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09

TWO THOUSAND NINE

World Catastrophe Reinsurance Market 2009

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Executive Summary

Reinsurance rates increased by 8 percent through the 2009 reinsurance renewals, as measured by the Guy Carpenter World Catastrophe Rate on Line (ROL) Index. Upward pressure came largely from the impact of the 2008 financial catastrophe on reinsurers' balance sheets, which was exacerbated by the effects of Hurricanes Gustav and Ike. At the January 1, 2010 renewal, reinsurance rates are likely to show little movement, unless a major property catastrophe or financial shock occurs.

Retained earnings are increasing, and financial markets are improving, with reinsurer assets increasing in value. At the same time, cedents face pressure from policyholders to contain costs, as they struggle with the worst economic recession since the Great Depression.

The thawing of financial markets is also making it easier for reinsurers to transfer risk to capital markets. Though catastrophe bond issuances were down 42.5 percent year-over-year by risk capital (and 18 percent by the number of catastrophe bonds issued), the market continues to be active following a silent fourth quarter in 2008.

Given the 18 percent loss of capital sustained by reinsurers last year, risk-bearers are revisiting how they use catastrophe models, in order to manage their risk and capital more effectively. Model diversification and innovation have become particularly important since Hurricane Ike made landfall in Galveston, Texas a year ago. The use of several catastrophe models to inform risk manager judgment – enhanced with other tools, as well – has become crucial to protecting capital and achieving a company's stated financial targets.

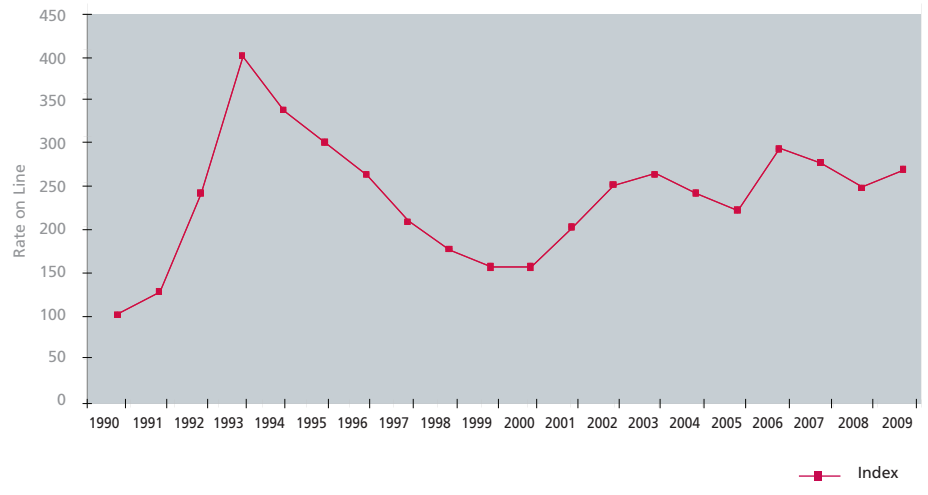
The rewards for prudent risk and capital management are profound, especially when one considers the size of the reinsurance industry in the broadest sense. The evolution of the reinsurance industry from a closed financial system to an open one will likely result in lower volatility. And, the opportunities afforded by new risks and emerging markets will likely lead to an increase in demand for reinsurance. Last year, 80 percent of insured catastrophe losses occurred in North America – compared to only 6 percent in Asia. Though reinsurers are likely to be cautious in covering newer risks (and those they are still beginning to understand), the low level of insurance penetration indicates a substantial potential revenue stream.

While there are reasons to be optimistic about the long-term growth of the reinsurance industry – particularly in emerging economies – reinsurance leaders have to operate and thrive in the present. This can be a difficult proposition. For most reinsurers it means aiming for success in a mature, competitive business that is based on a commodity product and is centered in North America and Europe. For cedents, however, the benefits are substantial. They can enjoy the prospect of a very competitive and innovative set of suppliers, vying energetically for their business.

2 Reinsurance Rates in 2009

Global property-catastrophe reinsurance rates increased by 8 percent on average through the 2009 renewal season, according to the Guy Carpenter World ROL Index. This follows declines of 6 percent in 2008 and 10 percent in 2007. In the United States, the world's largest reinsurance market (geographically), increases were fairly uniform at the January, April, June, and July renewals, moving in a channel of 10 percent to 15 percent, depending on region, exposures, and loss history. Even with this reversal in the property-catastrophe reinsurance pricing trend from the past few years, rates have not returned to 2007 levels, despite the financial catastrophe of a year ago and the impacts of Hurricanes Gustav and Ike.

FIGURE 1: GUY CARPENTER WORLD ROL INDEX*



Source: Guy Carpenter & Company, LLC

*1990=100

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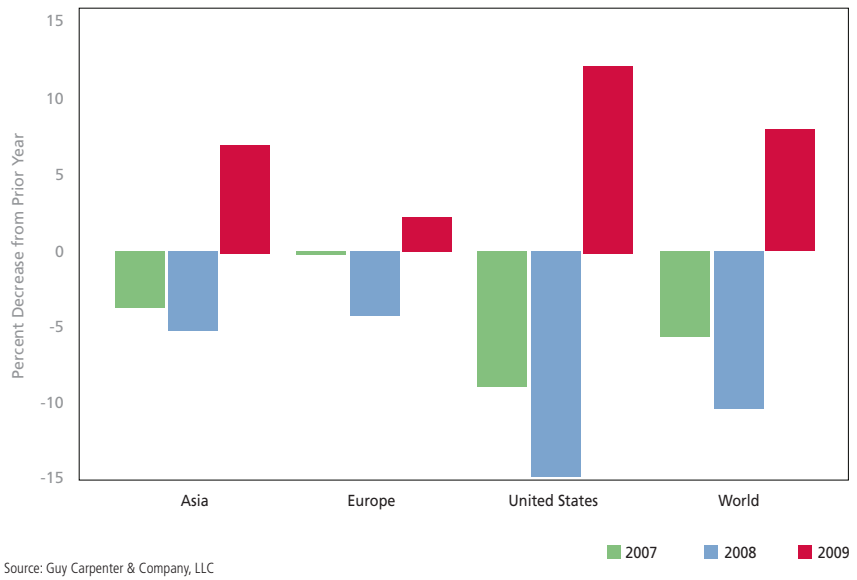
The U.S. increases were highest, though this was neither unexpected nor unreasonable. Reinsurance rates were up an average of 12 percent for the year, largely because of loss histories and exposures (e.g., in the Gulf of Mexico). The upward moves were lower in Europe and Asia, 7 percent and 2 percent, respectively. Again, these increases were not sufficient to offset the previous years' price declines.

FIGURE 2: REGIONAL INDICATORS



Source: Guy Carpenter & Company, LLC

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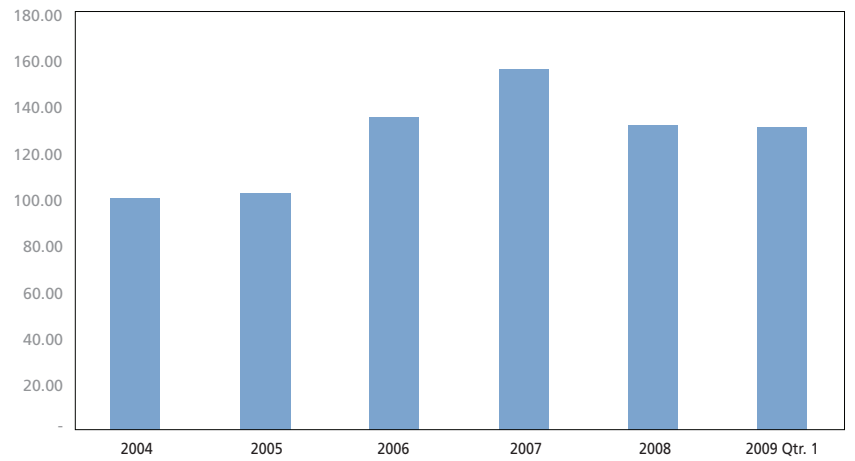
In addition to the insured losses from Hurricanes Gustav and Ike – which amounted to USD13.9 billion – the financial catastrophe had a profound impact on reinsurer balance sheets, which in turn affected the rates they charged cedents. Shareholders' equity fell 18 percent, as measured by the Guy Carpenter Global Reinsurance Composite, mostly because of realized and unrealized asset-side losses. The full effects of these shocks were realized well into 2009, as a result of financial reporting cycles and continued upward revisions of losses attributable to the September 2008 storms. Insurance and reinsurance markets were not operating in a vacuum. Policyholders in the commercial sector were suffering through a global recession – the most significant since the Great Depression – and were resistant to price increases for all products and services, including insurance.

FIGURE 3: REINSURANCE EQUITY INDEX, END OF PERIOD



Source: Guy Carpenter & Company, LLC, GC Global Reinsurance Composite Equity Index

Reinsurance Equity 2004=100

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Given the record losses in investment asset values, the rate of return on equity (ROE) for the GC Global Reinsurance Composite dropped from 13.4 percent in 2007 to 10.4 percent in 2008. The decline continued into the first quarter of 2009 – dropping to 7.8 percent. Reinsurers felt under pressure to produce higher returns, and so pushed for rate hikes.

Outlook for 2010 Renewals

Barring a major physical or financial catastrophe, reinsurance rates are likely to remain flat in the near future. Demand is likely to be flat, reflecting the weak global economy, while reinsurance supply is expected to increase. The thawing of financial markets will support balance sheet growth, and underwriting gains will contribute to stronger capital positions as well.

For more information on reinsurance rates, go to
GCCapitalideas.com/tag/reinsurance-rates

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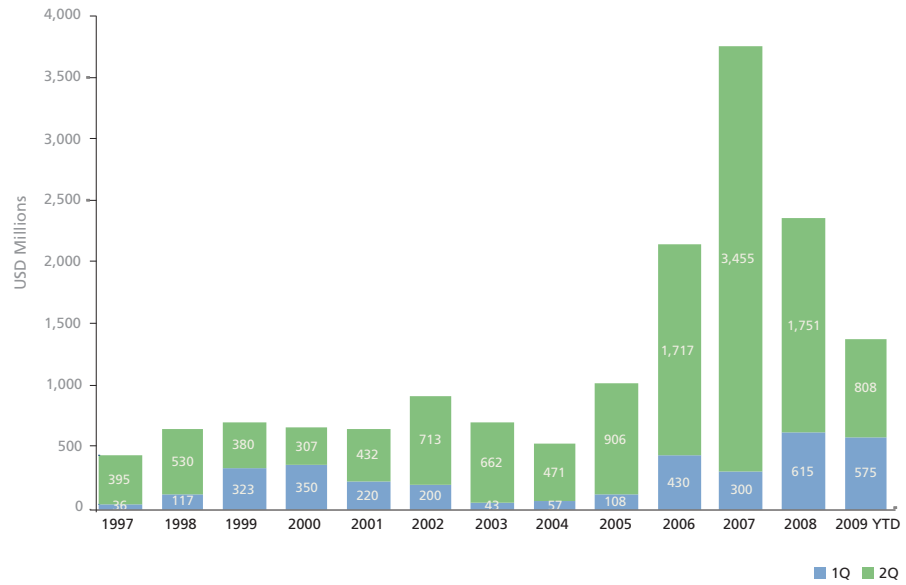
Catastrophe Bond Update

Six catastrophe bond transactions were completed in the second quarter of 2009, with USD808 million in risk capital coming to market. The number of bonds issued is down 25 percent year-over-year (from eight last year), and risk principal issued is off 54 percent from the USD1.75 billion issued during the second quarter of 2008. For the first half of the year, nine catastrophe bonds were issued, generating risk capital of USD1.38 billion. The first half of 2008 was more robust, with 11 transactions resulting in USD2.4 billion issued. From the first half of last year to the first half of this year, risk capital issued declined 42.5 percent, due in part to pricing conditions.

FIGURE 4: 1Q AND 2Q BOND ISSUANCE 1997 THROUGH 2009 YTD



Source: Guy Carpenter & Company, LLC

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Offsetting new issuances, USD1.59 billion in catastrophe bonds matured in the second quarter of 2009, bringing the year-to-date total of matured risk principal to just over USD2.24 billion. Another USD960 million is scheduled to mature in the second half of the year.

Net catastrophe bond risk capital outstanding fell USD779 million (6.5 percent) from the first quarter of 2009 to the second quarter of 2009 – from USD12.0 billion to USD11.2 billion, as maturities outpaced issuances. The second quarter of 2009 was the second consecutive quarter in which total risk capital outstanding declined.

Risk capital outstanding peaked at the end of 2007 at USD14 billion and fell to USD12 billion a year later. Two quarters into 2009, catastrophe bond risk capital outstanding is at mid-year 2007 levels.

Collateral Solutions and Alternatives

Collateral solutions continue to attract attention, and several alternative approaches have been developed. Current options include :

1. Total return swap with Federal Deposit Insurance Corporation-guaranteed bank debt
2. Bank deposit
3. Tri-party repurchase agreement
4. Customized putable notes
5. U.S. Treasury Money Market funds

The market is willing to support several alternatives to traditional collateral solutions, as long as they are perceived to be sufficiently transparent and insulated from credit risk. The existence of several choices enables sponsors to make decisions based on cost, protection, and other considerations that affect how they manage risk and capital. Further, by using several solutions simultaneously, the market is less likely to become "overweight" on one single solution, maintaining an element of diversification across collateral solutions. The result is another layer of protection from shock events that could have a negative impact on a single type of collateral solution.

For more information on catastrophe bonds, go to **GCCapitalideas.com/tag/catastrophe-bonds**

Industry Loss Warranties

The Industry Loss Warranty ("ILW") market, though trading a distinct product relative to catastrophe bonds, occupies a similar position as an alternative, supplementing traditional capacity, and is subject to similar supply and demand forces. In the first half of 2009, ILW providers were keeping their powder dry believing that there was a high probability of a capacity crunch for Florida property carriers at the June 1, 2009 renewal. However, this did not materialize, and ILW supply vastly exceeded demand. Capacity was withdrawn from the market, and rates fell by 15 percent to 20 percent. Yet, even this decline in pricing did not lead to much extra demand for the product.

For more information on ILWs, go to **GCCapitalideas.com/tag/ILW**

4 Optimizing the Use of Catastrophe Models

Insurer and reinsurer reliance on catastrophe models has become part of the fabric of risk management. Though they provide guidance rather than specific courses of action, these tools help carriers quantify risk and deploy their capital as effectively as possible. But, every catastrophe model has specific strengths and weaknesses, which is why risk-bearers tend to use several of them to evaluate exposures. The final decisions on whether to cover a particular risk are shaped by loss history, company objectives, and risk manager judgment. As a result, models are crucial to (re)insurer success … as long as they are used properly.

The losses from catastrophic events can have a dramatic impact on property risk treaties – and all aspects of the events affect the entire chain of primary pricing (and coverage) for both property risk and catastrophe treaties. Understanding the interplay among the issues that can drive insured losses and how the catastrophe modeling firms address them can materially affect the structure of a reinsurance program.

Determining projected financial implications tends to be the simplest aspect of a catastrophe model, but it can reveal some of the weaknesses in the hazard and vulnerability analyses. To make the financial component more powerful, modeler expertise on a region or peril needs to be supplemented with an intricate understanding of the insurance and reinsurance structures involved, which is usually provided by the reinsurance broker. Thus, hazard, vulnerability, and financial factors converge – via model analysis, broker insights, and a cedent's knowledge of the risks it covers. When this happens, coverage is optimized to help risk-bearers maximize their possible returns on capital deployed.

Understanding Ike

It took many months for the reinsurance industry to digest the effects of Hurricane Ike and its impact continues. One of the largest natural catastrophes in history in terms of insured losses, the Gulf of Mexico storm was in part overshadowed by the simultaneous financial catastrophe that struck business centers around the world. The implications of both emerged at the same time, as risk managers sought to keep pace with damage to both the asset and liability sides of the balance sheet. So, how did the major catastrophe models miss the possibility of an Ike-strength hurricane?

In the hunt for answers, many reinsurers began to question whether their exposure data was of high enough quality. Several potential flaws were identified, from modeling firm data to insurer-supplied data to insufficient imagination in identifying key risks and exploring scenarios. There was no single cause of the vast change in loss estimates in the half-year following Hurricane Ike, and the (re)insurance industry remains focused on applying remedies to all areas of risk and capital management. The use of models, however, has attracted particular attention, as there is plenty of room for improving how they are applied to risk identification and evaluation – and ultimately to reinsurance decision-making.

Among the gaps in model usage was the absence of customized approaches to risk-bearers' portfolios. Typically, each modeling firm uses a standard approach – a baseline, effectively – that constitutes an excellent starting point. What was missing last year, though, was a deeper look at each cedent's situation in order to gauge the reliability and applicability of exposure and claims data; measurement against company risk appetites, tolerances, and profiles; and the development of solutions that accurately reflect a carrier's strategy as a whole.

Model Diversification

Instead of focusing solely on one model, for example, reinsurers may need to broaden their scopes to include different data sources, varied models, and a broader evaluation of the factors that could contribute to outsized insured losses. Models are tools to be considered within a larger field of risk and capital management capabilities, and over-reliance can cause unexpected losses, the reverberations of which could reach all the way to market capitalization.

Historically, reinsurers have relied on past events to plan for the future: loss history is an important source of risk management information. Unfortunately, there tends to be limited experience in certain domains. Emerging threats, developing markets, and climate change, for example, require forecasting without the benefit of past results. Catastrophe models create information where none would exist otherwise to enable analysis and effective risk management decision-making. These same techniques also enhance the management of established risks.

The assumption and transfer of risk is not isolated. Catastrophe models help carriers bridge the gap between events and financial performance by relating risk to premium. A successful portfolio generates sufficient premium revenue to offset losses and expenses while still delivering returns to meet company revenue, earnings, and ROE targets. Catastrophe models only reach part-way across the risk/return chasm, though. The rest comes from supplemental tools and expertise from internal and proprietary models, reinsurance brokers, and risk management specialists to ascertain

the impacts of rate levels and disaster scenarios on company financials. Guy Carpenter's i-aXs® platform, for example, integrates with third-party catastrophe models to provide satellite imagery, real-time data feeds, and risk assessment information to add timely insights to underwriting decisions.

With the uncertainty that pervades catastrophe risk management, no single tool is enough. Instead, reinsurers should gather as much relevant information as possible, using all the resources at their disposal. Diversifying model usage across the three major vendors mitigates the risk that useful insights will be missed, helping carriers to maximize their returns and increase shareholder value. Additionally, the modeling effort should reach beyond the catastrophe modeling firms. Tools and techniques from other sources should be included in the process – such as scenario-based investigation including claims department input, reinsurance broker-conducted analyses, and proprietary catastrophe modeling solutions.

By linking a portfolio's likelihood of success to the results of only one catastrophe model, a (re)insurer assumes a considerable amount of risk – unnecessarily. There are three major catastrophe model vendors for a reason: each brings a set of strengths to the market. Further, the additional tools and insights available within cedent organizations or from their reinsurance brokers can yield even more relevant information to facilitate effective risk transfer. Casting a wide net can result in a considerable performance upside.

Creating New Ideas

Catastrophe models may be invaluable, but they are not all-encompassing. The vendors tend to focus on what can be known – and quantified – which leaves some parts of (re)insurer portfolios unaddressed. Depending on the nature of these gaps, carrier exposures can remain quite high, diluting substantially the effects of any risk management planning and execution. To alleviate this concern, reinsurance brokers have extended catastrophe model capabilities with a variety of tools to help clients limit their exposures further. Guy Carpenter has developed several model enhancements – such as GC LiveCat™ and GC ForeCat™, available through the i-aXs platform – to facilitate risk identification and capital management beyond the capabilities of the major catastrophe modeling firms.

A portion of most reinsurers' portfolios goes unmodeled, of necessity. Some exposures are not addressed by catastrophe models, including automobiles, marine risks, and fine art. The data and tools simply do not exist for these risks, limiting carriers' abilities to plan and take informed action. Further, some models do not include all the risks associated with a particular event. If regulators change policy terms and conditions after an event, for example, insured losses may be higher than expected.

Other expenses that reinsurers could incur may also be overlooked by the major catastrophe models. Loss-adjustment expenses (e.g., the cost to settle claims) and assessments from organizations that carriers are obligated to support (such as fair plans and wind pools) can erode margins beyond expectations, ultimately impairing capital positions. This is also the case for differences in claims practices.

Of course, reinsurance broker relationships in general are designed either to minimize the effects of these costs or account for them in risk management efforts. But, additional modeling tools have been developed to integrate these issues into the entire process of evaluating alternatives, from the earliest stages of exploration to the execution of specific structures. Guy Carpenter's GC LiveCat and GC ForeCat tools (developed in conjunction with WSI Corporation), for example, open a range of choices to carriers that would not exist using the vendors' models alone.

GC ForeCat offers a detailed monthly preseason windstorm forecast from December through April, in order to help property-catastrophe insurers gauge the threats to their portfolios in advance of the Gulf of Mexico hurricane season. Once the season begins, GC LiveCat tracks live hurricanes (with uncertainty estimates), enabling real-time risk management from the time a storm forms through its dissipation. Using technology from WSI, GC LiveCat extends the track and intensity forecast time horizon to 10 days – double the five days offered by the National Hurricane Center. As a result, insurers can take immediate action on their portfolios to minimize losses and protect their capital.

Further, refined analytics around catastrophe events can hone a (re)insurer's risk management practices, ultimately leading to more cost-effective cover and improved financial performance. Being able to mitigate losses by laying off some catastrophe risk via livecat cover, for example, has an effect on margins, earnings, and market capitalizations (where the effects of earnings and margins are magnified). These benefits do not come from the use of third-party catastrophe models alone. Rather, they are secured by extending existing features with tools developed by reinsurance brokers who are closely engaged with the overall market for risk-transfer.

Catastrophe models provide a starting point for generating the full set of analytics necessary to optimize the deployment of capital, attain clearly stated financial targets, and realize company growth. Reinsurers thus need to look beyond the core catastrophe models to understand the full natures of the risks they cover, as well as the possible effects to their balance sheets. "Extended" catastrophe models, frankly, extend the financial upside.

Major Changes to Models

The most significant changes to models for the remainder of 2009 are expected from AIR and RMS, for their earthquake models across various regions and perils, with the focus clearly on the United States, Canada, and Latin America earthquake models.

The primary catalyst behind the model updates for the U.S. and Canada earthquake is the publication of the 2008 National Seismic Hazard Mapping Project (NSHMP) results by the U.S. Geological Survey. This is a major study that is updated every five to six years and used as a benchmark for earthquake hazards in the United States. The greatest contributor to the changes in results is the new science behind the 2008 NSHMP, particularly the Next Generation Attenuation ground motion relationships used for shallow earthquakes in the western half of the continent. These new findings are the largest drivers of changes to results in California and the western U.S., which include locally significant decreases in losses.

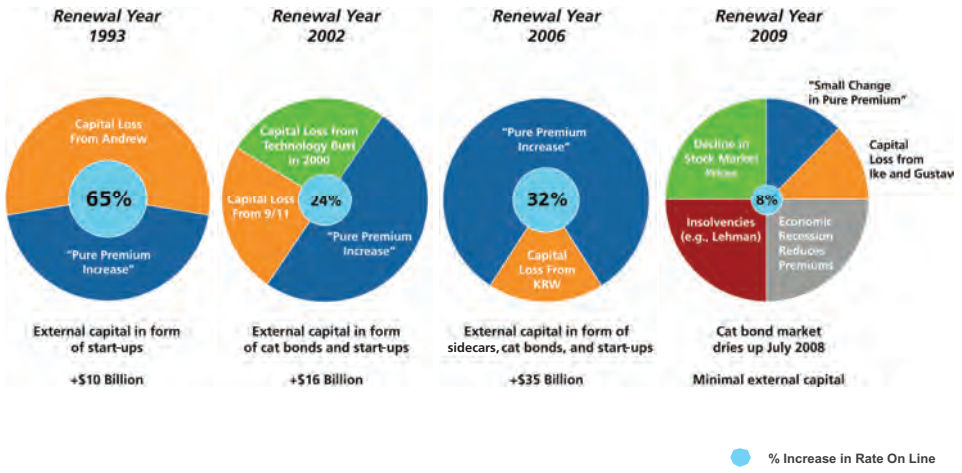
Based on the **Get the Most Out of Models** *series on GCCapitalIdeas.com*

5 A Changing Property-Catastrophe Reinsurance Industry

Evolution of the Property-Catastrophe Reinsurance Market

This year's 8 percent World ROL Index increase differs profoundly from the 65 percent surge that followed Hurricane Andrew and the 24 percent hike following the terror attacks of September 11, 2001 in the United States. Even after losing 18 percent of its aggregate capital following the 2008 financial catastrophe, reinsurers were unable to push for the high rates that some expected. The evolution of the reinsurance industry over the past two decades suggests that carriers have become much more adept at managing risk and capital, making it easier to absorb shock losses and manage the cost to transfer risk.

FIGURE 5: EVOLVING CATASTROPHE REINSURANCE MARKET



Source: Guy Carpenter & Company, LLC

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Following Hurricane Andrew in 1992 (loss of USD23 billion), ROLs increased by 65 percent at the 1993 renewals. The rate increases can be decomposed into two major parts: the pure premium increase and the impact of a decline in reinsurer capital.

The first part was the "pure premium increase," as reinsurers saw the claims-driven costs increasing substantially because of the storm. The increased potential for insured losses resulted in premium increases in the primary market, which flowed up to the reinsurance market, increasing cedents' costs to transfer risk. Quite simply, reinsurers believed that the average size of a loss that could come from a major tropical cyclone had increased.

The second part of the rate increase following Hurricane Andrew was the result of price pressures from a reduction in capital across the reinsurance industry following the catastrophic loss. The inability to replenish capital quickly drove ROLs higher: the reinsurance industry was a relatively closed financial system at the time. The capital already in the reinsurance system was essentially fixed. With scarce capacity, prices rose sharply, as the market distributed the scarce capital to the highest bidders.

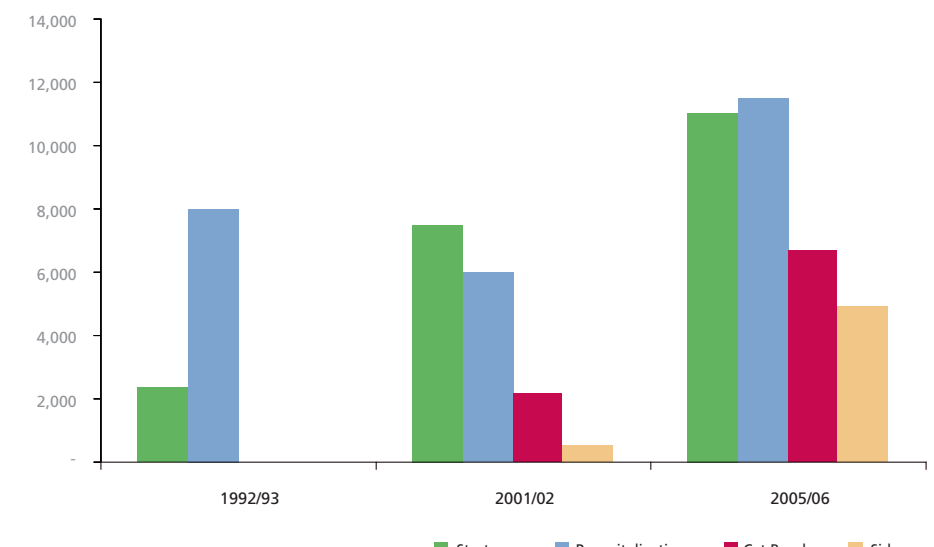
Following Hurricane Andrew, capital did flow into the reinsurance industry in the form of the newly created mono-line catastrophe writers (i.e., the "Bermuda mono-line cats"), but because the reinsurance system was closed, it took a while. The first reinsurance start-up to open its doors did so well past the January 1, 1993 renewal date.

The next step in the industry's evolution came with the terror attacks of September 11, 2001 in the United States. At the subsequent renewal, ROLs increased by an average of 24 percent. The pure premium increase was the dominant factor, based on the additional cost expected for covering the terrorism peril. Before this event occurred, reinsurers had charged minimal amounts for terror losses (if anything at all). Of course, it is difficult to isolate the implications of the terror attacks on reinsurance rates, as price increases were also affected by the asset-side losses – and broader financial implications – of the decimation of the early "dotcom economy" – from the initial NASDAQ drop in March 2000 through the collapse of Enron (and other large companies) in late 2001 and early 2002.

The lower ROL increase at the renewals following the terror attacks resulted largely from a more open reinsurance system. The advent of catastrophe bonds in the late 1990s provided an alternative source of capacity, which, though small relative to traditional reinsurance, showed that capital could enter the industry more easily. Also, sidecars began to gain some prominence with Olympus Re, which was established by White Mountains Insurance Group to take a quota share of Folksamerica Re. This was only 3 percent of the USD16 billion raised in late 2001 and 2002, and alternative capacity (which includes both catastrophe bonds and sidecars) accounted for 14 percent. Despite the increasing openness, the industry still received most of its replenishment capital from traditional equity and new underwriters – such as Axis, Arch, and Endurance.

An industry defined by the transformative effects of shock losses changed again with Hurricanes Katrina, Rita, and Wilma and the 2006 reinsurance renewal – as combined insured losses reached USD60.5 billion. Despite the extent of the damage, these storms did not cause substantial losses of capital, as the rest of the property and casualty (P&C) insurance industry was highly profitable. The insurance industry as a whole recorded a combined ratio of 100.7 and a rate of return of 10 percent. Further, the reinsurance industry was no longer a closed system – external capital was readily available. More than USD35 billion flowed into the industry through a variety of instruments, including start-ups, catastrophe bonds, and sidecars.

FIGURE 6: POST-LOSS CAPITAL RAISING



Source: Guy Carpenter & Company, LLC

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Among the reasons for the relatively rapid replenishment was the rise of the alternative investment sector. Hedge funds in particular were attracted to the outsized returns available from the sidecars issued following the 2005 hurricanes. Of the capital raised in late 2005 and 2006, 20 percent came from catastrophe bonds and 13 percent from sidecars. The proportion of capital raised through alternative sources more than doubled from 2002 to 2006. With one-third of the replacement capital coming from non-traditional means, the reinsurance system was far more open than it had been only five years earlier … and was almost unrecognizable (in this regard) compared to the industry in 1993.

Unlike the other industry-changing shocks of the past 20 years, the events of 2008 came mostly from the financial community – and at the same time as a major property catastrophe (i.e., Hurricanes Gustav and Ike). The financial crisis had been developing since February 2007 and erupted in September 2008, dwarfing the economic damage caused by the dotcom collapse. On the same weekend, Hurricane Ike, one of the most expensive hurricanes on record, tore through the Gulf of Mexico, stretching much farther inland than expected.

The events of 2000 and 2001 were quite different from those of 2008 (with effects stretching into 2009). The dotcom collapse was a financial event of a much smaller order than the financial catastrophe of 2008 which threatened the global economic system. Though the (re)insurance industry has emerged from the financial catastrophe – certainly more successfully than other sectors of the financial services industry – it did sustain significant investment losses across all asset classes, particularly fixed income. The dotcom fallout was more pronounced for speculative investments, rather than the conservative portfolios typically held by insurers and reinsurers.

Further, the property-catastrophe shock of 2001 was different in scope and impact than Hurricane Ike. The latter was a large storm, though not a key event for the global reinsurance industry. The terror attacks, on the other hand, shocked the industry, because the mindset had been that terror events were more a threat to persons, with limited potential for large economic loss.

Because of the unique nature of the financial catastrophe, the pure premium impact has not been substantial, as evidenced by the contained average ROL increase around the world. Rather, the losses were caused by the availability of capital relative to the amounts lost. Though there have been signs that efforts to raise capital are becoming more successful (especially from the second quarter onward this year), it will take a considerable amount of time for carriers to return to the robust positions of late 2007 and early 2008.

Not all price changes were related to capital; some reinsurers did charge higher rates for areas hit by Hurricane Ike, particularly for situations where retrocession support had dried up. But, the losses related to the storm were not transformational. The capital implications resulted from the concurrent financial catastrophe. Most sources of outside capital closed, as banks and alternative investment institutions were hit more severely than reinsurers. This effectively returned the industry to a closed financial system to a degree not seen since the 1980s.

As financial markets around the world continue to stabilize – and eventually return to normal – the impact of the loss of capital will be diminished. The reinsurance system will begin to open again, with reinsurers able to replenish their balance sheets more quickly through renewed access to sources of capital outside the industry (including insurance-linked securities). As this happens, the primary driver of property-catastrophe rate changes will be the pure premium factor in the wake of a disaster. The net result is likely to be a less volatile reinsurance market.

Economic Losses Point to Reinsurance Growth Potential

The transformational losses that have pushed the evolution of the reinsurance industry generally have been limited to the availability of capital relative to a fairly consistent marketplace. Reinsurers see the opportunity for rate increases following a catastrophe event or when capital is in short supply. This allows for little flexibility: risk-bearers can't take their fates into their own hands. Yet, there is another measure of growth potential – and it is one that reinsurers can use to increase top-line and bottom-line performance.

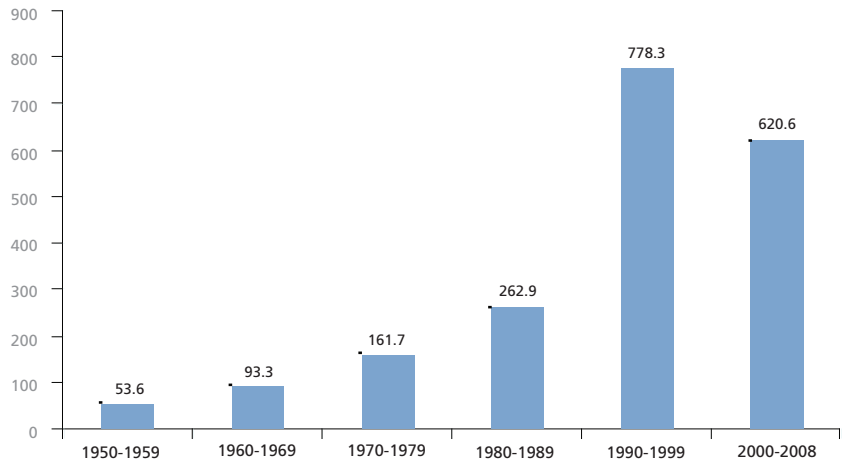
Expanding the insurance and reinsurance systems to areas not currently covered suggests a significant increase in the potential size of the reinsurance industry. By distributing risk more widely around the world, reinsurers can identify new coverage opportunities, write more business, and manage volatility. So, it is possible to increase the size of the marketplace while managing risk and capital more effectively.

Traditionally, analyses of reinsurance industry growth potential have focused on insured losses. This approach may seem sensible, but it has significant weaknesses. The definition of insured loss differs from country to country and over time. Hence, insured losses can lead to a distorted picture of the true loss history. For example, in the United States, flood risk is insured by the federal government, leading insurance studies to neglect losses from this peril. In emerging markets – such as China and India – insured losses tend to be relatively low. This tends to give rise to the potential for small sample error: projections based on small samples can be egregiously inaccurate.

Economic losses, on the other hand, cover a wider range. By measuring all damages – insured and not – it is possible to gauge losses not currently insured but which could be. Effectively, this approach includes in the reinsurance industry's revenue potential the impact of primary market growth into new regions and risks. The result is a more accurate view of the possible size and composition of the reinsurance industry.

From 1950 through the present, economic losses from natural disasters have grown rapidly, suggesting that there is plenty of growth potential for the reinsurance industry. Coastal population growth is largely responsible for this change over the past seven decades, and it has been compounded by increased property values in exposed areas (e.g., Florida and California). In emerging economies, rapid growth in assets also led to higher exposures.

FIGURE 7: ECONOMIC LOSS FROM NATURAL DISASTERS



Source: Howard Kunreuther, Wharton School, University of Pennsylvania
Note: All figures adjusted for inflation

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Economic losses from 1990 to 1999 were 14 times higher than from 1950 to 1959. The rate of economic loss fell 20.2 percent from the last decade to the current one but is still 12 times higher than in the 1950s. The recent decline is probably an anomaly and is likely to disappear if we include man-made catastrophe events, such as terrorism.

The history of the property-catastrophe reinsurance industry indicates that it has the potential to be a fast growing segment of the global economy. This trend is likely to continue in this direction as emerging economies transfer more risk to insurance and reinsurance companies. But, one cannot expect this growth to follow a smooth trajectory, since property catastrophes do not follow a stable path. Hence, long-term players in the market will need larger amounts of capital to withstand the wide swings in catastrophe losses that are likely to occur.

6

The Reinsurance Market: From Turbulence to Growth

The reinsurance industry has had a turbulent year, but it has survived the greatest financial catastrophe since the Great Depression remarkably well. Balance sheets have stabilized and have even begun to improve this year. Despite an average loss of capital of 18 percent, a string of reinsurer failures – feared by many – never materialized. Strong capital positions enabled reinsurers to absorb the financial and natural shocks of 2008 and continue to bear risk without interruption.

Rigorous risk management practices contributed substantially to the reinsurance industry's ability to recover in 2009. Capital was deployed with discipline, and industry innovation was tapped to improve catastrophe and capital models, equipping risk-bearers to prepare for future shocks and protect their balance sheets. Even when financial markets were at their tightest, carriers used the tools at their disposal to optimize their capital, making the most of recently limited resources.

As financial markets continue to thaw, fears of a capital famine should continue to abate. This development in conditions has led to a decline in volatility and the successful completion of debt and equity issues. Alternative sources of capital, such as catastrophe bonds, have returned from the quiet of the fourth quarter of 2008, though not in sufficient volume to have a profound impact on risk-transfer supply. Still, these factors point to continued stabilization.

The gradual return to normalcy does not have to be treated as an end-point for the reinsurance industry. Rather than remain constrained by the traditional dynamic of catastrophe loss-driven pricing, the sizeable increases in uninsured economic losses over the past 70 years suggest that there are plenty of risks remaining to be covered – and prospects for outsized industry growth. Entering markets currently underserved – such as property-catastrophe in the Asia-Pacific region – offers the possibility of industry-leading results. With the correct mix of modeling and risk manager judgment, carriers will be better prepared to assume these risks and deliver the rewards to their shareholders.

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