AMERICAN ACADEMY *of* ACTUARIES

March 3, 2005

The Honorable Craig Eiland, President
National Conference of Insurance Legislators
385 Jordan Road
Troy, NY 12180

Dear Representative Eiland:

I am writing to you as chairperson of the American Academy of Actuaries'[1] Extreme Events Committee. At the November 2004 National Conference of Insurance Legislators (NCOIL) meeting the Academy offered oral comments to the Property/Casualty Insurance Committee on the current state of the U.S. catastrophe insurance marketplace. This letter is a follow-up to those comments and addresses them in further detail. Specifically, it outlines considerations for the Subcommittee on Natural Disaster Insurance Legislation as it discusses its July 2004 Resolution Regarding Natural Disaster Issues.

Overview

The main challenge facing the U.S. insurance system in funding major catastrophe losses is the enormous amount of capital that is required to assure payment of claims and how to replace the capital after it is depleted. A $100 billion or larger event is certainly plausible for natural disasters such as hurricanes and earthquakes or man-made disasters such as terrorism. Since exposing that much capital to loss entails a high degree of risk, the capital markets require a significantly higher return to justify their investment, just as securities markets expect a higher return on stocks than treasury bills.

Another challenge is the difficulty in regulating rates that include the cost of capital. Many state regulatory laws and rules are not explicitly designed to address this problem. In addition, because of low frequency, regulated rates are often held below the true costs of the underlying capital required to cover the uncertainty, the volatility, and the risk of impairment or ruin due to high severity event losses.

[1] The American Academy of Actuaries is the public policy organization for actuaries practicing in all specialties within the United States. A major purpose of the Academy is to act as the public information organization for the profession. The Academy is non-partisan and assists the public policy process through the presentation of clear and objective actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification, and practice, and the Code of Professional Conduct for all actuaries practicing in the United States.

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How Much Capital is Required?

Quantifying the challenges we have identified consists of determining:

(1) The amount of capital required to pay losses for major catastrophic events.
(2) The amount of total industry capital that is allocable and available to cover such catastrophes.
(3) How the remaining capital needs can be met.
(4) How to ensure that the cost of capital is ultimately borne by the insurance system to the maximum extent possible, regardless of whether there is a temporary relief mechanism for a specified period of time following the disaster.

There must also be recognition that all capital has an opportunity cost and that this cost is higher as supply shrinks or the risk increases. This is true regardless of the capital source. The cost of capital will be significant for both natural and man-made hazards, and the availability and prices in the private placement markets may be especially volatile following a major event. To accommodate the premium for accepting the risk for these major events, the cost of capital will often significantly exceed the expected losses.

Assuming that the challenge of being able to adequately measure the expected losses for such events can be appropriately resolved by using available commercial loss models, a reasonable loss and loss expense distribution can be determined. Participants will then need to discuss the key issues of:

- What are the alternatives for the type of funding mechanism?
- Which stakeholders should be involved?
- How to efficiently acquire sufficient capital to pay the expected losses.
- Should an approach be determined for each type of hazard or should a single approach be applied to all?

The resolution of these key issues usually requires a rational evaluation of the impacts, both positive and negative, of each component of a viable mechanism and often needs to involve a compromise among the various stakeholders.

Determining Alternatives

There are, of course, as many different perspectives regarding the solutions as there are stakeholder classes: federal and state governments, insurers, reinsurers, insureds, securities market, and the public. Even within these classes there are likely differing perspectives. The aggregation of losses for any given year could refer to those for an individual natural and/or man-made extreme hazard or may reflect the entirety of the enterprise-wide risk. Whether hazard specific or aggregated in total, the measured risk and cost of capital are both essential ingredients of any solution. The method and timing of funding in a viable structure needs to be addressed and a careful review of the key issues and alternatives is critical. Most of the structures in place today were born of marketplace crises that resulted in compromises among the various stakeholder classes and their members.

Public and private alternatives each have their advantages and disadvantages, and frequently a solution will include a combination of both. Governments can play a valid role in partnering with the private sector to provide some of the needed capital at stable and less expensive prices. That is the idea underlying proposals for a national catastrophe insurance fund. However, it is important to note that a "one-size fits all" approach is neither possible nor desirable. In extreme man-made events, the dynamics of such potential events may call for a different approach that reflects the ever-changing nature of the threat and the greater difficulty in determining and finding capital suppliers willing to accept the risk. Natural catastrophe risk, on the other hand, involves natural phenomena that are fairly consistent over time. Capital suppliers may be more willing to accept more of that risk in exchange for an acceptable return on their investment of capital.

A key element of government participation is the ability to issue bonds that are secured by some form of assessment power on policyholders, either directly or by passing through rates that are charged by insurers. While private insurers must completely pre-fund losses, government programs can post-fund some losses and can spread the government's cost over time. (This is less expensive in the long run because the government is the ultimate guarantor of the bonds.) However, because bond debt is likely to be more expensive and would need to be counted as a liability, current accounting rules prevent insurers from doing this efficiently as they would be forced to have the amount of the bond debt in assets before the event. States have a more limited ability to issue debt than the federal government, but are still more efficient in this than individual insurers. In Florida, for instance, the catastrophe insurance fund has only about $15 billion of capacity.

Federal Involvement

The federal government has the ability to issue significant debt at low cost. A key element to keep in mind about the federal Terrorism Risk Insurance Program (TRIP) is that it does not collect premiums in advance, but funds all deficits out of future assessments. While this was necessary to get the program off the ground, it may not be as applicable to natural disasters. There was scant data from which to initially price terrorism coverage but that is generally not true with natural disasters, reflective of fairly well established modeling available for those perils. In fact, improved modeling of terrorism losses is becoming available as well. The insurance industry now has some better tools with which to evaluate and price the exposure. In reality the same alternatives basically exist for any future extension of the Terrorism Risk Insurance Act as exist for Florida Hurricane Catastrophe Fund or California Earthquake Authority or as might be proposed for a national disaster fund.

The federal government has additional methods of dealing with the high impact, low frequency events that are so problematic for the insurance industry. There is a fairly well defined system for delivering disaster assistance to victims in officially declared disaster areas. The National Flood Insurance Program (NFIP), is an example where the government has assumed responsibility for the insurance and disaster assistance programs and the risk while working in partnership with the insurance industry in some capacity on the insurance aspects. The Price-Anderson Act for nuclear risk and the Crop-Hail Program for the nation's agricultural risks are other examples. Each has its own strengths and weaknesses. They were all developed, however, to respond to a specific risk where there was reluctance by private industry risk-takers to fully accept the risk these perils presented.

Previous proposals for federal natural catastrophe reinsurance legislation provided for a pre-funded program through excess-of-loss contract auctions. In contrast, a proposal for a federal flood insurance type of approach to hurricanes and earthquakes would address the capital issue in a completely different manner, by asking the agents under contract to the private insurers to present the policies, the insurance industry to process new business and renewals and to pay claims under the oversight of Federal Emergency Management Agency (FEMA.) For the federal flood program, the policy is both a contract between the insured and the insurer, and it is a law that places obligation on the insured in similar fashion to that created by tax law. Because this and other aspects of the federal flood insurance line of business are so different from the way other lines of business operate, any extension of that program to include other perils would be difficult. Critics also argue that it exposes the federal government to large liabilities while reinsurers might argue that this would tend to crowd out the private capital currently available to support this exposure.

Considerations for NCOIL Resolution Regarding Natural Disaster Insurance

It is clear that any rational discussion of alternatives will need to include a discussion of the advantages and disadvantages of each proposal and to consider the viewpoints of all interested stakeholders. It is vital that these stakeholders become part of any ultimate solution. Today, we are facing emerging crisis potential from both natural catastrophes and man-made catastrophes. We are seeing existing programs, such as the National Flood Insurance Program (NFIP), under criticism and in need of some fine-tuning.

Below are some considerations you may wish to review regarding the July 2004 NCOIL resolution.

- Modeling a natural disaster insurance approach on the TRIP.
  - Provides immediate relief from capacity problems.
  - Limits post-event market dislocation at a reasonable exposure to taxpayers.
  - Forms a private-public partnership, which preserves the primary role of private insurers in the market.
  - Could duplicate private-sector reinsurance and capital market solutions, such as index securitization and also potentially crowd out capital.
  - Political interference from such a program could crowd out private capital and could encourage the creation of more state funds, which potentially interfere with the private market.

- Incorporating natural disaster exposure into the NFIP.
  - Provides immediate relief from capacity problems.
  - Limits post-event market dislocation at a reasonable exposure to taxpayers
  - Forms a private-public partnership, which preserves the primary role of private insurers in the market.
  - Would need to be a carefully crafted merger of the other perils with the flood line of business, which has very unique attributes that are not present for the other perils and other property lines of business, including the fact that the insurance industry merely services the flood business on behalf of the government for the flood program under an annual Arrangement but does much more for other insurance lines covering natural disaster perils.

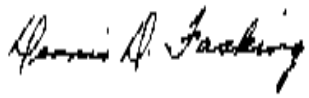
- Could duplicate private-sector reinsurance and capital market solutions, such as index securitization and also potentially crowd out capital
- Political interference from such a program could crowd out private capital and could encourage the creation of more state funds, which potentially interfere with the private market.

- Incorporating natural disaster exposure into TRIP.
  - Provides immediate relief from capacity problems below the cap.
  - Limits post-event market dislocation at a reasonable exposure to taxpayers.
  - Forms a private-public partnership, which preserves the primary role of private insurers in the market.
  - Could duplicate private-sector reinsurance and capital market solutions, such as index securitization and also potentially crowd out capital.
  - Political interference from such a program could crowd out private capital and could encourage the creation of more state funds, which potentially interfere with the private market.

- Creating a natural disaster catastrophe fund for the nation, or for targeted areas such as coastline states or earthquake-prone regions.
  - It is a less invasive solution with minimal administrative and transaction costs.
  - Reduces the cost of coverage by increasing capacity by repealing the tax penalty associated with building catastrophe reserves.
  - It does not address the problem of protecting against immediate losses, as reserves would accumulate very slowly and relief would accrue over decades.
  - It limits the ability of reinsurers to build catastrophe reserves. This could create market disruptions among companies using various levels of reinsurance.

Our committee stands ready to provide further assistance in bringing forth clear and objective information and understanding to enhance the public debate of these important issues. Please feel free to contact myself, or Greg Vass, Senior P/C Policy Analyst, if we can be of further assistance.

Sincerely,



Dennis Fasking, Chairperson
Extreme Events Committee
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