

**Property Specialty Update:  
1 January 2006  
Renewal Season Overview**  
Changes in the marketplace after record storms

2006

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## Executive Summary

For the reinsurance industry 2005 was the year of unprecedented catastrophe losses in terms of both frequency and severity. Consequently, these losses were the main drivers of the 1 January 2006 renewal season and have been described as “market changing events”.

Large losses and resultant destruction, and ensuing replenishment of capital continued the process of bringing the (re)insurance industry closer to the broader capital markets. Notable in this process was the increasing presence of private equity funds in the industry, which appear keen to back new reinsurers.

The events of 2005 brought further external pressures to bear on the industry which are expected to have effect past just the 1 January 2006 renewal season, particularly in respect of the relationship between the market, catastrophe modelling and the influence of rating agencies. The latter exerted a major force on the direction of the renewal at 1 January.

Whilst the US dominated the headlines in terms of significant events there were also losses in other territories and 2005 will add up to be the costliest ever catastrophe year for the insurance industry.

### GLOBAL: MAJOR CATASTROPHE INSURED LOSSES

Source: *Swiss Re sigma*

LOSS	DATE	AMOUNT	REGION
Hurricane Katrina	24 Aug	\$45.0bn	US, Bahamas
Hurricane Rita	20 Sep	\$10.0bn	US, Cuba
Hurricane Wilma	16 Oct	\$8.0bn	US, Mexico, Caribbean
Hurricane Dennis	6 July	\$2.0bn	US, Caribbean
Floods	19 Aug	\$1.9bn	Switzerland, Germany etc
Winter Storm Erwin	8 Jan	\$1.5bn	Scandinavia, Germany

Despite a year of heavy losses, US insurers reported increased net income and surplus during the first three quarters of 2005. Indeed, the combined ratio for the industry is estimated to be under 100% for 2005. Insurers were greatly assisted in achieving this result by the reinsurance market, which is estimated to have borne about 50% of the catastrophe losses.

**Primary property** rate reductions were less dramatic in 2005, most notably in the 4th quarter, where major accounts were renewing with just small reductions or even modest increases, depending on the nature and geographic location of the risk.

With the significant increase in reinsurance cost for many direct and facultative underwriters, especially in the London market, some observers estimate that rates for large risks may start to see some increases during 2006 or restrictions in coverage, particularly for catastrophe perils. There was evidence at 1 January of this phenomenon beginning to manifest itself, particularly in the US.

## Property Catastrophe

Preliminary estimates for the Guy Carpenter property reinsurance catastrophe index in 2006 show prices rising for the first time in two years and returning to a level close to that last seen in the mid 1990s. However, the market is skewed by the massive increases seen on some US renewals.

In general, reinsurance price increases were sensitive to three factors: loss experience; geographical scope; and programme size. We estimate the rate movements as follows:

### REGIONAL ROL CHANGES

Source: Guy Carpenter

REGION	ROL CHANGE
US Nationwide	30% to 125%+
US Regional	10% to 100%
Caribbean	5% to 15%
Northern Europe	0% to 15%
UK	5% to 15%
Other Europe	-5% to 5%
Australia	0% to 5%
Asia	-15% to 5%

Whilst there was no shortage of capacity outside peak zones in the US, insurers were faced with a reinsurance market increasingly influenced by three factors which in turn directly affected the capacity and price relationship:

#### *Rating Agencies*

Reassessment of the capital required to support catastrophe reinsurance.

#### *Catastrophe Models*

There has been a readjustment of expectation for frequency and severity in the short term and an increased focus on the effect of storm surge and demand surge. There was also a review of non modelled perils, particularly flood.

#### *Cost of Capital*

Investor expectation, revised rating agency standards and increased retrocession pricing all served to increase the cost of capital for reinsurers in 2006.

#### **Pricing**

In peak territories, classified as US, Northern Europe and Japan, issues relating to changes in modelling and quantification of secondary perils such as demand surge, are the most prevalent in pricing discussions and where the capital cost effect is at its most extreme. At 1/1, large capacity programmes that went to market with firm orders in the lower quartiles of consensus pricing were often forced to be repriced, and the revised pricing tended towards the upper quartiles in order to complete placements.

The **US market** was obviously heavily influenced, with a few exceptions, by unprecedented loss activity, particularly for nationwide and regional Gulf state programmes. Prices for programmes with this type of exposure typically saw increases of between 50% and 125%, with the larger increases occurring on the higher layers.

It is also noteworthy that a number of insurance companies purchased more cover in advance of anticipated changes to the vendor models during 2006 for both the US and Northern Europe. These model changes are expected to increase the modelled losses at the benchmark return periods. Consequently, it is likely that AM Best security ratings will come under pressure as some reinsurers may find they are over-leveraged in respect of AM Best's benchmarks with the new modelling results. It is estimated that US companies purchased in the region of 20% more cover as a group at 1 January 2006 than 12 months earlier. There were some clients that increased by 100%. In many cases the purchase of increased cover was funded by increasing retention levels and sometimes by increased co-participations.

Pricing increases for smaller, loss free US regional programmes ranged from 5% to 25%.

In **Northern Europe** programme size and territorial scope were influential in overall pricing. Whilst there were exceptions, in general, larger programmes requiring above \$500m in capacity were renewed with price increases between 10% and 15%. Medium sized programmes in Northern Europe (i.e. over \$250m in total capacity) renewed with price increases of between 5% and 10%. Smaller programmes experienced rises in the range 0% to 5%.

In **non peak zones**, renewals were often placed with strong support from local regional markets with pricing changes ranging between -15% to 5%. In these areas, local markets were influential in driving the pricing movements in efforts to maintain market share.

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#### Risk Excess of Loss

The pricing changes in the Per Risk market were less dramatic, although there was some limitation in the amount of catastrophe limit provided on per risk treaties, where reinsurers typically looked to limit occurrence limits to 1x or 2x risk limits. Some reinsurers pushed to exclude critical catastrophe (defined as US, Europe and Japan) in the renewal of worldwide risk excess of loss treaties. Ultimately, however, most reinsurers were willing to continue to include a limited amount of catastrophe coverage in risk excess protections and covers were renewed with catastrophe cover included.

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#### Pro Rata

Proportional treaty protection remains a much less popular line of business with most reinsurers than excess of loss. The number of reinsurers participating in traditional fire capacity treaties is limited to a few major players and a handful of supporters. Capacity was stable with reinsurers tending to treat each treaty according to its experience.

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#### Retrocession

The majority of retrocession programmes with US exposure suffered a total loss in 2005 and as a result the market experienced severe dislocation, not unlike that endured in 1993. At the January 1 2006 renewal, capacity was limited for worldwide programmes and relative price increases were in the region of 100%, achieved through a combination of increased deductibles, restricted coverage and pure price increase. The market sought to separate the US and non US elements of programmes: pure price increases on US specific covers were around 35% and those on non-US covers between 15% and 20%.

The retrocession market is still in flux, with some major retrocession buyers still issuing revised loss estimates in late December for the US Hurricanes. Only 45% of the market renews at 1 January with a further 45% still to renew at 1 April with the balance later in the year. It is expected that this market may harden further as the year progresses.

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#### Rating agencies

Rating agencies had an active year. Following the hurricane losses in the US, they took immediate action by downgrading a number of reinsurers. To a certain extent, rating agencies were also caught out by the extreme loss experience of 2005. They took action by instituting a reassessment of the method of measurement and treatment of catastrophic risk and the capital required to support it. This reassessment will continue to be a factor for both buyers and sellers of reinsurance as the market moves into 2006 and beyond.

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**New Entrants**

Following the losses of 2005 there was a rush of capital to the market to take advantage of the expectation that reinsurance (particularly treaty catastrophe) rates would rise. Capital confirmed raised by new companies is approximately \$8.5bn. Due to their late start, the new companies did not play as significant a role in the market at 1 January as their large capitalisation might suggest. It will therefore be interesting to see how these new reinsurers react for renewals later in the year.

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**Catastrophe Bonds and Alternative Risk Transfer**

The Catastrophe bond market enjoyed a record year with total publicly disclosed issuance in excess of \$1.99bn. The catastrophe bond market is likely to continue to flourish in 2006 with a number of companies, notably in the retrocession area, exploring this option.

The environment for structured risk reinsurance products, particularly for catastrophe business remains extremely challenging with both buyers and sellers concerned by potential regulatory and accounting issues.

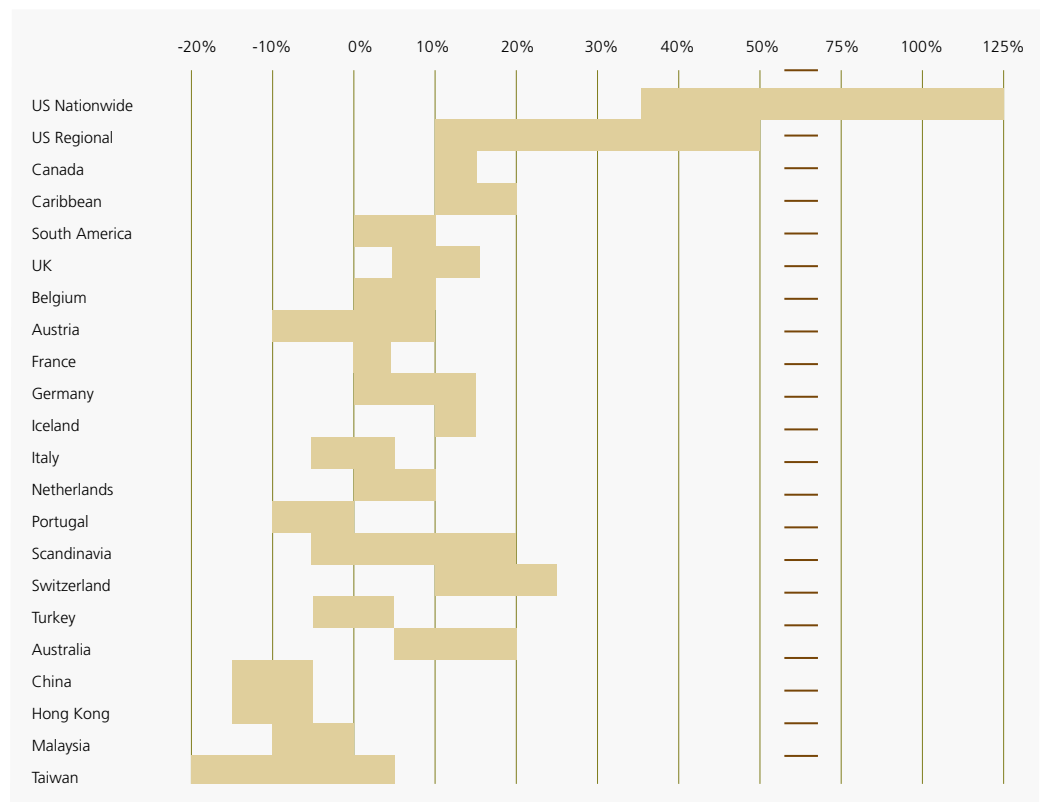
## Catastrophe Excess of Loss

### Pricing

Prices for renewal business showed a high degree of regional differentiation for 2006. Price movements reflected US or non-US exposure being covered with additional loadings or credit for loss experience. Peak zone exposed accounts all experienced some degree of increase in pricing. In the US nationwide account, rate increases were significant and came on top of programme repositioning to a higher level. US regional and Canadian accounts saw increases but not as severe as those on nationwide programmes. In the UK and Western Europe, there were rises on the larger accounts, but smaller accounts escaped with small increases or, in some instances, reductions. In other areas of Europe, the story was mixed, but the market was generally less firm and in some cases, reductions were possible. The Asian market has always been characterised by fierce competition and price reductions were commonly seen.

#### EXAMPLES OF RISK ADJUSTED ROL CHANGE BY TERRITORY

Source – Guy Carpenter



Three factors appeared to determine reinsurers' ability to impose price increases:

- **Loss experience:** Loss history is the first port of call (generally) in any renewal discussion. Comparisons were made between actual loss and modelled expected loss, where modelling is thought credible. This created an opportunity to further stress-test the modelling results on loss affected programmes.

Looking forward reinsurers are also building in additional loadings to account for increased expectancy, frequency and severity of losses over the short term.

- **Geographical scope:** Capacity was more in demand and hence more expensive in peak zones, such as US and Northern Europe. Capital allocation charges and retrocession issues also helped to make these zones the most expensive. Conversely, regions that did not require much capacity in a global context were able to be more aggressive in seeking stable prices and even reductions. Consequently, terms for restrictive territorial scopes were more favourable to sellers than general worldwide, pan European or US nationwide programmes.

- **Capacity sought:** Large programmes that required maximum lines from reinsurers attracted greater increases than small and medium sized ones. Furthermore the largest programmes appeared to suffer the greatest percentage rate increases at the very highest, low Loss on Line (Expected Loss Cost) layers. This phenomenon was encouraged by the fact that pricing adjustments that took into account such secondary factors as demand and storm surge were felt the most at the tail of the loss distribution and hence had the greatest effect on top layers. In addition, it is on the higher layers on which capital cost forms the greatest proportion of the price.

### Marketing

The reinsurance market initially started out by quoting large increases, and quotations tended to encompass a large range. However, as the season progressed and the likely direction of the market in each territory became clearer, a more realistic attitude was adopted by the market and reinsurers became more reasonable, especially on loss free non US exposed renewal business. Nevertheless, buyers in most of the major territories were forced to accept some degree of price increase to place their programmes and there was some evidence that reinsurers were willing to decline business if it did not fit in with the general perception of a hardening market. Away from the major territories reinsurers were willing to fight harder to retain the business and were accordingly more flexible with offered terms.

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## Capacity

### Traditional Capacity

In general, reinsurers were still reluctant to relinquish renewal business and most programmes (excluding some US nationwide) were placed without significant loss of capacity once lead terms had been set, although some reinsurers reduced line sizes if pricing was below expectation.

Regardless, the catastrophe market is still considered to have a plentiful supply of capacity in all but a few peak zones. Due to their very late entry, the **new entrants** to the market have not significantly made their presence felt.

The only circumstances where there was some apparent shortage of capacity was on very large programmes and especially those that looked to buy more cover at the top end. Placement could still be made but there was a pricing premium at this level.

### Hedge Funds

Some of the hedge funds that are operating in the reinsurance sector have the ability to commit significant capacity to transactions that fit their desired profiles. However, the impact of these players did not tend to drive the market but they were seen to provide useful additional capacity in a number of cases. It appears that price increases in the traditional market have made these markets a more realistic proposition for many buyers.

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## Terms and Conditions

With the market's focus almost exclusively on price this was a quiet renewal in the context of changes to terms and conditions.

### Terrorism – TRIA

A major event of 2005, impacting both property and casualty covers was the renewal of the Terrorism Risk and Insurance Act (TRIA) of 2002. This renewal averted a possible capacity crisis in the property and workers compensation lines, particularly for urban risks.

Major provisions of the TRIA 2006 worth noting are:

- The per-event threshold for federal government participation in insured losses with respect to an act of terrorism occurring after 31 March 2006, will be \$50m, increasing to \$100m for an act of terrorism occurring on or after 1 January 2007.

- The bill excludes commercial auto, burglary and theft, surety, professional liability (other than directors and officers liability) and farmowners multiple peril from TRIA.
- Insurers' deductibles in 2006 will be 17.5% and 20% in 2007.
- The industry's retention is increased to \$25bn in 2006 and \$27.5bn in 2007, up from \$15bn in 2005.

The renewal of TRIA came so late in the year that the market did not really have time to react. Most renewals were made with the terrorism clause left as per the expiring wording. In light of the TRIA renewal, there may be a move to tidy up some of the wordings by endorsement during the first quarter should it be deemed necessary.

#### **Hours Clauses**

Hours clauses were once again discussed at renewal. In the US, buyers looked to gain value for the large price increases that they were being made to bear by increasing the Hours clause for windstorm from 72 hours to 96 hours. In many cases this strategy was successful and the price implication was buried in the overall negotiation. In one case in the US where the hours increase was specifically priced for, the additional price on a 10% ROL layer was about 1% extra. Elsewhere in the world one buyer of a large programme was successful in radically changing the Hours clause from a standard definition of an event to an "any one atmospheric disturbance" type. This clause also incorporates 672 hours for earthquake. This programme is supported by most of the major reinsurers in the world.

## Per Risk Excess of Loss

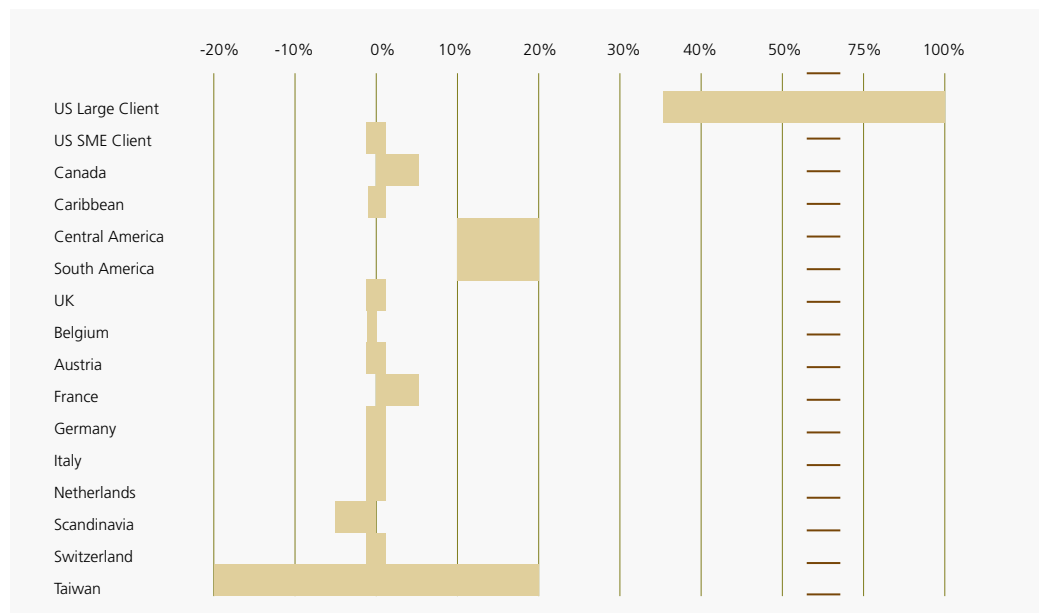
### Pricing

With the market's focus primarily on catastrophe renewals, the risk excess renewal was a quieter affair. The reaction of the market to renewal risk excess business was in the first instance driven by the individual experience of the treaty.

Nevertheless, a general market hardening made significant reductions on loss free business difficult to achieve. The exception to this rule once again appeared to be specific treaties in countries in Asia, where it was still possible to achieve risk adjusted rate reductions. In the US and Europe, rates for clean renewals were generally flat, with some exception for the larger programmes covering Fortune 1000 type exposures. Most large US & European risk excess business renews at dates other than 1 January, so a clear picture of rates on this business is difficult accurately to ascertain.

#### EXAMPLES OF RISK ADJUSTED RATE CHANGE BY TERRITORY

Source – Guy Carpenter



### Capacity

Market capacity remained adequate for all placements; though some markets players limited their lines where there was a perception of catastrophe exposure. For US business, Lloyd's and the London market remain an important provider of capacity on the higher layers where exposure rating tends to drive the pricing. Some of these covers have been impacted by the storms of 2005 and some large risk losses, and the capacity picture for the largest placements will become clearer as renewals are completed throughout the year. Protections bought by some US E&S writers are for small per risk limits, but with large per occurrence limits and high ROL (e.g. greater than 100% ROL) on the per risk limit. These covers are traditionally supported by the London market and Bermudian reinsurers and appeared to renew with no significant loss of capacity, albeit at higher prices, and often with raised retentions and tighter occurrence caps.

The UK and European accounts are dominated by the European reinsurers and capacity was stable. London and Bermudian reinsurers with a local presence have sometimes been seen to be competitive to try to gain market share, though interestingly it appeared that the incumbent market was usually able to be realistic in pricing expectations if faced with any competition.

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**Terms and Conditions****Natural Perils Exposure**

In a similar way to the attack on the World Trade Center, the storms of 2005 serve as a further reminder that even the higher layers of per risk reinsurance programmes can clash in catastrophic events. On the larger programmes, where capacity is tight, occurrence limits were reduced to 1x or 2x risk limit in those cases where they had previously been higher.

Natural Perils exposure is included in the coverage of most of the major territories. However, there was occasional isolated pressure from reinsurers for its exclusion, especially in the US. Reinsurers were sometimes seen to give differential quotations for cover including and excluding natural catastrophe exposures and this difference in quoted price could be significant. Nevertheless, most reinsurers around the world remain willing to give catastrophe cover in risk excess protections and, in the absence of any other major factors, reinsureds were not required to pay large price increases for this cover. To ease placement, reinsureds were asked to provide more information on catastrophe exposures and model data was (sometimes) shared, to facilitate this.

**Terrorism – TRIA**

The late renewal of TRIA in the US meant that most treaties were renewed with unchanged terrorism cover.

## Property Proportional Treaty

### Overview

In terms of the numbers of supporting participants, proportional treaty protection remains a much less popular line of business than excess of loss. Nevertheless, capacity for the business is sometimes provided in large shares from the major supporters. The market is in many countries dominated by one or two large players, for example Munich Re, Swiss Re or, in some territories, a national carrier. Compared to excess of loss business, it is harder to make generalisations about pro rata business, as a wide variety of terms exist within the market and even within territories according to loss experience and relationships.

### Terms and Conditions

In the US, pro rata treaties are often used to protect against catastrophe perils. This is becoming a more common usage than the more traditional purpose to build large amounts of fire capacity. US treaties experienced considerable losses from hurricane Katrina, but reinsurers were still looking to support them, especially where there was evidence that original rates had hardened.

#### Commissions

Reinsurers were willing to grant increases in commissions in many territories, if warranted by results. On loss affected treaties the movement was usually in the opposite direction, though there were signs that, on treaties where reinsurers were keen to renew because the long term results appear good, any commission reduction was small. In the US, where experience on windstorm exposed treaties was generally poor, commissions were sometimes seen to be reduced below a level that was necessary to cover original expenses. This phenomenon has also been witnessed in South America, where the low commission levels offered by the reinsurance market are tending to push cedants towards XL solutions.

Elsewhere, the reinsurance market leaders looked to introduce sliding scale commissions with low minimum levels (for example 10%) on treaties where results were poor.

#### Event Limits

In most territories, event limits remained unchanged. The method of calculation of event limit varies by territory. In some cases, key zone aggregates are used and the event limit is based on a PML calculation. In other cases, the limit is expressed as a multiple of ceded income.

#### TERMS AND CONDITIONS ON A SAMPLE OF PRO RATA TREATIES FROM AROUND THE WORLD.

TERRITORY	EVENT/CESSION	COMMISSION	COMMENT
US	Some downward pressure on event limits for catastrophe exposed treaties	-2.5% to 0%	Not usually core for building fire capacity, commissions sometimes reduced to below breakeven level for cedant. Hardening original rates are attractive to some reinsurers.
Caribbean	Some reduction in capacity	By experience	Rates high on original business
South America		Unchanged	Commissions at uneconomically low levels forcing move to XL
Germany	No Change	Unchanged	Ample capacity from European reinsurers
Italy	No Change	Unchanged	Results good
Australia	No Change	Unchanged	Results good
China	No Change	Reduced	Stricter terms to halt poor results
Hong Kong	No Change	Unchanged	
Malaysia		+2.5%	Increase limits achieved
Singapore		0% to +2.5%	
Taiwan	No Change	Unchanged	All now exclude nat cat. Drift towards risk ELC.
Thailand	Not Usual	-2.5% to 0%	Market sought improved cat agg information

## Property Retrocession

### Market Summary

The retrocession market was heavily affected and consequently reshaped by Hurricane Katrina and other losses. The massive losses during 2005 and the ensuing market dislocation have led some seasoned commentators to remark that the 2006 season is similar to that of 1993, when the market was forced into a fundamental re-evaluation as a result of the unforeseen magnitude of hurricane Andrew (Aug 1992). Once again, in 2006 capacity is scarce for worldwide retrocession programmes and reinsurers are being forced to consider “patchwork” placements. Retrocession reliant reinsurers will be forced to carefully examine and closely control their aggregates for 2006.

It is estimated that approximately 45% of the retrocession book is renewed at 1 January, with another 45% coming at 1 April and the balance across the rest of the year. It is possible that the market may harden further during the 1st quarter if the available capacity has been exhausted at 1 January.

PROPERTY RETROCESSION	TYPE	PRICING INCREASE (%)	COMMENT
	Retro Cat	15 to 100	Market attempt to split progs by region
	Industry Loss Warranty	50 to 75	1/1 market vastly increased in size

### Pricing

Worldwide Property retrocession price increases are estimated to be in the order of 100%. These increases have been achieved through a combination of increased deductibles and pure ROL increases.

Retentions, which were previously set at what was considered to be the 1-in-10-year return, have been increased to what is now considered to be the 1-in-15-year return. The ultimate aim is to position them at a level such that programmes sit in excess of any of the 2004 year losses, especially if the 2004 losses were in excess of the 1-in-10-year event.

Compounding the movement in retention, ROLs for worldwide programmes have been increased on average by 50%, with the greater increases tending to fall at the top end of programmes.

For US only covers the ROL rises are in the region of 35% Ex-US programmes the rises are in the range 15%-20%.

### Capacity

Nearly all programmes that included coverage for a US portfolio were exhausted vertically by hurricane Katrina. In many cases programme limits were exceeded by a considerable margin in that event, causing extensive losses to fall back to retrocession buyers.

Capacity available to accept worldwide retrocession programmes has fallen by up to 60% for the larger programmes renewing at the 1 January 2006.

At January 1, the market began to push retrocession protections away from giving worldwide coverage to just single territory or regional scope. Programmes are at least being split into US and non-US tranches or pillars of cover.

The loss of capacity for worldwide retrocession has been caused primarily by the exit from this sector of several reinsurers, notably in Bermuda. Increased focus on and a generally more demanding treatment of catastrophe exposures from rating agencies has led some players to conclude that the worldwide retrocession market no longer presents any opportunities for acceptable returns, given the increased amounts of capital required to be assigned to the

business by rating agencies. Commentators anticipate following the finalisation of the purchase by Swiss Re, GE Insurance Solutions will also withdraw from the market, further increasing the pressure on limited worldwide capacity.

Single territory retrocession capacity has proven easier to access. In this area, the better the data provided to retrocessionaires the more capacity that becomes potentially available. Single territory business has also attracted hedge fund capital and there may be more of this new capacity available into 2006.

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**ILW**

The ILW market has enjoyed another very active year. This market has not traditionally been active at the 1 January renewal season as buyers have tended to focus on the placement of their main UNL based retrocession protections. However, this year the market has experienced an unprecedented level of activity as buyers have considered alternative options in light of pricing, apparent retrocession capacity scarcity and rating agency pressures. Prices are up 50% to 75% on a year to year basis.

## Rating Agency Reactions to 2005

Rating agencies had an active year following the losses in the US. The extreme severity and frequency of losses experienced during 2005 had two major effects:

- **Immediate:** Rating actions were necessitated due to weakened balance sheets or “surprising” high levels of losses (i.e. market share was greater than expected). Other reasons cited were increased capital requirements for monoline property catastrophe writers and high volatility of results in previously regarded diversified books of reinsurance.
- **Strategic:** They caused all players in the reinsurance community, not least the rating agencies, to reconsider the assessment and treatment of catastrophic risk and the capital required to support it, as well as benefits of territorial and line of business diversification

In the aftermath of hurricane Katrina, several of the major rating agencies have announced changes to their approaches for evaluating capital adequacy. The S&P guidelines had already been adopted for reinsurers in June 2005, but are now extended to insurers as well. Most of the changes revolve around the treatment of catastrophic risk. They are summarised in the table below.

ACTIONS BY THE RATING AGENCIES	AM BEST	S & P
Capital Adjustment	Statutory Capital reduced by one net cat PML (calculated as the greater of the 1 in 100 WS or 1 in 250 EQ)	Required Capital increased by the amount of net aggregate losses at 1 in 250 level
Measurement	Event	Aggregate
Coverage and Perils analysed	Building and contents, ALE, BI, auto, WCA, energy, ocean and inland marine, crop, Flood,	Property. Wind, flood (non-US), EQ, tornado, hail. Other perils surveyed but not specifically charged
Components of Loss	Demand surge, storm surge, FFEQ, secondary uncertainty	Adjusted based on peers for demand surge and other factors
Reinsurance outwards	Net of RI (after allowance for co-RI and reinstatement cost)	Net of RI (after allowance for co-RI and reinstatement cost)
Tax	Post tax	Pre tax
Explicit premium adjustment	None	Net of 1 year cat prems
Explicit underwriting risk impact	None	Underwriting risk reduced to avoid double counting of cat risk
Credit Risk	Stress test assumes ceded reserves from first loss are subjected to a one level reinsurer panel downgrade	Potential material increases in reinsurance recoverables are taken into account
Second Event Stress Test	Yes	Not applicable, due aggregate nature of original test

### Implications for Catastrophe Modelling

2005 was the second consecutive year in which accuracy of output from catastrophe models has been questioned. In the past, rating agencies relied on the output of catastrophe models to assess the catastrophe risk to which a company is subject. This output will continue to be important and the rating agencies will be reviewing output from the revised models in 2006 and increasing their focus on secondary factors such as storm and demand surge.

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**Implications for the Reinsurance Sector**

As a result of 2005, participants in the reinsurance sector will need to address two main implications of the actions by rating agencies in 2005:

- Changes to the capital models of rating agencies, where models are expected to become more punitive and proscriptive with regards to catastrophe risk
- Potential for increase in PMLs generated by the upcoming new releases of catastrophe models forcing some insurers to buy cover to a higher level.

This has already started in some markets.

From a reinsurer perspective, the abovementioned factors will force them to increase the amount of capital required to support the underwriting of catastrophe business, particularly in peak zones. Following on from this, in order to continue to achieve the same ROE targets as had previously been set, price increases will be required and in many cases diversification into other territories and other lines of business. US focused Mono line Catastrophe Reinsurers in the future are to be expected to be subject to the most stringent requirements in order to maintain current financial strength ratings.

These changes made by rating agencies are forcing reinsurers to explore ways to avoid downgrades and maximise capital efficiency, through:

- Raising additional capital
- Reducing exposure from catastrophe risk on balance sheets:  
through re-underwriting, re-evaluation, discontinuation or diversification of certain lines of business. or sponsoring parallel reinsurers (or retrocession writers)
- Raising Prices.

## Catastrophe Bonds

### 2005 Year End Market Update

The catastrophe bond market posted a record year during 2005 with total publicly disclosed issuance in excess of \$1.99bn. In terms of risk capital, the volume for 2005 represented a 74% increase over last year's performance of \$1.14bn, and a 15% increase over the previous record of \$1.74bn, achieved in 2003. During the year a total of ten transactions were completed, matching 1999's record high transaction count. Since 1997, when the market began in earnest, sixty-nine catastrophe bonds have been issued with total risk limits of \$10.65bn. When measured in terms of bond principal outstanding, 2005 also showed strong growth. At year-end 2005 there was over \$4.90bn of outstanding principal, representing a 21% increase over the 2004 year-end total of \$4.04bn.

Of the **ten publicly disclosed transactions** that closed during 2005, six were from **first time-sponsors**, including **AXA Cessions**, **FM Global**, **Oil Casualty Insurance Limited (OCIL)**, **Zurich American Insurance Company**, **PXRE** (which sponsored two separate issuances), and **Montpelier Re**. This matches the record total of transactions brought to market by first-time sponsors achieved in each of 1999 and 2000.

On the heels of 2004's unprecedented four storms, 2005 was yet another record year for US hurricane activity. Hurricanes Katrina, Rita and Wilma battered Florida and the Gulf Coast, with Katrina causing the largest insured loss in US history. Hurricane Katrina was particularly significant for the catastrophe bond market as its damages caused the first triggering of a publicly disclosed catastrophe bond. **Kamp Re**, a \$190m, indemnity based transaction, sponsored by Swiss Re on behalf of Zurich American Insurance Company, likely sustained a total loss of principal as a result of hurricane Katrina.

Another notable transaction of 2005 was **Avalon Re Ltd.**, a \$405m transaction sponsored by Oil Casualty Insurance, Limited (OCIL), a captive insurer for the petrochemical industry. Avalon Re represents the first successful securitization of third-party general liability risk. Unlike most catastrophe bonds, which provide coverage against property damage caused by natural catastrophes, the Avalon Re transaction provides OCIL with reinsurance protection on its portfolio of excess general liability policies.

Reinsurer-sponsored transactions outpaced insurer-sponsored transactions by three to two in 2005. As was the case last year, we continue to see the largest reinsurers sponsoring the issuance of catastrophe bonds; however, more large insurers are turning to catastrophe bonds as a supplement to their existing reinsurance programmes.

Catastrophe bond transaction size continued to increase in 2005, with an **average size of \$199m<sup>1</sup>**. This is an increase from 2004's average transaction size of \$190m. Notably however, 2005 was the first year since 2002 in which transactions with less than \$100m of risk capital were placed.

With respect to the perils and geographies securitized, the catastrophe bond market in 2005 continued to be dominated by U.S earthquake and hurricane perils; however, there was also a notable up-tick the amount and number of European wind transactions. In 2005, **six transactions involving European wind** were completed, securitizing \$830m in risk capital. By comparison, in 2004, the European wind transaction total was only three, securitizing \$220m of risk capital.

<sup>1</sup> For the purposes of our analysis, we have combined the total issuances for the Arbor shelf offerings over the course of the entire year (e.g., Arbor had a total of 3 takedowns during 2005, which we have aggregated to arrive at a total issuance of \$63.0m during the year).

The type of transaction trigger utilized showed marked difference between (roughly) the first and second halves of the year. In the first seven months of 2005, there were six transactions completed, four of which utilized indemnity triggers. However, in the last five months of the year, post hurricane Katrina, four transactions were completed, none of which utilized an indemnity based trigger. Generally speaking, catastrophe bond sponsors have historically preferred indemnity based triggers (i.e., transactions in which bond payout is a function of the sponsor's own sustained losses) as they offer little or no basis risk. However, catastrophe bond investors have historically expressed reservations over the moral-hazard problem of indemnity based triggers as they lack transparency and are subject to the sponsors' own loss adjustment processes. A number of factors contributed to this change from the first half to the second half of the year, the principal ones being the need on the part of certain issuers to take advantage of faster issuance process for non-indemnity transactions, and investors' concerns over the modelling of indemnity based transactions, particularly for commercial lines portfolios.

2005 saw the continuing trend towards a risk term of three to five years, with three years being the most common term by far. Driven primarily by their calculated loss probabilities, the vast majority of catastrophe bond tranches continue to be given non-investment grade BB ratings by the three ratings agencies, notably however, 2005 saw the issuances of six tranches rated B, the largest total on record. A reduction in rating reflects an increase in the risk of a tranche and reflects both demand from sponsoring insurers and reinsurers for protection at these risk levels, and also an available supply of risk capital from investors. The available risk capital may reflect the continued demand of hedge funds for higher yielding (but more risky) catastrophe bond investment opportunities.

From a **Japanese catastrophe risk** perspective, there were only two transactions during the year which included Japanese earthquake as a covered peril; this is down from a total of three completed during 2004. These transactions were:

- **Champlain Limited, the Class-A tranche.** This is a \$75m tranche sponsored by Montpelier Re, which covers US earthquake and Japanese earthquake perils.
- Further take-downs on the **Arbor 1 tranche of the Arbor program**, which includes Japanese earthquake peril in addition to other US and European-based perils.

## Contract Certainty

Driven by regulatory pressures, the reinsurance market is moving to try to achieve “Contract Certainty” on all business. The London market has set itself a graded timeline for achievement of full contract certainty on all business that it transacts, with a goal of 85% compliance by the end of 2006.

Contract certainty is achieved by the complete and final agreement of all terms (including signed lines) between the insured and insurers before inception. In addition:

- The full wording must be agreed before any insurer formally commits to the contract.
- An appropriate evidence of cover is to be issued within 30 days of inception.

In order to achieve contract certainty as defined above, the slip must be as clear as possible. In order to achieve this, the London Market has promoted the ‘LMP’ (London Market Principles) slip. However, an overseas client’s ‘non-LMP’ slip will meet contract certainty requirements provided it reflects the contract terms, conditions and agreement parties in a clear and complete manner.

The 1 January renewal is the first target date for a minimum level of compliance for participants in the market. It will not become clear how effective the market has been in meeting its goals until the processing of this business is complete.

## Capital Flows and Capacity Changes

### Capital Raised by Reinsurers During 2005

Following on from a quiet 2004, the early part of 2005 was also uneventful in terms of capital raising activity. However, the losses of 2005 and the threat of rating agency actions led several reinsurers to raise capital during the latter half of the year. Over \$7bn of capital was raised in total. Notable was the speed with which Montpelier Re moved to shore up its balance sheet following large losses in hurricane Katrina. Many reinsurers lodged shelf registrations, enabling them to speed the access to extra capital should such an action become desirable in the future.

#### CAPITAL RAISED BY REINSURERS DURING 2005

COMPANY	CAPITAL RAISED	DATE	SUMMARY NOTES
Ace Ltd	\$1.58bn	3 Oct 2005	New common share issue
Aspen Ins Holdings	\$40m/\$1.0bn	Oct 2005	Common equity raising plus shelf registration
Axis Capital Holdings	\$250m/\$1.5bn	Sept/Oct 2005	Preferred equity plus shelf registration
Brit insurance Holdings	£150m	Dec 2005	Subordinated note issue
Endurance Specility	\$200m/\$200m	Oct 2005	Common equity, preferred equity
Everest RE	\$475m/\$76m	5 Oct 2005	Common equity plus shelf registration
Fairfax Financial Holdings	\$300M	27 Sept 2005	Sub voting shares
Glacier Re AG	\$100m	17 Oct 2005	Common equity
Hiscox PLC	£170m	Dec 2005	Rights issue (planned)
IPC Holdings	\$635m/\$1.5bn	Oct 2005	Common equity plus shelf registration
Max RE Capital	\$500m/\$297m	Sept/Oct 2005	Common equity plus shelf registration
Montpelier RE	\$600m/\$1.0bn	Sept 2005	Common equity plus shelf registration
Odyssey RE	\$100m/\$100m	Oct 2005	Common equity/preferred equity
PartnerRE	\$550m	Nov 2005	400m loam agreement plus common equity
Platinum	\$163m/\$137.5m	Sept/Oct 2005	Common equity plus shelf registration
PXRe	\$115m/\$360m	Oct 2005	Common equity/preferred equity
Quanta Capital Holdings	\$125m	Oct 2005	Shelf registration
SCOR	\$200m/\$200m	Jun 2005	Share offering
Swiss RE	CHF1.0bn	Dec 2005	Mandatory convertible securities offering
WR Berkley	\$1.0bn	Sept 2005	Shelf registration
XL	\$650m	Dec 2005	Shelf registration

## Summary of Rating Changes Made During 2005

With the exception of Scor, which was upgraded, most of the rating actions felt by reinsurers were of the negative variety. Most of the downgrades came in the latter half of the year, following losses. The downgrades of Alea and Olympus Re pushed them below the minimum security requirements of many reinsureds.

AM Best and S&P both currently have a negative outlook for the reinsurance industry.

### STANDARD AND POORS RATING CHANGES MADE DURING 2005 – SELECTED HIGHLIGHTS

ORGANISATION	COUNTRY	CHANGE	OLD RATING	NEW RATING	RATING DATE	OUTLOOK WATCH
Aig Group Companies	various	Downgrade	AAA	AA+	30-Mar-05	Watch Neg
Kyoei Fire & Marine Insurance Co.	JPN	Upgrade	BBB	BBB+	30-Mar-05	Stable
Fuji Fire & Marine Insurance Co.	JPN	Upgrade	BBB	BBB+	27-Apr-05	Stable
Euler Hermes Kredietverzekering N.V.	NLD	Upgrade	A+	AA-	26-May-05	–
Gerling-Konzern Allgemeine Versicherungs-AG	DEU	Upgrade	BBB+	A-	20-Jun-05	Stable
Fubon Insurance Co. Ltd.	TWN	Downgrade	A+	A	06-Sep-05	Stable
Mingtai Fire & Marine Insurance Co. Ltd.	TWN	Upgrade	A-	A	16-Sep-05	Stable
Secom General Insurance Co. Ltd.	JPN	New	NR	A-	01-Nov-05	Stable
Tokio Marine Nawa Insurance Co. Ltd.	TWN	New	NR	BBB+	01-Nov-05	Stable
XI Group Companies	various	Downgrade	AA-	A+	28-Nov-05	Stable
GE Frankona Rueckversicherungs Aktiengesellschaft	DEU	Downgrade	A+	A	04-Apr-05	Stable
Thai Reinsurance Public Co. Ltd.	THA	Upgrade	BBB	BBB+	02-Jun-05	Stable
SCOR Group Companies	various	Upgrade	BBB+	A-	01-Aug-05	Stable
Alea London Ltd.	GBR	Downgrade	A-	BBB+	09-Sept-05	Negative
Renaissance Reinsurance Ltd.	BMD	Downgrade	AA-	A+	02-Nov-05	Stable
IPCR Ltd.	BMD	Downgrade	A+	A	22-Nov-05	Negative
Transatlantic Reinsurance Co.	USA	Downgrade	AA	AA-	22-Nov-05	Stable
PX Re	BMD	Downgrade	A	A-	29-Sep-05	Stable

## New Entrants to the Market

Following the losses of 2005, there was also a rush of capital to the market not only to existing players but also in the form of new reinsurers to take advantage of the perception that reinsurance (particularly treaty catastrophe) rates would rise. New capital confirmed raised so far is \$5.7bn, with another \$2.5bn+ said to be in the pipeline.

The new entrants continued the process of bringing the (re)-insurance industry closer to the broader capital markets. Notable was the increased activity of private equity funds, which appear keen to back new reinsurers

The sector is still very much in the development stage, with new announcements being made almost daily. The table below details the major entrants to date.

### NEW ENTRANTS TO THE MARKET

COMPANY	CAPITAL (EXPENDED)	CAPITAL CONFIRMED	BEST RATING	BUSINESS FOCUS
Amlin Bermuda LTD	\$1.0bn	\$1.0bn	A-	QQS, Prop Cat, Prop Fac, Prop Risk, Pro rata
Ariel Reinsurance Company Ltd	\$1.0bn	\$1.0bn	A-	Prop Cat, Prop Risk, prop proportional, property retro, Marine and Energy
Arrow Capital Reinsurance Company, Ltd	\$1.0bn	\$1.0bn	A-	Short-tail
Ascendant Reinsurance Ltd				No firm details yet announced
Blue Ocean Reinsurance Ltd	\$300m	\$300m	n/a	Retro, Prop Cat
Flagstone Reinsurance Ltd	\$750m	\$530m	A-	Prop Cat & Risk; Marine & energy; Short-tail casualty
Greenlight Capital RE	\$250m	\$214m	n/a	Long tail structured collateralized products
Harbour Point RE Ltd	\$1.5bn	\$1.5bn	A	Multi-line; retro
Hiscox Insurance Company (Bermuda) Ltd	\$500m	\$500m	A-	Reinsurance and retail business
Lancashire Insurance Company Ltd	\$1.0bn	\$1.0bn	A-	Marine & Energy; Retro; Prop Fac; All short-tail business
New Castle Reinsurance Company Ltd	\$500m	\$500m	A-	Cat business, prefers single territory; will consider retro
Omega Specialty	\$170m			Short-tail insurance and reinsurance
Validus Reinsurance Ltd	\$1.0bn	\$981m	A-	Prop. Cat, Prop per risk, Prop proportional, W/C Cat, M&E, Terrorism, Retro

## Lloyd's

Lloyd's syndicate initial business plans for 2006 called for a reduction in overall capacity. However, following the losses of 2005, many syndicates revised their business plans in anticipation of increased rates. Thus Lloyd's provisional capacity for 2006 stands at £15.0bn (2005: £13.8bn). The number of syndicates is virtually unchanged at 62.

The table below gives selected highlights some of the major syndicates and their capacities for 2006.

\*NB: Plans for Beazley's new catastrophe orientated syndicate were subsequently shelved effective early Jan 2006

### SYNDICATE CAPACITIES

MANAGING AGENT	SYND NO	2005 CAPACITY	2006 CAPACITY
ACE	2488	400,000,000	350,000,000
Advent	780	152,923,060	152,923,060
Amlin	2001	850,000,000	1,000,000,000
Argenta	2121	75,802,031	90,000,000
Ascot	1414	435,000,000	550,000,000
Atrium	570	149,945,649	149,945,649
Atrium	609	214,984,943	214,984,943
Beazley	623	220,197,722	246,159,033
	2623	522,263,179	583,838,008
	3623*	0	200,000,000*
Brit	2987	500,000,000	500,000,000
Canopus	4444	240,000,000	300,000,000
Cathedral	2010	200,066,981	250,083,726
Catlin	2003	500,000,000	450,000,000
Chaucer	1084	400,247,436	450,000,000
Danish Re	1400	70,000,000	100,000,000
Faraday	435	300,000,000	325,000,000
Hiscox	33	775,001,716	833,002,844
Kiln	510	546,065,454	625,244,945
	557	47,842,063	54,779,162
Kiln	807	100,010,000	110,011,000
Liberty	4472	716,000,000	912,000,000
Limit	386	424,877,433	339,901,946
Limit	2999	550,000,000	660,000,000
MAP	2791	325,874,593	400,001,287
Markel	3000	145,000,000	145,000,000
Meacock	727	71,810,541	71,810,541
Omega	958	224,738,388	249,459,611
SVB	2147	286,000,000	240,000,000
Talbot	1183	282,000,000	307,000,000
Wellington	2020	730,001,266	800,000,231
<b>TOTAL</b>		<b>£13,820M</b>	<b>£14,991M</b>

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