Insurance and Reinsurance in a Low Carbon Economy

Is Climate Change the New Mass Tort for the Industry?

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Defining Climate Change

We live in an era where the long-established use of fossil fuels to power our industries and economies is being questioned due to its purported impact on the Earth's climate. The burning of fossil fuels produces CO_2 and other so-called greenhouse gases (GHGs) that scientists have linked to global warming and other changes in the Earth's climate. Carbon extractors and heavy users of fossil fuels have come under heightened scrutiny in just the last year. Insurers and risk managers should pay close attention to developments related to climate change and make certain that they remain proactive in the way in which they address risk to their respective organizations.

The phrase "climate change" is extremely broad and includes global warming as well as changes in precipitation, storm patterns, etc. While the phrase itself does not imply change due to human activity, it is often used in such a context. It is important to discern exactly what part of this larger discourse is relevant to the insurance industry. Specifically, the industry should concern itself with changes in the Earth's climate that can lead to a loss in insurer assets, by way of an insured loss, an investment loss or a regulatory fine.

For some insured exposures, such as property and business income coverages, it is not necessary to determine causation to acknowledge a need for concern. If, for example, warming of the Atlantic Ocean causes one additional hurricane each season, the property policy responds, regardless of who is to blame. Liability policies, on the other hand, would require a determination of causation, and ultimately of liability on the part of the policyholder before the policy would respond.

Any determination of legal liability would imply that climate change is, in fact, the result of man-made activities. Yet our discussion here is non-scientific and does not purport to establish a link between human activity and actual change in the earth's climate. On the other hand, we do discuss the types of future claims that are likely to be alleged against the industry.

Is Climate Change the New Asbestos?

Similar to asbestos thirty years ago, climate change has enormous potential to develop into a mass tort. Although the scientific community seems to be lining up on the side of causation, liability has yet to be established. Liability for asbestos-associated illness, however, has been established since the early 1970s (in the US). Further, asbestos-associated illnesses continue to arise in our society and theories of exposure continue to develop. However, it is premature to assume that climate change, as a mass tort, will have a trajectory similar to asbestos.

Asbestos, more than any other mass tort, has defined the process of denial to acceptance, as follows:

- Reports of Harm
- Claims submitted
- Denial of coverage
- Science weighs in
- Adverse judgments
- Ultimate acceptance

It is, therefore, informative to take a brief look at how asbestos came to be recognized as the cause of occupational illness and how the insurance industry processed from denial to ultimate acceptance.

Miners of asbestos, as far back as First Century Rome, noticed that their workers became ill after prolonged exposure in the mines.[1] There was no recourse then for the incapacity and loss of life that resulted without the aid of a well-funded insurance industry.

In modern times, the appetite for asbestos in manufacturing had become robust by the late 1960s, but the risk management part of the insurance industry was in its infancy. In spite of a decade of industrial hygiene reports calling out the dangers of this material, widespread use of asbestos would continue for another decade, and limited use (in brake pads, etc.) would go on for years into the future.[2]

The first successful US asbestos claim, Borel v. Fibreboard Paper Products (in 1971), awarded damages to cover the occupational disease known as "asbestosis."[3]

Policyholders who were manufacturers of products that required insulation or fire protection, would not give up asbestos without a fight. From their standpoint, asbestos was a "miracle" substance that insulated, but would not burn. Contractors continued blowing raw asbestos into Navy ships and every brake pad in virtually every automobile in the world was lined with the substance. New consumer products continued to go to market bringing asbestos "fire safety" into the home.

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[1] http://www.asbestos.com/asbestos/history/
[2] https://www.epa.gov/asbestos/us-federal-bans-asbestos#notbanned
[3] https://tshaonline.org/handbook/online/articles/jrb01

In the early 1970s, insurers of North American risks (including Lloyd's, London Companies, etc.) were in the business of selling insurance to industries that mined, refined, distributed and used asbestos in their daily operations. Assume you are corporate counsel at an insurer during this time period. You know that a single breakthrough law suit can portend a veritable tsunami of new law suits, adverse verdicts, settlements to avoid litigation and meritless claims that follow the real ones. You may not be able to change the industry, but you can influence what goes on in your company. What will you tell your underwriters? Your Actuaries? Your claims people? And what do you tell your accountants? Your Board of Directors? Your regulators?

The way in which insurers and their policyholders handle mass torts can potentially make things worse for their shareholders. Climate change, whether or not it makes it to the final stages of acceptance of liability, is a potentially enormous mass tort that demands the due attention now, and at each stage of its progression.

Where Do Insurers Have Exposure?

It is not hard to imagine the winners and losers from shifting weather patterns. If previously arid land in Africa suddenly becomes arable land due to increased annual rainfall, then local farmers may become winners as they enjoy bountiful harvests where none existed before. On the other hand, if the climate in Southern India suddenly becomes too hot to sustain centuries-old tea plantations, then the plantation owners could become losers to climate change. In addition, climate change has purportedly impacted El Nino, causing differing rain patterns that have led to unusual flooding in South America. Further, the hurricanes in the US seem to be changing their usual trajectory. Hurricane Sandy was the first major hurricane to hit the East Coast in many years. In each of these illustrations, the property damage liability, and liability for loss of income and loss of life could easily support billions of dollars in damages, provided causation and liability could be established in a court of competent jurisdiction.

In the Property & Casualty arena, there are a few broad categories that deserve attention:

1. Property and Business Income
2. General Liability
3. Investments
4. Directors & Officers
5. Regulatory Disclosure

1. Property and Business Income

The mere change in the Earth's climate may lead to increased exposure for insurers from the perils of wind, hale, flood or earthquake. Insurers are exposed to property and business income losses from these perils, without regard to whether the change is climate is determined to be man-made or not. Actuaries, underwriters, as well as the buyers of reinsurance should be tuned in to these changes.

2. General Liability

General liability policies covering fossil fuel extractors and heavy users, such as the utilities industry, could come into play provided that liability could be established in a court of law.

Causation would first need to be established, linking specific human activity of extracting and burning fossil fuel; then, liability by an insured entity that could establish an insurable loss.

Establishing causation, as stated earlier, is beyond the scope of this discussion. However, it will be incumbent upon insurance company management to stay abreast of current theories of causation in order to better understand their exposure.

The burning of fossil fuels in developed countries is pervasive, from utility plants and steel companies burning coal, to automobile owners burning gasoline. For the purposes of allocating liability, it would not be difficult to determine the largest extractors and users of fossil fuels in recent years.

In fact, there has been an attempt to establish such liability in the US courts. In 2011, the Supreme Court of Virginia was the first to make a determination in an insurance coverage matter. The Inupiat Eskimo Village of Kivalina, Alaska had filed a claim against numerous coal-burning utilities including AES Corporation for damages relating to climate change. The Village alleged that Arctic sea ice melting as a result of global warming was ruining the village. Steadfast Insurance Company denied coverage. The Virginia Supreme Court found that Steadfast had no duty to defend such a lawsuit.[4]

While this matter failed to establish liability on the part of the insurer, the mere potential of liability raises questions relating to accounting, claims, underwriting and investments, solvency and regulation. To the extent that liability might be established in the future, underwriting restrictions and/or policy exclusions on any new policies could serve to protect the insurer's capital.

3. Investments

Insurers and regulators, have only recently begun to scrutinize investment portfolios' correlation to the insurer's own insurance policies. Even if one were to assume that all insurers have a perfect handle on this correlation currently, the advent of climate change could change everything.

For example, if Hurricane Sandy, a force IV hurricane hitting the Northeastern United States, suddenly becomes the norm for future weather patterns rather than the exception, insurers with Northeastern real estate exposure, may realize too late that they <u>own</u> properties in the same sectors as they <u>insure</u>. If reinsurance rates rise, property insurance rates will rise and insurance availability could become constrained. If insurance becomes unaffordable,

[4] Insurer Climate Risk Disclosure Survey Report & Scorecard: 2014 Findings & Recommendations, October 2014, Ceres Insurance Program, pp 13-4; and, Hunton & Williams, Client Alert, "Insurance Coverage for Climate Change After AES Corp. v. Steadfast Ins. Co.", October 2011

properties will be foreclosed, dealing an investment loss to both real estate and mortgage loan investors in that sector. Similar scenarios are easily imaginable impacting both liability policies as well as an insurer's investments in carbon producing companies.

In addition to the investment portfolio's correlation with an insurer's own policies, there is also the risk that the portfolios will lose value if carbon extractors and heavy users of fossil fuels become financially impaired due to litigation, a declining market for their products or inability to raise needed capital from major investment funds who eschew carbon investing altogether.

In response to this risk, in January 2016, California Insurance Commissioner, Dave Jones, asked insurers to:

1. "disclose annually their carbon-based investments including those in oil, gas and coal," [5] and,

2. "voluntarily divest from investments they hold in thermal coal," stating:

> "I do not want to sit by and then discover in the near future that insurance companies' books are filled with stranded assets that have lost their value because of a shift away from the carbon-based economy, jeopardizing their financial stability and ability to meet their obligations, including paying claims to policyholders. Insurance companies divesting thermal coal assets will help reduce coal combustion, the single largest contributor to global climate change in the United States."[6]

4. Directors & Officers (D&O)

D&O insurance exposure has largely to do with the potential lack of disclosure from a Director or Officer of a policyholder to its stakeholders. For a public company, this is especially important due to SEC regulations.

Mandatory Public Company Disclosure - Liability for Failure to Disclose

Public company (policyholders) may now be required to disclose any potential liability for causing climate change, to the extent that it makes an investment in the company more risky. Directors and Officers of such companies (and their insurers) might ultimately be required to defend suits alleging inadequate disclosure.

In 2010, the US Securities and Exchange Commission (SEC) issued interpretive guidance relating to climate change disclosure for public companies, citing Item 503(c) of Regulation S-K that requires a registrant to disclose risk factors "that make an investment in the registrant

[5] http://www.insurance.ca.gov/0400-news/0100-press-releases/2016/statement010-16.cfm
[6] http://www.insurance.ca.gov/0400-news/0100-press-releases/2016/statement010-16.cfm

speculative or risky."[7] By the beginning of 2016, however, this interpretive guidance is seen to have had little impact on the quality of actual disclosure made by carbon intensive companies.[8]

In March 2016, the SEC forced Exxon Mobil to allow a climate change vote at its shareholder meeting in May.[9] New York state Comptroller Thomas DiNapoli, who spearheaded the proposal, stated: "Investors need to know if Exxon Mobil is taking necessary steps to prepare for a lower carbon future, particularly now in the wake of the Paris agreement".[10] In addition, the California Attorney General Kamala Harris has opened an investigation as to whether Exxon Mobil Corporation "lied to the public and its shareholders about the risk to its business from climate change – and whether such actions could amount to securities fraud and violations of environmental laws".[11]

Enhanced financial statement risk disclosure associated with climate change, at least for industries involved heavily in the extraction of fossil fuels and the emission of GHGs, will soon likely become a larger part of the Management Discussion & Analysis section of companies' SEC filings. This enhanced disclosure may be impacted by the following factors:

1. The Clean Power Plan, which, if implemented, will create disclosure obligations for companies that mine and use coal, including utilities. In addition to disclosure, the plan would establish emission guidelines for fossil fuel-fired electric generating units.[12]

2. The Paris Agreement of December 12, 2015 may spawn enhanced disclosure by the SEC in that entire countries are asked to track their contributions to emissions reduction; but will more immediately impact 600 individual private-sector companies that have signed the "Paris Pledge for Action".[13]

[7] Securities and Exchange Commission, 17 CFR Parts 211, 231 and 241, Commission Guidance Regarding Disclosure to Climate Change

[8] "Energy Sector Alert Series: Climate Change Disclosures in 2016", Wilmer Hale, February 11, 2016

[9] "Exxon Mobil must allow climate change vote: SEC", Reuters, March 24, 2016

[10] IBID.

[11] "California to investigate whether Exxon Mobil lied about climate change risks", LA Times, January 20, 2016

[12] https://www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants

[13] "Energy Sector Alert Series: Climate Change Disclosures in 2016", Wilmer Hale, February 11, 2016

5. Regulatory Disclosure for Insurance Companies

a. Recognizing a Liability

Insurance companies will need to recognize any appropriate liabilities that arise from climate change. However, in spite of enormous potential liability, there may be little (if any) liability that could be recognized now. From an accounting standpoint, a liability should be recognized under Generally Accepted Accounting Procedures (GAAP) when it is both probable and can be reasonably estimated.[14]

Insurer loss from property policies could occur merely by the increased frequency and severity of "metrological disturbances;" no causation link would need to be established, provided the perils (wind, flood, earthquake, etc.) were covered by the property policy in question. However, an insurer would only recognize case reserves on actual reported claims and Incurred But Not Reported (IBNR) reserves from events that have already occurred. In other words, there is no ability to reserve for future events, even if it is determined that they will be more likely to occur.

Insurers also have significant potential exposure to climate change from their liability policies. The triggering event for liability policies would not be the storm itself, but rather the act that ostensibly caused the storm, such as the combustion of fossil fuel. Although policyholders may have performed such activity, insurer liability is not yet probable, and any resulting insurer loses cannot be reasonably estimated. Thus, it is not possible at this point to record a liability on insurers' books for potential losses expected from climate change. Quantification of total insured losses is impossible without knowing the extent of causation and liability that would be assessed.

Pre-Event Catastrophe reserving

Some insurers and regulators might feel safer if a certain amount of the $700 billion in US policyholder surplus were reserved for the future exposure to climate change.[15] In an effort to fully account for catastrophic losses that will likely occur in the future, there have been alternative proposals put forth that would address multiple types of catastrophes, including those that would potentially arise from climate change.

Pre-Event catastrophe reserves are an idea the National Association of Insurance Commissioners (NAIC) has been considering since the mid-1990s. Under the NAIC plan, the tax deferred proceeds from these reserves would be earmarked only for mega-catastrophes.[16] In Japan, non-life companies are required to establish such a provision, which is partially tax

[14] ASC 450

[15] Insurance Information Institute, "2015 P/C Insurance Industry 2015 – First Half Results, October 21, 2015

[16] "Reserving for Catastrophes", Kay A. Clear, FCAS, MAAA and Judy Pol Boutchee, 2006, p. 29

deductible, depending on the line of business. Both Germany and the United Kingdom have similar requirements which are tax deductible.[17]

Among the benefits is that there is a smoothing of earnings and large catastrophes can be taken more in stride, thereby easing solvency issues both before and after an event. From a regulatory standpoint, the capital is at the company rather than at a foreign or alien reinsurer that may have untold exposure to a future catastrophe. One of the drawbacks, however, is that the more capital that is put away, the lower the capital efficiency ratios of the company. Companies reserving for severity may instead have a rash of frequency issues that require access to capital. Also, regulators see a general benefit to the spreading of risk through reinsurance agreements, and the reduction in such agreements overall would not benefit regulators' solvency efforts. As a result, catastrophe reserving is not under serious consideration for implementation under US GAAP or US Statutory Accounting Procedures (SAP).

b. State Disclosure Requirements for Insurance Companies

One of the most pressing issues for insurers at this juncture is the requirement for greater disclosure. Just as the SEC has required policyholders to disclose climate change exposure, so regulators are requiring the same of insurers.

Climate Change Survey

The National Association of Insurance Commissioners (NAIC) developed an insurance company survey on climate change that was adopted by insurance regulators in California, Connecticut, Minnesota, New York and Washington in 2013. Any company licensed in one of these states, with nationwide direct written premium over $100 million, is required to respond to the survey.

The California Department of Insurance Climate Risk Disclosure Survey consisting of 8 questions (see Appendix 1 showing questions). [18]

Through June 2016, the latest California Climate Risk Disclosure Surveys reflect 2014 data (2015 surveys are due in July 2016). We analyzed the results of over 700 respondents and found that most insurers indicate that they are doing something proactive in response to most of the questions on the survey.

Questions are laid out in a Yes/No format with a requirement to explain or expand upon the answer. Any "yes" response indicates that the insurer is doing something proactive relative to the respective climate change question, and is often followed by a lengthy detailed discussion of the measures that the insurer is taking to address this particular issue. On the 2015 survey, only two questions on the survey were answered "no" by more than 50% of insurers; the remaining questions had well over 50% of insurers responding in the affirmative.

c. Enterprise Risk Management, Model Audit Rule and ORSA

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[17] "Reserving for Catastrophes", Kay A. Clear, FCAS, MAAA and Judy Pol Boutchee, 2006

[18] http://www.insurance.ca.gov/0400-news/0100-press-releases/2016/statement010-16.cfm

Following the demise of Enron and WorldCom, Sarbanes-Oxley (SOX) requirements were imposed upon US Public companies, which included requiring that a "control environment" be established to ensure the company's stability. Not long after, the NAIC imposed Enterprise Risk Management (or ERM) requirements on insurers. ERM requires that a holistic framework be established in order that an insurer can better understand and control its risk-taking activity across underwriting, investment and operational risks. [19]

In addition to this framework, the requirements of the Model Audit Rule (MAR) more closely mirror Sarbanes-Oxley requirements. Specifically, insurers with more than $500 million in direct and assumed premiums must file a report addressing the company's assessment of its internal controls over statutory financial reporting. Like SOX, the report includes management's assertion as to the effectiveness of the controls; however, unlike SOX, the external auditors are not required to opine on the process.[20]

Further, in January 2015, the Own Risk and Solvency Assessment (ORSA) went into effect for insurers above a certain premium threshold. ORSA requires insurers to complete a confidential ORSA summary report addressing risk as it relates to the company's own solvency.[21]

Insurers should recognize that ERM, MAR and ORSA, each provide a tool which is already in place (at companies above the threshold levels), to address enterprise-wide risks they face with the uncertainties surrounding climate change. The ability to use these tools to assess, report and then re-assess climate change risks will be critical in the coming years. Where the risks are unclear, it will be incumbent upon insurers to seek help in identifying risks that could impact their entire organization.

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[19] http://www.naic.org/cipr_topics/topic_enterprise_risk_management.htm

[20] Society of Actuaries, *Small Talk*, Issue 34 June 2010, "The Model Audit Rule-It's Not SOX, But it Has a Punch!", by Lisa Cosentino and Philip Ferrari

[21] http://www.naic.org/cipr_topics/topic_enterprise_risk_management.htm

Appendix 1

California Climate Risk Disclosure Survey Reporting Year 2014

Survey Questions

1. Does the company have a plan to assess, reduce or mitigate its emissions in its operations or organizations?
Yes - The company has a plan to assess and reduce or mitigate emissions in our operations or organizations - Please summarize.
No - The company does not have a plan to assess and reduce or mitigate emissions in our operations or organizations - Please describe why not.

2. Does the company have a climate change policy with respect to risk management and investment management? If yes, please summarize. If no, how do you account for climate change in your risk management?
Yes - The company has a climate change policy with respect to risk management and investment management - Please summarize.
No - The company does not have a climate change policy with respect to risk management and investment management - Please describe how you account for climate change in your risk management, or why you do not account for climate change in your risk management.

3. Describe your company's process for identifying climate change-related risks and assessing the degree that they could affect your business, including financial implications.
Yes - The company has a process for identifying climate change-related risks and assessing the degree that it could affect our business including financial implications - Please summarize.
No - The company does not have a process for identifying climate change-related risks and assessing the degree that it could affect our business including financial implications - Please describe why not.

4. Summarize the current or anticipated risks that climate change poses to your company. Explain the ways that these risks could affect your business. Include identification of the geographical areas affected by these risks.
Yes - The company has identified current or anticipated risks that climate change poses to our company - Explain the ways that these risks could affect your business - Include identification of the geographical areas affected by these risks.
No - The company has not identified current or anticipated risks that climate change will pose to our company - Please describe why not.

5. Has the company considered the impact of climate change on its investment portfolio? Has it altered its investment strategy in response to these considerations? If so, please summarize steps you have taken.
Yes - The company has considered the impact of climate change on its investment portfolio - Please summarize.
No - The company has not considered the impact of climate change on its investment portfolio - Please describe why not.
Yes - The company has altered its investment strategy in response to these considerations - Please summarize steps you have taken.

No - The company has not altered its investment strategy in response to these considerations - Please describe why not.

6. Summarize steps the company has taken to encourage policyholders to reduce the losses caused by climate change-influenced events.
Yes - The company has taken steps to encourage policyholders to reduce the losses caused by climate change-influenced events - Please summarize.
No - The company has not taken steps to encourage policyholders to reduce the losses caused by climate change-influenced events - Please describe why not.

7. Discuss steps, if any, the company has taken to engage key constituencies on the topic of climate change.
Yes - The company has taken steps to engage key constituencies on the topic of climate change - Please summarize.
No - The company has not taken steps to engage key constituencies on the topic of climate change - Please describe why not.

8. Describe actions the company is taking to manage the risks climate change poses to your business including, in general terms, the use of computer modeling.
Yes - The company is taking actions to manage the risks climate change poses to the business - Please summarize what actions the company is taking and in general terms the use if any of computer modeling.
No - The company is not taking actions to manage the risks climate change poses to the business - Please describe why.[22]

[22] http://www.insurance.ca.gov/0250-insurers/0300-insurers/0100-applications/ClimateSurvey/upload/GUIDELINES-CLIMATE-RISK-SURVEY-REPORTING-YEAR-2014.pdf

Appendix 2
Important Websites

California Insurance Department – Climate Risk Survey Guidance:
http://www.insurance.ca.gov/0250-insurers/0300-insurers/0100-applications/ClimateSurvey/

Carbon Disclosure Project ("CDP"): http://www.cdproject.net/.

Casualty Actuarial Society, American Academy of Actuaries, Canadian Institute of Actuaries and Society of Actuaries partnership to raise awareness on climate change:
http://www.casact.org/press/index.cfm?fa=viewArticle&articleID=2128

Ceres, Insurer Climate Risk Disclosure Survey: 2012 Findings and Recommendations:
http://www.ceres.org/resources/reports/naic-report/view.

Climate Disclosure Standards Board - http://www.cdsb.net/

Global Reporting Initiative ("GRI"): https://www.globalreporting.org.

Hecht, Sean. 2008. "Climate Change and the Transformation of Risk: Insurance Matters," UCLA Law Review, Vol. 55: 1559-1620: http://ssrn.com/abstract=1159853

Hunton & Williams, Client Alert, "Insurance Coverage for Climate Change After AES Corp. v. Steadfast Ins. Co.", October 2011
https://www.hunton.com/files/News/7d354c22-37b5-413b-a4e8-ae49c456e272/Presentation/NewsAttachment/4a3cfd62-f5f6-459d-a37b-5295b3ab7eb8/insurance_lit_alert_vol_7_2011.pdf

Insurance Information Institute, Climate Change, Insurance Issues:
http://www.iii.org/disasters/ClimateChange.
Mills, E. 2012. "The Greening of Insurance," Science 338, 1424.":
http://evanmills.lbl.gov/pubs/pdf/science-2012-mills-1424-5.pdf.

Lloyd's: Catastrophe Modelling and Climate Change, 2014
https://www.lloyds.com/~/media/lloyds/reports/emerging%20risk%20reports/cc%20and%20modelling%20template%20v6.pdf

NAIC Climate Change and Global Warming (EX) Task Force. 2008. "The Potential Impact of Climate Change on Insurance Regulation.":
http://www.naic.org/store_pub_whitepapers.htm#climate_change.