his own part and not one for another and in respect of his due proportion only, to pay or mark good to the Assured all such Loss and/or Damage which he or they

much alike to a co-insurance relationship. In *Roadworks Ltd (1952) v. Charman*,[54] an insurance contract placed by slip was subscribed to by numerous insurers. The slip contained a "leading underwriter" clause which conferred upon the leading underwriter the power to act on behalf of the remaining underwriters in negotiating amendments to the cover. This was held to be sufficient to authorise the leading underwriter to agree to waive conditions precedent to the attachment of cover. However, English law does not provide unrestricted authority to leading underwriters, the scope of that authority turning exclusively on the scope of the leading underwriter clause. *Unum Life Insurance Company of America v. The Israel Phoenix Assurance Co Limited* [55] interpreted the limits of authority for a leading underwriter in a quota share treaty, in that the slip contained the clause "wording to be agreed by leading reinsurer only". After the policy had been avoided, the leading underwriter purported to enter into an arbitration agreement on behalf of all subscribes. It was held that the arbitration clause was of no effect, as at the time that it was entered into the leading underwriter's authority had been terminated by means of avoidance. Accordingly, the leading reinsurer had only agreed to bind itself. The Court of Appeal was also of view that, absent express wording, the leading underwriter would not have been authorised by general wording to bind the following market to arbitration.

2.2.3.3 Pooling arrangements

Although not exclusively used in treaty reinsurance, treaties are frequently underwritten by reinsurance pools, which represent an efficient mode for dividing cessions among several reinsurers, and each reinsurer is bound to undertake an indicated ratio of each risk ceded to the pool.[56] The usual practice is for an underwriting agent to represent the pool under separate management agreements between each pool member and the underwriting agent. The agent is granted authority either to underwrite at his option, or to receive and transfer risks for

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may sustain by any one or more of the aforesaid perils and the due proportion for which each of us, the Assurers, is liable shall be ascertained by reference to his share, as shown in the said List, of the Amount, Percentage or Proportion of the Total sum assured hereunder which is in the Table set opposite the definite number of the Syndicate of which such Assurer is a Member..."

[54] [1994] 2 Lloyd's Rep 99

[55] 2001 WL 395248

[56] *Suncorp Insurance and Finance v. Milano Assicurazioni SpA* [1993] 2 Lloyd's Rep 225

deliberation by the pool members. Sometimes, one individual member of the pool may perform the role of a fronting company, which accepts all the risks of direct insurance on behalf of all members, whereby the fronting company becomes the reinsurer and then transfers a proportion of or the entirety of the risks to the other members of the pool, by means of which placing a retrocession, while the other members are the retrocessionaires.[57] Pooling schemes can save the costs of arranging reinsurance and break down the barriers of the territorial limitation of the reinsuring businesses, and they have been enlarging efficiency of treaties by this *modus operandi*.[58]

2.2.3.4 Treaty brokerage

Treaties are normally effected through the intermediary of a broker, who will negotiate with the leading reinsurer. Nowadays, the international market of reinsurance is prosperous, mainly through brokers' efforts in transacting treaty reinsurance. Acting as go-between for underwriters, brokers deal with reinsurers worldwide and facilitate associations between insurance enterprises. In practice, the brokers' open cover, which is a species of fac/oblig treaty, is available. Under this kind of treaty, a broker obtains underwriting authority from the reinsurer in the form of a binding authority (binder) granted to the broker under which the broker may accept risks on behalf of the reinsurer. Under such agreements, the broker plays a decisive role in the acceptance of original policies for reinsurance coverage; thus, the broker has obligations to the original insurer and the reinsurers despite there being a potential conflict both as to the exercise of the broker's duties[59] and also as to the attachment of the risk in that the reinsurance may be placed in advance of the direct policy. The doubt results from not knowing whether the reinsurance lacks subject

[57] For the problems which may arise where other pool members become insolvent and are unable to make good their retrocession obligation, see *North Atlantic Insurance Co Ltd v. Nationwide General Insurance Co Ltd* [2004] Lloyd's Rep IR 466, holding that outwards reinsurance recoveries belong to each pool member rather than to the fronting company in whose name the outwards cover may have been placed.

[58] For example, a foreign insurer may not be licensed in the UK but will seek a fronting company to place in its business structure of insurance.

[59] The broker is in theory the agent of the reinsured, but accepts business under a binder issued by the reinsurers. The conflict of interest has often been commented upon, but not to date resolved.

matter where it precedes the direct policy. In *The Zephyr*,[60] the court decided that it was permissible for treaties to be entered into prior to fixing direct cover by the brokers.[61] The reinsurance takes effect as a standing offer which may be accepted by any direct underwriter who subscribes to a direct risk. This analysis of reinsurance in advance of insurance has been confirmed by *Bonner v. Cox*.[62]

Although the competitiveness of underwriters has been promoted by the utilisation of treaties, by reason of their convenience and simplicity, there is no treaty without defect, the most obvious being that the reinsurance companies may have become acquainted with confidential information on every aspect of the reinsured's operations after conclusion of the treaty; hence, the reinsured may experience some disadvantage. That said, treaty reinsurance operations have proved reinsurance traders to be members of an expert profession, which constantly improves the reinsuring businesses, enabling primary underwriters to obtain the support necessary to effectively cover their insurance risks, while the commercial markets' benefits from treaty reinsurance are countless. The use of treaties has stimulated the development of brokering operations and has also raised reinsurance efficiency.

[60] *General Accident Fire & Life Assurance Company Limited v. Tanter, The Zephyr* [1985] 2 Lloyd's Rep 529.
[61] By contrast, the early case *Delver v. Barnes* (1807) 1 Taunt 48 revealed that reinsurances were only allowed to be contracted after the underlying insurances had existed. .
[62] [2005] EWCA Civ 1512

2.3 Proportional reinsurance

To achieve macro-control of risks, the target for framing contracts of reinsurance focuses on the transfer of risks. Basically, the grounds for ceding companies seeking for reinsuring protection are to limit liabilities on specific risks, to stabilise losses, to cover against catastrophes and to expand capacities.[63] To satisfy the different demands, various types and forms of reinsurance contract are available. Reinsurance agreement can be divided into proportional and non-proportional contracts, and both facultative and treaty reinsurances can be written on these two types of basis.

Under a proportional form, there are two main features. First, the focus of a reinsurance contract is on the size of the risk; the ceding company passes a settled proportion of premium income to the reinsurer for cover against the same proportion of that risk; moreover, the reinsured and the reinsurer decide their retention and accept liability based on the amount insured. This differs from a non-proportional contract which focuses on the size of potential loss above the reinsured's retention. Secondly, the fixed proportional relationship determines the rights and obligations[64] of the two parties during the duration of the contract. In the current reinsurance market, the majority of transactions are traded by way of obligatory treaties, notwithstanding both treaty and facultative reinsurances can be formed either as the proportional or non-proportional type; hereafter, the content of this section will lay particular stress on the treaty reinsurance basis.

2.3.1 Quota share reinsurance

A quota share treaty is fixed percentage sharing, whereby the reinsurer participates to a certain quota in every risk underwritten by the original insurer, who transfers the same extent of primary premiums to the reinsurer as the reinsurance premium. *Allianz Assurance v. Marchant* [65] shows that, where the reinsurer has been informed that the reinsurance is on a quota share basis and the amount of the original premium

[63] Reinsurance Association of America, *Fundamentals of property casualty reinsurance*, (2003), p.3
[64] For example, a reinsurer is entitled to claim for his premium, which is a percentage of the original premium, less a negotiated ceding commission; on the other hand, he is liable to pay the cost and the sum of the indemnity.
[65] (1997) 2 IRLN 61

income handed over to the reinsurer is less than the direct underwriting rate, the reinsurance contract can be avoided for breach of the duty of utmost good faith. Basically, the insurer's underwriting capacity can be enhanced by way of this placing. In the event of unprofitable risks being accepted by an original underwriter, he will require a greater percentage of coverage amounts and less retention. In this situation, however, the reinsurer will seek to increase the retention of the reinsured in order to release partial liabilities; in contrast, where the insurance risks are profitable,[66] the situation will be the opposite. In spite of a simple method of this type, some problems still exist, as analysed as below.

(1) Co-insurantisation

To truly share the fortunes and to bear the identical risks between direct insurers and reinsurers,[67] quota share reinsurance requires the reinsurer to take part in the business of the original insurer for its proportion. In addition, a derivative type of quota share treaty, in which the reinsurer will follow its subscribing proportion to share the reinsured's original cost of acquiring the original business, including commission and expenses, is available in the reinsurance market. [68] The phenomenon of co-insurantisation is obvious, in which the quota share means that the primary policy losses and the primary premiums are shared in specified proportions. In the domain of life reinsurance, this is sometimes called "coinsurance"- reinsurance by the coinsurance method, which performs according to the fortunes of the reinsured; thus, every term in the original policy such as the death benefit, the maturity benefit, the premium return, the dividend etc., will be admitted by the reinsurer and then incorporated into the life quota share treaty. In this circumstance, the function of the reinsurers is tantamount to the role of the participating co-insurers. On the other hand, concerning the property insurance field, although the risks of the underlying insurer have been reinsured, this insurer is still entitled to further cede his business of retention by other separate reinsurance contracts. From the perspective of spreading overall original risks, the situation that the reinsurer provides for partial retention

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[66] *Groupama Insurance Co Ltd v. Overseas Partners Re Ltd* [2003] 2003 WL 933574, the fact stated that the defendant participated in quota share retrocession cover then agreed to increase participation subject to satisfactory warranty as to no losses incurred on programme to date.

[67] P. Antal, "Quantitative methods in reinsurance", *Swiss Re*, (Apr. 2003) p.3

[68] C. E. Golding, *The law and practice of reinsurance*, 3rd ed, p 60

covered is similar to a third party insurer subsequently taking part in the business of the original insurer, and then to be a co-insurer or a quota share reinsurer. English law has recognised that the retention can be ceded by further separate reinsurance contracts unless there is some contrary provision.[69]

(2) Treaty limit

According to the pre-agreed ratio to settle liabilities between two parties in the quota share contract, total risks are proportionally rated as various sums reinsured; from the viewpoint of balancing risks, the conditions are not improved; hence, the reinsurer may have insufficient capital to handle random losses involving risks with the high sum reinsured. To solve this difficulty, the contract will specify a maximum allowable limit ceded to the reinsurer on any one risk; consequently, large claims will be reduced to a limited extent. In case of being underwritten by a treaty, normally there is a clause to specify the table of limits or the schedule;[70] in which the maximum limit is stipulated. As to the exceeding part, it can be either dispersed through facultative, surplus or any other methods of reinsurance; or alternatively, it can be fitted into the retention of the original insurer.

(3) Application of quota share reinsurance

Albeit without the "follow the fortunes" clause being incorporated, privity of the contract still applies under a quota share agreement. There is a low level of moral hazard between the reinsurer and the direct insurer on the grounds of identity of interest. Placing a Pure quota share treaties, although it is less widely used today, but is still applied to, several categories of reinsurance; even the federal terrorism insurance programme in the U.S. involved quota share reinsurance.[71] In general, as

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[69] *Kingscroft Insurance Co Ltd v. Nissan Fire & Marine Insurance Co Ltd* [1999] Lloyd's Rep IR 603; *Assicurazioni Generali Spa v. Arab Insurance Group* [2002] Lloyd's Rep IR 633

[70] It shows the reinsurer's participation. See article 1 (a) of the LIRMA's fire quota share treaty clauses, " The Reinsured should reinsure by way of quota share reinsurance the proportion stated in the Schedule of those insurances and facultative reinsurances specified in the Schedule but not exceeding the maximum limit stipulated therein." *Reinsurance clause binder,* (2nd ed, 1992), Lloyd's Underwriter's Non Marine Association

[71] The U.S. Terrorism Risk Insurance Act (TRIA) came into force on November 2002, which provides a 90% quota share reinsurance cover for TRIA terrorism losses in excess of the insurer's deductibles.

far as creating a new business is concerned, it often involves potentially high risks on the basis of lack of enough experience and unstable income. In this situation, if the original underwriter still retains a certain proportion of the ceded risks, the reinsurer will obtain greater protection because he is at the same standpoint as the reinsured. Secondly, in the absence of anti-selection by the reinsured, there is also the possibility of covering liabilities under frequent incurrence and unpredictable loss sizes such as car liability insurance or natural peril insurance.[72] Thirdly, concerning transactions between related enterprises, such as a parent company its subsidiary, quota share contracts are rational, because the two parties' capital mechanism is identical. Fourthly, as far as the placement of retrocession is concerned, it is hard to fix the limits of the risk units; thus, quota share retrocession covers are normally supported.[73] Fifthly, a quota share is frequently combined with other methods to be placed; nowadays, there are quota share/surplus, quota share/excess of loss and excess of loss/quota share types available on the reinsurance market.

2.3.2 Surplus reinsurance

Surplus reinsurance is a form of proportional reinsurance, by virtue of which the rights and obligations of two parties (such as premiums and indemnities in a surplus reinsurance) bring into existence a certain proportional connection with the original policies. According to this connection, the original sum insured is relative to the sum insured in the surplus treaty. The majority of surplus agreements are placed by treaties, whereby the ceding company cedes his business risks on the basis of per risk and the reinsurer is bound to accept the surplus liability over the ceding company's retention of the risk. In other words, the risks ceded under a surplus treaty are those which fall within the definitions in the treaty itself. There are no discretions involved: the risks covered will be defined, and as soon as the reinsured accepts a risk of that description it will be ceded to the surplus treaty on condition that the retention figure has been exceeded.

See AIDA newsletter, March 2003, <http://www.aida.org.uk/newsmarch03/legaldevelop.html> visiting date 25/07/04

[72] R., Lucas, L. and Ralph, N. *Reinsurance*, (Reaction Publishing Group, 2000), p.183

[73] Willis Limited, "Reinsurance market review", (Match 2003), p.23

2.3.2.1 Basic operation of surplus reinsurance

(1) On the basis of per risk

Under surplus treaties the reinsured cedes a portion of any risk which exceeds its retention limit and each cession and retention is valued according to each risk. However, without a general construction defining one risk, sometimes the reinsurer will agree to abide by the decision of the reinsured as to what establishes one risk, which should be final and binding upon the reinsurer.[74] The most momentous influence on constituting "one risk" in a surplus treaty is that a ceding company can use surplus treaty reinsurance to transfer the poorer and the larger risks to reinsurers, thereby retaining the better risks and smaller risks for itself, and the risk type is often property only. In contrast to quota share contracts, the risk sort can be either property or casualty; in addition, without individual cessions, a ceding company is obliged to cede a specified percentage throughout the portfolios and is not allowed to be fastidious in preference.

(2) Individual cessions

A surplus treaty contains several individual cessions instead of unity in overall portfolios for transfer of risk. In accordance with the terms of the agreement, the reinsurer will accept individual cessions. The agreement contains a specified limit of amount for any one risk. Using the same framework as for ceding of risks, each cession can be separate from the others. In the marine insurance field, the surplus type is so-called "excess of line reinsurance." or "surplus of line reinsurance", in which case the reinsurers may follow the settlement of the original policy or policies to define the limit of the cession. Not infrequently the liberality under a single marine cargo policy such as Institute Cargo Clauses (A), (B) or (C), each policy is implied as an individual risk in the reinsurance contract. The early case of *South British Fire & Mar. Ins. Co. of New Zealand v. Da Costa* [75] described the meaning

[74] For instance, Article 1 (d) of the LIRMA's fire first surplus treaty clauses, ibid, states: "The Reinsured should decide what constitutes one risk hereunder and (unless otherwise hereinafter provided) should fix its net retentions without reference to the Reinsurer in accordance with the usual net retentions of the Reinsured or the table of limits mutually agree upon..."

[75] [1906] 1 KB 456

of the reinsurance (£1,000 in excess of £500) in the surplus contract. It meant that the reinsurers were to relieve the reinsured of £500 of the excess up to £1000. Moreover, under the original policy, it covered not only the main shipping vessel but also the necessary transport by a lighter craft during transit. The facts showed that the sum of the reinsured of the cargo surplus contract had exceeded £500; as a consequence, the reinsurer was obliged to indemnify, because the partial consignment of lighterage (£400) could not be treated as another separate risk, and the sum did not exceed the level of the ceding of risks.

(3) Operating by lines

The ceding company's retention is called the line, and there is a means to calculate the number of lines. The reinsured can cede as much of the treaty as he wishes, using as many lines as he wishes, although this will be for the reinsurers to determine, because they will indicate how much they are prepared to accept. For example, if the agreement accounts for five lines, it means that the reinsurer can accept up to five times of the retention as the sum reinsured, which is the reinsurer's maximum limit of liability. Retention joining to ceding lines is the "capacity" or "limit" of the treaty; hence, the sum of retention should be retained by the ceding company, who can cede the remaining part, which may be divided into multi-lines to the reinsurer. In summary, there is a mutual conjunction among the reinsurer's liability; the reinsured's retention and the number of lines in a treaty.

(4) Variable percentage sharing

Under a surplus treaty, although the sum of retention of every risk is the same, the quantity of risks may be tens of thousands and the sum insured of each risk may be various; hence, the proportional connection between the retention and the cession in every risk is diverse. As far as all risks contained in a surplus treaty are concerned, a fixed amount of each risk is retained by the insured; as a result, the reinsurers accept the remaining amount of each risk under a floating ratio, on the grounds that the size of risks may be different. As soon as percentage sharing has been settled, the premium and the indemnity will be accorded with the settled percentage for distribution. In other words, the proportional liabilities between two parties vary

depending on the various sums of risks in the treaty.[76]

(5) Layering surplus treaties

Following the development of insurance trading, the sum insured has grown sharply. Having one layer of surplus treaties may not be sufficient to handle all of the companies' risks. In the event that the limits of liability are too large, having filled the retention and full lines, the reinsured may cede the excess of risks to the second surplus reinsurance, which is used for writing huge risks. By analogy, he is entitled to develop surplus reinsurance for third, fourth, etc. layers. A reasonable formation is as follows. In the first place, risks in domestic business have sums insured below the line; no liability is shared because the risks belong to the direct insurer's retention. Next, commercial business risks can be protected by the first surplus; other surplus layers can be arranged to cover large, specified district, and high risk groups of industrial risks. Up to the third layer, most ceding companies can completely fulfil their risk through spreading. Normally, the more layers that have been provided, the less the risks can be contained, because the majority of risks have nearly been covered by the retention and lower layers. The sum insured of risks flowing into the higher layer is minor, in which case the risks are relatively larger and poorer. The premium income of reinsurers from higher layers is more unstable than from first surplus treaties.

2.3.2.2 Application of surplus reinsurance

The risk of random loss can be covered by surplus reinsurance, now in widespread use, because direct insurers can obtain an excellently balanced retained portfolio of business, although often property only.[77] The reinsurer pays a higher proportion of claims but sometimes the original premium will be preserved by the reinsured, in the event that the sums insured do not exceed the retention. Comparing with the same case in quota share, the ceding company will acquire more advantages.

Nowadays, there is much valuable marine cargo which shipped by large tankers,

[76] CAN Re, "Reinsurance basics", (2003) p.8
[77] By contrast; quota share provides for property and casualty.

whose class has reached over four hundred thousand tons in the marine shipment enterprise, in which case both the goods and the vessel are valuable, so the sums insured will be high. Applying the mechanism of surplus reinsurance, the risks can be absorbed layer by layer. On the other hand, the word "non-marine"[78] indicates a widespread category of insurance business on the grounds that comprehensive policies, such as fire insurance, combine with other categories of property or liability insurance, and this has become a new tendency; as a result, the classification of insurance is indistinct. Surplus share treaties follow this development with the purpose of protecting numerous direct policies' risks, which belong to different categories, so the comprehensive treaties are available in the reinsurance market. Under a surplus treaty, in the event that the reinsured has accepted one kind of business risk, by nature of which the loss ratio is high, it can still be balanced by other risks whose loss ratio is low; therefore, both parties can take advantage. From the reinsurers' point of view, the risks from many sorts of direct policies running together can complement each other, and reinsurance management tends to stabilise. On the other hand, from the viewpoint of the ceding company, the poorer risks, harder to cede out under beneficial conditions, can acquire reinsurance protection by operating in coordination with other profitable risks.

2.3.3 Some other problems resulting from proportional reinsurance

2.3.3.1 Definition of individual risks

Risks are the subject-matter reinsured in proportional reinsurance, in which the cessions of a quota share falls in every risk of the reassured's accounts, whereas a surplus reinsurance is allowed to select ceding risks. A significant task is how to settle the scope of one risk, through which the retentions and the sums reinsured, can be further decided, as is especially important for the surplus type, which should be defined in the treaty. Distributing to individual risks, it can avoid accumulation of risk; hence, the status of one risk implies that it is unconnected with other risks;

[78] The insurance business can be classified into various types, of which property insurance can be divided into marine and non-marine insurance in the London market. After the Company Act 1967 had been announced in Britain, many companies rearranged their non-marine enterprises in order to be supervised under statutory clauses. For example, fire treaties extend to cover more items such as theft and plate glass; house-owners'& householders' comprehensive policies additionally contain liability insurance.

additionally, the type of reinsurance and the nature of the risk will be a concern. As far as property covers are concerned, each of the properties can be treated as separate risks.[79] As is often the case in marine and motor vehicle insurance, each mobile object can roughly be regarded as an independent risk, by virtue of which the boundary of the risk is relatively easy to define; therefore, one vessel can be treated as one risk and one vehicle as one unit of a risk project. Once in a while, a group of movable objects, which can be one risk (such as a variable numbers of vehicles parked in a specified car park), is an exception.

Concerning immobile subject matters, the complication means that to delimit the scope of risk is a difficulty. To cite fire reinsurance as an example, one risk indicates the extent to which one fire can burn in a normal situation. However, it requires various technical methods to range the special risk; in the event that the properties potentially suffer from loss resulting from a single event occurring, for example, a fire causing damage to one terrace of houses with several properties, a specified house can be regarded as one risk. Moreover, if there are several buildings, raw materials, machines and goods in a factory, the different natures of the subject matter located in one specified space, mean that the measure of risk requires cautious examination.

2.3.3.2 Retention deciding

Under a quota share contract, the beneficial orientation of reinsurers and reinsureds tends to be alike; hence, a fixed retained proportion of business may be comprehensively deliberated throughout the portfolios by the ceding company. Reasonably, the percentage of retention should be in harmony with the fixed percentage sharing of the all accounts. Occasionally, the direct insurer can be structured to a fronting programme, preserving null percentage of retention and reinsuring out at the best terms.

By way of comparison, fixing retentions under surplus reinsurance will be relatively complicated, because the two parties' profits may be opposite; in addition, owing to

[79] See New York State Insurance Department, the opinion was issued by the office of general counsel, 03/02/03, < www.ins.state.ny.us/rg030107.htm>, last visiting date 01/08/04

there being no available formula for settling proper retention, a series of conditions such as risk level, sum insured, business quantity, price competition, premium reserve, etc. should be considered, which may be difficult. As is often the case in deciding a treaty's retention, it mainly includes two essentials: the risk items and the sum of retention, which can be put down in writing on the limit table or so-called retention table. This kind of table will systematically classify risk by risk. To cite fire reinsurance, for example, the risk items may be categorised according to the characteristics of the subject matter which have been covered by the treaty, such as the buildings' occupation, construction and location. According to the quality of each risk item, the sum retention can be subsequently determined. In the marine insurance field, voyage and time policies are popularly treated. Generally, time policies are applied to insure ships such as "Institute Time Clauses Hulls", by means of which the retention of the reinsurance sum can be fixed in accordance with the insured sum of the vessel and its duration; in comparison, settlement of the cargo is based on each voyage (such as Institute Cargo Clauses (A), (B) and (C)), and its reinsurance cover will follow the sequence of voyages to judge retention. For example, a cargo loaded in one vessel for one voyage will be regarded as one unit of risk.[80] In this circumstance, although the majority in the piecemeal consignment's value is less than the usual operating retention of the ceding company, the total sum will overload the capability of the ceding company and the risk degree will increase after numerous consignors' goods have been collected in the same vessel; hence, the ceding company still requires reinsurance covering. The usage is to estimate the probable maximum value as being at risk during the primary voyage, and that valued amount will be the retention level of the ceding company.[81]

2.3.3.3 The facultative method in proportional reinsurance

Proportional reinsurance can be placed either under a treaty or a facultative scheme, in which case there is no difficulty in a quota share type. There is a doubt as to whether surplus reinsurance can be transacted by the facultative method. In practice,

[80] In general, the concept of "goods" in MIA 1906 excludes rare and valuable cargo. See Rule 17(1) of the Rules for Construction of Policy. In the event that the merchantable cargo and valuable cargo such as specie, bullion, precious metals or stones, plate, works of art or other objects of a rare or precious nature, bank notes or other forms of currency, bonds or other negotiable instruments are collected in the same vessel, they should be separated to different reinsurance contracts.

[81] R. Carter, L. Lucas & N. Ralph, ibid, p.626

surplus contracts are nearly always non-facultative, in that the agreed proportions are fixed in advance, and any insurance is ceded automatically. Reinsurers are unwilling to accept this type of business on a facultative basis, as the reinsured can then pick and choose the risks to cede;[82] however, not forbidden from exercise, facultative placement is still available for surplus share reinsurance. For some reason, the ceding company would like to cede the risk via a facultative method. It is possible that the ceding company will arrange the amount which exceeded the retention to any other reinsurers on the basis of one risk. This circumstance is different from that involving the quota share on the basis of fixed percentage sharing. For example, the total amount of a single risk is £5,000, which the ceding company's retention is £500. On the other hand, three reinsurers A, B and C accept £2,000, £1,500 and £1,000 of cessions individually, so the reinsurers A, B and C equally to bear 40%, 30% and 20% of this risk. Under variable percentage sharing, this conforms to one of the characteristics of surplus reinsurance. In fact, where the cession is accorded with the fixed amount reinsured, which exceeds the retention amount, the reinsurance contract has been more or less infiltrated with the notion of the "proportional" ceding. Nevertheless, in a facultative contract, it would rather be operated by the amount sharing than ceded by lines.

2.3.3.4 Combined quota share and surplus reinsurance

In order to put aside the disadvantages and maintain the benefits of the two types of proportional treaty, a mixed kind of treaty is available. On the basis of the framework relating to surplus reinsurance operating, the first step is to arrange a quota share contract, regarded as the gross retention of the quota share/surplus treaty. Subsequently, the multi-lines will be layered according to the gross retention, treated as a line cession.[83] Using combined quota share and surplus reinsurance, it completely depends on the business requirement of the ceding company. In practice, the premium is higher under a quota share contract; nevertheless, there is a wide gap

[82] See *Aneco v Johnson & Higgin* [1998] 1 Lloyd's Rep. 565, which provides the market evidence on the limited use of fac/oblig treaties.

[83] For example, a ceding company retains £200,000 to form a quota share contract, of which, 40% (£80,000) is the net retention and 60% (£120,000) is the cession; the whole amount of the quota share contract (£200,000) is the gross retention, one line of the quota share/surplus treaty, if there are 4 lines; the limit of this combined reinsurance should be £10,000,000. Under different sizes of risks, the treaty is entitled to arrange more or less lines.

between premium income and indemnity liability, and the reinsurer may reject the surplus reinsurance transaction. Moreover, placing facultative reinsurance, the costs are greater, due to piecemeal rendering. In the circumstance, the quota share and surplus contract is able to bridge the insufficiency of the reinsurance enterprises; despite the fact that the processes and accounts are more complicated, the reinsurer may prefer this type of combination, because he is can still accept a part of the profitable cessions.

2.4 Non-proportional reinsurance

In the modern commercial market, non-proportional reinsurance is widely used, as the business of liability insurance has grown and the subject matters insured tend to have high sums insured and accumulated risks. In proportional reinsurance, risks are shared between the direct insurer and reinsurer on the basis of the sums reinsured; however, a non-proportional reinsurance contract works differently, in that it does not refer to each risk's connection with the sums of retention and cession as a percentage, but instead considers the potential claims, as shared by the parties of non-proportionally, the liability being layered and the direct insurer bearing a certain amount, which is the underlying retention or so-called deductible; subsequently, the reinsurance cover undertakes whatever exceeds this amount. There are many different manners of delimiting claims protected by reinsurance coverage, contracts usually operating either on an excess of loss basis, or on a stop loss basis. Taking advantage of special kinds of protection, economical costing and simplified accounts, in addition to combining with other types of reinsurance, the modern business of reinsurance can be more easily handled.

2.4.1 The characteristics of non-proportional reinsurance

There are several characteristics of non-proportional reinsurance that distinguish it from proportional reinsurance. The basic points are stated below.

(1) Liability in excess of the reinsured's retention

Under a non-proportional contract, the liability imposed on the reinsurer is according to the payment claimed by the reinsured; where the claim of the policy holders exceeds the retention level of the reinsurance contract, the reinsurer is obligated to indemnify the excess part of the loss; furthermore, the liability of the reinsurer is different to that in proportional mode, which is based on a predetermined percentage; it is based on the loss above the cedant's retention instead.[84]

[84] For instance, the direct insurer engages in an excess of loss contract, in which £800,000 is the retention. If there is a claim for £1,800,000 under the direct policies, the direct insurer is imposed on

(2) On the basis of claims sharing

Proportional reinsurance sharing is based on each risk; however, non-proportional reinsurance can be used for business with many different risk appearances; thus, the settlement of claims can be varied. In general, non-proportional reinsurance can be written per risk, per occurrence or as an aggregate or stop loss. Concerning the basis of loss claim of development in non-proportional reinsurance, it goes from simple to complex, and is classed into three main types. Per risk excess of loss reinsurance is the initial mode, in which the reinsurer is liable to losses arising from each direct policy or falling into a single risk, such as a building or location. This is the original type, often found in the domain of liability insurance, such as third party cover in motor vehicle insurance. Secondly, following the growth of excess of loss, one event or occurrence frequently causes damages falling into a series of risk scopes; instead of basing on per risk, per occurrence excess of loss reinsurance is invoked; thus, boundaries of subject matter are extended. Furthermore, this type of excess of loss contract is increased by claims overstepping the retention level, as a result of any event or occurrence, which is usually reinsured as catastrophe and damage to high-priced property exposures (catastrophe cover, conflagration cover, etc.). Finally, non-proportional reinsurance tends to focus on not only space but some time; thus, aggregate excess of loss, so-called excess of loss ratio reinsurance, or stop loss, is formed. A standard stop loss contract covers events or occurrences in specified risks or risk categories sometimes unlimited, under which the indemnity is actuated on the condition that claims exceed a pre-determined sum or a portion of overall premium income on the basis of aggregate loss during the specified year. In principle, a stop loss cover can reinsure the property only or the property and casualty to business, because the significance lies in protecting the comprehensive business of the reinsured.

(3) Focus on the size of loss

The indemnity of non-proportional reinsurance has no direct link to the size and nature of the overall risk, but it is concerned with the size of the loss to the reinsurer

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his retention (£800,000), which is reinsurance contract's excess point, while the reinsurer is responsible for the remaining part (£1,000,000).

instead. Owing to no objective rule being available for setting rates of reinsurance premium, reinsurers rather rely upon their subjective intentions; thus, sometimes, it occurs that the ceding company only pays a low premium to the reinsurer, but is still entitled to claim a huge indemnity if suffering a large loss. Under this phenomenon, it is easy for laxity to occur in the underwriting of primary insurers, a chief defect of non-proportional placing.

(4) Distinct settlements of losses and premiums

In proportional reinsurance, the premium rate is a percentage of original premiums less the ceding commission; by contrast, there is no connection between original and reinsurance premiums and commissions in non-proportional constitution, and they need to be negotiated separately. Setting premiums and losses are according to the accounts or bordereaux in proportional reinsurance, whereas settlement of losses individually is used in non-proportional reinsurance and based on a variety of factors.

(5) Making administration of the contract comparatively simple and cheap

Placing an excess of loss treaty has become the mainstream in reinsurance transacting. Analysing it in detail, several reasons emerge. First of all, in the modern era, the sums insured are on the increase; although facultative reinsurance is supplementary, it is usually a heavy and complicated procedure, which stimulates the growth of the excess of loss type, which is relatively much simpler. The second for popularity of the insurance practice is the extended coverage of its fire & allied peril policies;[85] for example, under this kind of peril policy, natural disasters, or so-called "Acts of God"[86] are covered; relying just on traditional proportional reinsurance is insufficient for indemnifying such kinds of losses, so it has gradually moved back to a supporting

[85] Sometimes, the extended coverage developing results from rule of law. For example, as far as the Taiwanese Insurance Code is concerned, Article 138-1, Section 1 carried the amendment that "The insurance enterprises should undertake residence insurance against earthquake risk by way of co-insurance and through the risk bearing mechanism established by the competent authority". Further, Section 2 carried the amendment that "With respect to the risk-bearing mechanism under the preceding paragraph, for the portion exceeding the limit of co-insurance, it may be borne by a residence earthquake insurance reinsured against through reinsurance by domestic and foreign reinsurance enterprises".

[86] For example, losses occurring as a result of earthquakes, typhoons, and hurricanes are included in the policy.

role in the reinsurance industry. Thirdly, in proportional reinsurance, presenting bordereaux is an essential task of the reinsured; however, the rules can sometimes be bent, submitting only to leading reinsurers instead an increasingly common expediency. In this mode, information on the reinsured, which the reinsurer is only partially acquainted with, is a limitation; consequently, the risk controlling ability of reinsurer will be weakened, as can be observed from the viewpoint of the tendency to risk-based reinsurance. In order to avoid a lack of information on the subject matter reinsured during the duration of contracts, especially for covering easily accumulating risks suddenly causing unpredictable indemnities, the contractors tend to seek protection from loss-based reinsurance. The fourth consideration in the monetary terms and on account of the competition between reinsurers, who seek to minimise expenses, the method of excess of loss is able to fulfil their requirements on the strength of the interior administration being relatively simple. In addition, the calculation of premiums for major excess of loss contracts is completed at the end of the treaty's year; thus, deposits by the reinsured of premium reserves are not necessary, unlike in the proportional type.[87] The reinsurer can take advantage of this to benefit from capital resource.

2.4.2 Excess of loss reinsurance

Excess of loss reinsurance is the commonest form in the domain of non-proportional reinsurance. From the viewpoint of reinsuring objects, it can be written per-risk, per-occurrence, or as an aggregate/stop loss. This paragraph focuses the former two bases, while stop loss will be considered later (**2.4.3** below). Lloyd's still plays a decisive, if not dominant role in the insurance industry. The syndicates of Lloyd's of London require hedging of their enterprises' risks of market loss; therefore they normally have their insurance risks from direct policy holders reinsured by way of

[87] By contrast to proportional reinsurance, a surplus treaty contains a premium reserve deposit clause, which may state that, as security for the due performance of the obligations of the reinsurer under the treaty, the reinsured is entitled to retain a certain percentage of the premium credited to the reinsurer at the end of each quarter; each of the amounts so retained is allowed to be held by the reinsured for a period of time. The purpose of the deposit is to allow the reinsured to set off sums owing under the treaty against premium due in the event of the reinsurers' insolvency. Under English insolvency law, the holder of a set off is a secured creditor, so the liquidator cannot claim the premium without having to pay losses up to the amount of the premium.

excess of loss reinsurance, in transactions named LMX,[88] through the operation of which the reinsurer undertakes a portion of each loss covered by the ceding company and the limitation of the reinsurer's liability is restricted within the excess of the underlying retention up to the limit of indemnity of the reinsurance contract.[89] In addition, with the purpose of avoiding bearing too many losses, of ensuring maximum liability of loss sums, and of enlarging capability, excess of loss reinsurance is not only placed in a single layer, but two or more layers are also as a matter of course engaged as second or third layer excess of loss covers.[90]

2.4.2.1 The basic operation of excess of loss reinsurance

The function of proportional reinsurance is to share risks; by contrast, there is no sharing above retention in the excess of loss contracts. In order to deal with the various kinds of loss, which lead to different degrees of liabilities, there are numerous optional excess of loss placements providing for quite wide practical requirements; normally, available on either a per risk basis or a per occurrence basis. Another classification is according to working covers or catastrophe cover. Frequently, working cover protects against routine business losses, which are comparatively small sized claims, while catastrophe risks have specific characteristics to underwrite rare catastrophic events. There are several distinctions between per-risk and per-occurrence covers,[91] as analysed below.

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[88] It is the abbreviation of the London market's "Excess of Loss Reinsurance of Lloyd's Syndicate and London Companies". See R. J. Kiln, *Reinsurance in practice* (2nd ed. 1986), p. 242

[89] Although excess of loss treaties can resolve the majority of large indemnities, this is not limitless; hence, many excess of loss treaties incorporate into an excess limit clause, which reveals maximum liability for each layer. It is named "top limit", and also called "ceiling figure".

[90] To cite a two-layered excess of loss reinsurance arrangement for example, supposing the capability of the underlying layer is £35,000, in which the retention is £15,000; thus, if the claim of the direct policy holders is £8,000, which does not exceed the retention, the reinsurer will have no liability. Again, if the loss is £20,000, the reinsurer is imposed an indemnity £5,000, the overflowing part of retention. In this circumstance, the excess point of the second layer will be £35,000, which is set from the top of the first layer; in the event that the loss is £45,000, the reinsurers of the first and second layers are obliged to indemnify £20,000 and £10,000 individually, while the direct insurer always handles the retention only.

[91] There is however some common ground related to premium setting; they are under a negotiated rate exposure basis, usually with no commission; additionally, premiums are settled by annual adjustment of deposit premiums, usually a minimum premium.

(1) Excess of loss on a per risk basis

Working cover may be placed on a per risk basis excess of loss contract. Under a one-risk basis cover, the amount of reinsurance and the reinsured's retention apply per-risk, protecting against single losses which exceed the retention, with losses to be settled individually. Furthermore, one "risk unit" can be set as a single piece of property, such as a building or location, a single policy, a single person etc.;[92] consequently, the retention is set for each risk, each building or each location. For example, one risk basis cover can be applied in medical insurance, where the "risk unit" is the sum of the medical claims in a policy period which affect a single person. Although this kind of cover placing is simpler than other forms of non-proportional reinsurance, the reinsurer is under pressure in items of payment capacity in the event that one accident causes a series of events exceeding retention losses involving numerous separate risk units; in this situation, the liability of the reinsurer will be considerable, because the indemnity settlements are on the basis of per loss per risk; thus, the majority of this kind of reinsurance has a per occurrence limitation.

As far as the objects reinsured are concerned, there is a doubt whether catastrophe losses can be covered by per risk excess of loss reinsurance. In theory, excess of loss insurance, by its nature, tends to cover a variety of policies and a variety of risks; however, there is no reason why an insurer should not partially insure a property account. It is possible to have a facultative excess of loss cover for a single risk of catastrophe, but facultative reinsurance these days is normally written on a proportional basis. However, it is infrequent, although still possible to cover catastrophe excess on a per risk basis, in which the catastrophe loss affecting a single risk is covered only on the condition that the retained loss after recovery from any insuring reinsurance exceeds the catastrophe retention, and normally there is no two risk warranty. In general, the efficiency of using excess on per risk basis is to protect against the small but random losses of normal business and to increase insuring the capability of direct insurers, and this kind of cover is more suitable for dealing with fire reinsurance affairs and marine cargo reinsurance.

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[92] Thomas G. Kabele's Article: "Reinsurance problems: in personal accidents, workers' compensation and other lines of business", <kabele.org/papers/reinsure-problems.pdf>, last visiting date: 21/08/04

(2) Excess of loss on a per occurrence basis

On this basis, an accumulation of losses arises from any one occurrence/event, accident or disaster; thus, losses are settled by event or occurrence. In practice, where the direct policy states the terms "caused by", "directly caused by" or "proximately cause by", the doctrine of proximate cause should be applied to judge whether any individual losses are proximately caused by any one occurrence/event;[93] subsequently, counting the amounts of reinsurance indemnity is in accordance with the losses affected by the occurrence/event in excess of the retention. The usual test for the reinsurers' liability is the liability of the reinsured: if the reinsured has chosen to adopt liability on a basis other than causation, then that is what the reinsurers have to face. In the event that there is any other provision in the direct policy, the judgement of causality between occurrences/events and losses rather follows the policy's wording than established practice. For example, there was a 3/4ths collision liability provision individually contained in Institute Time Clauses - Hulls (ITCH 1995) and Institute Voyage Clauses - Hulls (IVCH 1995),[94] which replaced "proximately caused by" with "in consequence of". If the insured vessel collides with another ship, the assured may be legally liable to the ship on the grounds of the liability of general average, salvage, or salvage under contract; analysing in detail, this kinds of liability of the assured is the proximate cause whereas the collision event is a remoter one. In order to exclude the application of proximate cause, this kind of collision clause uses "in consequence of" instead; consequently, the direct insurer is obliged to this sort of claim. In this circumstance, the reinsurer is imposed by the liability "to pay as may be paid", or more accurately "to pay as liable to pay"; the reinsurance contract is activated by losses above the priority level.

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[93] The doctrine of proximate cause refers to MIA 1906 s. 55 (1), which states that: "Subject to the provisions of this Act, and unless the policy otherwise provides, the insurer is liable for any loss proximately caused by peril insured against, but, subject as aforesaid, he is not liable for any loss which is not proximately caused by a peril insured against".

[94] The Hulls Clauses were revised in 2002 and again in 2003, but there is no change to the 3/4s rule, except as to legal costs. Both policies' 3/4ths collision liability clauses state that: "The underwriters agree to indemnify the Assured for three fourths of any sum or sum paid by the Assured to any other person or persons by reason of the Assured becoming legally liable by way of damages... where such payment by the Assured is in consequence of the vessel hereby insured coming into collision with any other vessel". However, there is provision in the 2003 Clauses for 4/4ths coverage on payment of an additional premium. It would seem that the market has yet to embrace the 2003 clauses, and most policies are written on the basis of earlier clauses.

The main advantage of the per occurrence/event basis appears to be that losses resulting from catastrophes can obtain adequate coverage, usually by placing catastrophe cover, in which reinsurance is actuated when an aggregate loss in excess of the catastrophe retention forms. Concerning the various natures of disasters or accidents, one event/occurrence may be spread considerably in space and time; thus, a single event or occurrence is limited to a certain period of time, or a specified geographical district. In general, whatever ultimate net loss to the direct insurer results from any one accident, event or occurrence, or one identical occasion causing a series of losses, both constructions can be treated as one occurrence. To further extend the meaning, the significance results from time continuation and the space proximity as to aggregative losses. However, to establish the meaning of one event or one occurrence is frequently a difficult task, and the most complicated is judging causality. For instance, in a car crash, it may not be difficult to establish cause and effect, but in the case of liability insurance covering drug poisoning leading to injury, it is comparably hard to trace the true cause. The meaning of the various aggregating terms is considered below.

2.4.2.2 Particular conditions in excess of loss reinsurance

There are several characteristic terms in excess of loss contracts; the most special clauses are cited below. As regards the common provisions used in both the fields of proportional and non-proportional reinsurance will be given in Chapter III.

(1) Co-reinsurance provision

An excess of loss reinsurance contract pays attention to the scope of losses, by nature of which the settlements as to premiums and losses are separate; hence, the reinsurer faces a potential risk whereby reinsurer may have insufficient capability to indemnify huge sums of losses in the event that the premium has been set at too low a level by reason of lack of information. Without the ability to control to the acceptance of the business of direct insurers, reinsurers seek protection in alternative ways. In practice, a per risk excess of loss treaty usually has a per-occurrence limitation in order to narrow reinsurers' liabilities, whereas as a per occurrence basis treaty often has a co-reinsurance provision whereby the reinsured shares in the loss above the retention.

For example, supposing in an excess of loss treaty the deductible is £6 million whereas the treaty limit is £16 millions; the reinsurer would rather accept 90% than bear the whole excess of losses in a covering layer. If a loss of £18 million occurs, the reinsurer undertakes 90% of reinsurance cover at £9 million (the £16 million limit less the £6 millions deductible, leaving £10 million 90% of which is £9 million), while the direct insurer also pays a total £9 million (the deductible £6 million as well as a 10% share of co-reinsurance, £1 million, plus the £2 million which were above the treaty ceiling). Thus, a relationship of identical fortune between reinsurers and direct insurers can be created more or less by way of direct insurers' co-reinsuring.

(2) Reinstatement clauses

The significance of reinstatement is to reinstate treaties' limits. It is normal practice for property and marine catastrophe treaties to incorporate a reinstatement clause. As soon as an indemnity has been made by the reinsurer the sum of reinsurance cover goes down according to the loss amount. By use of a reinstatement provision, the reinsurer agrees to reinstate this cover up to its full amount, as originally expressed in the cover; in other words, once cover under the policy has been exhausted, the reinsured has the right to reinstate the cover by paying the additional premium again. This type of clause is most obviously suited to excess of loss treaties,[95] which have a maximum sum recoverable in respect of aggregated losses so that once the limit is reached, the reinstatement clause will become relevant. A doubt results from not knowing the treaty's effect, once full reinstatements have been exhausted, if there is a limitation as to the number of reinstatements in the treaty. The reasonable interpretation is that there can be no additional liabilities in the treaty; moreover, this treaty is rather to be considered as validation than termination; more accurately, fresh business cannot be declared to the treaty; nevertheless, premiums for past business will remain payable.

[95] Although it does not happen at all in practice, it deserves to be mentioned that, in principle, a reinstatement clause can still be applied to a proportional treaty with annual limits.

(3) Definition of any one event /occurrence

Once losses arising from a single event/occurrence are covered by direct policies, the reinsurer is responsible for the reinsured's exceeding retention of losses. Frequently, excess of loss is used to cover catastrophes; furthermore, in the modern insurance industry, aspects of risk are continually evolving, such as the concept of "continuing loss occurrence"; as a result, to delimit the scope of one occurrence or event is a complex deliberation. For example, a single time earthquake incurring a series of aftershocks or one cold current activating another, both involve doubts concerning the number of occurrences or events. Therefore, occurrence limit restrictions are essential, by agreement of which, the terms of individual losses arising out of and directly occasioned by any one event, any one occurrence or any one accident are indicated[96] so that the liability of the reinsurer cannot be overstretched. Some of the key cases illustrate the point as follows.

In *Kuwait Airways Corporation v. Kuwait Insurance Co*,[97] Kuwait Airways Corporation had insured its aircraft under direct policy which imposed on an aggregate limit of recovery of $300 million for all losses arising from any one occurrence. When Kuwait was invaded by Iraq in September 1990, the airport in Kuwait was seized: at the time there were 15 aircraft belonging to KAC along with substantial quantities of spare parts. Seven of the 15 aircraft were flown to Iraq (and were subsequently destroyed by US bombing in Operation Desert Storm) and others were taken to Iran for safe keeping. A dispute arose, primarily between the reinsurers and restrocessionaires as to whether there had been one or 15 occurrences, ie, whether the loss of each aircraft was an occurrence in its own right. Rix J decided that there was just one occurrence, which was either the invasion of Kuwait or the seizure of the airport, and that an occurrence could involve a string of separate losses if those losses were unified by time, place, intention and cause. In the present case, the capture of each individual aircraft constituted a loss, and each loss could be regarded as forming part of a single occurrence given that the requisite unities had

[96] The general view is that these wordings are interchangeable, although there may be some contracts in which they are used to describe different methods of aggregation. In general, the term "accident" contained in working excess covers may be used in place of "disaster" on the ground that "disaster" is more suitable for applying catastrophe excess covers.

[97] [1996] 1 Lloyd's Rep 664

been satisfied. In a sequel, *Scott v. Copenhagen Co*,[98] the Court of Appeal - the leading judgment in which was given by Rix LJ – held that a BA aircraft which had been on the ground at the same time, and which had simply been left untouched by Iraq but had been destroyed by subsequent US bombing, did not form a part of the same occurrence, as it had not been the subject of any insured peril at the time of the taking of the airport but had simply been stranded. The unities of time and intention were, therefore, absent.

The distinction between *KAC* and *Scott* is illustrated by *Mann v. Lexington Insurance Company*,[99] a case involving a proportional retrocession contract which provided for "$5 million per occurrence, but in the annual aggregate separately for flood and earthquake". The assured owned a number of stores in Jakarta, and there were damaged by rioting which lasted for 48 hours. It was alleged that the rioting had been instigated by government supporters, so that there was unity of time, place, intention and cause. The Court of Appeal held that the damage to each store constituted a single occurrence. The stores were in different locations within the city, and the damage had occurred at different points in the 48 hour period: accordingly there was no unity of time or place. The only real unity was that of intention, but that was not sufficiently powerful to counterbalance the absence of the other unities. The Court of Appeal emphasised that an event or occurrence should take place at a particular time, at a particular place and in a particular way, as stated by Lord Mustill in *Axa Reinsurance UK Ltd. v. Field*.[100]

Caudle v. Sharp[101] can be regarded as the classic precedent, providing summary guidelines to determine the range of one event in the case of financial as opposed to property losses. The assured, an underwriter wrote a number of run-off stop loss covering liabilities for indemnity claims against occupational disease arising from old asbestos. The liability was reinsured under a contract which imposed a per event deductible. It thus became necessary to decide whether the deductible applied to

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[98] [2003] Lloyd's Rep IR 696
[99] [2001] Lloyd's Rep IR 179
[100] [1996] 3 All ER 517, it further refers that a cause was something less constricted, so it could be a continuing state of affairs or, similarly, the absence of something happening. In an aggregating context, the phrase "originating cause" opened up the widest possible search for a unifying factor in the history of losses which are thought to be aggregated.
[101] [1995] LRLR 433

each act of negligent underwriting or to the aggregate of the sums awarded against the underwriter by way of damages for negligence. The Court of Appeal was of the opinion that each contract underwritten was an "event", despite the majority view of the arbitrators that there was just one event, the so-called "blind spot" of the underwriter. Evans LJ identified the elements of "event": what had occurred was properly described as an "event" rather than a state of affairs; the individual losses had to satisfy the test of causation and proximate cause; and the individual losses were not too remote from the others. The Court of Appeal found that the underwriter had indeed possessed a blind spot, but that was simply a state of affairs rather than an event in its own right. By contrast, if the aggregating feature is described as "originating cause", the focus is not on individual acts of negligence but rather the blind spot itself.[102] As was said by Morison J in *Countrywide Assured Group Plc v. Marshall*,[103] an event is the happening, whereas an originating cause is why it happened. There are numerous recent authorities illustrating the same points.[104]

"Time and place of causative agency" and "common origin or common clause" are presented in a Lloyd's White Paper on the subject.[105] In fact, various provisions are designed for restricting occurrence limits in excess of loss reinsurance mechanisms; for example, the "Hours clause" is not infrequently used, which restricts the peril of natural disasters, such as tornados, windstorms, cyclones, hurricanes and hail, where the losses sustained by the reinsured must be restricted during certain consecutive calendar days affected by the same atmospheric disturbance. In the case of combined space and time limitation, one event can be within the confines of any one city, town or village during a period of time,[106] as for example with riots.

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[102] *Cox v. Bankside Members Agency* [1995] 2 Lloyd's Rep 437, as approved by Lord Mustill in *Axa v. Field.*

[103] [2003] Lloyd's Rep IR 195

[104] See: *American Centennial Insurance Co v. INSCO Ltd* [1996] LRLR 407; *Midland Mainline Ltd v. Commercial Union Assurance Co Ltd* [2004] Lloyd's Rep (reversed on appeal, but on other grounds); *Pilkington Union Assurance v. CGU Insurance Plc* [2004] Lloyd's Rep IR 891; *Lloyd's TSB General Insurance Holding v. Lloyd's Bank Insurance Co Ltd* [2003] Lloyd's Rep IR 623; *Mabey & Johnson Ltd v. Ecclesiatical Insurance Office (No 2)* [2003] Lloyd's Rep IR 724

[105] Lloyd's White Paper (09/1981) shows that the time and place of the typical restriction clause is "each and every loss shall be understood to mean each and every loss and/ or occurrence and/ or catastrophe and/ or disaster and/or calamity and or series of losses and/or occurrences and/or catastrophes and/or disasters and/or calamities arising out of one event".

[106] For example, the wording can be that, as regards "the perils of riot, civil commotion, riot attending a strike, malicious mischief and vandalism, it should be construed to mean all loss or losses sustained by the reinsured on risks situated within the confines of any one city, town, or village, including risk in

2.4.3 Excess of loss ratio reinsurance

Excess of loss ratio reinsurance provides for covering accumulation of losses over a period: this is also named stop loss reinsurance.[107] This is usually formed by way of treaty which is activated in the event of the ceding insurer incurring excessive aggregate losses, greater than either a predetermined amount or a proportion of overall premium income within the specified time period, mainly fixed at twelve months. For example, if a ceding company issues 100 direct policies in 2005 and then engages a stop loss treaty reinsurance agreement with the reinsurer, under this treaty the reinsurer agrees to be responsible for all losses above £50,000, on the condition that the losses occur between 1st January 2005 and 31st December 2005. If the ceding company incurs claims totalling £60,000 during 2005, the reinsurer will be responsible for £10,000. However, the reinsurer is not bound to that loss if the ceding company subsequently meets another claim on 2nd January 2006.

2.4.3.1 The reinsuring clauses in a stop loss reinsurance agreement

For a ceding company, a stop loss treaty reinsurance agreement is usually expressed in terms of a loss ratio in the reinsuring clause, such as "90% of all losses in excess of a loss ratio of 75%, up to a further 30% or £500,000, whichever is lesser".[108] Focusing on the excess of loss ratio, the reinsuring clause clearly sets the demarcation line of parties' liabilities and the limit of the reinsurer's liability. In the above example, the demarcation line of parties' liabilities was 75%, annual excess of which, the liability of indemnity will be imposed on the reinsurer, whereas the direct insurer is responsible for the retention if the losses aggregated within the whole year are less than this percentage. Sometimes, there is an alternative expression in a stop loss contract, which rather straightforwardly represents a specific amount than a loss ratio. Within a specified year, after the losses have aggregated to an amount of the direct insurer's premium income, the reinsurer takes charge of the excess; in fact, the total amount reached is the same as saying a loss ratio of 100%.

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the immediate proximity, during any one period of certain consecutive hours by reason of one or more riots, civil commotions, riots attending a strike and acts of malicious mischief and vandalism".

[107] In a stop loss, as the name indicates, all the losses of the direct insurer will stop at the excess point; in other words, the liability of the reinsured is only up to the indicated monetary limit.

[108] R. Carter, L. Lucas & N. Ralph, ibid., p.404

2.4.3.2 The operating features of stop loss reinsurance

(1) Leading co-insurance in the treaties

Basically, there is less connection between direct insurers incurring individual losses and reinsurers paying indemnities; however, a stop loss agreement pays attention to annual excess of loss by result instead. From the reinsurer's point of view, stop loss is the most complete form of reinsurance cover, in that the reinsured stands to advantage in the sense that almost every compensation for the reinsured's losses are controlled by the reinsured; by contrast, the reinsurer seems to avoid the right to influence the other party; as a consequence, the moral hazard is greater than for other types of reinsurance, if there is no other restriction against the reinsured. For this reason, the reinsurer occasionally demands the direct insurer to take part in losses with a small quota share for the sake of the parties' interests more or less going through "thick and thin" together. In the given example, the original insurer must self-undertake 10% of the section which exceeds a loss ratio of 75% and the reinsurer is responsible for 90% of that part. This co-insurance mechanism provides for avoiding unnecessary reinsurance losses resulting from direct insurers' "lax underwriting" or "generous indemnifying" to direct policy holders.

(2) Limit of reinsurer's liability

To confine reinsurers' liabilities within certain limits and to directly express their maximum liabilities is an additional method to co-reinsurance. Like the upper limit or ceiling in a general excess of loss treaty, there is a limitation concerning the reinsurer's liability in the treaty; the main difference is the liability based on the range of loss ratio. Regarding the above example, the liability of the reinsurer is restricted to a 30% zone of loss ratio, which is between 75% and 105% (disregard the 10% co-insurance share for the present). If the loss ratio reaches 110%, the excess 5% still belongs to the reinsured. What is more, the above case shows that the reinsurer's liability is further restricted up to the sum of £500,000. Between the ratio loss and the sum, the lesser one is taken as the limit of the reinsurer's maximum liability, after having counted the year's overall losses. The reason for the sum limit in a stop loss treaty is to make the underwriting of direct insurers a serious

consideration. If no sum limit is incorporated, the direct insurer may be under the impression that whenever the loss ratio overruns the retention level, his losses can be covered, but the danger lies in only noticing the ratio while ignoring the amount of the restriction limit.[109]

(3) Not paying attention to individual events or risks

The position here may be illustrated by reference to hail insurance. If a ceding company wants the business risk of hail insurance to be covered by way of non-proportional cover, stop loss reinsurance is a suitable method. As a hailstorm may re-occur over several days and losses may be too numerous to count, defining the event is difficult. Even if an "Hours clause" or a "Territories clause" is incorporated, it still leads to complex distinctions. A stop loss treaty advantages the reinsured because it regards neither the limitation of per occurrence/event nor one unit of risks. In principle, the quality of business accepted by the ceding company shifts all losses of frequency and severity to the reinsurer.

(4) Complementing prime reinsurance arrangements

Notwithstanding the indemnity of stop loss contracts on a loss ratio basis, this placing is really not to endorse the reinsureds' business profits; in fact, the prerequisite is that the reinsured's underlying underwriting has suffered from a certain number of losses in order to trigger a claim against the reinsurers. The main function of a stop loss is to cover the random fluctuation of the annual results belonging to the direct insurer;[110] the losses stemming from direct underwriting businesses will be controlled within a reasonable range during the duration of the stop loss contract. In addition, carrying on a special category of enterprise of reinsured will be facilitated. Considering the more or less guaranteed solvency of ceding companies,[111] they usually engage in stop loss treaties for all policies and/or insurance contracts and/or reinsurance such as

[109] A traditional loss ratio is equal to "incurred losses" divided by "earned premium" and then multiplied by 100%; thus, despite the loss ratio not being under a high percentage, the amount of indemnity can still be large, if both the incurred losses and the earned premium are large.

[110] For example, a ceding company underwriting an agricultural insurance needs stop loss for the risk random climate change.

[111] J. Butler & R. Merkin, *Bulter & Merkin's Reinsurance Law*, (Issue 59, April 2003) Sweet & Maxwell, Para. A-0039

quota shares, surplus or excess of loss contracts placed in order to prepare for all contingencies. Lloyd's syndicates' transactions, after various forms of reinsurance mechanisms have been arranged, the majority of Lloyd's businesses will be finally reinsured by stop loss treaties. A typical operation can be seen in *Sphere Drake Insurance plc v. Denby*,[112] where the stop loss agreement was to reimburse the reinsured relating to the liability which accrued with the ultimate net settlement under the quota share treaty, in which the reinsured's net absolute premium exceeded 100% up to an amount equal to 200% in respect of each year of account. Obviously, a stop loss treaty can fill the gap left by other insurance methods.

[112] [1995] L.R.L.R. 1

Chapter III Features of reinsurance

3.1 Insurable interest

"Pas d'assurance sans interêt" is a French phrase describing the position of insurable interest in insurance contracts. It is one of the conditions in an insurance contract; as a consequence, no policy is valid without insurable interest. An insurable interest means an interest that an assured has over the subject-matter insured, which is recognised by law. The subject-matter insured means the property and its related interests, or the life expectancy and human body which serve as insurance objects. Before the eighteenth century, as far as the British insurance market was concerned, many operations were gambles, because P.P.I. (policy proof of interest) clauses were widely accepted at that time.[1] Following the development of commercial doctrines and practices,[2] an insurance contract would be regarded as invalid nowadays, if the assured had no insurable interest in respect of the subject-matter insured.

If the insured has neither insurable interest, nor genuine anticipation of obtaining insurable interest, the policy will be void. The effect of lack of insurable interest is governed by some specific statutes under English law. MIA 1906, ss 4-9, curbs wagering or gaming by marine policies and section 1 of the Life Assurance Act 1774 (LAA 1774)[3] indicates that a life or accident policy taken out without insurable interest is void and illegal. In the case of other types of cover, including property and liability contracts, in the absence of any specific statute, the Gaming Act 1845 can be applied generally, section 18 stating that any gaming contract is unenforceable. It should be noted that section 18 has been repealed by section 335 of the Gambling Act 2005 from a date yet to be appointed, although it is unclear whether the section has any effect on insurance. Insurable interest is relevant at a number of points. First,

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[1] Howard. N. Bennett, *The Law of Marine Insurance*, Oxford University Press, 2nd ed., 2006, pp 68-69

[2] The Marine Insurance Act 1745 provided that any assurance by way of wagering or gaming on British ships or cargoes carried thereon was null and void.

[3] LAA 1774 s. 1 states that, "...no insurance shall be made...on the life or lives of any persons, or on any other event or events whatsoever, wherein the person or persons for whose use, benefit, or on whose account such policy or policies shall be made, shall have no interest, or by way of gaming or wagering; and that every assurance made contrary to the true intent and meaning hereof shall be null and void to all intents and purposes whatsoever."

when insurance taken out, insurable interest has to be in existence: this is of particular significance for life policies, where the absence of insurable interest renders the policy irredeemably illegal. Secondly, in all forms of indemnity cover, including fire, marine and liability insurable interest must exist at the date of loss, failing which there is no basis upon which the assured can make a claim. In the case of life insurance insurable interest is not required beyond the point at which the policy was taken out.

3.1.1 Insurable interest under reinsurance contracts

Given that reinsurance contracts are to be treated in the same way as insurance contracts, a significant issue becomes the ascertainment of the reinsured's insurable interest. Obviously, the insurer has undertaken a risk since the time of the insurance appointment after the direct policy is concluded. The risk is created as a result of the valid contract of insurance, which leads to the reinsured being liable for potential loss of the insured. Certainly, the insurer is allowed to reinsure the risk within the limitations of insurance risk. Furthermore, the insurer is treated as acquiring an insurable interest from the time he undertakes the risk of the insurance. To take marine reinsurance for example, MIA 1906, s. 9(1) states that the insurer under a marine insurance contract had an insurable interest in his risk and might reinsure in respect of it, because a contract to insure confers the insurer an insurable interest which will support reinsurance to the full amount of his liability on the original policy. If an original insured is merely in possession of a policy with PPI provision which has been made void and null by s.4 (2) (b) of the MIA 1906, the primary insurer will have no right to reinsure or cede to the treaty, because no claim may be established under a reinsurance contract on the grounds that a reinsured has null insurable interest in the subject matter or the original risk.[4]

3.1.2 The subject matter of reinsurance

Insurable interest for reinsurance purposes exists in the subject matter which has been reinsured. It thus becomes necessary to ascertain exactly what has been reinsured.

[4] *Re Overseas Marine Insurance Co. Ltd.* (1930) 36 LI LR 183

There is an arguable issue as to the relationship between the subject matter of underlying insurance and that of the reinsurance. A number of late nineteenth and early twentieth century cases on facultative reinsurance have implied that the subject matter insured under the direct policy is also the subject matter of the reinsurance. For instance, in *Mackenzie v. Whitworth*,[5] the court was confronted with a facultative marine reinsurance concluded by virtue of a form of direct policy; it was held that the subject-matter was identical in insurance and reinsurance. English law is still equivocal on the point.[6] In *Agnew and others v. Lansforsakringsbolagens AB*,[7] Lord Millett was of the opinion that insurance and reinsurance were conceptually dissimilar and for different purposes, so that some reinsurance might treat subject matter as contractual liabilities which the insurer had underwritten under direct policies.[8] On this analysis for reinsurance purposes, a reinsurance cover is in fact a contract of liability insurance; thus, the subject matters of insurance and reinsurance are not identical. Although this analysis is possibly more accurate, as a matter of construction, there is nothing amiss in explaining that facultative reinsurances are set as other cover on the original subject matter.[9] All may depend upon how the reinsurance policy is framed and why the question is being asked. In *Feasey v. Sun Life Assurance Co of Canada*,[10] the Court of Appeal assumed that a reinsurance treaty which was framed as a policy on the lives of the direct assured's employees

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[5] (1875) 1 Ex. D. 36

[6] Even though admitting the underlying subject matter is the same as that of reinsurance, there is still a slight difference in that of retrocession contracts. From the perspective of the late 19 century case of *Uzielli v. Boston Marine Insurance Co* (1884)15 QBD 11, the extent of subject matter of retrocession excludes the risk resulting from suing and labour charges, because no action is taken, either by the reinsurer/restrocedant or his factors, servants or assigns. The *Uzielli* case can be summarised as follows: the ship's owner insured his vessel on the sum of hypothetically, £10 thousand under a direct time policy with a suing and labouring clause; moreover, the insurer ceded his liability to the reinsurer, who further ceded his risk under the retrocession contract, in which the amount was still £10 thousand. Subsequently, the insured vessel ran aground and was abandoned to the insurer, who afterwards paid £1 thousand for the sake of reducing the loss of this grounded vessel; therefore, the insurer was entitled to claim for the reinsurer's indemnities, including £10 thousand, the sum of the insurer's liability to the policy holder and £1 thousand, the sue and labour charge. By contrast, the retrocessionaire was only in charge of £10 thousand and able to eliminate the liability as to £1 thousand resulting from suing and labouring expenses, even though there was an "as original" provision stipulated in the retrocession contract.

[7] [2000] Lloyd's Rep IR 317

[8] For further details, refer to the *Agnew,* ibid. Judgement by Lord Millett, revealed "...Direct insurance protects the insured against extraordinary risks outside the ordinary course of events, whether in his private life or in his business dealings. Reinsurance is concerned with the management of risks which it is the ordinary business of both parties to underwrite. It is essentially a professional hedging operation by which, by the only means known to the law, the insurer assigns all or part of his insurance liabilities to the reinsurer..."

[9] R. Merkin, *Colinvaux's Law of Insurance* (8th ed., 2006), Sweet & Maxwell, paragraph 17-04

[10] [2002] Lloyd's Rep IR (November)

was a life policy and had to fulfil the insurable interest requirements attaching to life policies. The question has also arisen in the context of regulation. In *Re NRG Victory Insurance Ltd* [11] the question was whether, for the purposes of the *Insurance Companies Act 1982* [12] reinsurance and retrocession were to be treated as extra layer insurance forms so that separate authorisation was required for each: this was the view of the court. Again, in *Re Friends Provident Lift Office,*[13] Neuberger J deemed that the reinsurance business fell within the same subject matter as the direct cover, for the purpose of the regulation of transfers insurance business as set out in the *Insurance Companies Act 1982,* Schedule 3. The 1982 Act has now replaced by the *Financial Services and Markets Act 2000*, without any change in the law.

3.1.3 Insurable interest at the time of reinsurance

As far as the timing of insurable interest is concerned, the law relating to direct insurances is complex and insurance categories, governed by individual statutes or common law principles.[14] By contrast, the position of reinsurance is at first sight simpler. The generally accepted concept is that reinsurance contracts belong to contracts of indemnity, by nature covering the liability of the reinsurer with regard to the loss of insured. Accordingly, given that reinsurance contracts are contracts of genuine indemnity, when the reinsured puts in a claim for the reinsurer's loss, he must have insurable interest at that time, in that he must be able to demonstrate loss.[15] The existence of insurable interest at the time of engagement of reinsurance is of no particular significance. In fact, engaging reinsurance before the reinsured obtains an insurable interest resulting from the underlying insurance risk is common in dealing with transactions of reinsurance treaties or open covers, as pointed out earlier.

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[11] [1995] 1 All ER 533

[12] This statue has come into the *Financial Services Markets Act 2000* and the *Financial Services Markets Act 2000 (Regulated Activities) Order 2001.*

[13] [1999] 1 All E.R. (Comm.) 28; it states that the reinsurer, who was the insurer's subsidiary, resolved to transfer the reinsurance business to the insurer, who petitioned the court to sanction the scheme pursuant to the Insurance Companies Act 1982 Sch. 2C Part 1 in order to obtain a tax benefit.

[14] For example, MIA 1906 s. 6(1) shows that an assured must have an interest at the time of loss; in comparison, LLA 1774 implies that the policyholder must have an insurable interest in the life insured when the policy is concluded.

[15] *Lucena v. Craufurd* (1806) 2 B & P (NR) 269

On the other hand, in the event that the reinsured possesses an insurable interest at the time the contract of reinsurance is entered into, and the direct policy afterwards is avoided, (which may be caused by various reasons, such as a breach of warranty by the original insured), there is a doubt as to whether it will affect the validity of the reinsurance contract. In principle, although the direct policy is avoided, the reinsurance itself is still not avoided and indeed it remains a valid contract on account of the fact that the risk will have been attached, even for just a short period; it is simply the case that the reinsured no longer has an insurable interest and then cannot make a claim. It may be that there is a specific clause in the reinsurance contract which expresses that in the event that the original insurance is avoided, the reinsurance will automatically come to an end; nevertheless, it will terminate prospectively and not retrospectively, even with this type of clause. It may be noted that in *Dalby v. India and London Life Assurance,*[16] which arguably[17] involved the reinsurance of a life policy, the surrender of the direct life policy was held to leave the reinsurance unaffected so that the reinsured was able to recover on the death of the life assured even though it no longer bore any liability under the direct policy. This case proceeded on the basis, as in *Feasy*, that the reinsurance was further policy on the life of the person insured, and under the Life Assurance Act 1774 – as concerned only with the interpretation of the 1774 Act, and does not hold good in respect of an indemnity policy.

2.1.4 The Feasey case

(1) The facts

Feasey v. Sun Life Assurance Company of Canada and Phoenix Home Mutual Lift Insurance Company [18] is a vital case and concerns a P&I Club, known as Steamship, which insured the liabilities of its shipowning constituent members for death, illnesses and injuries affecting employees or crewmembers suffered on board a vessel or offshore rigs. The personnel were described in the policy as Original Persons. Subsequently, Steamship had this insurance risk ceded to Lloyd's Syndicate 957 by

[16] (1854) 15 CB 364
[17] The point is not clear.
[18] [2003] Lloyd's Rep IR 693 (CA)

way of signing the master line-slip policy with *Feasey*, who was the underwriter of the syndicate, and the reinsurance was in effect a liability cover against claims by Original Persons. Subsequently, the risk codes of Lloyd's were amended so that it became all but impossible for the syndicate to accept cession on the basis of long-tail liability cover. In place of the liability form, the syndicate needed to have the reinsurance categorised as a short-tail business, which would be life cover. Accordingly, the reinsurance was redrafted to take the form of a life policy, the syndicate being required to pay fixed benefits to Steamship following any injury to an Original Person whether or not that person had made a claim. In other words, it focused on injury suffered by the employee casualty rather than liability. The syndicate further retroceded the liability to Sun Life and Phoenix. Afterwards, Sun Life and Phoenix argued that Steamship had no insurable interest in the lives of Original Persons at the time of entering into the master line-slip; hence, according to LAA 1774 s.1, the primary insurance was either null or voidable.[19]

(2) The issues

The point at issue was what established the insurable interest of Steamship, the liability of Steamship or its insurable interest in the lives of Original Persons. The majority of the Court of Appeal found that there was an insurable interest, although the reasoning is far from clear. Steamship was likened to a liability and contingency insurer, which protected against the members' duties on condition that the members were responsible for the lives of employees under the P&I Club rules. Steamship bore a potential liability to indemnify its members against claims, but it also possessed an insurable interest in the lives of Original Persons by reason of that liability. Moreover, Steamship was able to evaluate its pecuniary interest when the master line-slip policy was concluded; hence, the policy did not contravene the requirement of ab initio insurable interest under s.1 of the 1774 Act. On the other hand, the dissenting judgment of Ward LJ is worthy of consideration. Ward LJ's opinion was that legally Steamship was liable to its members and had no interest in the lives of Original Persons. In the case of connection with death or injury of

[19] The real issue in this case was the fact that the underwriting agent acting for the retrocessionaire had allegedly done so after his authority had been terminated: the insurable interest defence was largely taken as a fallback in the event that the agency argument failed. Phoenix succeeded on the agency point at first instance and thereupon dropped out of the proceedings.

Original Persons, it was only an expectation of disadvantage, which was inadequate for an insurable interest.

The other issue of this case concerned the construction of the policy arrangements. The master line-slip policy was in substance one of reinsurance, but framed as a life cover. The object was clearly to arrange liability cover for claims against Steamship's members. Nevertheless, investigating the overall framework in detail, the parties went precisely through a reinsurance scheme, by which means the syndicate was to pay fixed sums on the bodily injures being suffered. However, the syndicate's fixed sums were albeit differently calculated close to the sums payable by Steamship on the basis of liability to members under P&I rules. In the event that the fixed sums were insufficient to indemnify Steamship, the parties would be allowed to make up the payment via other methods. In general, this still remained the function of reinsurance, which worked on sharing the risk of insurance. This was an instrumental goal, and did not breach the fundamental value of reinsurance. The Court of Appeal emphasised that no wagering was taking place.

(3) Comment

The *Feasey* case has broken new ground by recognising that an insurer has insurable interest in the life or lives of the person insured under a liability cover. This illustrates an increasing trend towards allowing new and commercially sensible forms of cover by moderating insurable interest rules. Indeed, if Sun Life and Phoenix had been allowed to avoid their liabilities by an allegation that the underlying life policy was treated as void on the ground of want of insurable interest in the subject matter, it would have been an unjust result, given that the form of policy used was purely a mechanism to insure a perfectly legitimate liability risk backed by insurable interest. The Court of Appeal was content to construe what was in essence a life policy as covering the real insurable interest possessed by Steamship, namely its liability. There was no strict rule requiring a reinsurance placing to be in liability form. The current approach is therefore that insurable interest may be loosely described, so that a liability insurer is in possession of insurable interest in his liability to the insured, for the purpose of completing a reinsurance scheme can reinsure under any form of

policy as long as that policy is capable of being construed as covering his actual insurable interest.

3.2 Utmost good faith, misrepresentation and non-disclosure

The original dealings as to the nature of underwriting risk belonging to the ceding company will be the basis for placing reinsurance; thus, the duty of *uberrimae fidei* accounts for the reinsurance relationship, in which parties are, imposed a high standard of good faith towards each other. As regards the fundamental principles of utmost good faith in insurance, the first is the duty of disclosure.[20] From the viewpoint of English legal history, the root can be found in the eighteenth century case of *Carter v. Boehm*,[21] in which Lord Mansfield expressed the view that "...the special facts upon which the contingent chance is to be computed most commonly lie in the knowledge of the insured only". Equally, *uberrimae fidei* is binding not only on the insured but also on the underwriters.[22] In respect of reinsurance, although the obligations of representation and disclosure are not directly stipulated by current English statutes, they can still be analysed from the viewpoint of comparative law. Section 622 of the *California Insurance Code* is illustrative. It states that where an insurer obtains reinsurance, he must communicate all the representations of the original insured, and also all the knowledge and information he possesses, whether previously or subsequently acquired, which are material to the risk. Following the above interpretation by analogy, it can be presumed that the duty of the reinsured to make a full disclosure does not differ from that of an original insured[23] and indeed it is true to say that the modern law of utmost good faith has largely been fashioned from reinsurance cases.

3.2.1 Materiality

The reinsured is obliged to disclose and not misrepresent to the reinsurer any material fact; otherwise, it will breach the duty of utmost good faith. Materiality is relevant to the significance of both on non-disclosure and misrepresentation; the reinsured's

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[20] To take MIA 1906 s. 17 as an example, it reveals the principle that insurance is *uberrimae fide*i.

[21] (1766) 3 Burr 1905

[22] For further details, refer to *Carter v. Boehm*, ibid; Lord Mansfield said that the law, "forbids either party, by concealing what he privately knows, to draw the other into a bargain from his ignorance of that fact, and from his believing the contrary... The policy would be void against the underwriter if he concealed, as if he insured a ship on her voyage which he privately knew to be arrived, to recover the premium..."

[23] Arnould, J, *The Law of Marine Insurance and Average*, (1981, 16th ed, p. 576)

duty of disclosure is limited to material facts and the reinsurer has a remedy or right to avoid only if the fact misstated or withheld is material.

3.2.2 Influencing judgment

The difficulties lie in deciding which issues constitute material facts. Section 18(2) of MIA 1906 s. 18(2) states that "Every circumstance is material which would influence the judgment of a prudent insurer in fixing the premium or determining whether he will take the risk" The further question is how to identify the term "would influence the judgment of a prudent insurer". In *Container Transport Inc. v. Oceanus Mutual Underwriting Association (Bermuda) Ltd*,[24] the Court of Appeal held that the meaning of "would influence" would rather be that full disclosure might have influenced the prudent insurer to charge a different premium than that which would have led the insurer to have rated a different one. The majority of the House of Lords in *Pan Atlantic Insurance Co v. Pine Top Insurance Co* [25] confirmed this broad approach to materiality but superimposed the further requirement of inducement. Accordingly, there is now a two-part test: the first test is objective, namely whether the circumstance would have an impact on a prudent underwriter's decision concerning the process of assessment of risk leading to accepting the risk, and if so at what premium, even though the final decision of the insurer would not be different; the second test is subjective, namely whether the fact is actually influential upon the risk writing business of the insurer. Moreover, the burden of proof is always on reinsurers to show inducement. The case of *Assicurazioini Generali SpA v. Arab Insurance Group* [26] firmly establishes that reinsurers must, unless they are physically incapable doing so, give evidence that they were actually induced to enter into the transaction by the presentation made to them if they wish to rely upon non-disclosure or misrepresentation.

It is important to note that the concept of inducement has recently become the most significant of these tests. In *Drake Insurance Co v. Provident Insurance Co*,[27] the assured's wife was involved in a road traffic incident which was not in fact her fault

[24] (1984) 1 Lloyd's Rep 476
[25] [1994] 2 Lloyd's Rep 427 (HL)
[26] [2003] Lloyd's Rep IR 131
[27] [2004] 1 Lloyd's Rep 268

but which insurers presumed was her fault. Subsequently, the assured was convicted of speeding, a fact not disclosed to the insurers on the renewal of the policy. The insurers subsequently discovered the speeding offence and purported to avoid the policy on the basis that the conjunction of the accident and the speeding offence would have caused the insurers on an application of their standard underwriting criteria to charge a higher premium. The Court of Appeal, by a majority, held that there was no inducement. The suggestion that a higher premium would have been charged was hypothesis, and it was thus appropriate to add a further hypothesis, namely what would have transpired had the insurers informed the assured of a decision to charge a higher premium. The majority was satisfied that it would at that point have come to light that initial accident was no fault, and the assured would have been charged the same premium; accordingly, there was no inducement.[28]

3.2.3 Waiving the consequence of non-disclosure and misrepresentation

Section 18 (3) of MIA 1906 provides exceptions to the duty of disclosure. Section 18 (3) (c) states that there is no need to disclose facts where information pertinent to those facts has been waived. Further, if there has been limited disclosure which indicates that there may be additional material facts, the duty switches to the reinsurers to elicit those further facts.[29] Waiver may also be effected by express contractual provision relieving the reinsured of the duty to disclose some or all classes of material fact.[30] This is indeed an important aspect of Alternative Risk Transfer and is discussed below.

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[28] Pill LJ, dissenting on the point, focused instead on the insurers' duty of utmost good faith in reaching a decision on avoidance, and held that the avoidance was invalid on that basis.

[29] See *WISE v. Grupo* [2004] Lloyd's Rep IR 764 for different views as to the scope of implied waiver.

[30] Waiver clauses are infrequent but can still be applied to traditional insurance and reinsurance contracts; hence, an underwriter had better notice any potential impact of waiver clauses. If a waiver clause is stipulated in a contract of reinsurance, the reinsurer will be deprived or have limited right of avoidance for material misrepresentation and non-disclosure; besides, a waiver clause could be expressed such that, even if breaching a warranty of the reinsurance contract, remedies will be withdrawn. For example, *HIH Casualty and General Insurance Ltd v. Chase Manhattan Bank "the Phoenix case"* [2003] Lloyd's Rep IR 230 mentions that the clause was worded "...any such information provided by non-disclosure by the insured, and its agent to insure, shall not be a ground for avoidance of insurers' obligations under the policy or the cancellation thereof...". The House of Lords held that this clause would exclude the underwriter's right of avoidance for either innocent non-disclosures and misrepresentation by the negligent insured; in addition, the judgment was under the impression that if the consequences of a warranty are likely to be excluded, the waiver clause needed to specify "warranties".

3.2.4 Examples of material facts

There are numerous authorities on what facts are and are not material in the reinsurance context. The cases may be summarised as follows.

(1) The former loss and claim historic record of reinsurance covers

The record of former losses and claims is an important factor which the reinsurer may like to take into account; hence, treating as material is possible if the facts concerning the former losses and claims of the reinsured have passed the two-stage test, which is presented by *Pan Atlantic Insurance Co v. Pine Top Insurance Co* (see **3.2.2** above). Furthermore, the reinsured's obligations as to disclosure on the renewal of reinsurance contracts should reveal whether there are any significant changes to the coverage such as the persons, the activities and geographical location etc., as these are potential material facts, under the nature of which the reinsured is required to make disclosure. Equally, the reinsured's previous losses and claims histories are material; consequently, the loss experience under earlier years of reinsurance cover needs to be disclosed, even.[31]

(2) The extent of the reinsured's liability under the original policy

If the reinsured has accepted extraordinary business under the original policies, he must disclose the existing extent of exceptional liability to the reinsurer. To cite the case of *Black King Shipping Corporation v. Massie (The Litsion Pride)*,[32] for example, a direct policy was negotiated for a vessel for the carriage of crude oil, and then the vessel entered a war zone. If the insurer unusually had provided for protection against the exclusion of war risk via an extra provision incorporated into the direct policy, the reinsured would have been obliged to disclose the extent of the especial liability on the grounds that this underlying liability was indeed a material circumstance which the reinsurer would normally anticipate to find excluded. Furthermore, the nature of risk underwritten should be considered, where the

[31] Barlow Lyde & Gilbert, "Disclosure of material facts on renewal" in *The Review*: *legal guide to the renewals season*, (2003), pp.6-8
[32] [1985] 1 Lloyd's Rep. 437

reinsured is responsible for a fair presentation of the risk. In *Toomey v. Banco Vitalicio España SA de seguros y Reaseguros*,[33] the direct policy issued to the football club was a valued policy; whereas, the reinsurance was a contract of indemnity. The reinsurer argued that the reinsured's liability under the slip as to the nature of the direct policy had been a material misrepresentation on the grounds that there is no express disclosure in respect of there being a valued policy. Subsequently, both the Commercial Court and the Court of Appeal accepted that the limit of liability charged to the reinsured, incurring from underlying insurance, would be material, because it was possible that the losses could be less than the amount of the valued policy. If the reinsured risk should alter in a fundamental fashion after the policy has incepted, the reinsurers will be automatically discharged from further liability.[34]

(3) The cedant's retention

The extent or the level of risk retained by the reinsured and any intention on the part of the reinsured to reinsure the retention elsewhere could in principle affect the risk run by the reinsurer because it is an indication of the reinsured's confidence in the underlying business. Early authority indicates that the level of the retained risk is a material fact.[35] However, more recent cases have weakened this ruling. From the point of view of the modern market, the cedant's retention is a circumstance which is either known or presumed to be known to the reinsurer; at the very least, it could be treated as a matter which a reinsurer in the ordinary course of his business ought to know.[36] In *Société Anonyme d'Intermédiaies Luxembourgeois v. Farex Cie & others (SAIL v. Farex)*,[37] Gatehouse J was of the opinion that while the cedant's retention was of significance, the reinsurer should be able to obtain the relevant information by inquiry of the cedant if he considered it was significant; otherwise, it would be presumed that the reinsurer had waived entitlement to a presentation of the cedant's retention. Sometimes, a statement as to the amount of retention to be kept by the reinsured for its own account will be set out in the reinsurance contract, and the

[33] [2004] EWCA (Civ) 622
[34] *Swiss Re v. United India Insurance* [2005] Lloyd's Rep IR 341
[35] *Traill v. Baring* (1864) 33 LJ Ch 521
[36] MIA 1906 s. 18 (3)(b)
[37] [1995] LRLR 116

reinsurer would then be able to treat this as either a representation or a contract term. That said, it is not always clear that a representation as to the amount of retention is a material fact. In *Kingscroft Insurance Co & Others v. Nissan Fire & Marine Insurance Co Ltd*,[38] the reinsured under a quota share contract obtained excess of loss protection for his retention. The wording of quota share policy indicated that the reinsured would retain 50% or not exceeding their 80% participation in the policies as defined for his own account. Moore-Bick J held that there was no inducement of the reinsurer, since the reinsurer would not have refused to subscribe had it been aware of the excess of loss coverage; in fact, it is often seen in the London market that a whole account quota share reinsurer seeks to purchase excess of loss protection in respect of its retention, so a mixed quota and excess of loss placement can be reasonably treated as a circumstance which a reinsurer ought to have known.

3.2.5 The application of placing reinsurance treaties

There is no doubt that the duty of utmost good faith as to representation and disclosure exists when a reinsurance treaty is negotiated. At the pre-contractual stage, before a reinsurance contract is concluded, the ceding underwriter must disclose and truly represent material facts and that duty persists until the point at which the reinsurer becomes bound.[39] This general principle does give rise to problems where the placement relates to a treaty.

Under an obligatory treaty, the risks from direct policies will be transferred by means of individual cessions, which are allocated into the treaty. The reinsurer must accept these cessions and has no right to reject; hence, the obligatory treaty is regarded as a complete contract of reinsurance in its own right,[40] so that there is no obligation to disclose material facts relating to each subsequent cession. Likewise, under a fac/oblig treaty, the reinsurer is bound while the treaty is engaged being subsequently required adopting every cession ceded by the reinsured. On the other hand, a non-obligatory treaty is just a reinsurance framework which of itself is not a contract of utmost good faith, under which each cession can be treated as an independent

[38] [1999] Lloyd's Rep IR 603
[39] R. Merkin, *Colinvaux's law of insurance*, (8th ed., 2006), paragraph 17-06
[40] Although there must remain a doubt as to whether a treaty is a contract of reinsurance which attracts the duty of good faith, or merely a contract for reinsurance, which does not.

contract of facultative reinsurance which takes effect as a separate contract in its own right. The duty of utmost good faith applies thus to each individual cession. Consequently, the right of reinsurer to avoid any one cession on the basis of misrepresentation and non-disclosure will not affect other cessions.

During the currency of the reinsurance contract, there may be some overlap between disclosure and other obligations imposed on the reinsured. For instance, in *Phoenix General Insurance of Greece v. Halvanon Insurance*,[41] under a fac/oblig treaty written on a proportional basis, the reinsured held to be under a duty to exercise reasonable care in carrying out businesses during the duration of the treaty.[42] However, in *Bonner v. Cox*, [43] the Court of Appeal held that a reinsured under a non-proportional treaty owed no such implied duty of care to a reinsurer. In addition, as discussed earlier the reinsured is bound to submit *bordereaux* listing accepted risks,[44] and for the purposes of non-obligatory or fac/oblig policies these cannot include a risk in a *bordereau* if reinsured is aware that a loss arising from that risk has occurred.[45] The position is different under an obligatory treaty, as the risk will have attached irrespective of the submission of any bordereaux.[46] The point nevertheless remains that the reinsurers' protection under the duty of utmost good faith may be supplemented by express or implied contractual obligations.[47]

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[41] [1985] 2 Lloyd's Rep 599

[42] In fact, the duty of reasonable care in carrying out business applies almost certainly under any other form of obligatory treaty.

[43] [2005] EWCA Civ 1512

[44] The reinsurance may also contain an errors and omissions clause. When an original insurer deals with his underwriting affairs, which includes a series of minute and complicated procedures such as risk arrangements, notifications, policy transcribing, premium payments etc., it is hard to avoid some inadvertent errors. Supposing this reason leads to a breach of contract, it will be undeserved. If the reinsurer still grants rectification without delay to the reinsured, the concept of following the settlements can be successfully continued by the parties; hence, this kind of clause is created. The clause at issue is to limit the tolerance towards errors and omissions; otherwise, the original reinsured is probably to be either an opportunist or under the dependent mentality. Without certain criteria, the objective fact and the original insurer's motive should be deliberated case by case. However, *uberrimae fidei* still requires emphasising. In *Pan Atlantic Insurance v. Pine Top Insurance* ([1993] 1 Lloyd's Rep 496 (CA) and [1994] 2 Lloyd's Rep 427 (HL)), the Court of Appeal deemed that the error and omission clause was "inapt to cover a case where a party is otherwise entitled to avoid the contract for non-disclosure". Subsequently, the House of Lords also approved.

[45] *Glencore International AG v. Ryan, The Beursgracht* [2003] Lloyd's Rep IR 335

[46] *Glencore International AG v. Alpina Insurance Co* [2004] 1 Lloyd's Rep 111

[47] *Insurance handbook*, (2nd 2000), Barlow Lyde & Gilbert, p.230

The continuing duty of utmost good faith applied to reinsurance transactions has received attention in the same way as direct policies.[48] There is a doubt as to whether reinsureds duty of utmost good faith continues into the post-contractual stage, especially in the case of making reinsurance treaties in advance of insurance.[49] After the slip has been completely subscribed to, the reinsurance contract is deemed to be concluded in the form of a standing offer; thence, the reinsurer's standing offers provide cover for any risk falling in the defined conditions subsequently underwritten by the insurer. Each individual declaration to the reinsurer is an acceptance of that standing offer; in other words, the underlying insurance and the reinsurance come into effect simultaneously, triggered either by the reinsured or his broker fixing the direct policy. In *Bonner v Cox*,[50] the Court of Appeal decided that, once the direct underwriters had accepted the standing offer of reinsurance, there would be no more continuing duty of utmost good faith, even if some material information were perceived by the direct underwriters or the broker after taking up the standing offer. The time of acceptance of the standing offer led to the duty with regard to utmost good faith coming to an end. In other words, if the reinsurer's standing offer has been taken up by the insurers before become aware of the material facts, the insurers will no longer have any obligation to disclose those material facts.

3.2.6 Remedies for breach in the duty of utmost good faith

If there is a failure to disclose material facts, or material facts have been misstated, the reinsurers may avoid the policy.[51] The main point at issue is that a reinsurance contract is voidable only if the reinsured has been guilty of a breach in the duty of utmost good faith. Where there is no such breach, there is no basis for treating the

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[48] As far as direct policies are concerned, the continuing duty of utmost good faith has all but been abolished, as a result of *Manifest Shipping Ltd. v. Uni-Polaris Insurance Co. Ltd ("the Star Sea")* [2001] 1 Lloyd's Rep. 1. A fraudulent claim is no longer regarded as a breach of continuing duty of good faith: *Axa v. Gottlieb* [2005] Lloyd's Rep IR 369

[49] In the case of placing a facultative cover, to arrange reinsurance previous to original insurance is comparatively rare but is still occasionally placed.

[50] [2005] EWCA Civ 1512

[51] *Lambert v. Cooperative Insurance Society Ltd* [1975] 2 Lloyd's Rep 485, for further references, refer to MIA 1906 s. 18

reinsurance as avoidable *ab initio*, despite what may have occurred at the direct level.[52]

As far as a material false statement made to the insurer but not transferred to the reinsurer is concerned, a slightly different issue arises. In this situation, the primary insurance can be avoided on the grounds of breach of duty by the insured. If there is a "follow the settlement" clause in the reinsurance contract and the misrepresentation is not taken, the reinsurer is entitled to reject the claim of the reinsured because the reinsured did not enter into a *bona fide* underlying settlement relating to the assured's claim under the direct policy.[53] If there is no follow the settlement clause, the reinsured in any event needs to prove his liability as a matter of law, so once again the reinsurers are under no obligation to meet the claim.[54]

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[52] An argument occurs as to the circumstance in which the premium of facultative reinsurance is recoverable. The doubt results from a facultative reinsurance agreement where the underlying insurance is avoided, because utmost good faith has been observed by the assured, and a question arises as to whether the reinsured can be entitled to collect any return premium from the reinsurer on condition that the facultative reinsurance has no specific cancellation clause and the reinsured has had to return premium to the original assured. A solution can be that the premium is normally recoverable by the assured only when the policy is avoided *ab initio* for non-disclosure or misrepresentation, but there are few circumstances in which the reinsurance would be voidable on this basis. If the reinsured cancels the original policy with the assured because of many reasons allowed under the original policy whereby he has to return the original premium, it is unlikely that the reinsured can recover his reinsurance premium. For further analysis, *MIA 1906* s. 84 can serve as interpretation. The section states that, once the risk has started, the premium is not returnable, even if the risk is subsequently brought to an end.

[53] *Insurance Co of Africa v. Scor (UK) Reinsurance* [1985] 1 Lloyd's Rep 312

[54] *Commercial Union Assurance Co v. NRG Victory Reinsurance Ltd* [1998] Lloyd's Rep IR 439

3.3 Conditions and terms of reinsurance agreements

Reinsurance agreements, particularly treaties, are often individually negotiated, so that their terms and conditions may vary from case to case, depending on the categories of insurance, usages of the market and the specific requirements of parties. Even in identical categories of treaties, the provisions may vary. The most common clauses are analysed below. The facultative market operates in a different fashion. The most significant way is through incorporation of terms by reference, as follows.

3.3.1 Incorporation of terms into reinsurance contracts

In order to avoid the need for separate drafting, in a facultative contract, it is usually the case that the agreement contains the full reinsurance clause. In *Toomey v. Banco Vitalicio de Espana SA*:[55] the insurer agreed all relevant and applicable terms of the original contract of insurance, which became the terms of the reinsurance, and in return the reinsurer agreed to accept settlements made by the insured. The wording of the full reinsurance included "being a reinsurance of and warranted same terms and conditions as original" and to "follow the settlements". It has already been pointed out that the general assumption is that these words operate to incorporate the terms of the direct policy into the reinsurance. However, the conditions applicable to direct covers are not always compatible with those of the reinsurance. David Steel J in *HIH Casualty and General Insurance Ltd v New Hampshire Co* [56] set out a series of standards as to what kinds of direct terms are capable of being incorporated into the reinsurance. These are that (i) the term must be germane to the reinsurance; (ii) the term must make sense, subject to permissible "manipulation", in the context of the reinsurance; (iii) the term must be consistent with the express terms of the reinsurance; and (iv) the term must be apposite for inclusion in the reinsurance.

3.3.2 Same terms and conditions as original

As indicated above, although facultative reinsurance can be conducted in various ways, the practice of the London market is to attach the direct policy to a reinsurance

[55] [2004] EWHA Civ 622
[56] [2001] 2 LILR 161

slip policy and to use the full reinsurance. The well-known cases of *Vesta v. Butcher*[57] and *Groupama Navigation et Transports Continent SA v. Catatumbo Ca Seguros* [58] describes this arrangement.[59] In the Court of Appeal following *Vesta*, Mance LJ adopted the presumption in English law that facultative reinsurances could be "back-to-back", with the direct policies wholly or partly subscribed to the risks induced from the underlying insurance. The provision of "as original" or words to the same effect has an incorporating function which can make the terms and conditions of the reinsurance policy identical to those of the underlying policy. However, the application of an "as original" provision can result in some legal difficulties, especially without precise terms in the reinsurance.

A particular problem has arisen in the situation in relation to warranties, where the effect of a breach of warranty may be different under the law applicable to the direct policy and under the law applicable to the reinsurance agreement. In *Vesta*, an insurance policy on a fish farm was placed in Norway and subject to Norwegian law. The policy contained a "24-hour watch" warranty whereby the assured warranted that there would be constant monitoring of the insured premises. The policy was reinsured on a facultative basis in London under a reinsurance governed by English law and containing the full reinsurance clause. There is a loss at the time when the assured was in breach of the watch warranty, but this did not preclude recovery under Norwegian law as that law requires a causal link between the breach and the loss, which had not been shown. However, as far as the reinsurance was concerned, there was no need for a causative connection between the breach of warranty and the loss in English law reinsurance. The House of Lords (Lord Griffiths dissenting on this aspect) held that every term of the original policy had been incorporated into the facultative cover by reason of the full reinsurance clause, and in order to achieve back to back cover it was necessary for the warranty to be construed according to Norwegian law. Lord Griffiths reached the same conclusion, but by relying solely on back to back cover. The principle of back to back cover was taken even further in *Groupama v. Catatumbo*. Here, the direct policy was subject to Venezuelan law,

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[57] [1989] AC 852

[58] [2001] Lloyd's Rep IR 141 (CA).

[59] The relevant conditions of the reinsurance concerning "as original", "All term, clauses, conditions, warranties, additional premiums or return premiums, as original and to follow all decisions, settlements, agreements of same in every respect"

and stipulated a guarantee of maintenance of class warranty according to the ABS standard. This was reinsured on a facultative basis in London under a reinsurance governed by English law and containing the full reinsurance clause. The reinsurance contained its own classification warranty. Subsequently, the assured was proved to have been in breach of warranty on the grounds that the ships did not comply with the standard of classification during the duration of the underlying insurance. Nonetheless, the defendant reinsured declared that they had settled with the assured on the grounds that, under Venezuelan law, a breach of warranty, which had no causative link to damage, did not discharge the insurers' duty. The reinsured claimed for the reinsurers to be "as original". However, the reinsurers declared that the warranty in the facultative cover was "freestanding". The Court of Appeal rejected the reinsurers' argument and held that "the warranty in the reinsurance should be applied and interpreted in the same way as a similar warranty in the original policy".[60] It will be noted that in the present case there was additional wording inconsistent with that in the direct policy, but the Court of Appeal's view was that this could be regarded as no more than a fallback provision which ceased to be operative in the event that there was a direct insurance warranty to the same effect which had been incorporated into the reinsurance.

3.3.3 Following the settlements

In order to prevent unnecessary argument about coverage settlements made by the cedant, it has been common for many years for facultative reinsurers – and more recently, treaty reinsurers - to agree to follow the settlements. The principle of following the settlements can been seen in *Excess Insurance Co. Ltd v. Matthews*,[61] which indicates that the reinsurer must follow not only the amount of the settlement but also the reinsured's compromise of any dispute about liability on condition that the reinsured settling the original loss was not fraudulent or negligent. As far as the rationale is concerned, *Insurance Co of Africa v. SCOR (UK)* [62] decides that the original insurer of the present might be the reinsurer in the future; relying on each to mutually act in *uberrimae fides* and economising the expense to reinsurers of disputed

[60] For further details, refer to M. Graham, "Achieving back-to-back facultative cover" in *The Review: legal guide to the renewals season*, (2003), Barlow Lyde & Gilbert, pp.17-19
[61] (1925) 23 Ll.L. Rep 71
[62] [1985] 1 Lloyd's 312

claims, where there was no dispute brought by the original insurers; thus, the parties agree their reinsurance to apply the original terms and conditions and to pay as might be paid thereon.

(1) The adoption of following the settlements clauses

As far as the language is concerned, the following London Market excess of loss clause provides that "All loss settlements of the reinsured, including compromise settlements...shall be binding upon reinsurers, provided such settlements are within the terms and conditions of the original policies and/or contracts and within the terms and conditions of this reinsurance".[63] The *ICA v. SCOR* case shows that if a contract of reinsurance contains a "follow the settlements clause", the reinsurers are responsible for indemnifying the reinsured on condition that two matters can be proved by the cedant: first, the reinsured's liability towards the direct policy holder is ascertained and determined by a judgment, an arbitration award or an honest and businesslike settlement; secondly, the loss is of a type actually covered by the reinsurance. The Court of Appeal in *Assicurazioni Generali SpA v. CGU International Insurance plc*,[64] held that as the full reinsurance clause operates to incorporate the terms of the direct policy into the reinsurance, there is some doubt as to the need for the second condition given that if the original settlement was honest and businesslike it should not be undermined by the second condition. The Court of

[63] This example is extracted from *Hill v. M & G* [1996]1 WLR 1239 (HL). It is somewhat different from a "follow the fortunes" provision, which may be stipulated in the reinsurance agreements, a circumstance in the international insurance market. Typically, a "follow the fortunes" clause may state: "It is agreed that in all things coming within the scope of this agreement the Reinsurance shall follow to the extent of its interest the fortunes of the Company", so it can be said that the clause is "follow-the-fortunes of reinsured". There is an assumption that following the fortunes means the reinsurer follows the underwriting fortunes of the reinsured, so that the parties are in effect sharing profits and dividing losses. Furthermore, the "fortunes" are different from business and commercial fortunes, such as losses resulting from unpayable premiums or brokers' fraudulent conduct, which are not relevant to insurance fortunes (R. F. Salm, "Reinsurance contract wording" in *Reinsurance*, 1980, p.166). There is a debate over whether "follow the fortunes" can be applied to a facultative reinsurance agreement. Conceptually, in a reinsurance treaty, the reinsurer generally bears the indemnity of losses claimed under all policies issued by the reinsured; by contrast, a facultative reinsurance agreement covers a specific risk or a sole policy issued by the reinsured with risks evaluated by the reinsurer before engaging in the agreement. Hence, there seems to be a contradiction between the *modus* of "follow the fortunes" and that of risk transferring via facultative reinsurance. The *modus* of follow the fortune has yet to be resolved in England, because no English authority is currently available.

[64] [2004] EWCA Civ 429

Appeal was satisfied that the second condition remained valid, although was not able to give any convincing illustrations of when it would have independent effect.

(2) Absence of following the settlements clause

In the absence of a follow the settlements clause, it is clear from *Commercial Union Assurance Co v. NRG Victory Reinsurance Ltd* [65] that the reinsured can recover from the reinsurers only by showing liability at law to the reinsured: the fact that a settlement may have been reached on a *bona fide* and businesslike basis is of no assistance to the reinsured. In a sequel to this case *King v. Brandywine Reinsurance Co (UK) Ltd* [66] the Court of Appeal held that the reinsured had failed to establish its loss as a matter of New York law, the law applicable to a Global Corporate Excess policy issued to Exxon. The Court of Appeal held that the GCE policy covered only the clean up costs incurred in relation to debris, and oil spilt following the grounding of the Exxon Valdez could not be described as debris.

(3) *Ex-gratia* payments

It follows from *Generali v. CGU* [67] that a pure *ex gratia* payment is not binding on the reinsurers whether or not there is a follow settlements clause. If there is no such clause, the reinsured must prove its loss. If there is such a clause, an *ex gratia* payment is not one made in a *bona fide* and businesslike fashion. Reinsurers sometimes do incorporate *ex-gratia* payment clauses, in which the wording will be in the favour of the reinsureds. For example, the London market provides the clause's wording as "...all loss settlements made by the reassured, including *ex gratia* and compromise settlements, provided the same are within the terms of this agreement, should be unconditionally binding upon the reinsurers...".[68] That said, unless the wording of the clause is clear, the general assumption remains that the reinsured must act in a *bona fide* and businesslike fashion.[69]

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[65] [1998] Lloyd's Rep IR 421
[66] [2005] Lloyd's Rep IR 509.
[67] [2004] EWCA Civ 429
[68] Barlow Lyde & Gilbert, *Reinsurance practice and the law*, (2004) LLP, Para 15.2.7
[69] See the discussion in *Generali v CGU* itself.

3.3.4 Challenges to the full reinsurance clauses

As far as the tendency of the English courts is concerned, it seems that embodying the whole of direct terms into its reinsurance is rejected, even if there is a full reinsurance clause specified in the reinsurance contract; especially ancillary and procedural terms contracted in the original policy may be driven out; the concept of "back-to-back" has been challenged. Furthermore, the decisions on dispute resolution provisions such as arbitration, exclusive jurisdiction and choice of law clauses are consistent on the point. (The detail is discussed below)

The *Toomey* case pointed out possibilities as to whether the full reinsurance was a warranty that the underlying policy complied with the reinsured's description, or whether it served to incorporate the terms of direct policy into the reinsurance. Although there was no answer given, the court at least noted that the full reinsurance clause did not introduce a warranty by the insurer about the terms of the underlying insurance, so it seems that the element concerning "same terms and conditions" has been adjusted. It deserves to be mentioned that a "full reinsurance clause" is an incorporating provision and not a promise that the terms of the original are as per the reinsured's presentation;[70] hence, full reinsurance is really not inflexible. *HIH v. New Hampshire* case[71] illustrates the limitations of applying the "back-to-back" principle, which shows an "unrecognised" full reinsurance clause. The issue resulted from a contradiction, namely that the terms of the reinsurance were different from those of the underlying insurance, which covered the event that the insured's borrower was in default on a loan. On the other hand, an additional condition was incorporated into the reinsurance contract and stated one nominated employee to be retained during the reinsurance duration; nevertheless, "as original" and the reinsurers to "follow the insurers' settlements" still remained. Subsequently, the court held this additional condition as a warranty after analysing the intention of the parties as disclosed by the contract as a whole, and the reinsurer was entitled to discharge the liability by virtue of breach of warranty on the grounds that this designated person has left the appointed job.

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[70] The judge of the *Paul Toomey* case held that there had been a material non-disclosure or misrepresentation on the ground that the reinsurer was not informed of the original policy being valued rather than being based on the reinsured's actual loss.

[71] [2003] EWHC 302

3.3.5 Losses and claims

In order to ascertain the amounts of reinsurers' liabilities, some contracts incorporate the term "ultimate net loss", expressed with the words "are understood and agreed to mean the sum or/sums which the reinsured pays and/or advances and/or becomes liable to pay in settlement of claims and/or suits and/or in satisfaction of judgments under policies issued by the reinsured".[72] Basically, (1) interest payable by the reinsured, (2) expenses of litigation, (3) litigation and other expenses incurred to obtain salvages and (4) all other loss adjustment expenses will be included; however, all salvages, recoveries or payments recovered or received are to be deducted from the amount of liability. A dispute may result concerning the sum actually paid by the reinsured in the settlement of losses, the point at issue being whether the reinsured should make payment to the policy holders of the direct insurance as a priority of recovery from the reinsurers. The House of Lords clarified the position in *Charter Re v. Fagan*,[73] in which the court provided a creative interpretation and ignored the rigidly expressed wording of the contract, holding that if the reinsured had established and quantified the liability to pay, the recovery condition of excess of loss reinsurance was sufficiency, because the contractual language "the sum actually paid" did not mean "the sum actually paid" but instead meant "actually payable".

3.3.6 Claims co-operation and control

A claims co-operation imposes an obligation on the reinsured to co-operate with the reinsurers in the event of a claim by the assured. The scope of the duties will vary from case to case as there is no standard form of wording. In *Gan Insurance Company Limited v. Tai Ping Insurance Company (No2)*[74] the clause required the reinsured to inform the reinsurer of any negotiations with the assured and to seek the approval of the reinsured for any admission of liability or settlement.[75] The

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[72] C. Y. Chen, *Reinsurance: theory and practice*, Best Wise Co., Ltd, Taiwan, (Feb.2002) p.234
[73] [1996] 3 All ER 46
[74] [2001] Lloyd's Rep IR 291, 667
[75] In the *Tai Ping* case, two of the sub-clauses in the claims co-operation clause were as follows. The first was "the Reinsured should co-operate with the Reinsurers and/or their Appointed Representatives subscribing to this Policy in the investigation and assessment of any loss and/or circumstances giving rise to a loss". The next was "no settlement and/or compromise should be made and liability admitted without the prior approval of reinsurers".

reinsured was held to be in breach of these provisions, and as they were expressed as conditions precedent the assured was unable to recover. It was also held that "a claims co-operation clause which requires the consent of the reinsurers to any settlement reached between the reinsured and the policy holder is not subject to an implied condition that consent must not be unreasonably withheld. The reinsurers' refusal to give consent can only be challenged if the refusal is irrational, in that it is based on considerations which are unrelated to the claim itself."[76]

Under a claims control clause, of which *AIG Europe (UK) Ltd v. Ethniki* [77] provides an example, the reinsurer is entitled to control all negotiations with the original insured and the reinsured is therefore obliged to transfer the negotiating rights to the reinsurer. If the clause is appropriately worded, the transfer of control may be automatic and operate as an allocation of negotiating rights to the reinsurers so that if they fail to negotiate the reinsurer simply has no claim.[78] This type of provision is slightly different from a claims co-operation provision. The same principle, that the reinsurers must act rationally in deciding whether or not to control negotiations, is applicable.[79]

A controversial question arises as to priorities when a reinsurance agreement contains both follow the settlements and claims co-operation/control clauses. Frequently, the reinsurers' liabilities of the "follow the settlements" clause can be moderated through incorporation of claims co-operation and control provisions. In *Insurance Co of Africa v. Scor Reinsurance*,[80] the claims co-operation clause stated that the reinsured undertook in arriving at the settlement of any claim, that they would co-operate with the reinsurance underwriters and that no settlement should be made without the approval of the reinsurance underwriters subscribing; the Court of Appeal held that the follow the settlement provision was subject to any claims clause and was indeed emasculated by it.

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[76] Barlow Lyde & Gilbert, *The Review- Legal Guide to the Renewals Season* 2003, p.21
[77] [2000] 2 All ER 566
[78] *Eagle Star Insurance Co. Ltd v. Cresswell* [2004] Lloyd's Rep IR 537
[79] *Eagle Star Insurance Co. Ltd v. Cresswell* [2004] Lloyd's Rep IR 537
[80] [1985] 1 Lloyd's Rep 312

3.3.7 Arbitration clauses

Arbitration clauses provide for an alternative dispute resolution forum. Unless the parties otherwise agree, arbitrators have to apply the law applicable to the reinsurance contract in order to resolve the disputes between. However, section 46 of the Arbitration Act 1996 permits the parties to waive the application of strict rules of law and to allow the arbitrators to resolve any dispute on the basis of an "honourable engagement",[81] by virtue of which the arbitration cannot be bound by any strict rules of law, but instead the practices and customs of honour are brought to bear. Even before the passing of the 1996 Act, honourable engagement clauses were found to be operating in reinsurance contracts. *Home Insurance Co v. Mentor Insurance* [82] took the view that such a clause entitled the arbitrators to depart from the legal basis of rule or procedure or evidence, and apply customs and practices to interpret the reinsurance agreement. There was nevertheless uncertainty as to the scope of the freedom which could be conferred upon arbitrators and there were indeed doubts as to whether all substantive rules could be waived. The matter has been put beyond doubt by subsequent statutory intervention.

If there is an arbitration clause in the underlying policy, however, relying on a full reinsurance clause worded in the reinsurance contract will not be enough to carry that clause into the reinsurance agreement. This is because an arbitration clause is not a "term or condition" and thus falls outside the scope of the incorporating wording, and also because – from a wider point of view – it cannot be said that there is in reality any consensus between the reinsured and the reinsurer to submit their dispute to arbitration.[83] Further the type of arbitration clause in the direct policy may be wholly inappropriate to the reinsurance.[84] Section 6(2) of Arbitration Act 1996 now provides that an arbitration agreement may be found in some other document and then incorporated into the reinsurance, but it was held in *Trygg Hansa Insurance v. Equitas* [85] that the earlier law had not been changed and that an arbitration clause can be incorporated only by means of an express reference to it in the reinsurance agreement.

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[81] Barlow Lyde & Gilbert, *Tolley's Insurance Handbook*, (2nd ed. 2000) p.234
[82] [1989] 3 All ER 74
[83] *Excess Insurance v Mander* [1995] LRLR 358
[84] *Pine Top Insurance Co Ltd v Unione Italiana Anglo Saxon Reinsurance* [1987] 1 Lloyd's Rep 476
[85] [1998] 2 Lloyd's Rep Rep 439 (QB Com Ct). See also: *Cigna Life v Intercaser SA* [2001] Lloyd's Rep 821.

In the absence of a specific expression and with merely general words of incorporation in the full reinsurance clause, the reinsurance cannot be regarded as agreeing on arbitration.

3.3.8 Exclusive jurisdiction clauses

The rules relating to the incorporation by reference of exclusive jurisdiction clauses are indistinguishable from those applicable to arbitration clauses. In *Prifti v. Musini Sociedad Anonima de Seguros y Reseguros*,[86] there was a clause in a direct policy providing for the exclusive jurisdiction of the Spanish courts: this was held not to have been incorporated into the reinsurance by the words "as original" in the full reinsurance clause. The court further ruled that the full reinsurance clause did not amount to a warranty that the reinsurance would be subject to the same terms and conditions as the direct policy. This case arose under the provisions of article 23 of Council Regulation 44/2001 (replacing the Brussels Convention 1968), rather than at common law, although it is clear from the cases that the same principle applies whether the validity of the exclusive jurisdiction clause in the reinsurance is tested under European or common law rules.

3.3.9 Choice of law

In *Gan Insurance Co Ltd v Tai Ping Insurance Co Ltd (No 2)*,[87] the facultative cover of reinsurance placed in London did not contain an express governing law clause, but included, to the same effect as an "as original" clause, a reference to "per local standard...policy wording". The reinsurance also contained a claims co-operation clause. The underlying insurance was placed in Taiwan, and was expressly stated to be governed by Taiwanese law. The Court of Appeal held that the facultative reinsurance was concluded in England and was therefore by implication governed by English law. It followed that English jurisdiction was most appropriate for resolving disputes resulting under the claims co-operation clause. As for the term "as original", it was to be applied only to the risk insured and did not extend to choice of law

[86] [2003] EWHC 2796 (Comm.) There are numerous other authorities on the same point: *Arig Insurance v SASA* 1998, unreported; *AIG Group (UK) v The Ethniki* [2000] Lloyd's Rep IR 343; *AIG Europe SA v QBE International Insurance* [2002] Lloyd's Rep IR 22.
[87] [2001] Lloyd's Rep IR 291, 667

provisions. This case is illustrative of the general approach of the English courts to have disputes under reinsurance contracts made in England resolved in the English jurisdiction.

3.3.10 Inspection clauses

The main form of protection open to a reinsurer under a treaty is the right to inspect the books of the reinsured to ensure that underwriting conforms with required standards and those losses paid are based on actual liability. Most reinsurance treaties therefore contain an inspection clause, under which the reinsurers reserve the right to inspect in respect of the reinsured's internal information, such as in books, records, details of accounts, reserves, commissions etc. Inspection clauses have taken on particular significance given that in the modern market there are practices which are unfavourable to reinsurers in the reinsurance market. For example, no-bordereau systems are available; in addition, errors and omission clauses relieve the reinsured from breach of duty if information is misstated. For these reasons, inspection clauses are, if not express, to be implied as a matter of necessity. In *Baker v. Black Sea and Baltic General Insurance Co Ltd*,[88] there was no inspection provision in an obligatory proportional treaty, but it was held that the reinsurers still had an implied right to examine the reinsured's books or records. It was further held that failure to permit inspection is not a repudiation of the policy.

In conducting an inspection, timing is a concern. *Trinity Insurance Co Ltd v. Overseas Union Insurance Ltd* [89] shows that reinsurers cannot use inspection as a tactic to delay making payment. In this case the reinsured filed for summary judgment against the reinsurers in respect of an unpaid claim. Although the reinsurers suspected that there were grounds for avoidance, it was held that the reinsurers could not rely upon their right of inspection in order to fend off a summary judgment unless it could be shown that the reinsured had refused to allow inspection at the appropriate time.[90]

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[88] [1998] Lloyd's Rep IR 327
[89] [1996] LRLR 156
[90] See also; *Re A Company No.00875 of 1911, Ex parte Pritchard* [1992] BCLC 633; *Pacific and General Insurance Co Ltd v. Baltica Insurance Co (UK) Ltd* [1996] LRLR 8; *Aetna Reinsurance Co (UK) Ltd v. Central Reinsurance Corporation* [1996] LRLR 165

3.3.11 Duration

In order to achieve a presumption of "back-to-back" cover, parties have no difficulty in making a facultative contract valid for the same duration as the underlying policy. In the case of treaty reinsurance, there is no presumption of back-to back construction, so the valid times of the direct policy and the reinsurance treaty may not be compatible. As regards when dates of commencement and termination are stated in a treaty, two features, "continuingly effectual" and "annually renewable", are emphasised more than in any other types of reinsurance. Seemingly, the two features are contradictory, but in practice no conflict arises. For example, as excess of loss reinsurance is not infrequently used to cover huge amounts of underlying insurance, in this circumstance, whether from the ceding companies' or the reinsurers' points of views, both parties will anticipate ceaseless cover for the sake of economical costing and simplified procedures. On the other hand, the majority of excess of loss treaty premiums are annually adjusted in order to accord with current performance, the treaty's continuity, the desirability of business offered, fluctuations in premium incomes and exchange rate variations;[91] after various conditions have been deliberated, the premium can be rated year by year.[92] Basically, the liability on a losses occurring basis determines the primary insurance's indemnities under the terms of the reinsurance contract without respect to the issuing date of the direct policies. However, contracts effected on a losses occurring basis could contain ambiguities, in that whatever losses occur after the expiry of the contract, they will not be protected against if the contract is not to be renewed; in this situation, there could be a doubt in the event that a continuing occurrence arises during the contractual duration but ends posterior to expiry of the contract, such as a fire lasting until the expiry date. To deal with this ambiguity, extended expiration clauses are created, by the wording of which the reinsurers agree to charge an additional premium and accept losses attaching to risks which have been in force when the reinsurance treaty expired.[93]

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[91] Insurance Institute of London, Brochure: *Excess of loss method of reinsurance*, p.15

[92] By contrast to a proportional reinsurance contract, the ceding company passes a settled proportion of premium income to the reinsurer for cover against the same proportion of that risk.

[93] For example, an Article in an excess of loss hull and cargo treaty used by Lloyd's stipulates: "In the event of this Agreement not being renewed and if requested by the Company (the ceding company) prior to the expiry of this Reinsurance, the Reinsurers agree in consideration of an additional premium to be mutually agreed to extend cover hereunder for losses occurring during the period of 12 months from the date of expiry of this Agreement and sustained under the original policies which were in force prior to the expiry date of this Agreement."

Alternatively, a "risks attaching basis" treaty is available;[94] that is, where the direct policy is issued by the reinsured within the duration of the reinsurance treaty, the treaty will provide the protection. It focuses on whether the risk of the underlying policy has attached during the treaty's period. For instance, there is a reinsurance treaty valid from 1st January to 31st December 2005 and engaged prior to direct policies which may be covered. Supposing a 12 month underlying policy is issued on 1st July 2005, which is within the treaty's period. If the loss occurs on 1st January 2006, despite the fact that on that date the treaty has expired, the reinsured is still entitled to claim for reinsurance indemnity on the grounds that the primary insurance risk has attached from 1st July 2005, on which date the treaty is still valid.

If there is any equivocal wording in reinsurance agreement, matching up the time of underlying insurance in order to operate reinsurance successfully will be suitable. In *Commercial Union Assurance Co Plc v. Sun Alliance Group Plc*,[95] the reinsured subscribed a 12 month reinsurance slip, which was an incorporation of 120 days notice of cancellation at anniversary date (NCAD). The confusion over meaning resulted from the NCAD wording. The court considered the parties' contractual intentions, where the reinsured sought for protection against the direct insurance risk; in addition, the length of time of the reinsurance tying in with the underlying placement was deliberated appropriately. Steyn J held that with no notice of cancellation given within the fixed term, the contract was to be treated as automatically renewed for a further one year period at the termination of the first twelve month term.

[94] Jardine Lloyd Thompson Group Plc."Insurance market overview" (09/2002) <http//:www.jltasia.com/pressroom/media_gallery/publications/market_overview_13Sep02.pdf> visiting date 13/06/05

[95] [1992] 1 Lloyd's Rep 475

Chapter IV Regulation of reinsurers

The regulation of reinsurers has received attention since the late twentieth century. Following the expansion of reinsurance techniques, the developed countries have been successively examining modes of reinsurance regulation for a long time. In the domain of financial supervision, two main reasons lead to the regulating reinsurance business being minute and complicated. First, reinsurance businesses are characterised by internationalism, by virtue of which one single country's authority to regulate multinational affairs is restricted. Secondly, reinsurance contracts are concluded by reinsureds and reinsurers who possess professional knowledge of legal rules, insurance clauses and techniques of risk management. The insurance world used to suppose that regulating reinsurance was not a requirement and was of the opinion that reinsurance could function well even without regulation.

However, this out-of-date view has been changing. A free market for reinsurance without any regulation implies unavoidable risks. If a reinsurance company collapses, it will cause multiple negative effects to the entire insurance and financial market. In other words, every condition in the reinsurance enterprises may affect the status of the financial markets, which further affects the interests of insurance consumers and financial investors. Basically, regulation is state controlled and good state control over reinsurance undertakings is a means to economic stability.

4.1 Purposes of regulation of reinsurers

The first purpose is to protect the interests of the general public. If an extraordinary incident occurs, the reinsurance mechanism will provide funding for the insurer to make up unexpected loss; hence, a reinsurance contract can be deemed as forming a mutual fund for sharing losses. From the viewpoint of social responsibility, re/insurance is not only a kind of commercial activity, but is also characterised as a public service. Some governmental purposes can be achieved using re/insurance devices. For example, in order to follow the government's policy of anti-terrorism, British government reinsurance schemes set up the provision of reinsurance for

insurers offering terrorism cover in accordance with Reinsurance (Acts of Terrorism) Act 1993. Furthermore, social policy protects traffic accident victims; thus, compulsory automobile liability insurance is established. Again, to assure depositors and stabilise the financial market, a national deposit insurance scheme is developed. In order to prevent the private sector from behaving unscrupulously, reinsurance operations are open to intervention by public authorities through supervision of reinsurance where necessary.

Ensuring the financial solvency and solidity of reinsurers is the second purpose. Collecting from reinsureds, reinsurance premiums are the main source of reinsurer solvency. The reinsureds are deeply concerned as to whether the reinsurer is sufficiently solvent to cope with the reinsurance indemnity. In order to enhance consumers' trust in the reinsurance markets, and to regulate reinsurers' financial securities, the application of funds and solvency measures is essential.

The third purpose is to promote a market mechanism. An authority exercising power often faces a number of dilemmas, such that regulatory functions may not be brought into full play. First of all, reinsurance contracts are often individually customised, and their contents need to be supervised from case to case, so regulation mechanisms may place excessive restrictions on freedom of reinsurance. Next, the more reinsurance undertakings are supervised, the more competitiveness will be reduced. Reinsurance affairs are often across multiple national borders. A loosening or tightening of each state's regulatory standards involves discrepancies in competitive positions between reinsurance companies. It more or less affects the principle of fair competition. The current task is for regulators to consider how to tackle the above difficulties in order to set up efficient, orderly and clean markets, under which primary insurers and reinsurers can fairly deal with their transactions.

4.2 Methods of regulation of reinsurers

Regulatory modes for reinsurance operations can be divided into two approaches, direct reinsurance supervision of reinsurance and indirect supervision of reinsurance. There is no commonly accredited single method of reinsurance supervision. The

jurisdiction can choose either the direct or indirect mode. Additionally, combined direct and indirect reinsurance supervision can be comprehensively used. Both direct and indirect supervision methods focus on four requirements, which include (1) licensing requirements, (2) solvency requirements or an equivalent measure, (3) monitoring of various aspects of business and (4) prudential rules, which apply to the administration the retentions and the assuming risks of reinsurers.

4.2.1 Direct supervision of reinsurance

Direct supervision means that authorities directly supervise and monitor their home states' licensed reinsurers, the direct regulatory mode using the same approach as primary insurance regulation. Basically, direct regulation of reinsurers is most effective in the protection of policyholders, because regulators are able to obtain required information, such as concerning the financial solidity of reinsurers, management requirements and the nature of reinsurance business.

(1) Licensing

In the existing direct regulatory regimes across the world, obtaining reinsurance licences is a prerequisite for running a reinsurance business. In determining whether or not a licence should be granted, the competent authority may take into account each applicant's conditions of establishment, form of organisation, scope and field of business and so on. In most developed countries, a reinsurance enterprise is not allowed to commence operations unless it has applied for approval from the competent authority, completed business registration, posted a bond, and secured a business licence in accordance with the law. If a reinsurance undertaking carries on business without a licence, it will be disciplined. Having secured a licence, the reinsurance undertaking will face discipline if it violates regulations.

(2) The form of the organisation

The form of the organisation is a concern of reinsurance regulators. A reinsurer may be a limited joint stock company, a mutual company or a cooperative. In some circumstances, it could be an individual underwriter or member of a syndicate in

Lloyd's London. Each form of organisation carries its own advantages and disadvantages, but the competent authority in every jurisdiction can set up restrictions against the forms of organisation in accordance with the legal requirements.[1]

(3) Restriction against scope and field of reinsurance business

Most of the competent authorities set up restriction against the scope and field of business. A reinsurer is only allowed to carry on the scopes and fields of business which have been approved by the competent authority. Basically, reinsurance entities can be classified into two types, "pure reinsurance enterprises" and "mixed reinsurance enterprises". The former exclusively transact reinsurance contracts; the latter are direct insurers in conjunction with the trading reinsurance business. Each direct regulatory scheme establishes its own rules, so as to decide whether, first, a direct insurer is allowed to write reinsurance business, and secondly, whether a reinsurer is able to concurrently deal with other categories than its main type of reinsurance business. For example, in compliance with the domestic laws or actual requirements, the authority will set up a rule to determine whether a reinsurer is allowed to operate property reinsurance and meantime run life reinsurance activities.

(4) Regulations on financial soundness

The financial health of reinsurers is monitored by the competent authorities. There are three basic items of concern to regulators. The deposit of reserves by reinsurers is a first financial requirement, under which each competent authority will stipulate the methods for calculating reserves to be deposited.[2] Secondly, utilisation of funds will be monitored. In compliance with the law or regulations, a reinsurance enterprise's funds can be savings deposits; besides this, the funds only can be utilised

[1] In the case of the Insurance Law of Taiwan, Article 136(1) states that, "Unless established in compliance with other laws or with the approval of the competent authority, the organisation of an insurance enterprise is restricted to that of a company limited by shares or of a cooperative." This provision also can be analogically applied to reinsurance enterprises.

[2] Article 145 of the Taiwanese Insurance Law stipulates that "At the end of each business year, an insurance enterprise shall, for each type of insurance, calculate the amount it should allocate to the various reserve accounts for the respective types of insurance, and shall record such reserve amounts in special account books."

to do the statutory allowed businesses.[3] The third is a drawing up of statutory reinsurers' solvency margins, which indicate the level of reinsurance companies' spare capital in excess of their predetermined liabilities. The function of solvency margins provides extra capital as a buffer against unforeseen events, which may result from higher than expected claims levels or unfavourable investment results. Solvency margins can effectively measure the financial health of reinsurance companies, and there are often statutory minimum solvency margins.[4] Fourthly, regulators can conduct financial report monitoring, under which the reinsurers will be requested to disclose documents, including financial, statistical and actuarial reports and any other related information.

4.2.2 Indirect supervision of reinsurance

Being international in nature, reinsurance often crosses national boundaries. A single state is not able to issue licences to numerous reinsurers domiciled in different jurisdictions. Hence, the indirect mode of supervision comes into play. Under a scheme of indirect regulation, the competent authority will demand a direct insurer to comply with specified manners to cede risks to reinsurers, by which the related reinsurance affairs can be indirectly regulated. In other words, insurance regulators attach importance to the reinsurance plans of direct insurers rather than those of the reinsurers. By way of the scrutiny of direct insurers' reinsurance programmes, the reinsurers are supervised in a round about way. With inappropriate reinsurance cover affecting the insurer's ability to pay policyholders' claims, if the competent authority is not satisfied with the insurer's outwards reinsurance programme, being insufficient to protect the policyholders, the primary insurer will be requested to amend or terminate the reinsurance contract with the reinsurer. In the event that the existing reinsurance contract is amended or terminated, the reinsurer will suffer loss. Therefore, a satisfactory reinsurance programme submitted by the primary insurer is

[3] For example, Article 146(1) of the Taiwanese Insurance Law states that, "Except for savings deposits or where otherwise provided for by law, an insurance enterprise may utilise its funds only for the following: 1. Purchase of marketable securities; 2. Purchase of real estate; 3. Lending; 4. Engaging, with the approval of the competent authority, in special projects and public investments; 5. Foreign investments; 6. Investments in insurance-related businesses; 7. Trading in derivative products as approved by the competent authority; 8. Other utilisation of funds as approved by the competent authority."

[4] Keeping a solvency margin is not always easy. In a bear market, insurance companies may meet challenges to maintain their solvency margins, because their equity investments are falling in value.

required.

In most cases, with regard to the establishment of an insurance company, the insurance applicant shall submit particulars of a proposed reinsurance together with an application to the competent authority in order to apply for establishment permission. If the applicant's outwards reinsurance programmes[5] have been approved, the applicant can obtain a licence to conduct insurance business, by means of which the reinsurance contracts will be supervised. From the perspective of regulatory subject matter, the indirect supervision of reinsurance covers two fields. The first is the checking of the reinsurance plans; that is, the supervisory authority will examine the direct insurance companies' schemes to ascertain whether they have adequate reinsurance coverage to cope with the maximum foreseeable loss. The second is about supervision of elected reinsurers; that is, the competent authority will monitor whether a direct insurer is acting responsibly and prudently in selecting its reinsurance partners.

4.3 The Reinsurance Directive 2005

There are many different regulatory systems worldwide, but the sets of rules applied by each regulatory authority are not necessarily compatible with the establishment of an international supervisory system for reinsurance companies. The current situation involves each jurisdiction determining the terms of trade in their jurisdictions, a lack of lead state regulator, multiple or conflicting solvency requirements, collateral requirements in some countries and a fragmented world market etc. In the current system, no single reinsurance market exists in the EU member states. In order to bridge the discrepancy among every member state's regulations, to enact a new and common directive was regarded as essential.

[5] For example, the German supervisory authority published guidance for direct insurers on how to assess the performance and capacity of reinsurers. According to the guidance, the following information must be submitted by direct insurers to the supervisory authority: (1) the name of the reinsurance and insurance company or the name of the reinsurance broker, and (2) the ceded premiums have to be analysed from the point of view of the direct insurance business and the assumed reinsurance business. The amount of the ceded premiums has to include the premiums paid to the reinsurer as well as portfolio entries; (3) the reinsurer's share of the gross technical provisions has to be analysed from the point of view of the direct insurance business and the assumed insurance business and (4) the liabilities from the deposits of reinsurers have to be submitted. (European Commission, "Study into the methodologies for prudential supervision of reinsurance with a view to the possible establishment of an EU framework 31 /01 92", Contract no: ETD/2000/BS-3001/C/44, p.46)

The EU's passing of the Reinsurance Directive 2005,[6] gradually forming harmonised reinsurance regulations for its Member States, can be treated as a milestone. In June 2005, the European Parliament approved the EU Reinsurance Directive, drafted by the European Commission and submitted in April 2004.[7] In November 2005, the European Council of Ministers formally adopted the final version of the Reinsurance Directive, which came into force on 9 December 2005. The Reinsurance Directive applies to all undertakings that exclusively carry out reinsurance business and it forms part of the European Union's Financial Services Action Plan, which aims to create a single market in financial services in the European Economic Area (EEA). Basically, three significant changes were made in the Reinsurance Directive. First, the directive introduces common regulation of reinsurance throughout the EEA. Secondly, one regulatory licence allows EU reinsurers to operate in the EEA. The third is the removal of collateral requirements for EU reinsurers. As far as the solvency schemes in Europe are concerned, the directive is a transitional measure, and will be replaced once the EU's "Solvency II"[8] project comes into operation.

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[6] There are ten titles in the Reinsurance Directive 2005, namely: Title I Scope and definitions (Art 1-2), Title II The taking-up of the business of reinsurance and authorisation of the reinsurance undertaking (Art 3-14), Title III Conditions governing the business of reinsurance (Art 15-44), Title IV Provisions relating to finite reinsurance and special purpose vehicles (Art 45-46), Title V Provision relating to right of establishment and freedom to provide services (Art 47-48), Title VI Reinsurance undertakings, where head offices are outside the community, but conduct reinsurance activities in the community (Art 49-50), Title VII Subsidiaries of parent undertakings governed by the laws of a third country and acquisitions of holdings by such parent undertakings (Art 51-52), Title VIII Other provisions (Art 53-56), Title IX Amendment to existing directives (Art 57-60) and Title X Transitional and final provisions (Art 61-65). Title III is subdivided into 4 chapters. Chapter 1-Principles and methods of financial supervision (Art 15-31) includes Section 1-Competent authorities and general rules (Art 15-18), Section 2-Qualifying holdings (Art 19-23), Section 3-Professional secrecy and exchanges of information (Art 24-30) and Section 4-Duties of auditors (Art 31). Chapter 2 reveals the Rules relating to technical provisions (Art 32-34). Chapter 3 describes the rules relating to solvency margins and to guarantee funds (Art 35-44), which includes Section 1-Available solvency margins (Art 35-36), Section 2-Required solvency margins (Art 37-39) and Section 3-Guarantee funds (Art 40-41). Chapter 4 refers to Reinsurance undertakings in difficult or irregular situations and withdrawal of authorisation (Art 42-44).

[7] There were a number of forerunners who undertook to investigate reinsurance regulations, such as the Organisation for Economic Co-operation and Development (OECD), the International Association of Insurance Supervisors (IAIS), the Financial Stability Forum (FSF), the Comité Européen Des Assurances (CEA, the European Federation of National Insurance Associations) and the European Union Commission. The European Union Commission laid down a series of standard rules, to regulate the EU's reinsurance undertakings.

[8] The first EU non-life and life directives on solvency margins appeared in the 1970s. They formed the initial regulatory system regarding the solvency of insurance enterprises. In 1997, the Müller Report ("Solvency of insurance undertakings") reviewed the solvency rules in the Solvency I project. In 2002, Solvency I was completed (in force by 2004) and mainly enacted minimum solvency margins and enlarged the regulatory authorities. Solvency I can be treated as the first generation of the regulatory system. However, it did not change the initial solvency rules in substance too much. The EU perceived that insurance styles and investment conditions were far from previous ones and the original regulatory system was not able to deal with practical requirements. Since 2001, before

4.3.1 Significant principles adopted by the Reinsurance Directive 2005

There are several significant principles dominating the provisions of the directive. Some provisions are based on the same principles as the EU's life and non-life insurance Directives. They may be described as follows.

(1) Compulsory regulation

According to the Reinsurance Directive 2005, every member state is required to implement the directive in its own legislation by December 2007. Most member states will spend the next two years working on drafting their legislation. This is not voluntary - everyone must comply and introduce harmonised rules.

(2) Direct supervision

After reinsurers have obtained business licences in accordance with domestic rules, they are entitled to carry on business in the legal territories. Reinsurance Directive 2005 is designed to operate throughout the EEA, so the structure of the new regulatory regime for multi-nations is based on direct reinsurance regulation.

(3) Mutual recognition

Mutual recognition is one of the principles resulting from the system for regulating primary insurance.[9] A reinsurer can only be licensed by its home state in accordance with the single licence principle and the reinsurer is allowed to conduct reinsurance works in the other EEA member states (Article 4). In other words, the "one passport" approach ensures mutual recognition in the EEA. From the viewpoint of regulators, each regulatory authority of the EEA member state is able to remote

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Solvency I was put into practice, the EU began to plan how to revise the regulations of insurance industries. Re-enacting a new directive made requirements for re/insurer discipline. Solvency II was subsequently initiated. It can be regarded as the second generation regulatory system, under which (1) insurers' minimum level of capital and solvency capital requirements should be maintained; (2) internal controls and external supervisions should be involved; (3) insurer data should be transparent.

[9] Lovells Corporate, "Client's note: the Reinsurance Directive", <http://www.lovells.com/Lovells/Publications/ClientNotes/The+reinsurance+directive.htm?Download=True>, visiting date: 22/05/06

control reinsurance enterprises across national boundaries, while domestic reinsurers conduct commercial activities in other parts of the European Economic Area. From reinsurance transactors' points of view, a more convenient condition for transactions throughout the EEA will be established.

(4) Harmonisation

Harmonisation is the other principle deriving from regulating primary insurance. The significant point is to set down certain minimum standards, which each member state is required to fulfil in the new directive. If there is no harmonisation of member states' domestic legislations, reinsurers may flock to the least regulated EEA member state. To remove regulatory differences between EEA member states, the most concrete method in the Directive demands that member states request their state's reinsurers to comply with a variety of ongoing prudential requirements.

4.3.2 The main provisions of Reinsurance Directive

On the whole, the Directive's stipulations remain in line with the motive and purposes of reinsurance undertakings- to obtain authorisation- and the regulation of reinsurance business processes. The content can be roughly classified into the following categories.

4.3.2.1 The scope of the Directive

According to Article 1(1), the Directive applies to reinsurers who are currently established or wish to be established in EEA member states, and who only deal in reinsurance activities; and it also further applies to reinsurance captives. [10] Nevertheless, there are three entities which are not impacted by this Directive (Article 1(2)). The first is that direct insurers also carry on reinsurance activities, [11] because

[10] Reinsurance Directive Recital 11 states that the Directive also extends to captives. A reinsurance captive means either an insurer or an insurance enterprise combination in possession of large finances, which can be treated as a parent company, which builds up a subsidiary only for dealing with the reinsurance business of the company.

[11] However, the solvency margin stipulations of the Directive still administer the direct insurer carrying on reinsurance if the insurer having significant volume of reinsurance business occupying his entire business is represented.

the business activities must be regulated by Life and Non-Life Insurance (the Directive's Recital 3 and 12). The second is that reinsurers in run-off are exempt from the Directive, specifically when reinsurers will terminate the reinsurance business 24 months after the date of entry into force of the directive (Article 62). The third is that governments provide reinsurance as a last resort.

4.3.2.2 Authorisation requirements

Before carrying on reinsurance business, a reinsurer needs to apply for official authorisation in the home member state in order to obtain qualification to conduct business. Article 3 states that the business of reinsurance should be subject to prior official authorisation by the authorities of the member state in which the reinsurer's head office is domiciled. Article 4 reveals that business authorisation should be under a single European licence principle: once licensed, the reinsurer would be automatically allowed to carry on reinsurance businesses at liberty throughout the EEA.

As far as the conditions of authorisation are concerned, Member States require a reasonable standard for the sake of authorisation. Under Article 6, a reinsurance undertaking seeking authorisation from the home member state must satisfy the following conditions. First, according to Article 6(a), the reinsurer must limit its objects to the business of reinsurance and related operations,[12] because it is not proper to spread excessively the scope of reinsurance business. Secondly, according to Article 6(b), the reinsurer must submit a scheme of operation.[13] Thirdly, according to Article 6(c), the reinsurer must posses a minimum guarantee fund of not

[12] Recital 14 interprets related operations as including: statistical or actuarial advice, risk analysis or research for clients. It also includes holding company functions and activities with respect to financial sector services where the financial sector includes credit institutions, investment firms and mixed financial holding companies.

[13] The content of the scheme is laid down in Article 11(1), under which the scheme must contain particulars or evidence of "(a) the nature of the risks which the reinsurance undertaking proposes to cover; (b) the kinds of reinsurance arrangements which the reinsurance undertaking proposes to make with ceding undertakings; (c) the guiding principles as to retrocession; (d) the items constituting the minimum guarantee fund; (e) an estimate of the costs of setting up the administrative services and organisation for securing business and the financial resources intended to meet those costs." Under Article 11(2), in addition to these requirements, the scheme of operations must for the first three financial years contain: "(a) estimates of management expenses other than installation costs, in particular current general expenses and commissions; (b) estimates of premiums or contributions and claims; (c) a forecast balance sheet; (d) estimates of the financial resources intended to cover underwriting liabilities and the solvency margin."

less than €3 million and Member States may provide that, as regards captive reinsurance undertakings, the minimum guarantee fund be not less than €1 million (see Article 40(2)). Fourthly, according to Article 6(d), the reinsurer must be effectively run by persons of good repute with appropriate professional qualifications or experience.

A doubt in respect of the right acquired by existing reinsurance undertakings should be of concern. Regarding the statement made in Article 61, if reinsurance undertakings subject to the Directive which are authorised or entitled to carry out reinsurance business before the Directive has come into force, the reinsurance undertaking should be deemed to be authorised in accordance with the Directive. As far as solvency requirements are concerned, they should be imposed on post-authorisation responsibilities, which refer to them having 24 months to fill the gap in solvency requirements. During this interim period, they will be regarded as having a licence, even though they still have not reached the required solvency level.

4.3.2.3 Supervision by home state regulators

Every reinsurer must have its head office registered in the state of its domicile. In the light of rules on single home state authorisation, a reinsurer will be supervised by the competent authority of the Member State in which the head office has been established (Article 8 and Article 15); afterwards, the reinsurance business can be conducted throughout the EEA. A reinsurer may have several branches across the EEA. There is a doubt as to whether a branch, not located in the same state of the head office, requires authorisation or additional supervisory checks by the host Member State. This issue is clarified by Recital 10, which implies that the branch office neither needs to be authorised again nor be subject to supervision and checks by the host Member State if the reinsurance undertaking has already been authorised in its home member state.

However, international coordination in the supervision of reinsurance companies is involved. If reinsurers have their head offices in a third country and conduct reinsurance business in the EU, or reinsurers have their head offices in the EU and conduct reinsurance business in the territory of a third country, the Commission may

submit proposals to the Council for negotiation of agreements with that third country on the basis of Article 50.[14] The principle of home state control can be extended to the third country. In this situation, a proposal for the arrangement of an efficient system is possible, under which the financial supervision resides with the home state regulator, but governance issues and market conduct is supervised by host state regulators. Information between home and host regulators may be exchanged. If a host member feels that the activities of a reinsurer enterprise might affect its financial stability, the host member will inform the home member state for its resolution.

4.3.2.4 Solvency requirements

The solvency margin regime in the EU follows the Solvency II project, under which the regime for direct insurance will be applied to determine the required solvency margins of reinsurers. In principle, the solvency provisions for reinsurance undertakings are mainly based on those that apply to primary non-life insurance companies. However, there are exceptions to this principle. For example, stricter solvency is necessary for certain life reinsurance business. Under the directive, if the life reinsurance activities are linked to investment funds, participating member states are allowed to impose the heavier reinsurer solvency requirements, reaching the same level direct life insurers (Article 38(2)). Again, where the reinsurer conducts both non-life and life business, the home member state shall require the reinsurer to have an available solvency margin to cover the total sum of required solvency margins in respect of both non-life and life reinsurance activities.

The above rules are by no means inflexible. Recital 26 reveals a flexible method for adjusting solvency margin rules. Having consulted with the European Insurance and Occupational Pensions Committee, the Commission is entitled to make certain adjustments to the calculation of solvency margins.

[14] It is based on the Insurance Directives, where there is an agreement with Switzerland on this basis.

4.3.2.5 Abolition of the system in collateralisation

Nowadays, collateral is required from reinsurers in only a few countries in the EU, such as France and Portugal.[15] The Directive seeks to prevent reinsurers from having to deposit their assets with regulators as a method of guaranteeing their solvency. It is better that assets be freely available and that underwriting is carried out properly. Article 57(3), Article 60(6) and Recital 40 can be regarded as abolishment collateral provisions. As far as the pledging of assets in England is concerned, it took the original form of regulation adopted in England for life companies in 1870. It was abandoned over 50 years ago, so the concept of collateral requirements is old and outdated. This Directive officially abolishes the need to pledge assets to cover outstanding claims provisions which have been adopted by some Member States. However, in the event that Member States' reinsurers further cede risks to retrocessionaires domiciled in non-EU states, assets being pledged to cover outstanding claims can still be requested, due to retrocessionaires not being regulated by the directive.

Execution of new changes in respect of removing collateral mechanisms can be postponed. In the light of Article 63, Member States are allowed to postpone going through the abolishment of collateral provisions until 36 months after the date of entry into force of the Directive.

4.3.2.6 Finite reinsurance arrangements

The Directive is designed not only for the regulation of reinsurance but also for alternative risk transfer. Although Member States will not be imposed on a common EU wide scheme for regulating finite reinsurance, once finite reinsurance arrangements are permitted by the Member States, minimum regulatory criteria will be required. Hence, Article 45 enables each Member State to independently settle regulatory provision for finite reinsurance, including mandatory contractual provisions, accounting and risk management controls and solvency requirements.

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[15] There are two basic reasons for collateral. The first is to ultimately secure payment of reinsurance claims and the other is to serve as a precondition for a cedant to take credit for reinsurance on its balance sheet under local statutory accounting rules.

4.3.2.7 Establishment of Special Purpose Vehicles (SPVs)

This Directive empowers Member States to allow the establishment of Special Purpose Vehicles (SPVs) within the Member States' territories (Article 46(1)). For some reasons, insurers or reinsurers need to set up SPVs in order to deal with financial affairs including collecting money or funds by debt insurance, and the majority of SPVs provide services to parent companies only (the originators, insurers or reinsurers). SPVs are not pure reinsurers after all, so they are not required to completely comply with the Directive's requirements of reinsurers. However, a Member State must lay down conditions under which an undertaking should be carried on if the SPV is established in the Member State. The conditions should be laid down by national law, including the scope of authorisation, accounting, prudential and statistical information requirements etc. (Article 46(2)). Furthermore, they must be informed to the Commission on schedule (Article 46(3)).

4.3.3 The UK response

In November 2005, the Insurance Standing Group of the Financial Services Authority (FSA) issued a paper entitled "Reinsurance Directive-Initial Implementation Considerations", regarded as the initial response to implementation in the UK. The FSA is due to publish a formal consultation during 2006 in order to cope with the implementation of the Reinsurance Directive by 10 December 2007. It will not be difficult to absorb the new Directive into the UK regulatory regime, because the majority of provisions for regulating reinsurers have been covered by the rules of FSA already.[16] However, according to the *FSA Insurance Standing Group Paper (11/2005)*, there are three significant areas in which the Reinsurance Directive differs from the existing UK regime. Consequently, the FSA needs to complete essential changes according to the Reinsurance Directive Handbook by the due date (December 2007). The three areas are as follows.

"Firstly, the introduction of principles is based on the "prudent person" approach to asset admissibility for the reinsurance business of pure reinsurers and mixed firms

[16] DLA Piper Rudnick Gray Gary Global Legal Services, (Re)insurance Bulletin (December 2005), p2

(insurance companies that also write reinsurance business). Secondly, it needs to reduce the reinsurance solvency requirements for life and pensions business for pure reinsurers and mixed firms in respect of life reinsurance "protection" business (where the main risk is the occurrence of the insured event, such as death). Thirdly, a requirement to authorise and supervise insurance and reinsurance Special Purpose Vehicles and allow amounts outstanding or recoverable from them should be counted as regulatory capital or as reinsurance/retrocession."

4.3.4 International impact

The influence of the Reinsurance Directive may extend outside EU area and cause an international impact. To cite the EU-US's situation for example, the International Underwriting Association (IUA) predicted that the influence resulting from the unity of EU reinsurance market could drive the US market[17] and it was possible that EU and the US would access to a mutual admission of each other's regulations. The current West European (including the UK) reinsurance markets play decisive roles in the world.[18] Therefore, the US reinsurance capacities are suitable for cooperation with those of the EU due to the huge percentage of US reinsurance protection provided by European reinsurance enterprises. Still one difficulty should be resolved. Regarding current US National Association of Insurance Commissioners (NAIC) rules, where an alien reinsurer carries out business in the territory of the US, the assets must be pledged as security for the outstanding of responsibility. The US

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[17] Regarding the impact on the EU and US regulatory systems, the Director General of the Comité Européen Des Assurances (CEA, the European Federation of National Insurance Associations), Daniel Schanté declared that it would look forward to the directive reassuring the US on abandoning the system in collateralisation imposed on EU reinsurers; the fact that it is imposed on non-US reinsurers only is discriminatory and unjustified, the form of supervision is old-fashioned, costly and inefficient. Moreover, he concluded with a call on the Minister to adopt the Directive at the next possible EU Council meeting (Newsletter Mensal da Associação Portuguesa de Seguradores, No. 26, Brussels, 7 June 2005. p.5). John Tiner, Chief Executive of the UK's FSA had a similar point of view. He stated the anticipated abolition of the system of domestic collateralisation of reinsurance in the reassured's member state, and once the barrier was removed, the EU would have a strong position to push ahead with the US to review its own collaterisation requirements which at present some in the US justify by citing the absence, or in their view lack of adequate proving, of direct regulation of reinsurance in some member states. (FSA's Geneva Association, Speech by John Tiner, <http://www.fsa.gov.uk/Pages/Library/Communication/Speeches/2004/SP213.shtml>, visiting date 28/06/06)

[18] This statement can be traced by historic record. To cite the global reinsurance market in 2003 for example, the annual demand quantity was $58 billion, of which North America held 43%, Western Europe 34% and Japan 12% (data source: A.M. Best), while the percentages of reinsurance premium incomes in the US 27%, Japan 5%, Western Europe (excluding the UK) 42% and the UK 12% (data source: Standard & Poor's).

collateral system is only for geographically selected reinsurers. There is no exception to collateral being impose on non-US reinsurers. However, the EU has removed the collateral requirement already. Hence, this US protectionism will cause unfair competition, because EU reinsurance undertakings find it difficult to enter into the US market and the capital of EU reinsurers may be frozen. This barrier is anticipated to be demolished in the future, so that EU and US reinsurance transactions can flow in either direction.[19]

In recent years, Bermuda has been struggling to promote its global insurance and reinsurance businesses. The insurance regulator, the Bermuda Monetary Authority (BMA), has announced its intention to closely tie with the regulatory authorities in other jurisdictions[20] in order to establish a common standard of re/insurance supervision, under which the cost for regulating alien re/insurance enterprises can be reduced. This announcement has been responded to by the Financial Services Authority (FSA) in the UK. Having begun the link between the UK and Bermuda, it is possible that a global standard of re/insurance regulation may be created in the future.

[19] The EU reinsurers have continually negotiated with the US National Association of Insurance Commissioners (NAIC) and communicated with members of Congress in order to persuade the Federal government to establish an institution, to take charge of solving the EU and US's awkward situation. (NAIC, International report, Issue No. 21, Fall/Winter 2005, p.4)

[20] Brochure: The Brief- The review reports from the world insurance forum, "Article: Mutual recognition", Bermuda 2006, <http://www.worldinsuranceforum.bm/Rebrief-WIF-Mar06-lo.pdf>, visiting date 22/06/06

PART II ALTERNATIVE RISK TRANSFER (ART)

Chapter IV Current types of Alternative Risk Transfer products and methods

5.1 Introduction to Alternative Risk Transfer

5.1.1 Terminology

Following the development of reinsurance, new instruments designed for transferring underwriting risk have evolved into wide territories. The concept of "Alternative Risk Transfer" (hereafter, ART) indicates a range of innovative ways compared to traditional forms of reinsurance. As regards "risk transfer", the name may occasionally be misleading, because not every product of ART requires it. However, the function of ART covers more than the traditional approach to the transfer of risk, but also occasionally includes serving risk financing. For accuracy in name and because of its widespread use the term "Alternative Risk Financing" (ARF) might be appropriate.[1] Both reinsurance and ART modes are designed to acquire economic compensation for specified occurrences or events, the dissimilarity being that the events triggering payment of ART could be whatever risk affects the balance sheet, such as natural disasters, financial crises, a sharp change in the rate of exchange change, the environmental change, etc. The traditional reinsurance indemnification is limited according to the insurance risks of cedants' underwriting businesses. The range and coverage of the risks, in which ART is involved, are wider than those in traditional insurance mechanisms. In addition, ART has a more of an international character than other types of reinsurance.

[1] Central Reinsurance Corporation (Taiwan), "Introduction to Finite Risk Reinsurance" (in Taiwanese), *Reinsurance Information*, (10/04/02003), p.3

5.1.2 The reasons for carrying out ART

Ceding companies seek protection by way of reinsurance, under which insurers or reinsurers prefer to cede their risks to those who are reinsurers or retrocessionaires in possession of solid finance, as is often the case. However, reinsurance still remains the most significant mechanism.[2] From the viewpoint of developing mechanisms of hedge risk, ART can be divided into three possible steps, starting with risk insurantisation, next, reinsurantisation through the reinsurance market,[3] and then by way of ART. Nowadays, either ART or mixed methods have gained the ascendancy gradually. The reasons can be seen below.

(1) Boosting insurance capability

Since the 1970s, natural catastrophes have frequently occurred and underwriters' losses have been rising sharply;[4] furthermore, the limits of sums insured have been soaring. In order to solicit more businesses and to cope with such huge losses, insurance companies are now required to strengthen their capacities. Current re/insurance instruments were insufficient for handling catastrophic risks; hence, placing other than traditional reinsurance coverage was necessary. The alternative risk strategies can provide extra choices for enterprises to strengthen their indemnifying abilities.[5] Originally, there was a satisfactory catastrophic risk arrangement in the syndicates of Lloyd's in London, under which the insurance risks of clients (the direct policy holders) were reinsured by way of LMX (Excess of Loss Reinsurance of Lloyd's Syndicate and London Companies).[6] Following the evolution of the technology of risk management in international transactions,

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[2] The data reported by Swiss Re *sigma* no. 1/2003 reveals that the premium obtained by the global insurance market was USD 370 billion approximately in 2001, meanwhile the premium gained by the ART markets was USD 88 billion.

[3] Zeindler G., "Insuritization of Investments", GTNews website, <www.gtnews.com/risk/home.html>, visiting date 30/10/2002

[4] The global statistics from 1970 to 2002 reported by Swiss Re *sigma* no. 2/2003 shows that catastrophic losses each year before 1987 were seldom in excess of USD 5 billion; by contrast, the 15 year average of loss amount after 1987 (inclusive) was USD 14.6 billion.

[5] A solvent underwriter is a critical actor in the achievement of a successfully operating insurance facility. The impact of catastrophic losses and marketing competition causes the need for ceding companies to have abundant monetary strength; hence, many underwriters have been mergers, consolidation, joint ventures, by means of which their capitalisations can be enlarged. The current tendency is for to become proportional reinsurance less important, because it is only suitable for absorbing either small or middle ranges of risk, but excess of loss reinsurance is a requirement.

[6] Kiln R.J. *Reinsurance in Practice,* 2nd edition, 1986 p.242

catastrophic risks can also be arranged by means of carrying out ART, on the grounds that some ART products are economical alternatives to excess of loss reinsurance, such as insurance-linked securities. Normally, ceding companies with abundant financial resources like to seek overall protection via diverse risk hedges against market losses.

(2) Settling uninsurable risks

In the modern society, ceding companies might consider their timing risks,[7] credit risks,[8] investment risks,[9] market risks[10] and political risks,[11] etc. as belonging to the domain of uninsurable risks,[12] also called speculative risks, by virtue of which either loss or gain may occur; by contrast, insurable risk can bring loss only. Nowadays, potential disasters for businesses are huge and the risks tend to be diverse. It is a challenge to deal with contemporary risks in the modern enterprises. Following the tendency toward the liberalisation of financial regulations, both the insurance and financial circles have noted the importance of determining how to transfer these uninsurable risks.

(3) Tendency toward combination of capital and insurance strategies

ART is an innovation that takes advantage of a capital device to spread insurance risks, by way of which investors' capital is introduced into the domain of re/insurance, and underwriting costs acquire stabilisation, so that the insurers' business risk is more secure. This tendency can easily be observed from the development of ART.

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[7] It is also known as speed of settlement risk, by virtue of which the earlier the claims have been settled, the less investment earnings can be acquired.

[8] It indicates the possibility that the debtor pay back the principal and interest to the creditor by the expiration date. Basically, the higher the default risk is the more remuneration the loaner will demand. In any case insurers or reinsurers will face the credit risks, the main reason being that the quantity of business is several times more than the principal, there may be unanticipated risk of great losses.

[9] The obtainable yield of investment returns and the size and timing of claims settlements are decisive factors of the insurance business's earnings.

[10] For example, during the period of economic recession, all traders may suffer the same fate, leading to a form of catastrophic loss; consequently, no commercial insurer likes to cover this market risk. Even if there is an insurer providing this kind of cover, some abuses are still possible. The assured can increase the quantity of products; thus, the price will be lowered incurring another issue.

[11] In general, political risks are out of the parties' control. That sort of risk is difficult to predetermine; meanwhile, no basis can be relied on to estimate premium.

[12] In order to ascertain what kinds of risk are uninsurable, see M. R. Greene, et al., *Risk and Insurance*, South-Western Pub. Co, US (1977) pp 53-55.

When Hurricane Andrew struck Florida in 1992, causing large insurers losses in the US risk market, many American insurance companies began to search for alternative providers of catastrophe insurance. Thus, the insurance market combined with the capital markets through a specialised vehicle's facility, to operate ART. Following St. Paul Re's issue of catastrophe bonds in December, 1996, several international re/insurance companies, re/insurance brokers and investment banks became involved in the business.[13] The financial ability of the international reinsurance markets was limited; in contrast, the scope of international capital had actually reached twenty billion U.S. dollars at that time.[14] This could cover any insufficiency in the international reinsurance market. In 1999, the Financial Services Modernization Act of 1999 (also known as the Gramm-Leach-Bliley Act) was enacted; it revealed that banking, securities and insurance could be jointly operated under certain conditions. The Act improved fluidity in respect of ART products. As far as the advancement of ART in the US is concerned, it has comparatively tended towards being advanced; nowadays, reference to specific US practice is a requirement for solutions of problems resulting from ART.

Historically, it can be assumed that Lloyd's of London has for a long time led reinsurance market-places all over the world. In the case of international reinsurance transactions, the catastrophe risks are not only ceded by the traditional reinsurance contract, but also through the ART instruments. There have been several helpful pieces of legislation and administrative principles in the English regulatory system, which promoted the development of the combined capital and insurance market. For instance, in June 2001, the Financial Services Authority (FSA), made progress towards integrated prudential standards for more flexible access to the regulations of the insurance and investment businesses.[15] Thus, legal knowledge relating to licensing requirements, limits of insurability and other legal issues under English law are of necessary concern.

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[13] Canter M. & Cole J., "The Foundation and Evolution of the Catastrophe Bond Market", in *Global Reinsurance*, Sep. 1997, at 5-6

[14] The data as reported by Hodge S., "Catastrophe Bonds: Your New Port in a Storm", *Property Casualty Insurance*, (Nov./Dec.1997)

[15] FSA Press Release, Ref. FSA/PN/064/2001, 7 June 2001

5.1.3 Commercialisation of the insurance risk

The innovation of ART has created risk commercialisation. It operates differently from commercial articles traded on the spot market like soybean, or wheat or the way in which futures and options are transacted against tangible properties. By contrast, the invisible subject matter of insurance is transformed into financial products, while maintaining the function of hedging risk. This shift in condition is ascribed to the issuance of derivatives; the subject matter of derivatives is indemnities, by hedging of which the changeable value of insurance can be either averted or reduced.

On the other hand, derivatives are different from reinsurance contracts. The alternative trading mode can be compared to the bottomry and the respondentia,[16] under which loaners or investors previously hand over an amount of money which is equal to the insurance benefits to the borrower. The debtor does not necessarily pay back or refund just the partial amount due to the loaners if any agreed loss has incurred. The debtor must pay the debt of seed capital plus a specified rate of interest to loaners or investors if no loss has subsequently occurred. In contrast with the traditional insurance working system, the parties make a contract in which the insurer is entitled to collect a premium in regard to the cost of bearing risks; meanwhile, payment is imposed in him in terms of loss occurring. Therefore, the position of lenders or investors is similar to that of an insurer, and the role of the debtor resembles that of an assured. In the case of debt and its interest, they are similar to the insurer's indemnity and the premium, while the significant different point is "insurer" to draw "indemnity" in advance. A loan on bottomry or respondentia does not require to be repaid on condition that the ship (or goods) does not safely land; however, if the ship or cargo arrive, the loan coupled with a comparatively huge sum of interest are repayable. The high rate of interest is caused by the expense of marine risk transfer, because there are a series of risks in marine ventures. Nowadays, communication technology has vastly improved. The master obtains a monetary remittance and financial support from the carrier more conveniently during his voyage. Therefore, the security of the loaner, which relies

[16] In the old days, "by the law of the sea the master may, in case of necessity, and under certain restrictions, raise money on the security of the ship, freight, and cargo" (Ivamy, *Chalmers' Marine Insurance Act 1906* (10th ed.1993), p. 17); in contrast, the secured subject-matter of respondentia is merely restricted to cargo.

on a bottomry bond, is infrequently conducted in practice;[17] however, this transacting style has begun to be reconsidered and reset.[18]

In the property insurance field, the actual loss is the maximum of indemnity limit, by restriction of which the principle relating to the contract of indemnity can be carried out; hence, unjustified benefit can be avoided. Nevertheless, this rule does not need to be followed in ART strategies. Extending in meaning, insurable interest is a prerequisite of insurance indemnity; in contrast, the loss or gain traded with derivatives is in accordance with the scope of event/occurrence and the risk index, which is the investor's only concern rather than actual loss. In fact, there is no connection between insurable interest, sums insured and actual loss in a transaction of derivatives.

5.1.4 Legal status of ART

Nowadays, as regards the legal status of ART, it is far from clear whether the legal orientation of ART is towards to the field of re/insurance contracts or whether it falls in other categories. This issue is significant in two aspects. First, if ART is allocated to the re/insurance field, ART transactions must lay emphasis on the insurance elements, as has been demonstrated in the English legal system (duty of utmost good faith, insurable interest and risk transfer,[19] etc.). Secondly, in 2000, the Financial Services and Markets Act was enacted.[20] Furthermore, in June 2001, the Financial Services Authority (FSA), which was given statutory powers by the Financial Services and Markets Act 2000, took the view that an insurance company is able to conduct only insurance business and relative activities directly arising out of that business. On the other hand, this Act also made progress towards integrated

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[17] R. H. Brown, Marine Insurance, Vol.1 – The principles, 4th ed. 1978, p.49

[18] C. Y. Chen, *Alternative risk transfer ART*, The Insurance Advisory Board, (02/2000, Taiwan), pp.1-4

[19] As far as the need for a transfer of risk is concerned, the frequently quoted case for defining insurance (*Prudential Insurance Company v IRC* [1904] 2 KB 658) did not mention it, but English common law admits that there can be no insurance if no risk is transferred. For example, the case of *Pryke and Excess Insurance v Gibbs Hartley Cooper* [1991] 1 Lloyd's Rep. 602 shows that it is permissible for a broker to accept risk on behalf of a reinsurer, the agreement between the broker and the insurer not being a contract of insurance, because there is no risk transfer, and it only provides an instrument for transfer under an individual contract to be engaged in at a later date. This case can be used to analyse *HIH Casualty and General Insurance Ltd v New Hampshire Insurance Co.* [2001] Lloyd's Rep I.R. 224, in which a similar situation to a reinsurance treaty occurred.

[20] This Act implements EU legislation.

prudential standards for more flexible access to the regulations of the insurance and investment businesses.[21] Thus, the concept relating to licensing requirements, limits of insurability and relative issues under English regulation is looser than the elements defined by the English courts. In general, although the ART product satisfies the regulators' requirement, it does not indicate that the same product is also posited in the domain of insurance according to English case law.

5.1.5 The authorities' attitudes towards the regulations of ART

To cite catastrophe bonds for example, the ceding insurers can obtain increased availability of catastrophic insurance, less credit risk and more liquidity than traditional reinsurance.[22] Meanwhile, the returns that investors can acquire while under condition of diminishing overall risk of their portfolio[23] are uncorrelated with the fluctuation of outside catastrophe risk causes such as the stock market or foreign exchange rates.[24] On the other hand, the main obstacle can be imputed in several parts, namely "moral hazard from the insurers",[25] "high transaction cost"[26] and "latitude of interest arbitrage less than other high-yield corporate securities"[27] The problem is how to regulate this mechanism to look after both sides; the insurance enterprises' profits and investors' interests. To meet the trend of liberalisation of the insurance market and with a view to keeping market discipline, the settlement of appropriate regulatory schemes will be investigated at Chapter VI below.

There is a doubt as to whether all ART products can come under the supervision of the Financial Services Authority (FSA), the English regulatory authority. However, once a product does come under the regulations, increased flexibility in regulatory control is possible due to the availability of more diverse products, to meet the demand of consumers, and the need to improve the efficiency of insurers. In

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[21] FSA Press Release, Ref. FSA/PN/064/2001, 7 June 2001

[22] Blended Finite Insurance and Risk Securitization Transactions. Aig Risk Finance Co. Visiting date 19th Jun. 2002 <http://www.aigriskfinance.com/pdf/bfirst.pdf >

[23] Swiss Re New Market, *Insurance-Linked Securities*, (1999), p.19

[24] Froot K., et al., "Chapter V: the emerging asset class: insurance risk" in *Securitization of Insurance Risk, The 1995 Bowles Symposium,* SOA Monograph Ref. M-FI97-1, pp39-40

[25] Chen C.Y., *Reinsurance: Theory and Practice*, (in Taiwanese) Best Wise Co., Ltd, Taiwan, (Feb.2002) pp.390-398

[26] Chiarenza A., Insurance as an Asset Class <http://www.hedgeinfo.com/news/catbonds.htm>

[27] Ibid.

practice, offshore and domestic tax, accounts, risk based capital, insurance, security and future exchange law require overhauling. In the US, the National Association of Insurance Commissioners (NAIC) created the insurance securitization working group, which legislated for the Protected Cell Company Act in 1999, in order to provide regulation concerning the securitisation of insurance risk and derivatives.

5.1.6 ART versus conventional reinsurance

ART products can be operated through the capital market, which is distinct from the reinsurance market in many aspects. First of all, some investors in the capital market lack of professional knowledge of ART risks; they may favour short-term and/or speculative and/or high-yield of commodities. In contrast to reinsurance, a cedant appreciates the risk transfer to a firm and long-term system of coverage. Secondly, as far as prices are concerned, rising and falling interest rates always affect prices in the capital market; however, the premium charged by the reinsurer alters in order to reflect their current losses. Therefore, where a huge loss just has been incurred and/or the market is trending to become hard, the reinsurance premium will be adjusted to a high level. Under this situation, cedants may consider seeking protection via the capital market on the grounds of the rising interest. Conversely, if the reinsurance market has abundant capacity, cedants will prefer to maintain risk transfer by way of reinsurance. Thirdly, issuing an ART product requires arduous preparation, and it is complicated to integrate all of the specialised fields of accounting, finance, trust, bonding and legal regulations etc. By contrast, reinsurance is comparatively simple, even if impromptu placements are available. Fourthly, concerning insurance risk financing, no other re/insurance mode had been available in the past. Having launched ART programs, risk management can further settle other categories than insurance risk. Fifthly, the majority of resources for traditional reinsurance indemnity derive from reserves and cash flow, but the claim funds in ART programs further include debt financing, equity financing, securitisation and so on.

5.2 Self-insurance and captive insurance

The name of ART initially appeared on the description of captive insurance and financial reinsurance. The most important placement of self-insurance is by means of captive insurers. Consequently, self-insurance and captive insurance is classified into the programme of non-traditional reinsurance.

5.2.1 The function of self-insurance

As far as self-insurance is concerned, having predicted potential losses in a period of time by analysing past statistical records, a carrier may raise his own reserve fund via a series of periodical instalments, which reserve can be used to indemnify the claims if a loss incurs in the future. This kind of risk arrangement is thus named self accepting risk. Strictly, the scheme is the usage of alternative reinsurers rather than alternative products. Basically, the carrier is conscious act of risk existence, so he designs to set up funding in order to bear the risk. The main advantages comprise decreasing encumbrance of premium payments, obtaining the indemnity quickly, providing an uninsurable risk sharing instrument and promoting capital operation. However, there are some disadvantages. If the sum of self-insurance has not reached the standard of the law on large numbers, the scheme may be insufficient for solving a large amount of loss. Moreover, self-insurance does not fall into the territory of insurance; hence, tax credit benefits cannot be applied. Self-insurance can be deemed a foundation stone ART. From the financial management's point of view, whatever the self-insurance enterprise conducts, it is required to examine the situation concerning acceptance of risk and financial conditions in order to determine the limitation of self-insurance. In the case of excess of self-bearing limit, the remaining risk can still be transferred by way of traditional insurance or other ART mechanisms.

5.2.2 The function of captive insurance companies

In the case of captive insurance, either an enterprise group or an enterprise combination in possession of large finances can be treated as a parent company, which builds up a subsidiary only for dealing with the insurance business of the

company. In reality, under a captive insurance scheme, a reasonable planning system relating to risk retention will be set up; consequently, controlling risk and spreading risk can be achieved. Basically, arranging captives is usually on the basis of the following insurance advantages. (1) Coverage for risk is not usually insurable: in order to handle the requirement of various sorts of insurance businesses, where the traditional insurance does not satisfy the insurance items of the requirement of the parent company, he can create a captive company either by himself or by alliance with another in the same trade. (2) Tax sheltered: the premium paid out can be looked upon as a tax credit for operating expenses; furthermore, captives are commonly domiciled in tax havens such as Bermuda, the Cayman Islands, Guernsey, etc.,[28] which are under loose regulations, so a broader and simpler insurance contract is easy to procure. (3) Facilitation in reinsurance design: if the reinsurance contract is arranged by the captive insurer, the parent company may acquire a lower premium price but with greater limitations. Because of the improved negotiation position, the trade discount is easy to acquire. (4) Financial benefits: the parent company obtains efficiency resulting from the capital handling via the captive insurer. Reduced insurance costs are a possibility. In addition, the captive business can be an income-earning sideline, so business items can be enlarged. (5) Reduced need for commercial insurance: when a captive insurer tends to mature and his net value is continually developing, the capability to bear risk is improved; thus, the self-retaining rate of parent companies' cessions will be raised. From the parent company's point of view, he will reduce dependence on ceding to conventional underwriting.

5.2.3 Framework of captive insurance

Under a captive insurance formation, the captive insurer may directly issue the policies. However, there can be a fronting company to bridge between the parent company and the captive insurer, as often the case, because captive insurers are usually not licensed to perform business outside of their location. Some jurisdictions stipulate that offshore captives can only carry on business in territories through admitted underwriters; hence, the local insured will choose an admitted insurer as an offshore fronting company to bridge between himself (the local insured) and the

[28] D. Alberts, "Moving insurance securitisation onshore in the United States", *Lloyd's ART Work,* (2nd ed. 2000)

captive. The fronting company is entitled to issue insurance policies, to deal with indemnities, to control loss frequency and to arrange related affairs; additionally, it is imposed on him to transfer the whole or part of the risks and premium to the indicated captive insurer through the reinsurance agreement. Consequently, the captive as a reinsurer is able to make retrocession and to cede either the entire or partial cession; alternatively, he can also retain all the risks following the parent company's direction. Some captive companies can provide insurance product coverage and participate in the reinsurance pool with third parties, so the parent company's source of additional revenue will increase.

5.2.4 Privity issues in a captive insurance structure

A captive cedes 100% of risk to a reinsurer; this is similar to the captive carrying on the insurance business on behalf of the insured. In this circumstance, a special relationship will link the insured, the captive and the reinsurer. The doubt is whether the insured is entitled to negotiate with the reinsurer directly, on the grounds that he is the real insurance carrier, while the captive is just a nominal one. Basically, a privity relationship exists between the insured and the captive insurer, while there is no legal connection between the insured and the reinsurer, and the legal relationships do not tally with the practical situation, in which the actual underwriting parties are the original insured and the reinsurer. If there is a fronting company between the local insured and the offshore captive, similarly, each privity is independent. In other words, there are separate contractual relationships between the insured and the fronting company, between the fronting company and the captive insurer and between the captive insurer and the retrocessionaires.

The insured's duty concerning disclosure of material information to the insurer also requires following this strict principle. Suppose that there is an insurance contract between the local insured and the fronting company, a reinsurance contract between the fronting company and the captive and a retrocession contract between the captive and the retrocessionaire. Consequently, the local insured has an obligation to disclose to the fronting company; the fronting company is obliged to disclose to the captive and the captive has an obligation to disclose to the retrocessionaire. The point at issue is how to improve the retrocessionaire's awkward situation, under

which there will be a chain reaction, in which the retrocessionaire cannot obtain the correct message in the event that the insured breaches the duty of utmost good faith to the fronting company. Although the retrocessionaire is allowed to avoid the retrocession contract by reason of the non-disclosed facts, it must also fit the conditions that the captive was aware of, that non-disclosed facts would have caused the possibility of reasonable enquiry by the retrocessionaire. However, the captive is deceived as well, so this situation is relatively rare. In this circumstance, the retrocessionaire's position can be resolved by the following methods.[29] The first method is that the insured and captive can make a joint presentation, by which the captive effectively assumes the insured's disclosure; the second is that the policy wording can be expressly or implicit made to indicate that the captive's representation of all material facts has been disclosed by the insured; the third method is the reverse design, that the insured is an captive's agent for the sake of the requirement of the reinsurer or the retrocessionaire. As an agent, the insured is responsible to fully disclose and not misrepresent material facts to the reinsurer or the retrocessionaire on behalf of the captive. Activities by the insured within authorisation will be subject to the captive's effect. Under this situation, the reinsurer or the retrocessionaire is entitled to avoid the contract engaged in with the captive in the event that the insured fails to fulfil the duty of utmost good faith.

[29] Barlow Lyde & Gilbert, *Reinsurance practice and the law*, (2004) LLP, paragraph 14.9

5.3 Financial reinsurance

4.3.1 Background

In the 1960's, the Lloyd's Market began to operate reinsurance through "rollover" cover, under which the financial reinsurer was required to pay back the policyholder's premiums if the claim had been made by the reinsured.[30] The features of rollover cover were, first, the policyholder had an option to decide the time of claims recovered from reinsurers as the reinsurance claims paid; secondly, the effective feedback of premiums was allowed to be rolled forward to be the allowance of premiums from year to year.[31] Additionally, the maximum indemnity/feedback by the reinsurer could be designed to be no more than the remaining sum of the reinsurance premium plus interest, and then minus commission. The reinsurance instrument by way of these features of rollover funding policies was called "financial reinsurance". The rollover cover might only be for financial allocation rather than insurance liability assignation and acceptance; in other words, a rollover cover was less a function of the transfer of underwriting risks, but was as if a bank provided the funding turnover for the sake of the original insurers.[32] Moreover, the Lloyd's syndicates might take advantage of financial reinsurance to avoid payment of tax.[33] Although the self-governing system in the Lloyd's market was strict and the authority was satisfied about this operation, several abuses gradually emerged. There was a possibility that underwriters or agents of Lloyd's could set up offshore reinsurers or captive companies in some territories, where confidential communication of banking and lax tax regulations were allowed. Under this situation, premiums paid were easy

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[30] E. Stanley, Research Papers: "The various products which have come to be known as Alternative Risk Transfer", JTW Reinsurance Consultants, <http://www.jtw-re.com/botresearch.htm>, visiting date 12/08/05

[31] Barlow Llyde & Gilbert, "Alternative risk transfer: a jargon free explanation of the basics" (summer 1999), *BLG Law Quarterly*

[32] Funding policy is different from insurance policy. For example, under traditional reinsurance, after a premium has been paid, the reinsurer cannot pay it back, or only if the contract is avoidable. By contrast, after a funding policies' underwriter has collected the premium, he will put the money into investment in order to accrue interest. When the pre-agreed condition has occurred, the underwriter will return the equivalent sum of the premium, which is artificially in the name of reinsurance indemnity.

[33] In reality, the premium of financial reinsurance was equal to the reserve which originally should be deposited. Nevertheless, if the sum could be spent in the name of the expenditure premium, the reinsured would have been capable of legal tax evasion, because the premiums payable and the claims recoverable from reinsurance can be adjusted to a tax classification appreciated by the parties.

to speculate.[34] There was a huge controversy over rollover policies for financial reinsurance, of which the public usually had a bad impression, so the financing facility was subsequently improved by means of "finite risk reinsurance", which provides finite risk transfer, under which the ceding enterprise have the liability of potential loss transferred to the assuming enterprise[35] and the content of risks would rather lay particular stress on financial loss risks than underwriting risks. Additionally, the operating processes are monitored by the related regulations. In 1992, in the US, the FASB (Financial Accounting Standards Board) issued Statement Standard No. 113, "Accounting and Reporting for Reinsurance of Short-Duration and Long-Duration Contracts"; thereafter, if the financial reinsurance contract conforms to this regulatory standard, it can be called "finite risk reinsurance". In order words, finite risk reinsurance develops from financial reinsurance. Both names are often interchangeable in the market; nevertheless, with the notion of protection against the financial risks of insurers, so the name of financial reinsurance will continue to be used hereafter.

The recent development of finite risk reinsurance has reached the realm of comprehensive utilisation concerning multi-risks and multi-years. Multi-risk indicates various kinds of risks covered by a single policy, while multi-years means that a blended policy may is last several years. The innovation of multi-year multi-peril blended cover is also known as blended cover or a hybrid policy.[36] The combination, which uses a policy to link up financial reinsurance and traditional reinsurance, provides multi-layer protections against insurance and uninsurable

[34] Funding policy was introduced to Lloyd's in the 70's and became popular. Afterwards, the majority of syndicates took part in such transactions. Finally, the scandal of Peter Cameron-Webb erupted in 1982. The marine underwriter, Peter Cameron-Webb acted on behalf of a PCW syndicate to deal with a reinsurance affair. He had the affair reinsured by his own reinsurer located within Gibraltar, and then embezzled the premiums to a value of £400 million. (See Lloyd's in the News, "Cold comfort for the Lloyd's losers", copied from *The Daily Mail*, January 16, 1998 <http://www.lliarsoflondon. com/news.html> visiting date 24/06/05)

[35] It is more accurate to name it as a "ceding enterprise and assuming enterprise", because a finite risk transaction can be in existence not only between insurers and reinsurers, but also between individualities and insurers. Finite insurance is engaged by the general enterprise and the insurer; finite reinsurance is contracted by the reinsurer and the reinsurer. The distinction is between the parties involved. (See R. George Monti, A. Barile, *A practice Guide to Finite Risk insurance and Reinsurance*, John Wiley & Sons Inc., p.4).

[36] Swiss Re. often creates new names for new products. The name blended cover or hybrid policy is adopted from the article, Swiss Re, "Alternative risk transfer via finite risk reinsurance: an effective contribution to the stability of the insurance industry", *Sigma No.5*

risks.[37] Through one package placement, premiums can more or less be saved; the reinsurer acquires the combined risks of businesses in one arrangement, which can also save costs. Furthermore, the long duration of blended cover provides stability. The forms of blended cover can be treated as a foundation for reinsurance to slip into the capital market.

5.3.2 Functions of financial reinsurance

In general, there are a number of utilities in the mechanism of financial reinsurance. In the first place, taking advantage of time to spread risks is a significant technique concerning risk management. Under a financial reinsurance bargain, there is a stable, long-term business relationship between the cedant and the reinsurer; thus, the inequality in the underwriting affair, if any, can be made up through adjusting the premium rate, contractual terms and conditions during the relevant years. As the current global market knows particularly keen competition, business connections between parties may only last for a short period. A financial reinsurance contract can maintain two parties' cooperation for the sake of business stability. The next function is to raise money. Financial reinsurance methods are divided between pre-financing (see **5.3.4.1** below) and post-financing (see **5.3.4.2** below) types. In the former, the cedant assumes the reinsurer's breaking contract risk and in the latter, the reinsurer bears the risk of breach of contract by the cedant. Therefore, if financial reinsurance is about to be underwritten, credit risk will be a factor in deliberations as to acceptance or rejection. Thirdly, prospective cover or retrospective policies have their separate effects to satisfy different requirements of clients. A retrospective reinsurance product is especially suitable for a captive insurance company to disperse incurred loss using loss portfolio transfer contracts. Otherwise, if a company faces claims rising from a tangible, let us say, for example asbestos-related, ailment, it will be able to purchase adverse development cover to cope with a series of IBNR (incurred but not reported) losses. On the other hand, the major consumers of prospective reinsurance commodities are insurance companies

[37] For example, there is a cover with blanket arrangements relating to several categories of risk, such as liability insurance, fire insurance, earthquake insurance and other natural disaster insurance. Each kind of risk is settled in order of priority and the exceeding part is individually arranged in two layers of coverage, comprising traditional reinsurance and finite risk reinsurance. Such a complicated insurance arrangement can only be made by means of one blended policy. It is an economic method.

and big enterprises who may use these financial instruments to reduce taxes and to adjust profits and losses shown on their accounts. Fourthly, as far as dealing with corporate reorganisations, mergers and acquisitions is concerned, if a company has a number of long-term latent claims, there will be obstacles to processing these affairs. Normally, the company will not be merged or acquired until all liabilities are cleared off. Using the mechanism of financial reinsurance, especially retroactive cover, to transfer the remaining amount due to the reinsurer, the merger and acquisition between enterprises will facilitated. Similarly, reorganisation will be easier to deal with after the corporations have squared up. Fifthly, due to the fact that the profit origin of finite risk reinsurance is from investment benefit, the reinsurer's premium income will be invested in the capital market; as a result, the capital market will be activated.

5.3.3 Characteristics of financial reinsurance

Financial reinsurance is a hybrid of traditional reinsurance and self-insurance systems, which can be customised by reinsurers. In general, a contract agrees on transferring the cedant's loss risks to the reinsurer during the contract's duration; moreover, a liability limit which involves a commutation feature should be fixed. The premium paid by the cedant will be returned. In addition, the investment income created by the premium should be paid back as well. In principle, the better situation is that the cedant's actual loss is less than his expected loss, then the more profit the cedant obtains from the payback.

There is still no widely accepted definition by the public as to what is financial reinsurance. However, analysing the characteristics and the difference between it and traditional reinsurance, a clear concept can be obtained as to what constitutes either a financial reinsurance or a finite risk reinsurance agreement. (1) The types of risks which a finite risk reinsurance policy pay attention to integrate risk management, by handling a basket of risks to obtain blanket protection,[38] although the capacity of assuming risks is still finite; however, a reinsurance contract is restricted in assuming the insurance risks resulting from underlying policies. (2) The financial reinsurance

[38] Asia Insurance Review, "Alternative Risk financing: Everything you wanted to know were too afraid to ask", (12/1998)

policy will last many years, a long period over which not only can risks be spread, but the cost of transaction will reduce. In contrast, a reinsurance treaty is on a one year duration basis, though some are renewable annually. (3) From point of view of the time dimension of cover, traditional reinsurance is responsible for losses that have not yet occurred; in other words, the insurance claims carry futurity and are of an aleatory nature. In contrast, financial reinsurance bears losses not just limited to the future; retroactive losses can be covered if required. (4) After the indemnity, the remaining sum of premiums paid, if any, should be returned to the reinsured when the policy has expired and the cost of financial reinsurance is calculated on the basis of the individual reinsured's previous losses and claims history. (5) Potential interest during the policy's duration can be a material deliberation when the premium is estimated, so that handling and skill as regards the time value of currency can increase the cost-benefit of the finite reinsurance policy; in contrast, a value on reinsurance premium stands on the risks assumed. (6) The targets of finite risk reinsurance are to moderate the underwriting cycle,[39] to improve financial construction, to approach predictability of the ratio of profit and loss and to structure a long-term stable risk transfer and financing scheme.[40] However, traditional reinsurance is simpler; it deals with risk transfer and by no means risks financing. (7) Risk transfer can be conducted in various ways, such as with extended time, where the time value is emphasised by finite risk reinsurance, under which full acceptance of risk is normally the charge of a single reinsurer. Another difference is that numerous reinsurers may participate in a traditional reinsurance policy.

The Financial Services Authority (FSA) has also submitted a brief description of conditions, under which financial reinsurance or finite risk reinsurance can be provided: "firstly, an element of direct or indirect profit sharing; secondly, multi-year and multi-risk contracts; thirdly establishment of an experience account maintained by the reinsurer according to a specific formula throughout the life of the contract; and fourthly, despite the fact that a main purpose of arrangement is financing, often a

[39] Swiss Re, "Alternative risk transfer (ART) for corporations: a passing fashion or risk management for the 21st century", *Sigma No.2*, (1999), p.18

[40] The Risk Financier, *Contemporary Treads in Finite Risk Re/Insurance Volume 3*, (Jan./1999), p1

limited amount of insurance risk is transferred to the reinsurer but enough for the arrangement to be considered reinsurance for accounting purposes." [41]

5.3.4 Current types of financial reinsurance

Nowadays, the types of financial reinsurance display great diversity. Prospective cover is when potential losses in the future are transferred to the reinsurer in advance. Retrospective cover is when losses assumed by the reinsurer have been incurred. The most important current types can be subdivided as follows.[42]

5.3.4.1 Prospective covers

Under a prospective policy, the cedant acquires protection against the future potential losses. When a balance sheet has been analysed, some risks may have no way of appearing, which belong to off balance sheet risk. For instance, an abrupt terrorist attack incurs catastrophic losses. In order to handle this kind of risk, cedants may arrange off balance sheet reserves; furthermore, prospective contracts can be constituted in order to stabilise such profits and losses.

(1) Spread loss treaties (SLTs)

Nowadays, although a cedant may be able to accurately estimate the total losses which may incur in a period of future time, it is still difficult to make an estimate of the distribution for individual annual losses. Occasionally, the loss range is large but sometimes it is small. The function of spread loss treaties is to stabilise the variations in business results by equalising timing risks within the fixed multi-years. The cession is the surpassed part over the cedant's retention, which features future accumulation of loss. Under a spread loss treaty, the cedant must pay the reinsurance premiums yearly, and then the reinsurer credits the premium sums in an

[41] FSA, "A new regulatory approach to insurance firms' use of financial engineering", Consultation paper CP 144, (07/2002) <http://www.fsa.gov.uk/pubs/cp/cp144.pdf > visiting date 28/06/05

[42] Financial reinsurance forms are continuously developing. The form can even be tailor-made for the sake of the requirement of the cedant, so it is different from a conventional reinsurance treaty which is a standard form. This content below cites Swiss Re's most representative finite risk products as revealed in the Swiss Re, *Sigma.*

"experience account",[43] under which the reinsurer's loss payments, the expenses and the reinsurer's profits are paid; on the other hand, the interest accrued from the experience account still belongs to the cedant. In the event that the balance on the experience account becomes negative, the cedant can spread the loss over payment of premiums in the next contractual years. On the other hand, if the experience account displays positive at expiry date, the cedant is entitled to a share of the surplus.

(2) Finite quota shares (FQSs)

FQSs are one of the oldest forms of finite risk reinsurance. They derive from the US accounting system, under which Statutory accounting principles (SAPs) stipulate that, as soon as a new underlying policy has been issued, all costs resulting from the policy, such as soliciting and issuing fees must be accounted for among the expense items in that cedant's financial year. From the insurance account's point of view, not having obtained the policy's premium income, the cedant has incurred a number of acquisition costs. Therefore, if the premiums soar and the acquisition costs of the underlying policies increase, the profit and loss statement and the balance will display distortion, under which the rights and interests of the cedant's policyholder reduce. In detail, the unearned premium reserves must be calculated on the basis of the gross sums of premium, under which such broker's commission and any acquisition costs must be paid immediately at the time of issuing the policy. Sometimes, the cedant is forced to cope with such costs by sacrificing the policyholder's benefits. It may cause a drain on the policyholder's surplus,[44] which affects the ceding company's financial condition.

A cedant's solvency and capacity can be improved by FQS, under which the cedant determines a sum equal to the unearned premium as the reinsurance premium, and then allots it to the finite risk reinsurer. In return, the finite risk reinsurer will pay a commission which can be used to make up for the cedant's temporary reduction to the cedant. In other words, the situation is similar to that where the finite quota reinsurer makes a loan fitting to the primary insurer's expected income in future

[43] Swiss Re, ibid., *Sigma No.5*, (1997), p.21

[44] If written premiums grow too rapidly surplus will shrink. This is called surplus drain. See "Reinsurance" <http://cobfaculty.stcloudstate.edu/jhaley/f476/chapter8.pdf> visiting date 12/07/05

business years. Furthermore, the liability of the reinsurer is finite and unsuitable for unlimited extension. One possible achievement is that revenue and expenditure are balanced, which would be more difficult in a single year. Commonly, adjusting the distortive accounting conditions require several years, so multi-year FQSs are necessary to operate.

5.3.4.2 Retrospective cover

Under a loss retrospective cover, the cedant's losses, which have occurred before the agreement is engaged but have not been settled, transfer to the cover underwriter. This kind of cover has been used in the insurance and reinsurance business for decades. It is different from a traditional reinsurance contract which is responsible for the losses which happen after the contract has concluded. From the viewpoint of timing, the settlement of claims is profitable. Where the risk's loss or gain is based on either advance or time delay, this is called timing risk.[45] The current forms of retrospective cover include loss portfolio transfer agreements, adverse development cover and time and distance policies.

(1) Loss portfolio transfer agreements (LPTs)

Under an LPT agreement, the cedant will have a liability stemming from the underlying outstanding claims transferred to the reinsurers. The premium is equal to the net present value of the ceded loss reserves plus a loading (such as profits and administrative expenses).[46] Due to the delay in claims settlement, taking into account the time value of money, the cedant's payment is at a discount, which reflects the reinsuer's potential investment gain; thus, the total sum of the premium is lower

[45] One of the most famous retrospective finite policies was bought by MGM after a fire destroyed the MGM Grand Hotel in Las Vegas in 1980. Having only arranged $30 million of liability insurance, MGM bought a back dated insurance policy for $39 million which covered a further $170 million in losses resulting from the disaster. The finite risk insurer forecasted that it would face six years to settle a number of lawsuits from victims and their families; so the insurer had the six-year income on investment estimated and then accepted a low price of premium. However, contrary to the parties' expectation, the lawsuits were settled after two years, the insurer could not bear and the payment of indemnity was rejected. Therefore, MGM filed the lawsuits against the insurers and the brokers. It is a typical situation that the timing value is taken advantage by the insurance enterprise. See A. Barr, "SEC, Spitzer probing so-called finite insurance at Ace", Investors < http://www.investors.com/breakingnews.asp?journalid=24002630&brk=1> visiting date 05/07/05

[46] Swiss Re, "The picture of ART", *Sigma No.1*, (2003), p.25

than the sum of the actual outstanding claims. Commonly, when the contract is effected, the claims liabilities have been estimated on the basis of the outstanding claims and the profits resulting from timing. The settling of claims in advance of the expected time causes a lower potential earning through investment income on the cash-flow; however, a slower than expected claims settlement makes the capital application earning.

(2) Adverse development covers (ADCs)

Both ACDs and LPTs deal with incurred losses that have not been compensated, but a cedant of ADCs pays a premium for the transfer of losses exceeding the level at which the reserves have already been fixed. This type of cover can be placed by either a stop loss treaty, which protects the cedant from losses over an aggregate sum, or as a working or catastrophe excess of loss treaty; therefore, ADCs are also known as "retrospective excess of loss covers".[47] They are different from LPTs, which cope with the outstanding losses insured and reported to the re/insurer; additionally, the LPTs' loss reserves are embodied in the premium and then transferred to the re/insurer. In comparison, the subject covered by the ADCs is the part of losses which is the sum over the cedant's loss reserves but under the actual payment of losses. The exceeding losses probably result from IBNR (incurred-but-not reported) losses[48] and/or a lower estimate of loss reserves. The premium calculation is basing on the nature of risks, the duration of the cover and the total payment of compensation, then converted to the present value; thus, ADCs still take advantage of the time value.

(3) Time and distance policies. (TDs)

Since the early days, Lloyd's of London began to provide time-and-distance contracts in order to solve the incurred losses associated with the cedant's liability. When a contract is effected, the policyholders are required to pay the re/insurer a pre-settled premium, which represents the net present value of future multiple loss payments

[47] C. Culp, *The ART of risk management: Alternative risk transfer, capital structure, and the convergence of insurance and capital market*, John Wiley & Sons, Inc. (2002) p.393

[48] For example, the annual accounts come to an end at the 24:00 of 31st December. Supposing an event incurred at that day's 23:59 so either the cedant has no enough time to report or no reserve has taken account for this event, which will cause excess of loss and affect the cedant's annual revenue and expenditure. ADCs can absorb this kind of losses.

rather than past experience in losses. The re/insurer agrees to pay back by way of instalments in the name of indemnity. This type of return payment is also known as "scheduled payment", because it follows the sums and dates which have been set up and recorded in the contract.[49] In reality, the role of re/insurers is like that of a savings bank. The re/insurer of time and distance policy only bears investment risk, which is only restricted in the event that the actual profit resulting from the investment is lower than the expected profit. As the investment profit will be in the future, so-called time & distance implies the distance of a period of future time.

5.3.5 The nature of financial reinsurance

There is a doubt as to whether a financial reinsurance contract is an insurance contract or belongs to other domains (for the present merely seeking to determine the nature of the law, not the regulatory issues). The regulations concerning ART will be discussed in **Chapter VI** below. A commonly cited definition of insurance is from *Prudential Insurance Company v. Inland Revenue Commissioners*,[50] which provided a general, not comprehensive description. In this case, Channell J revealed that three components served as the identifying items. (1) Insurance contract for some consideration, generally but not necessarily for periodic payments called premiums. In return, the insured obtains some benefit of protection against the occurrence of an event; (2) the event must be uncertain as to whether it will happen or not, or if the event will happen, there must be uncertainty as to when; and (3) the event must be adverse to the insured, in that he or she possesses an insurable interest in the subject matter insured. If a contract conforms to these three elements, it may be treated as an insurance contract. Although English law has adopted a practical approach to defining an insurance contract, it has not yet made out an exhaustive one.[51] Various types of financial reinsurance contracts have been widely used in London, including Lloyd's syndicates and other markets. Such various financial reinsurance contracts

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[49] Swiss Re, "Alternative risk transfer via finite risk reinsurance: an effective contribution to the stability of the insurance industry", *Sigma No.5*, (1997), p.16

[50] [1904] 2 KB 658

[51] In *Medical Defence Union v. Department of Trade* [1979] 1 Lloyd's 499, Sir Robert Megarry V-C stated that, "...whether a satisfactory definition of a "contract of insurance will ever be evolved. Plainly it is a matter of considerable difficulty, it may be that it is a concept which is better to describe than to attempt to define..."

cannot be discussed or regarded as being in the same frame but should be analysed separately according to type.

5.3.5.1 The nature of prospective cover

Under a prospective policy, the cedant must pay a premium in order to secure against loss, if any. The policy covers loss which is under uncertainty; in other words, when parties engage in a prospective policy, the reinsurer's liability relating to indemnity does not yet exist, so this kind of agreement is also known as a future loss agreements. Moreover, there is no doubt that the cedant has an insurable interest in the subject matter[52] (see **3.1, Chapter III**). Therefore, the nature of prospective covers can be treated as that of insurance contracts; consequently, under a prospective contract, the reinsurer is in charge of indemnifying the cedant's loss if any agreed event or occurrence has occurred. A slightly different point from the traditional one is that prospective financial reinsurance contracts take advantage of alternative methods to administer accounting affairs, such as disbursing and accepting premium, settling commission and paying for losses etc. Whether using spread loss treaties or finite quota shares, the performance of which require sophisticated skills (see **5.3.4.1** above) to correct parties' financial conditions and related statements, the aim of risk transfer and financing may be achieved.

5.3.5.2 Legal considerations arising out of retrospective cover

The framework of the retrospective types of financial reinsurance is more complicated than that of the prospective ones. Furthermore, it is quite dissimilar to the formation of traditional insurance. The most significant distinction is that the subject matter of the retrospective contract is the certain liability of the cedant on the grounds that a loss covered by the direct policy has incurred. However, from the perspective of legal elements, protecting against such uncertain happenings or unknown time of

[52] The most common cited definition of insurable interest is the case of *Lucena v. Craufurd* (1806) 2 B & PNR 269. In that case, three elements were identified: (a) whether the insured had a genuine interest in the subject matter; (b) whether the insured was prejudiced if any thing adverse happened to him; and (c) his interest can be partial, or at least not necessarily whole. Lawrence J. further referred to the case "...where a man is so circumstanced with respect to matters exposed to certain risks or dangers, as to have a moral certainty of advantage or benefit, but for those risks or dangers he may be said to be interested in the safety of the thing".

losses is one of the essential factors in constituting an insurance contract. Following this inference, retrospective cover is by no means in the nature of a pure insurance contract, without discussing regulatory concerns for the present.

There remains a doubt with not knowing what the nature of retrospective policies might be. In the case of the nature of a loss portfolio transfer (LPT), a contract is to be described as a "sale"[53] of liabilities carried on the balance sheet of a cedant rather than as pure reinsurance. The cedant consequently withdraws the retained liability to solve the outstanding claims; meanwhile, he obtains commission in return from the reinsurer. The working of the system can be compared with a sales contract relationship between the seller (the cedant) and the buyer (the reinsurer).[54] The outstanding claims reserves can be contrasted to the "buyout" which involves not only the liability to indemnify but also the investment benefits using the premium income. On the other hand, the payment of commission is equal to the sale's consideration. In the case of adverse development covers (ADCs), the origin is extended from LPTs, so these two types are conceptually similar. The only different point is that the subject matters of ADC "sales" are the parts of IBNR and incurred loss, but are insufficient in preparing for the loss reserve. Both parts exceed the scope of the subject matters transacted in LPTs (see **5.3.4.2** above); meanwhile, the commission is equal to the consideration, in view of with which ADCs are on the same basis as LPTs. As far as a time and distance policy is concerned, its construction is different from either an LPT or an ADC one. Nevertheless, it is like a form of investment, [55] under which the "premium" is regarded as a deposit and the "recoveries" as a repayment of the deposit with interest. The function of the reinsurer is like that of a savings bank, by operation of which the depositor (the cedant) saves money under the savings

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[53] IRMG, "Protecting Your Business – Solutions for complex Risk: Loss portfolio transfer" <http://www.aon.com/risk_management/pdf/captives/lpt(uk).pdf >, visiting date 14/07/05

[54] Perhaps a contract of LPTs or ADCs could be compared with a contract of loan; however, after detailed analysis, it is preferable not to make this analogy. Apparently, either an LPT or an ADC is like a lender making a loan to the borrower. However, under a loan, one of the essential elements is that the borrower needs to complete repayment by contract expiry. In the case of an LPT or an ADC policy, the commission paid by the reinsurer is not required to be repaid by the cedant. For this reason, the nature of both LPTs and ADCs does not correspond to that of loan contracts. See Converium, "Financial reinsurance applications in life reassurance", <http://www.converiun.com/ 2043.asp>, visiting date 18/07/05

[55] P.K. Clark, F. Duncan, A.N. Hitchcox & M.G. White, "Financial reinsurance" GISG, General Insurance Convention 1991, p.12 <http://www.actuaries.org.uk/files/pdf/library/ /gic1991/fin_re.pdf >, visiting date 17/07/05

bank's (the reinsurer's) custody and the reinsurer should repay capital with interest according to the pre-agreed schedule of payment.

5.4 Introduction to the securitisation of insurance risk

Securitisation is "the process of removing assets, liabilities, or cash flow from the corporate balance sheet and conveying them to third parties through tradable securities".[56] Insurance risk securitisation involves a number of innovative strategies for hedging risk, which enables future potential losses or gains accrued from risks of cedants' businesses to be transformed into tradable securities, in exchange for which an investor pays a sum of capital. Therefore, catastrophe or other kinds of specified risks linked with an insurance contingency, transfer to the widespread capital market and are born by the investors. Nowadays, there are a number of international investment banks, securities firms, reinsurance brokers and reinsurers that have begun to launch various types of insurance risk securitisation. In recent years, they further set up departments or new firms[57] to take charge of those affairs; thus, it is not hard to foresee that there will be ample development in the securities business in the future. Normally, insurance risk securitisation transactions involve multinational enterprises; causally, they require analysis of practical status in territories which comparatively tend towards integrity, such as the US, the UK and some European countries, particularly as regards effects on insurance risk sharing.

5.4.1 The development of insurance risk securitisation

A series of natural disasters occurred in the early 1990's as a result of which international reinsurers faced huge losses, and the international market for catastrophe reinsurance became impoverished. In order to cope with the situation of how capital resources, underwriting conditions became stricter and reinsurance premiums rose. In order to resolve the difficulty, the concept of insurance risk securitisation was activated.

CBOT (Chicago Board of Trade) launched catastrophe insurance futures contract in 1992 and catastrophe insurance futures call spreads in 1993. Traded in the public,

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[56] See Erik Banks, *Alternative Risk Transfer: integrated risk management through insurance, reinsurance, and the capital markets* (2004), John Wiley & Sons, p.115

[57] In order to deal with insurance risk securitisation, the reinsurer, Swiss Re. established the Swiss Re. New markets; the reinsurance broker Aon set up the Aon Capital market, the securities firm Marsh & McLennan proceeded in strategic alliance with the reinsurance broker, Guy Carpenter.

this kind of standard contract led to somewhat more funding being available to make up for the insufficient capability in catastrophe reinsurance businesses. It was the first step of insurance risk securitisation that integrates insurance and capital operations.[58] However, after an initial period, the products were a failure,[59] due to no limitation on the amount of losses.

The CBOT launched PCS catastrophe options (property claim service catastrophe options) in 1995.[60] The concept of insurance risk securitisation was gradually established in the insurance enterprise. Following the CBOT's issuing of PCS, BCOE (Bermuda Commodities Exchange) launched GCCI options (Guy Carpenter catastrophe index options) in 1997. It provided risk hedgers with another choice. Both PCS and GCCI conducted the process of securitisation, by which standard contracts were publicly traded, so risks were transferred to the capital market. Meanwhile, the concept of securitisation also entered into "over-the-counter"[61] markets; as a result, catastrophe bonds were created. Following Hanover Re's success in the issue of catastrophe bonds in 1994, several international reinsurance companies, reinsurance brokers and investment banks became involved in this domain. Besides catastrophe bonds, there are several products in the over- the- counter market. This kind of securitisation product focuses on obtaining finance rather than transferring catastrophe risk after the loss has been incurred. In 1995, the Nationwide Mutual Insurance Company capitalised on contingent surplus notes

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[58] Financial products from both are based on the ISO Index (Insurance Standards Organisation) for valuation of losses. There were several kinds of policies, including homeowners, multiple commercial perils, earthquake, fire, related catastrophes, automobile and physical damage, farm owners, inland and marine commerce; the financial schemes provided protection against property and casualty losses (R. Carter, L. Lucas & N. Ralph, *Reinsurance*, (4th ed, 2000) Reaction Publishing Group, p.752).

[59] These kinds of CBOT futures only lasted for a short period of time and soon were terminated, as were the CBOT launched Catastrophe call spreads which lasted only two years for hedging commodities. The failure is imputed to the immature market, under which ISO data were insufficiently known to the public. The products caused speculators an excessive range of losses, and market speculators lost interest. See C. J. Allard, "The Development of Risk Securitisation", *Insurance Risk Securitisation - A Guide for Issuers and Investors*, (July, 1999), Reactions publishing.

[60] Owing to the information of catastrophe losses being adequately made public and the contract conditions being properly designed, the volume of business of PCS CAT options was obviously developing. However, it only held a minor ratio in the whole reinsurance market and did not take the place of traditional reinsurance. (C. J. Allard, "The Development of Risk Securitisation", *Insurance Risk Securitisation - A Guide for Issuers and Investors*, (July, 1999), Reactions publishing)

[61] Whatever the securities are not listed or available on an officially recognised exchange market but traded in direct negotiation between buyers and sellers.

(CSNs) to collect $400 million on stand-by.[62] Under the operation of CSNs, the risk hedge seeker purchases the right to issue in the future to investors at preset terms in exchange for cash or liquid assets on the condition of the specified losses taking place; therefore, the CSN issuer can take advantage of cash or liquid assets to pay catastrophe losses. In 1996, the RLI Corporation bought catastrophe equity puts, giving it $50 million in contingent financing.[63] In general, catastrophe equity puts are securities that entitle the hedge seeker (an equity puts buyer is normally is an insurer) to the right to sell certain shares of their stock to investors (equity puts seller) at a predetermined price when catastrophe losses exceed the levels specified in the options.

Weather derivatives appeared in 1996. That market has subsequently broadened. They were introduced to stabilise the earning of US utility companies, whose earnings varied with changes in weather. To cite CME (the Chicago Mercantile Exchange) for example, in 1999, CME launched two kinds of futures and options because various of business losses coming from changeable weather; namely CME Heating Degree Day futures and options designed for dealing with the risks resulting from high temperature; CME Cooling Degree Day futures and options were to cope with the losses rising out of low temperature. Up to present, the majority of products concerning securitisation of risk are still on the basis of catastrophe risk; occasionally, some products have begun to cover the other kinds of risks, but they are still in the minority. As far as the tendency of insurance risk securitisation in the future is concerned, the international reinsurance market will not only continually develop hedge catastrophe risk products and technology, [64] but will also focus on securitisation on the basis of some non-catastrophe risks, such as worker compensation insurance risk, health insurance risk, car insurance risk and so on.

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[62] ISO studies and analyses, "Financing Catastrophe Risk: Capital Market Solutions" <http://www.iso.com/ studies_analyses/docs/study013.html>, visiting date 01/09/05

[63] ISO studies and analyses, "Financing Catastrophe Risk: Capital Market Solutions", ibid.

[64] E-commerce has become popular in the modern day, and new technology has been introduced into the catastrophe insurance market. The Catastrophe Risk Exchange (CATEX) was a global computer trading system established in 1994. In 1998, it launched risk assumption and transfer businesses through the electronic market, under which insurers, reinsurers and brokers were allowed to be members, and then traditional re/insurance and the various ART products were entitled to be swapped or traded day and night. See <http://www.catex.com>

5.4.2 Insurance-linked securities versus asset-backed securitises

Insurance-linked securities (ILS), if directed against catastrophe risks, can also be called catastrophe bonds, or Act of God bond. Certain types of catastrophe bonds can be designed to cope with losses triggered by earthquake, tornado, hurricane, typhoon, flood, hail, riot and any other natural or man-made calamities that may cause huge losses. Insurance-linked securities (ILS) are traded via the capital market, where investors spend principals as purchase payment; in return, the insurer pays the pre-agreed coupon by instalments. The uncertainty is whether the principal and coupon will be paid back or how much of the sum will be refunded. The answer depends on whether the loss occurs and how the situation is affected by the catastrophe. Therefore, when an insurance-linked security is issued, the repayment and coupon cannot be assessed.

There is one issue that may confuse the regimes between insurance-linked securities and asset-backed securities. Asset-backed securities[65] contain mortgage backed securities, automobile backed securities, credit card receivable-backed securities and so on, under operating of which the originator (the original creditor) establishes a Special Purpose Vehicle (SPV).[66] The next step is that the originator has the credits, which are under the same rating, transferred to the SPV, so-called pool; hence, there will be a trust relationship between the originator and the SPV, by function of which the SVP can issue the asset-backed securities, also known as securitisation by pooling.

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[65] Securitisation can be generally divided into two major types, traditional securitisation and asset securitisation. The traditional type is when enterprises or companies issue stocks, debentures, convertible bonds etc. for the sake of collecting business capital; additionally, this method of financing involves reselling securities to mass investors through securities firms. Relying on the credit of the enterprise or the company itself or a governmental organisation, it is not necessary to go through a financing institution as an intermediary. Asset securitisation can be subdivided into financial securitisation and real estate securitisation according to the nature of the assets. Without specific reference, asset securitisation refers to enterprises or companies that have their assets transformed into the form of securities, by virtue of which the securities are floating and marketable.

[66] Carrying out asset securitisation can be divided into five basic steps. To cite mortgage backed securities for example, the first step is origination, under which the banking institution grants loans to the borrower and obtain a hypothec on the security assets in accordance with their loan contract. The second step is pooling, under which the banking institution gathers together the businesses of loans which possess the similar conditions, and then has them transferred to a SPV or a trustee. The third step is credit enhancement, under which the SPV or the trustee may provide over-collateralisation, pooling coverage through insurance or/and arrange the third party issuing stand- by L/C or guaranty. The fourth step is sale and trading, under which the SPV commonly authorises the security traders to the investors. The fifth step is servicing, under which the lending bank, the SPV and the trustee receive interest according to schedule, and then hand over the interest to the investors.

The main purpose of this kind of asset securitisation is to transfer the default risk of debtors to the investors via a capital marketing mechanism.

The similarity between insurance-linked securities and asset-backed securities is that, under the two regimes, the originators require the establishment of SPVs, which can be treated as their subsidiaries, to deal with the business of issuing securities. However, there are a number of differences between the two kinds of securities. (1) First, most of the originators of insurance-linked securities are insurance or reinsurance companies; by contrast, in asset-back securities, the majority of originators are banks or credit card issuing companies or the like. (2) Secondly, what insurance-linked securities will securitise is the premium incomes of the ceding company and the cash flows caused from compensating for catastrophe losses during the valid time of the securities; by contrast, the target of asset-backed securities is to securitise the cash flows coming from the receivables collection and the irrecoverable loans or credits during the life of the securities. (3) Under a placement of insurance-linked securities, the SPV, which is a subsidiary, issues a re/insurance or retrocession policy to the originator, who is a parent company; under a scheme of asset-backed securities, the SPV dose not necessarily issue any policy to the parent company. (4) As far as correlation is concerned, insurance-linked securities correlate with a certain number of catastrophe losses or loss indexes, but there is no correlation in the operation of asset-backed securities. (5) Being an investor of insurance-linked securities, the risks are on losing principal, after an occurrence, or a breaking of contract, such as no coupon payment or no proposal returns at expiry date. Under operation of asset-backed securities, the significant risk of investors is the payment risk stemming from debtors, who could be default or require earlier refund.

5.5 Catastrophe bonds

Catastrophe bonds (hereafter, CAT bonds), are also known as insurance-linked bonds, catastrophe-linked securities or Act of God bonds, a typical type of catastrophe risk securitisation. Having issued bonds, the originator is required to make payment under a coupon issued to the bondholders, according to the regular time schedule, through his SPV (Special Purpose Vehicle), if there is no catastrophic loss triggering payment or the loss has not been incurred within the duration of the CAT bond. In the event that any catastrophic loss incurs, the bondholders will lose the whole or part of their investment principal. In other words, whether the principal and coupon are payable to the bondholders depends on to what extent and how the originator is liable to compensate for his own business losses.

5.5.1 The nature of catastrophe risks

Almost every enterprise has potential catastrophe risks, which can be spread by launching CAT bonds. Catastrophe risks have several possible characteristics: (1) the frequency of catastrophe is low. The probability of common risks causing normal size losses may be up to ten times more in a single year. In contrast, the probability of catastrophe risks leading to catastrophe losses may arise only once every several decades. Due to infrequent occurrence, there is a lack of complete statistical data, so catastrophic risks and losses are difficult to forecast and estimate. (2) A widespread catastrophe risk will cause underwriters to suffer huge losses. A general insurance contract normally involves only one subject-matter insured. By contrast, a catastrophe risk may affect a number of subject-matters, which are destroyed and suffer from losses spreading to many areas. Catastrophe risks potentially either make insurance enterprises suffer grievous losses or force them into insolvency. (3) Due to the high variability in catastrophe risk, historic records are less important, as they cannot serve as a reference to value risk level. (4) As far as defining a catastrophe loss is concerned, PCS (Property Claims Service of the American Insurance Services Group Inc.) state that a catastrophe loss is a single event or occurrence amounting to more than $25 million (inclusive) of sum loss, which would affect numerous insurers and the assureds involved in the insurance

enterprise.[67] In practice, this criterion has been used to judge how many amounts of losses can be treated as catastrophe loss.

5.5.2 The main roles in a catastrophe bond scheme

Launching CAT bonds is a difficult task. It may involve a number of parties, such as originators/sponsors, Special Purpose Vehicles (hereafter, SPVs), investors, trustees and so on. These parties have their individual uses in a catastrophe bond scheme. Their principal functions are discussed below.

5.5.2.1 Originator/sponsor

Originators or sponsors are those who hedge the catastrophe risks resulting from their businesses by way of launching CAT bonds. Although the majority of originators or sponsors are insurance underwriters nowadays, it is worth noting that an originator or sponsor is not restricted to the enterprise carrying on re/insurance business. Sometimes, non-insurance proprietors or groups are allowed to apply the mechanism of CAT bonds. For example, the Tokyo Disneyland theme park in Japan, a famous non-insurance ceding company, tapped capital markets in order to cover its catastrophe exposure.[68] Whenever a large enterprise has the ability to issue CAT bonds independently, it can directly pass business risks to the capital market. The advantage is that risks are undertaken by the whole financial capital market; there is no risk of the insurance company's insolvency with regard to settling claims.

5.5.2.2 Special purpose vehicles: SPVs

The regulations in some jurisdictions currently do not allow re/insurance enterprises to launch directly any non-insurance business. However, this restriction seems to be

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[67] The current setting of $25 million has been effective since January 1, 1997. From 1982 to 1996, PCS (Property Claim Services) used a $5 million threshold in defining catastrophes. Before 1982, PCS used a $1 million threshold. (Source: Insurance Information Institute, <http://www.iii.org>)

[68] In 1999, the business operator of Tokyo Disneyland, Oriental Land Ltd., issued $ 200 million catastrophe bonds, because there was no insurance company accepting its huge risks stemming from earthquakes. By launching the catastrophe bonds, the originator obtained protection against the risks resulting from the damage of valuable equipment and the enormous break off from carrying on business.

loose. For example, the EU Reinsurance Directive entitles Member States to establish SPVs within Member State territories (Article 46(1)). In order to launch CAT bonds, insurers or reinsurers (originators) need to set up SPVs. An SPV provides services to parent companies only (the originators, insurers or reinsurers), as is often the case. In order to be an independent entity, to prevent embroilment in the insolvency of the originator/sponsor and to seek lax regulations for tax payment, an SPV is usually domiciled in an offshore tax haven, such as Bermuda, the Cayman Islands and so on. In these territories, establishing a commercial entity or a company only requires payment of a certain registration fee. Moreover, there is no regulation to restrict maximum or minimum company capital. For dealing with bond transactions only, an SPV can be designed for termination after the overall tasks have been completed.

Similar to a captive insurance, an SPV only provides service to its parent company (the originator/ sponsor), and it plays two roles. First, an SPV is either an insurer or a reinsurer:[69] collecting money from the bond purchasers as the principal, the SPV is liable to provide multi-year re/insurance coverage for its parent company. Secondly, an SPV is a bond issuer: having engaged in a re/insurance contract with the originator, the SPV accepts the business risks originating from the originator and the risks are spread to mass investors through the sale of CAT bonds. Basically, an SPV is an intermediary bridging the insurance and capital industries. If a pre-agreed loss occurs during the duration of the bonds, the SPV takes responsibility for paying the indemnity to the originator, who is like a captive insurer's parent company. If no loss occurs before the expiry date of the CAT bonds, the SPV will be liable to return the principal to the bondholder.

If the originator sets its SPV offshore, there will be a doubt as to whether the SPV requires local regulatory permission to operate a re/insurance business. The answer will depend on what kind of trigger has been settled in the SPV and the originator's contract. Basically, triggers can be either on an indemnity or on an index basis. The details are as follows. (1) Indemnity trigger: the condition for the SPV paying the originator follows the originator's actual loss on the ground that there is a privity

[69] Consequently, the SPV will be a reinsurer if the originator or sponsor is an insurer; conversely, if the originator or sponsor is a general business enterprise, the SPV will become an insurer.

of reinsurance contract between the originator and its SPV. Thus, the SPV is in a position to be a reinsurer, more accurately termed an SPRV (Special Purpose Reinsurance Vehicle). The SPRV needs to acquire a license for running re/insurance business under the domicile's regulations. (2) Index trigger: if the condition of indemnity is based on the parameter and index of catastrophe events, there is no reinsurance contract between the SPV and the originator, but a financial contract instead. Consequently, the SPV does not require a license to run a reinsurance business.

5.5.2.3 Investors

Investors are those who purchase catastrophe bonds. In the event that a specified occurrence occurs, the investors will suffer losses, because they cannot take back all or part of the seed capital; alternatively, the seed capital investment return will be delayed. Basically, a CAT bond investor takes greater investment risks than on other investment products due to the constant link with catastrophic losses. On the other hand, the SPV will normally have money collected from the investors held on trust; as a result, the investors' credit risks are either very low or almost null.

The majority of catastrophe bonds have a three to five year term; thus, investors can arrange for long-term investment. Due to the variation of margin being smaller than for other kinds of investment assets, the investors' profits are comparatively firm.[70] Sometimes, the quantity of margin can reach five to seven times that of the expected loss.[71] The potential earning profits are often better than those at the same level of company debenture stocks.

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[70] After CAT bonds had just appeared in the capital market, the majority of investors were reinsurers. Afterwards, more and more non-insurance enterprises plunged into investment. Nowadays, there are various enterprises plunging into investment in catastrophe bonds, such as mutual funds/investment advisors, reinsurance/intermediaries, proprietary/hedge funds, banks, non-life and life insurers (Goldman Sachs, Property Catastrophe Securitization, 2002).

[71] As far as earning profit is concerned, an investor is usually in an advantageous position which is attractive. For example, there has not been any historical record concerning the indemnity of a catastrophe bond yet. On 23 Oct. 2004, the earthquake in Niigata Japan, causing the Phoenix Quake Wind II's trigger, can be regarded as the first trigger event incurring. However, the mechanism has not caused any indemnity to the cedants yet. D. Y. Hsu, *Risk transfer of catastrophe bond*, Taiwan, July 2005, Chung-Yang University, p10

5.5.2.4 Trust enterprise

The cedants and investors undergo credit risk resulting from the fact that the SPV may unscrupulously abuse his asset if there is no suitable custody. In practice, the SPV may hand over its assets to the trust enterprise. Through a suitable quarantining of asset, cedants' and investors' credit risks will be reduced. When the bonds expire or if a trigger event occurs, the trust will be responsible for giving back the asset to the trustee/SPV so that the SPV can settle the money for the investors or the cedants.

5.5.2.5 Short-term investments markets

In order to provide guarantees of payment of interest and principal on CAT securities, an SPV may plunge into a short-term investment. The capital investment may result from interest from a trust or any other sum, but excluding the money being deposited to the trust. For example, the SPV may use a swap in the swap market, as is often the case. The swap counterparty provides interest rate swaps to hedge against interest rate related risk, by which the credit of the SPV can be enhanced.

5.5.3 The general structure of catastrophe bonds

The typical structural model regarding cash flow and the contractual relationship for CAT bonds are illustrated as follows. The process of operating catastrophe bonds can be divided into two basic time phases. The first period of time is before the catastrophe loss is incurred; the other concerns affairs after the catastrophe loss has occurred, if any.

5.5.3.1 The process prior to triggers occurring

Prior to the agreed catastrophe loss occurring, several steps should be carried out (See Figure **5.1** below).

(1) The first step is for the initiator to create an SPV, normally in an offshore tax haven.

(2) After the role of the SPV has been established. The next step is to deal with the privity issues between the SPV and the cedant, who is normally the initiator. The SPVs provide insurance coverage to the cedants and the cedants are responsible for paying premiums to their SPVs. Sometimes, an additional insurer will be arranged to buffer the cedant and the SPV (see **5.5.2.2** above). This can avoid the cedant's reputation being directly ruined in the event that any inappropriate activity has been carried on by the SPV.

(3) The third step is to engage in contracts of catastrophe bonds between a number of investors and the SPV. Commonly, catastrophe bonds are designed as one kind of restricted security, by virtue of which the investors should be in possession of certain qualifications recognised by the law if they would like to conduct the transactions of catastrophe bonds.[72] When an investor purchases catastrophe bonds, he must previously pay all the purchase proceeds to a sales agent who is normally a professional underwriter for the SPV, who issues the catastrophe bonds and hand them over to the investor. The money paid for the bonds purchased will serve as the indemnity if a catastrophe event occurred in the future.

(4) The fourth step concerns the SPV managing the money collected from the investors. Often, the SPV arranges all or part of the money raised from the investors (capital) for deposit in a professional trust fund, under custody of which the rights and interests of the transaction parties can be conserved and the risk level can be reduced to the lowest. There is a contractual trust relationship between the SPV and the trust; reasonable management is necessary; hence, the capital of the trust fund is only allowed to be invested in exchequer bills, government securities and any other null risk independent accounts. Only when the pre-agreed trigger has occurred can the trust fund be drawn on to pay the catastrophe loss's indemnity. Ordinarily, the trust fund requires payment of interest to the SPV according to the provision of the trust contract.

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[72] In the US, regarding the qualifications of securities purchasers and resellers, the Securities Act, Rules 144A, 501(a) and 902(o) reveal related regulations. Basically, the purchasers of restricted securities must be under qualifications ruled by the law. Moreover, the restricted securities will be purchased directly from the issuer or an affiliate of the issuer rather than through a public offering.

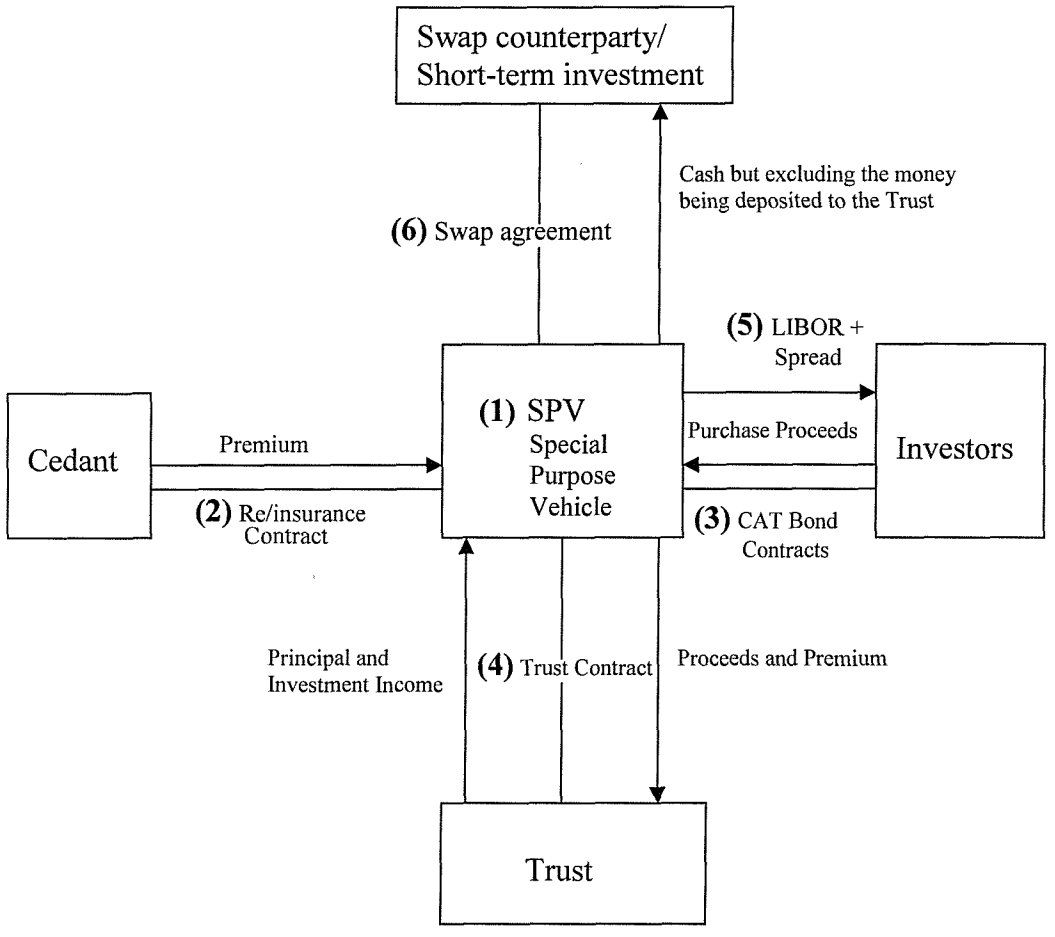
(5) The fifth point is that the SPV is liable to pay the coupon to the bondholders. Signing contracts of catastrophe bonds with investors means that the SPV is liable to pay the bondholders coupons which serve as the profits of purchasing. Normally, calculation of the coupon is according to LIBOR (the London interbank open rate) plus the reward of credit risk spread.[73]

(6) Occasionally, the SPV will put the interest from the trust fund plus the premium received from the cedant to good account in a short-term investment. However, in order to cover the risk of the rate of return on the short-term investment being lower than LIBOR, the SPV may carry out interest rate swaps in the swap market.[74] The timing of coupon payment and premium collection is significant; they should be synchronised, because the main source of coupons to pay to the bondholders is the premium sum collected from the cedant by the SPV.

[73] The effect resulting from credit risk spread is usually from 2% to 3%. (C. Y. Chen, *Reinsurance: Theory and Practice*, Best Wise Co., Ltd, Taiwan, (Feb.2002), p.369)

[74] The interest rate swap is in the nature of a contract, under which two parties agree to mutually swap in their interests during a certain period of time. The contracts of interest rate swaps can be divided into two main types. One is a fixed interest rate in exchange for a floating interest rate; the other is a floating interest rate in exchange for a fixed interest rate. Normally, an insurance company will use a floating interest rate in exchange for a fixed interest rate. The insurance company is aware that the amount needs to be spent in the future. Taking advantage of the mechanism of interest rate swaps, the insurance company can avoid the risk resulting from rising and falling interest rates during the duration of the interest rate swap contract.

Figure 5.1: CAT bond cash flow prior to the triggers occurring



5.5.3.1 Operation posterior to the trigger occurring

The above processes are on condition that either there is no occurrence during the duration of the bond or the occurrence has not happened yet. Once an actual catastrophe loss surpasses a specified amount, or trigger, the process will enter into another stage (See Figure **5.2** below).

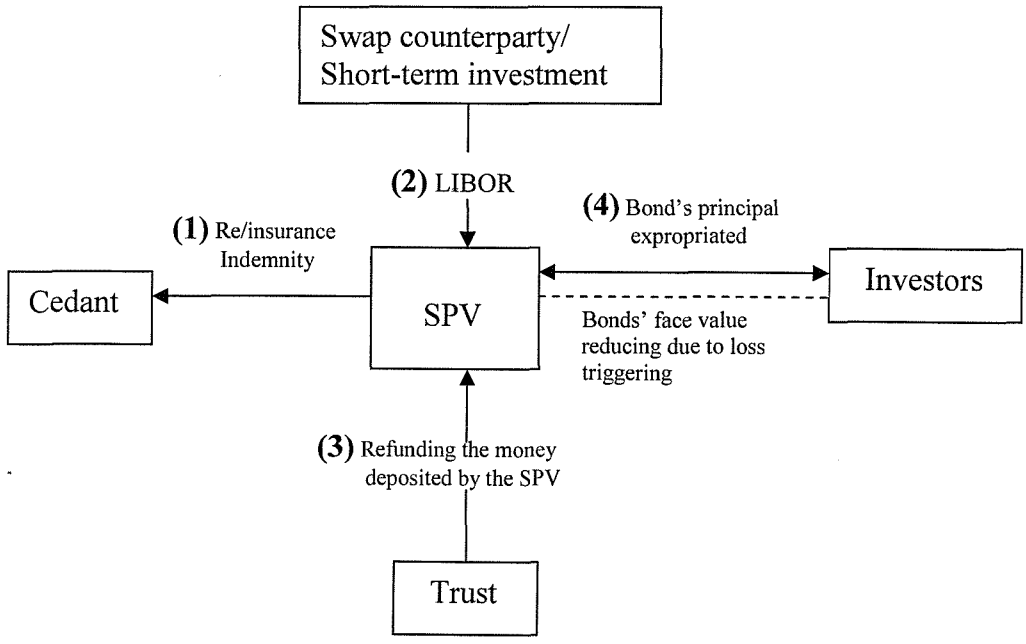
(1) The first step is that the SPV needs to indemnify the loss of the cedant in accordance with the provision of either the insurance or the reinsurance contract.

(2) The SPV can sell his short-term investment to meet the urgent needs of the indemnity. For example, having processed swaps in the interest rate market, the SPV can draw the LIBOR (London interbank open rate) from the interest rate market.

(3) Only relying on the financial sources from short-term investments may be insufficient for handling the huge amount of loss, so the next step is that the SPV can take back the money which it has deposited in the trust account. The total sum of money can be calculated on the basis of the pre-negotiated condition of payment.

(4) There are several influences on the bondholders: first, the bonds' principal will be expropriated; secondly, the bonds' coupon will stop being paid; moreover, any other activity the SPV carries out is in accordance with the stipulations of the catastrophe bond contracts.

Figure 5.2: CAT bond cash flow posterior to triggers occurring



5.5.4 The features of catastrophe bonds

There are several features, advantages and disadvantages in the regime of catastrophe bonds. Analysis is given below.

(1) Less basis and credit risks

Due to absence of standardisation, a catastrophe bond contract can be tailor-made in order to provide more flexible and complete protection; so the issuing of a catastrophe bond has less basis risk than other risk management strategies. An insurance future or its option contract is almost a standard contract. Basis risk results from the risk management tool not always accurately covering the losses. Under an insurance contract, the basis risk is reflected in the insured recipient receiving a payment greater or less than the actual losses incurred.

In the case of less credit risk, having purchased catastrophe bonds, the bondholders have only relatively low credit risk resulting from the insurers' default, because after the investors' money has been raised, it will form a trust fund, withdrawal of which is are not allowed unless trigger losses take place or the bonds expire.

(2) Non-correlation with other than catastrophe losses

Correlation indicates the extent of effect between multiple risk profiles, under which correlated risk profiles create an identical variation while receiving the same stimulation.[75] The returns that the investors can acquire while under condition of diminishing overall risk of their portfolio[76] are uncorrelated with the fluctuation of outside catastrophe risk causes such as stock market or foreign exchange rates;[77] the fluctuations in financial markets are the investors' biggest risk, which they process

[75] For example, the Dow Jones Industrial Average (DJIA) correlates with Standard & Poor (S&P) within Index 500, because both indexes are influenced by the same factors. In contrast, non-correlated risk profile refers to a number of risk profiles influenced by completely different factors; consequently, they will cause different variations. See Dictionary of Insurance, (2003), Insurance Advisory Board, Taiwan.

[76] Swiss Reinsurance New Market, *Insurance-Linked Securities*, Swiss Re New Market (1999), p.19

[77] Froot K., et al., "Chapter V: the emerging asset class: insurance risk" in *Securitization of Insurance Risk, The 1995 Bowles Symposium,* SOA Monograph Ref. M-FI97-1, pp 39-40

through risk management via financial tools.[78] From the ceding insurers' perspective, they can obtain increased availability of catastrophe insurance, less credit risk and more liquidity than in traditional reinsurance.[79]

(3) Moral hazard

The most significant shortcoming is the probability of "moral hazard from the insurers".[80] If an unworthy insurance company plots to reduce the cedant's retention, to increase the policies' values, to underwrite laxly and to unduly indemnify his clients, the bondholders will be disadvantaged in the terms bearing unnecessary risks resulting from the bond issuers' normal hazard. This weakness can be overseen by establishing fair rating systems, engaging in excess of loss re/insurance contracts, and editing catastrophe indexes. In detail, catastrophe bonds can be rated on the grounds of underlying actual businesses, such as insurance policy pricing, retention deciding, indemnity proceeding and any other actual factors. Additionally, turning the nature of excess of loss contracts to good account, the principals of bondholders are not affected if the loss does not exceed the retention, which is still borne by the bond issuer. The co-participation in risk sharing by both sides (bond issuer and bondholders) can be accessed.

(4) Transparency

The nature of transparency brings advantages and disadvantages. When catastrophe bonds are issued, the investors require more detail than when traditional re/insurance contracts are concluded. Not every investor recognises a reasonable price when calculating the insurance loss; a transparent trading process can fill this gap. However, this favourable condition for mass investors is unfavourable to the bond

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[78] The nature of non-correlation was proved during the global financial crisis from 1997 to 1998. When the global stock, exchange and future markets were shaken by the financial crisis, the decline did not reflect on the value and interest rate of catastrophe bonds. It was full proof that catastrophe bonds were only correlated with the trigger losses and "unhooked" the influence of the traditional financial market. A. Chiarenza, "Insurance as an Asset Class", <http://www.hedgeinfo.com/news/catbond.htm>, Visiting date 25/11/98

[79] Aig Risk Finance Co., "Blended Finite Insurance and Risk Securitization Transactions", Visiting date 19th Jun. 2002 <http://www.aigriskfinance.com/pdf/bfirst.pdf >

[80] C. Y. Chen., *Reinsurance: Theory and Practice*, Best Wise Co., Ltd, Taiwan, (Feb.2002) pp.390-398.

issuer, because it is easy to force disclosure of commercial secrets which may further affect the stock market prices of risk bond issuing companies.

(5) High transaction costs

The transactions involve investment banks, financial guarantees, trust institutions, actuarial valuation pricing and other complicated processes, so that establishing a catastrophe database and simulation modelling is hard to achieve,[81] and high prices are the result. Although there are high transaction costs, the commercial partnership between the bond issuer and the bondholder is still difficult. The relationship only exists during the duration of the bonds, so these resources will be wasted; by contrast, the treaty insurance relationship between the insurer and the insured lasts longer.

(6) Small interest arbitrage

Characteristics causing stabilisation may attract investors; however, there can be a disadvantage. From a speculator's point of view, arbitrage[82] is one cause of liquidity in financial markets. However, the non-correlation other than with the risks of catastrophe means less opportunity for arbitrage. Additionally, as catastrophe implies an "Act of God", complete information is not available to speculators. Therefore, the breadth latitude of interest in arbitrage is less than in other high yield corporate securities.[83]

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[81] Establishing a creditworthy database can be used to provide simulation modelling; however, too great a consumption of money and time is possible. As far as estimating catastrophe risk is concerned, it requires collecting multiple data such as frequency of catastrophe occurrence, regional population, insuring properties, mechanical structure, ratio of industrial and residential areas and past related information, and then assisting with independent academic research analysis such as the distribution of earthquake faults. An index relies on judging whether bondholders' principal will be refunded, such as the PCS index (Proper Claim Services of American Insurance Services Group Inc.), which is difficult to edit. To avoid disputes in the future, it is suitable to be in the independent charge of creditable organisations with long experience in the valuation of losses.

[82] Arbitrage indicates the simultaneous purchase and selling of an asset in order to profit from a differential in the price. This usually takes place on different exchanges or marketplaces.

[83] A. Chiarenza, Insurance as an Asset Class, <http://www.hedgeinfo.com/news/catbonds.htm>

5.5.5 Issues resulting from advancing catastrophe bonds

A series of complicated issues should be settled, including deciding loss triggers, dealing with repayments, valuing prices, rating credit conditions and so on; therefore, the costs of transaction are comparatively high. The main roles and related mechanisms concerning the launch of catastrophe bonds are analysed in detail below.

5.5.5.1 Loss triggers

One issue of concern is under what circumstances bond issuers must make a repayment; in order words, the issue in point is what the loss triggers will be. To generalise the probabilities, the triggers can be settled under four conditions. The first can be based on a certain company's loss or indemnity trigger, such as a loss suffered by the bond issuing company itself. The second indemnity trigger can be a specified market's losses, in which the re/insurer or insurer invests, to spread the catastrophic risks resulting from the re/insurance market. Under this scheme, an SPV for issuing catastrophe bonds may be established by the re/insurer. The third is in accord with the pre-agreed index triggers and the fourth is where the trigger can be set to a specified event occurring, the so-called parametric trigger, such as a typhoon at Beaufort scale 10 or an earthquake with a Richter magnitude of 7. Conditions for the loss trigger may be composed of each of the above mentioned conditions. There is a concern about objectivity and certainty with regard to decisions on loss triggers. Where a party issues a catastrophe bond, he is always in possession of comparatively more intelligence data than counterparts who are mass investors; hence, in order to avoid moral hazard, the loss trigger should be beyond cedant control. In practice, there are two ways to fix the loss trigger. Normally, organisations and institutions with credibility[84] will announce the trigger on the basis of loss sums, which is also known as indemnity type. The other one appears on the standard of the loss index, which is transformed from the loss amount; thus, it is the so-called index type.

[84] For example, the purpose of the Catastrophe Risk Evaluation and Standardizing Target Accumulations (CRESTA) is to establish a standard system which can be applied all over the world, especially for controlling the accumulation risk resulting from natural hazards such as earthquakes, storms and floods. Nowadays, the international insurance industry has widely accepted standards of credibility. See <http//www.cresta.org>

5.5.5.2 Repayment

Principal repayments can be divided into two forms: principal at risk; and principal protected.[85] The former is also called variable principal, indicating that the investor can lose part or all of the investment depending on the range of loss incurred by the catastrophe. If the occurrence of catastrophe is in excess of the trigger point, the principal will be deducted, in order to compensate for the loss of the SPV. The bond's principal can be deducted, until the whole of the amount is exhausted; however, the remaining amount should be returned to the investors if or when the catastrophe bond contract expires. In the case of principal protected, the investor does not lose principal, as the issuer pays back to the investors, no matter whether the trigger has occurred or not. However, the timing of principal repayment still depends on whether or not the catastrophe has occurred. If no catastrophe occurs during the agreed time, the issuer should repay the principal plus interest, if any, to the investors, by the expiry date. The issuer facing catastrophe loss is entitled to keep the principal up to the pre-agreed time. For example, the two parties agree that the issuer can hold the principal for 10 years if the loss incurs, without necessarily paying interest; thus, the bond issuer acquires a sum of money for planning and management without paying interest. Additionally, a mix of principal at risk and principal protected is also available. Under the mixed operation, if the loss trigger has occurred, a part of the principal is to be retained by the bond issuer as necessary, but it is refunded in a specified future time, while the other part of the principal is removed to serve as indemnity for loss.

5.5.5.3 Price

Basically, calculating the price of catastrophe bonds is similar to estimating an insurance rate, and involves potential loss and loading.[86] The estimation of risk rate is on the basis of loss severity and loss frequency, under which previous loss history can be a reference. To value the risk rate of earthquake in one district, for example, the previous record and current situation relating to density of population, changes in

[85] E. Canabarro, M. Finkemeier, R. R. Anderson & F. Bendimerad, "Analyzing Insurance-Linked Securities", The Journal of Risk Finance (Winter 2000), p.12

[86] Loading involves all expenses in issuing securities. It may contain the fee for valuing risk, counsel fees, bank certificate fees, rating fees, effecting sales fees and any other miscellaneous expenses.

population and increased rates of property values are useful statistics, which need to be observed over a long period of time; thus, to make an estimate of natural disaster risk is complicated work. It should be of concern about how much of the risk ratio the cedant wants to retain and what range of risk the cedant wants to transfer by way of securitisation, which will affect the investors' interest and confidence; consequently, the price of the catastrophe bonds will be affected.

5.5.5.4 Credit rating

Under a catastrophe bond operation, the majority of risk sources derive from the catastrophes themselves and the credit rating. As far as credit rating is concerned, it means that throughout all affairs related to issuing securities, all aspects remain consideration. Occasionally, the rating covers bond issuer itself. The result of the rating can serve as a material index for mass investors to recognise the credit strength and quality of the enterprise. If there were no rating mechanism, an investor may hesitate to invest capital due to lack of information and the marketing of the catastrophe bond would be in decline. After overall the performance with regard to securities transactions has been rated by organisations and institutions with credibility,[87] the rating classification can be disclosed to the public. The advantage of the rating mechanism is that, not only can knowledge and information for investors be protected, but also the sales market of the securities will be promoted. Therefore, the rating reports made by specified risk modelling companies prove to have a decisive effect on catastrophe bond marketing.

[87] In the case of organisations and institutions in charge of rating, to cite the US for example, the Securities and Exchange Commission has appointed and recognised Moody's Investors Service, Inc; Fitch, Inc; Standard and Poor's, a division of The McGraw-Hill Companies, Inc; and Dominion Bond Rating Service Limited (DBRS) etc. as Nationally Recognized Statistical Rating Organizations (NRSROs); otherwise, there are a number of rating organisations and corporations based outside the US applying or waiting for approvals. (See European Commission Internal Market DG, "Annex to the Call to CESR for Technical Advice on Possible Measures Concerning Credit Rating Agencies", <http://europa.eu.int/comm/internal_market/securities/docs/agencies/2004-07-27-advice-annex_en.pdf, visiting date: 19/08/05.)

5.6 Insurance derivatives

The CBOT (Chicago Board of Trade) has created many derivatives which can be treated as the most revolutionary of all risk management strategies. The invention of catastrophe insurance futures, catastrophe insurance options, weather derivatives etc. has had tremendous impacts on the reinsurance market.

5.6.1 Catastrophe insurance options

Under the various insurance derivatives, a future contract means that the investor must buy or sell the underlying instrument at a future pre-set at a pre-specified price, while an option contract is a security which gives the holder the right, but no obligation, to purchase (call option) or to sell (put option) the underlying instrument at a pre-specified price (the exercise price). In 1992, catastrophe insurance futures were launched and catastrophe insurance futures call spreads were issued in 1993. Both of the financial products are based on the ISO Index (Insurance Standards Organisation) for valuing the losses. However, the initial period for the products was unsuccessful, as those products failed to attract the level of interest wanted.[88] In the current market for catastrophe options, CBOT PCS provides three types of contracts: calls, puts and spreads. In addition, a small cap and a large cap are available[89] for catastrophe option transactions.

5.6.1.1 Examples of operations of catastrophe options

Based on the PCS Index[90] (Property Claim Services of American Insurance Service Group Inc.), CBOT PCS call option spreads can be regarded as the most significant of catastrophe options. The process should be as follows. First, the hedger or the insurance company purchases a call option at a lower exercise price and sells a call

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[88] C. J. Allard, "The Development of Risk Securitisation", *Insurance Risk Securitisation*, (1999) Reactions Publishing Group, p.27

[89] Small cap means that the loss on the PCS Index is from 0 to 200 (equal to from $0 to $20 thousand millions); a large cap loss indicates index points from 200 to 500 (from $20 thousand millions to $50 thousand millions).

[90] Since 1948, various loss rates compiled by PCS Group Inc. have been applied by reinsurance companies as their calculating bases when the reinsurance contracts were concluded in the over-the-counter (OTC) markets. (C. J. Allard, "The Development of Risk Securitisation", ibid, pp. 21-32)

option at a higher exercise price at the same time. Both options have the same expiry dates and the same underlying instruments; hence, this combination of buying and selling is built into the spread. Having paid the premium, the hedger/insurance company can acquire a certain sum of money when the lower and higher prices of options are exercised.

PCS Index points are the concern during the transaction. To take a PCS small cap for example, the standard is set at 40/60 spread; in other words; the PCS Index point is from 40 to 60, and one point value is equal to $100 millions of industry losses.[91] In this case, where the catastrophe loss is from $4 thousand millions to $6 thousand millions, the loss will be covered. Besides 40/60 spread, 60/80, 80/100, 100/120 and any other analogous spreads involving twenty index points are also available. Supposing the PCS Index falls outsides the scope of two exercises, it means that the call option spread contract is not "in the money", so the buyer is allowed not to exercise any strike value. PCS options trade is based upon individual national, regional and state loss indices.[92] In the current situation, PCS defines catastrophes as events that cause more than $25 million[93] of insured property damage affecting a significant number of insureds and insurers. In other words, the PCS Index only activates PCS options on condition that the loss overflows $25 millions, so trifling losses will be excluded.

The settlement date is essential for the operation of options. The exercise procedure is a European cash option, by virtue of which it is settled in cash only at the expiration of the contract.[94] However, catastrophes have continuity, so total losses cannot be ascertained until a period of time has passed after the occurrence. For example, a hurricane has continually stormed for several days, which may stride across the contractual expiration date. In practice, it is allowed to defer the setting date despite

[91] Data source: <http//:www.cbot.com>
[92] In the U.S., the area of coverage can be divided into nine geographical districts, the Northeast, Southeast, East Coast, Midwest, West, Florida, Texas, California and National.
[93] The current setting of $25 million has been effective since January 1, 1997. From 1982 to 1996, PCS (Property Claim Services) used a $5 million threshold in defining catastrophes. Before 1982, PCS used a $1 million threshold. (Source: Insurance Information Institute, <http://www.iii.org>)
[94] In contrast to an American option, the option can be exercised any time within the duration of the contract; in the case of an Asian option, the stick value is the average of overall date value before the expiration date. Nevertheless, neither is satisfied for the trade relating to catastrophe call option spreads.

the loss period being based on annual or quarterly duration. In general, the settlement date is the last business day of the 12 months following the end of the loss period, the so-called loss development. During loss development, the losses reported to the insurer can be brought into the total catastrophe loss.

5.6.1.2 The features of catastrophe options

Catastrophe options have a number of specific features, leading to several advantages. (1) The first is low transaction cost: due to standardisation of contracts and losses being expressed by indices, the transactions of catastrophe options have lower cost than other over-the-counter products.[95] (2) The second is low moral hazard: basing on all insurance industries' losses to calculate the loss index, no individual insurance company can intentionally affect the valuation of index. In addition, trading in an exchange market, no asymmetry of information exists between sellers and buyers. It is different from traditional reinsurance, under which the ceding companies are in possession of more information on the subject matter reinsured. In contrast, dealing with catastrophe options, moral hazard is not easy to incur. (3) The third advantage is zero-beta, which excludes market risk from fluctuation in the stock market or foreign exchange rates. (4) The forth is making use of the concept of excess of loss reinsurance: due to there being a higher exercise price setting in a PCS call option spread contract, the investors' losses, if any, will not be unlimited. This device is designed to equal the maximum limit liability in excess of loss reinsurance. Moreover, an investor is entitled to receive a premium, equal to the original budget of the re/insurance premium paid out by the re/insured. The main difference is exposure of loss. An excess of reinsurance contract calculates the losses on the basis of the liability to the primary insurer, while an option contract shows its losses by way of indices.

On the other hand, operating catastrophe options have a basis risk, which is an obvious characteristic.[96] The variable range of value of a catastrophe option is not

[95] For example, lack of standardisation of contracts, the cost of issuing CAT bonds is more expensive than an option one.

[96] Every hedge tool has its possible basis risks. However, the operation of reinsurance contracts does not pay much attention to this issue. Catastrophe options bring a new viewpoint for risk valuation. More actual, the existence of basis risks of catastrophe options cannot be treated as a shortcoming.

always in harmony with that of the catastrophe loss; thus, there is a possibility of loss from imperfectly matched risk offsetting positions in actual loss and the loss shown by indices. Owing to the existence of basis risk, the function of risk hedge may either run short of or surpass the actual requirement.

5.6.1.3 Catastrophe insurance option vs. excess of loss reinsurance

As far as the evolution of the loss calculating basis is concerned, it can be divided into three possible steps, starting with single risk insurance, which covers the loss caused by a single peril, next, allied risk cover, which insures the losses caused by one occurrence within the limit of multi-risks, and thirdly, aggregate risk policy which protects against aggregate losses within multiple risks during a pre-agreed period of time. For analogy, a single risk may be considered to be a dot, allied risk as a surface and aggregate risk considers a time dimension, a three-step evolution. Similar to aggregate excess of loss reinsurance, the target of catastrophe options is the accumulated amount of the specified losses incurred by specified occurrences within the specified time; the amount must exceed a fixed level. Supposing an excess of loss reinsurance is agreed while the original insurer loss amount overruns £1 million, the reinsurer will take charge of the excess part up to £5 million, the maximum liability; in other words, the excess point is £1 million and the reinsurance contract covers £4 million (from £1 million to £5 million). Catastrophe options can provide a similar function, by virtue of which £4 million losses can still be protected, the difference being that the losses in option contracts are represented by indices rather than actual sums of losses. This difference can be treated as the fourth step of evolution. As far as similarity is concerned, a hedger is similar to either an insurance company, who enhances his capability by means of reinsurance originally, or a general company, who seeks insurance protection. To extend the meaning, a catastrophe call option contract can be compared to an excess reinsurance contract, under which the contractual relationship between the reinsured and reinsurer is similar to that between the buyer and the seller in a call option contract. In the case of an underlying asset, it can be compared to the loss of reinsured. Furthermore, the retention by the reinsured (priority) in excess of loss reinsurance is like in a call option, with one lower exercise price being bought by the call option buyer; the reinsurance premium is the image of the option premium, which the buyer pays to the

seller. The maximum limit liability of the reinsurer can be compared to a call option with higher exercise price being sold by the call option buyer. Consequently, the call option seller needs only to pay the amount between the higher and the lower exercise price, on condition that the PCS Index falls in the spread range at expiry date.

5.6.2 Weather derivatives

Weather risk refers to a special kind of business risk, under which adverse or unexpected weather conditions may cause unstable income or loss. Weather risks are difficult to predict in advance, and enterprises go almost out of control. Sometimes, weather risks may affect market prices, reflecting on industry earnings.[97] Weather derivatives are financial tools that can be used to offset weather risks. The main difference from other derivatives is that the underlying asset in cases of rain, temperature, snow and so on has no direct value relation to the price of the weather derivative.

Insurance has been the main tool used by hedgers for protection against unexpected weather conditions. Insurance protection only covers catastrophic damages, but does nothing to protect against the reduced demand that businesses experience as a result of weather that is warmer or colder than expected. Weather derivatives can fill the gap. In the serious slump in the insurance market in the late 1990s, many insurance companies and brokers turned to hedge their risks by way of derivatives to make up for the shortfall in insurance capacity. Similar to catastrophe bonds, weather derivatives were almost carried on by capital instruments, the aim being to provide a financial hedge against the effect of natural events. Compensation is paid out to hedgers according to the index of weather change rather than actual losses.[98]

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[97] Certain lines of business may be closely linked to variety of weather. For instance, air-conditioning, ice creams, beer and cold drinks etc. sell well if the summer is hotter than usual. More specifically, a temperature increase of 1°C may represent a sales volume increase of 1 million cans of beer or soft drinks. However, in a cold summer or a warm winter, tens of thousand of companies may lose profit.

[98] Traditional reinsurance can also provide for coverage against weather risks, but under a different operation. For example, catastrophe cover is liable to indemnify the actual loss caused by huge natural disasters, such as the actual loss from damage to a theme park's facilities resulting from hurricane attack.

5.6.2.1 Daily temperature fluctuation

The majority of triggers for weather derivatives are based on daily temperature rises or falls; however, several other weather related events can also be trigger criteria, such as the volatile precipitation, wind speed or humidity. Most current weather derivatives track daily temperature rises or falls; tracking frost days in the Netherlands and monthly/seasonal snowfall in Boston and New York began on the CME (Chicago Mercantile Exchange).[99] Transacted in the over-the-counter market and exchange,[100] the options of HDD (heating degree days) and CDD (cooling degree days) could be deemed as two of the common types of weather derivatives. CDDs subtract the baseline (65 degrees Fahrenheit) from the average daily temperature; by contrast, HDDs subtract the average daily temperature from the baseline.[101] An HDD option contract on the CME (Chicago Mercantile Exchange) would be run from November to March. Oppositely, a typical CDD option contract would be from May to September in the US, with each day where the temperature rises above the baseline temperature making an accumulative count. To calculate the value of the contract, daily HDDs or CDDs are accumulated each day during the duration of the contract and then multiplied by $100.[102] Under a HDD/CDD put option,[103] the option buyer would obtain payment if the outcome were less than a specified level; in other words, the buyer might receive profit of a set amount per HDD/CDD from the actual count from the strike. On the other hand, under an HDD/CDD call option,[104] if the actual count is higher than the strike based on the HDD/CDD indices at a certain time, the option's buyer can earn a profit equal to an amount from the strike to the actual count.

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[99] Swiss Re, "The picture of ART", *Sigma*, No.1/2003, pp.38-40

[100] Weather derivatives contracts initially began trading over-the-counter in 1997. In 1999, the CME (Chicago Mercantile Exchange) launched the first exchange-traded weather futures contracts and corresponding options.

[101] Supposing T_{max} is the maximum of daily temperature and T_{min} is the minimum daily temperature. Daily HDD = max (0, baseline – $(T_{max} + T_{min})/2$). Daily CDD = max (0, $(T_{max} + T_{min})/2$- baseline) See Erik Banks, *Alternative Risk Transfer*, (2004), John Wiley & Sons, p. 158

[102] For example, HDDs of 35, 40, 45, and 50 yield a value of $ 17,000.

[103] The general meaning of a put option contract is that it allows the option's buyer the right but not the obligation to sell a commodity or underlying instrument to the option's seller of the option at a certain time for a certain price (the strike price). If the buyer chooses to exercise the option, the seller will have the obligation to purchase at that strike price.

[104] The general meaning of a call option is that the call option's buyer has the right but not the obligation to buy an agreed quantity of a particular commodity or the underlying instrument from the seller of the option at a future certain time for a certain price (the strike price). The seller will be liable to sell the commodity or the underlying instrument if the call option's buyer chooses to exercise the option. However, the buyer must pay a premium for this right.

5.6.2.2 Example of using temperature derivatives to hedge risks

Weather derivatives can be used to protect the earnings of various industries whose earnings vary with changes in the weather. For example, cold drinks distributors may make use of cooling degree days (CDD) contracts to protect against potential losses resulting from cooler summers. The deregulation of the US energy industry in 1997 was a major activator behind the development of weather derivatives.[105] In the winters of 1997 and 1998, extremely warm weather prevailed in the US, and consumers used less gas to heat their buildings. The earnings of gas suppliers decreased. At that time, many energy companies sought an alternative method to stabilise their earnings across periods of unusual temperature. Weather derivatives were introduced in August 1997 to protect the earnings of utility companies whose revenues varied with weather changes.

Using temperature derivatives to hedge risks is a sophisticated skill. To cite heating degree days (HDD) contracts for example,[106] hypothetically the Wisconsin Gas Co. would like to compensate for poor revenue caused by warm winters. Having sold a call option with a strike of 5600 HDDs, the Wisconsin Gas purchases an HDD put option with a strike of 5000 HDDs. The cost of purchasing the put option can be paid by using the income from selling the call option. Through an over-the-counter transaction, the Wisconsin Gas and El Paso Electric come to an agreement, under which El Paso needs to pay Wisconsin Gas $5,000 for each HDD running short of the put option's strike, but it would obtain $5,000 for each HDD exceeding the call strike. In the event that the HDDs fall in the level between the call and put strikes, there will be out-of-action between the two parties. In a normal winter, the region would generate 5300 HDD. From the viewpoint of the gas company, the put option limits the risk resulting from possible low revenue, while the call option limits the potential benefit resulting from a very cold winter.

Supposing the temperature in a specific winter is higher and the total HDD is only 4800 HDD (200 HDDs below the put strike level, 5000 HDDs). The earnings of the

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[105] G. Booth, "Weather Derivatives", *Insurance Risk Securitisation: A Guide for Issuers and Investors*, (1999), Reactions Publication, Chapter 7

[106] The following example is adapted from "The picture of ART" *Sigma* No.1/2003, p.39

gas firm are reduced. In this situation, from the put option's point of view, Wisconsin Gas can choose to exercise the put option and then acquire $1 million ($5,000 multiplied by 200 HDDs) from El Paso. On the other hand, if the temperatures are low during the winter, Wisconsin Gas will acquire high revenues due to high sales volume. Under this situation, the total HDD of that winter reaches a high level, for example, 5800 HDD (200 HDDs over the call strike, 5600 HDDs), and Wisconsin Gas will lose $1 million due to El Paso exercising the call option's strike. However, this loss can easily be recovered by the high sales volume caused by the severe winter.

5.7 Contingent capital instruments

When an insurance company undertakes catastrophe risk business, the internal capital is potentially in a state of exhaustion, which endangers the existence of the company. Low frequency but high severity insurance risks are not easy to cover satisfactorily in reinsurance markets. Although the insurance company can adopt self-financing, depositing a large amount of loss reserve, it will impact the company's overall financial structure. The alternative method, contingent capital, has received attention. Basically, contingent capital instruments do not lay emphasis on indemnity of losses, but focus on providing sufficient capital to insurers for continual working after catastrophe losses occur instead. Re/insurers take advantage of contingent capital products to provide additional funding in the event of large catastrophic losses; hence, the re/insurance capital and reserves can be replenished by the injection of capital in the form of debt or equity arising from the activation of triggers.[107]

Three characteristics are worthy of concern. First, contingent capital instruments are post-loss financing facilities; their financing functions take place after losses occur. Secondly, raising cash by contingent capital facilities carries futurity and is of an aleatory nature. Whether or not the insurer acquires capital is contingent on the trigger event. When the capital has not been obtained, the insurer is allowed not to debit it on the balance sheet, being granted rights to carry out contingent debt or equity financing in the uncertain future.[108] Thirdly, the funds made contingent can be accessed variously, which can match each insurance company's individual requirements. Therefore, a trigger event may be activated by stating a level of loss, a specific loss-making event, or based on a market index which is widely tracked.

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[107] In practice, contingent capital products can be used not only by re/insurance undertakings, many industries can use them as well. For example, a bank can arrange a contingent capital facility to cover unexpectedly large credit losses.

[108] A contingent capital product is a tool for externally raising funds. In principle, after cash has been raised, it should be a debit on the balance sheet. However, statutory accounting systems are not exactly identical. For example, Statutory Accounting Practices (SAP) in the US admit that issuing contingent surplus notes can add to an insurer's net worth or surplus; thus, the issuing company's shareholding will not be affected. However, according to General Accepted Accounting Principles (GAAP) in the US, raising cash by contingent surplus notes should be stated as a debit. (Financing Catastrophe Risk: Capital Market Solutions, <http://www.iso.com/studies_analyses/docs/study013 html>, visiting date: 18/07/06).

A contingent capital facility is different from traditional reinsurance. Contingent capital providers do not bear any risk transferred from primary insurers, but supply funds to insurers in the case of lack of capital after catastrophic losses arising; by contrast, transferring risk is a required factor in every re/insurance facility. Next, funds drawn from the contingent capital must be refunded to the capital providers; in contrast, reinsurance indemnities do not have to be paid back. Currently, there are three most common contingent capital instruments operating in the market. They are contingent surplus note arrangements, catastrophe equity puts and standby credit facilities. They are explained as follows.

5.7.1 Contingent surplus notes (CSNs)

Besides issuing common and preferred stocks, launching contingent surplus notes is an alternative way for an insurer to obtain funding. Under a contingent surplus note (CSN) scheme, an insurance company is at liberty to issue and sell surplus notes in exchange for cash or liquid assets on condition that the specified events have occurred. The proceeds of the sale of surplus notes will form the financial fund, by use of which the insurance company's catastrophe business losses can be recovered or reduced.

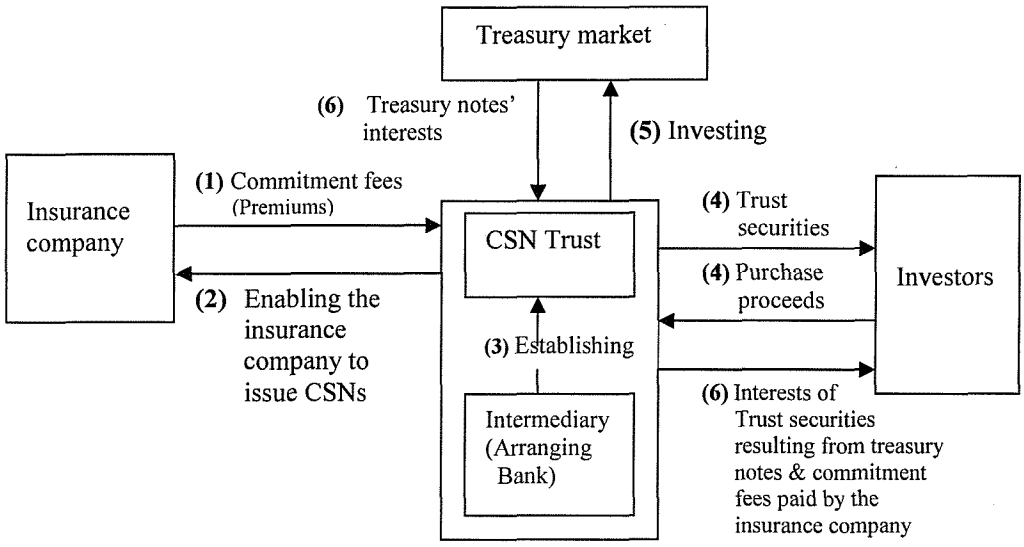
There are four main roles in a CSN programme, each with its individual utilities. They are as follows. (1) Insurers: an insurer is a user of a CSN facility. (2) Financial intermediaries: in order to arrange the CSN transaction overall, there should be an intermediary in a CSN arrangement. Normally, intermediaries are played by investment banks, such as the JP Morgan. (3) CSN Trusts: a CSN trust is established by the intermediary. (4) Investors: an investor is the holder of trust notes or certificates issued by the CSN trust. Obviously, no matter whether before or after the trigger event happening, investors do not directly purchase CSNs, but they buy the securities issued by the CSN trusts.

The process of operating CSNs can be divided into two basic time phases. The first period of time is before the catastrophe loss (the trigger event has occurred); the other concerns affairs after the trigger event has occurred, if any.

5.7.1.1 The process prior to the triggers occurring

Before the triggers occur, the typical structural model regarding cash flow and the contractual relationship for CSNs is illustrated as follows (see Figure **5.3** below).

Figure 5.3: Contingent surplus note cash flow prior to the triggers occurring



(1) The insurer contracts with an investment bank which is the intermediary and pays the commitment fee to the arranging bank.

(2) For the duration of the contract, when the parties have agreed when the insurer incurred catastrophe loss in excess of the pre-settled trigger condition, the insurer will be entitled to issue CSNs to the arranging banks. It can be compared to when an insurer purchases a put option from the arranging bank.

(3) The arranging bank establishes a CSN trust.

(4) When the pre-arranged losses have not occurred, the trust issues trust securities to the investors to raise funds. Consequently, the investors should pay the proceeds for purchasing trust securities for the trust.

(5) The fund raised will usually be invested in treasury markets, which pay periodic interest to the trust. Basically, treasury securities are characterised as being risk free.

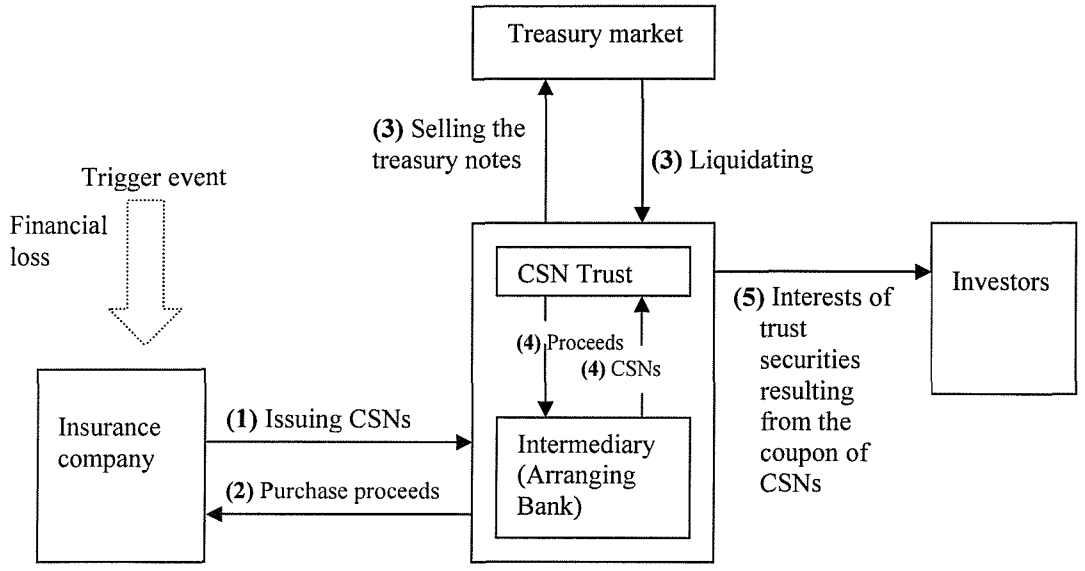
(6) The trust is responsible for paying the investors the trust securities coupons on schedule. Prior to event triggering, the trust securities' interest paid to the

investors comes from two sources. The first is the interest accruing from the short-term treasury notes. The second is the commitment fee paid by the insurer.[109]

5.7.1.2 The operation posterior to the trigger incurred

The above processes are on condition that either there is no occurrence during the duration of the CSN or the trigger event has not happened yet. Once the event trigger causes financial loss to the insurer, the process will enter into another stage (See Figure **5.4** below).

Figure 5.4: Contingent surplus note cash flow posterior to triggers occurring



(1) The insurer issues the CSNs and sells them to the arranging bank.

(2) The arranging bank needs to pay the proceeds to the insurer for the purchasing price of the CSNs. Hence, the insurer can obtain the capital to cope with the financial loss resulting from the trigger event.

(3) The trust liquidates its treasury position, under which the trust will sell the treasury notes in exchange for cash.

[109] In order to compensate the investors who, under uncertainty that their securities' interest could change from being accrued from CSNs at any time, the insurer is responsible for paying the trust a sum of commitment free, whose function is similar to a put option premium paid by the put option buyer.

(4) The trust uses the liquidation proceeds to acquire the CSNs, which are entitled to collect the periodic coupons. In order words, once the event triggers, the items of the trust's investment will shift to the CSNs, so the arranging bank uses the CSNs in exchange for the trust's portfolios and proceeds. It is similar to the arranging bank and the trust carrying out a swap.

(5) In the meantime, the CSN trust continually pays the investors the trust-issued securities' interests, which are transferred from the coupons of the CSNs. The investors will receive periodic payments of interest and principal, even after the insurer suffers catastrophe losses, if the insurer meets its obligations under its surplus notes.

5.7.1.3 The launching of contingent surplus notes (CSNs)

By tailoring a CSN transaction to meet its specific needs, the insurer can increase its capital adequacy. If the insurance company has a good credit reputation, it will spend on less transaction costs, due to the fact that the amount of interest paid by the insurer is determined by the credit rating of the issuing company. The investors can earn higher returns by investing in a CSN trust than by investing directly in Treasury securities. Basically, the higher the securities risk, the more profits the investors can gain. It can be assumed that the higher return on investment is mainly due to the expense of the insurer's higher default risk.

However, there are some shortcomings in a CSN facility. First of all, it is difficult to evaluate the credibility of an insurer repaying CSNs. The insurer's CSNs are subordinate to all other forms of debt (e.g. a policyholder debt). If the insurer suffers insolvency, the probability of insurer repayment will be under high risk, because whether or not the insurer repays depends on the relevant insurance authority's decision. The insurer must obtain permission from the regulatory authority to repay the notes. Secondly, insurers using CSNs needs high transaction costs, which contain fees for establishing CSN trusts, underwriting the charges of investment banks, costs of risk evaluation (e.g. evaluating the probabilities of catastrophe loss taking place, insurers issuing CSNs and insurers' insolvencies causing default). Thirdly, owing to lack of information about the insurer's catastrophe exposure and ability to repay the CSNs, investors who have bought CSN trust notes or certificates can

possibly resell their CSN trust securities. Fourthly, privately traded CSN trust securities are less liquid than publicly transacted securities, because few investors are knowledgeable about operating the complicated CSN facility, so only certain institutions and acknowledged investors desire to invest in privately placed securities.

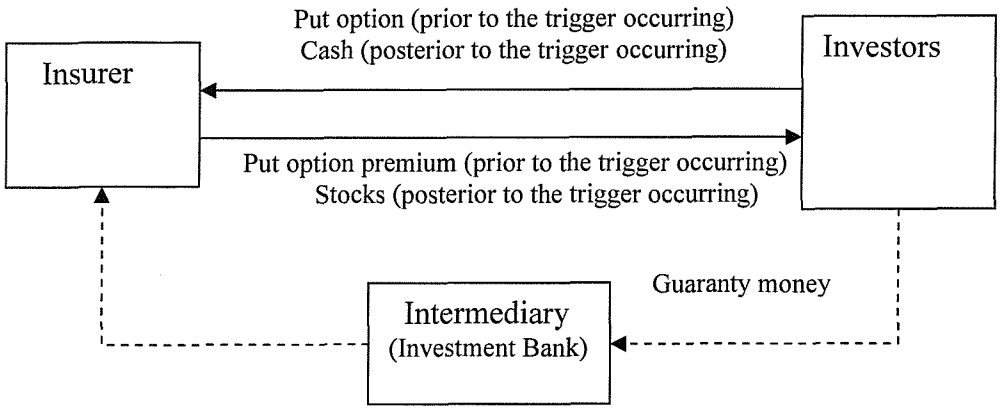
5.7.2 Catastrophe equity puts

Catastrophe equity puts are a kind of put option, in which the objects transacted are equities. Transacting in the over-the-counter market (OTC market), the insurer dealing with a catastrophe equity put usually trades through a financial intermediary (possibly an investment bank), which will seek investors in the capital market on behalf of the insurer. However, if the investors are in possession of good credit ratings, the parties are allowed not to use any intermediary (see **Figure 5.5**, the dotted lines mean that an intermediary sometimes can be left out).

5.7.2.1 The process of transacting catastrophe equity puts

Under the structure of a catastrophe equity put, the insurer pays the premium to the investors or the intermediary for purchasing the put option. Due to the possibility of investors' bad credit, or in order to avoid investors breaking the option agreement, investors may be requested to pay the full pre-determined price or deposit a sum of guaranty money to the intermediary.

Figure 5.5: The process of transacting catastrophe equity puts



(1) Immediately following a catastrophe, the insurer is entitled to sell equities or stocks, which could be ordinary shares, special shares or convertible special shares to the investors, at a predetermined price on condition that the catastrophe loss exceeds a pre-settled amount.

(2) In the event that the investors reject or fail to fulfil the payment according to the strike price after the trigger event occurs, the guaranty money will be confiscated; hence, even a bad credit investor can still be constrained to fulfil the obligation.

(3) Capitalised by the investors, the insurer obtains a financing fund to make up its catastrophic business loss.

(4) After the investors have acquired the equity or stock due to exercise the put option, it may make a request to hold the equity or stock for a period of time (usually three years).

5.7.2.2 Advantages and disadvantages of catastrophe equity puts

Under a catastrophe equity put arrangement, the damage to shareholders will be reduced if stock or equity drops after a loss event, since the equities or stocks have been locked in a price in advance for the insurer. The second advantage is that the insurer's capital can be increased by using catastrophe equity puts, by virtue of which they is by no means a method of debt; thus, the raising of capital by financing cannot

be recorded as liability on a financial statement, but as the issuing company's capital instead.

A major disadvantage of catastrophe equity puts is that they dilute the existing shareholders' percentage of ownership in the insurer following a loss, because the quantity of equity will increase on condition that the put option is exercised. Secondly, owing to the exercising time of the put option being indefinite, there is a difficulty in pricing the put option premium. Next, trading in over-the-counter markets, catastrophe equity puts are by no means adhesive contracts; consequently, the market liquidity is lower than in standard option contracts.

5.7.3 Standby credit facilities

A standby credit facility (also known as a credit line) is a common financing product operated in a commercial bank. It is the simplest contingent capital method for post loss financing. Similar to a loan agreement with a bank, a standby credit facility is an agreement whereby a bank or financial institution guarantees to provide capital in the form of a loan to an organisation in the event that some specified event happens. The credit has been negotiated at the inception of the agreement so that all terms such as the interest rate, the schedule of principal repayment and the interest rate, etc., have been determined prior to a loss. The origination is imposed on paying a commitment fee for the availability of the bank's guarantee.

An abnormally bad claims experience could cause insurer's financial strain. Standby credit facilities can be applied by insurers to relieve the catastrophe claim losses.[110] Similar to other contingent capital instruments, access to the standby credit can be made contingent upon the occurrence of a specified catastrophic event, a series of losses whose total has exceeded a threshold. Otherwise, trigger conditions can be based on catastrophe indices, such as the ISO Index (Insurance Standards Organisation) and the PCS Index (Property Claim Services of American Insurance Service Group Inc.). However, compared to CSNs and catastrophe equity puts, some different points emerge. The most obvious is that there is no security issued in

[110] A standby credit facility to be classified as ART is possibly arguable; this kind of financing instrument has been operating in the insurance world for a long time.

a standby credit facility; by contrast, both CSNs and catastrophe equity puts facilities will be transacted using securities. Moreover, there is no need for an intermediary; an insurer directly contracts with the bank; in contrast, there should be an intermediary in a CSN and catastrophe equity put scheme. Loaning to the insurer, the financing bank will take account of the insurer's credit risk, because there is a high default probability in a standby credit facility; by contrast, there is a lower default risk in a CSN or catastrophe equity put transaction.

Chapter VI Legal and regulatory issues resulting from Alternative Risk Transfer (ART)

The products are financial innovations which can be used by insurers to obtain capital and enhance underwriting. Laying down the law and regulations for ART products has been a concern of the courts and operators. Basically, ascertaining what law or regulations will be applied to ART transactions depends on each type and individual ART instruments. However, it is often difficult to classify an ART product into one single area. Most ART devices are hybrids, which blend with several categories or fields. To cite catastrophe bonds (CAT bonds), for example, they combine with characteristics of insurance business, security operations and so on.

This chapter analyses and evaluates the legal and regulatory issues which have arisen in connection with the current main ART categories, including financial reinsurance, insurance securitisation and derivatives. By analysing the formation, the functions and characteristics of the main types of ART, the principal issues and solutions will be drawn out.

6.1 Legal and regulatory issues arising out of financial reinsurance

The definitions of finite/financial reinsurance[1] in most jurisdictions (legal systems) are far from clear. For example, Section 2 of the Taiwanese Financial Reinsurance Guidelines, authorised by Section 21 of the Taiwanese Regulations Governing the Administration of Insurance Enterprises, stipulates that "financial reinsurance can be defined as a contract in which the reinsured pays the reinsurer the reinsurance premiums, and the reinsurer is responsible for providing financial assistance and reimbursing the reinsured for losses incurred under the significant risk inherited in the insurance policy." This definition of financial reinsurance given by the Taiwanese Financial Reinsurance Guidelines still lacks detail and specifics, so characterising financial reinsurance cannot be settled down by this guideline.

It may be necessary to determine whether financial reinsurance can be categorised as the business of insurance. After this doubt has been settled, there are several further issues that should be cleared up, first, whether the legal doctrines of traditional insurance, such as the rules relating to insurable interest, the principle of utmost good faith, can be further applied to financial reinsurance transactions. Next, there is still a question as to whether the regulations of conventional insurance can be applied to supervise the financial reinsurance industry, moreover, whether the legislation, such as on tax, accounting, and special rules for insurance contracts, can be used in the financial reinsurance field.

6.1.1 The legal characteristics of financial reinsurance contracts

There is a doubt as to whether financial reinsurance contracts, in part or in whole, can be legally qualified as contracts of insurance. This issue would be considered by the courts, despite the fact that, in particular, the accountancy profession and the regulatory authorities may hold different views on legal issues. In the English legal system, a commonly cited definition of insurance is from *Prudential Insurance*

[1] The terminologies "financial reinsurance" and "finite reinsurance" are often interchangeable in the markets, so the term "financial reinsurance" will continue to be used hereafter.

Company v. Inland Revenue Commissioners,[2] which provided a general, not comprehensive description.

6.1.1.1 Elements of insurance contracts

In the *Prudential* case, Channell J revealed that three components served as the identifying items, which can be summarised below:

> "(1) An insurance contract is for some consideration, generally but not necessarily for periodic payments called premiums...the insured obtains some benefit of protection against the occurrence of an event; (2) the event must be uncertain as to whether it will happen or not, or if the event will happen, there must be uncertainty as to when; and (3) the event must be adverse to the insured, in that he or she possesses an insurable interest in the subject matter insured."[3]

If a contract conforms to these three elements, it may be treated as an insurance contract. Although English law has submitted a practical approach to defining an insurance contract, it has not yet made an exhaustive definition.[4] Various types of financial reinsurance contract have been widely used in London, including in Lloyd's syndicates and other markets. Such various financial reinsurance contracts cannot be discussed or regarded as being in the same frame, but should be analysed separately according to type.

6.1.1.2 Insurable interest requirements

The most significant difference between a re/insurance contract and a financial management contract is that the re/insured must have an insurable interest in the subject matter of the re/insurance. Determining whether a cedant by way of ART must possess insurable interest cannot be discussed or regarded in an indiscriminate

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[2] [1904] 2 KB 685

[3] *Prudential Insurance Company v. Inland Revenue Commissioners*, ibid

[4] In *Medical Defence Union v. Department of Trade* [1979] 1 Lloyd's 499, Sir Robert Megarry V-C doubted "...whether a satisfactory definition of a "contract of insurance will ever be evolved. Plainly it is a matter of considerable difficulty, it may be that it is a concept which is better to describe than to attempt to define..."

matter. Multi-products should be examined as to their substance individually. Financial reinsurance may be dressed up as a reinsurance contract; as a result, the insured supposedly needs to have an insurable interest.

6.1.1.3 The duty of utmost good faith

If a financial reinsurance contract can be characterised as a contract of re/insurance, the contract's parties must comply with the duty of utmost good faith. By contrast, other financial products do not belong with contracts of re/insurance; the purchasers of non-re/insurance contracts are subject to considerations of good faith (the law will not support fraud); however, the non-re/insurance purchasers are not responsible for disclosure and non-misrepresentation of material facts relevant to risk.

6.1.2 Transfer of risk requirements

Concerning ART products, especially for financial reinsurance, operators will pay attention to risk transfer, because financial reinsurance remains close to traditional domain of conventional reinsurance. From the perspective of regulatory purpose, financial reinsurance businesses belong to the domain of reinsurance businesses. It is obvious that regulating financial reinsurance and regulating traditional reinsurance in most jurisdictions are dealt with almost by the same regulations.

The risk categories, transferred by the instrument of traditional reinsurance and by the device of financial reinsurance, are not completely the same in essence. Conventional reinsurance agreements mainly rely on transferring the underwriting risks, sometimes further to timing risks. By contrast, financial reinsurance policies belong to the category of customised reinsurance contracts, based on the concept of integrated risk management.[5] Various type of financial reinsurance provide blanket to hedge a basket of risks,[6] which need not only cover insurance or underwriting risks,

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[5] Munich Re, "Report of the Supervisory Board 2005", <http://www.munichre.de/Templates/Special/PrintPage.aspx?lang=en&current_page=/pages/05/corporate_governance/supervisory_board/report_en.aspx?print=yes>, visiting date 05/08/06

[6] Securitisation Working Party, "Including Insurance Indices and the boundaries between Banking and Insurance", October 1998, <http://www.actuaries.org.uk/files/pdf/library/proceedings/gen_ins/paper2.pdf>, visiting date 05/08/06

but also protect non-insurable risks,[7] which cannot be ensured by traditional formations of reinsurance. As economic development has increased every industry will confront various kinds of risks while commercial activities are proceeding. Highlighting omnibearing coverage, the dimensions covered by financial reinsurance are wider than those of traditional reinsurance.

6.1.2.1 Legal considerations

To view risk transfer from a modern perspective, the transfer of risk has not been directly considered in leading English cases. The English courts do not lay down any comprehensive, prescriptive definition as to settle the test of risk transfer. Channell J in the *Prudential* case did not contemplate that the purpose of a re/insurance contract is to transfer risk from one party to another.

It can be analysed from the viewpoint of comparative law. For example, Article 1 of the Taiwanese Insurance Law stipulates, "The term insurance as used in this Law means an act whereby the parties concerned agree that one party pays a premium to the other party, and the other party is liable for pecuniary indemnification for damage caused by unforeseeable events or *force majeure*." and "A contract entered into on the basis of the preceding paragraph is called an insurance contract." This provision has a lack of accurate instruction in respect of transferring risk; it only mentions that indemnification for damage is a characteristic of an insurance contract. Nevertheless,

[7] As far as the types of non-insurance risks are concerned, for example, (1) interest risks: an insurer normally will have the capital assets put into the investment market for the sake of gaining interest. However, the rate of investment rewards may be under flotation. The interest risk originates from the interest fluctuation with regard to the guaranteed interest rates and the reasonable expectations of policyholders regarding profit sharing. (2) Exchange risks: this kind of risk usually affects international business. If an insurer underwrites the businesses across national boundaries, it may be in want of foreign currency exchange. Moreover, it can also affect insurers making international investments, under which, if money must be converted to another currency to make a certain investment, then any changes in currency exchange rate will cause that investment's value to either decrease or increase when the investment is sold and converted back into the original currency. (3) Credit risks: this type of risk is also known as default risk. Due to some events or occurrences, a contractual party may default on a contract. Almost all enterprises carry credit risks. From the insurers' point of view, insurance companies may not demand the policyholders' up-front cash payment for the premiums. Instead, most insurance companies provide the insurance services after the contracts have been concluded. The premiums paid by the policyholders are supposed to be complete after the insurance services have begun. Therefore, the direct policyholders might default on the payments of insurance premium.

devices other than re/insurance, such as mutual aid or guarantee contracts, can also have the same purpose. Participators in re/insurance undertakings may be confused.

Under the US legal system, the McCarran-Ferguson Act enacted in 1945 deems that each State' government is entitled to regulate and supervise the business of insurance within its individual governable territory. However, this Act still does not resolve whether the transfer of risk is a requirement in a re/insurance contract.[8] In earlier times, the US courts did not firmly establish any comprehensive criterion for determining what constitutes the business of insurance until *Group Life and Health Ins. Co. v. Royal Drug Co.*[9] in 1979. The US Supreme Court was of the opinion that the primary element of an insurance contract would be the underwriting or spreading of risk. In *Union Labor Life Ins. Co. v. Pireno*[10] in 1982, the US Supreme Court gave more explicit instructions on how to judge an undertaking categorised as the business of insurance, under which it adopted a test on three points. The three points were: "(a) whether the practice has the effect of transferring or spreading a policyholder's risk; (b) whether the practice is an integral part of the policy relationship between the insurer and the insured; and (c) whether the practice is limited to entities within the insurance industry." The most significant gist of the *Pireno* case is that the transfer of risk is an essential characteristic of the business of insurance.

6.1.2.2 The regulatory and accounting viewpoints

In the initial stage of the evolution of financial reinsurance, the regulatory authorities deemed that a contract was not a reinsurance contract if it bore only timing risks rather than underwriting risks; hence, a contract without transfer of underwriting risk was merely categorised as a financial management contract.

Following the development of regulatory doctrines and practices, risk types were extended, but the risk transfer element is still essential in a financial reinsurance

[8] The key language of this Act, for present purposes, is contained in 15 U.S.C. §1012(b): "No act of Congress shall be construed to invalidate, impair, or supersede any law enacted by any State for the purpose of regulating the business of insurance...unless such act specifically relates to the business of insurance...".

[9] 440 U.S. 205 (1979)

[10] 458 U.S. 119 (1982)

contract. It has proved necessary to deal with risk transfer in a flexible manner. The most significant point is that the authorities have loosened the restrictions against timing risks. For example, the Department of Trade and Industry deemed that "reinsurance arrangements that only provide cover for the timing risk, as to the settlement pattern of claims, and do not cover the underwriting risk, as to the amount and existence of claims, may nonetheless constitute reinsurance".[11] Otherwise, whether there is little or no transfer of risk, supervisors need to question whether the insurer should be permitted to account for the contract as reinsurance.

The UK FSA (Financial Services Authority) adopts a broad principle rather than a prescriptively quantitative rule to examine risk transfer; hence, more latitude and larger scope of coverage for approaches for testing risk transfer are possible. The regulators will investigate whether the business motivation is transfer of risk or not. The FSA forbids that the main motivation for transacting financial reinsurance is rather to improve the financial statement than to transfer risk.

Transfer of risk has been emphasised by the English accountancy profession, and many regulations pay attention to accounting aspects. Some documents address the transfer of risk as one of the essentials of a re/insurance contract. A Technical Release issued in 1994 by the Institute of Chartered Accountants entitled the "Application of FRS 5 (Financial Reporting Standard) to General Insurance Transactions", also known as FRAG 35/94, states that either an underwriting risk or a timing risk will satisfy the risk transfer requirement. Moreover, the Statement of Recommended Practice (SORP) on Accounting for Insurance Business by the Association of British Insurance in December 1998 reflects the approach taken by FRAG 35/94 and includes the idea that a key characteristic of insurance is the transfer and assumption of insurance risk which may comprise either/both underwriting risk or/and timing risk.[12]

On the other hand, the US accountancy profession place emphasis on the point that the characters of transfer risk and loss indemnity in an insurance arrangement are

[11] See the Department of Trade and Industry in a letter dated 23 December 1992 to every company authorised to conduct general insurance business in the UK

[12] Barlow Lyde & Gilbert, *Reinsurance Practice and the Law*, LLP, Paragraph 14.4.3

requirements. In 1992, the US Financial Accounting Standards Board issued Financial Accounting Standard 113 (FASB 113), which further stipulates that the declaration for accounting as to reinsurance contracts requires tallying with the two conditions: the first is transfer of risks, including both/either underwriting and/or timing risks; the second is reasonable probability of a significant loss. The intention of FASB 113 is to prevent insurers from amending their balance sheets through effectively deducting reserves by means of financial reinsurance instruments. However, there is a doubt as to how much insurance risk is significant risk. FASB 113 only provides a principle-based approach rather than an interpretation in detail.

The International Accounting Standards Board (IASB) expressed an opinion on risk transfer in publishing the International Financial Reporting Standard (IFRS 4), which provides guidance on insurance accounting practices. There is a common definition for both insurance and reinsurance in IFRS 4, under which the transfer of significant insurance risk is when: "A contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specific uncertain future event (the insured event) adversely affects the policyholder."[13] Similar to US FASB, IFRS 4 does not give any quantitative guidance as to the extent of insurance risk or loss, but provides only an abstract idea, which implies that financial statements need to reflect economic substance. IFRS reject provision of a firm definition of significant insurance risk by presenting "the expected (i.e. probability-weighted) average of present values of the adverse outcomes as a proportion of the expected present value of all outcomes, or as a proportion of the premium."[14]

6.1.2.3. The 10-10 rule

In the practice of re/insurance undertakings, the "10-10" rule can be a rule of thumb among auditors and regulators. This rule suggests that if there is at least a 10% chance that the reinsurer would suffer a 10% or greater loss on a percent value basis, the risk transfer will be "significant". In brief, there is a 10% probability of a loss

[13] IFRS 4 Appendix A
[14] IFRS 4 BC 35

equal to at least 10% of the policy limit.[15] For example, under an insurance policy, first, losses are at least 10% likely to be incurred; secondly, if the policy has a £1 million limit and a £0.9 million premium can be collected by the underwriter, it will pass the 10-10 test, because the maximum loss to the underwriter is £100,000 (£1 million is decreased by £0.9 million), which is equal to 10% of the policy limit. By contrast, if there is an insurance contract with a £1 million policy limit and a £910,000 premium, it will fail the 10-10 test, because the maximum loss to the insurer is £90,000 which is only 9% of the policy limit, even though that loss is 95% likely to occur. Passing that bright-line test can be regarded as achieving "significant" risk transfer. However, the 10-10 rule does not suitably apply to catastrophe or other high severity covers, due to a low probability of catastrophic events occurring. Otherwise, there might be numerous situations which should be excluded from the application of the 10-10 rule.[16] In the final analysis, the 10-10 rule is not a statutory or regulatory requirement. Nowadays, methods for testing significant risk transfer have not formally been concluded yet.[17] The greater numbers of situations are still decided on a case-by-case basis.

6.1.3 Testing transfer of risk against various financial reinsurance forms

As mentioned above, regulators in the UK and US are of the opinion that a reinsurance agreement must fit two conditions: (1) the reinsurer assumes significant insurance risk, including both/either underwriting and/or timing risks; (2) the reinsurer is reasonably capable of incurring significant loss. It is worth examining whether the current various types of financial reinsurance[18] conform to the two regulatory requirements. However, it should first be clarified what timing and underwriting risks are. The explanations are as follows.

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[15] Casualty Actuarial Society (CAS) suggested 10-10 Rule was inadequate as universal rule because it could not identify contracts that were clearly risky.

[16] In recent years, there has been a higher standard "15-15" rule, which provides an alternative method for valuing significant risk transfer.

[17] The American Academy of Actuaries (AAA) concluded that, "Just as there are many acceptable loss reserving methods, we believe that there can be many acceptable risk transfer methods. No one method will always be better than others, and the appropriateness of any given method will depend on individual circumstances".

[18] The definitions of various types of financial reinsurance have been interpreted in Chapter V (5.3.4.1 and 5.3.4.2)

As far as timing risks are concerned, after an insurer's responsibility for indemnifying the assured incurs, there could be a disparity between the anticipation of indemnity time and the actual indemnity time. If the actual indemnity time advances the anticipative time of indemnity, both the insurer and the reinsurer will suffer loss. As far as the benefits of insurers and reinsurers are concerned, the earlier the claims have been settled, the fewer earnings can be acquired. Depositing a claim reserve is an additional function that can accrue monetary interest; however, if the time of indemnification must be earlier than the anticipation, the claim reserve deposited by the insurer will be trimmed down, causing the reduction of interest.

As far as underwriting risks are concerned, the main purpose of traditional reinsurance contracts is to transfer underwriting risks. In practice, having underwritten a business, the underwriter may face at least three kinds of risks, including risk of change, risk of random fluctuation and risk of error, as a result, premium collected may be insufficient to cover actual claims payments. These types of risk are generally called underwriting risks. Risk of change refers to the change of anticipative conditions; risk of random fluctuation covers events random, risk of error may be caused by inaccuracy in actuarial valuation. Having underwriting risks, an insurer is confronted with the probability of under-estimating the liabilities from business already written, or inadequately pricing current or prospective business; as a result, the premiums received from the assureds are potentially not sufficient to cover future incurred losses and the loss adjustment expenses' current reserves are not sufficient.

6.1.3.1 Loss portfolio transfer agreements (LPTs)

Under an LPT agreement, the ceding insurer transfers to the financial reinsurer its liability for underlying outstanding losses (the losses have not been indemnified by the insurer), brought on portfolios of business transacted in prior underwriting years. There is a time gap between the direct policyholders' claims and the reinsurer's expenditure on actual indemnity. The reinsurer will earn profits if the actual payment of indemnity is later than the expected indemnifying expenditure. By contrast, the reinsurer will incur loss if the payment of indemnity is earlier than the expected indemnity. The principle risk that the ceding insurer transfers to the

reinsurer through an LPT is the timing risk that losses or claims arrive at a much faster rate than expected. Furthermore, the reinsurer may face underwriting risk more or less if the ceding insurer underestimates its loss reserves; nevertheless, the net present value of the reserves plus a loading is approximately equal to the LPT premium.

In the case of reasonable probability of a significant loss, an LPT is able reach this condition. For example, the ceding insurer transfers significant risk to the reinsurer and such a policy has passed the quantitative test of risk transfer on the basis of the 10-10 test (the reinsurer bears that 10% possibility of losses which is, equal to 10% of the policy limit). To summarise briefly, LPTs can be treated as reinsurance contracts on the account, from the perspective of the regulatory authorities, in spite of legal considerations and different views (see **Chapter V, 5.3.5.2**).

6.1.3.2 Adverse development covers (ADCs)

Basically, ADCs are similar to LPTs as types of retrospective loss contracts. The difference between them is that an ADC provides protection against any losses above the attachment point which is equal to the ceding insurer's loss reserves; in comparison, an LPT's cession is equal to the outstanding claims reserves for the liabilities. Like LPTs, ADCs also fulfil transfer of timing risks on the basis of the principle of time value of money.[19] Moreover, the reinsurer assumes much more residual underwriting risk,[20] stemming from the possibility that the ceding insurer has undervalued its reserves, due to complexity of estimation. Like LPTs, reasonable probability of a significant loss can be approached by ACDs, so this paragraph does not give unnecessary details.

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[19] The time value of money is also known as the discounted present value. It presumes that that money received immediately is more valuable than money received in the future. One would prefer to receive a certain amount of money immediately, rather than the same amount in the future. As a result, it is reasonable that one demands interest when making investment, depositing money in a bank account or any other financing. For example, if £90 today will accumulate to £100 a year from now, than the present value of £100 to be received one from now is £90.

[20] Residual underwriting risks are remaining risks which cannot be defined in more detail after elimination or inclusion of all conceivable quantified risks in a risk consideration.

6.1.3.3 Time and distance policies (TDs)

TDs mainly provide for coverage against IBNR (incurred-but-not-reported) losses. Unlike LPTs and ADCs, TDs do not deal with outstanding claims. In other words, the ceding insurer's liabilities from business already written are not transferred from the insurer to the reinsurer. When a TD contract is concluded, the TD's premium, equal to the present value of the payable indemnity, deducting the expected investment income, should be paid by the ceding insurer. According to the specified fixed schedule, the reinsurer pays back the amount to the ceding insurer at agreed dates and for agreed sums. It is worthy of concern that the reinsurer does not assume any underwriting or timing risk,[21] because all the payment conditions have been agreed in advance. The only risk borne by the reinsurer is that the ceding insurer's actual investment income is lower than the expected investment income. Without insurance risk transfer, the issue as to whether TDs are legitimate has raised suspicions among the regulatory and tax authorities. In most jurisdictions, TDs cannot be treated as reinsurance contracts from both the legal and regulatory points of view.

6.1.3.4 Prospective covers

As far as current prospective covers are concerned, spread loss treaties (SLTs) and finite quota shares (FQSs) can be treated as typical types. Concluding the underlying insurance policy, the underwriter incurs insurance business risks. As far as the underwriting risk is concerned, the premiums fixed to cover expected claims payments coupled with transaction costs may be insufficient to cover actual claims payments. As far as timing risk is concerned, actual loss claims may happen earlier than expected,[22] but the cedant's reserve may be too low to pay for those claims. Under a SLT or FQS, the reinsurer will assume the insurance risks transferred from the cedant. These insurance risks include at least some underwriting or timing risks. On the other hand, after passing the quantitative test of risk transfer, a condition of

[21] International Association of Insurance Supervisors (IAIS), *Disclosure and Analysis of Finite Reinsurance*, October 2005, p.34

[22] Concluding an insurance contract, an underwriter usually will evaluate the frequency and time points of loss occurring according to the past experiences of records, though uncertainty of losses in the future are difficult to estimate.

reasonable probability of significant loss can be reached. In summary, prospective financial reinsurance covers can be treaded as reinsurance contracts from both legal and regulatory system viewpoints.

6.1.4 Supervision of financial reinsurance after the failure of the HIH Group

Back to the fundamental values, financial reinsurance is appropriate in condition of being capable of being operated properly. This will be difficult if regulators and market practitioners want it stamped out. By means of financial reinsurance, the cedant's cash flow can be relieved. However, it sometimes increase the potential risk of the cedant's solvency. For example, having concluded a financial reinsurance contract, the reinsured reduces its loss reserve in spite of no actual risk transfer in that contract. In this situation, the reinsured/cedant is still probably lacks sufficient capability to deal with the direct policyholder's claim for indemnity. Again, some financial agreements are reinsurance contracts in name only, but in reality they are similar to loans. The arrangements may cause inappropriate records on balance sheets or financial statements. In order to get rid of the weakness and keep the strength, establishing effective regulatory systems is a requirement. The significance of supervising financial reinsurance transactions has received attention by the regulatory authorities. Several countries have begun to draw up regulations for supervising financial reinsurance, due to having perceived several abuses which damaged several insurers.

Financial reinsurance has flourished since the 90's, because the functions of economic stability and propriety have obtained a common consensus and the financial reinsurance market was laxly regulated. Nowadays, the time and spatial background has changed; it promptly raises the need for mature regulatory rules. Regulating financial reinsurance transactions can be on the basis of two approaches, the principle based approach and the rules based approach. On the principle based side, based on freedom of contracts, supervisory regulations rather give conceptual guidance than detailed provision. Responsibilities are placed on senior management and the board, which should pay attention to properly agreed and documented policies and appropriate procedures. By contrast, under a rules based approach, supervisory requirements are more definitive and supervisory procedure more detailed.

6.1.4.1 The collapse of the HIH Group

Founded in 1968, the HIH Group used to be one of Australia's largest insurance companies, with branches in Australia, the US, the UK, Hong Kong and many other countries. In March 2001, HIH received permission from the New South Wales Supreme Court to have their major companies placed into provisional liquidation put into liquidation, due to the estimated deficit of the insurance group reaching between AU$3.6billion and AU$5.3billion. Following the collapse of HIH, a Royal Commission was established to investigate the failure of the companies. In April 2003, the Royal Commission published its report, under which there were a number of causes for the collapse of HIH, such as insufficient insurance rates, rapid expansion of business, inappropriate reinsurance arrangements and incompetence to control against catastrophe risks.

When HIH collapsed, Australian governmental officers and global re/insurance enterprises were astonished, because HIH had just passed an assessment by APRA (the Australian Prudential Regulation Authority), which in the Australian legal system is responsible for monitoring insurance undertakings. For the convenience of the regulators, insurers are obliged to submit seasonal or annual auditing reports to APRA. Once an insurer is known to have breached a prudential standard or is likely to breach a prudential standard,[23] APRA is entitled to direct the insurer to comply with all or part of the standard within a specified time and the insurer must comply with the direction.[24] HIH's insolvency reflected insufficiency of supervision, which should be highly criticised. Under the Royal committee's report, the obvious negligence was that APRA did not take action in view of HIH's financial difficulty by way of proper measures at the proper time. It may have prevented the collapse of HIH if APRA had designated inspectors who could enter into regulatory procedures earlier. APRA had given assistance and cooperated with other insurance firms, and this

[23] APRA may determine (in writing) prudential standards that must be complied with by insurers (Sect. 32 of Australian Insurance Act 1973)

[24] The direction involves prudential matters (1) are which conducted by the insurers to keep themselves in a sound financial position and to avoid instability in the Australian system, and (2) which reflects the conduct by the insurers of its affairs with integrity, prudence and professional skill (Sect.3 Australian Insurance Act 1973). For example, the direction may ask an insurer to give APRA the indicated information within a certain time, not to execute disposal of a specified property within a certain time or to dispose of a specified property under the instruction of APRA.

cooperation extended to at least 1 million policyholders. Nevertheless, numerous claims were brought about that should have been earlier indemnified by HIH. In fact, indemnities paid early put HIH in a difficult position, due to insufficiency of premium receipts. According to Sect. 9 of the Australian Insurance (Agents and Brokers) Act 1984, an insurance broker takes charge of arranging contracts of insurance for intending insureds. There were business relations between HIH and numerous insurance brokers. When HIH collapsed, there were approximately AU$50 million of insurance premiums which had been collected by the brokers, but the brokers had not handed them over to HIH. It can be deemed that the APRA arrangements neglectfully worsened HIH's solvency situation.

HIH entering into inappropriate financial reinsurance arrangements can be treated as the chief abuse. Under the Royal Commission's survey, the first misuse of financial reinsurance was the appearance of transfer of risk where there had been none. Secondly, oral agreements and side letters were used to negate the risk transfer effect of financial reinsurance contracts. Thirdly, some fraudulent records were entered on the financial statements, and backdating of documents occurred. Other serious misuses were "the inclusion of unrealistic triggers, the inclusion of cover not intended to be called upon and the inclusion of features inconsistent with insurance."[25] However, the Royal Commission did not say that financial reinsurance was *per se* bad or misleading, but deemed that the regulating financial reinsurance regime should be retrofitted instead. For example, in order to avoid the misleading of accounting officers and auditors, the Royal Commission proposed that the relevant accounting standard for a financial reinsurance contract should be in need of a material or sufficient transfer of insurance risk before the contract is properly categorised as a reinsurance contract. In February 2006, APRA released Prudential Standard GPS 230, under which there are a number of restrictions against concluding finite reinsurance, such as robust requirements for approval and documentation of limited risk transfer products. There was a strict rule that the re/insurer would be obliged to obtain APRA's pre-approval before setting up any inadequate risk transfer arrangement, which included entering into financial reinsurance.

[25] M. Graham, "Has financial Reinsurance lost its Bounce after HIH?", BLG's ART seminar, November 2003

6.1.4.2 The UK response

The bankruptcy of HIH also triggered concerns outside Australia, in terms of improving the financial reinsurance regulatory regime. In the UK, arranging each financial reinsurance contract is not necessary to obtain prior approval by the regulatory authority. FSA has no proposal to establish prescriptive rules in relation to regulating financial reinsurance and is of the opinion that economic substance of transaction can be supervised in a principle based approach more appropriately than monitoring in a rules-based approach.

In 2002, the FSA issued *Consultation Paper 144 (CP144)*, also known as "A New Regulatory Approach to Insurance Firms' Use of Financial Engineering", which stated that "properly constructed and presented financial engineering can be a valid method of strengthening a firm's solvency position where there is genuine and material transfer of risk to an unconnected counterparty". *CP144* gave insurers a warning that financial engineering could be used not only to obscure the insurer's financial condition, but also to mislead consumers or regulators; the FSA would conduct disciplinary treatment against directors of insurers in the event that the insurer distorted its financial results by means of financial arrangements or letters.[26]

In March 2005, the FSA sent an open "Dear CEO" (Chief Executive Officer) letter to ask UK insurance companies and the managing agent at Lloyd's to consider the most effective way to supervise the use of financial engineering. The letter revealed four tasks that should be undertaken by firms.[27] (i) To disclose to the FSA all details of financial arrangements on condition that economic value of transactions were materially different from the value put down in writing on the firm's balance sheet. (ii) The transactions accepted by such firms should be set out for adequate

[26] In 2003, FSA banned six former directors of Chiyoda Fire and Marine Insurance Company (Europe) Limited for distorting company financial results for 1999/2000. As far as the supervising insurance executives are concerned, FSA adopts an approved persons system, under which only persons who have been approved by the FSA are entitled to perform an FSA controlled function for authorised insurers. Having passed the FSA's fit and proper test, which focuses on the person's honesty, integrity, reputation, competence, capability and financial soundness, an executive can obtain the approval. If an approved person breaches the regulations, he will be disciplined (*FSA Hand book*, titled "The Fit and Proper test for Approved Persons", Release 027, January 2004, Chapter 2 Main Assessment Criteria)

[27] FSA, "A regulatory update from the Insurance Sector Team", *General Insurance Newsletter*, Issue No. 7-October 2005

supervisory scrutiny. (iii) To confirm that they have not entered financial engineering transactions or side agreements that might hide their financial position. (iv) To confirm that they have given explanations for the extent of financial engineering undertaken and its impact on asset and liabilities.

In 2005, the FSA intended to make new rules, which placed special emphasis on disclosure requirement. The proposed guidance in the *FSA Consultation Paper CP05/14* can be summarised in three points.[28] (i) Where the general insurance firm or the Lloyd's Syndicate accepts insurance business which can be defined as financial reinsurance,[29] it will be requested to disclose annual financial returns from financial reinsurance and relevant information according to definite guidance as to what should be disclosed. (ii) Insurance firms and syndicates should take into full consideration the effect on their reinsurance contracts of any related agreements or side-letters. (iii) However, there is an exclusive situation, under which "no disclosure is required where the financial effect of the reinsurance agreement on the firm's capital resource is not material, which means that the financial effect of the reinsurance agreement on the value of both assets and liabilities is less than 1% of total technical provisions when considered in the aggregate which all such contracts with the same reinsurer or persons connected with that reinsurer."[30]

In 2006, the publication of the *FSA Consultation Paper CP06/16* gave feedback on the previous consultation papers. The disclosure requirement proposed by the *FSA Consultation Paper CP05/14* obtained reconfirmation. Lacking disclosure requirements, financial reinsurance operators will incur regulatory discipline. Financial reinsurance only can be used for lawful intentions and needs to be in the wake of full disclosure. In July 2006, the FSA and the APRA (Australian Prudential

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[28] FSA, *Quarterly Consultation Paper (No.6)*, October 2005, Chapter 3, Proposed amendments to the Integrated Prudential sourcebook, the Interim Prudential sourcebook for Insurers and the Lloyd's sourcebook.

[29] Adopting a principles based approach, there is no accurate definition given by the FSA. However, the FSA consultation paper *CP144* (July 2002) entitled "A new regulatory approach to insurance firms' use of financial engineering", illustrates four characteristics of financial reinsurance contracts. They are "(a) an element of direct or indirect profit sharing: (b) multi-year and multi-risk contracts; (c) establishment of an experience accout maintained by the reinsurer according to a specific formula throughout the life of the contract; and (d) despite the fact that a main purpose the arrangement is financing, often a limited amount of insurance risk is transferred to the reinsurer but enough for the arrangement to be considered reinsurance for accounting purposes."

[30] FSA, *Quarterly Consultation Paper (No. 6)*, October 2005, p.15

Regulation Authority) prohibited a reinsurance professional, Mr John Byrne, due to a number of financial reinsurance deals enabling counterparty insurers to misrepresent their financial position. Under the FSA prohibition, Mr Byrne was prohibited for five years from transacting in the UK for any controlled function which required FSA approval;[31] meanwhile, the APRA prohibited Mr Byrne from being a director or senior manager of a general insurer, non-operating holding company or agent of a foreign general insurer for five years in Australia. Many facts show that the FSA has made efforts, in that all reinsurance contracts, including financial reinsurance covers, need to reflect the economic substance of the transaction.

6.1.4.3 Regulatory developments in the US

There are two key points to which US regulators have paid attention. One is significant insurance risk requirements (see **6.1.2** above); the other is that the regulators have been taking steps to advise disclosure requirements. On the risk transfer side, the National Association of Insurance Commissioners (NAIC) amended Chapter 22 of the Property/Casualty Accounting Practice and Procedure Manual in 1994, due to the intention to absorb several principles submitted by FASB 113; afterwards, the governmental and the non-governmental professional standpoints tended to similarity in the matter of significant insurance risk transfer.[32] On the disclosure side, the NAIC approved enhanced disclosure requirements for insurers using finite reinsurance in 2005. The disclosures adopted for the 2005 annual statement require a property and casualty insurer to report to state insurance regulators any agreement that has "the effect of altering policyholders' surplus by more than three percent or represents more than three percent of premium or losses".[33] In order to help the regulator to monitor an insurer's financial stability, the insurer's CEO (Chief Executive Officer) and CFO (Chief Financial Officer) are required to sign an

[31] FSA, "FSA and APRA prohibit reinsurance specialist for five years" FSA/PN/072/2006, <http://www.fsa.gov.uk/pages/Library/Communication/PR/2006/072.shtml>, visiting date 23/02/07

[32] In 1992, the US Financial Accounting Standards Board (FASB) issued Statement No. 113 (FASB 113), which established the principle of significant insurance risk transfer.

[33] NAIC News Release, "NAIC Group Approves Finite Reinsurance Disclosure Requirements", 12/06/2005

attestation that there are no side agreements and that risk transfer has occurred more over, attesting propriety of accounting is requested as well.[34]

6.1.4.4 Financial reinsurance provisions in the EU Reinsurance Directive 2005

Under the Reinsurance Directive 2005, the definitions of reinsurance were broader than they were traditionally due to including finite reinsurance. Article 2(1)(q) states that, "finite reinsurance means reinsurance under which the explicit maximum economic risk transferred, arising both from a significant underwriting risk and from a timing risk transfer, exceeds the premium over the lifetime of the contract, by a limited but significant amount, together with at least one of the following two features:

(i) explicit and material consideration of the time value of money;

(ii) contractual provisions to moderate the balance of economic experience between the parties over time to achieve the target risk transfer."

However, the above definition as to the concept of loss potential which is "limited but significant" is somewhat curious. Finite reinsurance transfers only a finite, or limited, amount of insurance risk. If a programme has gone through a test about significance, such as the 10-10 rule, the loss still fits with the term "limited". In other words, using "limited" to define the amount of loss seems to be redundant. Loss potential remaining "significant", despite being qualified as "limited", is a concern for regulators.

Article 45 reveals that home and member states may make specific provisions concerning finite reinsurance on: (i) mandatory conditions to be contained in policies, (ii) sound administrative and accounting procedures, (iii) adequate internal control mechanisms, (iv) risk management requirements, (v) accounting, prudential and statistical requirements, (vi) establishment of technical provisions ensuring that they are adequate, reliable and objective, (vii) investments of assets to ensure claims will be paid, (viii) solvency margin rules tailed for finite business.

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[34] The CEO/CFO attestation entitled "Attestation of Chief Executive Officer and Chief Financial Officer Regarding Reinsurance Agreements Supplement" was to be required as a supplement to the Annual Statement.

Recital 31 states "...owing to the special nature of this line of reinsurance activity, the home Member State should be given the option of laying down specific provisions for pursuit of finite reinsurance activities. These provisions could differ from the general regime laid down in this Directive on a number of specific points." There is a doubt as to whether the home member states should obey the directive's harmonised principle[35] when they settle down specific provisions for pursuance of finite reinsurance activities. The answer seems to be negative. Financial/finite reinsurance is still prohibited in certain EU countries nowadays. Nevertheless, where financial reinsurance is carried out and permitted, the member state is required to regulate it in whatever manner the member state thinks fit. The directive does not contemplate that financial reinsurance should be unregulated, but there is no harmonised regulation.

6.1.4.5 The International Association of Insurance Supervisors

In 2004, the IAIS's (International Association of Insurance Supervisors) Reinsurance and Other Forms of Risk Transfer Subcommittee held a meeting, under which establishing a *Guidance Paper on Finite Reinsurance* was suggested. In 2005, the draft concerning the *Guidance Paper on Finite Reinsurance*,[36] which provided a comprehensive supervisory guideline, was initially drawn up. It has been anticipated that the guidance paper can be a material reference to cope with the challenge for regulators to approach a balance between the market's discipline and the operating parties' favours.

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[35] The significance of harmonisation is to set down certain minimum standards, which each member state is required to fulfil. If there is no harmonisation of member states' domestic legislations, reinsurers may flock to the least regulated EU member state.

[36] The paper includes: (1) the background on the development of finite reinsurance and the used by insurers; (2) the key characteristics of finite reinsurance and the accounting treatment; (3) the issues that supervisors should be aware of and the supervisory approaches taken to address these issues, many of which are supported by existing IAIS principles on insurance supervision generally; (4) where appropriate, separate sections for life reinsurance; (5) recommendations for supervisors; (6) a number of detailed examples and further discussion on the issues which are included in the appendices (See *IAIS Newsletter 6*, 3rd Quarter 2005).

6.2 Legal and regulatory issues resulting from the insurance risk of securitisation: Focus on CAT-Bonds

Insurance risk securitisation, characterised by blended functions of financial instruments, is an innovation, by use of which insurers can obtain capital and enhance underwriting capacities. Section **6.2 of Chapter VI** presents and attempts to solve the legal and regulatory issues resulting from insurance risk securitisation, especially focusing on catastrophe bonds (CAT bonds). The trading of CAT bonds is usually across multi-national boundaries; causally, it requires analysing the present status of insurance and relevant law in the related countries, particularly its effects on insurance risk sharing. This study will make use of the method of comparative law, especially comparing with US law.

6.2.1 An SPV entering into principal relationships in a CAT bond regime

The complicated nature of CAT bonds, completing the overall process of a CAT bond programme, may involve a number of parties domiciled in different judicial territories. The US securities laws are worthy of concern, due to there being volumes of securities transacted on the US market. Activities such as establishing off-shore SPVs and issuing CAT bonds to investors overseas may bridge across multi-nations. Under a CAT bond regime, the SPV enters into two principal contractual relationships. The first is the relationship with the cedant/ceding insurer; the second is the relationship with investing bondholders.

6.2.1.1 The contract between the SPV bond issuer and the cedant/ceding insurer

The relationship between the originator and the SPV/SPR[37] maintains a doubt as to whether there is a re/insurance contract between the originator and the SPV. The answer depends on which trigger base a CAT bond programme adopts. A CAT bond programme can be on an indemnity trigger basis and on an index or a parameter

[37] There will be an insurance contract between the originator and the SPV if the originator is a non-insurance entity; in comparison, if the originator is an insurance entity, there will be a reinsurance contract between the originator and the SPR (special purposes reinsurer) and the SPV becomes the SPR. However, the terminology SPR is often replaced by SPV even it is less accurate, so the term SPV will continue to be used hereafter.

trigger basis. Under an indemnity trigger regime, the originator is liable to pay the premium to the SPV; in return, the SPV will pay the originator in accordance with the originator's actual loss when the indemnity event occurs. Having ascertained the amount of actual loss, the originator is entitled to claim for the SPV's indemnity. Clearly, there is a privity of re/insurance contract between the originator and its SPV.

By contract, under the index or parameter trigger of a CAT bond, the SPV does not indemnify the originator based on the actual loss, but makes a payment in accordance with the parameters or indices proclaimed by the reliable official or nonofficial bodies instead. The index or parameter based type does not completely fit in with the components of a re/insurance contract.[38] Although the originator pays the "premium" to its SPV, this factor is similar to operating a re/insurance contract. However, a main point of difference from a re/insurance contract is that the SPV's repayment would be subject to an index or a parameter stated in the contract rather than the originator's actual loss. Without resting on actual loss indemnity, the privity of contract between the SPV and the originator is by no means a contractual re/insurance relationship. Insurance principles, contracts of indemnity, insurable interest, utmost good faith etc., do not apply to this kind of contract.

6.2.1.2 The contract between an SPV bond issuer and investing bondholders

There is still a blur as to what kind of relationship exists between the SPV and the investors. Four various sectoral contractual forms are make use of to examine questions of the contractual relationship between the SPV and the investors in a CAT bond regime, as follows.

[38] *Insurance Company v. Inland Revenue Commissioner* provided a general description in connection with insurance contracts (see 6.1.1.1). To summarise briefly, parties concerned agree that (i) the ceding party is the assured, and pays a premium to the other party, who is the insurer, then (ii) the insurer is liable for pecuniary indemnification for damage caused by events which are uncertain to happen or uncertain as to when, and (iii) the assured possesses an insurable interest in the subject matter.

(1) Whether there is a contractual relationship of re/insurance between the SPV and the bondholder

The relationship between the bondholders and the SPV can be comparable to the relationship between the re/insurer and the reinsurer/retrocessionaire. However, the cash flow of a CAT bond regime is quite different from that under a re/insurance programme. At the beginning of CAT bond transaction, there is a lump sum subscribed by the investors that will be treated as the bond capital; afterwards, the element of "premium" is visible only if and when the bond is repaid. Furthermore, under the index or parameter trigger of a CAT bond, redemption of the bond capital may not be affected by the specific loss suffered by the SPV under its underlying re/insurance contract. The tendency is that a transaction arising through the capital markets may be deemed as one financing contract but not a re/insurance contract. Moreover, the scale and regularity of CAT bond transactions may increase, and then CAT bonds will get rid of the nature of insurance more or less. Thus, the contract between the investors and the SPV is not suitable to be qualified as the contract of insurance.

(2) Whether CAT bonds can be treated as corporate bonds

A corporate bond is a bond issued by a corporation for the sake of expressing the bondholder's credit to the issuing corporation. Basically, a corporate bond is a debt instrument, under which there is a privity of loan contract between the bond issuer (the debtor) and the bondholder (the creditor). The corporation pays the coupon on schedule and refunds the principal to the bondholder at the maturity date. As far as the classification according to the principal repayments is concerned, CAT bonds can be classified into principal protected and principal at risk bonds (see **5.5.5.2**). Operating a principal protected bond, which the returnable principal designs, is similar to the system of operating corporate bonds. On the other hand, operating principal at risk bonds seems to be a doubt, because the issuer forfeiting the principal is different from the principal operated in a corporate bond. However, from the viewpoint of the function of expressing bondholder's rights, both CAT bonds and corporate bonds are commercial papers which represent the holders' right to the issuer

and to the public; it is better to treat CAT bonds as one alternative type of corporate bond.

(3) Whether CAT bonds are derivatives

Derivatives involve trading under linked to securities, interest rates, indices, or any other interest set forth by exchange and other relevant markets. Futures contracts and option contracts can be regarded as two typical types of derivatives. As far as the definitions of futures and option contracts are concerned, Taiwan's legislative has drawn a comparatively clear explanation. Under Article 3(1) of the Taiwanese Futures Trading Law 2002, "A Futures Contract shall mean a contract made pursuant to the agreement of the parties involved to purchase or sell a specified quantity of a certain underlying interest for delivery at a specified point of time in the future and at a specified price and under the specified trading terms, or to offset the obligation under the contract by settling the difference in price prior to or on the last trading day." Under Article 3(2) the Taiwanese Futures Trading Law 2002, "An Option Contract should mean a contract made pursuant to the agreement of the parties involved, wherein the option buyer pays the premium in exchange for obtaining a right of call option or put option to purchase or sell a specified quantity of a certain underlying interest at a specified price and under the specified trading terms within a specified period of time; whereas the option seller has the corresponding obligation to fulfil his/her duties pursuant to such an option contract, when the option buyer exercises the right and demands for the option seller's performance; or both parties agree to offset the obligation and right under the contract by settling the difference in price prior to or on the last trading day."

As far as the index trigger and parametric trigger of CAT bonds are concerned, the trigger mechanisms are linked with changeable indices or parameters. In other words, an investor either earning profits or suffering losses depends on the fluctuations in indices or parameters which should be settled under the specified trading terms within a specified period of time. From the trigger condition's point of views, if a CAT bond's trigger is based on a series of indices or parameters, it is similar to the operation either in a futures contract or in an option contract. In

comparison, in a condition where a bond is triggered by actual indemnity loss, it is far from the nature of derivatives.

However, only relying on trigger conditions to judge whether CAT bonds are derivatives is too hasty. From an investor's point of view, a CAT bondholder obtains a coupon from a bond issuer, whereas there is no coupon payment in a derivatives regime. Moreover, under a derivatives transaction, an investor is allowed to take part in the derivatives investment just after he has paid a sum of guaranty money. This is quite different in that a CAT bond investor needs to pay in full the principal before he becomes a CAT bondholder. The investment risk borne by a CAT bond investor is much less than that by a derivatives investor; hence, life insurance, pension and annuity undertakings can take advantage of CAT bonds as an investment tool, due to incurring stable investment incomes. There are so many different characteristics of CAT bonds and derivatives, so CAT bonds are not suitable to be regarded as one commodity of derivative.

(4) Whether CAT bonds are securities under the US Securities Act

Issuing CAT bonds may occur be across multiple countries. Consequently, the US securities law is worthy of concern. There is a doubt as to whether CAT bonds are "investment contracts", which can be regarded as a security defined in the US Securities Act 1933. In principle, an investment contract is characterised by its investment nature and market liquidity. An investment contract indicates that an investor parts with an asset to purchase or equivalently a deposit is made in an investment entity, in hopes of obtaining a future return or interest from it. Expectation of earning profits on a regular time schedule, CAT bonds do possess the nature of investment. In the case of market liquidity, it is a business or economics terms that refers to the ability to quickly buy or sell a particular item without causing a significant movement in the price. CAT bonds are provided with liquidity, which is no different from other negotiable securities.

Regarding the significant US case *Securities and Exchange Commission (SEC) v. W.J. Howey*[39] in 1946, the US Supreme Court gave instructions on how to judge an instrument qualified as an "investment contract" for the purpose of the US Securities Act 1933. This *Howey* case (which later came to be referred to as the *Howey* test) adopted a test on three points, which were: "(i) whether there is investment of money due to an expectation of profits arising; (ii) a common enterprise; and (iii) solely from the efforts of a promoter or third party." Being passed the tests laid down in the *Howey* case, the contract can be treated as an investment contract which should comply with the securities law and any other relevant regulations.[40] There is a blur as to whether CAT bonds completely conform to the *Howey* test. At the first glance, the CAT instruments seem to satisfy the *Howey* test.[41] However, from the strict point of views, CAT bonds firmly tally with two of the elements: The first is that that the investors make investments in a common enterprise, the SPV, and the second is that the investors expect to receive profits from others. The element as to "profits from the efforts of a promoter or third party" is somewhat arguable. Under CAT bonds on the index trigger basis, the investors' profits connect with occurring natural disasters or not; the effect can not be man-made. As far as CAT bonds on the indemnity trigger basis are concerned, for example, the bond originator underwriting the primary policies may earn profits, so these underwriting activities can be treated as the "effort of the promoter or a third party". However, the bond originator has its effect before the bonds are distributed to the investors; a separate case *SEC v. Life Partners, Inc.*[42] implies that the "effect of others" should take place after the investment contracts have been concluded. In *SEC v. Life Partners, Inc.*, the Circuit Court of the District of Columbia was of the opinion that the life insurance policies were similar to participations in "viatical settlements"[43] and securitised life insurance policies were not securities because the promoters performed their efforts before the

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[39] 328 U.S.293(1946)

[40] W. Kothari, "Law of Insurance Risk Securitisation", Winod Kothari Securitization Website, <http:// www.vinodkothari.com/riskseclawarticle.htm>, visiting date 26/10/06

[41] J. Mathew, "Whether the bonds issued by the special purpose vehicles qualify under the definition of securities under relevant laws?", <http://www.securitization.net/international/ asia/Mathew_ IndiaLifeInsur.pdf>, last visiting date 10/01/07

[42] 87 F.3d 536, 537-39 (D.C. Cir. 1996)

[43] The sale of a life insurance policy by a terminally ill individual to a third party in order to have cash on hand before dying. When the individual dies, the third party collects money as the policy owner and beneficiary.

sale of participations in the policies. However, the decision of *SEC v. Life Partners* did not aim to target CAT bonds directly.

From the persuasive point of views, the definition of the US Securities Act 1933 s.2(a)(1)[44] is wide enough to include CAT bond instruments. For the sake of governance of CAT bonds transactions, the Federal Securities and Exchange Commission (SEC)[45] is under the impression that insurance-linked bonds are securities, which should be subject to the US securities Act.

6.2.2 Diversified regulatory regime vs. single regulatory regime

In the majority of countries, for example, the US, the financial regulatory regime is under a diversified system, under which each single kind of commercial or financial product has its own regulatory requirement, based on each sector or each transaction pattern. One single sectoral regulator has its clear authority and responsibility under the specified sector or the specified kind of transactions. For the above reasons, it is a requirement for CAT transactors to ascertain the kind of relationship between the parties in a CAT bond regime (see **6.2.1.1** and **6.2.1.2**). For example, if the relationship between the cedant and the SPV in a CAT bond regime is defined in terms of the conduct of insurance, it will be subject to the insurance law and should be regulated by the insurance regulator. If the transaction between the SPV and the investing bondholders under a CAT bond regime is defined as a securities exchange, it will be subject to the securities and the related laws and should be supervised by the regulator of securities.

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[44] Sec. 2 (a)(1) of the US Securities Act of 1933 defines that "the term security means any note, stock, treasury stock, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, pre-organization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a security, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing."

[45] The SEC was established to enforce federal securities law on the basis of the Securities and Exchange Act of 1934.

In contrast with the US financial regulatory structure, the UK has launched a single regulatory regime by way of legislating the Financial Services and Markets Act 2000 (FSMA 2000, hereinafter), due to boundaries between types of financial services or products becoming blurred. For example, CAT bonds have the same nature various financial forms, so it is difficult to categorise CAT bonds into a single product industry. After FSMA 2000 had taken effect, only one single regulator, the Financial Services Authority (FSA, hereinafter) could control regulatory affairs; hence, to ascertain whether a CAT bond transaction belonged to a certain industrial domain or was subject to which sector's regulations became less important. Besides CAT bonds, various ART forms, such as financial reinsurance, catastrophe options, weather derivatives, contingent capital structures etc. should be supervised by the FSA subject to FSMA 2000. This could promote the regulatory efficiency for ART markets. The related regulatory issues and interpretations will be given in section **6.3** below.

6.2.3 The issues as to issuing insurance linked securities in the US

To take a broad view, the US has various huge securities markets, with qualities, quantities and reputations in excess of those in other countries. CAT bonds are securities under the US Securities Act, so the US securities and related laws are worthy of investigation. In principle, the issuance of products of insurance risk securitisation is a kind of private economic activity, so an issuer is at liberty to decide how to issue securities and how to collect funds in a reasonable way. Issuing securities, especially public offerings, usually involves mass investors, and may cause significant overall economic advantages. A number of countries have begun to supervise the transactions of insurance risk securitisation, including issuing CAT bonds, CBOT PCS options, insurance linked surplus financing securities, and so on.

6.2.3.1 Public offerings of securities

Basically, CAT bonds are of the kind of that should be subject to securities laws. In the US, two principal securities laws were enacted, the Federal Securities Act 1933 (hereinafter the 1933 Act) and the Federal Securities Exchange Act 1934 (hereinafter

the 1934 Act).[46] The 1933 and the 1934 Acts raised the efficiency of the securities exchange and operation in the market. Under Section 6(a) of 1933 Act, offerings of securities had to be registered with the SEC,[47] including issuing CAT bonds and any other insurance-linked securities. In filing registration statements, most important financial information can be disclosed. The disclosure of important information enables potential investors to make informed judgements about whether to invest in the securities. Nevertheless, the SEC does not guarantee that the information provided by the issuer is accurate. The main legislative purpose is not to ensure that investors earn profits; the intent is to prohibit deceit, misrepresentations and other fraud in the sale of securities.

The 1934 Act was a significant law providing regulation of securities trading business on the secondary market (after issue). The 1934 Act enlarges the registration and disclosure requirements, especially for securities issuers. The weight-bearing points of the 1934 Act are as follows. First, registration of all listed securities is necessary. Secondly, if a company's financial status dramatically changes, such as by the breaking down of a significant number of company assets, the SEC requires that the company reflects those changed conditions. Thirdly, if there are more than a certain number of shareholders and a certain amount of assets[48] in a company, the 1934 Act requires that issuers regularly file company information with the SEC on certain forms. Fourthly, for the sake of protecting the investing public, regulation of broker dealers is enforced, so that trading practices on stock exchanges and over-the-counter markets to minimise the possibility of insolvency among brokers and dealers can be achieved under the SEC's supervision.

6.2.3.2 Private offerings of securities entitled to exemption from registration statements

Exemption from registration statement is designed to balance conflicts of interest between issuers and investors. Under a CAT bond regime, either the location of the

[46] On July 30, 2002, President Bush signed into law the Sarbanes-Oxley Act of 2002, which added many new and changed many existing provisions of the federal securities laws.
[47] A series of statutory exemptions from registration are available. They include: (i) private offerings to a limited number of persons or institutions; (ii) offerings of limited size; intrastate offerings; and (iii) securities of municipal, state and (iv) federal governments.
[48] 500 shareholders, above 10 million in assets, per 1934 Act sections 12, 13 and 15.

SPV or the sale offering place or the investor's domicile can be selected to apply regulation of the process of issuance of CAT bonds. Basically, having filed a registration statement, the issuer is entitled to issue securities that include launching CAT bonds. Private offerings, also known as private placement, constitute a significant opportunity for exemption from registration.

Due to the time-consuming and expensive registration process for public offerings, it has been a necessity to seek alternative methods to apply for the issuance of securities to a limited number of investors. Consequently, the private offering of securities has been created. The issuer, by selling securities privately, is able to raise funds without incurring the delay and expense of registration. Private placement is also attractive to investors, who often purchase the securities on terms more favourable than those in a public offering. Section 4(2) of the 1933 Act revealed that filing a registration statement would be unnecessary on condition of transactions by an issuer not involving any public offering. That the securities are a private offering gaining the issuer exemption from registration the statement should be a question of fact, about which the burden of proof belongs to the parties who claim for the exemption.[49] The regime of private placement exemption is based on two reasons. The first is for the sake of simplifying the long-winded process; the other is that private offer securities have less impact on public benefits. Section 4(2) of the US securities Act covered securities not involving any public offering. The party who is allowed exemption from registration liability is a securities issuer, but not a securities underwriter or any other financial institution. Under a private offering mechanism, securities distributors or brokers are not allowed to resell to third parties. If the bonds are issued by way of private offering, the bond issuer must establish himself in a bond seller's position; a bond distributor is only entitled to deal with the brokerage business between the issuer/seller and the investors/purchasers in order to earn commission.

There is an issue as to how to define the private offering of securities. In *SEC v. Ralston Purina Co*,[50] the Supreme Court established a standard which can be used to distinguish between public offerings and private offerings. This case judged

[49] M. Himick, *Securitized Insurance Risk*, Glenlake Publishing Co., 1998, p.100
[50] 346 U.S. 119 (1953)

revealed whether the securities can be private offering according to whether the potential purchases needed to be disclosed by the issuer or the seller. In public placement, the 1933 Act provides protection against the securities issuer or seller's fraudulence. In order to safeguard investors, the securities issuer or seller is requested to provide full disclosure of information by filing registration. In a private placement, the statute does not provide the same level of protection based on disclosure of information. In the *Ralston* case, the facts stated were as follows. Ralston Purina Company sold nearly $2,000,000 of stock to employees without registration; in other words, Ralston Purina did not make full disclosure of information with SEC. SEC argued that Ralston Purina's issue of securities to more than one hundred employees could not be treated as private placement, so filing a registration statement with SEC was necessary. The US Supreme Court overruled, saying that the number of purchasers was not only one crucial factor in deciding whether a public or private offering had come into existence. The court was of the opinion that filing registration and full disclosure of information depended on whether the securities purchaser required the safeguard of disclosure or not. In the *Ralston* case, the employees who purchased the securities were not only the key employees, who were able to obtain information via their executive positions in the company, but also included general employees, who needed to obtain the information through full disclosure. Therefore, the Ralston Purina Company's sale of stock to the employees was not allowed as a private placement, so registration with SEC was a requirement. To summarise the *Ralston* case, a private offering of securities must comply with the following: first, each potential purchaser does not need to be protected by the full disclosure of information through the insurer's registration statement in accordance with the 1933 Act; secondly, every potential purchaser is able to obtain governing information to be published in issuance prospectuses.

From the US point of views, several leading cases seemed to restrict the scope of private offering exemption. In *Gilbert v. Nixon*,[51] the court deemed that only if there was a long standing association between the bond issuer and the offeree, would the issuer be able to apply for private offering exemption. The *Hill York Corp v.*

[51] 429 F. 2d 348, 354 (10th Cir. 1970)

American International Franchise Inc.[52] case gave a hint that the insurer should prove the existence of the following three facts if wanting to conduct a private offering exempt from registration. First, the number of offerees should be limited. Secondly, the issuer needs to prove that both parties (the issuer and the offeree) have established a privileged relationship, by the relationship of which the offeree is able to catch on related information that reaches the same completeness as if the registration had been filed. Thirdly, the issuer also needs to prove that any information disclosed by way of registration is of no help to the offerees in the sense that the information is available to them through the positions they hold in the company, so the protection of the 1933 Act is unnecessary. In the *Hill York* case, the defendant could not prove that each offeree had obtained information similar to that which would have been provided on a registration statement, so the securities offering could not be treated as a private placement. The court rejected an argument about the intrinsic quality of an offeree being a standard of judgement, and felt that the offeree being a sophisticated businessman or a lawyer could not be a reasonable reason for private offering exemption. However, a judge is decision may depend on the specific details of a specific case.

6.2.3.3 Anti-fault provisions

No matter or not whether the issuing of CAT bonds needs a filed registration statement with SEC, the "anti-fault provisions" stipulated in the securities laws should be applied without exception. For example, Section 12 a(2) of the 1933 Act roughly states that in the case of "any person who offers or sells a security, by the use of any means or instruments of transportation or communication in interstate commerce or of the mails, by means of a prospectus or oral communication, which includes an untrue statement of a material fact or omits to state a material fact necessary in order to make the statements...", the securities offeror or seller has the civil liability to pay compensation. Furthermore, Rule 10b-5 (an SEC rule under the securities Exchange Act of 1934) makes it unlawful for "any person, in connection with the purchase or sale of any security, to employ any device, scheme, or artifice to defraud; to make any untrue statement of a material fact or to omit to state a material fact necessary in order

[52] 448 F. 2d 680, 689 (5th Cir. 1971)

to make the statements made, in the light of the circumstances under which they were made, not misleading; or to engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person".

From the viewpoint of the regulatory purposes, CAT bond registration statements or private offering prospectuses should be disclosed to investors when the investor makes decisions as to whether he wants to invest or not. The expressible documents include the form of CAT bonds, the SPV's business and management methods, the purpose of the bond's principal and the tax and related documents. The significance is that the expressible documents should contain the risk factors and the investment cogitating factors, which a prudential investor will pay attention to. Not only can traditional risk factors be disclosed, but also the CAT bond's special risk factors should be unveiled; for example, investors' principal loss risks, the unpredictability of catastrophe risks and the risks resulting from the fact that investors may be treated as carrying out insurance business which should be regulated by the related regulations. In addition, a catastrophe's historical record, which the CAT bonds link with, and damage expectancy information on the loss made by the firm should be disclosed by the bond issuer or seller as well.

6.3 ART transactions under the supervision of the UK Financial Services and Markets Act 2000

Recently, financial products have developed sharply. Increased comprehensiveness in regulatory controls has become possible in order to provide more diverse forms, to meet the demand of investors as well as to improve the efficiency of insurance risk securitisation. Sometimes, it is difficult to categorise an ART product into a single notion of contracts subject to one specific kind of regulation. To cite a CAT bond for example, a mixture of financial instrument characteristics are possible, perhaps an insurance contract, or/and a security contract, or/and a corporate bond contract, or/and a contract of derivatives. Consequently, the traditional distinctions among banking, insurance, securities and financing products have become unclear in modern financial practice. Therefore, the need for a greater unification of the regulation of the insurance, security and investment industries in the UK has arisen.

6.3.1 The Financial Services and Markets Act 2000 efforts in the modernisation of regulation

The British government realised that earlier regulations were inefficient and insufficient to protect investors; they were minute in detail, but complicated. Furthermore, in the earlier complicated UK legal framework, often operated in self-governing ways, mass investors would easily be confused, and undertakings would not know what course to take. In 1997, the Financial Services Authority[53] (hereinafter FSA) was named the regulatory body for the whole financial services industry, UK insurance, securities, banking enterprises etc., planned jointly so as to take into consideration aspects of every matter. Consequently, regulating various ART forms has been affected since the Financial Services and Markets Act 2000 (hereinafter FSMA 2000) was enacted.

[53] The Financial Services Authority (FSA) has the legal form of a company limited by guarantee (number 01920623). It was incorporated on 7 June 1985 under the name of The Securities and Investments Board Ltd. The FSA is an independent non-departmental public body and quasi-judicial body which regulates the financial services industry in the UK.

6.3.1.1 Rationale for a single regulator

Traditional regulatory methods for financial products are according to individual financial sectors. Basically, one sector has at least one regulator and one sector's regulator only deals with its sector's regulatory affairs. As ART forms are across various sectors, if an ART product is under a diverse regulatory system, it may be inextricable. However, most countries still have multiple regulators based on individual sector principles.

Creating one single regulatory structure is favourable for ART product transactors. There are a number of reasons for appointing a single regulator in place of diverse ones.[54] First of all, the blurring of boundaries between types of financial services and products is a significant tendency. For example, insurance risk securitisation products may be a mixture of insurance, banking, securities, options and so on. The second reason is the increase in the number of institutions that cut across traditional sectoral boundaries. Following economic growth, the sectoral boundaries among traditional insurance, bank and security sectors no longer appear.[55] The third reason is economies of scale resulting in a reduction in direct cost of regulation. Under single regulation, internal the resource distribution can be suitable arranged, so institutional costs could be reduced. Simplification of procedures is the fourth reason, under which the superfluous repetition of regulatory procedures may not occur. Fifthly, it is possibly less confusing for consumers. Under diversification of regulator structure, an ART consumer may not know what kinds of regulation and which regulators it should obey. The sixth reason is to reduce the likelihood of regulatory failures, because one regulator takes charge of overall affairs, creating a clear system of accountability.

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[54] The following reasons were addressed by G. Nicholson, "The example of the Financial Services Authority in the UK" in *Zurich Financial Services Workshop for the Media*, 17/06/03

[55] HM Treasury News Release 49/97, 20/05/97 states that, "At the same time it is clear that the distinctions between different types of financial institution - banks, securities firms and insurance companies - are becoming increasingly blurred. Many of today's financial institutions are regulated by a plethora of different supervisors. This increases the cost and reduces the effectiveness of supervision". (See <http://archive.treasury.gov.uk/press/1997/p49_97.html>, visiting date 04/12/06)

6.3.1.2 Unity of regulatory structure in the UK

Modified from the Financial Services Act of 1986, FSMA 2000 was enacted by Parliament in 2000. In 2001, FSA, which formally obtained statutory powers from FSMA 2000, made progress towards integrated prudential standards for a more united access to the regulations of insurance, securities, and investment businesses and other.[56] The limits of FSA's functions and powers broadly comprise banking, insurance services, security industries, exchange-traded contracts and liquidation businesses, involving relevant accountancy firms, lawyers and so on. Under a united regulatory system, a single FSA division supervises almost all the large firms across all aspects of business (e.g. securities, banking and insurance); in other words, FSA is the single super regulator under the current regulatory regime created by FSMA 2000. After having created FSA, ten different supervisory agencies/authorities were merged.[57] However, as far as legislating for ordinance is concerned, FSA is not the sole agency to publicise supplementary FSMA 2000 statutes; for example, HM Treasury is another.

The main objectives of FSMA 2000 are as follows. The first is market confidence, especially maintaining confidence in the financial system (FSMA 2000 s.3). The second is public awareness, which refers to promoting public understanding of the financial system (FSMA 2000 s.4). The third is consumer protection, which means securing an appropriate degree of protection for consumers (FSMA 2000 s.5). The fourth is reduction of financial crime, which indicates reducing extent to which it is possible for a business carried on by a regulated person to be used for a purpose connected with financial crime (FSMA 2000 s.6). Having laid down FSMA 2000, there were nine Acts that were accordingly discarded;[58] or rather they were merged into one Act. In summary, the provisions of FSMA 2000 cover banks, building

[56] FSA Press Release, Ref. FSA/PN/604/2001, 07/06/01

[57] The ten authorities were as follows. (1) the Securities and Investments Board (SIB), (2) the Securities and Futures Authority (SFA), (3) the Personal Investment Authority (PIA), (4) the Investment Management Regulatory Organisation (IMRO), (5) the Banking Supervision Division of the Bank of England (6) the Register of Friendly Societies, (7) the Building Societies Commission, (8) the Friendly Societies Commission, (9) the Insurance Directorate (HM Treasury), (10) the London Stock Exchange's function as a UK Listing Authority.

[58] Namely, (1) the Credit Unions Act 1979, (2) the Insurance Companies Act 1982, (3) the Financial Services Act 1986, (4) the Building Societies Act 1986, (5) the Banking Act 1987, (6) the Friendly Society Act 1992, (7) the Policyholders Protection Acts 1975-97, (8) the Industrial Assurance Acts 1923-48, and (9) the Insurance Brokers (Registration) Act 1977.

societies, insurance companies, friendly societies, credit unions, Lloyd's, investment and pensions advisers, stockbrokers, professional firms offering certain types of investment services, professional firms offering certain types of investment services, fund managers, and derivatives traders. The existing and potential conflicts between one Act and another might no longer occur.

As far as the subject matters regulated are concerned, the wordings of the provisions of FSMA 2000 replace the conventional denominations. Accepting deposits, managing investment, effecting contracts of insurance and dealing in investment as an agent are referred to as "regulated activities". Moreover, the names of persons in various sectors, such as in banking, underwriting and security undertaking are no longer as before; they are generally called "authorised persons" [59] or "exempt persons" instead.

In terms of general prohibition, authorisation and other management processes and procedures, e.g. capital maintenance and standards of conduct, FSA controls almost all activities of the UK financial services institutions. As far as the significance of general prohibition is concerned, FSMA 2000 s. 19(1) states that "no person may carry on a 'regulated activity' in the United Kingdom, or purport to do so, unless he is (i) an authorised person; or (ii) an exempt person." In other words, if a person who is neither an authorised person nor an exempt person, but still engages in any regulated activity, the person will be treated as committing an offence;[60] furthermore, an effect on law may not operate. For the above reason, only if an ART operator becomes either an authorised person or an exempt person, will he be allowed to carry on regulated activities, which may include ART operating activities.

6.3.2 The issue as to whether ART transactions belong to regulated activities under FSMA 2000

The significant issue is whether transacting various ART forms, such as dealing with financial insurance, insurance risk securitisation, insurance derivatives and contingent

[59] "A person" in the FSMA 2000 includes both legal person, for example a body corporate, and a natural person, that is, an individual.
[60] FSMA 2000, s 23-25

capital instruments etc., fits in with "regulated activities" subject to FSMA 2000. The answer should be traced to the scope of supervision of FSMA 2000. The initial task is to ascertain what kinds of activities are permitted by FSA, and then the bodies corporate, partnerships, individuals and unincorporated associations are allowed to carry on those activities. In other words, the point at issue is the extent of scope of the "regulated activities" in FSMA 2000. If the ART products come under the scope of regulated activities, the administrative and managing activities of ART products will be under the supervision of FSMA 2000.

FSMA 2000 Sch. 2 just provides for general characterisations. In 2001, the HM Treasury, given statutory power by FSMA 2000 s.22, enacted the Financial Services and Market Act 2000 (Regulated Activities) Order 2001 (hereinafter Regulated Activities Order 2001), under which the regulated activities obtained a slightly clearer interpretation. According to FSMA 2000[61] and Regulated Activities Order 2001, a regulated activity for the purposes of FSMA 2000 should fit in with three essential factors: (1) a regulated activity should be an activity of a specified kind; (2) a regulated activity should belong to a related investment of a specified kind; (3) a regulated activity should carry on by way of business. If an ART transaction's activity conforms to the three factors, the activity will be treated as a regulated activity for the purpose of FSMA 2000. These three factors are analysed below.

6.3.2.1 Activities of a specified kind

FSMA 2000 and Regulated Activities Order 2001 listed the activities of a specified kind, under which there are two significant activity patterns, probably involving ART transaction activities: (i) safekeeping and administration of assets, (ii) managing investments. These are detailed as follows.

(1) Safekeeping and administration of assets and managing investments

FSMA 2000 Sch.2 para.5 relates to: "(1) Safeguarding and administering assets belonging to another which consist of or include investments or offering or agreeing

[61] FSMA 2000, s.22

to do so; (2) Arranging for the safeguarding and administration of assets belonging to another, or offering or agreeing to do so". Regulated Activities Order 2001 art. 40(1) relates to: "the activity consisting of both (a) the safeguarding of assets belonging to another, and (b) the administration of those assets." Regulated Activities Order 2001 art. 40(2)(a) further defines assets which "consist of or include any investment which is a security or a contractually based investment". According to Regulated Activities Order 2001 art. 3, a contractually based investment could be a future contract, a contract for difference, an option contract or an insurance contract etc.

According to FSMA 2000 Sch. 2 para. 6, managing investments is "managing, or offering or agreeing to manage, assets belonging to another person where (a) the assets consist of or include investments; or (b) the arrangements for their management are such that the assets may consist of or include investments at the discretion of the person managing or offering or agreeing to manage them". Similar to item (i) above, according to Regulated Activities Order 2001 art 37, the assets stipulated in FSMA 2000 Sch. 2 para. 6 indicate "any investment which is a security or a contractually cased investment".

There is a question as to what is the difference between "managing", as stated in FSMA 2000 Sch. 2 para. 6, and "administration", as stated in FSMA 2000 Sch.2 para.5. Basically, managing is to direct or to control the investment of the managee (the opposite of a manager); administration refers to organisation of the affairs of an administratee (the opposite of an administrator). A manager has more limits of authority than an administrator.

(2) Testing ART transactions fitting in with activities of a specified kind

As far as the condition of safekeeping and administration of assets is concerned, under an ART agreement, the hedger transfers the premium/asset to the ART mechanism operator (such as a financial reinsurer, an SPV, an exchange, or a trust and so on) for the sake of "investment";[62] in return, the operator is liable to "safeguard", "administrate" the assets in accordance with the contractually based investment.

[62] Basically, the investment purpose can be achieved by various ART forms, under which loss or gain may be incurred; hence, ART is also known as ARF (Alternative Risk Financing).

Furthermore, only arranging but not having actually conducted the safeguarding and administration of assets can also be treated as safekeeping and administration of assets.

In the case of managing investments, the risk hedger's counterparty, the risk transferee, is liable to manage contractually based investments in accordance with the ART contract. For example, in a typical insurance securitisation, the SVP bond issuer enters into two principal contractual relationships: first, its relationship with the ceding insurer and second, its relationship with its investing bondholders. As far as the first relationship is concerned, the ceding insurer transfers the assets to the SPV as the premium payment in accordance with the insurance contract. The SPV bond issuer is responsible for managing this contractually based insurance investment. As far as the second relationship is concerned, the investor pays the purchase proceeds to the SPV, and the SPV bond issuer is liable to manage this contractually based investment bond. In order to manage the above two principal kinds of contracts, the SPV managing investment activities include making a short-term investment and carrying out swaps, etc. Again, to cite a catastrophe option scheme for example, the hedger purchases a call option at a lower exercise price and sells a call option at a higher exercise price at the same time. By way of the exchange's management, the combination of buying and selling is built into the spread. The option transactions in the exchange can be treated as carrying out managing investment on the basis of the option contracts. In summary, having tested (i) safekeeping and administration of assets, (ii) managing investments, ART transactions can be treated as fitting in with these two conditions; consequently, the inferences as to conforming activities of a specified kind can be drawn.

6.3.2.2 Related investments of a specified kind

The above "activities of a specified kind" focus on various activity patterns. The next concern is that these activity patterns should be in connection with the "specified investments",[63] which are stipulated in FSMA 2000 and Regulated Activities Order

[63] As far as the meaning of investment is concerned, the word means the action of putting capital somewhere else. Normally, an asset is usually purchased, or equivalently a deposit is made in a financial institution, in the hope of obtaining a future return of interest from it.

2001. Some of specified investments are probably involved in ART transaction activities.[64] The descriptions are as follows.

(1) The scope of specified investments

(i) Securities: securities belong to one kind of investment stipulated in FSMA 2000, under which securities indicate: first, shares or stock in the share capital of a company,[65] secondly, instruments creating or acknowledging indebtedness, including debentures, debenture stock, loan stock, bonds, certificates of deposit and any other instruments creating or acknowledging a present or future indebtedness,[66] thirdly, government and public securities,[67] fourthly, instruments giving entitlement to investments,[68] fifthly, certificates representing securities.[69]

(ii) Options: they refer to acquisition or disposal of property.[70] According to Regulated Activities Order 2001 art. 83, the subject matters of options include: first, securities, secondly, contractually based investments (e.g. futures contracts, contracts for difference, insurance contracts, etc.), thirdly, the currency of any country or territory, fourthly, valuable metals (e.g. palladium, platinum, gold or silver), and so on.

(iii) Futures: a futures contract can be transacted not only on the exchange, but also the over-the-counter. According to FSMA 2000, Sch. 2, para. 18, futures

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[64] On the other hand, several investments of a specified kind stipulated in FSMA 2000 may not very close to ART activities. For example, firstly, a unit in a collective investment scheme: it contains "shares in or securities of an open-ended investment company, and any right to participate in a collective investment scheme" (FSMA 2000 Sch. 2, para. 16). Secondly, deposits: there are rights under any contract under which one of the parties (depositor) shall transfer to the other (depositary) a sum of money, and the parties agree that the latter shall return the sum of money with or without interest or a premium, either on demand at a time, or following the agreed condition of the contract (see FSMA 2000 Sch. 2, para. 22). Thirdly, loans are secured on land rights under any contract under which one of the parties shall provide the other with credit and transfer to the other the ownership of money (cash loan or other financial accommodation) and the parties agree that the latter shall return in accordance with the loan contract; moreover, the repayment should be secured on land (see FSMA 2000 Sch. 2, para. 23; see also Regulated Activities Order 2001, art. 88).

[65] FSMA 2000 Sch. 2, para. 11

[66] FSMA 2000 Sch. 2, para. 12

[67] FSMA 2000 Sch. 2, para. 13. See also Regulated Activities Order 2001, art. 78

[68] FSMA 2000 Sch. 2, para. 14. See also Regulated Activities Order 2001, art. 79

[69] FSMA 2000 Sch. 2, para. 15. See also Regulated Activities Order 2001, art. 80

[70] FSMA 2000 Sch 2, para. 17

contracts indicate "rights under a contract for the sale of a commodity or property of any other description under which delivery is to be made at a future date".

(iv) Contract for differences: there is no clear definition of contract for differences in the legal system. FSMA 2000 Sch. 2, para. 19 states that "rights under (a) a contract for difference, or (b) any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss by reference to fluctuations in (i) the value or price of property of any description, or (ii) an index or other factor designated for that purpose in the contract". Regulated Activities Order 2001 art. 85 provides for the same definition.

(v) Contract of insurance: it refers to; first, rights under a general meaning of insurance contracts,[71] secondly, the underwriting capacity of a Lloyd's syndicate, thirdly, a person's membership of a Lloyd's syndicate.[72] However, no clearer definition of insurance contract is available in the English legal system.[73] When an English court judges whether a business belongs to an insurance business, the decision should be made case-by-case.

(vi) Rights to or interests in investments: both FSMA 2000 Sch. 2 para. 24 and Regulated Activities Order 2001, art. 89 have general provisions, under which any right or interest resulting from any investment according to this Act is generally included.

(2) Testing an ART transaction involving an investment of a specified kind

As far as the current ART forms are concerned, financial reinsurance, CAT bonds, insurance derivatives and contingent capital instruments can be treated as the four common products operated in ART markets. A financial reinsurance contract is an investment programme on the basis of a contract of insurance, which is stipulated in FSMA 2000 Sch. 2, para. 20.

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[71] FSMA 2000, Sch. 2, para. 20

[72] FSMA 2000, Sch. 2, para. 21. See also Regulated Activities Order 2001, art. 86

[73] Regulated Activities Order 2001, art. 75. See also *Providential Insurance Company v. Commissioner of Inland Revenue* [1904] 2 KB 658

Excluding financial reinsurance, the other three forms can be generally called catastrophe securitisation. The method of risk hedging provided by a catastrophe securitisation will probably be treated as an investment of a specified kind under FSMA 2000 Sch. 2 Part II para. 19 (b)(ii): "Any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss by reference to fluctuations in...an index or other factor designated for that purpose in the contract". Although this interpretation is not wrong, it is lacking details or specifics. As far as current legal practice is concerned, insurance companies may not directly put to use this provision.[74]

More complete interpretations can be drawn below. Various catastrophe securitisation forms may take advantage of the provision of FSMA 2000 Sch. 2 Part II para. 19 (b)(ii), which stipulates contract of differences. They may further fit in with the other provisions individually. There are two principal contractually based investments in a CAT bond scheme; they are insurance contracts and security contracts (see **6.2.1** above), which respectively tally with FSMA 2000 Sch. 2, para. 20 and para. 11. In the case of insurance derivatives, catastrophe options and weather derivatives are operated by way of option contracts, which conform to the purpose of FSMA 2000, Sch 2, para. 17. As far as contingent capital instruments are concerned, the products are mixed (using securities, options etc, which belong to the specified investments under FSMA 2000). To generalise, the current ART methods are deemed investments of specified kinds under FSMA 2000.

6.3.2.3 Carrying on by way of business

The third condition is that a regulated activity for the purposes of FSMA 2000 should be carried on by way of business. Unfortunately, the English courts and FSA have not given any specified interpretation as to what the exact meaning of business is. Having been given powers by FSMA 2000, HM Treasury set up the Financial Services Act (Carrying on Regulated Activities by way of business) Order 2001. This Order provides rough explanations for investment businesses, under which the

[74] Asia Insurance Review, "Legislating for an ART Market", August 2001

scope of investment business includes most activities of a specified kind,[75] which are indicated in Regulated Activities Order 2001. In other words, if a person conducts activities of a specified kind stated in Regulated Activities Order 2001 and the purpose is to organise and maintain collective production toward accomplishing particular creative and productive goals, usually to generate revenue, this person can be regarded as "carrying on by way of business".

Under a normal ART regime, the ART operators conduct activities of specified kinds, which are in connection with specified investments, and carried on by way of business. Hence, an inference can be drawn that transacting ART products' activities are "regulated activities" for the purpose of FSMA 2000. Regulating current ART transactions in the UK should be subject to FSMA 2000 and its related orders.

6.3.3 Supervision involving a mixture of conduct of business and prudential regulation

Under the structure of FSMA 2000, the sub-laws not only focus on prudential regulations, which used to be the core under the traditional regulatory system, but also pay attention to conduct of business, in which financial promotion may be involved. Supervision involves both conduct of business and prudential regulation, so it is advantageous to combine these two aspects in a single regulator.

6.3.3.1 Conduct of business

FAS supervision addresses the principles of conduct of business. FSA rules and guidance are minute and complicated.[76] The Conduct of Business (hereinafter COB) covered in the FSA Handbook defines special rule concerning unified conduct of business such as dealing with and managing "regulated activities". ART product transactors should comply with COB. When an ART investment is engaged, a series of principles should be observed, such as the issues resulting from "duty of care" and

[75] Carrying on Regulated Activities by way of business Order 2001, art 3 provides rough explanations for deposit taking businesses, investment businesses and managing occupational pension schemes.
[76] The FSA Handbook of rules and guidance comprises many large volumes: 37 individual sourcebooks and nearly 8000 pages of rules and guidance governing what financial services firms can and cannot do.

"conflict of interests".

The FSA Handbook provides eleven principles for business applicable to all firms; these principles are also applicable to those firms that transact ART products. "The first principle is integrity, under which firm must conduct its business with integrity. The second principle is skill, care and diligence, under which a firm must conduct its business with due skill, care and diligence. The third principle is management and control, under which a firm must take reasonable care to organise and control its affairs responsibly and effectively, with adequate risk management systems. The fourth principle is financial prudence, under which a firm must maintain adequate financial resources. The fifth principle is market conduct, under which a firm must observe proper standards of market conduct. The sixth principle is customers' interests, under which a firm must pay due regard to the interests of its customers and treat them fairly. The seventh principle is communications with clients, under which a firm must pay due regard to the information needs of its clients, and communicate information to them in a way which is clear, fair and not misleading. The eighth principle is conflicts of interest, under which a firm must manage conflicts of interest fairly, both between itself and its customers and between a customer and another client. The ninth principle is customers' relationships of trust, under which a firm must take reasonable care to ensure the suitability of its advice and discretionary decisions for any customer who is entitled to rely upon its judgement. The tenth principle is clients' assets, under which a firm must arrange adequate protection for clients' assets when it is responsible for them. The eleventh principle is relations with regulators, under which a firm must deal with its regulators in an open and cooperative way, and must disclose to the FSA appropriately anything relating to the firm of which the FSA would reasonably expect notice."[77]

According to the Conduct of Business Sourcebook in the FSA Handbook, FSA requests that a firm (including operating ART firms), when it is conducting designated investment business with or for a customer (including an ART operator with or for a client) must pay attention to fair treatments, which are as follows. First,

[77] See FSA Handbook, Principle for Business (PRIN), § 2.1, <http://fsahandbook.info/FSA/html/handbook/PRIN/2/1>, visiting date 08/12/06

a firm should manage conflicts of interest fairly.[78] Secondly, in order to protect customers' rights and interests, a firm occasionally should make disclosure of an interest to a customer at the right moment.[79] Thirdly, when a firm manages investment for a customer, it is not allowed to enter into transactions with unnecessary frequency; in other words, churning a customer's account is forbidden.[80] Fourthly, realisation of private customers' assets is not allowed, unless contractual rights legally entitle it to do so.[81] Fifthly, when executing customer orders in a designed investment, the firm must act properly carefully and promptly,[82] dealing fairly and in due turn, providing best execution and timely execution.

6.3.3.2 Prudential regulation

Basically, prudential regulation involves attempting to protect the financial soundness of the regulated institutions; in other words, prudential regulation concerns itself with the overall solvency of the company. FSA adopts a risk based approach by reference to its statutory objectives rather than a sector based approach. FSA have produced a statement, under which "requirements on capital and related systems and controls be set as far as possible by risk factor rather than by the sector from which the form came; so standards will be organised by market, credit, operational insurance and group risk, and not according to whether the firm is a bank, an insurance company or an investment firm".[83] Under the FSMA 2000 scheme, FAS's first set of rules were substantively "same as before". However, the difficulty is in drawing the substantive implications of the nine discarded Arts and then melt them into the FSA integrated prudential standards. So far, the sub-laws and related regulations of FSMA 2000 have not completely achieved proper integrated prudential standards for united access to the regulation of the insurance, securities, banks and any other ART related risks.[84]

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[78] FSA Handbook, Conduct of Business Sourcebook (COB), 7.1.3
[79] COB § 7.1.5
[80] COB § 7.2
[81] COB § 7.8
[82] COB § 7.4-7.6
[83] FSA Press Release, 7 June 2001
[84] In the UK, both regulators and regulatees still comply with several interim standards, such as the Interim Prudential sourcebook for Banks and the Interim Prudential sourcebook for Insurers, <http://fsa handbook.info/FSA/html/handbook>, visiting date:03/12/06

Many ART products have the characteristics of various sectors, such as banking and insurance. However, harmonising the regulation of capital adequacy, especially for banks and insurers, is more difficult. The reasons could be both "banking and insurance prudential regulations (to differing degrees) have been the subject of agreement and harmonisation at global level (in the case of banks) or the EU level[85] (in the case of insurers)".[86] It being difficult to unify the regulatory system, settling integrated prudential standards and then promoting the regulation of ART forms is anticipated in the future.

6.3.4 The Guidelines on the Financial Services Authority treating ART products

It is not always easy to ascertain whether a product is insurance or another type of investment. There is a possibility that a number of ART products are not suitable for treatment as insurance contracts; these products may include CBOT catastrophe options, whether derivatives, catastrophe equity puts or other.

6.3.4.1 Separating insurance from investment business

FSMA 2000 Sch. 2 Part II is of the view that insurance is just one kind of investment. However, for regulatory purposes, the UK currently retains independent rules for regulating the insurance business, which are issued by the FSA' sourcebook, and the sourcebooks show that the regulatory regimes for general insurance and other investments are different. The most significant point appears on the restrictions on an insurance business, stated in paragraph 1.3 of the FSA *Interim Prudential Sourcebook: Insurers*,[87] under which "An insurer must not carry on any commercial business in the United Kingdom or elsewhere other than insurance business and activities directly arising from that business".[88] Furthermore, the *FSA Handbook's Glossary* defines an "insurance business" as "the business of effecting or carrying out

[85] For example, Solvency II is the new EU framework for prudential regulation of insurance companies.
[86] G. Nicholson, "The example of the Financial Services Authority in the UK", Zurich Financial Services workshop for media, Jane 2003
[87] FSA, *Interim Prudential Sourcebook: Insurers instrument, 21/06/ 2001,* p.11, <http://fsahandbook.info/FSA/handbook/LI/2001/2001_12.pdf>, visiting date 13/12/06
[88] Paragraph 1.3 of FSA *Interim Prudential Sourcebook* is modified from the Insurance Companies Act 1982 s.16. It provides that "an insurance company...should not carry on any activities in the UK elsewhere, otherwise than in connection with or for the purposes of its insurance business".

contracts of insurance".[89] In principle, the FSA's *Interim Prudential Sourcebook* precludes insurers from writing risk transfer contracts in the manner of non-insurance forms, such as options, derivatives, catastrophe equity puts and other ART products which fall outside the domain of the insurance sector. In other words, insurers cannot conduct independent investment business. Nevertheless, matters changed after FSMA 2000 took effect. Detailed description is given below.

6.3.4.2 The effect on insurers entering into ART investment contracts

A person (usually a company) needs to be granted FSA authorisation if wanting to carry on one or more FSA regulated activities in the UK. A person will be guilty if carrying on any regulated activities without authorisation from the FSA. There is a question as to what effect will occur if an insurance company transacts ART investment contracts, including futures, options, weather derivatives, CAT bonds, and other ART forms, rather than insurance contracts. To solve the question, the first task is to clarify the effects of the FSA's authorisation and the FSA's permission respectively. After FSMA 2000 was implemented,[90] trading without authorisation and trading without permission were distinct. Permissions are analogously regulatory licences granted by the FSA under Part IV of FSMA 2000 to allow companies to carry on regulated activities. Having obtained the FSA authorisation, almost all kinds of financial services companies require further permissions from FSA in order to do business in the UK. If an authorised company carried on a certain business but began to conduct a different business for which it had no permission, it would fall foul of the regulatory regime under the FSMA 2000. However, this kind of contravention does not mean that the authorised company committed a criminal offence, nor will it render the contract unenforceable, even though the contract was concluded without permission.[91] The inference is that, once authorised by the FSA, if the authorised insurer engages in ART contracts rather than insurance contracts, the

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[89] See FSA, "Glossary of definitions", <http://www.fsa.gov.uk/pubs/hb-releases/rel24/rel24glossary.Pdf>, visiting date 13/12/06

[90] Before the FSMA 2000 was enacted, under the Insurance Companies Act 1982, if an insurance company entered into an investment contract rather than a contract of insurance, the contract could be unenforceable by the insurer; additionally, the policyholder could be entitled to recover premium, along with compensation for the losses. Similarly, if a non-insurance firm carried on insurance business without authorisation, the unauthorised business was unenforceable by the insurer.

[91] A. Booth, Article: "Blurred boundaries", Elbone Mitchell, <http://www.elbornes.com/index.php?section=articles&param=41>, visiting date 03/01/07

ART contracts are still enforceable, despite the lack of relevant permission.

6.3.4.3 FSA countermeasures against an authorised person without permission

The above issue regarding the carrying on of non-insurance businesses including ART transactions without relevant FSA permission has become a serious regulatory loophole. However, the FSA has not necessarily lost its governable powers. Sanctions may be imposed on companies that are already authorised but have not applied for FSA permission subject to the FSA's discipline. The FSA may adopt several disciplinary methods on the basis of its enforcement powers. First, the FSA may impose or apply to the court for restitution orders, under which the regulatory breaching company can be ordered to compensate investors who have suffered losses owing to the company's breach, and/or to return profits resulting from the breach. Secondly, the FSA may apply to the court for injunctions to prohibit companies from regulatory contraventions. Thirdly, the FSA may set up restrictions on a company's permission. Fourthly, the FSA may cancel a company's permission to carry out business; however, cancellation of permission is almost an ultimate measure, which is only suitable to be used in serious circumstances.

Moreover, the FSA is entitled to prevent the abuse of individuals' activities by way of the "approved person" regime. An approved person means an individual who has been approved by the FSA to perform a "controlled function"[92] on behalf of an authorised company. For example, a director and a manager of a company can be qualified as an approved person. Under a controlled function, the approved person is required to comply with the FSA's Statements of Principle and Code of Practice for Approved Persons. If an approved director or manager does not comply with the regulatory requirements, he may be fined or/and publicly reprimanded by the FSA. Moreover, the FSA may use an ultimate method to withdraw a person's approval on condition that the approved person seriously breaches the regulations.

[92] There are a number of controlled functions and each different function is applied to each different business, depending on the particular regulated activities the approved persons do. In general, a controlled function may consider the individual's honesty, integrity and reputation, competence and capability and financial soundness. (FSA, "Becoming an approved person", <http://www.fsa.gov.uk/pubs/other/factsheet_approved.pdf>, visiting date 18/12/06)

The FSA's dealing with an authorised person's business, for which no permission is granted, is an awkward regulatory situation. The FSA's current countermeasures are only governed by expediency. Hence, the FSA can contemplate the publication of guidance to clarify the blurred boundaries surrounding various ART products. Furthermore, it is anticipated that insurers entering into non-insurance business, including several ART products, can be clarified by the guidance published by the FSA.

Chapter VII Conclusions

After generalisation of the contents form traditional reinsurance to ART, some inferences can be drawn, as summarised below.

7.1 Conclusions about traditional reinsurance

Reinsurance is referred to as the insurance for insurance companies. By way of reinsurance, an insurance company can protect against the risk of losses involving other re/insurance companies. In addition to risk transfer, an insurance company can obtain other advantages through the reinsurance mechanism, such as stabilising business management, income smoothing, improving balance sheets, arbitrage and so on. These benefits can help to strengthen the financial soundness of insurance companies, so policyholders and investors can benefit from protection as well.

7.1.1 Summary of reinsurance forms and types

There are two basic arrangement methods in reinsurance: facultative reinsurance and treaty reinsurance. Under facultative cover, the reinsurer agrees to undertake all or part of the risk from an individual policy or risk written by the reinsured. Most facultative reinsurance contracts are impromptu arrangements; the cession and assumption of each policy or risk is negotiated. The treaty type comprises the major volume of business in the reinsurance market. Under treaty reinsurance, the reinsurer agrees to assume a package of risk from the reinsured. In practice, three forms of treaties are arranged as obligatory, non-obligatory and fac/oblig treaties. Ceding risks to treaties involves two steps: first, a treaty is engaged by the parties; secondly, the reinsured cedes risks falling with the coverage, while the reinsurer accepts the risks in accordance with the pre-agreed treaty.

Both facultative reinsurance and treaty reinsurance can be either proportional or non-proportional. There are a number of differences between proportional and non-proportional types. First, the proportional reinsurance's liability is based on a

predetermined percentage; non-proportional reinsurance's liability is founded on the excess of the cedant's retention. Secondly, proportional reinsurance highlights the sharing of risks; non-proportional reinsurance involves no sharing above the retention. Thirdly, proportional reinsurance focus is on size of risk; non-proportional reinsurance focuses on the size of the loss. Fourthly, the proportional reinsurance rate is a percentage of the original premium less the ceding commission; non-proportional reinsurance is based on a separate rate, with or without commission. Fifthly, proportional reinsurance contract premiums and losses are settled by account; non-proportional reinsurance premiums and losses are settled individually.

7.1.2 Summary of reinsurance features

Basically, where the insurance principle does not conflict with the contracting reinsurance, the principle can be applied to carry out reinsurance.

(1) Insurable interest

Insurable interest is one of the essentials in an insurance contract; no reinsurance is available without insurable interest. The insurable interest of reinsurance is part of the insurer's risk which leads to the possibility of the insurer having to pay the indemnity to the policyholder when the insurance incident occurs. Based on this disadvantage, the insurer is entitled to reinsure in respect of uncertain liability.

(2) Utmost good faith

The principle of utmost good faith also applies to treating reinsurance, even if the degree of requirement concerning the burden of non-misrepresentation and disclosure on the reinsurance parties is higher than that imposed on direct insurance parties. The reasons may be as follows. First, subject matters reinsured are intangible objects, so that reinsurance is normally dealt with on paper. It would be difficult to accomplish a contract of an invisible nature if the parties did not meet the duty of utmost good faith. Secondly, once an obligatory reinsurance treaty is concluded, a series of cessions are ceded to the treaty one-by-one, and the reinsurer cannot reject the cessions. Under the "package deal", the treaty would not be fluently conducted

if the reinsurer fell out of trust with the reinsured. Thirdly, the reinsurer does not participate in direct policies. The reinsurer acquiring the primary underwriting information relies only on the disclosure or representation by the reinsured. Fourthly, having chosen a reinsurer, the reinsured will establish a mutually beneficial relationship with the reinsurer. In other words, there is a long term relationship, under which the parties will comply with the principle of utmost good faith.

(3) Conditions and terms of reinsurance agreements

Based on the concept of freedom of contract, the reinsurance parties are allowed to place any negotiated provisions on the contract in accordance with their individual requirements. Some terms and conditions are often incorporated into reinsurance contracts. Common categories of contractual clauses and functions are as follows. The first is general nature clauses, including definitions clauses, followed by settlement clauses and one risk/occurrence clauses. The second is scope of coverage clauses, including reinsuring clauses, exclusion clauses and inception and termination clauses. The third is claims clauses, including claim co-operation clauses, claim control clauses and so on. The fourth is accounts-natured clauses, including bordereau clauses and premium and commission clauses. The fifth is dispute resolution clauses, including arbitration, exclusive jurisdiction and choice of law clauses. Other contractual terms and conditions are difficult to categorise.

(4) Incorporation by reference

Reinsurance being a separate contract, the terms of a reinsurance contract can be different from those in a direct policy. However, there is a certain degree of connection between a reinsurance contract and a primary insurance policy. In practice, the incorporation of terms into reinsurance contracts is likely to be negotiated by the parties. Often, a reinsurance contract is incorporated in the full reinsurance clause, which includes "as original" and "follow the settlement"; the former means that the insurer agrees that the terms of the reinsurance contract are the same as those of the original policy, and the latter means that the reinsurer totally accepts to assume the insurer's underlying settlements. Having incorporated a following the settlement clause in the reinsurance contract, the reinsurer will have to

pay the indemnity if the reinsured proves two facts. The first is a *bona fide* & businesslike settlement with the original insured and the second is when the loss is a type actually covered by the reinsurance cover. Without the following the settlement clause, the reinsurer should pay the indemnity only if the reinsured can show liability at law belonging to the reinsured.

7.1.3 Summary of regulation of reinsurance transactions

The regulation of reinsurance undertakings has received considerable attention. There are two principal ways for regulating reinsurers, through direct reinsurance supervision and indirect reinsurance supervision. Both direct and indirect modes can be jointly or separately operated. Under the direct supervisory mode, the authority directly supervises its home state's reinsurers. The methods can be through controlling the issuance of licences of reinsurers, governing the forms of reinsurers' organisations, restricting the scope and field of reinsurance business, monitoring the financial health of reinsurers and so on. By contrast, the indirect regulation regime is not aimed at reinsurers directly but monitors insurers' activities instead. Under the indirect supervision scheme, a direct insurer is required to submit its reinsurance plan to the regulator. Having examined the reinsurance plan, the regulator may set up the ceding company's maximum retention or/and limits the reinsurance objects. In order to solicit business, the reinsurer will match up the reinsurance plan project as inspected by the regulator. Thus, the reinsurance business can be governed in a roundabout way.

If regulating reinsurance affairs is carried out just in a single country, the competent regulator will find it easier to implement the supervising task. Following the development of reinsurance internationalisation, domestic insurance undertakings may cede their business risks to overseas reinsurers; the insurance undertakings may establish offshore branches; furthermore, the domestic insurance enterprise may accept business ceded from foreign undertakings. These facts bring on potential conflicts, since fulfilling the regulatory activities across multiple nations is difficult and complicated. In 2005, the EU passed the Reinsurance Directive 2005, whose intention was to harmonise the reinsurance regulations for EU Member states. According to UK FSMA 2000, the competent reinsurance regulator in the UK is the

FSA (Financial Services Authority). The FSA has tried to revise some of its rules with the Reinsurance Directive 2005. The IAIS (International Association of Insurance Supervisors) treated the reinsurance regulatory reform as a weight-bearing point for research. Balance market discipline and parties' favours is an objective in supervising reinsurance transactions.

7.2 Summary concerning Alternative Risk Transfer (ART)

The development of ART is an inevitable tendency. In the modern world, relying only on insurance mechanisms is insufficient to handle the numerous risk emergencies arising in an endless stream. Cooperating with ART instruments, ceding companies can obtain whole business protection against various risks.

7.2.1 Combining insurance and capital markets

Insurance undertakings often face predicaments, under which numerous insurers and reinsurers may lack the ability to accurately evaluate the scales of losses and when they may occur in the future, especially the ability to cope appropriately with catastrophic risks, which represents a difficult problem. Once a catastrophe event occurs, it not only affects the underwriter's profit and loss statement, but also triggers price change in the reinsurance market. As a result, insurers may find it either difficult to acquire protection from reinsurers or unaffordable because of rising premiums of reinsurance. Following the financial promotion of liberalisation and internationalisation, innovations have led to a variety of capital implements, which drive insurance risk transfer through capital markets. This has drawn a number of international insurance companies and brokers to actively plunge into the development of a combination of insurance and capital markets, under which the insurance industry puts strategic alliances with investment banks to good account as one of the significant tools of risk management.

7.2.2 Various ART products and methods

Current ART instruments can be divided into four principal categories. The first is the non-traditional reinsurance category, including self-insurance and financial reinsurance; the second is CAT bonds category; the third is the derivatives category, including catastrophe options and weather derivatives; the fourth is the capital market instruments category, including contingent surplus notes, catastrophe equity puts and standby credit facilities.

(1) Self-insurance and captive insurance

Self-insurance is a means by which a person or a company protects against business risks by using its financial readiness. Having reserved a fund in advance, an individual or an enterprise can easily cope with potential losses and make up the amount of difference between actual and previously estimated losses. The function of captive insurance is similar to that of self-insurance. Captive insurance companies are in-house and self-insurance vehicles established by a parent company or group. Captive insurers are limited purpose bodies, whose main task is to deal with the financing risks resulting from parent companies or groups.

(2) Financial reinsurance

Current financial reinsurance can be divided into two categories, prospective cover and retrospective cover. Identification of these two categories can be determined according to whether the losses assumed by the financial reinsurer have occurred or not. Prospective cover protects against losses that may occur in the future; by contrast, retrospective cover covers against losses that have incurred. From the legal viewpoint, retrospective cover is by no means a reinsurance placement, while prospective cover tallies with the fundamental element of reinsurance. Retrospective cover cannot be classified into one sector but should be judged on each individual case.

(3) Securitisation of insurance risk

Nowadays, more and more business investors and administrators have begun to ponder on how an insurance or general company can reach the financial capacity to deal with catastrophe risks. Various risk securitisation products can be regarded as sophisticated methods of insurance, with general enterprises obtaining financial support from the capital market. Insufficient capacities can be offset by way of securitised insurance risk instruments that provide alternative choices for insurers beyond traditional reinsurance placements.

The most popular products in the securitised insurance risk domain are perhaps CAT bonds, CAT options and weather derivatives. However, launching securitised insurance risk programmes carries several conditions. First of all, if the insurance industry plans to launch securitisation products, it should rely on an independent agency that can adjust catastrophe indices periodically. The loss triggers of index based CAT bonds and the values of CAT options need to be assessed using impartial indices. To cite a CBOT (Chicago Board of Trade) PCS insurance option for example, it is based on the PCS Index (Property Claim Services of the American Insurance Service Group Inc.), which can be regarded as a fair and objective mechanism. Secondly, establishing an objective and fair model of catastrophe risk assessment is an essential but complicated task. If a risk is unable to be evaluated, it will involve infinite risk, and investors will show loss of interest. In order for the securitised insurance risk industry to flourish insurance enterprises should urge governments and related institutes to provide accurate catastrophe information, such as meteorological, earthquake and any other natural disaster announcements. Thirdly, to enhance the function of credit rating is worthy of concern. Not every CAT bond has been rated; however, if not rated by the credit rating agencies, CAT bonds lose competitiveness, which discourages the sale of bonds. Based on either internal or external rules, some investors, especially institutional investors such as in pension funds, are restricted to only being able to purchase securities that have been rated highly. The credit rating mechanism leads to positive competition, because CAT bond issuers will make efforts to improve technical procedures in operating bonds.

(4) Contingent capital instruments

Contingent capital instruments provide post-loss financing methods, under which the insurer can achieve efficiency in hedging catastrophe risk without effects on normal operating business. If an insurer manages its capital by way of contingent capital instruments, such as contingent surplus notes, catastrophe equity puts and standby credit facilities, it may obtain more benefits than by way of debt instruments, which weaken the insurer's surface financial health.

7.2.3 Summary of legal and regulatory issues resulting from ART

Having created an ART product, the supervisory mechanism for the newly emerged form may not have been entirely established. The ART supervision system is not always in step with the development of ART products. Some difficulties may occur, as follows.

(1) The supervision of financial reinsurance contracts

The transfer of risk, a controversial issue of financial reinsurance, has been emphasised by the accountancy profession, with some documents addressing the transfer of risk as one of the essentials of a re/insurance contract, while there is no legal precedent concerning this issue in English law. As far as regulatory purposes are concerned, it has proved necessary to deal with risk transfer in a flexible manner. The attitude of regulators tends to be that re/insurance is a requirement of risk transfer.[1] Financial reinsurance may be misused if there is no proper supervision. Following the failure of the HIH group, supervising financial reinsurance was received considerable attention by many countries' regulators. Having investigated the reasons for the collapse of the HIH group, the most serious abuse was that no risk transfer function existed in HIH's financial reinsurance placements. Nowadays, financial reinsurance operators pay attention to risk transfer, because financial

[1] Sir Howard Davies, the outgoing chairman made a speech to the Association of Insurance and Risk Managers in 2002 and delivered the statement that "the regulator had identified instances where it was unclear whether any risk had in fact been transferred and where the motivation seemed purely presentational". He commented further that, as a result, the FSA had required a number of companies to renegotiate their reinsurance arrangement (Barlow Lyde & Gilbert, *Reinsurance Practice and the Law*, LLP, Paragraph 14.4.2).

reinsurance remains close to the traditional domain of conventional reinsurance. Significant regulatory doctrines and practices are addressed by the UK and the US's accounting rules, which stipulate two points. First, a reinsurer (including a financial reinsurance's reinsurer) should assume significant insurance risk, including both/either underwriting and/or timing risks. Secondly, the US FASB 113 reveals that a reinsurer (including a financial reinsurance contract's reinsurer) is reasonably capable of incurring significant loss.

The most significant difference between a re/insurance contract and an ART product is that the re/insured must have an insurable interest in the subject matter of the re/insurance. Financial reinsurance may be dressed up as a reinsurance contract; as a result, the insured supposedly needs to have an insurable interest. On the other hand, under an insurance derivative contract operation, it is not necessary to give proof that a specified occurrence causes actual loss to the derivative's purchaser but movement on the pre-agreed index instead. In other words, the obvious difference between derivatives and re/insurance is that the former are not designed to provide an indemnity in the case of a buyer suffering loss, but rather to pay out on the condition that an event stipulated in the derivatives occurs. From the purely legal point of view of the nature of derivatives, purchasers are in possession of less insurable interest, even though a similar protection function of conventional reinsurance can be the approach.

Under an ART programme, the question of whether a party has the duty of utmost good faith imposed should be examined as regards the substance of the transaction on a case-by-case basis. If a financial contract can be characterised as a contract of reinsurance, including a financial reinsurance contract, the contract's parties must comply with the duty of utmost good faith.

(2) The supervision of launching CAT bonds

Under a CAT bond regime, the SPV plays a decisive role, in two principal contractual relationships. The first is the relationship with the originator/ceding insurer; the second is the relationship with the bondholders. As far as the relationship between the originator and the SPV is concerned, there will be a privity of re/insurance

contract if the CAT bond is based on an indemnity trigger; by contrast, there is no contractual re/insurance relationship between the SPV and the originator if the CAT bond programme is on an index or a parameter basis, due to the lack of a characteristic of actual loss indemnity. As far as the relationship between the SPV and the investors is concerned, it is still not clear as to what kind of contract exists within it.

As they involve multi-sectors, CAT bonds are difficult to categorise into only one sector. The SEC was of the opinion that CAT bonds fitted in with the definition of the US Securities Act 1933 s.2(a)(1) and should be governed by the US securities regulatory regime. There is a doubt regarding the securities sector's regulators, and as to whether no other sector's regulator is entitled to carry out part or whole of the supervisory business. Nowadays, the majority of countries still have diversified regulatory regimes, under which there is a possibility that several sectors' regulators actively scramble for supervisory authority; on the other hand, there is also a chance that each sector's regulator shirks supervisory responsibility and prefers to hand it to others. However, the diversification of the supervisory system is not totally worthless. The reasons for adopting diversified supervisory regimes are usually based on individual countries' history, its economic development, industrial structure, political conditions, economic environment, financial, professional and legal systems etc. By clear assignment of authorities and responsibilities, the various sectors' regulators can still carry out supervisory work with fluency.

(3) ART transactions under the UK single regulatory regime

Tested on three conditions, (i) activities of a specified kind, (ii) investments of a specified kind and (iii) carrying on by way of business, current ART transactions fit in with the definitions of regulated activities under FSMA 2000. After enacting FSMA 2000 (Financial Services Market Act, 2000), the FSA (Financial Services Authority) became the single institution of financial supervision in the UK. Consequently, UK ART trading should be supervised by the FSA. Adopting the single regulatory regime can obtain some benefits. Nowadays, a number of financial service groups run their businesses across sectors. Under a diversified regulatory regime, the financial service groups may shift non-performance assets in some sectors to others in

order to evade those sectors' supervisory conditions. No supervisory dead space can exists under the UK's single regulatory regime, as all sectors' financial business comes under the authority of the FSA. Furthermore, unity of regulatory structure, using a financial infrastructure, administration, research and information collection resources achieves economic efficiency, saving the FSA from miscellaneous expenses.

7.3 Expectations

(1) The reinsurance markets

Global financial market liberation has brought about impacts on the development of reinsurance. The most obvious is that there is a tendency towards regional cooperation. Following the EU's establishment, Member States were to legislate or amend their domestic laws or regulations in accordance with the EU Reinsurance Directive. It is obvious that the EU intended to create an integrated reinsurance market, under which reinsurance transactions among EU Member States would face no obstruction. Taking mutual taking advantage of each member state's reinsurance capacity, the entire EU reinsurance capacity would increase. Consequently, the negotiated price ability of the integrated EU reinsurance market would be promoted, especially against the US insurance market, which needs a great amount of reinsurance protection. Conventionally, US insurance enterprises cede a large of percentage of catastrophe risk to the UK and continental Europe reinsurance markets.[2] For the sake of ensuring applicable profits, the EU reinsurance market occupies a dominant position in negotiating prices with the US insurance market.

(2) The development of ART transactions

Techniques for risk hedge have entered a new era. Having underwritten original risk, underwriters can disperse their insurance risks by way of either/both traditional reinsurance or/and ART. There are several defects in traditional reinsurance transactions, such as insufficient capacity for dealing with catastrophes, high credit

[2] The brochure: *Reactions*, Monte Carlo Rendez-Vous Reporter, 10/09/06

risk, asymmetric information between transacting parties and so on. The predicaments of reinsurance arrangements mean that some insurers have their partial or entire catastrophe risks absorbed via the capital market. Consequently, not only has the number of ART transaction increased, but ART products are also being continually innovated. Some challenges should be overcome: ART techniques are not completely popularised at present; the related legislation has not achieved a mature level; the costs of ART transactions are comparatively high. In the current stage, ART products still play a supporting role in protecting against catastrophe risks, rather than playing the role of whole re/insurance agreements. In the next stage, with mature ART techniques, applying ART will be integrated into risk financing plans. According to the individual requirements of financial purposes and position, enterprises may apply various ART tools to simultaneously settle their traditional and non-traditional risks.

As far as combining insurance and capital markets in Taiwan is concerned, insurance undertakings have successfully put into initial practice. In 2001, amendments to the Insurance Law were passed by the Legislative Yuan of Taiwan.[3] Article 138-1, Section 1 carried the amendment that "The insurance enterprises should undertake residence insurance against earthquake risk by way of co-insurance and through the risk bearing mechanism established by the competent authority". Further, Section 2 carried the amendment that "With respect to the risk-bearing mechanism under the preceding paragraph, for the portion exceeding the limit of co-insurance, it may be borne by a residence earthquake insurance reinsured against through reinsurance by domestic and foreign reinsurance enterprises". The laws inspire Taiwanese insurance enterprises to seek protection from capital markets. Having underwritten the residential earthquake insurance policies, the insurance companies in Taiwan reinsure their businesses to the Taiwan's Central Reinsurance Corporation; this process forms the Taiwan Residential Earthquake Insurance Pool (TREIP). In 2003, a Cayman Islands-domiciled special purpose vehicle, Formosa Re Ltd. was established by Central Reinsurance Corporation, the administrator for TREIP. Afterwards, Formosa Re Ltd issued catastrophe bonds:[4] the three-year, $100 million

[3] Bulletin of the Legislative Yuan, Taiwan (August 2001)
[4] The catastrophe bonds were offered by Swiss Re Capital Markets, Aon Capital Markets, and MMC Securities Corp.

indemnity transaction covers potential losses to the TREIP portfolio of residential earthquake insurance policies. This experience was the first time the Taiwanese residential earthquake insurance system spread risks on global capital market.

Besides dealing with catastrophe risks, spreading risks via the capital market is further used to cope with liability risks, credit risks, and mortality risks etc. Liability insurance risks have been spread by the capital mechanism already. The Oil Casualty Insurance Ltd (OCIL) domiciled in Bermuda, owned by the energy industry, is a captive insurer that provides excess liability policies for the energy industry. In 2005, OCIL, the originator, designated a Cayman Islands-domiciled insurance company, Avalon Re Ltd, to be its SPV, by function of which it issued $405 million volumes of insurance linked bonds. It was a successful experience that third-party liability risks sought to hedge by way of securitisation, a method in capital markets.[5]

(3) Regulatory authorities running into challenges

The scope of financial engineering into which insurance undertakings slips into capital markets, more and more. Consequently, the related regulatory authorities meet more and greater challenges than before. The most obvious is there being a time gap: after a new financial product is designed, the relevant regulations may be laid down later; in other words, there is a time difference between the innovation of financial products and the legislation or regulation. This awkward situation is expected to be overcome by ART regulators in the future. Moreover, the innovations of and legislation on ART products often step beyond the boundaries of insurance, and may stretch into various financial fields, such as the industries of management, securities, banking and derivatives etc. It is anticipated that ART product originators and legislators can deliberate from macroscopic points of views when the operating standards are set up or/and related laws and regulations are legislated or/and revised in the future. For the sake of handling prompt development of ART programmes, it is expected that originators and legislators will be able to communicate and cooperate with several supervisory bodies who have acquired

[5] Crain Communications Inc., "Catastrophe bond issuance continuing to set records", <http://www.floridainsurancereform.com/docs/relatedResources/CatastropheBondIssuance.pdf>, visiting date 18/10/06

eminent fame. Hence, it is anticipated that the International Association of Insurance Supervisors (IAIS), the UK Financial Services Authority (FSA) and the US National Association of Insurance Commissioners (NAIC) can provide many more material references as to operating experiences for other regulators in the future.

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