



AMERICAN ACADEMY *of* ACTUARIES

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July 9, 2009

The Honorable George Keiser  
Attn: NCOIL Subcommittee on Natural Disaster Insurance Legislation  
c/o Candace Thorson  
385 Jordan Road  
Troy, NY 12180

Re: Proposed System for Public-Private Natural Catastrophe Financing

Dear Rep. Keiser:

The Extreme Events Committee's Natural Catastrophe Subcommittee of the American Academy of Actuaries<sup>1</sup> (Academy) welcomes the opportunity to provide comments to the National Conference of Insurance Legislators' Subcommittee on Natural Disaster Insurance Legislation on its Proposed System for Public-Private Natural Catastrophe Financing.

The Natural Catastrophe Subcommittee believes that it is in the best interest of all parties that preparations be made to deal with the unpredictable timing and severe impact of large catastrophic events, including the effects of multiple events in the same or multiple jurisdictions in a relatively short time span. Such events present substantial financial and social challenges to the state and federal governments, the insurance industry, and virtually all aspects of the U.S. economy. The Natural Catastrophe Subcommittee favors public discussions focused on developing ways to deal with the substantial capacity needs that are likely to arise in the wake of such "mega-catastrophes," and to do so in an actuarially appropriate manner.

The Proposed System has considerable merits; however, we have a significant concern regarding the proposed target level for the state pool. The current proposal is for the state pool to target a level equivalent to 70 percent of the total insured amount that the state would need in order to cover the average exposure of the three largest natural catastrophes within the state over the last 15 years. The target level should consider the potential catastrophic risks threatening the state, not simply the historical risks. According to scientific analysis, what *can* happen in the future is more important than what *has* happened in the past. For example, calculating the target level as written for a state whose primary catastrophic risk is earthquake may equate to a target level of zero if the state has not experienced a quake in the last 15 years.

The inherent instability of historical catastrophic loss experience by peril and region should also be taken into account in designing the target. Therefore, we propose that the target level be set

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<sup>1</sup> The American Academy of Actuaries is a 16,000-member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

such that it would cover an estimated annual aggregate loss at a certain predetermined probability level. For example, the target level could be established to cover 100 percent of an annual aggregate loss expected to occur with a 0.4 percent probability in any given year. This is sometimes referred to as a “1 in 250 year” loss. Considering the annual aggregate loss probability in setting the target level allows the level to respond to the particular state’s catastrophic risks and exposure levels and also considers the possibility of multiple catastrophic events in a single year. Several widely-recognized catastrophe simulation tools are available to assist in making these predictions.

Furthermore, the state pool, in combination with any federal involvement, would be most effective if it does not supplant the private market’s available claims-paying capacity but merely provides the necessary capacity for a “mega-event” or series of events over a short time period. The threshold for public involvement should strike a balance between too high a level, which could ignore market failures in availability and affordability; and too low a level, which could crowd out an otherwise well-functioning private market.

We acknowledge that achieving and maintaining this balance is a difficult and ever-changing actuarial, economic, and public policy challenge. One might look to the Florida Hurricane Catastrophe Fund’s (FHCF) approach. The FHCF resets the “layer” of covered losses annually, according to the statewide change in expected annual catastrophe losses, as determined by the statewide growth in property values and catastrophe simulation tools accepted by the state government. Then the participation levels of individual insurers are determined by their share of these expected annual catastrophe losses, which are calculated from the insurer’s own property values as reported to FHCF. Much of the typical homeowner’s policy premium is not intended to cover losses from catastrophic events, and this technique avoids the distortions associated with using premium market share as the basis of pool participation.

In the following section, we provide comments on the outstanding questions posed in the proposal.

- **What happens if the state pool cannot cover its 70 percent responsibility? Would it assess insurers? Issue bonds? Would insurers be allowed to pass any additional costs onto their policyholders?**

Current state pools use mechanisms such as initial insurer capitalization, post-event insurer assessments, pre-event bonds, post-event bonds, and post-event policyholder assessments. We suggest that the state can best determine the appropriate funding mechanisms for its target risk level.

Of paramount consideration in developing details of the plan is the fact that rates should be actuarially sound, taking into account the specific catastrophic risks associated with the plan coverage for each jurisdiction. To maintain actuarially sound rates, the expected cost of the insurance should ultimately be borne by the policyholders. The expected cost includes the expected loss to the state pool and the cost to cover the full amount of the risk, e.g., the cost of bonds and repaying federal monies.

- **What strings would come with federal involvement, i.e., what interest rates and timeframes for repayment?**

We believe it is important that a reference interest rate be applied to the money that is borrowed so as not to create a subsidy for states that are more catastrophe-prone and thus more likely to access the federal loan program. We also note that the National Flood Insurance Program borrows money from the Treasury at a short-term rate determined by the Treasury.

The timeframe for repayment might consider the amount of money borrowed to avoid placing too large a repayment burden on the state pool and state policyholders following an extreme event.

- **How long would the state pool have to ramp up to its 70 percent funding level?**

The state pool should be at its target level. It can achieve its target level without a ramp-up period by purchasing reinsurance and/or catastrophe bonds and/or arranging for other forms of capacity, such as assessments or post-event bonding. This encourages equity among state pools, some of which are already in place.

- **What would happen during the first few years?**

If the state pool is at its target level from the beginning, then no special consideration or exception is needed in its first few years. Over time, the amount of external capacity that is needed may diminish, depending upon the frequency and severity of insured events.

We hope that you will find these comments helpful. The Subcommittee would be pleased to assist NCOIL in the further development of its proposed system. If you have any questions, please feel free to contact Lauren Pachman, the Academy's casualty policy analyst, at [pachman@actuary.org](mailto:pachman@actuary.org).

Sincerely,

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