

Global Warming – Impact on General Insurance

“ We’d be out of our minds if we wrote weather insurance on the opinion global warming would have no effect at all.”

Warren Buffett, 2006 Berkshire Hathaway Annual Shareholder Meeting

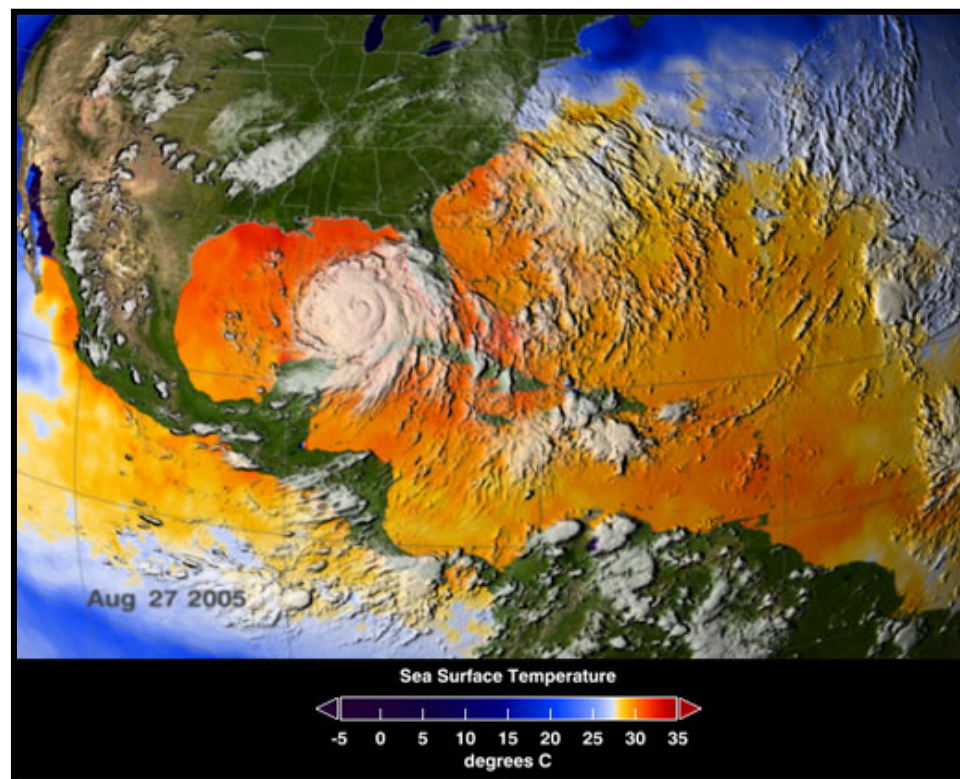
Bill Peck
General Manager
Risk Management and Compliance
Aon Australia

Global Warming – Impact on Insurance

- Key climate change issues for insurers
 - Future of hazard risk
 - Reduced insurability
 - Risk controls
 - Pricing paradigms
- The ‘capital strain’
 - Prudential regulation
 - Reinsurance and retro markets
 - Recalibrating portfolios
 - Capital markets
 - The investor
- A perfect storm scenario
- Key messages for stakeholders

Future of hazard risk

- Bigger cyclones
- More frequent and intense bushfires
- Stronger more frequent storms
- New areas of exposure
 - Eg the 27° C trigger



Reduced insurability

And the Threat



The Opportunity

- Shortening time between loss events
- Changing variability
- Shifting spatial distribution of events
 - Eg cyclones & the 27°C SST trigger
- Damage that increase exponentially with weather intensity
- Single events but multiple, correlated consequences
- The 'experience irony'
 - Our knowledge is reducing

Risk controls

- Insurance pricing relies on risk controls eg
 - Building codes
 - Bush fire protection
 - Planning controls
- But based on historical data
 - For both size and locations of exposures
- “Make it insurable” - tomorrow
 - Infrastructure
 - Planning & building codes
 - In a three tier government environment
- It’s time to act now

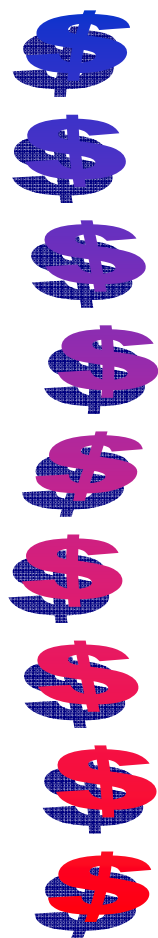


An historical pricing paradigm

- Insurance pricing is (should be) based on the law of large numbers
- Which assumes some level of predictability
- Currently based on historical experience
- Pricing is locked into the old experience paradigm
- As are customer pricing expectations
- Not assisted by soft market, intense competition for growth & changes in liability risk
- Technical pricing?
- “Need” a ‘trigger event’



The 'capital strain'



- Prudential regulation
- Reinsurance and retro markets
- Recalibrating portfolios
- Capital markets
- The investor

Prudential regulation

- Increased & more sophisticated regulation since HIH etc collapses
- But still based on old paradigms
- And subject to a high level of subjectivity
- With competing drivers (competition, stock analysts, remuneration)
- ABI “Financial Risks of Climate Change” in 2005
 - Potential MCR increases >90% US hurricanes & 80% Japanese windstorm
- Increasing importance of rating agencies
 - Global, better resourced & informed – quicker to move
 - RMS model now used by S&P for US ratings – 2X increase in natcat capital

Reinsurance & retro markets

- Established reinsurers are best informed
 - With the best modelling capabilities
 - Which show increased risk
- KRW has led to 75% reduction in retro capacity
 - Opportunistic and idealistic capital?
- New capital is competing with established reinsurance
 - Who continue to converge
- KRW not a global pricing trigger
 - Increases local “spike”
- Larry has driven some minor increases in cat pricing

Recalibrating portfolios

- Property and BI risks most affected
- Liability least affected (but beware the lawyers)
- Will capital be redirected?
- Will companies pursue greater diversification?
 - Both class and geographical
- Will we start to see diverging pricing cycles?
 - Between long and short tail classes
 - Between geographies



Capital markets

- Cat bonds are now well established alternatives to traditional insurance
- Sidecars have added another alternative
- The Catlin “Bay Haven” cat swap is yet another alternative
 - With the added attraction of being structured as a low risk investment
- All of which are providing an escape valve for the potential for global warming driven increases in catastrophe risk
- But will they survive a major “global warming” cat?
 - Appetite, Modeling reliability

The investor

- Tell me more
 - Global Framework for Climate Risk Disclosure
- But give me growth – quarter by quarter
- And less, not more, volatility (I'm a super fund)
- Improved information but still lack of risk management and reserving transparency
- Which Australian insurer has the best handle on climate change
- But what do the stock analysts say?

The perfect storm scenario

- Major multiple cat events
- Major losses for Australian insurers
- Ratings downgrades
- Increased prudential capital requirements
- Reduced stock market confidence – PE ratios drop
- No appetite for further insurer investment – too much uncertainty & volatility
- Big increases in reinsurance costs & reinsurance cover withdrawn
- Insurance cover reduced or withdrawn
- Government substitution

Key messages for stakeholders

- Insurers
- Governments
- Regulators
- Investors

Messages for insurers

- Get informed
 - Use your reinsurers
 - Improve your knowledge
 - Improve your modelling capability
 - Consider industry approaches
- There are opportunities
 - As a government and community educator
 - To improve the insurance brand
- Drive & reward risk control improvements
 - Building codes
 - Planning & development
 - Building materials
 - New buildings
 - Renovations and improvements
- Take innovative approaches
 - Partner with government to incentivise change
 - Develop new products



Lloyds posted a profit of \$2.4bn in 2004 and a loss of \$180m in 2005 which equates to \$1.12 paid for every \$1.00 in premium revenues, thanks largely to hurricane losses

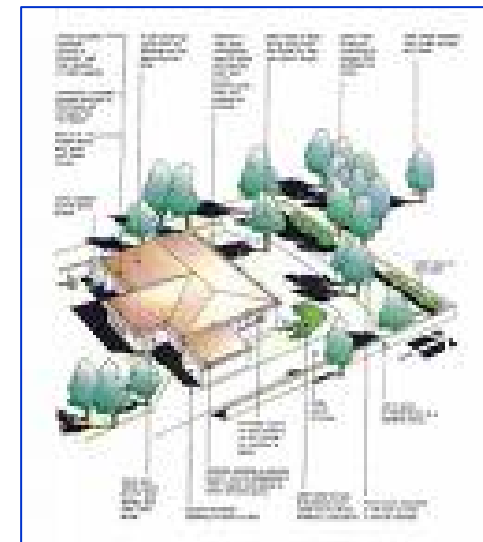
- The industry must do more now to understand and actively manage CG risk
- Recent events have shown capital and pricing models to be wanting. We must regularly update and recalibrate our models to keep pace with reality.
- CG means that exposures are changing and new ones emerging. Insurers must regularly review and communicate conditions of coverage.
- Effective partnership with business and government will be key to managing risk. The insurance industry must engage now

Messages for Federal & State Governments

- Learn from the insurance industry – rather than the coal industry
- You (& taxpayers) are the insurer of last resort - directly or indirectly
- History suggests governments don't do it well & it's expensive
- Potentially damaging of government and political brand
- We need a healthy insurance industry providing valuable cover
- You need to maximise private sector insurance
- Stop tax disincentives - tax incentives for cat funding
- Incentivise insurance and risk controls

Messages for Local Government

- Understand the need for future local risk controls
- Use insurance industry information on risk
- Help educate your communities – you're closest
- Stop risky developments – it's likely to be bad for your financial health
- Promote risk controls



Messages for . . .

- **Regulators**

- It's time to up skill
- Climate change risks is more important than outsourcing risk
- But it's not just about more capital
- Work with the industry to influence government

- **Investors**

- Measure and reward only growth at your own peril
- The insurance industry is different (you don't know the cost of sales until later)
- Be more climate change inquisitive
- Reward sustainability – we are about to move into a fundamentally different era

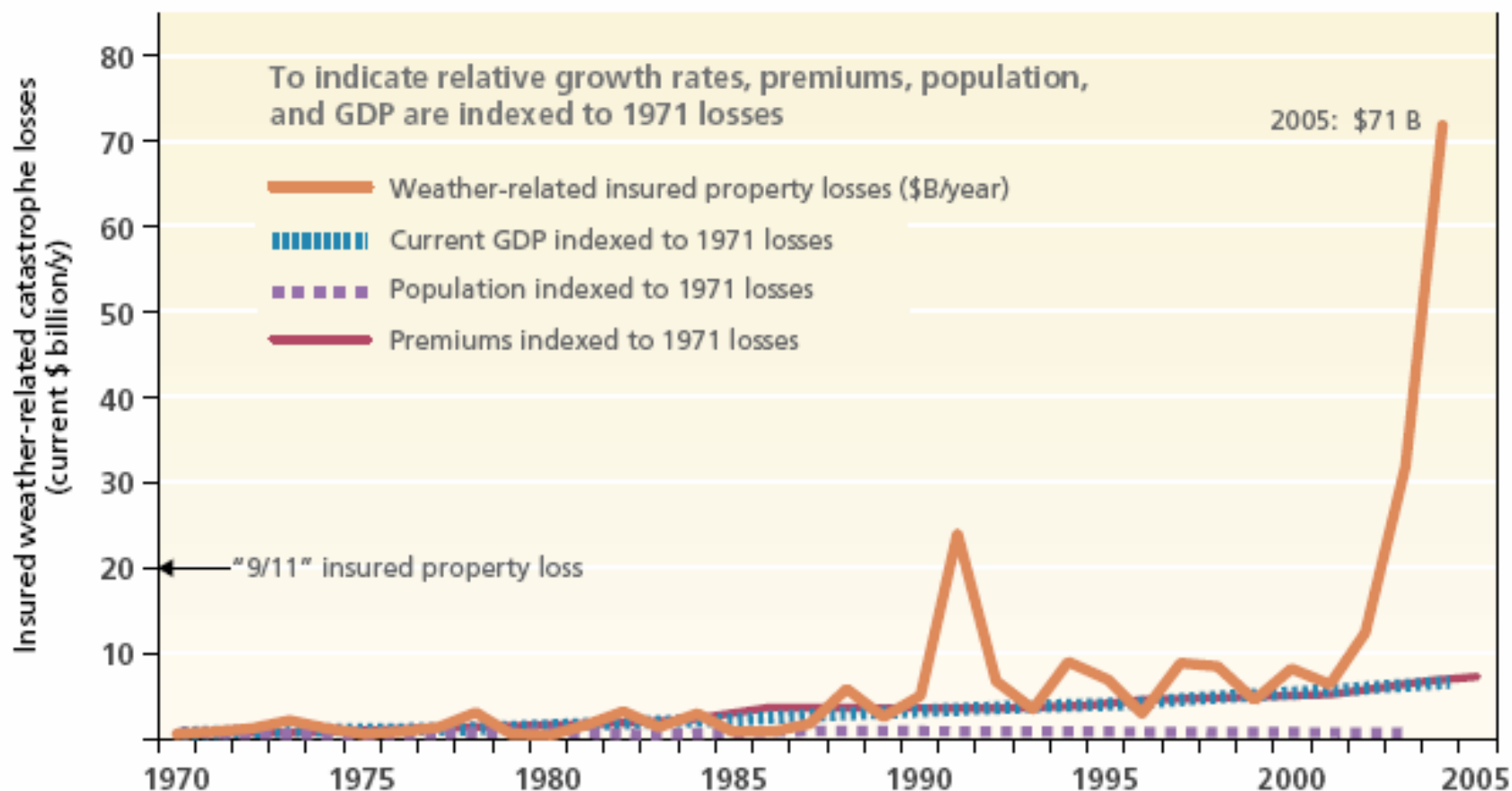


Figure 1. U.S. Insured Catastrophe Losses Growing Faster than Premiums, Population, GDP

Source: Mills, Roth, and Lecomte (2005) updated to show 2005 losses

From Risk to Opportunity published by Ceres August 2006

Principal information sources

- Stronger Evidence but New Challenges: Climate Change Science 2001-2005 by Will Steffen, Department of the Environment & Heritage, Australian Greenhouse Office
- Climate Science Overview June 2006 by Bryson Bates, CSIRO
- Topics January 2006 by Munich Re
- Financial Risks of Climate Change Summary Report 2005 published by the Association of British Insurers
- Climate Change – Adapt or Bust published by Lloyds of London 2006
- Asset management and climate change published in 2005 by Tyndall Centre for Climate Change Research
- Global Framework for Climate Risk Disclosure published by Ceres
- From Risk to Opportunity: How insurers can proactively and profitably manage climate change published by Ceres
- Climate Change and Insurance: An agenda for action in the US published by Allianz Group & WWF
- Availability and Affordability of Insurance under Climate Change: A growing challenge for the US published by Ceres
- Insurance Journal (www.insurancejournal.com)
- www.planetark.com