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# **The Mid-Year 2011 Reinsurance Market: On “Uncertain” Ground**

July 1, 2011 (revised)

**HOLBORN<sup>®</sup>**

## “Uncertain” Ground

As recently as 2009, Holborn and other analysts reported that the industry had many billions more in capital than the level where reinsurers’ leverage ratios would begin to affect market capacity and pricing. We estimated \$60 billion in excess capital at the beginning of 2010. Reinsurers’ after-tax loss from Hurricane Katrina was near \$20 billion, and thus it might take the equivalent of three Katrina-sized events in 2010 - 2011 to move prices.

Since then, reinsurers have sustained a Katrina-sized loss in Japan, and an equivalent-sized adverse combination of other losses over the last fifteen months. The second quarter in the U.S. has been at record levels for tornado losses, as well. For U.S. coastal property exposures, the recent model changes (RMS version 11 and to a lesser degree AIR version 12) have required many reinsurers to assign more capital. Thus, for U.S. coastal property business, the market’s capital has, in fact, felt “Three Katrinas” and begun to move, although with capacity tightening more than pricing. Other classes of business that have not had model changes or do not rely as much on capital levels have not shown this stress and remain more stable.

The overall pricing environment at year-end will depend on the experience in this coming wind season and financial factors. The market will be different across the various lines of business and regions.

### Overview

- Despite avoiding a U.S. hurricane landfall in the 2010 season and with 2011’s just begun, **reinsurers had far worse than average catastrophe experience** in both 2010 and 2011.
- In the year prior to the Japan earthquake and tsunami on March 11<sup>th</sup>, the worldwide industry had already sustained losses on **a record number of multi-billion dollar events** (Chile earthquake, a windstorm in France, Deepwater Horizon explosion and spill, New Zealand September earthquake, Western Queensland floods, Brisbane floods, Cyclone Yasi, and New Zealand February earthquake). That was already the worst 12-month block for large losses since Katrina, and represents over 15 points on the professional reinsurance industry’s annualized loss ratio, and **nearly 10 points above long-term averages**.
- **The U.S. had a very severe first half** for large weather-related losses, with two multi-billion dollar tornado outbreaks, several floods, and ice and collapse losses earlier in the year. We estimate U.S. second-quarter weather losses at more than \$20 billion. Relative to premiums, it has been the worst second quarter for U.S. catastrophes since Hurricane Agnes in 1972.
- **Reinsurers’ reserves weakened by well over \$10 billion during 2010**, overstating income. In addition to Casualty reserve savings on prior years, the Chile and earlier New Zealand earthquakes and December Australian floods had not been booked to their ultimate

values during 2010. Some reinsurers have also not recognized their liability exposure to the Deepwater Horizon spill.

- The Japan March 11<sup>th</sup> loss was likely smaller than Katrina on a direct basis, but may be larger to reinsurers. Together with the earlier losses and U.S. losses in the second quarter, 2010 and 2011 are already **the worst ever two-year block for large losses to the reinsurance industry** in dollars, and as a percent of both premiums and surplus, worse than 2004 and 2005. Depressed values and “soft market” policy terms are part of the reason, and despite some recent increases, both will continue into 2012.
- In the medium-term, we expect an increase in U.S. inflation rates that will raise the cost of future losses, for both property and casualty, and increase casualty loss reserves, especially on WC and umbrella business. In the short-term, the EU’s response to Greek and other sovereign debt problems may raise interest rates and depress some European reinsurers’ asset values, especially on affected government and bank bonds. We also expect Solvency II requirements to limit some reinsurers’ capacity, perhaps as soon as 2012, depending on the final effective date.

Our analysis follows at the links shown below:

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**July 1, 2011**

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## A. Current U.S. Market Conditions

### I. Property Catastrophe

Catastrophe contract premiums at January 1, 2011 and early in the year generally decreased by single digits. Most loss-free programs were down by 5% to 10% in rate-on-line for programs completed prior to the Japan loss, and with moderate increases for May and later effective dates.

#### Property catastrophe rate-on-line increases

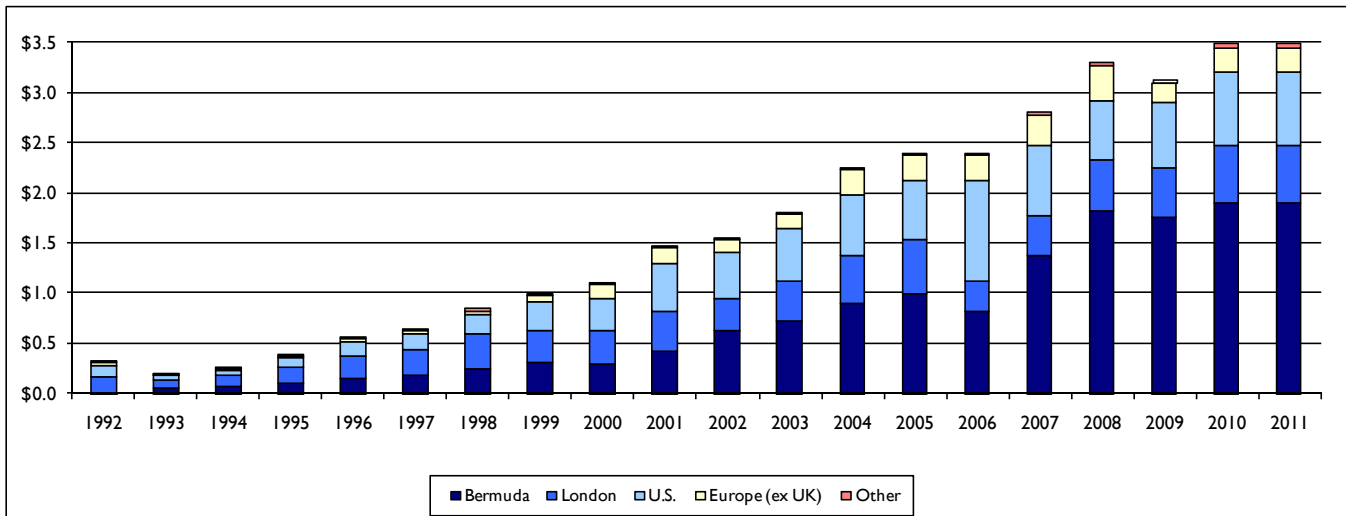
	Coastal Exposed		Non-Coastal	
	with Recent Loss	without Loss	with Recent Loss	without Loss
January, 2006	+25% to +100%	+10% to +25%	+20% to +50%	+5% to +15%
April – July, 2006	+60% to +300%	+30% to +100%	Few placements	Few placements
January, 2007	+15% to +40%	0% to +20%	+10% to +25%	-10% to +10%
April – July, 2007	-10% to 0%	-20% to -10%	Few placements	Few placements
January, 2008	-20% to -10%	-20% to -10%	-15% to -5%	-15% to +5%
April – July, 2008	-15% to -5%	-20% to -10%	Few placements	Few placements
January, 2009	+15% to +50%	+5% to +20%	+10% to +40%	0% to +10%
April – July, 2009	+15% to +40%	+10% to +20%	Few placements	Few placements
January, 2010	-5% to 0%	-15% to -5%	+5% to +15%	-10% to -5%
April – July, 2010	-15% to -5%	-10% to -5%	Few placements	Few placements
January, 2011*	Few placements	-10% to +5%	-5% to +10%	-10% to -5%
April – July, 2011	Few placements	0% to +20%	Few placements	Few placements

Notes: Measured in dollar amounts for programs with comparable exposure levels.

\*Includes mid-year anniversary renewals that were placed prior to April.

Capacity placed on some of the largest individual programs in 2010 and 2011 increased slightly from 2008 and 2009 levels. Some second-tier programs increased significantly. Several U.S. insurers now buy over \$3 billion in placed limit.

## Property catastrophe capacity



Note: Size of largest actual U.S. placement in \$Billions, based on maximum amount exposed in any zone by a single ceding company program, including aggregate excess contracts. Excludes Cat bond capacity or side cars; includes National Indemnity. Market regions are shown by underwriting office, not domicile.

## Coastal and national accounts

Some national programs placed substantially higher limits at mid-year 2011 although both State Farm and Allstate placed less. Reinsurers reacted to RMS v.11 changes, international losses, or both by generally holding their capacity level.

### Florida

Florida-exposed companies, at least companies domiciled out of the state, have been buying larger programs from the market to supplement the FHCF’s reduced bonding capacity. Most private sector insurers faced higher Cat model estimates under RMS v.11, although Citizen’s Insurance did not. The domestic companies are highly concentrated and have difficulty buying enough protection out of their direct writings. Florida remains the largest commitment of reinsurers’ capacity in the world, at about \$80 billion. Florida programs saw larger increases than many other U.S. programs in 2011.

### Gulf

In addition to the higher losses on inland locations in RMS v.11 and AIR v.12, the RMS update also reflects building code and construction differences between the Gulf and Atlantic coastlines. Reinsurers are citing these changes as support for higher prices on Gulf-exposed renewals.

## **Other U.S. zones**

Capacity remains tight in the Northeast for wind exposure and in Southern California for shake exposure. The Northeast also faces higher hurricane model estimates in RMS v.11. In California, however, reinsurers are reflecting lower earthquake model results introduced in RMS v.9. Many reinsurers deployed increased capital levels and some ceding companies were able to increase their placements.

Outside of those few peak concentration zones, capacity has still been ample as reinsurers have competed for this diversifying business.

## **Energy and Aviation**

These two classes have seen losses recently. Ike (in 2008) was a significant loss to Gulf oil production regions and the 2009 Western Atlas rig fire in the Indian Ocean and the Deepwater Horizon explosion and spill (in 2010) were the largest single-platform losses since 1998. The Qantas A380 engine failure and several crashes kept the Aviation market's loss ratio well over 100% in both 2009 and 2010. Prices for both lines have increased in both 2010 and 2011.

## **Involuntary markets**

Two large programs re-entered the market after dropping their Cat programs. Citizen's Insurance writes 40% of the Florida personal wind market values (as either Homeowners or Wind-only policies) and over 60% in the more-exposed southern counties. Citizen's placed a \$550 million program. The Texas Windstorm Insurance Association also bought protection in 2011, placing a \$636 million program. TWIA had gone bare following Hurricane Ike. Both placements cost more than the facilities' earlier treaties.

## **Collateralized reinsurance and Cat bonds**

Fund managers and “alternative asset” investors have invested directly in insurance risk by providing fully-funded limits, largely in peak zones and for retrocessions. Many hedge fund investors have focused on what they view as opportunistic positions in European government bonds and bank debt, with higher interest spreads. So these investors have not been as supportive of insurance risk as in the past. But several multi-strategy funds remain interested in insurance risk and can move quickly if opportunities meet their return requirements. Cat bond placements in 2011 varied in size, but remain far below 2007 volumes. Collateralized reinsurers likely incurred retrocessional losses on the Japan and New Zealand earthquake, which limits their ongoing collateral capacity.

## **Retrocessions and ILWs**

The retrocessional market has begun to stabilize after the departure of Berkshire Hathaway and the downsizing of hedge fund participants. But at current prices, there is still limited supply.

Some reinsurers placed new or increased quota shares on their excess of loss portfolios. Some are finding support for these retrocessions from primary insurers, who are either willing to provide reciprocity to a major trading partner, or are seeking diversification.

ILW placements outside of the U.S. often attach at \$5 billion, and many may have been triggered by the international earthquakes in 2010 and 2011. The market reports high interest in ILW’s, but little agreement on terms.

## 2. Clash, WC and Life Catastrophe

Overall market capacity for some peak zones has tracked with industry capital and is constrained. Costs for lower layers continued to fall as reinsurance prices were impacted by lower subject premium or levels of underlying exposures. Higher layer ROLs are consistent with market minimums, which have been falling moderately, outside of the peak exposed areas of California earthquake and New York terrorism. There is a continuing appetite to place per person covers and higher MAOLs in Catastrophe covers.

Clash, WC and Life Catastrophe	
January, 2006	-5% to +5%
April – July, 2006	-10% to 0%
January, 2007	-10% to 0%
April – July, 2007	-15% to -10%
January, 2008	-15% to -10%
April – July, 2008	-20% to -10%
January, 2009	-3% to +5%
April – July, 2009	-5% to +3%
January, 2010	-15% to -5%
April – July, 2010	-15% to -5%
January, 2011	-15% to +5%
April – July, 2011	-5% to +5%

Note: Measured in dollars amounts or ROLs.

Comparable programs at renewal.

## 3. Policy - Exposed Contracts

With lower subject bases, most renewals were at lower premium amounts. These classes of business do not depend on capital as much as Catastrophe covers. Rates on renewals were largely driven by accounts’ individual experience, but generally with lower ceded deposit premiums, due to reduced subject premiums.

	Working	High Excess With Recent Losses	High Excess With No Loss
January, 2006	0% to +10%	+15% to +25%	0% to +15%
April – July, 2006	0% to +30%	+25% to +50%	+5% to +15%
January, 2007	0% to +40%	+10% to +25%	-10% to 0%
April – July, 2007	10% to -5%	0% to +10%	10% to 0%
January, 2008	-10% to -2.5%	0% to +10%	10% to 0%
April – July, 2008	-5% to +5%	-0% to +10%	-10% to 0%
January, 2009	-5% to +10%	+25% to +50%	0% to +10%
April – July, 2009	-5% to +10%	+25% to +50%	0% to +10%
January, 2010	-5% to 0%	0% to +15%	-10% to +5%
April – July, 2010	-5% to 0%	0 to +15%	-10% to -5%
January, 2011	-5% to +10%	+5% to +20%	-5% to -10%
April – July, 2011	-5% to +5%	+5% to +20%	-5% to +5%

Note: Measured as rates on subject income, not dollar amounts

## Property Per Risk

Since 2008, reinsurers have seen a marked run of losses to large risks (often fires) worldwide and to many U.S. middle market accounts. This drove rate increases in some cases. The higher U.S. frequency may be related to housekeeping and maintenance. We have not yet seen an uptick in arson. The increased frequency reverses a favorable trend that has helped the industry’s profitability, despite low direct prices. Insurance to value is also a current challenge, due to low real estate prices. Reinsurers are also more closely assessing catastrophe exposure in these contracts.

## Casualty, including Umbrella

A number of players (such as AWAC, Aspen, Catlin and Tokio Millenium) have entered the on-shore casualty market in the last few years.

Reinsurers express concerns about very low interest rates, continued soft pricing in the primary market, decreasing reserve adequacy and (a recent change) adverse trends in WC. Longer-term, government deficits and the weaker dollar may cause higher levels of general inflation, and healthcare reform may raise medical costs covered by WC and liability coverages.

## 4. Terrorism Coverage

Reinsurers write their terrorism exposures without retrocessions or TRIA protection (and often competing for capacity with affiliates’ direct operations). Therefore, their limited capacity requires meaningful ROLs. Some market trends are:

- Ceding companies often have similar occurrence retentions on terrorism and natural catastrophes, so retention levels for terrorism have also tended to increase. At the top end of programs, TRIA retentions have fallen due to lower subject premium incomes.
- Significant capacity is available (over \$1 billion per ceding company, less in “Tier 1” cities). This is ample for most regional carriers, but not for nationwide accounts with multi-billion dollar TRIA retentions. Some commercial nationals buy no terror protection beyond TRIA. Regional carriers tend to have broader coverage in underlying programs and also purchase higher Cat and Clash limits for terror.
- NBCR coverage is more constrained at \$500 million (less for key cities) and it remains expensive. It is more common in regional account and Life/PA placements.
- Companies exposed in the Northeast, and especially in Metropolitan New York, find capacity tight for both Windstorm and Terrorism and often choose to limit their terrorism protection, in order to maximize windstorm coverage.

## B. 2011 Market Losses

### I. 2010 and 2011 in Context

**Large losses in 2010 and 2011 are already a larger hit to reinsurers’ earnings and capital than in 2004 and 2005.**

Accident Year	Midpoint Loss Estimates (\$Bns)	Percent of Gross Premiums	Percent of Beginning Capital
2001	\$25.0	19.9%	32.1%
2002	\$1.5	1.0%	2.0%
2003	\$2.4	1.2%	3.0%
2004	\$8.0	3.9%	6.3%
2005	\$28.0	15.1%	19.3%
2006	\$0.0	0.0%	0.0%
2007	\$2.8	1.3%	1.4%
2008	\$8.9	4.6%	4.3%
2009	\$0.0	0.0%	0.0%
2010	\$19.8	9.2%	9.4%
1st Half, 2011	\$43.5	20.2%	20.3%

Notes: *Holborn loss and LAE estimates for events over 0.5% of industry NEP.  
Pre-tax, nominal (i.e., uninflated dollars).  
All coverages combined, including direct lines.  
Premiums and capital for worldwide panel of firms predominantly in reinsurance.  
Companies in run-off excluded.  
2011 as a percent of premiums is compared to full-year premiums.*

The last eighteen months incurred more major losses than the preceding eight years. Our analysis of the larger 2011 events follows.

## 2. New Zealand February 22<sup>nd</sup> Earthquake

The South Island was hit by magnitude 6.3 and 5.6 quakes very close to Christchurch, which has a regional population near 500,000. It was a notably shallow event, and more damaging than the magnitudes alone suggest. These were both aftershocks to the September 4, 2010 magnitude 7.1 quake (epicentered 25 miles to the west) but are considered a separate occurrence under standard insurance and reinsurance contracts.

Many buildings are total collapse losses, more than seen last September. As in Chile last March, there are standing buildings that are still constructive total losses. Almost all property is insured for a primary earthquake layer by the government commission, with many owners placing excess layers commercially above that. There is little privately insured PA or WC business in New Zealand, although there will be some losses on Life and Travel coverages.

Loss reports by insurers are far higher than the Cat models estimated, with significant losses to time element and excess property coverages. We estimate over \$10 billion in direct loss, although other reports are even higher. These figures do not consider the further magnitude 6.0 and 5.2 aftershocks on June 13<sup>th</sup>.

### 3. Japan March 11<sup>th</sup> Earthquake and Tsunami

The loss began with an extremely powerful quake (magnitude 9.0) off the coast of northern Japan. The tsunami that followed was over 25 feet high when crossing straight coastlines, much higher in constrained bays, and affected hundreds of miles of coast, killing over 25,000 persons. The epicenter was only 80 miles from the city of Sendai (population 1,000,000) which sustained massive shake damage. There were many aftershocks with magnitudes between 7.0 and 7.5 and a surprising amount of soil liquefaction. The shake, tsunami and resulting fires damaged property over a wide area, most notably the reactors and fuel storage pools at the Fukushima power station, causing evacuations. Power outages and damage to roads, rail and other infrastructure interrupted a wide variety of manufacturers and exporters.

The Japan quake was one of the five strongest earthquakes in the previous hundred years. It was the strongest ever near a major city in a developed country. Cat modeling firms have reported this as a very significant loss on the coverages they can model.

#### Modeled Loss Estimates, Excluding Life, CBI, and On-Shore Cargo

Modeler	Released On	Published Range	Modeled Exclusions	Adjusted Range
AIR	March 25th	\$20Bn to \$30Bn	Auto, Marine, Demand Surge, LAE	\$26Bn to \$40Bn
RMS	April 12th	\$21Bn to \$34Bn	CBI on Non-Japanese Insureds, LAE	\$16Bn to \$24Bn
EQECAT	May 9th	\$22Bn to \$39Bn	CBI on Non-Japanese Insureds, LAE	\$18Bn to \$31Bn

## **Losses for other coverages**

To develop estimates for other coverages, and also to objectively review the modeled estimates, we have compared the degree of damage and values in this and previous events.

**Marine** – At least 100 miles of docks, piers and small vessels were struck. There are over \$2 billion in reported Hull losses only. That is close to the \$2 billion to \$4 billion that EQECAT estimates under all Marine coverages.

**Demand Surge** – Because of the many perils involved, demand surge will be higher than in most other events. We estimate 20% to 25% on losses that are below policy limits.

**Contingent Business Interruption and Cargo** – These two coverages are hard to underwrite and model because insureds cannot know what property is where at what time. The modeling companies appear to exclude the coverage U.S. and European insurers give for indirect Japanese exposures. These coverages are often included in blanket policies purchased by Fortune 500 manufacturers and other large multinationals. Insureds have submitted numerous large losses, although not all are over policy limits, and at least one notable loss has been reduced.

Cargo is all-risks and worldwide coverage. Goods are not only covered while they are moving, but also in piers, warehouses and storage yards. Large commercial insureds are also able to endorse cargo onto their main policies.

Based on early claim advices, we estimated that these two coverages are worth \$10 billion to \$15 billion. In the case of Fortune 500 accounts (and comparable European insureds), policy limits are often set at the value of the largest individual domestic plant.

**Life and Accident** – There is overlap between the toll of dead and missing, and when whole families were lost, there may not be survivors to report a claim. The identifiable toll will be approximately 25,000. We estimate that half will be insured with Life (not Accident) policies. Many Japanese Accident policies exclude deaths caused by earthquakes or other natural disasters. Also, Workers Compensation is insured by a monopolistic plan and not by the private market. Model estimates of \$2 billion to \$4 billion for the current cost to Life insurers are reasonable.

**Other loss considerations** – The modelers do not attempt to estimate Trip and Event Cancellation and Interruption. Some estimates for Auto note that Earthquake coverage on APD is often not taken up. There are damages to many leased and financed cars, which if not insured as APD, will fall to Auto “Gap” or Credit coverages. Finally, nuclear evacuations has worsened Time Element coverage for the insured perils.

**Loss Adjustment** – Model companies do not include LAE in their estimates, although reinsurance covers it. On large U.S. events, LAE often averages 6% to 8% of the direct loss amounts. The Japanese legal system is less contentious than the U.S.’s, but this loss will be more complex to handle. A reasonable range for estimated LAE would be 4% to 8% of loss.

### Ultimate Losses By Coverage

Coverage	Direct Losses
Shake and Fire Following	\$16 Bn to \$23 Bn
Tsunami On-shore	\$7 Bn to \$12 Bn
Tsunami on the Coast	\$2.5 Bn to \$5 Bn
CBI and On-shore Cargo	\$10 Bn to \$15 Bn
Life and Accident	\$2 Bn to \$4 Bn
Travel, Auto “Gap”, Credit	\$1 Bn to \$2 Bn
<u>Loss Adjustment</u>	<u>\$1.5 Bn to \$4 Bn</u>
<b>Market Loss and LAE</b>	<b>Likely Over \$50 Bn</b>

Holborn estimates including Demand Surge.

### Losses by Market Segment (\$Billions)

Market Segment	Direct Losses	Ceded to Cat	Ceded to Risk	Non-Market Retro	Net
Japanese General	\$12 to \$18	(\$4 to \$8)	(\$2 to \$4)	\$0	\$8 to \$16
Co-operatives	10 to 15	(4 to 6)	0	0	6 to 9
Foreign Direct	8 to 12	(1 to 2)	(1 to 2)	0	7 to 12
Life Companies	2 to 4	(0 to 2)	0	0	2 to 3
Rated Reinsurers	6 to 18	10 to 20	3 to 5	(1 to 2)	20 to 30
Cat Bonds / Collateralized	0	0	0	1 to 2	1 to 2
<b>Total</b>	<b>Over \$50</b>				<b>Over \$50</b>

## 4. Second Quarter U.S. Losses

Damage from the April 26-28 tornado outbreak spanned 14 states, but loss was especially severe in northern Alabama, including Tuscaloosa (population 93,000) and portions of Birmingham (population 212,000). Modeling firm EQECAT estimated that as many as 10,000 buildings were destroyed with up to \$5 billion of insured losses. Market loss advices are somewhat higher. The death toll is above 340, with 250 deaths in Alabama alone; it represents the largest loss of U.S. lives from a natural

disaster since Hurricane Katrina. Based on insurers’ loss reports, we estimate the of total loss in April including this outbreak and others at \$10 billion in direct losses.

On May 22<sup>nd</sup>, a series of 48 tornadoes struck the northern and southern plains. One tracked through the center of Joplin, Missouri (population 50,000) causing major damage to buildings and infrastructure. The local hospital was badly damaged (equipment was carried as far as 45 miles), with market loss reports of \$600 million for this risk alone. Several other businesses have been completely destroyed, including large retailers. Over 7,000 property claims have been reported. The death toll is 159. We estimate \$3 billion in insured losses for the outbreak.

Rain and an earlier wet spring have raised the Mississippi, Missouri and other rivers to flood stage, but so far the levee system has succeeded in protecting larger cities. Controlled levee releases have caused extensive crop damage and some damage to smaller towns, farms and equipment. We estimate the total insured property and crop loss as at least \$2 billion dollars. This estimate is prior to June’s flooding in Minot, ND, which will cause crop and equipment claims to several thousand farms.

## 5. Summary: First Half Reinsured Events

Event	Dates	Description	Reported Deaths	Direct Loss	Reinsured Loss
Queensland Floods and Typhoon Yasi	Dec. '10 - Jan. '11; Feb. 3	Series of floods hit Queensland, Australia. 75% of Queensland declared a disaster zone.	35	\$5Bn	\$2Bn - \$2.5Bn
Victoria Floods	Jan. 12 - Mar. 19	High intensity rainfall caused flash flooding in the Australian state of Victoria.	2	\$1Bn	\$250Mn - \$500Mn
Northeast U.S. Ice and Snow	Feb. 3	Heavy snowfalls and ice.	0	>\$5Bn	Moderate
Gryphon Shutdown	Feb. 4	Maersk Oil's floating production vessel, Gryphon, suffered 4 broken chain anchors during a storm. Lost daily production of 14,500 barrels.	0	\$750Mn	Direct
Christchurch, NZ Earthquake	Feb. 22	Epicenter 6.2 miles southeast of Christchurch.	172	>\$10Bn	>\$8Bn
Japan Earthquake and Tsunami	Mar. 11	Epicenter 43.4 miles from coast of Tohoku. Caused Tsunami. Level 7 nuclear event.	25,000 - 27,500	>\$50Bn	>\$20Bn
U.S. Tornadoes	Apr. 27	Tornado outbreaks affecting Tuscaloosa and Birmingham, Alabama.	>340	\$6Bn (\$10Bn April total)	\$1Bn - \$2Bn
Alberta Wild Fires	May 1	Fires in Northern Alberta forced oil sands producers to halt output and destroyed equipment and part of a town of 7,000 people.	0	\$1.25Bn	Direct
U.S. Tornadoes	May 22	Multiple vortex tornado through Joplin, MO.	159	\$3Bn	>\$1Bn
Mississippi Floods	Apr. - May '11	Among largest and most damaging recorded along US waterway in past century. 25,000 homes evacuated.	>20	>\$2Bn	Moderate
Christchurch Aftershocks	June 13	Magnitude 6.2 and 5.0 aftershocks from the Christchurch earthquake that occurred in February.	1	TBD	Some
<b>11 Losses</b>	<b>First Half, 2011</b>			<b>Over \$90Bn</b>	<b>Over \$35Bn</b>

## 6. 2011 Hurricane Outlook

The weather patterns that resulted in an active 2010 hurricane season seem likely to continue at least partway into 2011. Although, the La Niña conditions in the Pacific appear to be reducing, which would lower the U.S. risk. The early forecasts are for a moderately active year, but well above pre-'04 levels.

Business written in 2009 through 2011 reflects lower building values, and thus tends to have depressed insured values. In addition, coverage terms have been softening, with increased use of blanket limits, and more liberal coverage for flood and earthquake on middle-market commercial business. There is more exposure per dollar of premium or TIV than would have been the case earlier. Even if the market and economy recover quickly, most of the business that will earn in 2012 has already been written, and worse than average loss experience may continue.

## C. Worldwide Reinsurance Industry Results

We analyzed the consolidated experience of the worldwide reinsurance industry that is active in the United States. This analysis includes all professional reinsurers, excluding companies that have ceased writing business or are exclusively government sponsored, such as the Federal Flood program and SRA in the United States, CRC in France, etc. We include companies that are not exclusively reinsurers but that are influential lead markets in the U.S. Finally, we exclude reinsurers that exclusively reinsure county and township mutuals, and un-rated collateralized markets.

The worldwide reinsurance industry is:

- **Moderately profitable** overall (a 9% compound ROE since year-end 2000)
- **Volatile** (calendar year ROE's ranging between -9% and +20%)
- **Shrinking** (the 2011 market will show less premium than 2003's)
- **Merging** (with TRC-AWAC and HarborPoint-Max seen as very workable combinations.)

Adjusting reported data for foreign affiliates and exchange rates, Holborn calculates 2010 results of:

- **Net Earned Premiums** – \$184 billion (down approximately 2%)
- **Combined Ratio** – 88.3% (up by two points)
- **Net Income** – \$22.6 billion (down, but still far above the long-term average levels)
- **Return on Equity** – 10.6% (also down, but still strong)
- **Year-end Capital** – flat at \$214 billion (GAAP basis except for RAA members)

- **Assets** – Basically flat at +0.2% growth
- **Large Losses** – Industry events in 2010 added about 9 points to reinsurers’ all lines loss ratios, about 4 points more than normal.

Based on Cat losses to date and current levels in currency markets and investments, Holborn estimates that year-end 2011 market results will show:

- Underwriting losses, driven by 2010 and 2011 Cat losses, expense pressure and previous rate decreases that will continue to earn throughout the year.
- Flat premium volumes, as mid-year rate increases will not outpace the earlier declines.
- Reduced financial flexibility with falling or negative cashflow, unrealized capital losses on long-term bond portfolios, and share prices that do not make cash mergers or new issues attractive.

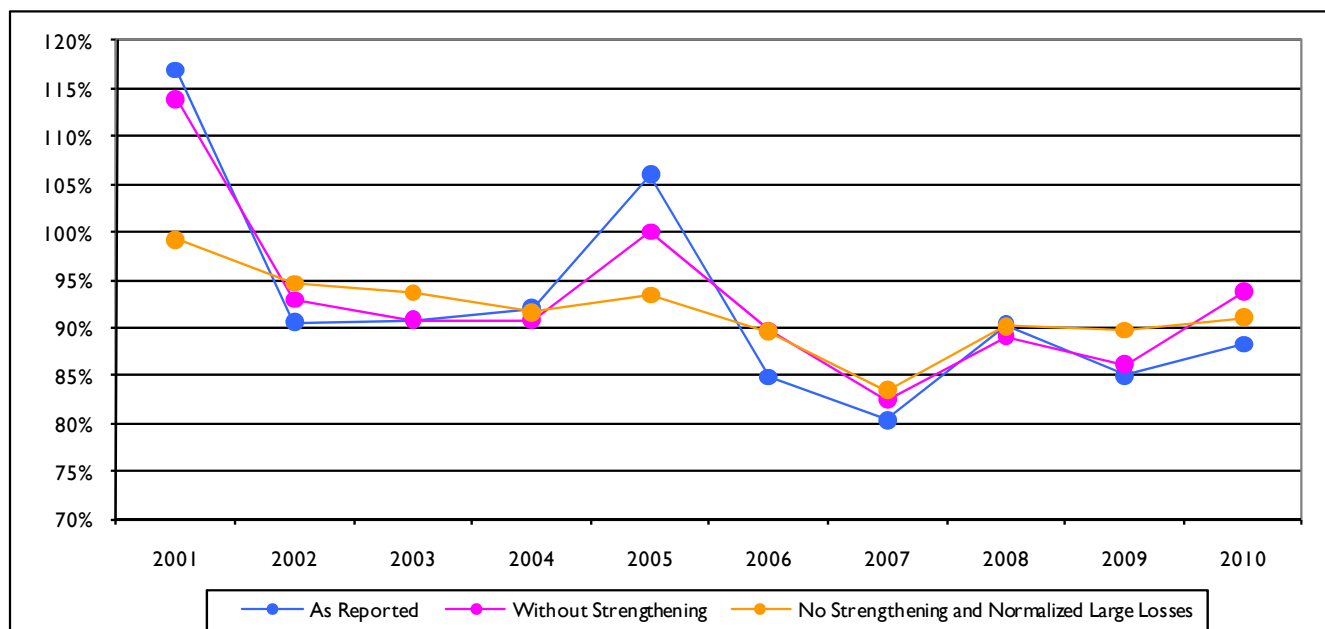
### Worldwide industry results

	Gross Premiums Written	Net Premiums Earned	Net Underwriting Gain	Combined Ratio	Net Income/ Loss	Capital Funds	Return on Equity
2001	\$125,655	\$97,047	(\$17,328)	117.9%	(\$7,148)	\$74,422	-9.2%
2002	156,393	125,691	6,117	95.1%	4,169	80,271	5.6%
2003	203,412	173,934	14,349	91.8%	11,314	126,905	14.1%
2004	203,781	181,778	12,582	93.1%	14,151	145,110	11.2%
2005	185,906	164,895	(7,726)	104.7%	2,265	152,013	1.6%
2006	196,633	168,101	27,203	83.8%	30,765	195,383	20.2%
2007	207,110	180,877	29,852	83.5%	32,772	206,726	16.8%
2008	194,399	169,907	18,005	89.4%	5,522	170,894	2.7%
2009	213,307	187,131	26,037	86.1%	26,771	212,724	15.7%
2010	215,157	184,320	21,631	88.3%	22,675	214,681	10.7%
2011 (est.)	\$210,000 to \$220,000	\$180,000 to \$190,000	(\$10,000) to (\$20,000)	105% to 115%	\$0 to (\$10,000)	\$205,000 to \$215,000	0 to -5.0%
<b>10-Year Average</b>	<b>\$190,175</b>	<b>\$163,368</b>	<b>\$13,072</b>	<b>92.0%</b>	<b>\$14,325</b>	<b>\$157,913</b>	<b>9.1%</b>

Notes: \$Mns. Gross premiums include retrocessions.

We also review underwriting results adjusting for reserve strengthening and large losses, based on a 10-year history of large reinsured events. 2011 estimates assume no further worldwide events above \$5 billion in direct losses.

### Reinsurance industry combined ratios



Notes: Trade basis, calendar year. Details in Appendix I

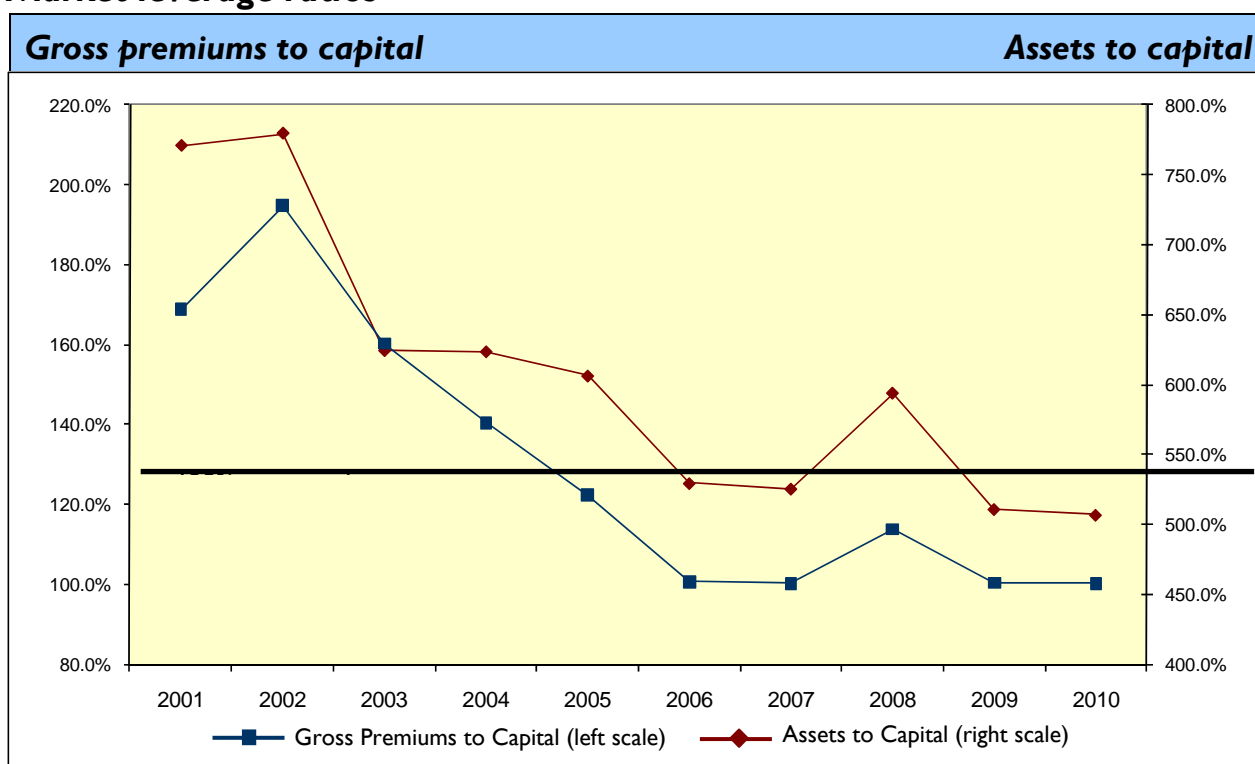
On a normalized basis, with large losses smoothed at average levels and without reserve strengthening, results are much less volatile. Reinsurers’ booked results in 2010 were roughly five points better than our normalized ratios, due to five to seven points of reserve weakening, partly offset by large loss experience that is three to five points worse than average.

### Growth in premiums and capital

	Gross Premiums Written	Premium Growth Rate	Adjusted For Exchange Rates	Year-end Capital Funds	Premium Leverage Ratio	Asset Leverage Ratio
2001	\$125,655			\$74,422	168.8%	7.71x
2002	156,393	24.3%	17.5%	80,271	194.8%	7.81x
2003	203,412	29.8%	18.8%	126,905	160.3%	6.24x
2004	203,781	0.1%	-3.9%	145,110	140.4%	6.23x
2005	185,901	-8.8%	-1.8%	150,762	123.3%	6.06x
2006	195,961	5.4%	-2.3%	193,915	100.6%	5.30x
2007	206,423	5.3%	3.2%	204,750	100.2%	5.26x
2008	193,563	-6.2%	-3.0%	169,008	113.8%	5.93x
2009	212,381	9.7%	5.0%	210,613	100.3%	5.10x
2010	215,157	0.3%	0.0%	214,681	100.2%	5.06x
<b>10-Year Average</b>	<b>\$189,863</b>	<b>6.7%</b>	<b>3.7%</b>	<b>\$157,044</b>	<b>130.3%</b>	<b>6.07x</b>

Note: \$/Mns.

### Market leverage ratios



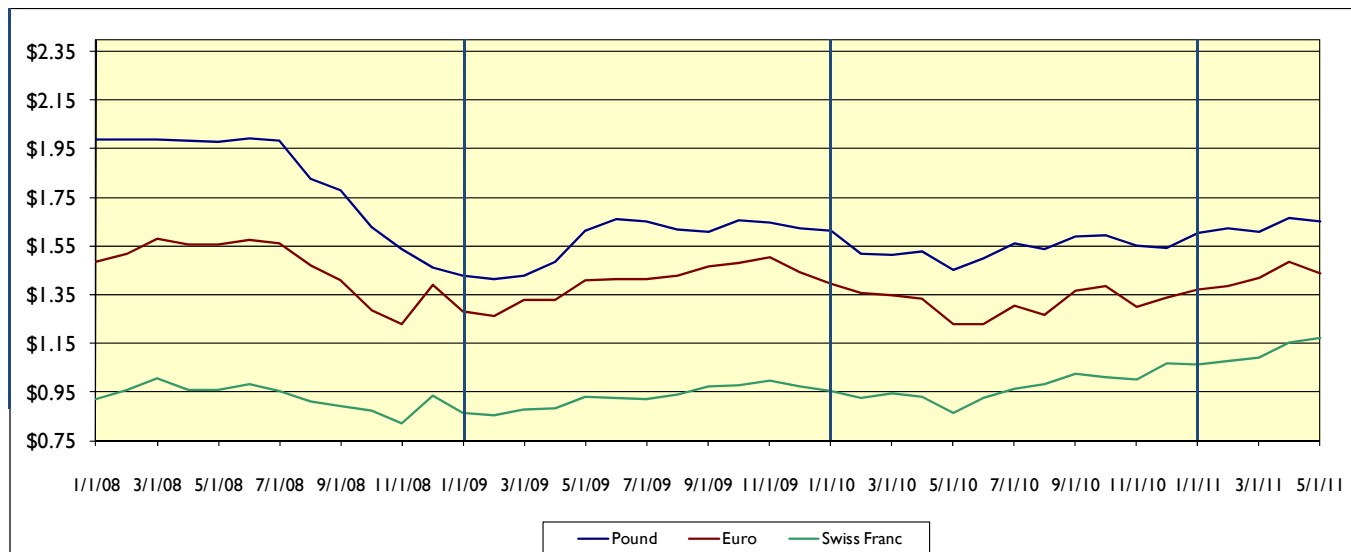
Holborn estimates that at a market average premium-to-capital ratio above 125% (shown as a black line in the graph above), some reinsurers would need to reduce capacity.

### Industry capital peaked in 2009 and 2010

	Net Income/Loss	Increases from Exchange Rates	Reductions from Restructuring and Mergers	Unrealized Gains (After-tax)	Net Capital Additions	Total Changes in Capital Funds
2001	(\$7,148)	(\$1,810)	\$0	\$0	\$5,472	(\$3,485)
2002	4,169	6,875	(6,800)	0	1,605	5,849
2003	11,314	6,253	7,100	0	21,967	46,634
2004	14,151	4,734	0	0	(681)	18,204
2005	2,264	(8,688)	0	0	12,077	5,652
2006	30,604	8,045	(5,000)	0	9,505	43,153
2007	32,611	6,804	0	0	(28,581)	10,834
2008	5,527	(8,039)	(1,500)	(35,000)	3,270	(35,742)
2009	26,506	4,483	0	12,000	(1,383)	41,606
2010	26,711	(1,915)	0	(12,000)	(11,539)	1,257
<b>2001 – 2010</b>	<b>\$146,708</b>	<b>\$16,742</b>	<b>(\$6,200)</b>	<b>(\$35,000)</b>	<b>\$11,713</b>	<b>\$133,962</b>
<b>10-Year Average</b>	<b>\$14,671</b>	<b>\$1,674</b>	<b>(\$690)</b>	<b>(\$3,500)</b>	<b>\$1,171</b>	<b>\$13,396</b>

Notes: \$Mns. Restructurings involve: Munich-Allianz, Hannover-DHI, Converium-SCOR, Swiss-ERC, XL-SCA, Partner-Paris and Validus-IPC. Negative amounts shown as capital increases in 2007 and 2010 are largely stock repurchases. Net capital increases are calculated to balance to total change, and include miscellaneous items, with dividends and buy-backs shown as decreases.

**Key foreign currencies have risen against the U.S. dollar consistently in 2010 and 2011.**



A weaker dollar tends to raise industry capital levels and premium volumes, when measured in U.S. dollars.

**2011 Estimates**

Holborn forecasts the market will continue to show moderate, if any, growth and falling leverage ratios.

	Gross Premiums Written	Combined Ratio	Net Income	Net New Capital	Change in Capital	Year-end Capital	Gross Leverage Ratio
<b>2011 Estimates</b>	\$210,000 to \$220,000	105% to 115%	\$0 to (\$10,000)	\$5,000	(\$5,000) to \$5,000	\$205,000 to \$215,000	100% - 105%
<b>2010 Actual</b>	\$214,894	88.3%	\$22,600	(\$10,000)	\$1,257	\$213,921	100.4%
<b>2001–2010 Averages</b>	\$190,149	92.0%	\$14,318	\$1,364	\$13,396	\$157,843	130.3%

Note: \$Mns.

The 2011 estimates assume no losses over \$5 billion gross in the second half and no cash mergers. Mergers are increasingly likely and tend to reduce capital. The estimates also assume that the equity and currency markets remain near mid-year levels.

## D. For More Information

### **Holborn contacts:**

Paul Kneuer

Jon Christianson

David Harding

Duane Hynes

Holborn prepares the latest information on these issues in a variety of easy-to-use formats. We provide updates on recent and potential catastrophe events for several regions through an e-mail service. We also offer clients a monthly summary of reinsurer financial news and rating information. Holborn’s Eye-in-the-Sky(SM) data management tool provides individually-tailored alerts on events that expose clients’ accumulations.

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Holborn is the largest independent reinsurance brokerage firm in the U.S., offering advanced analytic tools, global market access and responsive account services to clients. The company was formed in 1920, making us one of the most experienced reinsurance brokers in the world. We are owned exclusively by our employees. This contributes to Holborn’s stable client base and noteworthy ability to attract and retain talent.

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<http://www.holborn.com/perspectives.aspx>

## Appendices

1. Normalized Industry Results
2. Major U.S. Losses Since 1965
3. Major Reinsured Losses Since 2001
4. Largest Reinsured Losses
5. Public Reinsurers’ 1<sup>st</sup> Half 2011 Announced Losses

## I. Normalized Industry Results

### Results excluding reserve strengthening and worldwide industry losses over 0.5% of U.S. Industry NEP.

	Net Income/ Loss	Casualty Reserve Strengthening	Property Reserve Strengthening	Estimated Cat Losses	Tax Effect	Adjusted Net Income/ Loss
2001	(7,148)	\$3,853	(\$3,000)	\$23,000	(\$6,114)	\$10,591
2002	\$4,169	\$2,750	\$3,000	\$1,500	(\$1,851)	\$9,568
2003	\$11,314	\$1,722	\$0	\$2,250	(\$839)	\$14,447
2004	\$14,151	\$3,970	(\$2,000)	\$8,250	(\$2,066)	\$22,304
2005	\$2,265	\$7,805	(\$10,000)	\$28,500	(\$4,951)	\$23,618
2006	\$30,765	(\$9,686)	\$8,000	\$0	\$304	\$29,222
2007	\$32,772	\$1,699	\$4,000	\$2,250	(\$1,651)	\$38,910
2008	\$5,522	\$358	(\$2,000)	\$8,000	(\$1,322)	\$10,563
2009	\$26,771	(\$2,900)	\$2,000	\$750	\$31	\$26,387
2010	\$22,675	(\$5,000)	(\$10,000)	\$21,250	(\$1,250)	\$27,675
<b>2001-2010 Average</b>	<b>\$14,326</b>	<b>\$457</b>	<b>(\$1,000)</b>	<b>\$9,575</b>	<b>(\$1,971)</b>	<b>\$21,328</b>

Notes: \$Mns. No tax-effect on unconsolidated Bermuda companies or Lloyd's syndicates. Reserve strengthening reflects disclosed amounts for U.S. casualty excess business, and Holborn estimates of property losses that emerge in the year following major events.

### Results excluding reserve strengthening and with large losses at average levels

	Adjusted Net Income		Normalized Combined Ratio	Normalized Return
	No Strengthening and No Large Losses	But Average Large Losses		
2001	\$10,591	\$6,326	100.7%	8.1%
2002	\$9,568	\$4,645	99.8%	6.2%
2003	\$14,447	\$8,722	95.3%	10.9%
2004	\$22,304	\$16,317	91.9%	12.9%
2005	\$23,618	\$17,372	88.8%	12.0%
2006	\$29,222	\$22,804	95.8%	15.1%
2007	\$38,910	\$32,684	86.9%	16.9%
2008	\$10,563	\$4,519	90.4%	2.2%
2009	\$26,387	\$20,431	89.7%	12.1%
2010	\$27,675	\$18,828	91.0%	8.9%
<b>2001-2010 Average</b>	<b>\$21,328</b>	<b>\$15,265</b>	<b>93.0%</b>	<b>10.5%</b>

Note: \$Mns.

## 2. Major U.S. Losses Since 1965 (Events over 0.5% of DWP)

Year	Loss	Reported Fatalities	Worldwide Direct Insured Losses	% of U.S. Industry DEP
1965	<b>Hurricane Betsy</b>	76	\$1.5 Bn	>7%
1967	Hurricane Beulah	58	\$200 Mn	0.9%
1969	<b>Hurricane Camille</b>	259	\$1.5 Bn	5.4%
1970	Lubbock Tornado	26	\$350 Mn	1.1%
1970	Hurricane Celia	28	\$600 Mn	1.9%
1970	Bayway Refinery	0	\$500 Mn	1.6%
1971	Mississippi Valley Tornado Outbreak	115	\$300 Mn	0.9%
1972	<b>Hurricane Agnes</b>	130	\$3.5 Bn	9.3%
1973	Mississippi River Flooding	33	\$500 Mn	1.2%
1974	Xenia Tornado Outbreak (Cat 74)	330	\$1 Bn	2.3%
1974	Hurricane Carmen	4	\$300 Mn	0.7%
1975	Omaha Tornado	3	\$1 Bn	2.1%
1976	Hurricane Belle	10	\$450 Mn	0.8%
1978	U.S. Blizzard	100	\$800 Mn	1.0%
1979	Red River Valley Tornado Outbreak	58	\$650 Mn	0.7%
1979	American Airlines DC-10 Crash	273	\$500 Mn	0.6%
1979	Hurricane Frederic	12	\$2 Bn	2.3%
1980	Mt. St. Helens Explosion	57	\$2 Bn	2.1%
1980	Hurricane Allen	290	\$750 Mn	0.8%
1980	MGM Grand Fire	85	\$750 Mn	0.8%
1983	Hurricane Alicia	21	\$1.5 Bn	1.4%
1984	Carolinas Tornado Outbreak	57	\$750 Mn	0.7%
1986	Dupont Plaza Hotel Fire	97	\$850 Mn	0.5%
1989	Exxon Valdez Oil Spill	0	\$4.5 Bn	2.2%
1989	<b>Hurricane Hugo</b>	56	\$7 Bn	3.4%
1989	<b>Loma Prieta Earthquake</b>	63	\$7.5 Bn	3.6%
1989	Phillips Petroleum Explosion	23	\$1.5 Bn	0.7%
1992	<b>Hurricane Andrew</b>	26	\$15.5 Bn	6.9%
1992	Hurricane Iniki	6	\$1.5 Bn	0.7%
1993	Mississippi Flood	50	\$3 Bn	1.3%
1994	<b>Northridge Earthquake</b>	72	\$17.5 Bn	7.2%
1995	Texas Hail (Cat 38)	13	\$4 Bn	1.6%
1995	Hurricane Opal	70	\$3 Bn	1.2%
1996	Hurricane Fran	26	\$3.5 Bn	1.3%
1998	North American Ice Storm	35	\$1.5 Bn	0.5%
1998	Hurricane Georges	604	\$4 Bn	1.4%
1999	Hurricane Floyd	57	\$5 Bn	1.7%
2001	Hurricane Allison	41	\$3.5 Bn	1.1%
2001	<b>September 11th Attacks</b>	3,017	\$41 Bn	12.7%
2003	St. Louis Tornadoes	45	\$3.5 Bn	0.9%
2003	California Wild Fires	15	\$3.5 Bn	0.9%
2004	<b>Hurricane Charley</b>	35	\$12.5 Bn	2.9%
2004	Hurricane Frances	49	\$7 Bn	1.6%
2004	<b>Hurricane Ivan</b>	123	\$13 Bn	3.0%
2004	Hurricane Jeanne	3,035	\$5 Bn	1.2%
2005	<b>Hurricane Katrina</b>	1,836	\$65 Bn	15.1%
2005	Hurricane Rita	120	\$9 Bn	2.1%
2005	<b>Hurricane Wilma</b>	35	\$18.5 Bn	4.3%
2007	California Wild Fires	14	\$3 Bn	0.7%
2008	U.S. Floods	13	\$2.5 Bn	0.6%
2008	Hurricane Gustav	153	\$7 Bn	1.6%
2008	<b>Hurricane Ike</b>	195	\$20 Bn	4.4%
2010	Deepwater Horizon	11	\$3.5 Bn	0.8%
2011	Alabama Tornado Outbreak	249	\$10 Bn	2.3%
2011	Missouri Tornado Outbreak	156	\$3 Bn	0.7%
<b>1965 – 2011 Totals</b>		<b>55 Events</b>	<b>12,365</b>	<b>\$330 Bn to \$360 Bn</b>
<b>46-Year Averages</b>		<b>1.2 per year</b>	<b>&gt; 220</b>	<b>\$7 Bn to \$8 Bn</b>

Source: Holborn estimates of worldwide market loss, all coverages, including LAE; Based on PCS, III, Sigma and market reports. Actual loss amounts, not adjusted for inflation. Foreign currencies converted at historic rates.

### 3. Major Reinsured Losses Since 2001

Year	Loss	Worldwide Direct		Reinsured	% of Reinsurance	
		Insured Losses	Insured Lives	Losses	Industry NEP	
2001	Hurricane Allison	\$3.5 Bn		\$1 Bn to \$2 Bn	0.8% to 1.6%	
<b>2001</b>	<b>September 11th Attacks</b>	<b>\$41 Bn</b>	<b>2,750</b>	<b>\$20 Bn to \$25 Bn</b>	<b>15% to 20%</b>	
2001	AZF Toulouse Explosion	\$2.5 Bn		\$1 Bn to \$1.75 Bn	0.8% to 1.4%	
2002	Czech Floods	\$4 Bn		\$1 Bn to \$2 Bn	0.6% to 1.3%	
2003	St. Louis Tornadoes	\$3.5 Bn		\$1 Bn to \$2 Bn	0.5% to 1.0%	
2003	Hurricane Isabel	\$1.5 Bn		\$750 Mn to \$1 Bn	0.4% to 0.5%	
2004	Hurricane Charley	\$12.5 Bn		\$1.5 Bn to \$2.5 Bn	0.75% to 1.25%	
2004	Hurricane Frances	\$7 Bn		\$1 Bn to \$2 Bn	0.5% to 1.0%	
2004	Typhoon Songda	\$3.5 Bn		\$1 Bn to \$1.5 Bn	0.5% to 0.75%	
2004	Hurricane Ivan	\$13 Bn	60	\$1.5 Bn - \$2.5 Bn	0.75% to 1.25%	
2004	Hurricane Jeanne	\$5 Bn		\$1 Bn to \$2 Bn	0.5% to 1.0%	
<b>2005</b>	<b>Hurricane Katrina</b>	<b>\$65 Bn</b>	<b>1,250</b>	<b>\$20 Bn to \$24 Bn</b>	<b>10.7% to 14.6%</b>	
2005	Hurricane Rita	\$9 Bn	60	\$2 Bn to \$3 Bn	1.1% to 1.6%	
2005	Hurricane Wilma	\$18.5 Bn*		\$3 Bn to \$4 Bn	1.6% to 2.2%	
2007	European Winter Storm Kyrill	\$6 Bn	20	\$1 Bn to \$1.5 Bn	0.5% to 0.7%	
2007	UK Floods	\$7 Bn		\$1 Bn to \$1.5 Bn	0.5% to 0.7%	
2008	Hurricane Gustav	\$7 Bn		\$1 Bn to \$2 Bn	0.5% to 1.0%	
2008	U.S. Floods	\$2.5 Bn	13	\$750 Mn to \$1 Bn	0.4% to 0.5%	
<b>2008</b>	<b>Hurricane Ike</b>	<b>\$20 Bn</b>	<b>55</b>	<b>\$6 Bn to \$7 Bn</b>	<b>3.1% to 3.6%</b>	
2010	Chile Earthquake	\$10 Bn to \$14 Bn	400	\$9 Bn to \$12 Bn	4.5% to 6.0%	
2010	European Windstorm Xynthia	\$3.5 Bn		>\$1 Bn	>0.6%	
2010	Deepwater Horizon	\$3.5 Bn		>\$2 Bn	>1.0%	
2010	Canterbury, NZ Earthquake	\$5.0 Bn to \$6.0 Bn		\$4 Bn to \$5 Bn	2.3% to 2.8%	
2010	Australia Hail	\$2.5 Bn		\$1 Bn to \$1.5 Bn	0.5% to 0.7%	
2011	Australian Floods	\$5 Bn		\$1.75 Bn to \$2.25 Bn	0.8% to 1.0%	
2011	Cyclone Yasi	\$2 Bn		\$750 Mn to \$1 Bn	0.3% to 0.5%	
<b>2011</b>	<b>Christchurch, NZ Earthquake</b>	<b>&gt;\$10 Bn</b>	<b>&gt;50</b>	<b>&gt;\$8 Bn</b>	<b>&gt;4.2%</b>	
<b>2011</b>	<b>Japan Earthquake and Tsunami</b>	<b>&gt;\$50 Bn</b>	<b>12,500</b>	<b>&gt;\$20 Bn</b>	<b>&gt;10.5%</b>	
2011	Tuscaloosa Tornado Outbreak	\$6 Bn	125	\$1 Bn to \$2 Bn	0.5% to 0.9%	
2011	Missouri Tornado Outbreak	\$3 Bn	156	\$1.25 Bn to \$1.75 Bn	0.6% to 0.8%	
<b>2001 to 2011 Totals</b>		<b>28 Events</b>	<b>\$330 Bn to \$350 Bn</b>	<b>&gt;18,000</b>	<b>\$130 Bn to \$150 Bn</b>	
<b>11-Year Averages</b>		<b>2.5 per year</b>	<b>\$30 Bn to \$32 Bn</b>	<b>&gt;1,600</b>	<b>\$12 Bn to \$14 Bn</b>	<b>6.6%</b>

Source: Holborn estimates of market loss, all coverages, including LAE; based on PCS, III, Sigma and market reports. Actual loss amounts, not adjusted for inflation; foreign currencies converted at historic rates: Events listed are over 0.5% of reinsurance industry NEP.

\*U.S. only loss and expenses: \$16 Bn.

#### 4. Largest Reinsured Losses

Rank	Year	Event	Gross Loss	Range of Reinsured Loss		
1	2011	Japan Earthquake and Tsunami	>\$50 Bn	\$20 Bn	to	\$30 Bn
2	2001	September 11th Attacks	\$41 Bn	\$20 Bn	to	\$25 Bn
3	2005	Hurricane Katrina	\$65 Bn	\$18 Bn	to	\$24 Bn
4	2010	Chile Earthquake	\$12 Bn to \$15 Bn	\$9 Bn	to	\$12 Bn
5	2011	NZ (Christchurch) Earthquake	>\$10Bn	\$8 Bn	to	\$10 Bn
6	2008	Hurricane Ike	\$20 Bn	\$6 Bn	to	\$7 Bn
7	1994	Northridge Earthquake	\$17.5 Bn	\$5 Bn	to	\$6 Bn
8 (tie)	2005	Hurricane Wilma	\$18.5 Bn	\$3 Bn	to	\$4 Bn
8 (tie)	1992	Hurricane Andrew	\$15.5 Bn	\$3 Bn	to	\$4 Bn
8 (tie)	1999	European Winter Storm Lothar	\$9 Bn	\$3 Bn	to	\$4 Bn
11	2010	NZ (Canterbury) Earthquake	\$5 Bn to \$6 Bn	\$2.5 Bn	to	\$3.5 Bn
12 (tie)	2005	Hurricane Rita	\$9 Bn	\$2 Bn	to	\$3 Bn
12 (tie)	1989	Loma Prieta Earthquake	\$7.5 Bn	\$2 Bn	to	\$3 Bn
12 (tie)	1989	Hurricane Hugo	\$7 Bn	\$2 Bn	to	\$3 Bn
12 (tie)	1990	UK Winter Storm (Burn's day)	\$7 Bn	\$2 Bn	to	\$3 Bn
12 (tie)	1988	Hurricane Gilbert	\$6 Bn	\$2 Bn	to	\$3 Bn
12 (tie)	1991	Typhoon Mireille	\$5 Bn	\$2 Bn	to	\$3 Bn
12 (tie)	1999	Taiwan Earthquake	\$5 Bn	\$2 Bn	to	\$3 Bn
19	2010	Deepwater Horizon	\$3.5 Bn	\$2 Bn	to	\$2.5 Bn
20	2004	Hurricane Ivan	\$13.5 Bn	\$1.5 Bn	to	\$2.5 Bn

Notes: *Holborn loss and LAE estimates.*  
*Nominal (i.e., uninflated dollars).*  
*Worldwide, all coverages combined.*  
*Reinsured loss includes direct participations by reinsurers.*  
*Deepwater excludes D&O.*

## 5. Public Reinsurers’ 1st Half 2011 Announced Losses (\$thousands)

Reinsurer Group	2011 NZ/Aust Storms (000's)	2011 Japan Earthquake (000's)	2011 U.S. 2nd Qtr. Tornadoes (000's)	2011 Combined Total Loss (000's)	Group Surplus 12/31/2010 (000's)	Percent of Surplus NZ/Aust	Percent of Surplus Japan	Percent of Surplus Tornadoes	Percent of Surplus Total Loss
<b>Reporting two or more events</b>									
Flagstone Re	\$145,000	\$105,000		\$250,000	\$1,134,733	12.78%	9.25%		22.03%
Chaucer	\$27,600	\$48,500		\$76,100	\$493,498	5.59%	9.83%		15.42%
* Novae Group		\$70,000		\$70,000	\$455,776		15.36%		15.36%
PartnerRe	\$305,000	\$730,000	\$60,000	\$1,095,000	\$7,206,919	4.23%	10.13%	0.83%	15.19%
Amlin P.L.C.	\$201,500	\$185,000		\$386,500	\$2,682,651	7.51%	6.90%		14.41%
Hiscox	\$116,000	\$105,000	\$55,900	\$276,900	\$1,965,477	5.90%	5.34%	2.84%	14.09%
Montpelier	\$90,000	\$126,000		\$216,000	\$1,628,800	5.53%	7.74%		13.26%
Platinum Underwriters	\$160,000	\$87,000		\$247,000	\$1,895,455	8.44%	4.59%		13.03%
Munich Re	\$1,490,000	\$2,130,000	\$125,000	\$3,745,000	\$30,770,014	4.84%	6.92%	0.41%	12.17%
RenaissanceRe	\$220,000	\$220,000		\$440,000	\$3,939,214	5.58%	5.58%		11.17%
Hannover Re	\$342,900	\$354,200	\$46,000	\$743,100	\$6,838,538	5.01%	5.18%	0.67%	10.87%
Omega	\$22,100	\$23,600		\$45,700	\$421,563	5.24%	5.60%		10.84%
Catlin	\$173,100	\$200,000		\$373,100	\$3,448,000	5.02%	5.80%		10.82%
AXIS Capital	\$295,000	\$285,000		\$580,000	\$5,624,970	5.24%	5.07%		10.31%
Torus Insurance Holdings	\$35,000	\$60,000		\$95,000	\$950,600	3.68%	6.31%		9.99%
Aspen Ins. Holdings	\$90,000	\$160,000	\$60,000	\$310,000	\$3,241,900	2.78%	4.94%	1.85%	9.56%
Swiss Re	\$1,125,000	\$1,200,000		\$2,325,000	\$25,344,000	4.44%	4.73%		9.17%
SCOR S.E.	\$267,200	\$257,200		\$524,400	\$5,812,470	4.60%	4.42%		9.02%
Everest Re Group	\$220,000	\$320,000		\$540,000	\$6,283,517	3.50%	5.09%		8.59%
Transatlantic Holdings	\$115,000	\$240,000		\$355,000	\$4,284,459	2.68%	5.60%		8.29%
Endurance Specialty	\$60,000	\$125,000	\$50,000	\$235,000	\$2,848,153	2.11%	4.39%	1.76%	8.25%
Validus Holdings	\$37,500	\$139,000	\$65,000	\$241,500	\$3,504,831	1.07%	3.97%	1.85%	6.89%
Argo International	\$40,000	\$60,000		\$100,000	\$1,626,100	2.46%	3.69%		6.15%
Arch Capital	\$97,500	\$80,000	\$100,000	\$277,500	\$4,513,003	2.16%	1.77%	2.22%	6.15%
QBE Ins Group	\$425,000	\$125,000		\$550,000	\$10,311,000	4.12%	1.21%		5.33%
Alterra Capital	\$32,000	\$80,000	\$23,000	\$135,000	\$2,918,270	1.10%	2.74%	0.79%	4.63%
XL Group plc	\$162,500	\$240,000	\$62,500	\$465,000	\$10,613,049	1.53%	2.26%	0.59%	4.38%
Allied World	\$35,000	\$75,000		\$110,000	\$3,100,000	1.13%	2.42%		3.55%
* Ariel Holdings		\$42,500		\$42,500	\$1,545,218		2.75%		2.75%
ACE Ltd.	\$210,000	\$225,000		\$435,000	\$22,974,000	0.91%	0.98%		1.89%
<b>Totals</b>	<b>\$6,367,300</b>	<b>\$7,944,500</b>	<b>\$647,400</b>	<b>\$14,959,200</b>	<b>\$176,747,947</b>				<b>8.5%</b>
<b>Reporting one event</b>									
Hardy	\$16,800			\$16,800	\$237,978	7.06%			
Lancashire Holdings Ltd.		\$75,000		\$75,000	\$1,286,900		5.83%		
R+V Re		\$107,000		\$107,000	\$5,894,958		1.82%		
<b>Grand Total</b>	<b>\$6,384,100</b>	<b>\$8,126,500</b>		<b>\$15,158,000</b>	<b>\$184,167,783</b>				<b>8.2%</b>
*Novae and Ariel reported a combined estimate which has been reported in the Japan column Loss estimates for each group are taken at the mid-point of their ranges.									

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