

## ALTERNATIVE RISK TRANSFER

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Alternative Risk transfer (ART) is a broad term used for methods meant to protect one's assets or for covering the financing of risk through non-conventional insurance markets. These are tailor-made solutions for risks that the conventional reinsurance market would regard as uninsurable or does not have the capacity to absorb.

ART products – designed to transfer financial risks to the reinsurance industry and non-financial insurance risks to the capital markets and thus conceived as convergence of insurance & financial markets – are picking up across the globe. Companies are starting to use them as alternatives or supplements to traditional hedging and insurance methods. To put their capital to a more efficient use, banks are increasingly keen to offload a part of their credit risks on to the capital and insurance markets. At the same time, insurers and reinsurers are eager to take on new types of risk.

### ➤ Why ART is required ?

An insured/insurer considers adopting an Alternative Risk Transfer plan if one of the following circumstances appear:

- Very high premium level of guaranteed cost insurance making ART programs financially viable option (i.e. as cheaper cover)
- High frustration level with insurers or need of reducing dependency on insurers
- Insured's loss experience is predictable, and if the expected loss experience is significantly lesser than the premium to be paid
- Insured has a need and the desire to create financial incentive for controlling losses
- Insured is without a choice because guaranteed cost is not offered due to bad loss experience or "hard" market conditions

This list is indicative (not at all exhaustive). Sometimes insured might opt for ART

- To create a higher degree of stability in their premium costs (known as "Paced Cost Thru Time").
- Stabilization of cover & greater security of payment or for multi-year protection.
- With a desire to assume a higher level of risk as an incentive to heighten loss control efforts. This allows the management of the insured to share in any 'loss savings' enjoyed by the loss control programs.

ART contracts are also sought as a tool for more effective risk management due to following reasons:

- Management of solvency margins by reducing balance sheet contingencies and minimizing the impact of an adverse event on

their financial statements in a tax efficient manner.

- It can act as a source of capital (for example, to finance environmental liabilities, product liability, worker's compensation & professional liabilities) and can be helpful in Asset-liability management, Portfolio transfers for insurers/captives/self-insureds.
- Usage of ART creates customized portfolio strategies to meet unique future cash flow needs, can offer guaranteed return investments, actively managed and indexed portfolios and asset allocation strategies designed to match liability structures and minimize volatility.

### ➤ Examples of ART Products / Carriers

Nowadays, there are many types of ART programs being designed. Names used to refer such ART programs by brokers, agents, underwriters, and consultants may differ by professional and geographic region. Sometimes similar ART products differ in name just to gain a competitive edge or due to an attempt to combine features of different ART programs to give the insured the impression that a new and innovative ART program is being introduced.

In 2003 Swiss Re identified two segments of the alternative market: **Alternative carriers**, (e.g. captives, risk retention groups) and **Alternative risk transfer products**, (e.g. insurance-linked securities and weather derivatives). We would stick to this classification while introducing all the vehicles available today, regardless of the label applied to the program.

### Prevalent ART products are:-

- **Discounted Cover:** – It is the form of reinsurance where the premiums calculated are based on the discounted value of the outstanding claims. In this way the company can reduce its liabilities in the balance sheet by the amount of outstanding claims (non – discounted) and reduce the asset by the amount of premium. Discounted cover are used for managing solvency, risk transfer and capping losses.
- **Integrated risk cover:** Reinsurance arrangement covering several lines of business over several years with lower and upper limit being triggered by aggregate limits are known as Integrated risk cover. It is cost saving approach as it saves an insurance company from negotiating several arrangements.
- **Securitization:** Securitization of insurance risk is a manifestation of the markets' convergence aimed towards turning a risk into a financial security. Insurance companies, that have traditionally held the advantage in bearing property and casualty risks, are transferring the hard-to-place risks – on an aggregated or indexed basis – to the capital markets. From the investor's point of view, there are compelling arguments to include securitized insurance risk in a diversified investment portfolio – although whether this asset class will grow sufficiently in size and product range for investment fund managers to

devote the necessary resources for portfolio inclusion remains to be seen. Furthermore, commodity, interest rate and equity risks, long the domain of the capital markets, are being offered as part of risk transfer packages by insurers.

The securitization of insurance risk is likely to be a permanent market function. This is because the issuers and the bondholders act rationally, a transaction is completed only if the marginal benefits exceed the marginal costs for both parties. Therefore, an examination of the incentives to trade helps reveal the momentum behind the securitization of insurance risk.

- **Post Loss Funding:** Major losses deplete capital and increase its cost. Post-loss funding guarantees that funding will be provided in the event of a specified loss in exchange for a commitment fee. In funding, which is usually a loan on pre-agreed terms, or equity (contingent puts), commitment fee is less than insurance costs (as the cost of the funding will be borne largely post the event) - hence this appears (pre-loss) to be cheaper than conventional insurance. But here, there is no benefit to underwriting results.
- **Insurance derivatives:** A derivative is a security whose price depends on the value of an underlying asset or assets. While the underlying assets for most derivatives include financial instruments ranging from common stocks to foreign exchange rates, there are also derivatives based on seemingly non-financial "assets" such as the amount of rainfall at a particular location. Insurance derivatives, a growing class of derivative instruments, are designed to help insurance companies hedge their exposure to insurance losses. In most cases, they are used as a protection against catastrophic losses such as those caused by a hurricane or an earthquake. As other derivatives, in addition to hedging, insurance derivatives could be used by investors for speculative purposes or to improve portfolio diversification.

A simple example of an insurance derivative is an option that gives its buyer the right to a cash payment if a specific index of insured earthquake losses reaches a specified level ("strike price"). Alternatively, the index might be based not on the level of losses, but on the severity of the catastrophic event.

Since there is no traded underlying asset, the payment trigger for the insurance derivatives could be dependent on the actual losses suffered by an insurer, on an index based on aggregate losses suffered by the insurance industry, or on a parametric index based on physical characteristics of a catastrophic event. In transferring to the capital markets risk based on actual losses of an insurance company, a cat bond structure is usually utilized. The other two trigger types (i.e., industry losses index and parametric index) are used in insurance derivatives contracts. While they introduce some basis risk for the insurer, investors generally prefer them due to the lack of moral hazard and the inherently greater objectivity of using an index.

Hurricane Katrina and the fears of avian flu have brought new attention to the risks faced by the insurance industry, and to ways of transferring some of these risks to the capital markets. Overall, the issuance of

insurance-linked securities – from property catastrophe bonds to those that fund life insurance reserves – is on the rise. While the vast majority of publicly disclosed transactions have been in the form of fixed income instruments, the growth in the general insurance-linked securities market has generated a renewed interest in insurance derivatives.

- **Swaps :** In finance, a swap is a derivative, where two counterparties exchange one stream of cash flows against another stream. These streams are called the legs of the swap. The cash flows are calculated over a notional principal amount. Swaps are often used to hedge certain risks, for instance interest rate risk. Another use is speculation.

Besides these products, companies willing to assume a portion of their own risk can access a variety of alternative transfer financing mechanisms, while developing an individualized insurance program such as:

- **Large Deductible Programs**

Deductible insurance programs allow an insured to assume some risk in exchange for lower premiums. The risk transfer portion or the amount of insurance paid to the insurance company for the risk transferred is a guaranteed amount based upon overall payroll and revenue. Large deductible plans are quite flexible to accommodate company's needs. An aggregate deductible to provide protection in the event of an extraordinary increase in losses is also available in the market.

- **Self-Insured Retention Programs**

Policies excess of self-insured retentions for different kind of liability are being offered. Self-Insured Retention programs assist the insured in funding losses from current cash flow as well as reducing risk transfer costs. Loss prevention services can also be applied within the self-insured layers. An aggregate protection from an out-of-the-ordinary frequency of loss that produces higher than expected losses in the self-insured layer can also be looked upon.

- **Retrospective Ratings Programs**

Retrospective rating programs are a cost plus program, subject to maximum and minimum premiums. These types of plans come in a variety of rating methods. For instance, the two most popular methods are incurred loss retrospective rating and paid loss retrospective rating.

Retrospective rating programs provide for an evaluation of losses six months following expiration of a policy term, with an adjustment in premium based upon actual incurred or paid losses. Additional adjustments will be made annually until all claims are either closed or an agreement is reached with the insurance company on final settlement values.

**Existing Alternative carriers are:**

- **Captive Programs**

A captive insurance company can help a company stabilize insurance costs, earn investment income on the money used to fund future losses and gain more control over different areas of its insurance

program. Several captive options are available in the market-providing Claim handling, loss prevention services and other services.

Loss control professionals are experienced in making risk assessments and proposing practical remediation to help mitigate or prevent losses. Should a loss occur, exceptional claim service is available anytime/anywhere. Captive programs / services provide a one-stop option for your fronting and excess coverage needs, and emphasize the integration of risk management with risk financing.

- **Risk-Retention Groups:**

A risk-retention group (RRG) is a corporation owned and operated by its members. In U.S. it must be chartered and licensed as a liability insurance company under the laws of at least one state. The group can then write insurance in all other state. It need not obtain a license in a state other than its chartering states. In other countries licensed are obtained as per local law.

- **Risk Purchasing Groups**

Similar to Risk retention groups, purchasing groups must be made up of persons or entities with like exposures and in a common business. However, whereas RRGs are liability insurance companies owned by their members, purchasing groups purchase liability coverage for their members from admitted insurers, surplus lines carriers or RRGs.

- **Fronting**

For many corporations, the use of a self-insured retention or a captive insurance company is an integral part of risk management strategy. While these strategies provide insureds with proven benefits, there is a need for related administration which third parties provide. They (third parties) combine fronting and consulting with established, high quality claims handling and loss prevention services to minimize a corporation's total cost. Such customized fronting programs are available for all lines of insurance.

- **Blended Programs**

A company with complex exposures – for example, strong brand identity and multiple global locations – and a commitment to managing and controlling risk is a prime candidate for a blended program. A blended program is structured primary policies or self-insured retentions. Multiple lines can be combined in a blended layer with a single limit of insurance. The limit applies on an aggregate basis over all insurance included in the blended layer, regardless of whether the coverage triggers are occurrence or claims-made.

Companies will also seek solutions for more exotic forms of risk, for which no insurance product is yet available. Enterprise risk management, a novel concept in Europe, is becoming more common in corporate risk management thinking. The seeds of this approach are in the move towards a multi-product or business-line approach to risk management.

## ➤ Recent Developments and Trends in the arena of ART

Germinated during the liability crisis of the 1980s, when businesses had trouble obtaining some types of commercial insurance coverage, new mechanisms for transferring risk formed the alternative market. The real driver of the growth was the desire to discount claims reserves to offset significant deterioration. Later, increasing rates and a shortage of sufficient amounts of coverage in some commercial insurance lines, a trend which began in 2000 and intensified following the September 11 attacks, compelled businesses to look at a number of alternative risk transfer vehicles. Today ART market has global spread, with activities centred around London, New York, Bermuda, Zurich, Dublin, Luxembourg and mechanisms account for more than two thirds of the alternative market, growth among other alternative mechanisms, including capital market securitizations, government pools, group captives and risk retention groups are fast catching up.

Today ART market in U.S. generates nearly half of the estimated \$300 billion of it's commercial property and casualty business (estimated \$120 billion in premium) and cover 30 percent of the U.S. commercial insurance market. A wave of natural disasters and terrorist attacks have caused the costs of traditional insurance to rise significantly or have resulted in the inability of insurance companies to cover their risks adequately. Therefore, Industry is now actively seeking alternative ways to cover their high-impact risks and policyholders, large or small, have resorted to ART products.

As per the General Accountability Office report released in September, 2005 RRGs accounted for about \$1.8 billion, or about 1.17 percent, of all commercial liability insurance in 2003. The groups have played an important role in expanding the availability and affordability liability insurance for certain groups. More RRGs has been formed in the years from 2002 to 2004 than in the previous 15 years, with about three quarters of the new RRGs offering medical malpractice coverage.

Catastrophe bonds, developed in the wake of Hurricanes Andrew and Iniki in 1992 and the Northridge earthquake in 1994 – tapping into the capital markets have allowed insurers to diversify their risk and expand the amount of insurance available in catastrophe prone areas. Power failures, terrorism and sport events among the risks covered by catastrophe bonds last year. With investor interest driven principally by hurricane activity in the United States, annual issuance of catastrophe bonds reached a record \$4.69 billion in 2006, up 136 percent from \$1.99 billion in 2005.

**In Europe**, demand for ART solutions is increasing, particularly among insurers and reinsurers. One reason being that the prices of insurance and reinsurance products have started to rise. At the same time other players like Commercial banks, don't want to be merely risk takers but also risk managers

Firms are using ART to create extra underwriting capacity, including for new types of risk. Securitisation of risk more visible in advanced insurance markets (e.g. Switzerland, France and Germany) are making in road to comparatively lesser advanced (e.g. Italy).

Activities are gathering pace in European catastrophe bond market, which has been thin so far.

ART experts in Europe are venturing into new ground, in terms of the types of risks covered and their geographic location. Moving ahead from Earthquakes and hurricanes bonds, First flood cat bond has been designed.

Europe's life insurers are leaning towards ART due to increasingly pressing financial risks associated with the rising life expectancy of policyholders, which they are keen to offload. Life insurers are also considering to hedge the financial risks associated with the upfront commission payments to agents who sell their policies. Such costs are priced into the premiums of a life insurance contract, and thus are only recovered over the lifespan of such a policy.

The entire sector of retirement provision across Europe will create more demand for ART solutions.

**In India**, though ART market is in nascent stage but given the detariffed environment and a rush to capture maximum market share where Insurance companies are pushing themselves hard to be most competitively priced, ART is significantly relevant.

#### ➤ Actuary as an ART expert

Alternative risk financing mechanisms are being used more frequently by the more sophisticated professionals who have a relatively good grasp and understanding of economics, finance and statistics. These skills are required in order to be comfortable with using probabilistic risk analysis as a decision-making tool to effectively manage portfolios of risks. Such requirements make obvious opportunities for actuaries within ART. They can be instrumental in identifying / understanding risks and spreading commercial awareness. They are better equipped to understand as well as explain that risks are not just insurance risks. Their capabilities could be used in quantifying risks through modeling and also in investigating if the models are robust enough. They can play central role in deal structuring/placing as well as underwriting. At the same time actuaries need to be receptive and adaptable to rapid changes in markets and techniques.

#### ➤ New Avenues

Product innovation in the ART market has often started from deficiencies of traditional insurance or banking products. Single-line annual coverage developed into multi-line, multi-year coverage, single-trigger insurance became multi-trigger insurance, and pre-loss funding concepts where developed into contingent capital post-loss funding concepts.

The main concern of insurance and financial risk managers is to avoid volatility in earnings, in particular the negative impact on accounting figures in the earnings statement. In this context, the most important task is to devise a risk management strategy that can improve the general financial and investment policy of a corporation and positively affect either the return on invested capital or the cost of capital, thus increasing the value of the company.

Also, new insights in corporate finance makes the professional interested in the value-addition of these new solutions. In response to this and to address the dynamic needs of today's corporate, new risk solutions must shift the focus from loss-indemnification towards contingent and forward-

looking business financing. An innovative ART risk solution should have the following benefits:

- It should be a true enterprise risk management approach with the focus on protection of value-creation processes in the company and not on indemnification of a narrowly defined traditional loss.
- It should take advantage of a client's integrated risk management perspective (natural hedges, internal risk diversification). The cause of cash flow problems should not be relevant.
- The focus should be on distressed competitive cash flow issues (out-of-the-money option) i.e. cash payment only when needed.
- Coverage should also be provided for underperforming companies compared with key competitors, not only in case of absolute negative performance.
- It should avoid high transaction costs of traditional coverage (i.e. loss definitions, uncertainty with regard to quantification, law suits, etc) and should provide implicit coverage.

ART products based on multi-trigger approach, capable of addressing clear specific risk situations and bringing the future operational and financing cash flow better in line with cash needs for investments, can contribute to the ultimate business goal of creating company and shareholder value.

#### Finally we would like to conclude that:

- Volatility of conventional markets, rapidly rising cost of conventional reinsurance, lack of capacity for natural catastrophes, greater requirements for risk transfer from buyers, need for multi-year smoothing, convergence of financial markets, concentration of talent in ART providers and historic profitability of ART market are found to be main drivers for ART market growth.
- Nevertheless, ART market-place will not take a sudden quantum leap from its low base. Rather, it will evolve gradually. Many firms remain inherently reluctant to embrace new solutions and it may take long before they become comfortable with alternative risk transfer and financing techniques.
- ART programs are not a solution for all insureds. The high cost of administration makes ART programs acceptable only when the costs can be spread out over a large premium base. Small insureds may not have an adequate spread of risk to maintain an acceptable degree of loss stability. One large loss could dramatically skew an insured's total loss experience and result in large year-to-year variations in costs.

The convergence of the banking and insurance sectors in the market for alternative financial risk management solutions is imposing increasing competitive pressures on both industries. The challenge in bringing together banks and insurers in this deal was to understand the motivation for each side and create a large enough market. Insurers typically focus on short-term earnings cover whereas banks, willing to make long-term commitments tend to avoid adverse risk. Convergence of their objectives would be a win-win for all.