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As the market softens across most property lines in 2004, will the recent events in Florida and Japan reverse that trend in 2005, asks **Timothy Gardner**

In 2004, the global property catastrophe reinsurance market performed just as economic fundamentals would predict: both supply and demand expanded but as increasing supply surpassed rising demand, prices fell.

On the demand side, increased calls for catastrophic cover arose from a number of factors, including:

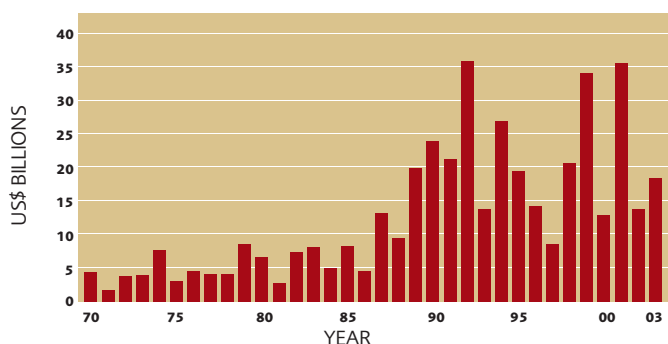
- The expanding global economy generated increased exposures.
- Model updates for North America by catastrophe modelling companies led to increased loss projections and thus increased demand, particularly at the top end of insurer programmes.
- The softening commercial property market in a number of countries lowered original rates to the point where they were unattractive to the proportional pro rata treaty reinsurance market, thus pushing cedents towards catastrophe excess-of-loss protection.

On the supply side, capacity greatly increased. For example, at the end of 2003, the top 25 reinsurers in Bermuda had a premium/surplus ratio of 0.9:1, a level normally indicative of excess capacity. In the same year, 17 of those top reinsurers had a rate of return that exceeded 15%. Returns of this level in today's investment climate of record low interest rates generated a strong appetite for increased business by practically all players. The growth in capacity in 2003 arose from three main sources: strong

financial results for 2003, a rebound in equity prices and recapitalisations by a number of major reinsurers.

The overall cost of catastrophes in 2003 was about average when compared to the losses for the past 15 years (see chart below). As a result, catastrophe losses did not play a major role in the pricing of 2004 renewals in most markets. However, in areas where specific events occurred, such as brushfires in southern California and floods in Korea, the market was impacted.

GLOBAL INSURED CATASTROPHE LOSSES



Source: Swiss Re, sigma No. 1/2004

Property Catastrophe

Pricing for catastrophe property reinsurance declined in most countries in 2004. The index of global rate on line fell by 8.7% from the peak of 2003. This decline follows an upward trend in pricing that began in 2000 and was accentuated by the enormous losses of September 11 2001.

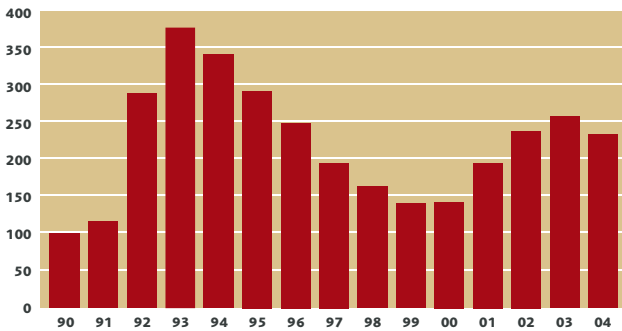
of catastrophes worldwide was about average in 2003, and pricing was impacted only in those regional markets that experienced significant losses for the year.

Catastrophe modelling continues to have an increasing impact on reinsurance structures and pricing. There is now a much broader acceptance

of instances of 'cliff pricing'. Contracts tended to be oversubscribed when priced at profitable rates as measured by model results, but capacity offered 'fell off the cliff' if prices were perceived as inadequate.

While catastrophe modelling does seem to lend discipline to the market, perception of model quality and utility in many regions still varies. There appears to be an inverse relationship between cyclical price volatility and catastrophe model reliance. In territories where the models are well entrenched, well understood and fully utilized, price volatility is tight. In territories where the models are unproven and still developing, the significant market fluctuations still appear to exist. The bottom line is that the models offer a consistent measure of 'price adequacy'. While there are many different perspectives around the accuracy of the models and we can all agree that the nature of loss

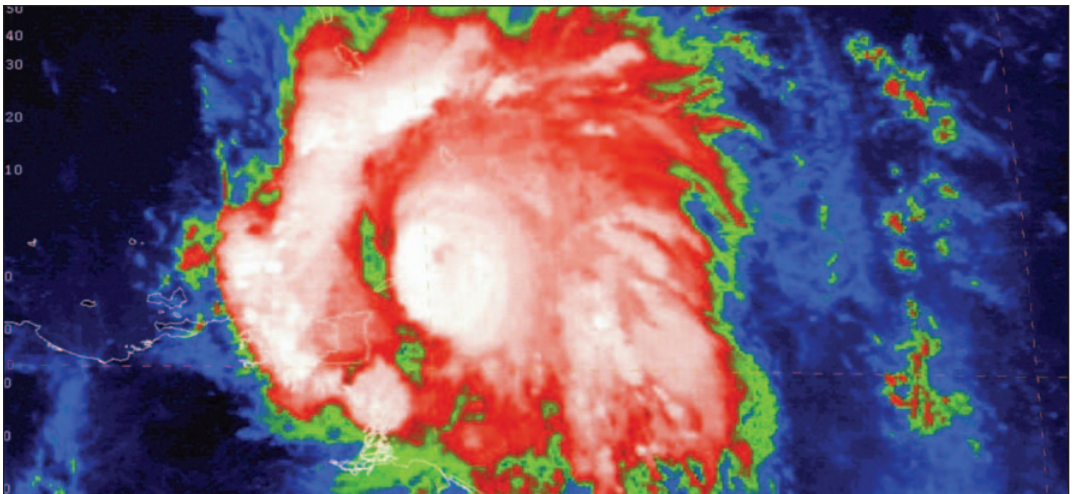
WORLD RATE ON LINE INDEX*

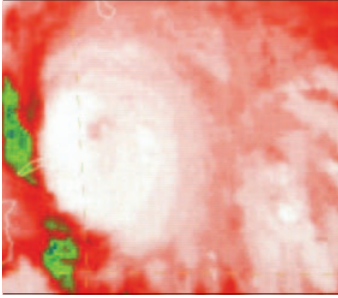


Source: *1990 = 100. Index constructed by Guy Carpenter & Company, Inc.

In general, reinsurers at 2004 renewals were competitive and aggressive in pursuing business that was perceived as adequately priced. The number and severity

of modelling results in many territories, which tends to produce a narrower range for prices and less cyclical price volatility. The year saw a number





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estimates means that they will never be right, the identification of 'expected loss' offers a consistent starting point.

In the territories that rely heavily upon the cat models, there is a general agreement on the amount of risk being transferred. The negotiation revolves around the margin that reinsurers require to assume that risk.

IMPACT OF RECENT EVENTS

There is no question that the 2004 tropical cyclone activity will have an impact on 2005 pricing. The questions that still need to be answered are: "To what degree?" and: "How far reaching will that potential impact be felt?"

Let's start with Florida: as a result of this year's hurricanes, which damaged approximately 20% of Florida homes, "the insurance industry will pay out more than the \$15bn in insurance claims which resulted from Hurricane Andrew in 1992," according to the Insurance Information Institute (III). While Andrew remains the single most costly hurricane in US history, the three major hurricanes (Charley, Frances and Ivan) have produced somewhere in the neighbourhood of \$16bn

(depending on the model vendor and the points within the range you choose) in insured loss to the Southeast United States.

Hurricane Andrew not only changed the manner in which property catastrophe reinsurance was viewed, priced and ultimately sold, it was a redefining moment for the property catastrophe reinsurance market. Prior to Andrew, losses that large were simply not contemplated; aggregation issues, for both insurers and reinsurers, were not fully understood and catastrophe reinsurance was viewed as a means of earnings protection, not capital preservation.

After Andrew, reinsurers were created to sell only property catastrophe reinsurance; vendor models rapidly escalated in quality to become the valuable tools they are today and primary insurers began to think about catastrophe reinsurance as a protection against their risk of ruin. So the question remains, will the 2004 activity, which is close to the same quantum of total loss, produce the same dramatic market shift?

The simple answer is no, and there are several reasons for the difference.

DIFFERENCE

There are a few very large Florida market players that do not buy meaningful external reinsurance. According to an estimate of market share by Fitch Ratings based upon estimate of 2003 direct written homeowners premium, Citizens, Allstate and State Farm alone are estimated to represent more than 40% of the homeowner's market. If we assume that \$14.8bn of the \$16bn in insured loss estimate resides in Florida, the 40% share for these three companies means that approximately \$5.92bn will not be subject to the reinsurance market.

The Florida Hurricane Catastrophe Fund (FHCF) is the largest reinsurer in the state. Even though the current estimated loss amounts for all three storms appear to fall below the industry attachment for the FHCF, the Fund pays out based upon individual member company's specific limits and attachments. There is no question that the FHCF will draw some potential loss out of the reinsurance sector. AM Best estimates indicate that the FHCF will pay approximately \$2bn in total losses from all three combined

events. This, too, is loss that will not be subject to the reinsurance market.

Property catastrophe programme retentions for the national writers have grown over the last several years to the point where Charley, Frances and Ivan will largely be net retained events. There were a large number of regional companies or Florida-only writers that are in dire situations as a result of these three storms, but in terms of a total impact on the reinsurance market, without the large national writers (with their big limit, reinsurance programmes) involved, the impact is much less severe. We estimate that 75% of these total losses will be retained net.

Breakdown of Charley, Frances and Ivan Total Losses (\$bn)

Total estimated insured loss	\$16.0
Loss to the 'big three' (40%)	\$5.9
Loss to FHCF	\$2.0
Total potential UNL to Cat re Market	\$8.1
Estimate of amount retained net (75%)	\$6.1
Estimated loss to the Reinsurance Market	\$2.0

It is important to highlight that these loss estimates do not include commercial flood loss potential. The model vendors do not measure the impact of flooding, and while the majority of personal lines flooding is covered under the Federal Flood Program, commercial flooding is kept in the private industry. Frances and Ivan both dropped incredible amounts of rain. We expect that there will be some very large per risk losses as a result, and the impact of those

losses both on their own and in addition to the per event totals ceded to reinsurers have not been contemplated.

While the industry's attention was focused on Florida, Japan suffered back-to-back typhoon events as well. Typhoon Chaba and Typhoon Songda both made landfall on Kyushu Island on August 30 and September 7, respectively. With each storm carrying wind speeds in excess of 100 mph, Japan was left to deal with wind damage, extensive flooding and power outages.

According to modelling company Risk Management Solutions, the insured loss estimates from the combination of the two events range from \$1.1bn to \$2.4bn. The general

feeling is that these losses will largely be retained net or may impact the first layers of some Japanese catastrophe programmes. While the ultimate figures are still far from being released, the expectation is that these events will not produce meaningful losses to reinsurers.

BUSY YEAR

The year 2004 will be remembered as a very active wind season. From a historical context, there have only been six years

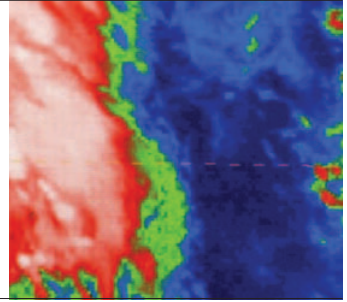
since 1900 that experienced four or more hurricanes making US landfall. There has never been a year where two Category 4, or above, storms made landfall, and we very nearly saw three.

Despite all of that, our prediction is that the impact to the global reinsurance market will be relatively small. For some reinsurers, these losses have eroded, or quite possibly eliminated, 2004 profits and prices must increase, at best, or halt their declines, at worst, in order to address the recent experience. Our opinion, however, is that the impact will not be far reaching enough to turn the tide of falling rates. There are too many very large US reinsurance buyers that have retained these losses net and while they may be looking for additional ways to protect accumulations (aggregate coverages, subsequent event drop downs, etc), they will not be inclined to pay more for their existing excess of loss programmes.

THE RETRO MARKET

While more customers are seeking to purchase retro protection in 2004 (as evidenced by the Bermudian catastrophe companies), there is little evidence to suggest that the retro market has been a significant factor in 2004 property catastrophe renewals. This is partly due to strong corporate balance sheets and increased confidence that prior-year reserve risk, with some notable

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exceptions, is now more robust than in past years.

While retention levels generally held firm, capacity was available at a cost below the previous year of around 10%, dependent on exposures. With most buying activity completed in time for the US wind season, the only areas where capacity became limited – and hence where pricing did not come down – were for Californian earthquake and Northern European storm exposures.

Improved exposure-management data and better than anticipated returns have enticed some new providers into the retro arena, including some existing primary reinsurers, who up until now have preferred the ‘vanilla’ exposure. It remains to be seen whether such capacity will prove resilient once a significant natural peril event occurs.

In terms of capacity, reinsurers will generally seek to manage to their 1 in 250-year event, which in terms of US industry loss would equate to about a \$50bn industry event today. At present, the traditional retro market is unable to provide fully for such a loss within cost-effective parameters, and this often leads

customers to seek additional benefits through structured, parametric or capital market transactions, where a significant amount of alternative capacity exists. These type of transactions are becoming increasingly popular with those wishing to spread their catastrophe volatility across a wider spectrum of the financial market.

For US terrorism, retro providers have generally agreed that for 2004 they would cover ‘non-certified’ terrorism exposures within the property product.

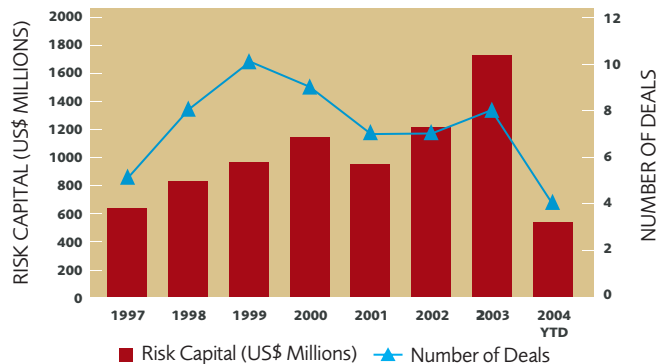
CAT BOND MARKET

The catastrophe bond market witnessed yet another record year in 2003, with total issuance of

\$1.73bn, an impressive 42% year-on-year increase over the 2002 record of \$1.22bn. During the year, a total of eight transactions were completed, with three originating from first-time issuers. Since 1997, when the market began in earnest, 54 catastrophe bond issues have been completed with total risk limits of almost \$8bn.

The trend toward larger transactions continued in 2003, with the average issue size hitting a new high of \$217m, up from \$174m in 2002. In addition, shelf offerings – a registration of a new issue without selling the entire issue at once – are becoming more common. Following its first successful catastrophe shelf

CATASTROPHE BOND MARKET OVERVIEW



offering, Pioneer, Swiss Re obtained an additional \$293m of catastrophe protection through the Arbor Program shelf offering. Shelf offerings are advantageous for issuers as they facilitate the fast and efficient offering of securities as needs or market conditions dictate.

CATASTROPHE MODELS

Catastrophe models are constantly changing and improving as 'bugs' are repaired, financial calculations are enhanced and updated exposure and experience information becomes available to the modelling company engineers. This additional information is incorporated into the models as

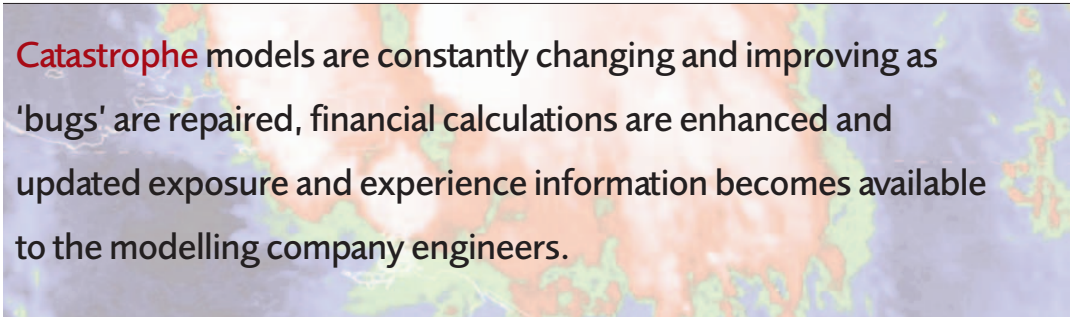
hurricane peril in the North Eastern US, causing some companies to buy additional cover. At the same time, other company portfolios have shown a decrease in losses. The new model also incorporates a more accurately represented coastline, 'transitioning' storms, as well as changes in vulnerability curves. As always, the changes in losses are dependent on the line of business, location, construction and occupancy of a given company's book of business.

RMS's earthquake model was also updated. The regions included in the update are the Western United States and Canada. The changes include updated USGS National Seismic

change in the seismic source model resulted in a significant loss decrease in Washington state, at the same time causing a significant increase in Oregon. The New Madrid area had been updated in 2000 and did not change in version 4.3.

Updated RiskLink version 4.4 will be used for the 2005 renewal season. Although there are many enhancements and changes in this updated version, few, if any, will affect the losses.

AIR Classic version 5.5 changed very little overall from the prior year, with the exception of the land-use and land-cover data for the state of Florida. The updated data for Florida could result in significant loss



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needed and model updates are released. In most cases, the new versions will affect the loss output.

RMS's hurricane model underwent a significant update in 2003 affecting the 2004 renewal season with the release of RiskLink 4.3. Both the hazard and vulnerability components have been updated. In some cases, these updates have resulted in dramatic changes in loss estimates, most notably for the

Hazard Maps (2002), revised data on fault rates, new active faults, an expanded set of high-magnitude events and revised attenuation rates. By increasing the probability of very large earthquakes and at the same time decreasing the probability of moderate events, the losses in certain areas of California increased at the long return periods, while decreasing at the shorter return periods. The

increases, depending on the location of the portfolio. Similar changes will be incorporated for all states in the Classic version 6.0 to be used for the 2005 renewal season. In addition to the land-use and land-cover changes, version 6.0 will also update information on commercial vulnerabilities, which may cause an increase in projected commercial losses for the 2005 renewal season.