Climate Change and Insurance

Challenges and Opportunities

Why do we care?

- Insurance key to our economy—keeps risk within reasonable limits so businesses can invest and grow and so individuals can recover their losses
- Required to obtain financing
  - For home owners to obtain mortgages
  - For businesses to secure working capital and lines of credit
- Insurers are investors: government and private bonds, business financing, home mortgages

Climate change affects insurance claims

- Climate change predicted to cause more extreme weather and rising sea levels
- More intense hurricanes/cyclones
  - 2005 US hurricanes likely to cost private insurers $60-70 B
  - 2004 multiple storms cost $22.5 B
- Insurers and reinsurers fear multiple events in a single year—risk of insolvency

Climate Change affects insurance claims

- More floods
  - Most flood insurance provided by the federal government
  - Indirect effect on private insurers
    - Excess insurance (above federal limits)
    - Business interruption
    - Concurrent wind/flood claims
- Droughts
  - Wildfires
  - Crop failures—some federally insured

Climate Change affects insurance claims

- Climate change litigation--liability and D&O insurance
- Impact on health and life insurance
  - Heat waves
  - Pollution (asthma, cardiovascular events)
  - Vector borne diseases (Lyme, West Nile, Malaria)

Insurers Sound the Alarm on Climate Change

- "Swiss Re believes that global warming and the resulting climatic changes may be the greatest challenge facing society." *Roger Ferguson, former chairman, Swiss Re America*
- At Lloyds we do not subscribe to scare stories…we believe that a $100 billion dollar US mega-catastrophe is getting closer for the insurance industry—and it could hit almost anywhere on the Atlantic Coast. *Lord Levene, Chairman of Lloyds*

Insurers Sound the Alarm on Climate Change

- “Climate change has the potential to develop into the greatest environmental challenge of the 21st century. The recent period of intense tropical cyclone activity most likely reflects the effects of both natural climate variability and a superimposed global warming trend due to human causes.” *Chief Risk Officers of 19 insurers*
- “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*

Insurance Regulators warn of financial consequences

- “The threat that climate change driven weather-related risks pose to insurer solvency is of universal concern for insurance regulators” *Draft White Paper, National Association of Insurance Commissioners (NAIC)*
- “The insurance industry is our canary in the coal mine.” *Tim Wagner, former Chair NAIC Climate Change Task Force and Nebraska Insurance Director*
- “Climate Change: Financial Risks to Federal and Private Insurers in the Coming Decades Are Potentially Significant” *GAO*

Insurance is a Promise

- We pay premiums for a promise to pay if a specific event happens
  - Fire, auto accident, hurricane, flood, death, serious illness, or loss of income
- Insurers need the assets to pay your claim and all claims made at the same time
- Premiums must be adequate and insurers must invest wisely so the company can pay all legitimate claims without becoming insolvent

Insurance is a Promise

- Insurers base premiums on perceived risk usually based on past experience
  - Young men driving fancy sports cars pay more than married 40 year old women in minivans
  - Homeowners and businesses in coastal areas subject to hurricanes or close to wildfire prone forests pay more than those living further from danger

Insurance is a Promise

- Insurers also buy insurance for themselves from reinsurers, particularly to guard against catastrophe risk such as a major hurricane
  - Much of the increase in premiums post Katrina is due to the higher cost of reinsurance because reinsurers perceive greater risk

Insurance is a promise

- When faced with higher risk, insurers take action to stay solvent:
  - Raise premiums
  - Withdraw from higher risk markets or drop higher risk policy holders
  - Limit types of coverage
    - Eliminate wind coverage
    - Charge higher deductibles

Flood Insurance

- Flood insurance in the U.S provided by the federal government – not covered in private homeowner or business property coverage
- Premiums do not fully reflect differences in the risk assumed (Florida vs Virginia, coast vs inland)
- Taxpayers are the reinsurers (i.e. Katrina)
- Flood insurance limited in amount—some excess private insurance

Why is Climate Change Important?

- Predicted to increase the number of severe weather events likely to result in claims
- Likely to increase catastrophic losses such as those caused by major flooding, more intense hurricanes, or large wildfires
- The past may no longer predict the future so the cost of insurance likely to include a premium for uncertainty

Why is Climate Change Important?

- Ernst & Young survey of global leaders on strategic business risk:
  - The top insurance risk in 2008 is climate change

Virginia Insurance Market

- Virginia homeowner insurance premiums have increased 67.2 % (2001-2006)
  - Nationwide increase 46.3%
- Virginia is not Florida
  - Still a viable private market
  - Only 1% in the FAIR plan (insurance pool for risks rejected by the private market)

Virginia: Sea Level Rise

- IPCC predicts sea level rise
- RMS (catastrophe modeling company) analyzed the exposure of the world's coastal cities to flooding:
  - Virginia Beach the 10th largest coastal city in terms of assets exposed to increased flooding from sea level rise
- Future hurricanes could cause more serious damage and
- Future problems with insurance affordability and availability

Insurer Climate Change Opportunities

- Insurers can influence public policy
  - Support federal action to curb GHG emissions
  - Support state and regional action to lower CO_2 emissions
  - Advocate for stronger land use, building codes, flood defenses, and disaster plans
  - Educate leaders, their policyholders and the public on the risk

Insurer Climate Change Opportunities

- Insurers need to develop new products to deal with climate change:
  - Coverage for new climate change technologies
  - Products to facilitate emissions trading
  - Pricing to encourage cuts in GHG emissions
    - Pay as you drive auto insurance
    - Discounts on green buildings
    - Discounts and financing for policyholder investments to prevent damage (e.g. hurricane shutters)
- Incorporate climate change into investment strategies

- “Insurance companies make money by accurately assessing risk. For decades environmentalists have been sounding the alarm about global warming. Now major insurers are becoming engaged as they look after their own assets and those that they cover. Federal reluctance to commit to international agreements on climate change or otherwise cap total carbon emissions, appears to be driven by influential businesses that fear the limitation will hurt their bottom lines. But the risk perceived by the insurance industry—the world’s largest economic sector—may shift that political balance.” *John Morrison, Montana state auditor, Alex Sink, Florida chief financial officer*