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CLIMATE CHANGE FROM AN INSURANCE PERSPECTIVE

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It is widely recognized that environmental issues are creating both opportunities and challenges for the business community. On the one hand, environmental goods and services are a booming business, and companies are racing to tap this sector's enormous market potential. On the other, environmental regulation is forcing businesses to take legal and financial responsibility for reducing their impact on the environment.

But there is a third side to the issue that is often overlooked – the physical and market risks caused by environmental change itself. One industry that is particularly attuned to these risks is the insurance sector. A leading group of international insurers and reinsurers, led by companies in Europe and Asia, has started to tackle this issue by joining together as the United Nations Environment Programme (UNEP) Insurance Industry Initiative on the Environment.

Climate Risks

While some industries worry about the up-front costs of taking action to reduce greenhouse gas emissions, insurers know from experience how expensive it can eventually be when people fail to protect themselves adequately against risk. As a rule, it is generally cheaper for an insurer to invest in loss prevention than to allow losses to happen unchecked and passively pay out claims. This is why the insurance industry shows up again and again in history playing roles such as founders of fire departments, early participants in Underwriters Laboratories and the like.

Natural disasters represent 85 percent of all insured losses, and according to the Reinsurance Association of America, more than 50 percent of the losses from natural disasters over the past 40 years have occurred since 1990. Causes of climate-related losses are numerous and include windstorms, floods and mudslides. The resulting health effects (e.g., spread of vector-borne diseases such as malaria; urban heat catastrophes) and agricultural damage can also lead to significant losses.

Some of the world's leading

insurance companies are therefore concerned about climate change. In fact, the first public statements by insurers on climate change date back nearly a decade. Munich Re, the world's largest reinsurer, was among the first voices. Swiss Re stated early on that "the phenomenon of climatic change is not some vague threat. …Human intervention in the natural climatic system could accelerate global climatic change to such an extent that society might no longer be able to adapt quickly enough."

The Second Assessment report of the Intergovernmental Panel on Climate Change (IPCC) – an unprecedented collaborative effort among 2,500 scientists from around the world – concluded that the atmosphere's mean global temperature is likely to rise by two to six degrees Fahrenheit by the end of the next century. This global change will likely alter regional circulation patterns in the atmosphere and the ocean. It is not known how this may affect the frequency and intensity of extreme climate events at the global level, but it is likely that some regions will experience more climate disasters than they do now. A group of insurers wrote one chapter of the IPCC report, focusing on the potential adverse impacts on their business.

Wildfires that raged in Southeast Asia this fall, sparked by the unfortunate combination of deforestation and drought, and the looming threat of major weather-related disasters in North America this winter due to El Nino are the kinds of costly events that some insurers fear will become more frequent if society continues to pump greenhouse gasses into the atmosphere.

If at-risk regions are unable to establish defensive infrastructure, institutions and services, they are likely to experience increased property damage. A higher risk of extreme events due to climate change could therefore lead to larger deductibles, higher premiums and decreases in coverage. In the most vulnerable areas, property coverage could even become unavailable.

Of course, growing losses from climate disasters have other causes besides climate trends. First, as the world's population expands and becomes wealthier, demand for insurance coverage increases. Each extreme climate event is therefore likely to come with a higher price tag.

Second, coastal and other exposed areas are seeing more and more development. Deforestation, land degradation and other forms of overexploitation of natural resources are also contributing to prospects for higher insurance losses.

The problem is that it is still not possible to precisely quantify present or future changes in the risk of extreme events. The uncertainties associated with climate change dampen proactive involvement by insurers and present obstacles to establishing an actuarial rate.

Higher premiums or the loss of coverage would increase direct financial losses to property owners and businesses. They would also have serious long-term implications for communities and governments. In addition, if unexpectedly severe events start insurer insolvencies, other economic sectors such as banking and public finances could feel the ripple effects. Banks in particular would experience a rapid increase in financial risk if the real estate to which they provided financing suddenly had reduced insurance coverage, or no coverage at all.

Investment Risks

Despite claims of some macroeconomists, climate change could affect stock markets and investment activities as society anticipates and adapts to the new climate regime. Because insurers manage long-term savings and investments, they should not ignore the possible effects of climate change and other environmental problems. The entire economies of certain regions, such as coastal areas and small islands, may be affected.

Some economic sectors will prosper under climate change, while others will suffer. For example, products and industries that are heavily dependent on climatic conditions (e.g., agriculture) or fossil fuels (e.g., oil industry) may become less attractive to investors. But quantifying the impact of environmental factors on investment risks is difficult.

No-Regrets Response Strategies

Since energy consumption is the largest contributor to global greenhouse gas emissions, supporting energy efficiency and renewable energy is well recognized as a promising response strategy.

Of particular relevance to insurers should be the fact that certain energy efficiency measures have the potential for reducing losses involving property, health/life or liability. For example, well-insulated roofs are less likely to suffer ice dam and accompanying water damage. The Institute for Business & Home Safety (IBHS) and the U.S. Department of Energy recently entered into a Statement of Understanding to develop ways of maximizing these benefits.

Renewable energy technologies offer similar dual benefits. General Accident notes that using certain wastes to grow renewable biomass fuels preempts liability insurance claims otherwise caused by leakage of those wastes into soils and waterways. Renewable electric supply systems like wind turbine arrays can increase the reliability of power grids, which means lower business-interruption claims following disasters. Hydroelectric dams help control flood waters (although this alone doesn't stop people from building in harm's way). Solar cells can be used to power disaster recovery operations, and a new generation of solar roof tiles may someday make homes more resistant to hailstorm damage.

By supporting these sorts of climate-friendly energy options, the insurance industry could reduce ordinary near-term business risks while making a considerable contribution to long-term reductions in greenhouse gas emissions that also threaten their bottom line. This creative and proactive approach represents an attractive and previously untapped "no-regrets" opportunity for insurers, as the risk-reducing benefits offer distinct value irrespective of the timing or extent of damages related to global climate change.

Following are three illustrations of no-regrets actions being undertaken by insurers:

•As part of its climate change strategy, Norway's Storebrand has launched the $80 million Environ-mental Value fund, basedon an environmental screen. A UK initiative known as the Solar Century has garnered insurer investment in the photo-voltaic energy industry, as has U.S.-based SunLight Power International.

•Arkwright Mutual Insurance Co. is actively exploring a special class of energy-saving strategies that simultaneously increase safety conditions and reduce emissions of greenhouse gasses. Their first demonstration project, carried out in partnership with Lawrence Berkeley Laboratory and Boston Edison Company, involves replacing fire-causing halogen torchiere lamps at two major U.S. university dormitories with highly efficient compact flourescents that pose no fire risk.

•A number of companies have implemented major in-house energy management programs that are garnering large cost savings as well as emissions related to the inefficient use of energy. By combining measures such as efficient window and lighting replacements, heating/cooling system upgrades and computerized energy management systems, these companies are reducing their utility bills by 50 percent and more.

Many other stakeholders (public and private) are already active in building markets for efficiency and renewable energy technologies and services. These include federal and local government agencies, energy utilities, energy service companies, consumer interest organizations, and a range of professional societies. Partnerships between these groups and insurers are now being forged.

Through its partnerships with groups as diverse as the EPRI Disaster Recovery Business Alliance, the U.S. Department of Energy, the American Red Cross, the U.S. Geological Survey and NOAA, IBHS initiatives can become testbeds for these new ideas.

The UNEP Initiative

In response to the climate negotiations, several large industrial associations have taken an aggressive stand against any effort to mitigate the potential risks of climate change, emphasizing the existence of scientific uncertainty, the high costs of changing technologies and the possible benefits for some regions.

Faced with this situation, and the growing importance of global issues to their activities, a group of foreign insurers has assembled over 70 insurance companies from 25 countries under the aegis of the United Nations Environment Programme to constitute the UNEP Insurance Industry Initiative for the Environment. These companies represent all major regions of the world: Africa (South Africa, Tanzania), Asia (Hong Kong, Indonesia, Japan, Singapore, South Korea, Thailand), Australia and Oceana (Australia, New Zealand), Europe (Austria, Denmark, France, Germany, Italy, Norway, Portugal, Russia, Spain, Sweden, Switzerland, United Kingdom), North America (Canada, United States) and South America (Argentina).

This initiative gives the insurance industry its own voice on climate change and other important global environmental issues. It can also offer policymakers useful information on solutions to the financial challenges of climate change. A new association was recently formed, consisting of a subset of the above 70 companies, which decided to engage themselves at an even higher level on environmental issues.

The steering committee for the initiative includes General Accident (UK), Gerling-Konzern Globale Reinsurance Company (Germany), N.P.I. (UK), Sumitomo Marine & Fire Insurance Co. (Japan), Swiss Reinsurance Co. (Switzerland) and Storebrand (Norway).

At last July's meeting of the Conference of the Parties, insurers presented a position paper on "Insurance and Climate Change," highlighting insurers' concern that, while the effect of climate change on the frequency or severity of extreme weather events remains unknown, it is clear that even small shifts in regional climate zones or storm patterns could lead to increased property damage. They called for early and substantial reductions in greenhouse gases.

They highlighted the importance of the precautionary principle, which states that the existence of scientific uncertainty and the need for further research should not be considered an excuse for avoiding early action.

The insurers also urged governments to promote scientific research that will establish what threshold level of atmospheric concentrations of greenhouse gases should be considered dangerous.

They also supported efforts to establish a transparent framework of political, social and economic measures to promote sustainable development, taking into account the risks of climate change.

Insurance company members of the UNEP Initiative remain active. In addition to supporting the development of methodologies for improving risk assessment, the group plans to participate actively at the next round of climate negotiations in Kyoto, Japan, where the release of a position paper on "Insurance and Climate Change" and other insurance-related events are planned.

Although foreign insurers face different tax laws, regulations, etc., there is enough commonality in the potential risk of climate change that it is warranted for U.S. insurers to join the international discussion. New U.S. members are welcome to join the UNEP Insurance Industry Initiative for the Environment.

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