The Global Economy, Rising Risk and Marine Insurance Markets

Risk and Reward in a Troubled World

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Presentation Outline

- Global Economic Overview & Outlook
  - International Overview
  - Emerging vs. Developing Markets
  - Global Trade Volume Forecasts: Imports/Exports

- US Economy Overview & Outlook
  - GDP Outlook
  - Drivers of P/C Insurance Exposures
  - Marine Drivers
  - Presidential Politics and P/C Profitability

- The Unfortunate Nexus of Opportunity, Risk and Uncertainty
  - The Fusion of Economic and (Geo)Political Risk
  - Top 10 Risks for the Global Economy

- Global Catastrophe Loss Trends and Threats
  - Was 2011 an Aberration or a Foreshadowing of the Future

- US P/C Insurance Industry Financial Overview & Outlook
Global Economic Outlook: Regional and Major Economy Perspectives

Strength of Economies Varies Greatly as Does Pace of Recovery from the Economic Challenges

Important Consequences for Insurer and Reinsurer Growth Opportunities
Real GDP Growth Forecasts: Major Economies: 2011 – 2013F

US recovery continues. The Eurozone and UK are in recession. Both should end in Q3:2012. China growth has slowed, but remains strong in an expected “soft landing” scenario. Rebuilding acts as a stimulus to Japanese economy.


Sources: Blue Chip Economic Indicators (4/2012 issue); Insurance Information Institute.

*Excludes Libya in 2011. **Indonesia, Malaysia, Thailand, Philippines and Vietnam
Sources: IMF *World Economic Outlook* (April 2012); Insurance Information Institute.
Emerging economies (led by China) are expected to grow by 5.7% in 2012 and 6.0% in 2013.

World output is forecast to grow by 3.5% in 2012 and 4.1% in 2013. The world economy shrank by 0.6% in 2009 amid the global financial crisis.

Advanced economies are expected to grow at a sluggish pace of 1.4% in 2012 and 2.0% in 2013.

Relative Shares of Global Output, Advanced vs. Developing Economies, 2009

The gap is closing quickly. China became the world’s second largest economy in 2010 and before long the developing world’s share of GDP will exceed that of advanced economies.

Developing Economies 47.1%
Advanced Economies 52.9%

Current Real GDP Growth vs. Pre-Crisis Average (2000-2007 vs. 2011F-2012F*)

- Latin and South American markets are in general growing more strongly than prior to the crisis.
- The US, Europe and Eurasia have seen significant slowdowns.
- Parts of the Middle East and South Asia have done well.

*Percentage point difference between compound annual rates of change 2000-2007 vs. forecasts for 2011-2012.

Source: IMF, World Economic Outlook, September 2011; Insurance Information Institute.
Current Real GDP Growth vs. Pre-Crisis Average (2000-2007 vs. 2011F-2012F*)

*Percentage point difference between compound annual rates of change 2000-2007 vs. forecasts for 2011-2012.

Source: IMF, World Economic Outlook, September 2011; Insurance Information Institute.

Growth in much of Europe today is about 2 pts. Lower than pre-crisis.
World Trade Volume: 2010—2013F

Growth in World Trade Volume (Imports + Exports) Has Slowed But Continues to Grow

Percentage Change (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>12.9%</td>
</tr>
<tr>
<td>2011</td>
<td>5.8%</td>
</tr>
<tr>
<td>2012F</td>
<td>4.0%</td>
</tr>
<tr>
<td>2013F</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Sources: IMF *World Economic Outlook* (April 2012); Insurance Information Institute.
Import growth in emerging economies outpaces Advanced Economies by a wide margin.

Sources: IMF World Economic Outlook (April 2012); Insurance Information Institute.
## World Trade Volume: Exports 2010 – 2013F

Growth (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Advanced Economies</th>
<th>Emerging Economies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>12.2%</td>
<td>14.7%</td>
</tr>
<tr>
<td>2011</td>
<td>5.3%</td>
<td>6.7%</td>
</tr>
<tr>
<td>2012F</td>
<td>2.3%</td>
<td>6.6%</td>
</tr>
<tr>
<td>2013F</td>
<td>4.7%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

Export growth in emerging economies outpaces Advanced Economies by a much narrower margin than imports.

Sources: IMF *World Economic Outlook* (April 2012); Insurance Information Institute.
The Strength of the Economy Will Influence P/C Insurer Growth Opportunities

All Lines of Commercial Insurance Will Benefit, Including Marine
The Q4:2008 decline was the steepest since the Q1:1982 drop of 6.8%

Recession began in Dec. 2007. Economic toll of credit crunch, housing slump, labor market contraction has been severe but modest recovery is underway

2012 is expected to see a modest but choppy acceleration in growth continuing into 2013

Demand for Insurance Continues To Be Impacted by Sluggish Economic Conditions, but the Benefits of Even Slow Growth Will Compound and Gradually Benefit the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.
Source: US Department of Commerce, Blue Economic Indicators 4/12; Insurance Information Institute.
Consumer confidence has been low for years amid high unemployment, falling home prices and other factors adversely impact consumers, but improved substantially in late 2011 and early 2012.

Optimism among consumers is recovering, in part due to an improving jobs outlook, after plunging amid the debt debate debacle and S&P downgrade.
Auto/Light Truck Sales, 1999-2022F

(Millions of Units)

New auto/light truck sales fell to the lowest level since the late 1960s. Forecast for 2012-13 is still far below 1999-2007 average of 17 million units, but a recovery is underway.

Job growth and improved credit market conditions will boost auto sales in 2012 and beyond.

Car/Light Truck Sales Will Continue to Recover from the 2009 Low Point, Bolstering the Auto Insurer Growth and the Manufacturing Sector.

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (10/11 and 4/12); Insurance Information Institute.
Overall Construction Activity is Up, But Growth Is Entirely in the Private Sector as State/Local Government Budget Woes Continue

*seasonally adjusted
Source: U.S. Census Bureau, [http://www.census.gov/construction/c30/c30index.html](http://www.census.gov/construction/c30/c30index.html) ; Insurance Information Institute.

<table>
<thead>
<tr>
<th>Segment</th>
<th>2011 Growth</th>
<th>2012 Growth</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Private Construction</td>
<td>10.2%</td>
<td>14.5%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Residential</td>
<td>5.6%</td>
<td>2.8%</td>
<td>-2.8%</td>
</tr>
<tr>
<td>Total Nonresidential</td>
<td>14.5%</td>
<td>4.8%</td>
<td>-9.7%</td>
</tr>
<tr>
<td>Lodging</td>
<td>-10.2%</td>
<td>-9.4%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Office</td>
<td>10.6%</td>
<td>3.3%</td>
<td>-7.3%</td>
</tr>
<tr>
<td>Commercial</td>
<td>20.1%</td>
<td>11.9%</td>
<td>-8.2%</td>
</tr>
<tr>
<td>Health Care</td>
<td>11.9%</td>
<td>3.3%</td>
<td>-8.6%</td>
</tr>
<tr>
<td>Educational</td>
<td>23.9%</td>
<td>23.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Religious</td>
<td>11.9%</td>
<td>3.3%</td>
<td>-8.6%</td>
</tr>
<tr>
<td>Amusement &amp; Rec.</td>
<td>39.7%</td>
<td>23.9%</td>
<td>-15.8%</td>
</tr>
<tr>
<td>Transportation</td>
<td>39.7%</td>
<td>23.9%</td>
<td>-15.8%</td>
</tr>
<tr>
<td>Communication</td>
<td>39.7%</td>
<td>23.9%</td>
<td>-15.8%</td>
</tr>
<tr>
<td>Power</td>
<td>39.7%</td>
<td>23.9%</td>
<td>-15.8%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>39.7%</td>
<td>23.9%</td>
<td>-15.8%</td>
</tr>
</tbody>
</table>

Private sector construction activity is up by double digits in many segments after plunging during the “Great Recession”.

Private Construction Activity is Up in Most Segments, Including Residential Construction

*seasonally adjusted
Source: U.S. Census Bureau, [http://www.census.gov/construction/c30/c30index.html](http://www.census.gov/construction/c30/c30index.html); Insurance Information Institute.
The manufacturing sector has been expanding and adding jobs. The question is whether this will continue.


The value of Manufacturing Shipments in Mar. 2012 was up 31% to $466B from its May 2009 trough. Dec. figure is only 3.9% below its previous record high in July 2008.

Monthly shipments are nearly back to peak (in July 2008, 8 months into the recession). Trough in May 2009. Growth from trough to March 2012 was 31%. This growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, Property and Various Liability Coverages.

*seasonally adjusted
Manufacturing Growth for Selected Sectors, 2012 vs. 2011*

Durables: +11.4%  Non-Durables: +8.5%

Manufacturing of durable goods has been especially strong.

Manufacturing Is Expanding Across a Wide Range of Sectors that Will Contribute to Growth in Insurable Exposures Including: WC, Commercial Property, Commercial Auto and Many Liability Coverages.

*Seasonally adjusted; Date are YTD comparing data through Feb. 2012 to the same period in 2011.
Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures

March 2001 through March 2012

Percent of Industrial Capacity

The closer the economy is to operating at “full capacity,” the greater the inflationary pressure.

The US operated at 78.6% of industrial capacity in Mar. 2012, above the June 2009 low of 68.3% and close to its post-crisis peak.

Global industrial production has been volatile but is growing.
Non-manufacturing industries have been expanding and adding jobs. The question is whether this will continue.

Business Bankruptcy Filings, 1980-2011

2011 bankruptcies totaled 47,806, down 15.1% from 56,282 in 2010—the second consecutive year of decline. Business bankruptcies more than tripled during the financial crisis.

Sources: American Bankruptcy Institute at http://www.abiworld.org/AM/AMTemplate.cfm?Section=Home&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=61633; Insurance Information Institute
Business starts were up 3.5% to 561,000 in the first 9 months of 2011 vs. first 9 months 2010. 722,000 new business starts were recorded in 2010, up 3.6% from 697,000 in 2009, which was the slowest year for new business starts since 1993.

Business Starts Were Down Nearly 20% in the Recession, Holding Back Most Types of Commercial Insurance Exposure, But Are Recovering Slowly.

* Data through September 30, 2011 are the latest available as of May 2, 2012; Seasonally adjusted. **Annualized based on data through 9/30.

12 Industries for the Next 10 Years: Insurance Solutions Needed

- Health Care
- Health Sciences
- Energy (Traditional)
- Alternative Energy
- Petrochemical
- Agriculture
- Natural Resources
- Technology (incl. Biotechnology)
- Light Manufacturing
- Insourced Manufacturing
- Export-Oriented Industries
- Shipping (Rail, Marine, Trucking)

Many industries are poised for growth, though insurers’ ability to capitalize on these industries varies widely.
Global Oil Consumption and Price, 2008 – 2035F

The nominal price of oil is expected to rise by 2.8% per year on average through 2035.

Global oil consumption is expected to rise by 1.1% per year on average through 2035.

Oil Will Become Relatively More Expensive Over Time, With Price Increases Outstripping Income Growth in Many Parts of the World.

Source: US Energy Information Administration; Insurance Information Institute
US Natural Gas Production and Non-Hydro Renewable Electricity Generation, 1990-2035P

Shale gas production is expected to grow rapidly in the US

Wind is expected to account for the majority of renewable electricity generation

Tight gas production involves controversial hydraulic fracturing (fracking) techniques

World Primary Energy Consumption, 1990-2030P


Between 2006 and 2030, energy consumption is expected to increase by 33.4% between 2010 and 2030 but by only 12% in the US.
Presidential Politics & the P/C Insurance Industry

How Is Profitability Affected by the President’s Political Party?
P/C Insurance Industry ROE by Presidential Administration, 1950-2012*

OVERALL RECORD: 1950-2012*
Democrats 7.67%
Republicans 7.97%

Party of President has marginal bearing on profitability of P/C insurance industry

*Truman administration ROE of 6.97% based on 3 years only, 1950-52; ROEs for the years 2008 forward exclude mortgage and financial guaranty segments. Estimated ROE for 2012 = 7.0%.
Source: Insurance Information Institute
P/C insurance Industry ROE by Presidential Party Affiliation, 1950-2012*

*ROEs for the years 2008 forward exclude mortgage and financial guaranty segments; Estimated 2012 ROE = 7.0%
Source: Insurance Information Institute
Election 2012: Political Issues Impacting Insurers

- Presidential Race Is Tight
- Potential for Senate to Flip Republican
- Affordable Care Act/Health Care Reform (ObamaCare)
  - Romney, Republicans generally vow to repeal the Act
  - Complete repeal is unlikely as several popular ACA provisions are already implemented
  - Supreme Court will rule on the constitutionality of the Act in June; Outcome uncertain
- Dodd-Frank Act/Financial Services Reform & Implementation
  - Republicans refer to DFA as a “confidence killer” and want it scaled back
  - Outright repeal is highly unlikely irrespective of election outcome
  - Systemic criteria have been developed; Designations in late 2012
  - Financial Stability Oversight Council: Current/future composition impacted by election
  - Changes to DFA and/or implementation will have little impact on P/C insurers
- Key Committee Shifts Possible
  - Senate Banking Chair: Tim Johnson (D-SD) → Richard Shelby (R-AL)
  - House Finl. Svcs. Chair: Spencer Bachus (R-AL) → Jeb Hensarling (R-TX) (term limits)
    - If House flipped Chair would go to Maxine Waters (D-CA)
- Federal Insurance Office
  - If Romney wins, he will appoint a new Treasury Secretary
  - FIO leadership, agenda and funding could be impacted
  - Secretary Geithner likely to step down after election even if Obama is re-elected
- Agent Licensing, NFIP
Most of the Global Economy’s Future Gains Will be Fraught with Much Greater Risk and Uncertainty than in the Past
Nonlife premium growth in emerging markets has exceeded that of industrialized countries in 27 of the past 31 years, including the entirety of the global financial crisis.

Real nonlife premium growth is very erratic in part to inflation volatility in emerging markets as well as a lack of consistent cyclicality.
Nonlife Real Premium Growth in 2010

Latin and South American markets performed relatively well during and after the global financial crisis in terms of growth.

There was also growth in the Middle East, East and South Asia as well as Australia and New Zealand.

Source: Swiss Re, sigma, No. 2/2011.
Nonlife Real Premium Growth Rates by Region: 2000-2009 and 2010

<table>
<thead>
<tr>
<th>Region</th>
<th>Growth rate 2000-2009</th>
<th>Annual average growth rate 1999-2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td></td>
<td></td>
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<tr>
<td>Industrialised countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td></td>
<td></td>
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<tr>
<td>Western Europe</td>
<td></td>
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<tr>
<td>Continental Europe</td>
<td></td>
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<tr>
<td>Japan and newly industrialised Asian economies</td>
<td></td>
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<tr>
<td>Oceania</td>
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<tr>
<td>Emerging markets</td>
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<tr>
<td>South and East Asia</td>
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<tr>
<td>Latin America and the Caribbean</td>
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<td></td>
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<tr>
<td>Central and Eastern Europe</td>
<td></td>
<td></td>
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<tr>
<td>Africa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle East and Central Asia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Middle East and many emerging market economies continued to grow during the global financial crisis and continued to benefit from foreign direct investment.

Although premium growth throughout the industrialized world was negative in 2009, its share of global nonlife premiums remained very high at nearly 86%—accounting for nearly $1.5 trillion in premiums.

The financial crisis and sluggish recovery in the major insurance markets will accelerate the expansion of the emerging market sector.

Developing markets now account for 47% of global GDP but just 14% of nonlife premiums.

Sources: Swiss Re; Insurance Information Institute research.
Political Risk in 2011/12: Greatest Business Opportunities Are Often in Risky Nations

The fastest growing markets are generally also among the politically riskiest, including East and South Asia.

Heightened risk has economic and insurance implications.

Much of the middle East and North Africa have experienced and continue to experience political turmoil.
The “Arab Spring” Has Increased Uncertainty in an Already Volatile Part of the World

Some energy-rich nations have been among the most unstable in 2011/12

Longer-run, significant investment and insurance opportunities exist throughout the region

Country Risk

The risk that country-specific factors could adversely affect an insurer’s ability to pay its financial obligations

<table>
<thead>
<tr>
<th>Economic Risk</th>
<th>Macroeconomy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prospects</td>
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<tr>
<td></td>
<td>Government Finance</td>
</tr>
<tr>
<td>Political Risk</td>
<td>Business Environment</td>
</tr>
<tr>
<td></td>
<td>Government Stability</td>
</tr>
<tr>
<td></td>
<td>Social Stability</td>
</tr>
<tr>
<td></td>
<td>Legal System</td>
</tr>
<tr>
<td>Financial System Risk</td>
<td>Banking System</td>
</tr>
<tr>
<td>Non-Insurance</td>
<td>Reporting Standards &amp; Regulation</td>
</tr>
<tr>
<td></td>
<td>Sovereign Debt</td>
</tr>
<tr>
<td>Insurance</td>
<td>Government &amp; Legislation</td>
</tr>
<tr>
<td></td>
<td>Supervisory Authority</td>
</tr>
<tr>
<td></td>
<td>Insurer Accountability</td>
</tr>
</tbody>
</table>

Source: A.M. Best.
Country Risk Relates to Insurance Market Development

Low risk countries have high insurance penetration rates and afford fewer growth opportunities.

Higher risk countries have low insurance penetration rates and often offer more growth opportunities.

Source: A.M. Best.
GDP Per Capita Drives Insurance Market Penetration

Source: A.M. Best.
Summary of 10 Greatest Potential Threats to Global Economy as of May 2012

1. Armed Conflict in the Middle East, Disrupting Oil Markets
   - $200/bbl oil is possible; Severe supply disruptions
   - Result → serious damage to the global economy, killing fragile recovery

2. Rising Oil Prices
   - Even in the absence of armed conflict, oil prices slowing growth
   - Sustained $10/bbl increase → -0.2% on global GDP in Year 1; -0.5% Year 2

3. Sovereign Debt Concerns in Europe (was #1 threat in 2011)
   - Contagion spreads beyond Greece → Spain, Italy, Portugal, etc.
   - EU political/economic solution fails resulting in disorderly default
   - Sharp drift to the left in Europe & lose of resolve to address Eurozone problems

4. “Hard Landing” of Chinese Economy
   - A sharp decline in China’s GDP would damage global economies

5. Mega-Catastrophe Trends Continue at Record Pace
   - Catastrophes trimmed 0.5% off global GDP in 2011
   - Massive disruptions to fragile global supply chains

6. Sudden Weakening of US Economy
7. Intensification of Geopolitical Instability (esp. Middle & Far East)
8. Disintegration of Eurozone (Political Failure)
9. Commodity Price Inflation (apart from oil)
10. Large-Scale Cyber Attack/Terrorism Attack (including cyberterror)
Global Catastrophe Loss Developments and Trends

2011 Rewrote Catastrophe Loss and Insurance History

But Will Losses Turn the Market?
Global Catastrophe Loss Summary: 2011

- **2011 Was the Highest Loss Year on Record for Economic Losses Globally**
  - Extraordinary accumulation of severe natural catastrophe: Earthquakes, tsunami, floods and tornadoes are the primary causes of loss

- **$380 Billion in Economic Losses Globally (New Record)**
  - New record, exceeding the previous record of $270B in 2005

- **$105 Billion in Insured Losses Globally**
  - 2011 losses were 2.5 times 2010 insured losses of $42B
  - Second only to 2005 on an inflation adjusted basis (new record on a unadjusted basis)
  - Over 5 times the 30-year average of $19B

- **$72.8 Billion in Economic Losses in the US**
  - Represents a 129% increase over the $11.8 billion amount through the first half of 2010

- **$35.9 Billion in Insured Losses in the US Arising from 171 CAT Events**
  - Fifth highest year on record
  - Represents 51% increase over the $23.8 billion total in 2010

Source: Munich Re; Insurance Information Institute.
Natural Loss Events, 2011

World Map

Number of Events: 820

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

Selection of significant loss events (see table)

Source: MR NatCatSERVICE
In 2011, 61% of insured natural catastrophe losses were in the Asia/Pacific region, nearly 3.5 times the average of 13% over the prior 30 years (1981-2010).

<table>
<thead>
<tr>
<th>Continent</th>
<th>Insured losses US$ m</th>
</tr>
</thead>
<tbody>
<tr>
<td>America (North and South America)</td>
<td>40,000</td>
</tr>
<tr>
<td>Europe</td>
<td>2,000</td>
</tr>
<tr>
<td>Africa</td>
<td>Minor damages</td>
</tr>
<tr>
<td>Asia</td>
<td>45,000</td>
</tr>
<tr>
<td>Australia/Oceania</td>
<td>18,000</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE
Natural Catastrophes Worldwide 1980 – 2011
Insured losses US$ 870bn - Percentage distribution per continent

<table>
<thead>
<tr>
<th>Continent</th>
<th>Insured losses US$ m</th>
</tr>
</thead>
<tbody>
<tr>
<td>America (North and South America)</td>
<td>566,000</td>
</tr>
<tr>
<td>Europe</td>
<td>146,000</td>
</tr>
<tr>
<td>Africa</td>
<td>2,000</td>
</tr>
<tr>
<td>Asia</td>
<td>115,000</td>
</tr>
<tr>
<td>Australia/Oceania</td>
<td>41,000</td>
</tr>
</tbody>
</table>

In 2011, 61% of natural catastrophe losses were in the Asia/Pacific region, nearly 3.5 times the average of 13% over the prior 30 years (1981-2010).

Source: MR NatCatSERVICE
Worldwide Natural Disasters 1980–2011, Overall and Insured Losses

(Insured Losses, 2011 Dollars, $ Billions)

Overall Losses: $380 Bill
Insured Losses: $105 Bill

Source: MR NatCatSERVICE

© 2011 Munich Re
Top 16 Most Costly World Insurance Losses, 1970-2011**

(Insured Losses, 2011 Dollars, $ Billions)

5 of the top 14 most expensive catastrophes in world history have occurred within the past 2 years.

Large catastrophes in Asia/Pacific and South America have dominated mega-losses since 2010.

*Average of range estimates of $35B - $40B as of 1/4/12; Privately insured losses only.
**Figures do not include federally insured flood losses.
Sources: Swiss Re sigma 1/2011; Munich Re; Insurance Information Institute research.
Worldwide Natural Disasters, 1980 – 2011

Number of Events

There were 820 events in 2011

Source: MR NatCatSERVICE
Natural Catastrophes in Asia 1980 – 2011
Overall and insured losses in 2011 Dollars

2011 set a record for both overall economic losses in Asia ($266B) and insured losses ($45B). The rapid economic development of Asia and increased insurance penetration guarantee that losses will trend higher in the future.

Source: MR NatCatSERVICE
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U.S. Insured Catastrophe Loss Update

2011 Was One of the Most Expensive Years on Record
Top 14 Most Costly Disasters in U.S. History

(Insured Losses, 2011 Dollars, $ Billions)

Taken as a single event, the Spring 2011 tornado and storm season are is the 4th costliest event in US insurance history.

Hurricane Irene became the 11th most expensive hurricane in US history.

*Losses will actually be broken down into several “events” as determined by PCS. Includes losses for the period April 1 – June 30. Sources: PCS; Insurance Information Institute inflation adjustments.
There were 117 natural disaster events in 2011.
Losses Due to Natural Disasters in the US, 1980–2011 (Overall & Insured Losses)

(Overall and Insured Losses)

(2011 Dollars, $ Billions)

2011 was the 5th most expensive year on record for insured catastrophe losses in the US.

Approximately 50% of the overall cost of catastrophes in the US was covered by insurance in 2011.

2011

Overall Losses: $72.8 Bill
Insured Losses: $35.9 Bill

Source: MR NatCatSERVICE

© 2011 Munich Re
US CAT Losses in 2011 Were the 5th Highest in US History on An Inflation Adjusted Basis

*PCS figure as of April 6, 2012.
Note: 2001 figure includes $20.3B for 9/11 losses reported through 12/31/01 ($25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = $12.2B ($15.6B in 2011 dollars.)
Sources: Property Claims Service/ISO; Insurance Information Institute.
### Natural Disaster Losses in the United States: 2011

<table>
<thead>
<tr>
<th>As of Jan. 1, 2012</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>69</td>
<td>617</td>
<td>46,548</td>
<td>25,813</td>
</tr>
<tr>
<td>Winter Storm</td>
<td>9</td>
<td>67</td>
<td>2,708</td>
<td>2,017</td>
</tr>
<tr>
<td>Flood</td>
<td>14</td>
<td>20</td>
<td>2,705</td>
<td>535</td>
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<tr>
<td>Earthquake</td>
<td>5</td>
<td>1</td>
<td>257</td>
<td>50</td>
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<tr>
<td>Tropical Cyclone</td>
<td>3</td>
<td>0</td>
<td>10,700</td>
<td>5,510</td>
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<tr>
<td>Wildfire</td>
<td>58</td>
<td>15</td>
<td>1,922</td>
<td>855</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>33</td>
<td>8,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Source: MR NatCatSERVICE
2011’s Most Expensive Catastrophes, Insured Losses

Thunderstorms, Apr. 22-26: $7,300
Thunderstorms, May 20-27: $6,900
Hurricane Irene, Aug. 26-28**: $5,000
Thunderstorms, Apr. 3-5: $2,000
Thunderstorms, Apr. 8-11: $1,510
Thunderstorms, Apr. 14-16: $1,400
Thunderstorms, Jun. 16-22: $1,200
Texas Drought, 2011*: $1,000
Thunderstorms, Jul. 10-14: $980
Winter Storm, Jan. 31-Feb. 3: $975
Thunderstorms, Aug. 18-19: $840
Thunderstorms, Apr. 19-20: $830
Wildfire, Sep. 4-19: $530
Flooding, April*: $500

**Includes $700 million in flood losses insured through the National Flood Insurance Program.
Source: PCS except as noted by “*” which are sourced to Munich Re; Insurance Information Institute.
Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2011*

Combined Ratio Points

Avg. CAT Loss Component of the Combined Ratio by Decade

1960s: 1.04
1970s: 0.85
1980s: 1.31
1990s: 3.39
2000s: 3.52
2010s: 6.20*

The Catastrophe Loss Component of Private Insurer Losses Has Increased Sharply in Recent Decades

*Insurance Information Institute estimates for 2010 and 2011 based on A.M. Best data.

Notes: Private carrier losses only. Excludes loss adjustment expenses and reinsurance reinstatement premiums. Figures are adjusted for losses ultimately paid by foreign insurers and reinsurers.

Source: ISO; Insurance Information Institute.
Average thunderstorm losses are up more than 5 fold since the early 1980s.

Thunderstorm losses in 2011 totaled a record $25.8 billion.

Hurricanes get all the headlines, but thunderstorms are consistent producers of large scale loss. 2008-2011 are the most expensive years on record.
P/C Insurance Industry
Financial Overview

Profit Recovery Was Set Back in 2011 by High Catastrophe Loss & Other Factors
P/C Net Income After Taxes
1991–2011 ($ Millions)

- $14,178
- $5,840
- $19,316
- $10,870
- $20,598
- $24,404
- $36
- $30,773
- $21,865
- $20,559
- $3,046
- $30,029
- $62,496
- $3,043
- $35,204
- $19,150
- $28,672
- $20,559
- $38,501
- $41,155
- $65,777
- $62,496
- $28,672
- $35,204
- $19,150

P-C Industry 2011 profits were down 46% to $19.2B vs. 2010, due primarily to high catastrophe losses and as non-cat underwriting results deteriorated.

- 2005 ROE* = 9.6%
- 2006 ROE = 12.7%
- 2007 ROE = 10.9%
- 2008 ROE = 0.1%
- 2009 ROE = 5.0%
- 2010 ROE = 6.6%
- 2011:Q3 ROAS¹ = 3.5%

* ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 4.6% ROAS for 2011, 7.6% 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

A combined ratio of about 100 generated ~5.5% 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

* 2008-2011 figures are return on average surplus and exclude mortgage and financial guaranty insurers. 2011 combined ratio including M&FG insurers is 108.2, ROAS = 3.5%. 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 ROAS data. Note: Data for 2008-2011 exclude mortgage and financial guaranty insurers. For 2011:Q3 ROAS = 3.5% including M&FG.
Source: Insurance Information Institute; NAIC, ISO, A.M. Best.

History suggests next ROE peak will be in 2016-2017

1975: 2.4%
1984: 1.8%
1992: 4.5%
2001: -1.2%
2011: 4.6%*
The BIG Question: When Will the Market Turn?

Are Catastrophes and Other Factors Pressuring Insurance Markets?
Criteria Necessary for a “Market Turn”: All Four Criteria Must Be Met

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Sustained Period of Large Underwriting Losses | Early Stage, Inevitable       | • Apart from 2011 CAT losses, overall p/c underwriting losses remain modest  
• Combined ratios (ex-CATs) still in low 100s (vs. 110+ at onset of last hard market)  
• Prior-year reserve releases continue to reduce u/w losses, boost ROEs, though more modestly |
| Material Decline in Surplus/Capacity          | Entered 2011 At Record High; Only Small Decline | • Surplus hit a record $565B as of 3/31/11  
• Fell just 1.6% through 12/31/11 from 12/31/10  
• Will likely see new record in 2012  
• Little excess capacity remains in reinsurance markets  
• Modest growth in demand for insurance is insufficient to absorb much excess capacity |
| Tight Reinsurance Market                      | Somewhat in Place              | • Much of the global “excess capacity” was eroded by cats  
• Higher prices in Asia/Pacific  
• Modestly higher pricing for US risks |
| Renewed Underwriting & Pricing Discipline     | Some Firming esp. in Property, WC | • Commercial lines pricing trends have turned from negative to flat and now positive, esp. Property & WC;  
• Competition remains intense as many seek to maintain market share |

Sources: Barclays Capital; Insurance Information Institute.
Have Underwriting Losses Been Large Enough for Long Enough to Turn the Market?
As Recently as 2001, Insurers Paid Out Nearly $1.16 for Every $1 in Earned Premiums

Heavy Use of Reinsurance Lowered Net Losses

Relatively Low CAT Losses, Reserve Releases

Relatively Low CAT Losses, Reserve Releases

Cyclical Deterioration

Avg. CAT Losses, More Reserve Releases

Higher CAT Losses, Shrinking Reserve Releases, Toll of Soft Market


Sources: A.M. Best, ISO.
The combined ratios for both personal and commercial lines insurers jumped by similar amounts in 2011.
Underwriting Gain (Loss) 1975–2011E*

Cumulative underwriting deficit from 1975 through 2011 is $479B

Underwriting losses in 2011 totaled $36.5B, the largest since 2001

Large Underwriting Losses Are *NOT* Sustainable in Current Investment Environment

* Includes mortgage and financial guaranty insurers in all years
Sources: A.M. Best, ISO; Insurance Information Institute.
Commercial Lines Combined Ratio, 1990-2012F*

*2007-2012 figures exclude mortgage and financial guaranty segments.
Source: A.M. Best; Insurance Information Institute

Commercial lines underwriting performance in 2011 was the worst since 2002

Note: 2005 reserve development excludes a $6 billion loss portfolio transfer between American Re and Munich Re. Including this transaction, total prior year adverse development in 2005 was $7 billion. The data from 2000 and subsequent years excludes development from financial guaranty and mortgage insurance.

Sources: Barclays Capital; A.M. Best.
2. SURPLUS/CAPITAL/CAPACITY

Have Large Global Losses Reduced Capacity in the Industry, Setting the Stage for a Market Turn?
Policyholder Surplus, 2006:Q4–2011:Q4

($ Billions)

2007:Q3 Previous Surplus Peak

The Industry now has $1 of surplus for every $0.80 of NPW, close to the strongest claims-paying status in its history.

Surplus as of 12/31/11 was down 2.5% below its all time record high of $564.7B set as of 3/31/11. A new record high in 2012 is possible.

Quarterly Surplus Changes Since 2011:Q1 Peak

11:Q2: -$5.6B (-1.0%)
11:Q3: -$26.1B (-4.6%)
11:Q4: -$14.3B (-2.5%)

*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.
3. REINSURANCE MARKET CONDITIONS

Record Global Catastrophes Activity is Pressuring Pricing
Reinsurers Paid a High Proportion of Insured Losses Arising from Major Catastrophic Events Around the World in Recent Years

Source: Insurance Information Institute from reinsurance share percentages provided in RAA, ABIR and CEA press release, Jan. 13, 2011.
Most excess reinsurance capacity was removed from the market in 2011, but there does not appear to be a shortage, leading to modest increases in 2012 reinsurance renewals except in areas hit hard by CATs.
Global Property Catastrophe Rate on Line Index, 1990—2012 (as of Jan. 1)

Property-Cat reinsurance pricing is up about 8% as of 1/1/12—modest relative to the level CAT losses.

Sources: Guy Carpenter; Insurance Information Institute.
4. RENEWED PRICING DISCIPLINE

Is There Evidence of a Broad and Sustained Shift in Pricing?
Premium Growth Is Up Modestly: More in 2012?

Shaded areas denote “hard market” periods
Sources: A.M. Best (historical and forecast), ISO, Insurance Information Institute.

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 growth was +3.3%

NWP was up 0.9% in 2010
Finally! Back-to-back quarters of net written premium growth (vs. the same quarter, prior year)

Sources: ISO, Insurance Information Institute.
Average Commercial Rate Change, All Lines, (1Q:2004–4Q:2011)

(Percents)

Pricing as of Q3:2011 was positive for the first time since 2003. Slightly stronger gains in Q4.

KRW Effect

Q2 2011 marked the 30th consecutive quarter of price declines

Source: Council of Insurance Agents & Brokers (1Q04-4Q11); Insurance Information Institute
Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2011:Q4

Percentage Change (%)

Peak = 2001:Q4 +28.5%

Pricing Turned Negative in Early 2004 and Remained that way for 7 ½ years

Trough = 2007:Q3 -13.6%

Pricing turned positive (+0.9%) in Q3:2011, the first increase in nearly 8 years; Q4:2011 renewals were up 2.8%

Source: Council of Insurance Agents and Brokers; Barclay’s Capital; Insurance Information Institute.
Cumulative Qtrly. Commercial Rate Changes, by Account Size: 1999:Q4 to 2011:Q4

1999:Q4 = 100

Despite Q4:2011 gain of 2.8%, pricing today is where it was in late 2000 (pre-9/11)

Upward pricing pressure is small for large accounts, 1.8% in Q4:2011, vs. 3.1% for small accounts and 3.5% for medium accounts

Source: Council of Insurance Agents and Brokers; Barclay’s Capital; Insurance Information Institute.
Change in Commercial Rate Renewals, by Line: 2011:Q4

Major Commercial Lines Renewed Uniformly Upward in Q4:2011 for Only the Second Time Since 2003; Property Lines & Workers Comp Leading the Way

Source: Council of Insurance Agents and Brokers; Insurance Information Institute.
INVESTMENTS: THE NEW REALITY

How Much of a Threat Are Persistently Low Interest Rates for (Re)Insurers?
Insurers Have Not Yet Fully Adapted to a Persistently Low Interest Rate Environment

- No Expectation that Rates Would Be:
  - Pushed to Such Low Levels
  - Pushed Down so Rapidly
  - Held to Such Low Levels for So Long
  - Suppressed via Unprecedented Aggressiveness of the Federal Reserve
    - Use of traditional and unconventional tools (QE)
    - Unconventional ’s policies couldn’t be anticipated, esp. QE1, 2 (3?)

- Competitive Pressure ➔ Protracted Soft Market
- Ability to Release Prior Reserves Eases Urgency
- Realization of Capital Gains
<table>
<thead>
<tr>
<th>Year</th>
<th>Investment Income ($ Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$38.9</td>
</tr>
<tr>
<td>2001</td>
<td>$37.1</td>
</tr>
<tr>
<td>2002</td>
<td>$36.7</td>
</tr>
<tr>
<td>2003</td>
<td>$38.7</td>
</tr>
<tr>
<td>2004</td>
<td>$39.6</td>
</tr>
<tr>
<td>2005</td>
<td>$49.5</td>
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<tr>
<td>2006</td>
<td>$52.3</td>
</tr>
<tr>
<td>2007</td>
<td>$54.6</td>
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<td>2008</td>
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<td>$49.0</td>
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<tr>
<td>2012F</td>
<td>$45.5</td>
</tr>
<tr>
<td>2013F</td>
<td>$46.4</td>
</tr>
</tbody>
</table>

Investment earnings in 2011 were 10.3% below their 2007 pre-crisis peak.

Investment Income in 2011 Was Surprisingly Strong, Though Investment Income Is Likely to Weaken in 2012 Due to Persistently Low Interest Rates.

1 Investment gains consist primarily of interest and stock dividends.

*2012F-201F based on Conning projections.

Sources: ISO; Conning Research & Consulting; Insurance Information Institute.
Investment Gains in 2011 Were Surprisingly Robust. Investment Gains Recovered Significantly in 2011 Due to Realized Investment Gains; The Financial Crisis Caused Investment Gains to Fall by 50% in 2008

$ 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.
Insurers Posted Net Realized Capital Gains in 2010 and 2011 After Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were the Primary Cause of 2008/2009’s Large Drop in Profits and ROE.

Sources: A.M. Best, ISO, Insurance Information Institute.
U.S. 10-Year Treasury Note Yields: A Long Downward Trend, 1990–2012*

Yields on 10-Year U.S. Treasury Notes have been essentially below 5% for nearly a decade.

Yields on 10-Year U.S. Treasury Notes have been essentially below 4% since January 2008.

Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, through March 2012. Note: Recessions indicated by gray shaded columns.
National Bureau of Economic Research (recession dates); Insurance Information Institutes.
The Fed Is Actively Signaling that it Is Determined to Keep Rates Low Through Late 2014

Source: Federal Reserve Board of Governors; Insurance Information Institute.
Interest rates remain generally low in much of the world, depressing insurer investment earnings. Central banks in many countries, including the US, are intentionally holding rates low.

Lower Investment Earnings Place a Greater Burden on Underwriting and Pricing Discipline

*Based on 2008 Invested Assets and Earned Premiums
**US domestic reinsurance only
Source: A.M. Best; Insurance Information Institute.
Insurance Information Institute Online:

www.iii.org

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