2011 HALF-YEAR NATURAL CATASTROPHE REVIEW

July 12, 2011
Agenda

Welcome/Introduction
Terese Rosenthal

U.S. Natural Catastrophe Update
Carl Hedde

Global Natural Catastrophe Update
Peter Hörppe

Economic Implications of Natural Catastrophe Losses
Dr. Robert Hartwig

Questions and Answers
U.S. NATURAL CATASTROPHE UPDATE

Carl Hedde, SVP, Head of Risk Accumulation
Munich Reinsurance America, Inc.
From 1980 until today all loss events; for USA and selected countries in Europe all loss events since 1970.

- Retrospectively, all great disasters since 1950.
- In addition, all major historical events starting from 79 AD – eruption of Mt. Vesuvius (3,000 historical data sets).
- Currently more than 30,000 data sets
2011 Headlines

- Very active thunderstorm (tornado-hail) season with insured losses exceeding $16 billion, far above the 2001 to 2010 January – June average thunderstorm loss of $6.4 billion (in 2010 Dollars). It was also the deadliest thunderstorm season in over 50 years.

- Extensive severe flooding events in Midwest and Great Plains

- Large, damaging wildfires in Texas, Arizona, and New Mexico.

- Major blizzard and ice storm in Midwest; severe freezing conditions in Southwest

- Seasonal forecasts indicate “active” hurricane season; neither El Niño or La Niña conditions are expected to be a factor this year
## Natural Disaster Losses in the United States
### First Six Months of 2011

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Number of Events</th>
<th>Fatalities</th>
<th>Estimated Overall Losses (US $m)</th>
<th>Estimated Insured Losses (US $m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe Thunderstorm</td>
<td>43</td>
<td>593</td>
<td>23,573</td>
<td>16,350</td>
</tr>
<tr>
<td>Winter Storm</td>
<td>8</td>
<td>15</td>
<td>1,900</td>
<td>1,425</td>
</tr>
<tr>
<td>Flood</td>
<td>8</td>
<td>15</td>
<td>2,100</td>
<td>in progress</td>
</tr>
<tr>
<td>Earthquake</td>
<td>2</td>
<td>1</td>
<td>105</td>
<td>in progress</td>
</tr>
<tr>
<td>Tropical Cyclone</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wildfire</td>
<td>37</td>
<td>7</td>
<td>125</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE
Natural Disasters in the United States, 1980 – 2011
Number of Events (January – June Only)

First Six Months 2011
98 Events

Source: MR NatCatSERVICE
Natural Disasters in the United States, 1980 – 2011
Number of Events (Annual Totals 1980 – 2010 vs. First Six Months 2011)

Source: MR NatCatSERVICE  © 2011 Munich Re
2011: Year of the Tornado

Pratt City, Alabama

Joplin, Missouri

Source: FEMA
Deadliest tornado year since 1953: 593 fatalities

Deadliest single tornado since 1947: Joplin, Missouri, 155 fatalities

Most observed tornadoes in a month: 875, April

Largest number of tornadoes in a day: 226, April 27

Most EF5 Tornadoes in a year: 6 (tied for first with 1974)

Five insured billion-dollar outbreaks

Two thunderstorm outbreaks each caused insured losses of about $5 billion

Late April (Alabama) outbreak is among top 10 largest natural catastrophe losses in U.S. history
Thunderstorm losses for the period January – June in 2011 were more than double of the 2006-2010 5-year average.

First Half 2011
$16.4 bn

Source: Property Claims Service
MR NatCatSERVICE
Average thunderstorm losses have increased fivefold since 1980.

First Half 2011
$16.4 bn
U.S. Natural Catastrophe Update

2011 U.S. Tornado Count

United States Annual Trend of LSR Tornadoes*

*Preliminary tornadoes from NWS Local Storm Reports (LSRs)
Annual average is based on preliminary LSRs, 2005-2010

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Lower Mississippi Flood of 2011

April 2011

Source: NASA © 2011 Munich Re
Lower Mississippi Flood of 2011

April 2011

- Heavy snowmelt, saturated soils, and over 20 inches of rain in a month lead to the worst flooding of the lower Mississippi River since 1927.

- Record river crests at Vicksburg and Natchez; Morganza Spillway opened in Louisiana to protect Baton Rouge and New Orleans from possible levee failures.

- Extensive agricultural damage, property, and inland marine losses due to flood.
  - Economic Losses: $2 billion
  - Insured Losses: Estimation in Progress
Other Notable Floods of 2011

June 2011

- Similar to the triggers of the Mississippi River flood, heavy rains in the northern plains states and the melting of a heavy snowpack in the Rockies resulted in severe flooding along several river systems, including the:
  - Missouri River: Numerous breached levees (some intentional to prevent flooding in densely populated regions), agriculture and transportation networks severely disrupted, Fort Calhoun nuclear power plant threatened, but no damage.
  - Souris River: Record flood levels at Minot, North Dakota. Levees were overtopped by flood waters; an estimated 11,000 residents (25% of Minot’s population) was evacuated.
Notable Wildfires in 2011

April – June

- Texas: Over 3 million acres burned in west Texas from 12 major seats of fire. Over 200 homes and businesses destroyed, $50 million insured loss.

- Arizona and New Mexico: “Wallow” fire largest in AZ history at 538,000 acres, Las Conchas fire near Los Alamos, 30 buildings destroyed.
Number of Acres Burned in Wildfires, 1980 – 2011 YTD

Source: Property Claims Service

© 2011 Munich Re
Average annual winter storm losses have increased over 50% since 1980.

First Half 2011
$1.4 billion
Notable Winter Storms of 2011

- 1-2 feet of snow in Chicago with 60+ mph wind gusts
- Up to 1” of freezing rain across Ohio River Valley
- Economic Losses: $900 million
- Insured Losses: $650 million

January 31-February 3, 2011

Source: NOAA
Notable Winter Storms of 2011

February 2-6, 2011

- Cold arctic air over Rockies and Southwest
- Deep freeze over agricultural areas of southwest during growing season
- Economic Losses: $600 million
- Insured Losses: $450 million (not including Agriculture)

Source: Property Claims Service
U.S. Natural Catastrophe Update
© 2011 Munich Re
The current 5-year average (2006-2010) insured tropical cyclone loss is $3.2 bn.
GLOBAL NATURAL CATASTROPHE UPDATE

Prof. Dr. Peter Höppe
Head of Geo Risks Research/ Corporate Climate Center
Munich Re
Global Natural Catastrophe Update

Natural loss events January – June 2011

World map

Number of events: 355

- Natural catastrophes
- Geophysical events (earthquake, tsunami, volcanic activity)
- Hydrological events (flood, mass movement)
- Meteorological events (storm)
- Climatological events (extreme temperature, drought, wildfire)

Source: MR NatCatSERVICE

© 2011 Munich Re
## Deadliest Disasters

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Area</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.3.2011</td>
<td>Earthquake, tsunami</td>
<td>Japan</td>
<td>15,500 (still missing: 7,297)</td>
</tr>
<tr>
<td>12/16.1.2011</td>
<td>Landslides, flash floods</td>
<td>Brazil</td>
<td>1,350</td>
</tr>
<tr>
<td>22-28.4.2011</td>
<td>Severe storm, tornadoes</td>
<td>USA</td>
<td>350</td>
</tr>
</tbody>
</table>

## Costliest Disasters (Insured Losses)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Area</th>
<th>Insured losses in US$m</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.3.2011</td>
<td>Earthquake, tsunami</td>
<td>Japan</td>
<td>~30,000</td>
</tr>
<tr>
<td>22.2.2011</td>
<td>Earthquake</td>
<td>New Zealand</td>
<td>&gt;10,000</td>
</tr>
<tr>
<td>22-28.4.2011</td>
<td>Severe storm, tornadoes</td>
<td>USA</td>
<td>5,050</td>
</tr>
</tbody>
</table>

## Costliest Disasters (Overall Losses)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Area</th>
<th>Overall losses in US$m</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.3.2011</td>
<td>Earthquake, tsunami</td>
<td>Japan</td>
<td>210,000</td>
</tr>
<tr>
<td>22.2.2011</td>
<td>Earthquake</td>
<td>New Zealand</td>
<td>20,000</td>
</tr>
<tr>
<td>22-28.4.2011</td>
<td>Severe storm, tornadoes</td>
<td>USA</td>
<td>7,500</td>
</tr>
</tbody>
</table>
Global Natural Catastrophe Update

Worldwide Natural Disasters 2011
Percentage Distribution of Insured Losses Per Continent (January – June only)

Insured losses 2011 (January – June only): US$ 60bn

<table>
<thead>
<tr>
<th>Continent</th>
<th>Insured losses [US$ m] in 2011 Jan - June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>minor</td>
</tr>
<tr>
<td>America</td>
<td>17,800</td>
</tr>
<tr>
<td>Asia</td>
<td>30,080</td>
</tr>
<tr>
<td>Australia/Oceania</td>
<td>12,900</td>
</tr>
<tr>
<td>Europe</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE
Global Natural Catastrophe Update

Percentage Distribution of Insured Losses Per Continent (January – June only)


<table>
<thead>
<tr>
<th>Continent</th>
<th>Insured losses [US$ m] Jan – June only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1,000</td>
</tr>
<tr>
<td>America</td>
<td>237,200</td>
</tr>
<tr>
<td>Asia</td>
<td>45,100</td>
</tr>
<tr>
<td>Australia/Oceania</td>
<td>25,100</td>
</tr>
<tr>
<td>Europe</td>
<td>80,900</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE

© 2011 Munich Re
Global Natural Catastrophe Update

Number of Events (January – June only)

First Six Months 2011
355 Events

Source: MR NatCatSERVICE

© 2011 Munich Re
Global Natural Catastrophe Update

Overall and Insured Losses

Losses in 2011: Overall = US$ 265bn ; Insured = US$ 60bn

Loss figures 2011
January – June only

Source: MR NatCatSERVICE

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### Global Natural Catastrophe Update

#### Natural Catastrophes, 2011
Overview and comparison with previous years

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of events</td>
<td>355</td>
<td>480</td>
<td>390</td>
<td>310</td>
<td>2007</td>
</tr>
<tr>
<td>Overall losses in US$m (original values)</td>
<td>265,000</td>
<td>97,200</td>
<td>47,400</td>
<td>36,400</td>
<td>1995 (EQ Kobe)</td>
</tr>
<tr>
<td>Insured losses in US$m (original values)</td>
<td>60,000</td>
<td>26,900</td>
<td>12,100</td>
<td>8,200</td>
<td>1994 (EQ, US Northridge)</td>
</tr>
<tr>
<td>Fatalities</td>
<td>19,380</td>
<td>230,300</td>
<td>52,900</td>
<td>42,700</td>
<td>2010 (EQ Haiti)</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE
### Worldwide Natural Disasters 2011

January – June only

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>New Zealand</td>
<td>Three strong earthquakes in 9 months, High losses due to soil liquefaction</td>
</tr>
<tr>
<td>Earthquake</td>
<td>Japan</td>
<td>Strongest EQ in Japan, Mw 9.0</td>
</tr>
<tr>
<td>Tornadoes, Wildfires, Floods</td>
<td>US</td>
<td>Spring time brought extreme weather and climate events, Deadliest tornado outbreak since 1925 in the US (1. Half year: 589)</td>
</tr>
<tr>
<td>Floods</td>
<td>Australia</td>
<td>The series of floods 2010/11 were the most devastating in modern Australian history, Highest sea surface temperature off the Australian coastline</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE

© 2011 Munich Re
Normalised overall and insured losses from US thunderstorms

All events

Overall losses

- Normalised overall losses: all events
- Wealth proxy: housing stock
- Estimated Trend: 1.9% p.a.

Insured losses

- Normalised insured losses: all events
- Wealth proxy: housing stock
- Estimated Trend: 2.4% p.a.

Trends of losses in line with meteorological trend of thunderstorm conditions.
Australia rainfall anomalies (Oct-Dec 2010)

Sea surface temperature is rising due to climate change

<table>
<thead>
<tr>
<th>Region</th>
<th>Overall losses</th>
<th>Insured losses</th>
<th>Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>US$ 7,300m</td>
<td>US$ 2,550m</td>
<td>35</td>
</tr>
</tbody>
</table>

Sources: MR NatCatSERVICE and New York Times
## Deadliest/Costliest Earthquakes 1900 – June 2011

**Date** | **Affected Area** | **Fatalities**
--- | --- | ---
1920 | China | 273,400
1976 | China | 242,800
2010 | Haiti | 222,570
2004 | Indonesia | 220,000
1923 | Japan | 142,800

**Date** | **Affected Area** | **Overall losses (US$m, original values)**
--- | --- | ---
2011 | Japan | 210,000
1995 | Japan | 100,000
2008 | China | 85,000
1994 | USA | 44,000
2010 | Chile | 30,000

Source: MR NatCatSERVICE
## Costliest Natural Catastrophes Since 1950

Rank by insured losses

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Region</th>
<th>Insured loss US$m (in original values)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>Hurricane Katrina</td>
<td>USA</td>
<td>62,200</td>
</tr>
<tr>
<td>2011</td>
<td>EQ, tsunami</td>
<td>Japan</td>
<td>~30,000</td>
</tr>
<tr>
<td>2008</td>
<td>Hurricane Ike</td>
<td>USA, Caribbean</td>
<td>18,500</td>
</tr>
<tr>
<td>1992</td>
<td>Hurricane Andrew</td>
<td>USA</td>
<td>17,000</td>
</tr>
<tr>
<td>1994</td>
<td>EQ Northridge</td>
<td>USA</td>
<td>15,300</td>
</tr>
<tr>
<td>2004</td>
<td>Hurricane Ivan</td>
<td>USA, Caribbean</td>
<td>13,800</td>
</tr>
<tr>
<td>2005</td>
<td>Hurricane Wilma</td>
<td>USA, Mexico</td>
<td>12,500</td>
</tr>
<tr>
<td>2005</td>
<td>Hurricane Rita</td>
<td>USA</td>
<td>12,100</td>
</tr>
<tr>
<td>2011</td>
<td>EQ New Zealand</td>
<td>New Zealand</td>
<td>&gt;10,000</td>
</tr>
<tr>
<td>2004</td>
<td>Hurricane Charley</td>
<td>USA, Caribbean</td>
<td>8,000</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE
Top 16 Most Costly World Insurance Losses, 1970-2011*

(Insured Losses, 2010 Dollars, $ Billions)

3 of the top 15 most expensive catastrophes in world history have occurred in the past 18 months

Taken as a single event, the Spring 2011 tornado season would likely become the 9th costliest event in global insurance history

*Through June 20, 2011. 2011 disaster figures are estimates; Figures include federally insured flood losses, where applicable.
Sources: Swiss Re sigma 1/2011; AIR Worldwide, RMS, Eqecat; Insurance Information Institute.
Top 12 (13?) Most Costly Disasters in U.S. History

(Insured Losses, 2010 Dollars, $ Billions)

Taken as a single event, the Spring 2011 tornado season would likely become 5th costliest event in US insurance history

*Losses will actually be broken down into several “events” as determined by PCS.
Sources: PCS; Insurance Information Institute inflation adjustments.
Insurers Making a Difference in Impacted Communities

Destroyed home in Tuscaloosa. Insurers will pay some 165,000 claims totaling $2 billion in the Tuscaloosa/Birmingham areas alone.

Presentation of a check to Tuscaloosa Mayor Walt Maddox to the Tuscaloosa Storm Recovery Fund

Source: Insurance Information Institute
Location of Tornadoes in the US, January 1—June 30, 2011

1,585 tornadoes
killed 537 people
through June 30,
including at least
340 on April 26
mostly in the
Tuscaloosa area,
and 130 in Joplin
on May 22

Source: NOAA Storm Prediction Center; http://www.spc.noaa.gov/climo/online/monthly/2011_annual_summary.html#
There were 7,176 “Large Hail” reports through June 30, causing extensive damage to homes, businesses and vehicles.
There were 11,283 “Wind Damage” reports through June 30, causing extensive damage to homes and businesses.

Source: NOAA Storm Prediction Center; http://www.spc.noaa.gov/climo/online/monthly/2011_annual_summary.html#
There have been 20,044 severe weather reports through June 30; including 1,585 tornadoes; 7,176 “Large Hail” reports and 11,283 high wind events.
Number of Severe Weather Reports in US, by Type: January 1—June 30, 2011

- **Wind Damage**: 11,283 reports, 56%
- **Large Hail**: 7,176 reports, 36%
- **Tornadoes**: 1,585 reports, 8%

Tornadoes accounted for just 8% of all Severe Weather Reports through June 30 but more than 500 deaths.

P/C Insurance Industry Financial Overview

Profit Recovery Will Be Set Back by High Catastrophe Losses & Other Factors
P/C Net Income After Taxes
1991–2011:Q1 ($ Millions)

P-C Industry 2011:Q1 profits were down 12.2% to $7.8B vs. $8.9B in 2010:Q1, as underwriting results deteriorated.

* ROE figures are GAAP; 1Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 6.5% ROAS for 2011:Q1, 7.5% for 2010 and 7.4% for 2009.

Sources: A.M. Best, ISO, Insurance Information Institute
A 100 Combined Ratio Isn’t What It Once Was: Investment Impact on ROEs

Combined Ratio / ROE

A combined ratio of about 100 generated ~7.5% ROE in 2009/10, 10% in 2005 and 16% in 1979

Combined Ratios Must Be Lower in Today’s Depressed Investment Environment to Generate Risk Appropriate ROEs

* 2009 and 2010 figures are return on average statutory surplus. 2008 -2011 figures exclude mortgage and financial guaranty insurers

Source: Insurance Information Institute from A.M. Best and ISO data.
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2011*

*Profitability = P/C insurer ROEs are I.I.I. estimates. 2011 figure is an estimate based on annualized ROAS for Q1 data.
Note: Data for 2008-2011 exclude mortgage and financial guaranty insurers.
Source: Insurance Information Institute; NAIC, ISO, A.M. Best.

History suggests next ROE peak will be in 2016-2017

1975: 2.4%
1977: 19.0%
1984: 1.8%
1987: 17.3%
1992: 4.5%
1997: 11.6%
2001: -1.2%
2007: 12.3%
2011: 6.1%*
Soft Market Persisted in 2010 but Growth Returned: More in 2011?

(Percent)

1975-78  1984-87  2000-03

Net Written Premiums Fell 0.7% in 2007 (First Decline Since 1943) by 2.0% in 2008, and 4.2% in 2009, the First 3-Year Decline Since 1930-33.

2011:Q1 growth was +3.5%; First Q1 growth since 2007

NWP was up 0.9% in 2010

*2011 figure is an estimate based on Q1 data.
Shaded areas denote “hard market” periods
Sources: A.M. Best (historical and forecast), ISO, Insurance Information Institute.
Finally! Back-to-back quarters of net written premium growth (vs. the same quarter, prior year)

Sources: ISO, Insurance Information Institute.
Investment gains in 2010 were the best since 2007

Investment Gains Recovered Significantly in 2010 Due to Realized Investment Gains; The Financial Crisis Caused Investment Gains to Fall by 50% in 2008

1 Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.
* 2005 figure includes special one-time dividend of $3.2B.
Sources: ISO; Insurance Information Institute.
Treasury yield curve remains near its most depressed level in at least 45 years. Investment income is falling as a result. Fed is unlikely to hike rates until well into 2012.

The End of the Fed’s Quantitative Easing Is Unlikely to Push Interest Rates Up Substantially Given Ongoing Economic Weakness

*Average of daily rates.
Sources: Board of Governors of the United States Federal Reserve Bank; Insurance Information Institute.
Financial Strength & Underwriting

Cyclical Pattern is P-C Impairment  
History is Directly Tied to  
Underwriting, Reserving & Pricing
The Number of Impairments Varies Significantly Over the P/C Insurance Cycle, With Peaks Occurring Well into Hard Markets


Historically, Catastrophe Losses Account for Only a Small Share of P-C Insurer Impairments.

- Deficient Loss Reserves/Inadequate Pricing: 40.3%
- Rapid Growth: 13.6%
- Alleged Fraud: 7.8%
- Catastrophe Losses: 7.8%
- Affiliate Impairment: 7.1%
- Investment Problems (Overstatement of Assets): 7.3%
- Misc.: 8.6%
- Sig. Change in Business: 4.0%
- Reinsurance Failure: 3.6%


Catastrophe Exposed Lines Account for a Relatively Small Share of the Premium Volume of Impaired Insurers Over the Past Decade

- Workers Comp: 26.6%
- Pvt. Passenger Auto: 22.2%
- Homeowners: 10.9%
- Commercial Multi peril: 8.1%
- Commercial Auto Liability: 7.7%
- Med Mal: 6.9%
- Other Liability: 6.5%
- Surety: 4.8%
- Financial Guaranty: 4.4%
- Title: 2.0%

SURPLUS/CAPITAL/CAPACITY

Have Large Global Losses Reduced Capacity in the Industry, Setting the Stage for a Market Turn?
US Policyholder Surplus: 1975–2011*

Surplus as of 3/31/11 was a record $564.7B, up from $437.1B at the crisis trough at 3/31/09. Prior peak was $521.8 as of 9/30/07. Surplus as of 3/31/11 was 8.2% above 2007 peak; Crisis trough was as of 3/31/09→16.2% below 2007 peak.

“Surplus” is a measure of underwriting capacity. It is analogous to “Owners Equity” or “Net Worth” in non-insurance organizations.

The Premium-to-Surplus Ratio Stood at $0.77:$1 as of 3/31/11, A Near Record Low (at Least in Recent History)**

* As of 3/31/11.
Policyholder Surplus, 2006:Q4–2011:Q1

$487.1 $496.6 $512.8 $517.9 $515.6 $505.0 $478.5 $455.6 $437.1 $463.0 $490.8 $511.5 $540.7 $530.5 $544.8 $556.9 $564.7

Previous Surplus Peak

Surplus set a new record in 2011:Q1*

The Industry now has $1 of surplus for every $0.77 of NPW—the strongest claims-paying status in its history.

Quarterly Surplus Changes Since 2007:Q3 Peak

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Change</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:Q1</td>
<td>-$84.7B</td>
<td>-16.2%</td>
</tr>
<tr>
<td>09:Q2</td>
<td>-$58.8B</td>
<td>-11.2%</td>
</tr>
<tr>
<td>09:Q3</td>
<td>-$31.0B</td>
<td>-5.9%</td>
</tr>
<tr>
<td>09:Q4</td>
<td>-$10.3B</td>
<td>-2.0%</td>
</tr>
<tr>
<td>10:Q1</td>
<td>+$18.9B</td>
<td>+3.6%</td>
</tr>
<tr>
<td>10:Q2</td>
<td>+$8.7B</td>
<td>+1.7%</td>
</tr>
<tr>
<td>10:Q3</td>
<td>+$23.0B</td>
<td>+4.4%</td>
</tr>
<tr>
<td>10:Q4</td>
<td>+$35.1B</td>
<td>+6.7%</td>
</tr>
<tr>
<td>11:Q4</td>
<td>+$42.9B</td>
<td>+8.2%</td>
</tr>
</tbody>
</table>

*Includes $22.5B of paid-in capital from a holding company parent for one insurer’s investment in a non-insurance business in early 2010.

Sources: ISO, A.M. Best.
Outlook for the 2011 Atlantic Hurricane Season

Above Average Activity, More Landfalls Expected
## Outlook for 2011 Hurricane Season: 75% More Active Than Average

<table>
<thead>
<tr>
<th>Category</th>
<th>Average*</th>
<th>2005 (Katrina Year)</th>
<th>2011F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Named Storms</td>
<td>9.6</td>
<td>28</td>
<td>16</td>
</tr>
<tr>
<td>Named Storm Days</td>
<td>49.1</td>
<td>115.5</td>
<td>80</td>
</tr>
<tr>
<td>Hurricanes</td>
<td>5.9</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Hurricane Days</td>
<td>24.5</td>
<td>47.5</td>
<td>35</td>
</tr>
<tr>
<td>Intense Hurricanes</td>
<td>2.3</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Intense Hurricane Days</td>
<td>5.0</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Accumulated Cyclone Energy</td>
<td>96.1</td>
<td>NA</td>
<td>160</td>
</tr>
<tr>
<td>Net Tropical Cyclone Activity</td>
<td>100%</td>
<td>275%</td>
<td>175%</td>
</tr>
</tbody>
</table>

*Average over the period 1950-2000.

Source: Dr. Philip Klotzbach and Dr. William Gray, Colorado State University, June 1, 2011.
### Probability of Major Hurricane Landfall (CAT 3, 4, 5) in 2011

<table>
<thead>
<tr>
<th>Region</th>
<th>Average*</th>
<th>2011F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire US Coast</td>
<td>52%</td>
<td>72%</td>
</tr>
<tr>
<td>US East Coast Including Florida Peninsula</td>
<td>31%</td>
<td>48%</td>
</tr>
<tr>
<td>Gulf Coast from FL Panhandle to Brownsville, TX</td>
<td>30%</td>
<td>47%</td>
</tr>
</tbody>
</table>

**ALSO...** Above-Average Major Hurricane Landfall Risk in Caribbean for 2011 (61% vs. 42%)

*Average over the period 1950-2000.

Source: Dr. Philip Klotzbach and Dr. William Gray, Colorado State University, June 1, 2011.
Most States Fail to Address Their Vulnerabilities to Catastrophic Coastal Loss
In the 21-year period between 1990 and 2010, total exposure to loss in the residual market (FAIR & Beach/Windstorm) Plans has surged from $54.7 billion in 1990 to $757.9 billion in 2010.

In the 21-year period between 1990 and 2010, the total number of policies in-force in the residual market (FAIR & Beach/Windstorm) Plans has more than tripled.

Source: PIPSQ; Insurance Information Institute; http://www.iii.org/pr/last-resort-2010.
Thank you for your time and your attention!

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