Reauthorizing TRIA: The State of the Terrorism Risk Insurance Market

United State Senate
Committee on Banking, Housing and Urban Affairs

Testimony of

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Thank you, Senator Johnson, Ranking Member Crapo and members of the Committee.

Good morning. My name is Robert Hartwig and I am President and Economist for the Insurance Information Institute, an international property/casualty insurance trade association based in New York City.[1] I am also a Chartered Property Casualty Underwriter (CPCU) and have worked on a wide variety of insurance issues during my 20 years in the property/casualty insurance and reinsurance industries, including many related to the industry's exposure to catastrophic loss, including acts or terrorism.[2] The Institute's members account for nearly 70 percent of all property/casualty insurance premiums written in the United States. Its primary mission is to improve understanding of the insurance industry and the key role it plays in the U.S. and global economy.

I have been asked by the Committee to provide testimony on the current state the Terrorism Risk Insurance Program and the market for terrorism insurance in the United States. For the purposes of my testimony, I will address the following issues:

(i) The immediate impacts of the September 11, 2001 attacks on insurance and reinsurance markets;
(ii) The essential role that TRIA plays with the nation's national security infrastructure and its benefits to consumers, businesses and communities;
(iii) Taxpayer protection features of TRIA;
(iv) Private sector insurer and reinsurer involvement in terrorism insurance markets since 9/11;
(v) The unique nature of terrorism risk and the limits of private sector involvement in terrorism insurance markets;
(vi) Changes in the terrorism threat landscape since the enactment of the original TRIA legislation in 2002 and the impacts on terrorism insurance;
(vii) Potential economic and insurance market impacts if TRIA is not extended;
(viii) Obstacles to insuring and reinsuring losses arising from acts of terrorism;
(ix) Cyber terrorism and certification timelines.

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[2] See *Terrorism Risk: A Constant Threat,* Robert P. Hartwig and Claire Wilkinson, Insurance Information Institute, June 2013.

Impacts of the September 11, 2001 Terrorist Attack on Insurance Markets

The terrorist attacks of September 11, 2001, produced insured losses larger than any natural or man-made event in history. Claims paid by insurers to their policyholders eventually totaled some $32.5 billion dollars—$42.1 billion in 2012 dollars **(**Exhibit 1**)** and to this day remains the second most costly insurance event in United States history (Exhibit 2).[3] The insured losses arising from the events of that fateful day were unprecedented in virtually every respect, producing catastrophic losses not only in property coverages, but also for the first time in the workers compensation line. The sheer enormity of the loss—coming from an entirely unforeseen peril for which no premium had been collected—combined with the possibility of future attacks, produced financial shockwaves that shook insurance markets worldwide and provoked an extraordinarily swift and severe underwriting and pricing reaction by insurers and reinsurers.

Terrorism Exclusions and Price Shocks in the Wake of the 9/11 Attack

The shock of the September 11 attack led insurers and reinsurers to exclude coverage arising from acts of terrorism from virtually all commercial property and liability policies. Before 9/11 terrorism exclusions were virtually nonexistent in commercial insurance contracts sold in the United States. The economic consequences of such exclusions were quick to manifest themselves. Major commercial property construction projects around the country, unable to secure coverage against the now very real risk of terrorist attack, were in jeopardy of being tabled, hurting job growth at a time of rapidly rising unemployment and when much of the country was in recession. Banks, in turn, threatened to choke off lending to businesses if borrowers failed to secure coverage against terrorist acts. The problem was not confined to high profile “trophy” properties located in major metropolitan areas. Shopping malls, office complexes, factories, sports stadiums, hotels, utilities, airports, port facilities and other critical infrastructure all across the United States were impacted. In short, the macroeconomic consequences associated with the lack of terrorism coverage were beginning to exact a severe toll on businesses

[3] The loss totals do not include the March 2010 settlement of up to $657.5 million announced by New York City officials and plaintiffs’ lawyers to compensate about 10,000 workers whose health was damaged during the rescue and cleanup at the World Trade Center.

and workers alike. *[Note: The potential macroeconomic implications of allowing TRIA to expire in 2014 are discussed in greater detail in the next section of this paper]*.

Even as exclusions proliferated, prices soared. The average rate increase for a business seeking to renew coverage in the fourth quarter of 2001 was nearly 30 percent. Reinsurance prices rose sharply as well. Very little private sector coverage for terrorism entered the market as a general consensus emerged that terrorism risk is fundamentally not insurable. Insurers, who are regulated by the states, therefore took the unprecedented step of seeking to establish a risk sharing plan with the federal government in the event of future attacks. Only when the Terrorism Risk Insurance Act (TRIA) was enacted by Congress in November 2002—fourteen months after the attack—did stability finally return to the market and coverage for terrorist attacks resume.

TRIA, National Security and Protection of the Nation's Critical Financial Infrastructure

The war on terror is far from over, as the recent Boston Marathon bombings attest, but TRIA by all objective measures is now a proven and unqualified success. The program not only succeeded in restoring stability to the country's vital insurance and reinsurance markets in the years immediately following 9/11, but it continues more than a decade later to deliver substantive, direct benefits to millions of businesses, workers, consumers and the overall economy—all at essentially no cost to taxpayers.

Upwards of 60 percent of businesses purchased terrorism coverage nationally in 2012, up from 27 percent in 2003, the first full year of the program (Exhibit 3). Industries responsible for much of the country's critical infrastructure such as power and utilities, telecommunications and health care, along with financial institutions and local government have take-up rates that approach or exceed 70 percent. Moreover, the take-up rate for workers compensation is effectively 100 percent, meaning that every worker in America is protected against injuries suffered as the result of a terrorist attack.

The unambiguous success of TRIA demonstrates that the Act has become an invaluable component of the country's national security infrastructure. The continued operation of the nation's financial institutions—including its insurers—during and throughout the aftermath of a major terrorist attack—is absolutely essential to ensure a smooth and expedited recovery from the massive economic and operational shocks of the sort that occurred after the 9/11 attacks and that are certain to accompany future such events, irrespective of where in the country they occur. Failure to institutionalize a permanent plan to protect the nation's financial infrastructure leaves the country unnecessarily vulnerable to economic instability and risk of recession.

Macroeconomic Impacts of the TRIA Expiration

A 2004 study co-authored by R. Glenn Hubbard, Columbia University's Business School Dean and a former chairman of the U.S. Council of Economic Advisors, quantified the potential macroeconomic impacts of a failure to extend TRIA.[4] The study concluded that within three years of the expiration of TRIA (in the absence of a major terrorist attack), GDP could fall by 0.4 percent, household net worth by 0.9 percent and employment by 0.2 percent. Applying the findings of that study to the current period suggests that expiration of the current Act could lead to a meaningful drag on economic growth, reducing real GDP by an estimated $69 billion by 2017, depressing household net worth by an estimated $798 billion and remove 290,000 jobs from the economy.[5]

Table 1

POTENTIAL MACROECONOMIC IMPACTS ASSOCIATED WITH THE EXPIRATION OF TRIA

Macroeconomic Factor	Estimated Impact Within 3 Years of Terrorism Program Expiration
Real GDP	-$69 Billion
Household Net Worth	-$798 Billion
Jobs	-290,000

[4] R. Glenn Hubbard and Bruce Deal, *The Economic Effects of Federal Participation in Terrorism Risk,* Analysis Group, September 14, 2004.

[5] Figures cited in Table 1 are Insurance Information Institute estimates based on findings of the study referenced in footnote 3.

As Table 1 demonstrates, terrorism remains a threat to the country's national economic security, especially in the context of the still fragile economic recovery. Consequently, maintaining a Terrorism Risk Insurance Program as a component of the country's comprehensive national security plan and infrastructure is both reasonable and prudent. It is also imminently affordable. Indeed, the cost to American taxpayers is effectively zero.

Taxpayer Protection Features of the Terrorism Risk Insurance Act

TRIA from its inception was designed as a terrorism risk sharing mechanism between the public and private sector—with an overwhelming share of the risk being borne by private insurers, a share which has increased steadily over time. Today, all but the very largest (and least likely) terrorist attacks would be financed entirely within the private sector. In the event of a truly catastrophic attack, TRIA provides the government with the ability to fully recoup any and all federal monies paid. In other words, there would be *no* cost to the taxpayer.

As a point of fact, from the date of TRIA's enactment in November 2002 through today, a span of nearly 11 years, the federal government and therefore taxpayers have paid nothing (apart from negligible administrative expenses) under the program. The recent Boston Marathon bombings provide an illustrative example. All of the 207 property/casualty claims filed in the wake of that event were handled by private insurers who have made payments to policyholders totaling at least $1.18 million.[6] Not one taxpayer dollar was used to pay any of these claims.

TRIA's structure actually provides at least eight distinct layers of taxpayer protection as displayed schematically in Exhibit 4's Pyramid of Taxpayer Protection. Each of those layers is discussed in turn below.

[6] As of July 26 (latest available). P/C insurers also held $1.41 million in reserves for claims associated with the bombings. Figures are from the Massachusetts Division of Insurance as reported in BestWire Services, *P/C Insurers Have Paid $1.18 Million in Boston Marathon Bombing Related Claims*, September 3, 2013.

SUMMARY OF 8 KEY TAXPAYER PROTECTION FEATURES UNDER TRIA

1. CERTIFICATION DEFINITION: *Criteria Must Be Met*[7]

- **Definition of a Certified Act of Terrorism:** The 2007 extension of TRIA, likes its predecessors, requires that a detailed set of criteria be met before an act of terror can be "certified." Specifically, the term "act of terrorism" refers only to an act that is certified by the [Treasury] Secretary, in concurrence with the Secretary of State and the Attorney General of the United States:
  - i. to be an act of terrorism;
  - ii. to be a violent act or an act that is dangerous to human life, property or infrastructure;
  - iii. to have resulted in damage within the United States, or outside of the United States in the case US air carriers, vessels and/or missions;
  - iv. to have been committed by and individuals as part of an effort to coerce the civilian population of the United States or to influence the policy or affect the conduct of the US government by coercion.

2. CERTIFICATION THRESHOLD (TRIGGER): *$5 Million*

- **$5 Million Minimum:** Under the 2007 reauthorization of TRIA, no act shall be certified by the Secretary as an act of terrorism if property and casualty losses, in the aggregate, do not exceed $5 million.
- **Acts of War Exclusion:** TRIA further stipulates that no act may be certified as an act of terrorism if the act is committed as part of the course of a war declared by Congress (this provision does not apply to workers compensation).

3. TRIGGERING EVENT THRESHOLD: *$100 Million*

- Under the 2007 reauthorization of TRIA the triggering event threshold was set at $100 million, up from $5 million in the original act and $50 million in 2006. This means that Federal funds will be paid out *only* in the event of a terrorist act that produces total insurance industry losses above this threshold (even if the event is certified by the Treasury Secretary as a terrorist act).

[7] United States Treasury accessed as of 9/22/13 at http://www.treasury.gov/resource-center/fin-mkts/Documents/TRIAasamended-CompositeTextPost.pdf.

4. **INDIVIDUAL INSURER DEDUCTIBLES:** ***20% of Premiums***
    - The amount of terrorism losses that an individual insurer must pay before federal assistance becomes available. The level rose to 20 percent of an insurer's direct earned premiums for commercial property/casualty insurance in 2007 where it currently remains (up from 17.5% in 2006, 15 percent in 2005, 10% in 2004 and 7% in 2003).

5. **INSURER CO-PAYMENT IN EXCESS OF RETENTION:** ***15% of Loss***
    - The share of losses that insurers pay above their individual retentions rose to 15 percent in 2007 where it remains today, up from 10 percent in 2006 and prior years.

6. **INDUSTRY AGGREGATE RETENTION:** ***$27.5 Billion***
    - Under the 2007 reauthorization, the industry as a whole must ultimately cover a total of $27.5 billion of the losses through deductibles and copayments (assuming an event of $27.5 billion or greater). This amount was increased to $27.5 billion in 2007, up from $25 billion in 2006, $15 billion in 2005, $12.5 billion 2004 and $10 billion in 2003 ***(Figure 7)***. Government expenditure above this amount can be recouped.

7. **GOVERNMENT RECOUPMENT:** ***Full Taxpayer Protection***
    - **Mandatory Recoupment:** TRIA mandates that the government recoup *133 percent* of the difference between the actual amount it has paid and the required retention. This recoupment comes via a surcharge on commercial insurance policyholders not to exceed 3 percent of premium for insurance coverages that fall under the program.
    - **Discretionary Recoupment:** If the insured loss exceeds the $27.5 billion threshold, federal expenditures may be recouped for amounts in excess of the threshold at the discretion of the Secretary of the Treasury.

8. **HARD CAP:** ***$100 Billion***
    - **Program Limit:** Losses within a program year are capped at $100 billion, inclusive of both insurer and government participation. Neither the government nor insurers would be required to pay losses for certified acts beyond this amount.

Additional Taxpayer Protection Features of TRIA

Several other features of TRIA serve as additional protections to taxpayers.

Commercial Lines Only: Only claims occurring in certain property/casualty commercial lines of insurance are included in the calculations of insured losses under TRIA (auto and homeowners insurance, life insurance and health insurance have always been excluded). In addition, the number of lines covered under TRIA has been narrowed over time. At TRIA's inception in 2002 approximately 44 percent of property/casualty insurance industry premiums were covered under the Act. By 2012 that figure had dropped to approximately 35 percent. Excluded commercial lines of coverage under the Act today include: mortgage and title insurance, financial guaranty, medical malpractice, reinsurance, commercial auto, burglary and theft, surety, professional liability (except directors and officers coverage) and farmowners multiperil.

State Guaranty Funds: In the unlikely event that an insurer becomes severely impaired or insolvent as a consequence of a terrorist attack, state insurance regulators will take corrective action. If the insurer's assets are insufficient to meet its liabilities, the resources of the appropriate state guaranty fund(s) could be called upon to satisfy those liabilities. Guaranty associations obtain funds for their operations and payment of claims through assessments against the solvent insurance companies licensed to do business in the state and from the recovery of amounts paid on claims from the insolvent estate.[8] All guaranty fund resources are therefore ultimately derived from the industry itself. *No taxpayer dollars are ever involved.*

Make Available Requirement (Mandatory Offer of Coverage): Commercial insurers are required to offer coverage against terrorist acts and by law, workers compensation must include coverage against such acts. These requirements have led to widespread participation in the program. The take-up rate for terrorism coverage in 2012 was 62

[8] National Conference of Insurance Guaranty Funds accessed September 22, 2013 at: http://www.ncigf.org/media/files/Primer-2012.pdf

percent according to a recent study by insurance broker Marsh.[9] The take-up rate for workers compensation is effectively 100 percent, meaning that every worker in America is protected against injuries suffered as the result of a terrorist attack.

TRIA Will Reduce Taxpayer Funded Post-Attack Disaster Aid Costs

The very fact that terrorism coverage is so widely purchased today and that coverage already extends to every American worker through the workers compensation system means that fewer government (taxpayer) resources will be called upon in the wake of any future terrorist attack. Allowing TRIA to expire will reduce the market penetration of terrorism coverage as prices rise and insurers limit their exposure across all lines of coverage, including workers compensation. Consequently, the uninsured share of losses will rise, increasing the pressure on the government to compensate victims for their uninsured losses. This will impair the ability of individual businesses, affected communities and the overall economy's ability to recover. A sharp spike in business failures, higher unemployment and reduced GDP growth are just a few of the adverse consequences that are certain to follow in the event of a major terrorist attack in the absence of TRIA. In summary, government will be called upon to act in the aftermath of a major terrorist attack. TRIA provides an efficient means for ensuring that most of the costs are financed and administered by the private sector rather than the taxpayer.

Use of Insurer Claim Management Infrastructure Will Save Taxpayer Money, Improve Post-Attack Response

Private insurers are today the principal source and conduit for the rapid and direct delivery of recovery funds to victims of terrorist attacks. In the event that TRIA is allowed to expire, the government lacks any formal structure or experience for adjusting, managing and delivering benefits to victims of complex commercial property and liability claims, nor does it have any formal fraud monitoring capability. Maintaining TRIA not only ensures that the costs of future terrorist attacks will be borne primarily by the private sector, it enhances the quality of the outcome. Again, in the absence of TRIA there is no question that the federal government will be called upon to act. TRIA ensures that that much of those costs will be borne and administered by the private insurers.

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[9] Marsh, *2013 Terrorism Risk Insurance Report*, May 2013.

Private Insurer and Reinsurance Participation in the Market for Terrorism Insurance Today

One primary goal of TRIA and it successors has been to encourage private sector capacity to enter (and remain) in the marketplace so that an increasing share of losses from future terrorist attacks could be borne in the private sector.

There is no question that billions of dollars in capacity has been attracted to the terrorism risk insurance market. Evidence of the program's success in this respect has been documented by a number of government entities and other organizations. In its latest report on terrorism risk insurance market conditions, the President's Working Group on Financial Markets noted that the program provides an incentive to property/casualty insurers and reinsurers who might not otherwise provide terrorism insurance at current capacity levels or prices.[10] The U.S. Government Accountability Office (GAO), commenting on the availability and affordability of terrorism coverage in large metropolitan areas, reported that with a few exceptions, commercial property terrorism insurance appears to be available nationwide at rates policyholders believe is reasonable, suggesting ample capacity.[11]

Note that this statement is very different from an assessment that such capacity would exist in the absence of a terrorism backstop. Again, it is important to emphasize that the majority of the coverage that exists in the market today exists because of the continued existence of the Terrorism Risk Insurance Program. Insurance broker Aon estimates that 70% to 80% of the market would encounter terrorism exclusions if the program were discontinued. Thus capacity in the market is largely contingent upon the continuation of the program. As detailed earlier in this testimony, policy language that would exclude coverage against terrorist attacks returned to the market each time the expiration of TRIA has loomed.

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[10] *Market Conditions for Terrorism Risk Insurance 2010*, Report of the President's Working Group on Financial Markets.

[11] *Initial Results on Availability of Terrorism Insurance in Specific Geographic Markets*, GAO-08-919R, July 2008.

The so-called market for "standalone" terrorism coverage also provides evidence that in the absence of a Terrorism Risk Insurance Program, coverage capacity (supply) will fall well short of demand. Insurance brokers Marsh and Aon both report that the "theoretical" maximum amount of coverage available per risk in the "standalone" market is approximately $2 billion with larger sums available under some circumstances. This is in contrast with limits of just $150 million or less available in early 2002 before TRIA was enacted. At the time, such coverage also was subject to high deductibles equal to 7 to 10 percent of the stated value of the coverage.[12] While the sums available in the market today may seem large, especially in comparison to 2002, there are many risks for which the coverage is inadequate. Consider, for example, that back in 2001 (prior to the introduction of terrorism exclusions) the twin towers at the World Trade Center site were insured for $3.55 billion—more than what is generally available in the market today. Multibillion dollars risks are now quite common in the United States, from office and shopping complexes to large manufacturing facilities, sports stadiums, transportation hubs and energy infrastructure not to mention infrastructure such as bridges, tunnels and dams. These exposures exist in every state.

Reinsurance capacity, which was extremely limited in the aftermath of 9/11, is up as well. A 2011 report from reinsurance broker Guy Carpenter noted that there is between $6 billion and $8 billion of terrorism reinsurance capacity available in the U.S. market, but cautions that the market remains vulnerable to a major terrorism loss. The $6 billion to $8 billion in terrorism reinsurance capacity stands in stark contrast to approximately $100 billion in reinsurance capacity available in the market today against traditional risks (mostly property catastrophe risks). A continued cautious approach is clearly required. Indeed, many modeled terrorism loss scenarios result in insured losses in the tens or even hundreds of billions of dollars—some even exceeding the claims paying capital of the entire industry. As noted previously, much of the capacity in the market today is predicated on the existence of the Terrorism Risk Insurance Program. In the absence of the program, reinsurance capacity would be greatly reduced.

[12] *September 11, 2001: One Hundred Minutes of Terror that Changed the Global Insurance Industry Forever,* Robert P. Hartwig, John Liner Review, January 2002.

Capital Markets and Terrorism Risk

Capital markets are playing an increasingly important role in providing capacity against losses arising from large natural disaster events which are becoming increasingly frequent in the United States and around the world. Capital market reinsurance capacity for U.S. natural catastrophe risks is estimated at $30 billion to $40 billion. However, investor appetite for catastrophe risk is so far limited to natural catastrophes such as hurricanes and earthquakes. Investors are attracted to investments in backing natural disasters risks in part because the performance of these assets is entirely uncorrelated with the performance of traditional financial market instruments such as stocks and bonds. A recession, for example, will impact the value of stocks and corporate bond prices but will have no impact on the likelihood of sustaining a loss on a catastrophe bond.

Investors to date have shown no appetite for terrorism risk because in the event of a major terrorist attack the performance of securitized terrorism risk instruments (such as catastrophe bonds) and tradition equity market and fixed income investment vehicles are likely to be *highly correlated*. For example, a large-scale terrorist attack could cause bonds exposed to the event to lose all or part of their value, leading to large losses for investors while stock markets plunge (as they did in the wake of the September 11, 2001 attack). Investor disinterest in terrorism risk is also a function of the inability to model and therefore price) such risks with anything close to the same degree of precision as tradition natural disaster risk.

Changes in the Terrorism Threat Landscape and Impacts on Terrorism Insurance Markets

In the immediate aftermath of 9/11 the ability of commercial policyholders to purchase adequate limits of terrorism coverage at affordable prices was severely constrained. Commercial property owners and businesses were faced with substantially reduced protection for terrorism-related risks, in addition to higher property/casualty rates overall. As a result, many were forced to go without coverage or only partly insure their assets.

Today, reports of property owners having problems securing terrorism coverage due to a lack of capacity in the market are no longer making headline news. Indeed, it is therefore tempting to conclude that in the eleven years since TRIA was first implemented that insurance markets have fully adjusted to the post-9/11 environment and that insurers and reinsurers have concluded that terrorism is a fully insurance risk.

The reality is quite different. The fact of the matter is that terrorism risk today is almost every bit as uninsurable as it was a decade ago. Recent major successes in the war on terror, including the killing of al-Qaida leader Osama bin Laden in 2011, do not alter this conclusion. This is because the current stability in the terrorism insurance market in the United States is due almost entirely to two factors:

(i) There has been no successful large scale terrorist attack on U.S. soil since 2001, and
(ii) TRIA remains in place.

The influence of both of these factors is discussed in the sections that follow.

Absence of Successful Attacks Does Not Imply Terrorism Risk is Inconsequential

The fact that there has been no successful terrorist attack in the United States in eleven years is a remarkable achievement. It is a testimony to the hard work and dedication of this nation's counterterrorism agencies and the bravery of the men and women in uniform who fought and continue to fight battles abroad to keep us safe here at home.

Unfortunately, the threat from terrorist attack in the United States is both real and substantial and will remain as such for the foreseeable future. Indeed, the U.S. State Department warned in a recent report that despite the death of bin Laden and other key al-Qaeda figures, the terrorist network's affiliates and adherents remain adaptable and resilient, and constitute "an enduring and serious threat to our national security."[13]

[13] *Country Reports on Terrorism 2011*, U.S. Department of State, July 31, 2012.

Table 2 below shows that interest in attacking targets within the United States remains undiminished—with four terrorist plots executed or interdicted within the past year alone. Indeed, it is clear from Table 2 that in addition to an ongoing threat from foreign terrorist networks, the United States also faces homegrown (domestic) terrorist threats from radical individuals, who may be inspired by al-Qaida and others, but may have little or no actual connection to militant groups.

Catastrophe modeler Risk Management Solutions (RMS) points to an increase in the number of homegrown plots in the U.S. in recent years.[14] Many of these have been thwarted, such as the 2012 attempt by Quazi Ahsam Nafis to blow up the Federal Reserve Bank of New York and Mohamed Osman Mohamud who targeted a Portland, Oregon, Christmas tree lighting ceremony. Also among the more notable unsuccessful attacks was an April 2013 attempt to blow up an Amtrak train en route between New York and Toronto. Other thwarted attacks against passenger and cargo aircraft, including the Christmas Day 2009 attempt to blow-up a jet over Detroit, are indicative of an ongoing risk to aviation infrastructure.

Table 2 also shows that terrorists are interesting in attacking targets across the United States, not just in large urban areas. Cities such as Springfield, Illinois and Lubbock, Texas, have also been targeted. It also important to note that the largest act of domestic terrorism in United States history was the truck bombing of the Alfred P. Murrah Federal Building in Oklahoma City in April 1995, which killed 166 people and produced insured property losses totaling $189 million (in 2012 dollars).

Another evolving threat is cyber-terrorism. Recent high profile attacks, such as the sabotaging of Iran's nuclear program via the Stuxnet computer worm and malicious infiltration attempts here in the U.S. by foreign entities, underscore the growing threat to both national security and the economy.

All these factors suggest that terrorism risk will be a constant and evolving threat for the foreseeable future.

[14] RMS Terrorism Risk Briefing, July 2012.

Table 2

RECENT TERRORIST ATTACKS AND ATTEMPTS IN THE UNITED STATES

Date	Location	Event
April 15, 2013	Boston, MA	Brothers Tamerlan and Dzhokhar Tsarnaev detonate two pressure cooker bombs near the finish line of the Boston Marathon, killing 3 and injuring 264
April, 2013	New York City, NY-Toronto	Two suspects with al-Qaida links arrested in Toronto, Canada for alleged plot to blow up Amtrak passenger train en route from New York City to Toronto
November, 2012	New York City, NY	Brothers Raees Alam Qazi and Sheheryar Alam Qazi arrested and charged with conspiring to detonate a weapon of mass destruction targeting a New York City landmark
October, 2012	New York City, NY	Quazi Mohammad Rezwanul Ahsan Nafis arrested in plot to blow up Federal Reserve Bank in New York City
August, 2012	Ludowici, GA	Four U.S. soldiers charged in connection with murder and illegal gang activity, linked to foiled plot to commit domestic acts of terrorism, including overthrowing the government and assassinating the President
May, 2012	TBD	Foiled underwear bomb plot to bring down U.S.-bound commercial airliner around the anniversary of bin Laden's death
July 27, 2011	Fort Hood, TX	U.S. Army Pfc Naser Jason Abdo arrested and charged with plotting bomb attack on fellow soldiers at Fort Hood
June 22, 2011	Seattle, WA	Two men arrested in plot to attack military recruiting station in Seattle
May 11, 2011	New York City, NY	Ahmed Ferhani and Mohamed Mamdouh arrested in plot to attack Manhattan synagogue.
February 23, 2011	Lubbock, TX	Foiled plot to bomb military and political targets, including former President George W. Bush in New York, Colorado and California
December 8, 2010	Baltimore, MD	Attempted bombing of Armed Forces recruiting center by U.S. citizen Antonio Martinez, aka Muhammad Hussain
November 26, 2010	Portland, OR	Attempted bombing at Christmas tree lighting ceremony in downtown Portland by naturalized U.S. citizen Mohamed Osman Mohamud
October, 2010	Washington, D.C.	Attempted plot to bomb D.C.-area metro stations
May 1, 2010	New York City, NY	Attempted SUV bombing in Times Square, New York City, by naturalized U.S. citizen Faisal Shahzad
December 25, 2009	Over Detroit, MI	Attempted bombing of Northwest Airlines passenger jet over Detroit by underwear bomber Umar Farouk Abdulmutallab
September, 2009	New York City, NY	U.S. resident Najibullah Zazi and others charged with conspiracy to use weapons of mass destruction in New York City
September, 2009	Springfield, IL	Attempted plot to detonate a vehicle bomb at the federal building in Springfield.
September, 2009	Dallas, TX	Attempted bombing of skyscraper in Dallas
May, 2009	New York City, NY	Foiled plot to bomb Jewish synagogue and shoot down military planes in New York City
May, 2009	Various U.S. targets	Conviction of Liberty City six for conspiring to plan attacks on U.S. targets, including Sears Tower, Chicago

Source: Federal Bureau of Investigation (FBI); various news reports; Insurance Information Institute.

Potential Impacts If TRIA Is Not Extended

Without question, TRIA and its successors are the principal reason for the continued stability in the insurance and reinsurance market for terrorism insurance today. As discussed previously, TRIA is credited with restoring terrorism coverage in commercial insurance policies upon its enactment in late 2002.

Potential macroeconomic effects of allowing TRIA to expire—reduced economic growth and fewer jobs—were discussed earlier. In terms of impacts on insurance markets there is no question that coverage will become more expensive and less available—and in many cases unavailable. The question is not a theoretical one. In 2004, more than a year before the original Act's expiration at year-end 2005, terrorism exclusions once again emerged for policies with exposure extending into 2006. This was an unmistakable indication that insurance and reinsurance markets felt that terrorism risk, at least for larger scale attacks, remained uninsurable in the private sector. After Congress agreed to extend the program for another two years under the Terrorism Risk Insurance Extension Act of 2005 (TRIEA), terrorism coverage remained available and affordable in the market. However, with TRIEA's looming expiration in year-end 2006, terrorism exclusions once again appeared in the market, signaling the market's assessment that terrorism risk remained fundamentally uninsurable. These exclusions largely disappeared following passage of a 7-year extension of the program under the Terrorism Risk Insurance Program Reauthorization Act of 2007 (TRIPRA). With TRIPRA's expiration now a little more than one year away (year-end 2014), it is virtually certain that terrorism exclusions will soon reappear in the market. Indeed, insurance broker Aon estimates that at least 80 percent of the commercial property market will be impacted by these exclusions and other restrictions.

Studies by various organizations, including the University of Pennsylvania's Wharton School Risk Center, the RAND Corporation and the Organization for Economic Co-operation and Development (OECD), have supported the idea of a substantive federal role in terrorism insurance. In particular, the Wharton School found that TRIA has had a positive effect on availability of terrorism coverage and also has significantly contributed to reducing insurance premiums.[15] The OECD notes, however, that the financial (capital) markets have thus far shown little appetite for terrorism risk.

Evidence from Other Countries: Terrorism Risk Insurance Programs Abroad

Additional evidence that terrorism risk is fundamentally uninsurable comes from abroad. A number of countries have established their own terrorism risk insurance programs and these have operated successfully, often for many years. Australia, Austria, Belgium, France, Germany, the Netherlands, Spain, Switzerland and the United Kingdom have all created programs to cover terrorism in the event of an attack on their own soil.[16] None of these countries is considering the discontinuation of its program.

This begs the question as to why—twelve years after the 9/11 attack and a decade after the initial terrorism risk insurance program legislation was enacted—terrorism risk, particularly for large-scale attacks, is still viewed as uninsurable? The answer is surprisingly simple and explains why even the absence of a successful major attack on U.S. soil since 2001 does not alter this assessment.

Obstacles to Insuring Losses Arising from Acts of Terrorism

Simply put, acts of terror violate all four of the basic requirements traditionally associated with insurability of a risk. In situations where these requirements cannot be met, it is difficult or impossible to ascertain the premium to be charged and/or difficult or impossible to achieve the necessary spread of risk to avoid excessive exposure to catastrophic loss, thereby threatening the insurer's solvency. Consequently, such a risk would generally be deemed to be commercially *not* viable (i.e., insurable) in whole or in part.

[15] *Evaluating the Effectiveness of Terrorism Risk Financing Solutions*, Howard C. Kunreuther and Erwann O. Michel-Kerjan, September 2007, National Bureau of Economic Research.

[16] In 1993, the British government formed a mutual reinsurance pool for terrorist coverage following acts of terrorism by the Irish Republican Army. Insurance companies pay premiums at rates set by the pool. The primary insurer pays the entire claim for terrorist damage but is reimbursed by the pool for losses in excess of a certain amount per event and per year based on its share of the total market. Following 9/11, coverage was extended to cover all risks, except war, including nuclear and biological contamination, aircraft impact and flooding, if caused by terrorist attacks. The British government acts as the reinsurer of last resort, guaranteeing payments above the industry retention.

The four basic requirements for insurability of a risk are detailed below (as well in Exhibits 4A and 4B), with a description of how terrorism risk violates each requirement:

1. **Estimable Frequency:** Insurers require a large number of observations to develop predictive, statistically sound rate-making models (an actuarial concept known as "credibility"). For example, insurers handle millions of auto, home, workers compensation and business property claims every year, providing them with vast amounts of data from which they can reliably estimate the frequency of such claims. For major catastrophic risks such as hurricanes and earthquakes that occur less frequently insurers still maintain databases with hundreds or even thousands of these events, supplemented by sophisticated catastrophe models, that help provide statistically reliable estimates of frequency. Terrorism risk is clearly different in this respect.

   Obstacle: There are very few data points on which to base frequency estimates for acts of terror in the United States, thus estimates lack any true actuarial credibility. The opinions of experts on the likelihood of terrorist attacks, which might be viewed by some as substitutes for actuarially credible data, are also highly subjective. At any given time, there is a wide range of viewpoints among national security experts on the likelihood, location and/or attack modality. Moreover, insurers have no access to data used internally by counterterrorism agencies. Given the paucity of historical data and diversity and shifting nature of expert opinions, catastrophe models used to estimate terrorism risk are relatively undeveloped compared to those used to assess natural hazard risks. The bottom line is that estimating the frequency of terror attacks with any degree of accuracy (credibility) is extraordinarily challenging, if not impossible in many circumstances.

2. **Estimable Severity:** Insurability requires that the maximum possible/probable loss be estimable in order to calculate the insurer's exposure (in dollar terms) and minimize its "probability of ruin." No insurer can expose itself to losses of a magnitude that present an unreasonable risk of insolvency.

Obstacle: Potential losses arising from terrorist attacks are virtually unbounded. In this sense terrorism risk is akin to war risk, which is almost universally excluded from commercial insurance policies worldwide. Consequently, losses arising from acts of terror can easily exceed an insurer's claims paying capital resources. Workers compensation coverage, which does not permit any exclusions or limitation if injuries or deaths arise from terrorist acts, can lead to extreme losses that on their own could potentially bankrupt an insurer under some attack scenarios. In addition, when it comes to estimating losses from potential terrorist attacks there also appears to be significant variability in outcomes (i.e., disagreement on estimated severity impacts), underscoring the degree of uncertainty associated with potential terrorist attacks.

3. **Diversifiable Risk:** Insurability requires that the losses can be spread across a large number of risks. This is an application of the "Law of Large Numbers" and helps makes losses more manageable and less volatile. Failure to achieve an adequate spread of risk increases the risk of insolvency in the same way that an undiversified portfolio of stocks (or any asset) is riskier than a well-diversified portfolio.

   Obstacle: Terrorism attacks are likely to be highly concentrated geographically (e.g., World Trade Center site), concentrated within an industry (e.g., power plants, airports) or within a certain span of time (e.g., coordinated attack).

4. **Random Loss Distribution/Fortuity:** Insurability requires that the probability of a loss occurring be random or fortuitous. This implies that individual events must be unpredictable in terms of timing, location and magnitude.

Obstacle: Terrorism attacks are planned, coordinated and deliberate acts of destruction. Again, they are likely to be highly concentrated geographically (e.g., World Trade Center site) or concentrated within an industry (e.g., power plants). Terrorists engage in "dynamic target shifting" whereby terrorists shift from "hardened targets" to "soft targets" which implies that losses are not random or fortuitous in nature. The April 2013 Boston Marathon bombing was an example of an attack on a soft target. It is also not difficult to imagine attacks occurring in the United States similar to the September 2013 attack on an upscale shopping mall (another soft target) in Nairobi, Kenya, by al-Shabaab, a Somali-based terrorist group with links to al-Qaeda.

Additional Issues for Consideration in Conjunction with TRIA Reauthorization

Certification Deadline: While TRIA spells out a highly detailed set of criteria that must be met for an event to be officially certified as a "terrorist act," TRIA offers no timeline or deadline by which such a certification must be made. Although the Boston Marathon bombings occurred more than five months ago (on April 15, 2013), there has to date been no certification by the Treasury Department nor has there been any statement by Treasury that the event would not be certified. Indeed, Treasury has offered no guidance as to whether any such determination is ever forthcoming. This situation has created some uncertainty and confusion for policyholders, insurers and other impacted parties. A simple and reasonable solution would be to require that a certification determination must be made within a specified number of days after the event.

Cyber Terrorism: The threat both to national security and the economy posed by cyber terrorism is a growing concern for governments and businesses around the world, with critical infrastructure, such as power plants, transportation, and communication infrastructure at risk.[17] The Department of Homeland Security received reports of some 198 attacks on critical infrastructure systems in the U.S. in 2012, a 52 percent increase on 2011.[18]

Former U.S. Homeland Security Secretary Janet Napolitano recently warned that a "cyber 9/11" could happen imminently and noted that critical infrastructure – including water, electricity and gas – is very vulnerable to such a strike.[19]

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[17] *Cyber Risks: The Growing Threat,* Robert P. Hartwig and Claire Wilkinson, Insurance Information Institute, April 2013.
[18] *As Hacking Against U.S. Rises, Experts Try to Pin Down Motive*, the New York Times, March 3, 2013
[19] *Napolitano warns of risk of major cyber attack*, Newsday, January 24, 2013.

Earlier, in an October 2012 speech then U.S. Defense Secretary Leon Panetta warned that the United States was facing a possible "cyber Pearl Harbor" scenario, and increasingly vulnerable to foreign cyber attacks on its critical infrastructure networks. Such attacks are targeting the computer control systems that operate chemical, electricity and water plants and transportation networks, Panetta said.

Summary

In the twelve years since the tragedy of the September 11, 2001 terrorist attack on the United States, much has been learned about the nature of terrorism risk and its insurability. There is no question that the Terrorism Risk Insurance Act and its successors brought much needed stability to the market in the aftermath of the most costly insurance loss in global history. In the decade since, private sector insurers, reinsurers and the federal government have successfully partnered with one another in order to maintain that stability, providing tangible benefits for businesses large and small—and their employees—all across America.

The looming expiration of the TRIA at the end of 2014 brings to a head the question of whether terrorism risk is now, or ever will be, a risk that can be managed entirely within the private sector. The evidence, both in the United States and from similar programs abroad, is that market stability in terms of both pricing and availability of terrorism coverage, as well as the ability to maintain adequate and expanding levels of capacity over time, are contingent on the continued existence of the Terrorism Risk Insurance Program.

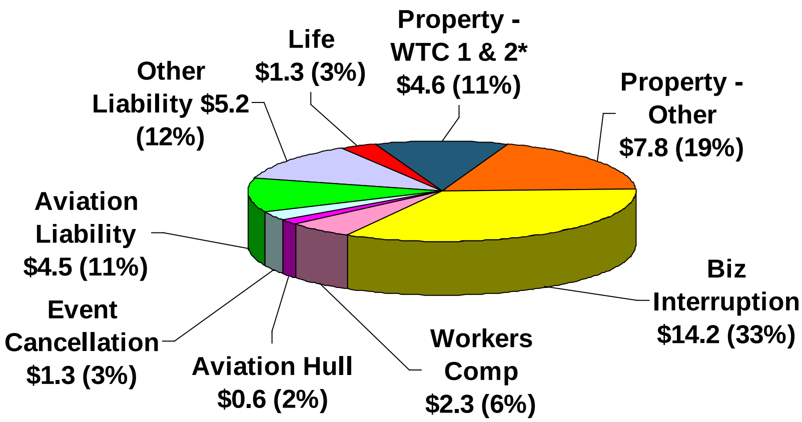
Thank you for you for the opportunity to testify before the Committee today. I would be happy to respond to any questions you may have.

Exhibit 1

Loss Distribution by Type of Insurance from Sept. 11 Terrorist Attack ($ 2012)

INSURANCE INFORMATION INSTITUTE

($ Billions)



Total Insured Losses Estimate: $42.1B

*Loss total does not include March 2010 New York City settlement of up to $657.5 million to compensate approximately 10,000 Ground Zero workers or any subsequent settlements.

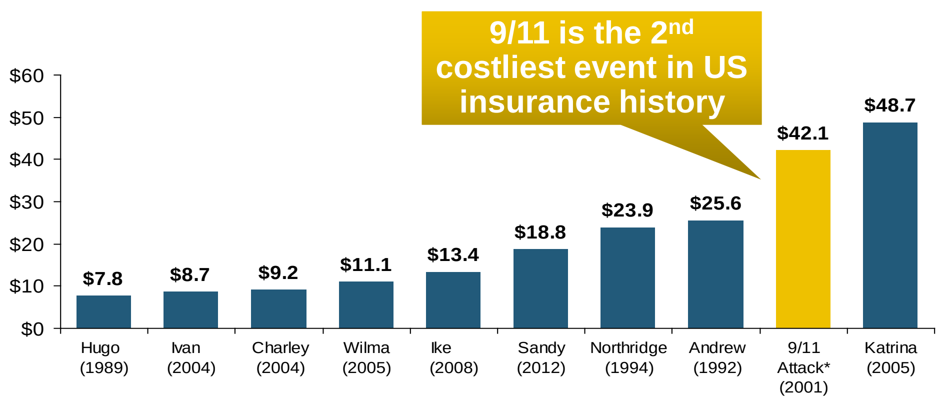
Source: Insurance Information Institute.

Exhibit 2

Top 10 Most Costly Disasters in U.S. History

INSURANCE INFORMATION INSTITUTE

(Insured Losses, 2012 Dollars, $ Billions)



* Insured loss estimate for Sep. 11 terrorist attack includes property, business interruption, workers comp, aviation hull, liability, event cancellation and life insurance losses.

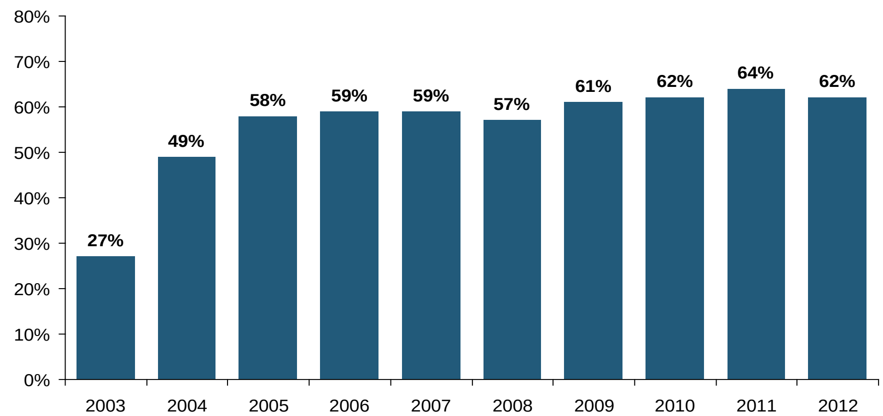
Sources: PCS; Insurance Information Institute inflation adjustments to 2012 dollars using the CPI.

11

Exhibit 3

Terrorism Insurance Take-up Rates, By Year, 2003-2012

INSURANCE INFORMATION INSTITUTE



In 2003, the first year TRIA was in effect, the terrorism take-up rate was 27 percent. Since then, it has increased steadily, remaining in the low 60 percent range since 2009.

Source: Marsh Global Analytics, *2013 Terrorism Risk Insurance Report*, May 2013.

12

Exhibit 3

Pyramid of Taxpayer Protection: Strong, Stable, Sound and Secure

INSURANCE INFORMATION INSTITUTE

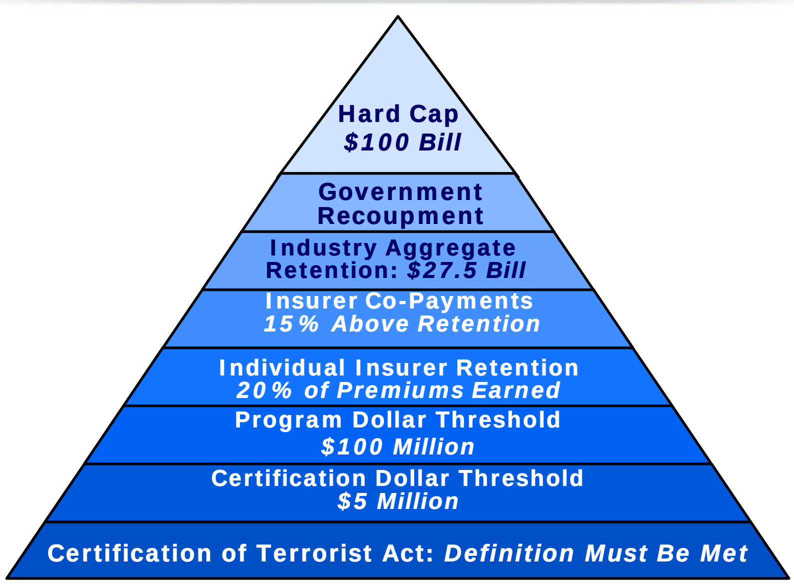


Exhibit 4A

Terrorism Violates Traditional Requirements for Insurability

Requirement	Definition	Violation
Estimable Frequency	•Insurance requires large number of observations to develop predictive rate-making models (an actuarial concept known as credibility)	•Very few data points •Terror modeling still in infancy, untested. •Inconsistent assessment of threat
Estimable Severity	•Maximum possible/ probable loss must be at least estimable in order to minimize "risk of ruin" (insurer cannot run an unreasonable risk of insolvency though assumption of the risk)	•Potential loss is virtually unbounded. •Losses can easily exceed insurer capital resources for paying claims. •Extreme risk in workers compensation and statute forbids exclusions.

Source: Insurance Information Institute

Exhibit 4B

Terrorism Violates Traditional Requirements for Insurability (cont'd)

Requirement	Definition	Violation
Diversifiable Risk	•Must be able to spread/distribute risk across large number of risks •"Law of Large Numbers" helps makes losses manageable and less volatile	•Losses likely highly concentrated geographically or by industry (e.g., WTC, power plants)
Random Loss Distribution/ Fortuity Source: Insurance Information Institute	•Probability of loss occurring must be purely random and fortuitous •Events are individually unpredictable in terms of time, location and magnitude	•Terrorism attacks are planned, coordinated and deliberate acts of destruction •Dynamic target shifting from "hardened targets" to "soft targets" •Terrorist adjust tactics to circumvent new security measures •Actions of US and foreign govts. may affect likelihood, nature and timing of attack