AMERICAN ACADEMY *of* ACTUARIES

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July 16, 2014

The Honorable John Boehner
Speaker, U.S. House of Representatives
1011 Longworth House Office Building
Washington, DC 20515

Re: H.R. 4871, the TRIA Reform Act of 2014

Dear Speaker Boehner:

The American Academy of Actuaries'[1] Casualty Practice Council appreciates this opportunity to provide you with perspectives on behalf of the U.S. actuarial profession of H.R. 4871, the TRIA Reform Act of 2014.

The current Terrorism Risk Insurance Act (TRIA) framework provides a needed backstop for extreme losses arising from acts of terrorism, a peril that is very difficult to fully insure in the private market. The program also assists insureds by providing an orderly claims settlement process. The program further offers a recoupment mechanism by which the private sector reimburses the federal government for its outlays. Overall, this program brings stability to an insurance marketplace that has difficulty pricing and managing terrorism risk exposure, in part due to limited historical or experience data. For these reasons, we write to indicate our support for the reauthorization of TRIA.

TRIA provides a federal government backstop to sustain private-sector capacity in the insurance market. Without such a backstop, insurer participation in this market would not be assured.

Background

Generally, a risk is an ideally insurable risk when it matches well with all six of the criteria listed below.[2] When a risk fails to meet several of these criteria, it is no longer considered ideally insurable, as is the case for terrorism risk.

1. Large number of exposure units for pooling
   A large number of insureds is required for pooling to assure that the risk is estimable with reasonable confidence. The mathematical/statistical concept of the

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[1] The American Academy of Actuaries is an 18,000-member professional association whose mission is to serve the public and 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.
[2] Principles of Risk Management and Insurance, 12th edition, Rejda McNamera; pps 22-24.

law of large numbers provides that, if the number of exposures is sufficiently large, then the estimate of the risk, i.e., the likely loss dollars, is reasonably certain. Adverse selection often occurs when individuals know their likelihood of loss. In such cases, only those exposed to the risk will purchase coverage for it. Consequently, the risk is not pooled among a broader group. The concentration of terrorism risk in large metropolitan areas makes it difficult to achieve a broader pooling of risk as a consequence of adverse selection.

2. Determinable loss amount

   A determinable characteristic means that the loss must be finite and clearly defined in the insurance policy so that the amount of potential indemnification is actually known and capable of being financially measured. This removes substantial ambiguity in the estimation of the occurrence of the loss.

3. Calculable chance of loss

   For a risk to be calculable, an insurer must be able to estimate an appropriate premium based on the expected frequency (likelihood) and severity of loss arising from the exposure. Terrorism risk poses the unique challenge in that critical information is not widely available to underwriters for national security reasons.

4. Fortuitous (accidental) in nature

   Terrorism events are not random or accidental.

5. Not catastrophic, and

6. Possessive of an economically feasible premium.

   Terrorism risk is clearly a catastrophic risk, and, without a federal backstop, premiums for terrorism risk insurance coverage would be unstable and subject to periodic availability issues.

The inherent unpredictability of catastrophic terrorism risk distinguishes it from more "standard" natural perils risks, making it difficult to maintain a stable market without a federal backstop.

Due to the limited number of historical events or occurrences, terrorism risk is much harder to model than other catastrophes. While terrorism modeling techniques have substantially evolved since 2001, a key parameter of all catastrophe models is the estimation of the frequency of possible events. Modelers of terrorism risks estimate frequencies (probabilities) and run simulations to present the results in 100-year, 250-year, and 500-year scenarios. This approach is similar to hurricane and earthquake modeling, in which assumptions are made for the frequency of an event and its estimated severity or impact. The exact frequency of any natural or man-made catastrophe is extremely difficult to calculate with precision.

This lack of precision can lead to unstable model output. In turn, this will likely engender insurance availability and affordability issues. Modelers examining 100-year returns for hurricanes have hundreds of historical "named" storms that can be used to estimate probabilities. Those probabilities drive hurricane modeling estimates. In fact, more than 10 significant named

storms have made landfall in the United States in the past 10 years. Losses incurred from those storms have been used to adjust models and are reflected in insurance premiums. Because this data is available, neither one severe hurricane nor or a series of destructive storms causing $40 billion of damage is likely to cause significant market disruption. Further, hurricane risk threatens substantial numbers of personal lines exposures. Consequently, hurricane losses can be pooled across an extremely large number of exposure units for pooling and are thus better able to be absorbed.

The parameters that populate terrorism risk models are neither as developed nor as accurate as hurricane modeling parameters. This can result in a material risk of model instability following an event, which introduces instability in the insurance market. The frequency of terrorism risk, even more so than risks posed by natural disasters, cannot be estimated with any degree of precision.

The table below illustrates expected industrywide catastrophe-loss estimates from modeling firm Risk Management Solutions (RMS). These examples, identified by type of catastrophe, indicate potential expected industrywide modeled insured losses arising from a hurricane, earthquake, or terrorist event. The industrywide estimates in the table below provide magnitude and context for the various catastrophic losses and associated uncertainties as measured by the relationship between the average annual loss and the 250-year loss scenario. The estimates include average annual losses (which are modeled expected losses for a year), tail scenarios or 250-year estimates (extreme event estimates that insurers and nationally recognized statistical rating organizations [NRSRO] utilize for capital requirement purposes), and realistic disaster scenarios (insurers' expected losses for a significant catastrophic event).

Catastrophe	Average Annual Loss (AAL)	250-Year Loss Scenario	Realistic Disaster Scenario (RDS)	RDS – Description
Hurricane	$16 Billion	$207 Billion	$143 Billion	Miami-Dade Hurricane
Earthquake	$4 Billion	$59 Billion	$55 Billion	San Francisco Earthquake Magnitude 7.5
Terrorism	$2.5 Billion	$45 Billion	$43 Billion	9/11 Losses (2013 dollars)

The table highlights the differences between natural catastrophe risks and terrorism risks. The ratio of the realistic disaster scenario and hurricane average annual loss is approximately 9 ($143 billion divided by $16 billion). As hurricanes are more frequent, the industry has better data to model and determine loss estimates and associated capital requirements so that premiums can be estimated. The corresponding ratio for terrorism is 17 ($43 billion divided by $2.5 billion). Terrorism risk is different from other insured catastrophic risks in two critical ways: 1) terrorism events are not random and 2) terrorists can change strategies in response to risk-mitigation efforts. Terrorism risk is not random because attacks are more likely to occur in large cities and are more likely to be aimed at specific targets, such as power plants or airports, perhaps even on specific dates. A hurricane does not change its path because a sea wall was put in place to minimize storm surge. An earthquake in California does not avoid certain areas because building

codes are stronger. While some areas are more prone to certain types of natural disaster, natural catastrophes are still unplanned. The Gulf Coast sustained significant damage in 2005 because of Hurricane Katrina, but that does not make a Gulf Coast hurricane event in future years more or less likely.

Key Provisions of H.R. 4871

Many of the key provisions of H.R. 4871 are meant to enhance the public-private sector roles under the TRIA framework and should expedite the claims and recovery processes associated with terrorism losses.

In particular, the following provisions will prove to be useful in expediting the claims processing and payment of terrorism losses:

- Require the Treasury Secretary to issue a preliminary certification that a given event qualifies as an "act of terrorism" within 15 days and a final determination on certification within 90 days;
- Remove the $5 million minimum threshold for certification; and
- Starting in 2016, increase the amount the Treasury Secretary is required to collect from 133 to 150 percent of federal payments made that are subject to mandatory recoupment.

H.R. 4871 also shifts more of the cost burden to the private sector, while preserving the role of the government in extreme catastrophic scenarios (with a recoupment mechanism).

The following provisions also shift more of the burden for conventional attacks to the private sector, while retaining a governmental role for the losses from extreme events:

- Bifurcate the handling of conventional and nuclear, biological, chemical, or radiological (NBCR) events;
- Raise the trigger for conventional events by $100 million every year until it reaches $500 million in 2019 (the trigger for NBCR events would remain at $100 million of insured losses);
- Decrease the federal government's share of insured losses for conventional events from 85 percent to 80 percent by 2019 (the federal share of payments for acts involving NBCR weapons would remain at 85 percent of insured losses);
- Require the Treasury Secretary to issue regulations allowing small insurers to voluntarily opt out of the mandatory availability requirement in some circumstances;
- Beginning in 2016, raise the aggregate retention amount to the sum of insurer deductibles for the previous program year for all participating insurers.

We strongly support the measures to establish an advisory committee and data collection initiatives that may ultimately lead to a sustainable, long-term solution. However, we have a slight concern about the 2016 start date for data collection. Realistically, it may take several iterations of data collection efforts, and subsequent additional time, to develop meaningful analysis based on the collected data. As such, Congress may not have received useful results by 2019, when TRIA would next expire.

The following provisions will help set the stage for a sustainable long-term market solution to insuring terrorism losses:

- Require the establishment of an Advisory Committee to encourage development of private risk-sharing mechanisms; and,
- Beginning in 2016, require the Treasury Secretary to securely collect terrorism insurance data and provide Congressional committees of jurisdiction with an annual analysis of such data.

Terrorism risk is patently a catastrophic risk, and, without a federal backstop, premiums for terrorism risk insurance coverage would be unstable and subject to periodic availability issues. While it is estimated that total property/casualty insurers' capital in the U.S. is about $650 billion, much of that capital is tied to personal lines coverages like automobile and homeowners' insurance, which are not covered under the TRIA program. The commercial lines' capital base, according to NRSRO A.M. Best, is approximately $250 billion. It would be very difficult for the private market to absorb a $150 billion event. Many of the modeled terrorism risk scenarios are above this threshold. It has been suggested that the reinsurance market has additional capacity to assume terrorism risk; however, any such protection would likely be limited, as reinsurers typically do not provide unlimited (uncapped) proportional coverage.

The success of TRIA in securing a stable market for insurance-risk coverage relies on a careful balance of roles between the private market and the federal government. Caution should be exercised in considering whether to increase retention amounts that may potentially disrupt that balance and, in particular, jeopardize the ability of smaller insurers to offer terrorism risk insurance coverage.

For the foregoing reasons, the American Academy of Actuaries' Casualty Practice Council appreciates the fact that H.R. 4871 retains the existing framework's basic structure of deductibles, co-pays, and triggers. By reauthorizing the program for five years, H.R. 4871 also provides comparative certainty to what would otherwise be an unstable market.

We would be pleased to discuss these issues further and/or answer any questions you have related to this letter. If you have any questions about our comments, please contact Lauren Pachman, the Academy's casualty policy analyst, at Pachman@actuary.org or (202) 223-8196.

Sincerely,

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Vice President, Casualty Practice Council
American Academy of Actuaries

cc: Members, U.S. House of Representatives