

Catastrophe Market Update



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About This Newsletter

This newsletter is a semi-annual publication covering recent reinsurance market issues and catastrophe trends. Gen Re Intermediaries is a boutique operation that focuses primarily on business solutions for property catastrophe, casualty clash, terrorism, aviation, and workers' compensation catastrophe lines of business.

The State of the Cat Market

Major themes on Year-End 2002/ First Quarter 2003 renewals can be summarized as follows:

- Property catastrophe capacity continues to be plentiful.
 - Widespread use of catastrophe models has streamlined the process of achieving the “right” price. Once this price—also referred to as the “trigger price”—is arrived at, anything falling below will be significantly undersubscribed while those above will oversubscribe. Such market “clearing price” sensitivity places more importance on the quality of intermediaries’ risk analytics.
 - Looking ahead in 2003, absent worldwide catastrophe losses, property catastrophe rates should continue to moderate.
- Year-end 2002 renewals for North American business were among the latest in many years, due to underwriters’ increased reliance on cat modeling and the time taken to assess the impact of the Terrorism Risk Insurance Act (TRIA). First quarter 2003 renewals experienced significantly quicker turnaround times from the underwriters.
- The Lloyd’s market aggressively competed for business and more than held their own against Bermuda competitors.
- With terrorism again on the front burner, mold became something of a “non-issue” with most property cat renewals incorporating a defined events clause with no reporting limitation.
- The Special Termination Clause received lots of attention with numerous iterations ranging from unilateral to bilateral termination based upon various reinsurer market credit ratings.
- Reinsurance withdrawals result in lost reinsurance capacity. The effect was most significant in the international markets with minimal impact in the United States.
 - The most significant departure was the closure of the world’s sixth largest reinsurance group, Gerling Global Re in October 2002. Gerling Global Re’s collapse caused significant repercussions in the international markets, particularly in Europe. Gerling was a lead market in many countries as reflected by almost \$3B of net written premium income in 1999. In terms of market share, Gerling wrote between 5% and 15% of the programs it supported.¹

April 1, 2003 Catastrophe Renewal—Market Observations

Market	Price Movements	Other Observations
National Accounts	World Trade Center paybacks of 2002 were leveraged to weaken pricing. The larger the client, the more aggressive they were to soften terms and conditions.	Terrorism clauses were often worded by the client.
Major Markets	Pure rates were down between 5% and 10%.	Market standard terrorism clauses were required.
Regional	Rates on line were generally flat. Accounts with exposure increases had slight ROL increases.	With underlying increase in exposure, effective rate changes levels ranged from flat to down by 5%. For the smallest regional companies, subject premium increases were minimal.

¹Source: *Farm Bureau Insurance Quarterly*—Winter 2003 newsletter

Major Market Withdrawals

Reinsurer	Date	Country	Action
Cox Insurance	July 2002	UK (Lloyd's)	Restructuring—withdrawal from reinsurance and commercial lines insurance.
Gerling Global Re	October 2002	Germany	Closure of P&C business—unsuccessful sale.
LaSalle Re	May 2002	Bermuda	Closed to release capital. Renewal rights sold to Endurance Specialty.
Overseas Partners Ltd.	February 2002	Bermuda	Closed to return capital to shareholders.
Scandinavian Re	February 2002	Bermuda	Closed by parent, Sirius International, following large losses.
SCOR	November 2002	France	Reduced U.S. and long-tail underwriting following reserve strengthening.
St. Paul Companies	November 2002	USA	Reinsurance spun-off into Platinum Underwriting.
SVB	December 2002	UK (Lloyd's)	Exit U.S. liability reinsurance.
Trenwick America	October 2002	USA	Cease writing to own balance sheet. Enters agreement to underwrite on behalf of Chubb Re.
Victoria Ruckversicherung	December 2002	Germany	Closed by parent Munich Re.
AXA Corporate Solutions Re	December 2002	USA	U.S. Sub closed by parent AXA Re, Paris.

Further re-structuring and possible withdrawals are expected in 2003, as reinsurers continue their effort to optimize the use of capital. Gen Re Intermediaries will continue to monitor market security in anticipation of possible further re-structuring and market withdrawals.

Bermuda

Start-up reinsurers, summarized below, have generally enjoyed an entry-level rating of A- from A.M. Best.

Reinsurer	A.M. Best Rating	Initial Capitalization	Year End 2002
Allied World Assurance Co.	A+	\$1.5B	1.7B
Arch Re	A-	\$1.0B	1.4B
Aspen Re ²	A	GPB 448M(\$689)	n/a
AXIS ³	A	\$1.6B	2.0B
Catlin Insurance Co.	A	\$425M	n/a
Endurance	A-	\$1.2B	1.2B
Montpelier Re	A-	\$861M	1.3B
Platinum Underwriters	A	\$1.0B+	n/a

² Although Aspen Re's underwriting company is incorporated in England, it is capitalized through a Bermuda-based holding company. Former Wellington Re underwriter Tony Taylor is a notable shareholder.

³ Upgraded from A- in March 2003.

Bermuda Themes

- Bermuda is a permanent and influential part of the insurance world. Nine Bermudian companies formed after September 11, 2001, raising a little over \$8.1B.
- Swiss Re has estimated that since 2000, the industry has lost approximately \$200 billion of capital against \$26 billion raised in 2001 and \$19 billion in 2003. Of this, Bermuda attracted more than half, or \$22 billion.
- Two of the nine start-ups (Axis and Arch) have written over \$1B in net written premiums in 2002.
- With more than enough property catastrophe capacity, the older established players were aggressive in defending their market positions.
- The Bermuda start-ups are uniquely positioned to capitalize on the favorable market largely due to the lack of reserving problems that are afflicting the rest of the industry. Notwithstanding the new capital, take-up rates have been low as buyers seek market continuity on their programs.
- A growing tendency has emerged for traditional Lloyd's business to be written in Bermuda including primary E&S covers, high excess E&S and other lines.
- Most of the major brokers have opened offices in Bermuda. Existing brokers have bolstered staff in response to increased activity.
- Return on equity target of 20%+ published in some year-end 2001 business plans have proven to be overly optimistic. These targets have since been tempered to somewhere between 14% and 15% on average. Returns witnessed in 2002's favorable market environment would seem to impose a major challenge to these targets.

Bermuda Earnings Overview

As reflected below, mono-line property catastrophe reinsurers have generated lower but volatile combined ratios versus the multi-line companies which have sustained less volatility offset by higher combined ratios:

Bermuda Earnings Overview				
Reinsurer	2001 Combined Ratio	2001 GPW(M)	2002 Combined Ratio	2002 GPW(M)
IPC	129.4%	133	34.1%	260
Renaissance Re	70.2%	501	57.1%	1.17
Montpelier Re	n/a	n/a	67.4%	608
Axis	72.1	26.7	64.5%	1,108
PXRE	127.0%	290	77.7%	367
Endurance	n/a	n/a	86.2%	799
AWAC	n/a	n/a	90.7%	923
Arch	n/a	n/a	90.9%	1,500
XL Capital	139.7%	5,421	97.0%	8,986
Partner Re	130.2%	1,878	97.9%	2,706
ACE	111.6%	10,165	101.7%	12,819

Key Catastrophe Renewal Market Issues

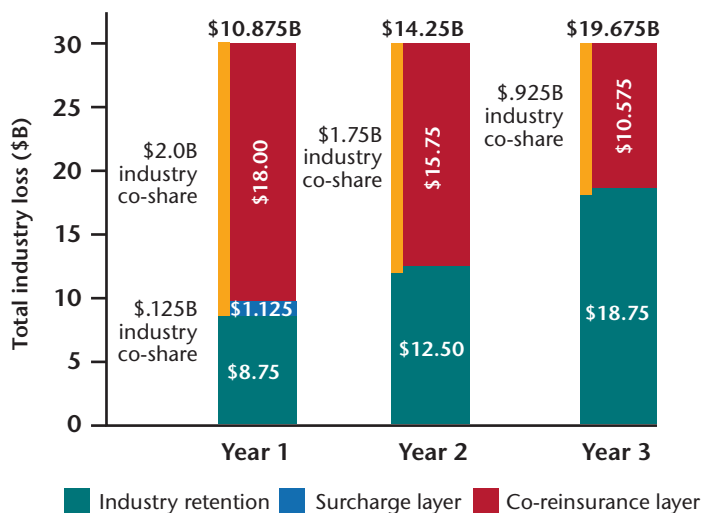
A brief review of *Key Market Issues* and their impact on Year-end 2002/First Quarter 2003 renewals includes:

Terrorism

One of the most significant events of 2002 was the November 26th passage of the federal Terrorism Risk Insurance Act (TRIA) that provides as much as \$100B annually in federal backup coverage for future terrorist acts (by or on behalf of "foreign interests") resulting in more than \$5M in insured losses. The legislation established what is essentially a three year cost-sharing program that applies to all primary commercial property/casualty insurance companies. Under the program, insurers within the same holding company group will maintain a loss deductible equal to 7% of their direct earned premiums in the first full year of the program, 10% in the second year and 15% in the third year. For losses in excess of those percentages, the federal government would cover 90% and insurers would cover 10%, subject to a recoupment program funded through future assessments on commercial policies of up to 3% of premium. Using \$150B of industry-wide commercial premium as estimated by Fitch, the overall industry deductible would be \$10.5B in the first year, \$15B in the second year and \$22.5B in the third year. The Act applies only to commercial lines and farmowners business. It provides no coverage or reimbursement for personal lines (e.g., auto, homeowners).

Assuming that September 11's commercial property and workers' compensation losses total \$30B, if September 11 had occurred while TRIA was in force, the insurance industry's losses could have been limited to approximately \$11B in 2003, \$14B in 2004 and less than \$20B in 2005 as estimated by Bob Hartwig of the Insurance Institute of New York and as reflected in Chart 1.

Chart 1. Damage Limitation—How the New Bill Would Have Coped with September 11



Assumes \$30B commercial property and workers' compensation loss, \$125B "at risk" commercial direct premiums written.

Source: Insurance Information Institute

Following the passage of TRIA, the majority of property catastrophe programs were modified to include, at no additional cost, coverage for losses (excluding NBC: nuclear, biological and chemical) from any Non-Certified Act (mainly domestic terrorism) and losses outside the definition of "Insured Loss" under the Act (personal lines). NMA2930c (amended) became the "market standard" wording. The situation is not the same for the large commercial writers with larger commercial risks in urban areas. We will monitor these placements at mid-year to determine what conditions are attached. Lloyd's was expected to issue a new clause providing terrorism cover up to a franchise market loss limit, but to date this has not been adopted by the marketplace.

Although TRIA has established an upper boundary for the most extreme events, insurers are still left with a significant amount of risk in the form of:

- The deductible (in 2003 this is 7% of a company's direct earned premium)
- The co-insurance layer (since the government pays 90% of the losses, the insurance industry's share is 10% up to a maximum of \$100M)
- The terrorism losses within the insurer's retention
- Non-TRIA certified events

Subsequent to the enactment of TRIA, some insurers may be more exposed to terrorism losses with the removal of their terrorism exclusions than before passage of the bill. With this in mind, there are opportunities for reinsurers to help clients identify and manage their natural peril/occupational accident/terrorism peak exposures **and/or** tailor terrorism risk reinsurance products, including but not limited to the following types:

- Buy-downs
- Separate covers

- Class specific protections
- Territory specific protections
- Coverage for NBC or non-NBC

Note that since TRIA responds on an aggregate basis, some of the earliest TRIA "wrap around" covers in the market have been structured as aggregate protections in order to align.

The market capacity for terrorism cover (including NBC) is currently limited with pricing levels that can range above 30% rate on line. The direct writers, Bermuda and London markets, who have been quoting the full TRIA-buydowns or property only terrorism catastrophe covers, are being selective with their limited terrorism aggregates. The Bermuda market seems to have the most capacity and is issuing a lot of quotes, although client purchases have been minimal. Notwithstanding the high prices, there are positive signs that reinsurers are differentiating exposures by zone. Terrorism cover excluding NBC, on the other hand, is quite plentiful (as much as \$500M) with pricing for "sleep covers" that can drop as low as 2% rate on line.

The rating agencies will be attempting to ensure that insurers monitor and manage their concentration of risk and exposure to terrorism. A.M. Best has already drafted a Terrorism Exposure Questionnaire that companies will be asked to complete. Best's follow-up on these questionnaires will likely focus on an insurer's accumulation management program.

The dilemma with respect to the World Trade Center attack about whether the terrorist event constitutes one occurrence or more is still unresolved. On January 1 placements, the market had yet to resolve how to define a terrorist event although one lead London syndicate has indicated that **one** event would result from the same cause or purpose.

Workers' Compensation Catastrophe

- Market capacity for Workers' Comp cat excess layers expanded from what was available at year-end 2001.
- Many markets will not quote without more detailed exposure information, including employee counts by location—particularly in peak areas.
- Renewal pricing was down significantly from January 1, 2002 levels.
- Many programs cover terrorism (priced separately), while most exclude NBC acts. Pricing to cover terrorism is still problematic.
- Some markets provided broader per person protection with a limited number of reinstatements on the lower catastrophe layers.
- Most capacity continues to be placed with P&C reinsurers, which is a shift from the life reinsurer dominance pre-September 11.

Terrorism and Workers' Compensation Catastrophe Modeling Update

The main obstacle in reducing insurers'/reinsurers' skepticism with the models is their inability to determine the frequency of terrorist events.

The three risk modeling companies (RMS, Eqecat and AIR Worldwide) have launched different models to price the risk of terrorism. All three models are available via a consulting engagement with fees based on the subject premium being modeled.

- The **AIR** model has been called a comprehensive approach that utilizes the "Delphi Method," which factors in the opinions of counter-terrorism specialists.
- **Eqecat** calls its model the only one that is "truly probabilistic." The Eqecat combines the Delphi Method and Game Theory and it looks at all weapons of mass destruction, not just blast perils.
- **RMS's** model relies heavily on Game Theory stressing that a traditional probabilistic approach, as used in natural catastrophe modeling, is not up to the challenge of modeling terrorism. Advisors to RMS in the development of their terrorism model include Jane's Consultancy (an information and consulting service for defense, intelligence and security issues), the RAND Corporation (the theoretical think-tank for the U.S. military), senior CIA officials and experts on Al-Qaeda. The RMS model, like Eqecat's, looks at CBNR (chemical, biological, nuclear and radiological) perils in addition to blast perils.

Thus far, the rating agency feedback has been skeptical. To quote Standard & Poor's, "Claims for the effectiveness of terrorism pricing models now coming to market are wildly exaggerated. Bathed in an aura of invincibility by such obfuscatory phrases as 'fully probabilistic,' they are at best a blunt instrument that could nevertheless lull insurers into a false sense of security."

The terrorism models are still in the infancy stage of growth and will continue to develop over time.

World Trade Center Update

According to industry loss estimates, the **World Trade Center loss** will range from \$30B to \$60B. The table below reflects estimated insurance market losses per line of business sourced by Tillinghast-Towers Perrin:

Line of Business	Range (\$B)
Property	10.0 – 12.0
Business Interruption	3.5 – 7.0
Workers' Compensation	3.0 – 5.0
Aviation	3.0 – 6.0
Liability	5.0 – 20.0
Other Lines (non-life)	1.0 – 2.0
Life and Health	4.5 – 6.0
	<hr/> 30.0 – 58.0

WTC Property Coverage Dispute Update

During the first week of February, District Judge John S. Martin denied a motion to limit the World Trade Center exposure to a single occurrence. WTC leaseholder Silverstein is increasingly confident that he and other insureds will recover on a two occurrence basis. Oral arguments in the Second Circuit Court of Appeals will begin in May 2003.

2002/2003 Items of Note

2002 Catastrophe Loss Overview

Catastrophe losses in 2002 were relatively modest—with one significant exception, **Catastrophe 61**—the event that no one seems to know about. From April 27 to May 3, 2002, 17 southeastern and northeastern states incurred losses from wind and thunderstorms. When we issued our *Catastrophe Market Update* newsletter in the Fall of 2002, PCS's Cat 61 estimate was \$855M in property losses. The figure has increased and is now final at \$1.675B, making this the 12th largest catastrophe according to PCS. Catastrophe 61 has outpaced both Hurricanes Fran and Iniki and is just \$25M less than the Oakland, California fires of 1991.

The state of Kentucky was the hardest hit with an estimated 50% share, or \$830M of the total loss.

Modeling Update

In February 2003, Risk Management Solutions (RMS) launched what it has called the third generation of its U.S. Hurricane model, "The first such model to fully represent the physical processes of hurricanes that impact the U.S." Drawing on new research, the model introduces the phenomenon of "transitioning storms" that particularly affect the Northeast region of the U.S. and that yield different losses from pure hurricanes. RMS has determined that almost 50% of Atlantic tropical storms "change phase" from tropical cyclones to "extratropical" status. To summarize the effect of transitioning storms in the Northeast, a decrease in losses is reflected at low return periods while losses seem to have increased both inland (compared to the previous model) and at long return periods.

2003 Hurricane Season Forecast

While 2002 has been deemed a "suppressed hurricane season," Professor William Gray and his forecast team from Colorado State University are predicting well above average hurricane activity for 2003, including twice as many hurricanes as in 2002. Their extended range forecast predicts 12 named tropical storms of which eight will become hurricanes and three will develop into intense hurricanes (categories 3 to 5).

When commenting on the small number of major hurricanes to cross the U.S. coastline over the prior eight years (4 out of 29: i.e., Opal, Bret, Fran and Lili), Gray noted that "The United States has been extremely lucky over the past eight years, but climatology will eventually right itself, and we must expect a great increase in landfalling intense hurricanes. With such large coastal population growth in recent decades, it is inevitable that we will see hurricane-spawned destruction in coming years on a scale many times greater than what we have seen in the past."

Lloyd's Market Brief

There continues to be plentiful capacity for Property Excess of Loss Treaty business in Lloyd's.

As reflected in the below Exhibit, capacity at Lloyd's has increased and is being provided by a smaller number of strongly capitalized syndicates. The number of property treaty syndicates remains fairly stable at around 20.

2003 Stamp Capacity			
	2001	2002	2003
Stamp Capacity	GBP 11.06B (\$17.62B)	GBP 12.35B (\$19.68B)	GBP 14.40B (\$22.95B)
Number of syndicates*	108	86	71
Average Stamp per syndicate	GBP 102.4M (\$163.17M)	GBP 143.6M (\$228.85M)	GBP 202.8M (\$323.19M)

*Includes 48 Syndicates closing down, 11 starting up, for a net reduction of 37.

The GBP14.4B noted above represents Lloyd's highest ever capacity and excludes qualifying quota share capacity.

Capacity in Lloyd's in 2002 was significantly bolstered by capital from qualifying quota share arrangements with approximately GBP1B of additional capacity approved via this route. In 2003 qualifying quota shares are expected to continue to supplement market capacity.

Other London Items of Note

- Berkshire Hathaway is now the largest supporter of Lloyd's through various arrangements (including QQS) and its own Faraday syndicate.
- Corporate capital represents 87% of the capital in Lloyd's in 2003.
- U.S. clients are starting to differentiate more between Lloyd's syndicates by choosing syndicates that have acquired a separate rating that is stronger than Lloyd's overall market rating of A, per S&P, and A-, per A.M Best.

Aviation Market Update

Airlines

The period October through December is the most active period for airline renewals. For the first nine months of 2002 the total premium increase was in the region of 40%. All indications were that underwriters would seek to maintain this level of premium or increase where possible. As the October airline renewals were taking place, it was clear that this trend would continue. Hull and Liability premiums were being maintained at the expiring level with slight reductions in the war surcharge being obtained when included within the main premium—although some airlines received premium increases as a result of recent losses.

It was anticipated that November and December airline renewals would demonstrate a similar pattern of maintaining

expiring premium levels. However, the favorable rating levels of the prior 12 months attracted additional market capacity. Competition that developed between various underwriters and market forces led to reductions in overall renewal premium. Discounts on the war surcharge premium increased and were becoming more commonplace. A review of all the major airline renewals through November indicates an overall premium reduction in the region of 7%. This competition continued into December as demonstrated by the continued pattern of premium reductions. The strategy towards “vertical marketing” of airline policies, i.e., following markets that quote different pricing for their own (lesser) share of a policy put pressure on the leading markets to reduce pricing with the negative result being overall premium reductions.

Airline Premium Comparison (War surcharges included in main premium for 2002)

	2001			2002	Percent Change
	Premium	Surcharge	Total	Combined Total	
October	\$280M	\$201M	\$481M	\$490M	2%
November	\$400M	\$375M	\$775M	\$725M	-7%
December	\$400M	\$770M	\$1,170M	\$870M	-26%

Manufacturers/Products

The fourth quarter is a relatively quiet period with regard to manufacturers/products renewals, with only a few major manufacturers renewing. Underwriters pricing requirements remained consistent with prior renewals with premium

increases in the region of 30% to 40%, excluding any war surcharge. Insured's with unfavorable experience or significant increases in sales exposure did incur higher premium increases.

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