

# EL CAMBIO CLIMÁTICO Y LA AGRAVACIÓN DE LOS RIESGOS CATASTRÓFICOS.

**AGERS 2.000**

**D. John Forder  
Managing Director (Project Risk Group)  
HEATH LAMBERT GROUP**

## **CLIMATIC CHANGES AND CATASTROPHIC RISKS - THE IMPLICATIONS FOR RISK MANAGERS**

Precedent speakers have already set the scene in his presentation as regards the changing weather patterns worldwide and the increasing number of catastrophic events that are occurring around the world. These are indisputable facts and are affecting the lives of millions of people, not just in traditional "catastrophe" regions but also in areas of the world previously considered "low risk". Europe in particular has suffered enormously in the past decade, particularly due to windstorm and localised but severe flooding - an example being my own homeland in the U.K. earlier this month. The media understandably concentrates on the human tragedy associated with these natural catastrophes but for the purposes of my presentation I will focus upon the implications for insurers/reinsurers and therefore the risk managers.

This situation affects the Spanish Multinational Companies working around the world, and also all the construction activities in Spain, that are excluded from the coverage of the "Consortio de Compensación de Seguros".

### **INSURED LOSSES**

In the 1990's the largest insured loss year for natural catastrophes was of course 1992 where the insurance/reinsurance market suffered losses of US\$ 26,000,000,000. This was largely due to Hurricane Andrew, accounting for US\$ 17,000,000,000 - despite the U.S.A. having the most stringent building regulations in the world as regards windload. 1994 produced insured losses of around US\$ 18,000,000,000 from natural catastrophes followed by a generally reducing trend - when compared to 1992 and 1994 - until 1999.

Social and economic expansion in the 1990's produced vastly increased values at risk and concentration of those values. Whilst the 1970's and 1980's had their share of natural catastrophes (e.g. Tangshan earthquake in China in 1976), it is insured losses arising from natural catastrophes that have increased enormously in the 1990's

<u>Decade</u>	<u>Aggregate insured losses (present day values estimate)</u>
1970's	US\$ 20,000,000,000
1980's	US\$ 30,000,000,000
1990's	US\$ 120,000,000,000

The 20th century finished with nature reminding us of it's awesome power and increasing unpredictability - insured losses in 1999 reached US\$ 22,000,000,000 from natural catastrophes! On the next page you will find a list of the most significant such loss events in 1999 and the geographical spread and individual magnitude of the largest catastrophes is most striking.

The basic principal of insurance is that the "losses of the few are paid for by the premiums of the many". When normal additional losses and severe fire/explosion type losses are taken into account in addition to the natural catastrophes it is clear that insurers/reinsurers have suffered significantly throughout the 1990's. Moreover, it is considered by many experts that the 21st century - and certainly this new decade - will continue the trend towards greater unpredictability and severity of natural catastrophe losses. The U.K. flood/storm losses are expected to exceed US\$ 2,000,000,000 and as I write this presentation (8th November) the waters are still rising!

## **UNINSURED LOSSES**

These arise in various ways and largely relate to pure economic loss, such as loss of productivity, where no direct material damage may have occurred. However, industry is always uninsured to the extent of deductibles, self-insurance retention's and the like and in some case a conscious decision not to insure. As an example of the latter I am aware of at least one major European utility company that decided not to insure it's transmission lines and smaller sub-stations etc. - and was hit by a US\$ 1,000,000,000 uninsured windstorm loss!

Indirect losses such as senior management time in mitigating the effects after a natural catastrophe, effect on share price and the like also impact significantly on businesses suffering such losses. The uninsured and economic losses from natural catastrophes invariably dramatically exceed insured losses - in 1994 these were estimated at around US\$ 130,000,000,000!

## **The Reaction of Insurers/Reinsurers**

Faced with the situation of an increasing and less predictable exposure to natural catastrophe losses, the insurance and reinsurance markets are reacting in a number of ways. Such giants as Munich Re and Swiss Re are spending even more time and money on the study of the changing weather patterns, earthquake/volcanic activity, building design code studies and the like. They are keen to share this information with their clients – primarily ceding company insurers – and indeed much of the statistical material in my presentation emanates from some excellent Munich Re publications.

In addition to these research activities, insurers/reinsurers are looking to increase their premium base and reduce or contain their exposure, especially in areas prone to catastrophic losses. Examples would be the Earthquake Rating Tariffs introduced in Turkey and Greece in late 1999/early 2000, significantly increasing premium levels for Property/Business Interruption insurance in those countries. Increased "cat" peril deductibles are generally being demanded in many part of the world considered to represent severe "cat" risk. Reinsurers are also limiting the capacity they will provide to insurers in "cat" areas and for international insurers writing reinsurance business from such areas. Based on the laws of supply and demand, it must be recognised that commercial and household rating levels are likely to rise in general, but particularly in "cat" areas such as:-

- (a) much of the East Coast of North Central and South America, Turkey and Taiwan (Earthquake);
- (b) Western and Central Europe, Japan, South East U.S.A. coastal areas and the Caribbean (Windstorm);
- (c) Numerous areas of the world that are historically or more recently recognised as particularly at risk of catastrophic flooding (e.g. parts of the U.K., Northern Spain, Mozambique, Venezuela and Mexico).

The infamous EL Nino had an enormous impact on the flooding risk in parts of South and Central America as well as Africa. The effects of EL Nino vary from severe rainfall/flooding to droughts and has much to do with the climatic changes we have witnessed in recent years due to global warming.

In essence, insurers/reinsurers are looking to price their product more highly in "cat" areas and seek greater risk participation or mitigation by the insureds by way of such things as:-

- Increased deductible/self-insurance levels
- Improved risk protection (e.g. more robust temporary protections from water damage during construction, higher design capacity for buildings in windstorm/earthquake regions).
- Avoidance where possible of building or purchasing property in prone areas

Many insurers will have reduced treaty capacity in 2001 which will drive more business into the facultative reinsurance market. Insurers/reinsurers will find it more difficult and expensive to purchase "cat" and "clash" protections of their own.

### **How Does All This Effect The Risk Manager**

Clearly, the talk at the reinsurance forums at Monte Carlo and Baden Baden this year was of poor results and a need to increase rating levels significantly.

Against this undeniable background, Risk Managers should be in more demand by major corporations than ever before. This is the time that a professional and sophisticated approach to insurance purchasing is more imperative than ever – the "hard" market is emerging!

I am an insurance broker not insurer or reinsurer and my company's interests are served by our providing an excellent service to our clients at a reasonable price. I would ask you to assume that your broker (whether in-house or external) is capable and professional and will continue to secure the maximum or optimum coverage at a competitive price – whatever that may be in a changing marketplace. On this assumption, many of the keys to mitigating spiralling insurance costs rest firmly in the hands of Risk Managers – like you here today – and the attitude of their senior management towards risk and its management. To obtain the very best from insurers/reinsurers in a hard market, it is imperative for you to be able to demonstrate your company(s) commitment to risk management at both corporate and operational levels, such as:-

- Appropriate work methods/time schedules (Construction and Erection risks); property protection in hazardous areas (such as Earthquake/Windstorm design, river flood embankments etc); fire protections, security arrangements etc.
- Provision of full technical underwriting information, co-operation with insurer risk surveys.
- Regular/preventative maintenance of property and machinery.

All of the above can be considered standard practice, but become all the more important in a hard market. Differentiating your business from others in a positive manner much improves the terms that insurers might otherwise apply.

## **Partnering and Risk Packaging**

Many of our clients have been preparing with us for the inevitable hardening of the market that is now upon us. Such preparation has centred upon creation of a "partnering" relationship with carefully selected first class insurers/reinsurers and building a multi-line, multi-national package programme of insurance. An excellent example would be Grupo Dragados, whose Risk management Department worked closely with Heath Lambert to create what is probably the world's largest and most comprehensive such programme for a company in their sectors of activity. These "Master Programmes" create a relationship with insurers whereby there is no "selection against" and virtually every class of insurance can be grouped together, maximising bulk purchasing leverage and designing a seamless policy. In consequence, insurers become part of the risk management team – along with the broker – and are prepared to accept the more exposed risks as these can be balanced against the lower risk classes in the programme. Long term, multi-year programmes such as these are intended to bring stability to cost and coverage and increase risk management control. They are proving invaluable in ensuring a reduced impact of the hardening market.

## **Alternative Approaches To Catastrophe Risk Protection**

Partly as a result of these occurring in the 1990's, various forms of Alternative Risk Transfer have been created or adopted to provide an alternative solution to "traditional" insurance (and reinsurance) for natural catastrophes.

For a number of years, the capital market has been providing the possibility for insurers to protect both insured losses and loss of equity capital, normally in the form of surplus notes and/or preference shares.

Bond issues are another alternative, often involving the creation of a "Special Purpose Vehicle" company, behind an insurer or reinsurer, and which issues the bond. The bond is then guaranteed by the purchase of first class bonds via a collateral trust using the proceeds of the SPV bond issue.

Yet another alternative involves insurance derivatives such as swaps and options. As you can imagine, it is for the protection against natural catastrophes that these various alternatives have been most used to date. However, it is only a very tiny proportion of the worldwide capacity that has been secured by means of utilising the capital market.

### **Weather Derivatives**

Whilst the ART related alternatives mentioned above are almost exclusively the province of Insurers as purchasers, weather derivatives have primarily been purchased by industry, particularly energy. Basically a weather derivative is a financially settled contract, not dissimilar to an insurance policy, that enables a company to reduce its weather related business risks. The contract is normally triggered by such events as unexpected weather conditions e.g. too warm or cold, too much snow/abnormally low snowfall, too much wind or little wind. The vast majority of contracts to date have related to change in temperature and the buyers principally energy companies. Their income is obviously affected by warmer winters' when less energy for heating is used. I understand that the estimate of such contracts to date is a notional value of some US\$8,000,000,000.

Dealers in these contracts are principally companies such as ENRON – a major client of Heath Lambert – Koch and Aquila.

In general, the contracts involve swaps by two parties whose business face opposite risk exposures e.g. an energy company with an ice-cream manufacturer. Typically, the individual deals involve relatively low amounts of US\$5,000,000 or less. However, this is a growing market and very much worthwhile exploring if your business is heavily exposed to weather patterns.

## **CONCLUSION**

- Seek to balance your "cat" risks with less exposed aspects of your insurance portfolio.
- Ensure that your broker and insurer relationships are solid and long term three-way partnership based.
- Produce the information to differentiate your company from your competitors – demonstrate risk management focus.
- Prepare for the possibility of larger self-insurance and more costly coverage in "cat" areas. Heath Lambert also specialises in "Self-Insured Occurrence/Aggregate Retention" programmes.
- Interesting challenges are ahead for all those involved in the insurance industry. Professionalism will be imperative.