

TRIA and Beyond: What Would Be the Most Effective Way for the Nation to Recover From (Mega)-Terrorist Attacks?

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Executive Summary (March 24, 2005)

The scheduled expiration of the Terrorism Risk Insurance Act in December 2005 presents a series of challenges for the U.S. insurance industry and the government in deciding how to insure businesses and structures against major terrorist attacks.

Termination of the act with no alternative public-sector backing for the insurance industry would represent a withdrawal of the federal government from its current role as principal reinsurer in the event of a foreign terrorist attack on U.S. soil. Many insurance professionals doubt the industry's capacity to adequately insure against a major act of terrorism without some backing from the government.

Since becoming law in November 2002, premiums have fallen, availability has increased, and there has been a significant increase in the number of businesses purchasing terrorism insurance. Through the act, the federal government has effectively replaced the reinsurance industry which largely withdrew from terrorism coverage following heavy losses caused by the attacks of Sept. 11, 2001. Some industry participants argue that without TRIA – which requires insurers to offer terrorism coverage – rates are likely to increase significantly, capacity would be curtailed, and high-risk locations would be underserved by the private market.

Proponents of TRIA say that the availability of terrorism insurance is part of the national security infrastructure that would allow economic and social continuity after any other such catastrophic event and that in the same way that the federal government has a duty to provide physical security measures, it should also continue to share the risk of insuring against such events.

According to TRIA supporters, amid growing expectations of another major attack on the U.S., Congress should extend the duration of the act or at least form a partnership with the private sector to provide the necessary coverage.

But others say TRIA is flawed because it discourages meaningful attempts to mitigate the terrorist threat, impedes the development of a private market, and shifts the cost of a future attack toward taxpayers rather than to the owners of targeted businesses or buildings. Critics also say the act is too narrow in its scope

since it only covers terrorist acts on U.S. soil by foreign entities and does not extend to domestic terrorism such as the Oklahoma City bombing.

Critics say that higher premiums resulting from the withdrawal of TRIA would encourage businesses to build or reinforce structures to withstand terrorist attack, and would spur the development of risk-spreading mechanisms such as mutual reinsurance pools and catastrophe bonds.

An alternative view is that TRIA should be extended in modified form, to allow an enhanced role for the private sector in sharing risk, and giving commercial clients the main responsibility for mitigation.

Introduction

In considering how or whether to provide insurance coverage against terrorist attack, government and industry should weigh a range of issues including the supply and demand for terrorism insurance; the link between insurance and risk-mitigation measures; the pros and cons of renewing TRIA, and the nature of terrorism as an extreme event.

The unpredictability of the timing, location, and impact of terrorist attacks is greater than for other extreme events such as earthquakes or hurricanes, making them more challenging to manage, the workshop heard.

Estimating the risk of a terrorist attack is problematic because of limited historical data, divergent models, and differing expert judgments on the likelihood and impact of an attack. Therefore, professionals seeking to manage the risk are further challenged by uncertainty over whether to buy insurance, by how to conduct appropriate inspections and audits of the property, and by which regulations and standards may apply.

The need to develop a national strategy for insurance against terrorist attack reflects the expectation that there will be further attacks, perhaps more severe than 9/11.

An analysis of the national strategy for dealing with the terrorist threat combines public and private-sector factors. On the government side, relevant strategies include foreign and counter-terrorism policy, and policies to stimulate the economy and provide compensation to victims of terrorist attacks. In the private sector, policies cover risk mitigation, risk sharing through insurance or securitization, and the absorption of losses through a firm's own capital. The availability of insurance is influenced by TRIA.

More companies purchased terrorism insurance in 2004 compared with 2003 as prices fell and concern about future attacks persisted. A survey of 500 commercial accounts found 57 percent of those who had renewed their coverage in the year ending Sept. 30, 2004 bought terrorism coverage compared with 20-30 percent early in 2003. The increase

may also reflect a heightened concern about the risk in light of a number of government alerts about the possibility of an attack.

But about half of commercial firms are still without coverage, the conference heard. Possible explanations include the fact that firms are already covered against terrorism for workers' compensation and fire following without additional terrorism coverage, that companies have diversified assets outside of perceived high-risk areas, and that some executives simply believe "it won't happen to us."

In offering terrorism coverage, insurance companies must consider a range of factors including the potential for significant national disruption resulting from a "mega" attack. Other significant factors include the interdependent nature of terrorism risk; that is, the security of one part of a system may be dependent on another part hundreds of miles away. On Sept. 11, 2001, the attacks on the World Trade Center followed security lapses at Boston's Logan airport, allowing the hijackers to board the jets that crashed into the twin towers.

Insurability is also influenced by dynamic uncertainty, or the variation of risk over time, depending on actions taken by terrorists or counter-terrorists.

In providing coverage, insurers will also consider their ratio of exposure to surplus, their evaluation of terrorism scenarios, and the geographical diversification of exposure.

The debate over terrorism insurance is focused on whether to renew TRIA when it expires on Dec. 31 this year. Those in favor of extending it argue that it keeps premiums at levels that firms are likely to pay, that there is insufficient private capital to cover terrorism risk, and that its existence would avoid significant disruption in insurance markets following the next attack.

Extension of TRIA would also avoid the transaction costs for insurers of recontracting with commercial reinsurers – if those firms return to the market – and would avoid the need to pay disaster assistance in response to the next terrorist attack. Those arguing that the act should be allowed to expire say that the insurance market has had time to adjust to the new conditions since 9/11, and that some insurers are now offering coverage that includes attacks that originate within the United States – such as the Oklahoma City bombing – whereas TRIA is restricted to foreign attacks. They also argue there is little evidence that workers' compensation coverage will be disrupted if TRIA expires, and that expiration would provide extra incentive for risk mitigation by the private sector. On the opposite side, other participants argue that if TRIA expires, a federal preemption would be needed to permit insurers to exclude terror from WC. Otherwise, the choice would be to offer a policy and provide terror cover, or not offer a WC policy.

If TRIA is allowed to expire, it could be replaced by a purely market approach in which there would be no obligations for insurers to provide coverage, and no federal backstop

for extreme losses. This scenario would use capital from insurers, insured firms, and other parties such as reinsurers and the buyers of securities such as catastrophe bonds.

Another alternative is the mutual insurance pool in which the risk is spread over a large number of insurers. In this case, capacity would be limited, and there would be no government backup.

The act could also be replaced by public-private partnerships which would ideally combine the strengths of both sectors. In this case, private insurers would use their experience of collecting premiums, estimating losses and making claim payments, while the government would cover catastrophic losses.

Another alternative to TRIA could be that all firms be required to buy terrorism insurance, a plan that would spread risk across industries, structures, and geographical areas while stabilizing premium incomes and reducing the need for government aid in the event of an attack.

In evaluating alternatives to TRIA, there is a need to construct credible attack scenarios that examine the impact on the exposure/surplus ratios of insurers and reinsurers. The roles of rating agencies, reinsurers, and financial institutions should also be taken into account.

Panel 1: Alternative Strategies for Providing Terrorism Insurance

The first panel focused on the appropriate roles for public and private sectors in providing terrorist coverage; what role the government is likely to play after a terrorist attack if there is limited insurance coverage; whether there are risks that are not insurable by the private sector alone, and whether individual states face large differences in their levels of risk.

1. Arguments for Extending TRIA

One participant argued that the federal government has a clear responsibility to protect the nation from terrorist attack and that it has capabilities beyond those of individual states or cities. In the case of the 9/11 attacks, the Port Authority of New York and New Jersey, which owned the twin towers, was powerless to prevent the attacks, it was argued.

At the same time, the private sector should do more to protect itself, although government needs to recognize the limits of private-sector responsibility. One major insurance company set up concrete barriers outside its offices in Lower Manhattan, and requires people entering its building to go through three layers of security. Despite such precautions, it cannot protect against some external threats such as a truck bomb parked outside.

Self-insurance, normally a useful tool, is of limited use for terrorism coverage because of the unpredictability of the threat, one speaker said. Such unpredictability is underscored by the fact that 9/11 is the only terrorism event in insurance industry history to incur industry losses of more than \$1 billion.

TRIA has stabilized the insurance market since 9/11, though reinsurers have remained largely absent following the huge losses they suffered from the attacks. If TRIA is not renewed, the insurance industry will bear the brunt of any future attacks, and there will be a loss of capacity for commercial property and workers' compensation, it was argued.

There are already signs that the industry is preparing for TRIA to expire, one speaker said, citing requests from large clients for rates just three to five months out, compared with their usual longer-term approach to coverage. "Underwriters are beginning to position themselves for the expiration of TRIA," the speaker said.

2. Arguments Against Extending TRIA

Extending TRIA would result in higher costs for taxpayers in an area that is best served by the private sector, one speaker argued.

The absence of TRIA would result in scarce terrorism coverage, higher prices and some uninsured assets, the speaker acknowledged. But expiration of the act would increase businesses' incentive to mitigate their own risk by building structures that would withstand terrorist attacks, or by diversifying their operations to locations that are seen as less-likely targets for terrorists, he argued.

TRIA shifts costs of coverage from property owners to taxpayers, and may result in higher overall costs because it is a disincentive to mitigation.

Expiration of TRIA could also stimulate the development of mutual reinsurance pools and capital instruments such as catastrophe bonds, according to a study by the Congressional Budget Office published in January. The assumption that terrorism is a long-term threat does not imply that the act should be extended, but argues that premiums should be increased to reflect higher expected losses, the report argued.

According to the study, extending TRIA for two years as proposed by House Bill 4634 would cost the government \$1.3 billion over 10 years, and the Treasury would recoup some or all of the costs through surcharges. Insurers would need to pay premiums of \$700 million annually to offset the government's average annual loss from providing the reinsurance, although that sum is not expected to compensate taxpayers for the risk they are bearing, the study found.

Participants also discussed the merits of catastrophe bonds as a possible alternative to terrorism insurance. Although cat bonds are not yet widely used, they have the capacity to grow as investors become more familiar with them, one participant said.

But another argued that it was hard to see how cat bonds could cover terrorism and there was no indication that the market for such instruments could substitute for TRIA.

Cat bonds reflect an attitude of “faith over experience,” one participant said, while another argued that they encourage a “moral hazard” attitude in which one party fails to take responsibility for his or her actions in the belief that another party such as the government or the capital market will protect them.

A more valid approach to dealing with the terrorist threat would be for businesses to simply move out of big cities, another participant said, arguing that the geographic location of a firm is the single most important factor for its insurability.

Panel 2: Demand for Terrorism Insurance and Mitigation

The second panel discussed the demand for terrorism insurance and mitigation in the chemical, real estate and retail sectors. Panelists were asked to consider who should take responsibility for management of terrorism risk from both the insurance and mitigation viewpoints. The panel also focused on what steps companies have taken to assess risk and mitigate their vulnerabilities to terrorism. The consequences of expiration of TRIA were also examined.

1. TRIA extension would boost demand

The insurance industry alone doesn't have the capital to cover events like 9/11, and the federal government has an obligation to back the industry because of the current war-like conditions, one speaker said. Since federal government policy is presumed to influence terrorist acts, it has a responsibility to share the risk.

That speaker also rejected suggestions that the removal of TRIA would create a free market in which the private sector could provide adequate coverage. Even without TRIA, the insurance market would be regulated by laws in all 50 states, leading to inconsistent availability, he said.

Before TRIA, the federal government was already involved in insurance, for example by providing political risk insurance for U.S. companies doing business in unstable areas of the world, creating a precedent for TRIA, it was argued.

Mitigation measures have not reduced insurance premiums, and mitigation would not be a significant defense while the threat remains unpredictable and unquantifiable.

TRIA allows society to plan for the aftermath of the next major terrorist attack, the speaker said. “Without that mechanism, there would be less insurance in place the day after the next 9/11 than there was after the first one.” Renewal of the act would result in increased take-up rates while expiration would mean higher prices and more exclusions, he predicted.

2. Limited demand from some sectors

One chemical manufacturer told the workshop that terrorism insurance is seen as an unnecessary addition to an already extensive security regime. “Insurance is something that we don’t want to have to count on,” he said. “We have an emphasis on prevention.”

The company has spent \$20 million on high-tech security equipment and can’t justify buying terrorism coverage because it’s a risk that, at present, can’t be quantified, the speaker said.

Still, the prospect of TRIA’s expiration causes concern for the company because it may lead underwriters to refuse to insure high-risk companies such as chemical manufacturers, and may drive down some insurers’ ratings, reducing the number of companies with which the company can do business at reasonable rates.

3. Location influences demand

Demand for terrorism insurance is also affected by geographic location and business sector, the conference heard. Demand tends to be lower in the Midwest and other areas perceived to be outside major target cities such as New York, or Washington where some major buildings are seen as “trophy targets.”

One of the central areas in which modeling companies, like ABS, have been helping industrial clients to quantify terrorism risks, is in supply chain operations. These operations are characterized by significant risks and interdependencies. Sectors affected include major retailers (relying on port facilities and global sourcing) as well as industrial sectors, including chemicals, that are characterized by long supply chains resulting from large-scale, concentrated manufacturing operations. There are many insurance challenges associated with these types of operations, because of the scope of resulting losses should an event occur as well as the potential spillovers from one business to another in manufacturing centers such as Houston or Detroit.

4. Doubts on the effectiveness of some mitigation measures

On mitigation, one participant questioned the effectiveness of ID cards in enhancing building security. “It’s as if someone with the capacity to make a low-level nuclear device would not be able to make a laminated card,” he said.

A meaningful way of mitigating risk would be for companies to move to low-rise buildings in the suburbs that are a long way from other buildings and have large parking

lots, thus reducing the potential damage from a terrorist bomb, according to another participant. This comment, made in jest, underlined some of the potential economic issues associated with both TRIA renewal and, more generally, with business responses to the terrorism risk.

In response to a question of demand drivers in the real estate sector, it was noted that the demand for terrorism insurance coverage was, at the first level, driven by bank lending requirements, but there were other drivers as well, including investors. On the mitigation side, it was noted that the move to increased “guns, guards and gates” in major buildings was being driven by tenants in those buildings. Also, the importance of mitigation and of visible deterrents was being promoted by some employees’ reluctance to work in high-rise buildings, one participant said.

Panel 3: Supply of Terrorism Insurance

The third panel focused on the supply of terrorism insurance from the points of view of insurers, reinsurers and ratings companies. Insurers were asked to consider how supply would be affected by the availability of reinsurance and how they could better meet their clients’ needs in an environment of limited supply. From the reinsurers’ perspective, the panel focused on opportunities such as reinsuring part of TRIA deductibles faced by primary insurers. Rating agencies were asked to discuss how supply influences ratings, and what impact the expiration of TRIA would have on prices, availability, capital requirements and credit ratings.

1. Factors limiting supply

Supply is limited by price, the availability of reinsurance, and the perceived likelihood of a major terrorist attack, the workshop heard. Insurers’ ability to price coverage is hampered by the lack of predictive prior claim experience, and the recognition that the risk is not stable over time. Insurers are also influenced by the possibility that future terrorist attacks could be financially ruinous.

A lack of reinsurance capacity and acceptable pricing limits insurance supply, as does a shortage of alternative financial market solutions. The perceived likelihood of a nuclear, chemical, biological or radiological attack also influences insurers who will consider the potential for long-duration claims when making decisions about supply.

Post 9/11, insurers are dealing with a new world in which the actions of a single individual can have severe consequences, one speaker said. “The power of the single angry man and the damage he can do is devastating.”

2. Industry may lack capacity to cover major attack

From the reinsurer's point of view, terrorism is "borderline" insurable given the anticipated losses under a number of scenarios, the workshop heard. According to one estimate, an anthrax attack on New York City would cost the industry an estimated \$91 billion in insured workers' compensation claims.

In another estimate, an attack on a U.S. city using weapons of mass destruction would cause more than \$250 billion in insured losses, or twice the claims-paying capacity of the entire U.S. property and casualty insurance industry. "There isn't enough capacity around to pay for a really huge loss," one speaker said. "It's not really insurable."

TRIA should be renewed because of the industry's inability to deal with huge losses from a terrorist attack, and because information about the terrorist threat is managed by the government in contrast to the free flow of information that the insurance industry normally depends on, said a representative of the reinsurance industry.

If the act expires, capacity will decline, coverage disputes will increase, and investors might avoid parts of the insurance industry that are perceived to have high exposure to terrorism losses, it was argued.

3. Terrorism risk acceptance will put pressure on ratings

From the rating company's perspective, the focus is on the capital adequacy of insurers who seek to provide terrorism coverage, one representative said. Rating companies also need to consider that terrorism risk, because of its uncertainty, can't be applied to specific locations, and they must recognize that only limited amounts of the risk will be accepted voluntarily by reinsurers.

If TRIA is not renewed, ratings of personal lines insurers are unlikely to be affected but there will be growing pressure on those providing workers compensation coverage, and capital charges approaching 100 percent of identifiable exposure on commercial lines, said a rating company representative.

"To the extent that issuers accept terrorism risk, capital adequacy will be hurt, and that will put pressure on the ratings," the speaker said. "This is as close to gambling as you can get in all the things insurance companies do."

One participant said the U.S. insurance industry should consider spreading terrorism risk by mutualizing among a large number of insurance companies, as happens in some other countries.

Another participant warned that it would be optimistic or even foolish for the industry to assume that terrorist organizations can only correlate their attacks in one specific market.

Reports of small working groups:

Participants were asked to consider the implications of renewing TRIA, letting TRIA expire, or modifying TRIA through a public-private partnership. Each group discussed one scenario, considered the challenges facing it, and looked at ways of overcoming those problems.

Among the issues under discussion were: the impact on the supply of and demand for insurance; the role of the federal government following a terrorist attack, and the impact of a particular program on stakeholders such as industrial firms, the insurance industry, state and federal governments, and the public.

Group 1 – TRIA renewed:

Renewing the act would ensure availability and affordability of terrorism insurance and would allow the government to define the event on the basis of its privileged information, the group concluded. TRIA's \$100 billion capacity shores up the industry's questionable ability to deal with a major terrorist attack, and it covers uncorrelated losses. Renewal of the act for a limited period would be the best route to a permanent arrangement, a public-private partnership, the group agreed.

Arguments against renewing the act include that retentions are too high; the definition of terror is too narrow, and that there are post-loss surcharges that people don't understand. The group also argued that the act doesn't have sufficient linkage to preparedness for terrorist attack, and that its existence doesn't expand private-sector capacity. TRIA also lacks coverage of some potential casualties of terrorist attack such as agriculture and cyber networks.

Group 2 – TRIA expires:

Without government, the market will not offer terrorism insurance at affordable prices, the group concluded. High-risk areas such as New York City would be under-covered, and there would be an overall contraction in the marketplace. The group challenged the assertion that a post-TRIA market would be truly free, and concluded that expiration of the act is not a viable option.

The group discussed whether reinsurers could be enticed back to the market if primary insurers were required to purchase reinsurance.

Group 3 – Public-private partnership:

The government has a legitimate role to play in protecting the nation against terrorism, especially in CBRN and other high-severity events, the group concluded. The costs of such losses should be shared throughout society; terrorism coverage should be mandatory for insurers and insureds, but rates should be set competitively.

The group envisioned a three-layer system: Layer 1- a policy deductible layer, Layer 2- a layer of private insurance, Layer 3- federal reinsurance. The federal reinsurance layer would be pre-funded by rates charged on all policies, but if this layer were inadequate at the time of an attack, funds would be borrowed from the taxpayers, using a post-funding system similar to the one under TRIA. The federal role in this program would be strictly that of reinsurer, not of disaster relief organization.

The new program would need to set rates and limits under each layer, and federal mitigation standards would help to ensure that these rates were set fairly. The group also emphasized that under this program, foreign and domestic terrorism, conventional and CBRN attacks would all be covered.

Group 4 – Public-private partnership:

This group argued that both sectors have a legitimate role to play. The insurance industry should do what it is good at: collection and distribution, and taking some of the risk to ensure their “skin is in the game.” Commercial clients should play the leading role in mitigation. In providing extreme events coverage, government capital is more efficient than that from the private sector. Government should be deeply involved in preparing for and preventing acts of terrorism, and can assume responsibility for national priorities in ways that private capital and markets would find more difficult, the group concluded. It urged both government and industry to learn from programs in other countries such as PoolRe in Britain.

Under this PPP, a modified TRIA would be flexible by line of reinsurance and responsive to risk. Insurers would retain 15 percent of property risk and 5 percent of workers’ comp risk but none for the effects of CBRN attacks. Retention would be risk based, possibly based on risk indicators such as population or concentration of workers.

Questions raised by the plan include whether it would be universally available; whether insurance and reinsurance coverage would be mandatory, and how risk-based pricing would be decided.

Questions for future research:

In the final session, participants raised outstanding questions and proposed sources of data that would inform the TRIA debate in the months that precede the U.S. Treasury's report on the future of TRIA . They included:

- Why aren't reinsurers more active?
- Why hasn't securitization happened?
- What types of interdependencies exist?
- What is the demand for terrorism coverage?
- What mitigation measures have been taken by industry?
- When will the next attack occur?
- When will underwriters have sufficient capital to cover terrorist attack?

Suggested sources of data include brokers on demand, and individual industries on mitigation. Reinsurers should be asked what it would take for them to return to the market. Interviews with cat bond investors may also help to explain why securitization has not significantly emerged as a way of spreading risk.