THE ART OF ALTERNATIVE RISK TRANSFER METHODS OF INSURANCE

*Athenia Bongani Sibindi**

Abstract

The very basis of insurance is risk assumption. Hence it is the business of insurance to give risk protection. The notion that all 'risk is risk' and hence should be treated as such, has become the driving force on the risk landscape. Insurance companies have no room to be selective, as there are competitive threats posed by other financial players who are waiting on the wings to invade the market segment. There has been an emergence of new risks, such as cyber, terrorism as well as liability risks. The insurance cycles have made traditional insurance cover expensive. In this article we sought to interrogate whether Alternative Risk Transfer techniques represent a cost effective way of balancing insurability and the bottom line by analysing global trends. On the basis of the research findings it can be concluded that indeed the ART solutions are a must buy for both corporates and insurance companies, as they result in the organisation using them achieving financial efficiency. The present study also demonstrates that there is a paradigm shift in insurance from that of indemnity to that of value enhancement. Lastly the study reveals that ART solutions are here to stay and are not a fad. Insurance companies cannot afford the luxury of missing any further opportunities, such as happened with Y2K, which proved to be a free lunch.

Key words: Alternative Risk Transfer, Non-traditional Insurance, Risks, Derivatives

**Senior Lecturer –University of South Africa, Department of Finance ,Risk Management and Banking, P.O Box 392, UNISA, Pretoria 0003*

1. Introduction

The principal role of insurance is to provide a safety net to the insured – the peace of mind, and protect them from ruin of asset or loss of limb or life alike, when disaster strikes. In the main this has been handled conventionally through the issuance of an insurance policy. It is instructive to note that these devices, (insurance policies) that have been deployed to handle risk, have fallen short, because risks have evolved over time and imperatives have changed. Closely linked to this, insurance companies have been constrained by capital restrictions imposed by regulators as well as the underwriting capacity of the individual companies and the industry as a whole. Also, insurance companies have had to contend with competition from within the insurance industry and from that of banks that have been ever ready to invade their terrain.

Principally the motivation behind this study stems from my observation that insurance has often been criticised (rightly or wrongly) of being conservative and lacking in innovation as compared to its contemporaries. Perhaps this somewhat lukewarm reception to innovation can be traced to the very basis of insurance—insurable interest and indemnity. At worst insurance companies have failed to measure these dynamic variables, because they look too much to the past—akin to the biblical Lot's wife. Thus if insurers recognise that the risk management paradigm is changing from indemnity to value creation and enhancement, they can stem the flow and be lively players in the evolving corporate risk management market place (Doherty, 2000a). The tide is inclining towards the use of Alternative Risk Transfer (ART) techniques.

It is equally impelling that we explore what led to the conception of ART techniques. It would seem that it was the interplay of a number of factors principally being – the shortcomings of traditional insurance, cost of insurance, stiffening competition, as well as innovation to cater for the sophisticated customer and as an instrument to attack the market segments inhabited by banks (Dickinson, 2001). Moreover there has been stiffening competition to insurance. The competition emanates from other insurance companies and that of banks. Over the years there has been a proliferation of insurance companies. This at worst results in price wars – alas the small to medium players might find themselves in the corporate graveyard.

The other source of competition comes from banks. It must be acknowledged that banks are innovative and behave like "vultures" in quest for

new business and opportunities alike. They often find their prey in insurance business. To this end they have invaded the insurance terrain by, for example offering bancassurance products and have stolen the limelight in the development of derivatives. It must be borne in mind that derivatives are risk management products that are deployed to cater for financial risk. It would have been natural for insurance companies to be at the forefront of the development of this sector, yet it would appear it has somewhat taken a back seat (Punter, 2000). Thus it would seem that the development of insurance derivatives is the answer to defend the market segments of insurance companies from attack by bankers.

In the present study we appraise of the factors that have led to the development and uptake of alternative risk transfer methods of insurance. We also analyse global trends in the application of these techniques.

The rest of the paper is arranged as follows: Section 2 reviews the related literature. Section 3 reviews the global trends in alternative risk financing and Section 4 concludes.

2. Review of related literature

2.1 The definition of Alternative Risk Transfer products.

Several definitions have been posited with view to differentiating ART products from conventional insurance products. ART is widely accepted to mean the set of insurance products that for the most part function more like capital market instruments than classical insurance and reinsurance structures. Perhaps the most apt definition was given by Banks (2004) who noted that, ART products are quite simply often taken to mean any products falling under the rubric of "convergence products" between capital and insurance markets provided. The insurance market offers them. In other words ART products are the derivatives of the insurance industry. Whereas Culp (2002) contends that ART products are contracts, structures or solutions provided by insurance and/or reinsurance companies that enable firms either to finance or transfer the risks to which they are exposed in a non-traditional way thereby functioning as synthetic debt or equity in a customer's structure. What is striking about the latter definition is that it implies that alternative risk transfer techniques either transfer risk to a third party or finance that risk. As such the province of ART techniques also encompasses Alternative Risk Financing (ARF). Perhaps what is instructive about these definitions is to say ART products represent a class of products, which are a cross between conventional insurance products, and capital market products that facilitate risk transfer or risk financing. Thus the nomenclature of such products is that they either transfer the risk in whole or part there-of, to a third party, or retain that risk and arrange a contingent financing mechanism[70] should peril strike.

It is now obligating to give a synopsis of the traditional insuring mechanism and principles to inform of their antithesis and similarities with the alternative risk transfer mechanism.

2.2 A primer of traditional insurance principles and mechanisms

What constitutes an insurance contract is perhaps the most easily understood and appreciated. According to Culp (2002), a typical insurance contract is a risk transfer mechanism enabling a firm to transfer the loss arising from the equity holders of the insurance provider. Whereas Banks (2004), defines this as an agreement between two parties that exchanges an *ex-ante* premium for an ex-post claim, without the ability to adjust the claim amount once it has been agreed. It is trite to point out that insurance contacts are best understood by first their distinguishing characteristics and then their mechanisms including the risks they are designed to cover.

2.2.1 Insurance principles

Traditional insurance contracts are characterised by four important features.

- The purchaser of insurance must have insurable interest.[71]
- The risk must exist at the inception of the contract.[72]
- The insurance contact must transfer some portion of risk from the purchaser of the insurance to the provider or seller in return for which the purchaser must convey some consideration that is a premium, to the seller.[73]
- The contract is of *uberrima fides.*[74]

It is imperative that the most salient features of insurance contracts, which are insurable interest, utmost good faith and indemnity, be considered in detail to show their distinctiveness from alternative risk transfer techniques.

- Insurable interest is required for a contract to be considered a classical insurance contact as opposed to say a derivatives contact. A derivatives contact involves an optionable interest

[70] This is Alternative Risk Financing, it is not funded by the traditional insurance markets but by the capital markets

[71] Insurable interest relates to the equitable right at law that the insured stands to suffer a pecuniary (financial) loss, should peril strike on the subject matter of insurance.

[72] A contract of insurance is not that of gamming or profit making, as such it is not of speculation, the risk must exist at the inception of the policy.

[73] It is founded upon contract law that there should be an commutation of benefits between the contracting parties

[74] An insurance contact is that of utmost good faith, as such strict disclosure is incumbent upon the parties to the contract.

rather than an insurable interest. This means that the risks transferred in a derivatives contract need not be risks to which the derivatives counter parties are naturally exposed.

- Another important feature of insurance contracts is that they are governed by the principle of utmost good faith. This means that the standard of honesty is higher than the standard applied to ordinary commercial or capital market transactions.
- The other critical consideration upon which insurance is bases—is that of indemnity. To indemnify means to put back, the subject matter of insurance, to the position it was, before suffering a loss. This might take the form of cash payment, reinstatement, replacement and repair. It is trite to say that, indemnity is only applicable to property classes and does and is not the basis of insurance in life insurance. Life insurance is thus premised on valued contracts. The corollary of indemnity[75] is subrogation[76]. The rationale deriving from the very basis of insurance. An insurance contract is not that of gamming or wagering – but that of protecting the insured against financial loss or ruin on the happening of a contingent event. This is what sets it apart from other financial contracts such as derivatives.

2.2.2 The insurance mechanism and risk transfer

The insurance market is premised on two fundamental characteristics—the transfer of exposure from a single party to a broad group and the sharing of all losses, by all those in the group. Insurance relies heavily on the Law of Large Numbers[77]. The short of it is to say, in a pooling arrangement there is a cross- subsidisation, with bad risks being offset by the good risks. This can act as a 'double edged sword' to the insurer, in that if it is oblivious of the risk experience and price the bad risk the same as the good risk, the utility to insure diminishes for the insured with a good risk. Banks (2004) observes that risk transfer occurs when one party pays a small, certain cost (e.g. a risk premium) in exchange for coverage of uncertain losses in exchange for coverage of uncertain losses: this is equal to shifting of exposures.

It is instructive to note that insurance is premised on the concept of spreading risk. Incidental to the foregoing, insurance companies themselves spread this risk by ceding these risks to reinsurance companies[78]. Reinsurance companies spread the risk by ceding part of, to other reinsurance companies. Figure 1 shows the value chain of insurance. Risk is transferred from one party to the higher one in the hierarchy, in whole or part, for exchange of a premium. For an insured this takes the form of an insurance policy. For the cedant, it takes the form of facultative and treaty reinsurance.[79] For reinsurance it takes the form of retrocession protection from other insurance companies.

A company may opt for full insurance (complete coverage of a risk in exchange for a higher risk premium) or partial insurance, (fractional coverage of risk for a lower risk premium). A cedant can create partial insurance by including a deductible (a 'first loss' amount paid by the cedant before the insurer makes a payment) or a coinsurance feature (a shared loss component between cedant and insurer). If it is economically viable for a firm to pay the larger risk premium to secure full insurance (and consistent with its risk philosophy) it will do so. Alternatively, it may select from one of the partial insurance options. According to Banks (2004), when a firm can clearly identify an optimal Expected Value (EV) loss scenario that is preferable, the choice of protection becomes relatively straightforward. However it is possible to create a range of full and partial insurance options with EV loss rankings, in such cases a firm needs to examine its utility function to determine whether one option dominates. In practice, since it is difficult for a company facing a complex set of businesses with varying priorities and goals to know the slope of its utility function, it must turn to alternative techniques e.g. cost/benefit review – a mean variance analysis that take into specific account the variance and standard deviation and does not require *ex-ante* identification of a utility function and similar practical measures.

[75] They work hand-in-in glove, the application of indemnity triggers the operation of subrogation.

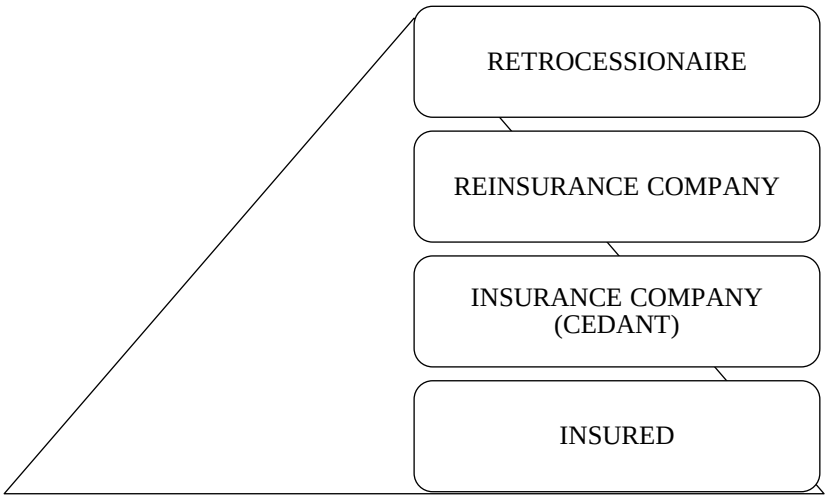
[76] Subrogation is an equitable principle that applies in insurance contracts, whereby one party having indemnified the other, stands in the shoes of the other and avails himself of any rights or obligations that ensue.

[77] The Law of Large Numbers approximates the underlying loss distribution (risk) to that of the normal distribution. Hence the Central Limit Theorem then applies, and this helps the underwriter to price the risk appropriately.

[78] A reinsurance company is an insurer of an insurance company, who assumes part of the obligations of the ceding company to the insured. However the insured does not have a direct contract with the reinsurer.

[79] Facultative reinsurance is sought on the basis of an individual risk, whereas treaty reinsurance is arranged on a class basis. Thus facultative reinsurance is adhoc in nature, whereas treaty reinsurance is a standing arrangement. Treaty reinsurance comes in two forms, Proportional Treaties e.g. quota share, surplus treaty and Non Proportional Treaties also referred as Excess of Loss (XOL) Treaties such as Catastrophe cover.

Figure 1. The Value Chain of Insurance



Source: author's own compilation.

It is instructive to note that, the more the wealth the higher the utility derived from insuring as long as the risk premium is less than or equal to the EV of loss. Put in other words, the lower the expected monetary value, the lower the marginal utility derived from insuring.

2.2 A primer of ART techniques and products.

Alternative Risk Transfer techniques have evolved over the last fifty years, and it would seem they have endured the test of time, and are not a fashion—that easily fades away, but are a fashionable risk management tool that will carry the insurance industry into the twenty-first century. It becomes imperative that the origins of ART be traced. This probing will unravel the motivation behind the use of ART techniques, the forms it take and the functionality of the ART products.

2.2.1 The origins and evolution of ART

Doherty (2000b) traces the origins of ART techniques to the 1950's. He argues that this was linked to organisations beginning to fully embrace the concepts and process of risk management. Thus there arose the need for corporations to systematise their insurance buying. Managers began to consider systems for loss prevention and later, for the economic control of losses should they occur. There were incentives to do this since insurance prices tended not to reflect the claims experience of the corporation.

Schanz (1999)[80] contends that the term ART was first coined in the USA. He goes further to say that; initially ART described mechanisms that made it easier for companies to insure their own risks, by means of captives and risk retention groups amongst others. More recently the term has acquired a broader meaning and now encompasses, for example, finite insurance and finite reinsurance as well as risk transfer via the capital markets.

The key features of ART solutions that have evolved over the years can be enumerated as follows[81]:

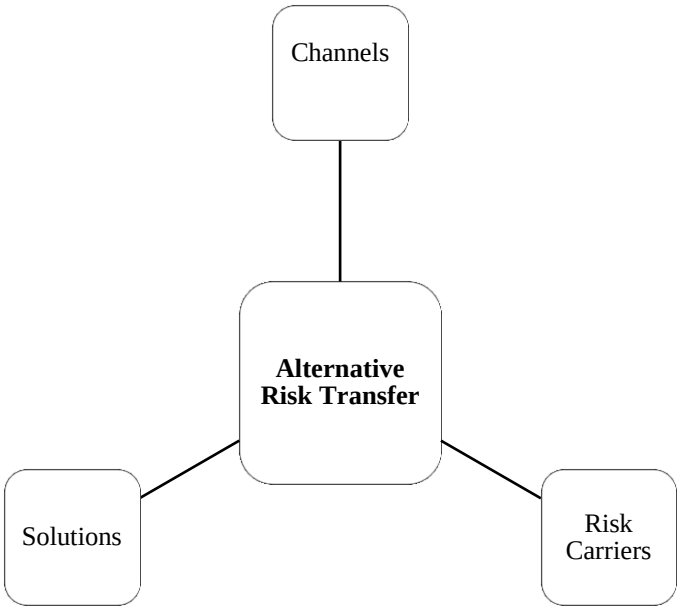
- Tailored to specific problems.
- Multi-year, multi-line cover.
- Spread of risk over time and within a policyholder's portfolio. This is what makes the assumption of traditionally uninsurable risks possible.
- Risk assumption by non- (re)insurers.

Factoring into account these attributes, the domain of ART techniques is as depicted in Figure 2 below.

[80] Dr Kai-Uwe Schanz was writing in Sigma Number 2/1999 commissioned by Swiss Reinsurance

[81] Schanz *op.cit.*

Figure 2. An overview of Alternative Risk Transfer techniques.



Source (adapted from Swiss Re Sigma 2/1999)

Firstly, alternative distribution channel to specialised direct insurers and reinsurers are for example companies' own captives, which are potential purchasers of traditional and/or alternative risk transfers products. Secondly alternative solutions embrace finite risk products whose main aim emphasis is on financing rather than the transfer of risks. Multi-year contracts also play an increasingly important role. These solutions combine different classes of insurance such as property and casualty risks. Although these products are not essentially new, they are considered to be alternative as they provide the basis for wider ranging covers. These solutions bundle together insurance, finance and in some cases general business risks as well, in the form of multi-year contracts with aggregate retentions. Other covers that fall into the category of alternative solutions include multi-trigger products, i.e. those which only come into play if insurance and non-insurance loss events occur simultaneously within a specific time frame as well as financing of losses at conditions agreed upon in advance (contingent capital.) Lastly, alternative risk carriers are ultimately capital market investors directly involved in insurance risks. These mainly concern insurance—linked bonds and derivatives.

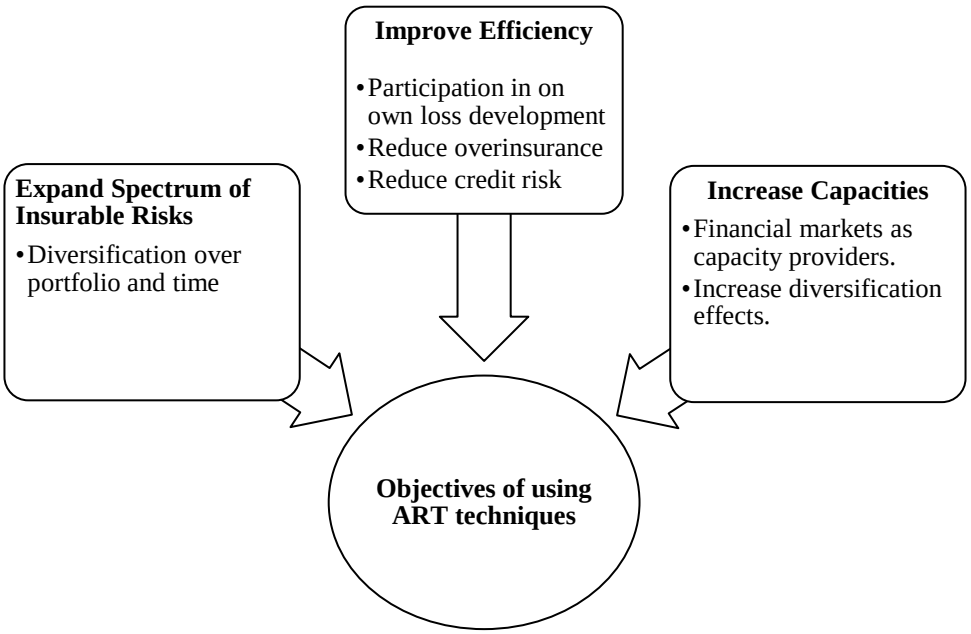
It is instructive to note that ART techniques have evolved to be used by insurance companies, to satisfy the insured and have also evolved to be used by reinsurance companies to satisfy the requirements of insurance companies. As such there are two forms of ART solutions, one peculiar to the cedant and the other peculiar to the insured, in other words, the two classes are—insurance alternative risk transfer and reinsurance alternative risk transfer.[82] Thus the point of convergence for all ART techniques can be enumerated as in Figure 3 below.

The salient features of Alternative Risk Financing techniques are that the primary objective is that they are developed to complement those already in use in order to improve efficiency of risk transfer. The second goal is to expand the spectrum of insurable risks. The third goal is to generate additional capacity via the capital markets.

Doherty (2000b) propounds that the earliest forms of ART took the form of captives. Increasingly since the 1960's larger corporations have created and used their own in house operation, primarily as a means of co-ordinating insurance buying across the global enterprise. Forent (2004) propounds that the earliest forms of ART programmes developed in response to the hard insurance markets. Companies turned to large deductible, loss sensitive rating and retrospective rating insurance programmes to gain independence. This led to the development of wholly owned offshore captives for large corporations and rent-a-captive for small to medium size companies. He goes on to note that, in the hard insurance, high-interest environment of the early 1990's finite programmes emerged as another finance tool. The motives behind finite programme were similar to captives with additional tax and financial benefits. In the main there are three types of such techniques—finite risk insurance, insurance derivatives and securitisation of insurance risks directly on to the capital markets.

[82] Punter Alan (1999): The Spectrum of Alternative Risk Financing Opportunities, Aon Group Australia.

Figure 3. Reasons for the use of Alternative Risk Transfer



Source: Adapted from Swiss Sigma Number 2/1999

What is instructive to note is that finite programmes began the trend towards a more holistic approach to risk while facilitating the creation of sophisticated coverages that blurred the lines between financial and insurance markets. According to Culp (2002) finite risk insurances and financial insurances are an extension of conventional insurance in that the contracts typically last for three to five years and they often involve a packaging of different kinds of insurance including some risks that are difficult to place. In addition, finite risk insurance usually poses a profit sharing feature such that if the claims costs of the corporation vary unexpectedly there is some form of *ex post* adjustment in the premium cost. Because of its tailor made character finite risk insurance represented an attempt by insurance companies to develop longer-term risk sharing relationships with corporations. As the name implies, there are limits to the degree of risk transfer in finite risk programs and thus they provide a mezzanine layer of risk financing between self-insurance and conventional types of insurance.

Further, Doherty (2000b) contends that insurance derivatives evolved in the mid 1990's. For a long time, insurance had been seen as a potential area of product development for derivatives, in part because a conventional contract can theoretically be seen as a put option sold by an insurance company. However the development of derivatives as a mechanism of risk financing for corporate risks has been limited for two main reasons. Firstly there are no suitable indices on which derivatives can be based. Secondly derivatives require that the underlying economic variable being tracked is relatively homogeneous. This requirement is often not met for corporate insurance risks since these represent a heterogeneous bundle of risks many of which may be specific to an industry.

In 2000 the only active traded derivative market, was the property catastrophe options market at the Chicago Board of Trade and the Catastrophe Risk Exchange (CATEX) in New York.[83] More recently weather derivatives have been introduced based on indices of rainfall, snowfall and temperature.

One of the latest ART solutions relates to the securitisation of insurance risks directly onto the capital markets. Growth there is likely to continue in the longer term especially for longer-term potential losses facing corporations and for important projects. Two mechanisms for securitisation have evolved, one based on bond instruments and the other on equity instruments. Specialist divisions of insurers and brokers have often collaborated with investment banks to develop tailor made products for corporations to transfer their risks on to the capital markets.

Doherty (2000b) goes on to say that the risk securitisation is likely to expand in the future and companies might switch from bond based to equity based instruments. The theoretical advantage of equity-based instruments is that they are a form of Just-In-Time (JIT) capital, since capital is only raised when a large loss takes place. Equity based products extend the concept of contingent capital that exists in conventional insurance and thus has the effect of removing the capital cost constraint imposed on insurance and reinsurance companies.

[83] The CBOT was set up in 1992 whilst the CATEX was set up in 1996. The former specialised in options whilst the latter traded in swaps for insurers.

The latest form of ART solution to evolve has really captured the imagination of insurance consumers. This is Enterprise Wide Risk Management (EWRM). This is the buzz term across the financial services sector. According to Culp (2002), this represents synthetic contingent capital facilities, which are a collection of contracts together with advisory services supplied to a customer – all of which result in an enterprise wide risk management solution to the firm. Meulbroek (2002) defined EWRM as the process of identifying and assessment of the collective risks that affect a company's value and the implementation of a company-wide strategy to manage them.

What is trite about these definitions is that it is instructive to note that, this requires an organisational endeavour, which requires the participation of everyone. Put in other words, there is an aggregation of effort towards risk management. More to it, companies have three ways of implementing risk management objectives – modifying the company's operations, adjusting its capital structure and employing targeted financial instruments.

Further, Meulbroek (2002) argues that EWRM calls for Integrated Risk Management. As such these terms can be used synonymously. Integration refers both to the combined application of the three tools for implementing a risk management strategy and to the aggregation of all risks faced by the company. Risk management entails managing the company's total risk, because it is the company's total exposures that determine whether the company can avoid financial distress.

2.3.2 Insurance Alternative Risk Transfer

The development of Alternative Risk Transfer (ART) for corporate buyers has traced the following path:[84]

- Self-insurance
- Captive insurance company, rent-a-captive insurance company and protected cell insurance companies.
- Finite or financial insurance.
- Multi-year, multi-line, aggregate or blended and integrated programs.
- Enterprise wide risk management.

2.4 The motivation behind the use of ART techniques.

From the onset it must be highlighted that ART techniques emerged to complement traditional insurance solutions, but not to out-compete them. On this premise various reasons have been advanced to explain the growth of the ART business in comparison to the conventional insurance business. There have been push and pull factors at play, which are considered henceforth:

2.4.1 Push Factors

Several reasons have compelled insurance companies to embrace ART techniques chief amongst them being the following:

(a) Limitations of traditional insurance methods

The inefficiencies of traditional insurance have contributed substantially to the development of Alternative Risk Transfer (Doherty, 2000b). An analysis of the costs of traditional insurance covers shows that the difference between the premium and the expected value of the loss is comparatively high. This is often explained as a result of the information asymmetry between (re)insurers and policyholders.

Traditional insurance prices are arrived at, on the basis of average risks, and are therefore higher than the risk-adjusted premium rates for good risks. As a result, good risks are becoming increasingly reluctant to cross-subsidise bad risks, and are turning to self-insurance instead. As such there is inequity in rating. With insurance there is a danger that the policyholder has little incentive to prevent or contain a loss, which means the insurer has to demand a higher average premium (moral hazard problem). In the case of self-financing, the policyholder has a direct incentive to adopt suitable risk management measures to prevent losses to a reasonable level. Moreover as a result of this phenomenon (moral hazard) insurance companies have set high deductibles (first loss amount met by the insured), which have resulted in the diminishing marginal utility of insureds, because intuitively, risk transfer fails.

Various ART solutions eliminate the problem of moral hazard by defining the loss event on the basis of an independent index or a physical event. However there arises a new phenomenon of basis risk[85].

There is usually capacity constraint in the industry. Some risks are well understood but considered uninsurable due to their sheer size. For example some natural catastrophe scenarios range from USD50 billion to USD100 billion, depending on the location and intensity of the event. Commodity risks and financial risks aggregate exposures of magnitudes that challenge the capital strength of many commercial insurers. Securitisation for example can supplement the capacity of the commercial insurance market by tapping directly into the capital markets. Other ART products shift the focus from risk transfer to risk financing and hence increasing the scope of risk management solutions.

(b) Macro-environmental factors

Macro-environmental factors such as interest rates, foreign exchange rates, and inflation have tended to stimulate the development of the ART sector. The causal link between these variables is that they have a

[84] Punter Alan *op. cit.*

[85] Basis risk arises when the risk being managed does not behave in the same way as the hedging instrument.

bearing on the pricing of (re)insurance. Thus, this has resulted in insurance cycles. The commercial insurance market is characterised by a strong cyclical pattern. Periods of high premiums and limited availability of cover, alternate with periods of low premium and easily available cover. From the insured's point of view, this obviates the need to purchase insurance. There is no stability in the premiums. ART products can partially insulate corporations from the volatility of the underwriting cycle by means of increased self-insurance, multi-year contracts and the substitution of risk transfer with risk financing or using capital markets as risk carriers.

Secondly companies face a shifting risk landscape, from structural changes in the economy, changes in the legal environment, and the emergence of new risk classes. These alterations to the corporate risk landscape lead to shifts between the traditional lines of business, a steady push forward in the limits of insurability and the development of new products. Many ART products are better suited to manage new risk classes that are not yet dealt with by traditional markets.

To give a synopsis of the foregoing, on the legal challenges besetting the industry it is trite to say that, the liability risks manifest themselves in the form of asbestos claims, directors & officers (D & O's), medical malpractice, employment practices amongst others. Thus it is imperative that insurance companies seek run off protection for these whilst on the other hand insured continue to seek adequate cover. The ART markets provide the same.

The emergence of new risk classes challenges the limits of insurability. Insufficient market data and loss experience complicate the underwriting process and result in high parameter risk (the uncertainty over the true value of expected losses). Large corporations are seeking protection for the following type of risks classes:

- Commodity price volatility.
- Protection of the value of non-liquid classes.
- Transfer of large complex risks, such as asbestos liability or environmental liability.
- Protection against new risks like cyber risks and political risks.
- Protection against terrorist actions.
- Hedging market risks.

(c) Micro-environmental factors

The micro environmental challenges that face insurance companies relate to competitive challenges that are brought about by the cycles. In soft markets, for example insurance companies have resorted to rampant rate cutting in order to stay afloat. This greatly erodes the margins of insurance companies. In markets where barriers to entry are low, the industries have become heavily populated resulting in the thinning of margins.

The entrance of banking institutions into the insurance terrain has further exacerbated this. Banking companies have been offering substitutes to insurance products. Thus to defend their market segments insurance companies develop ART products.

2.4.2 Pull factors

Several factors have attracted (re)insurance companies towards the ART segment. The key factors can be enumerated as follows.

- There has been a paradigm from indemnity to value creation. There is a growing shift in focus in organisation towards value creation. For example the emergence of EWRM has gravitated organisations toward ART solutions as opposed to passive risk management.
- The integration of financial markets has resulted in the transfer of knowledge and skills from banking and finance to insurance, hence financial products has been developed to manage traditional insurance risk.
- The ART segment is not heavily regulated as compared to the traditional insurance market. As such there is regulatory arbitrage within the industry.
- Intermediaries and complex clients who have a good grasp of insurance principles, have a strong bargaining power and as such have tended to influence the actions of insurance companies.
- Competitor behaviour has a bearing on what insurance companies do. Some tend to embrace ART solutions to outwit competition, and some to follow the leader.

In sum these are the factors that have motivated insurance and reinsurance factors to develop and embrace ART techniques. The efficacy of these solutions is thus going to be informed by the empirical study given forth.

3. Global trends in alternative risk financing

The Alternative Risk Transfer sector has continued to grow in leaps and bounds over the years. All of these classes have exhibited significant and continuous growth, despite the soft market conditions prevailing. Table 1 illustrates this point. From the table, it shows that the premiums in 2001 for the ART segment grew by 17% from the 1999 figure as compared to the 2% increase in premium volumes of the traditional sector under the same period. In 1999 the relative size of the ART sector as compared to the traditional sector in terms of premiums was 8% whereas in 2001 I had gone up to 24%.

Table 1. An analysis of the size of the global ART market between 1999 and 2001

Direct Premiums Written	1999 USD billions	2001 USD billions	Percentage Change %
Traditional carriers	365	370	2%
Captives	21	38	81%
Self-insurance and other alternative carriers.	7	49	600%
Total	393	457	17%

Source: Adapted from Swiss Re *Sigma* No 2/1999 and *Sigma* No 1/2003

3.1 The experience of The United States of America

The USA takes a leading role in the area of ART solutions. Different forms of self-insurance have steadily gained importance in the last 30 years. Self-insurance is the largest in the Alternative market, accounting for three-quarters of the industry. With an estimated volume of USD128 billion, they are already important as traditional commercial insurance, at USD158 billion[86]. Problems in the area of liability insurance (product liability, workers' compensation, environmental liability) have repeatedly triggered a search for alternative solutions.

On the captive front it is instructive to not the USA accounts for the second greatest proportion of captive business accounting for USD8 billion of the USD25 billion global net written premium in 2001. However there is saturation tendency in so far as the formation of captives is concerned. On the other hand medium and small sized companies are increasingly exploiting the possibilities of rent-a-captives, while on the other existing captives are being used for a broader range of purposes. Efficiency and strategic reasons are the main incentives. With offshore locations losing some of their attraction as tax havens, more and more captives are being founded in the US itself. A number of US states have now established themselves as captive domiciles with attractive regulatory conditions.

Although risk management culture in the USA is very advanced in a global comparison, holistic risk management is still in its infancy. Organisations are still grappling with the implementation of EWRM programmes. Most insurance securitisation concluded so far deal with earthquakes or storm risk. Insurance derivatives have been traded in Chicago and Bermuda. The main purpose has been to expand capacity. Securitisation issues are growing in popularity as investors begin to understand the portfolio of risks that are bundled. The global market for securitisation issues stood at USD 6,5 billion in 2003, of which many issues originated in the USA.

3.2 The experience of Europe

The importance of ARF solutions in the European market varies considerably. In the UK their development is relatively advanced, while in continental Europe they are still in their infancy, although this is only true to a limited extent for the world's biggest industrial and service companies. Because they face intense global competitive pressure, these companies are also confronted with comparable risk management demands, irrespective of where they are domiciled.

The main differences with the US market lies in the lesser importance of the capital market for corporate financing and subsequently the weaker pressure exerted by shareholders, as well as balance sheet practices based on the principle of conservatism that permitted the formation of hidden reserves. In the medium term, Europe is also therefore likely to experience growth in the ART segment. In general the overall conditions for innovations in ART are actually more favourable than in the US as regards the regulatory and accounting principles. There is potential for growth of the captive sector brought about by the deregulation of the insurance markets and tax breaks.

Demand for finite and integrated covers is increasing as the focus is shifting toward the concept of shareholder value and the change this brings to the risk management culture. The introduction of the euro has also created a single capital market in Europe whose size is second only to that of the USA. The European market is therefore much liquid than before, which is an anchor for the important role of corporate financing.

3.3 The experience of Japan and the rest of Asia

Alternative forms of risk transfer for corporate clients are still in the early stages in Asia. This slow development compared with the other regions can be attributed to the close interdependencies between industrial companies and property and casualty insurers, as well as the relatively underdeveloped risk management culture.

Captive insurers owned by a company do not play a significant role in Asia, except in Australia. Even in Japan, where the technical and physical standards are very high, the function of risk management is very underdeveloped at the organisational level and tends to be considered more of an administrative task. Another reason is the close interdependence between industrial companies on the one hand and property and casualty insurers on the other. In Japan for example, the four biggest non-life

[86] Swiss Re Sigma Number 1/1999 pages 36-37

insurers, whose market share comes to almost 50%, belong to what are known as "Keiretsu" associations. A large portion of commercial insurance is arranged within these groups of companies, so that the competitive pressure and the prospects of success for (external) ART providers have not been very good to date. The picture is changing however. Competitive pressure is mounting with globalisation of business becoming a reality. In Japan, for example, financial departments are becoming interested in how risk management affects company earnings. Given this background, it is likely that captives will receive a boost in the region, especially since Hong Kong is in the process of building itself into a second regional captive centre alongside Singapore.

There has been limited potential for finite solutions and capital market solutions are particularly interesting in Japan. Against a backdrop of deregulation of cover restrictions in the commercial business, the three biggest Japanese non-life insurers placed part of their earthquake and storm risks in the capital market. This was intended to create additional capacity for covering the company's natural catastrophe risks.

Thus it will seem that the development of the ART segment is at various stages across the continents and is growing in importance.

4. Conclusion

This research effort has analysed the impetus behind the growth of the ART solutions. The opinion that has been informed is that, ART solutions are an innovation that will stand the test of time. They are not a fashion that is going to fade away, but will endure forever. They are a must buy for corporates, insurance and reinsurance companies. The growth of the insurance industry is going to be largely underpinned by the development of the ART segment. Insurance companies should embrace ART techniques as they the crown jewels in the risk management arena. They must be best understood as compliments rather than substitutes of the traditional insurance products. The insurance companies must realise that the paradigm is shifting from indemnity to that of value creation. There must be a realisation that 'a risk is a risk' and as such it must be treated as such. The very basis of insurance is to provide risk protection. In a highly competitive environment where other financial players such as banking institution are waiting on the wings, to invade the insurance terrain, it would be folly for insurance companies to decline risks and categorise them as uninsurable. This would create gaps in the market and they would have afforded the other players to attack their segment. There have been lost opportunities, which should never have been (for example the Y2K risk was a free lunch as nothing happened).

References

1. Banks, E. (2004). Alternative risk transfer: integrated risk management through insurance, reinsurance, and the capital markets. John Wiley & Sons.
2. Culp, C. L. (2002). The ART of risk management: alternative risk transfer, capital structure, and the convergence of insurance and capital markets (Vol. 142). John Wiley & Sons.
3. Dickinson, G. (2000). Insurance finds a blend of innovation and tradition. Mastering Risk, 1.
4. Doherty, N. (2000). Insurance and finance: New vehicles for driving value. Financial Times, Mastering Risk Series.
5. Doherty, N. (2000). Integrated Risk Management: Techniques and Strategies for Managing Corporate Risk: Techniques and Strategies for Managing Corporate Risk. McGraw Hill Professional.
6. Forent, N. (2003). The ART gallery. Accessed from www.captivereview.com
7. Meulbroek, L. K. (2002). A senior manager's guide to integrated risk management. Journal of Applied Corporate Finance, 14(4), pp. 56-70.
8. Punter, A. (1999). The Spectrum of Alternative Risk Financing Opportunities. In The Changing Risk Landscape: Implications for Insurance Risk Management, proceedings of a conference sponsored by Aon Group Australia Ltd (Sydney: Aon Group Australia Ltd) pp. 121-50.
9. Punter, A. (2000). New solutions for the financing of risk. Insurance Research and Practice, 15(2), pp. 28-39.
10. Swiss Re, (1999). Sigma Report 1
11. Swiss Re, (1999). Sigma Report 2
12. Swiss Re, (2003). Sigma Report 2