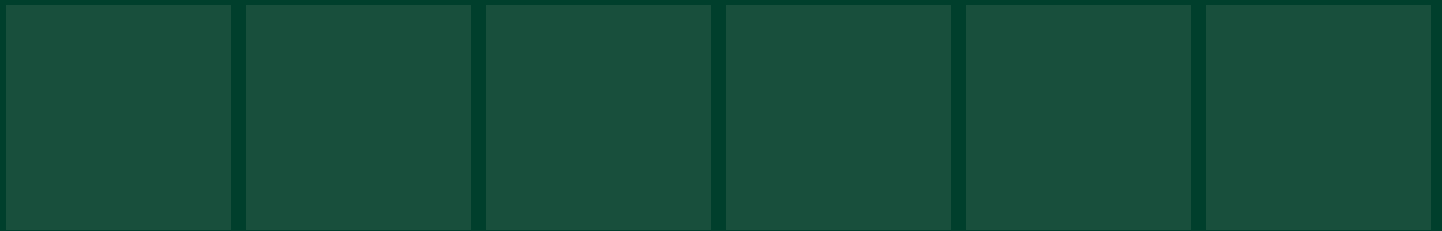


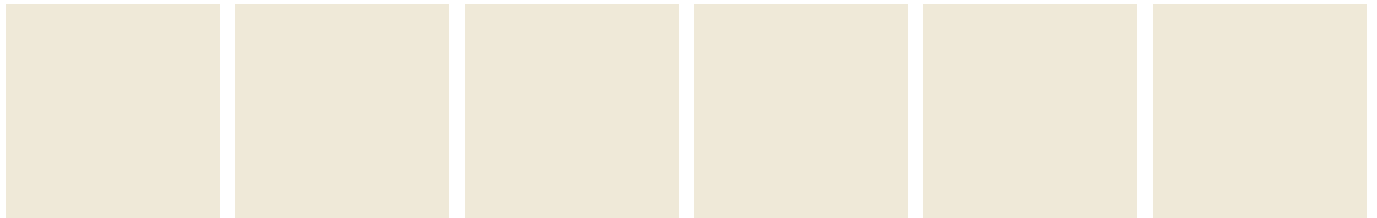
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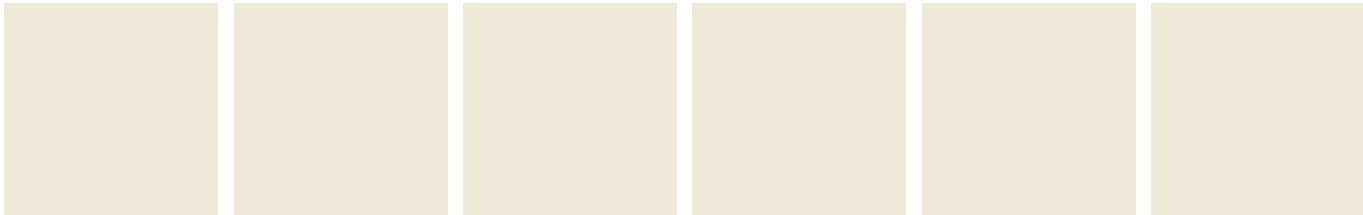
**Marketwatch:
Terrorism Insurance
2005**

Marketwatch: Terrorism Insurance 2005



Publisher	Steve Lundin	<i>Marsh's Property Practice</i>
Subject Experts	Robert Blumber William Boone John Hughes Sean Mooney John Rand Chris Varin	<i>Marsh's Property Practice</i> <i>Marsh's Casualty Practice</i> <i>Marsh's Property Practice</i> <i>Guy Carpenter</i> <i>Marsh's Property Practice</i> <i>Marsh's Captive Management Services</i>
Contributors	Kroll Security Experts	
Editor	Tom Walsh	<i>Marsh's Sales and Marketing Practice</i>
Managing Editor	Meike Olin	<i>Marsh's Sales and Marketing Practice</i>
Production Manager	Christine Reilly	<i>Marsh's Sales and Marketing Practice</i>

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Introduction

1

The future pricing and availability of terrorism insurance are in question this spring as Congress debates whether to renew the Terrorism Risk Insurance Act (TRIA).

The Act, which became law in November 2002, was a direct response to the business fallout from the terrorist attacks of September 11, 2001, which caused an estimated \$40 billion in losses. TRIA's purpose was to provide a temporary window of reinsurance relief to help insurers manage the ongoing risk of terrorism. One of TRIA's original goals was to enable the insurance industry to amass the private capital necessary to insure catastrophic terrorism losses. To date, the industry has not amassed that capital, leading many to call for TRIA's extension beyond its slated expiration at midnight, December 31, 2005.

Terrorism insurance and associated risk management strategies are dynamic and complex issues, with many interdependent factors contributing to risk. Foreign relations, the effectiveness of homeland defense, and the ambiguous nature of the risk make terrorism loss extremely challenging to predict and quantify. For this reason, it is difficult for insurers to effectively price and reserve capacity for their potential exposure to catastrophic terrorism loss. TRIA provides a temporary reinsurance backstop to insurers to protect them against such loss.

If TRIA is not renewed, it is not realistic to expect insurers to maintain their present terrorism capacity, nor is it realistic to expect the reinsurance market to fill the void. Given this reality, many insurers are already

reducing or eliminating available terrorism coverage for 2006, and clients may find themselves unable to transfer terrorism risk in a cost-effective manner.

With TRIA's fate still undecided at the outset of the second quarter of 2005, companies need to be planning their strategies for managing terrorism risk, whatever Congress decides. This publication, the second annual *Marketwatch* focused on terrorism, is designed to help clients address terrorism risk issues despite these uncertainties. It is part of Marsh's ongoing effort to inform clients of notable developments in the terrorism insurance marketplace—including the cost of, demand for, and gaps in insurance coverage. The report looks at:

- key issues under TRIA;
- property terrorism insurance purchasing in 2004;
- the standalone property terrorism insurance market;
- terrorism issues in workers compensation and liability insurance;
- TRIA's impact on the insurance and reinsurance markets;
- insurance for terrorism exposures in captives; and
- terrorism risk management.

Through benchmarking and by staying aware of important developments, risk managers and other key executives can help their companies prepare strategies to manage the ever-shifting realities of terrorism risk. Marsh remains committed to assisting our clients in developing a robust, comprehensive strategy.

2

Executive Summary

This report provides a snapshot of the major issues surrounding terrorism insurance at the beginning of the second quarter of 2005. Key issues and findings include:

Property Terrorism Insurance

- Nearly 50 percent of Marsh's risk management and middle-market clients purchased property terrorism insurance in 2004, a dramatic increase from the 2003 average of 27 percent.
- The purchase of property terrorism coverage in 2004 varied significantly, depending on a company's total insured values (TIV). Smaller companies (less than \$100 million TIV) were much less apt to purchase this coverage.
- Take-up rates—the percentage of companies buying the coverage—varied considerably among regions. Take-up rates were about 53 percent in the Northeast and Midwest, 47 percent in the South, but only 34 percent in the West.
- The cost of property terrorism insurance in 2004 was unchanged from the price in 2003, indicating that the increase in take-up rates was not driven solely by price.
- Financial institutions, real-estate firms, and health care facilities had the highest take-up rates, each exceeding 60 percent.

The Standalone Market

- If TRIA is not extended, the standalone insurance market is unlikely to have sufficient capacity to satisfy all of the expected demand at commercially viable prices.

- Capacity in the standalone property terrorism insurance marketplace is relatively stable, though limited. The amount available for a specific risk can vary significantly, depending on the risk's location, an insurer's accumulated exposure, and the concentration of exposures in a given area.
- Outside of major metropolitan areas, Marsh estimates terrorism market capacity is approximately \$1.4 billion; however, program limits greater than \$500 million are relatively rare due to pricing constraints.
- In major metropolitan areas with high levels of concentrated risk, terrorism market capacity is more limited and considerably more expensive.

Workers Compensation and Liability Coverages

- Workers compensation provides lifetime medical care for on-the-job injuries, leading some experts to project the worst-case cost of a terrorism incident could exceed \$90 billion dollars.
- If TRIA is not extended, some insurers may feel they have no choice but to nonrenew some workers compensation policies because there is not enough reinsurance capacity to protect them from the essentially unlimited exposure arising from terrorism.
- Eighty-four percent of companies purchased TRIA coverage in their primary auto liability programs in 2004, a decline from 95 percent in 2003.
- Eighty-one percent of companies purchased TRIA coverage in their primary general liability (GL) programs in 2004, a decline from 93 percent in 2003.

- The actual rate charged as a percentage of premium for the overall coverage in both GL and auto held steady at about 1 percent, implying that the reduction in the take-up rate was driven not by the cost of the coverage, but by the perceived risk.

TRIA's Impact on the Insurance and Reinsurance Markets

- If TRIA is not renewed, it is unrealistic to expect reinsurance market capacity to expand from its current estimated level of \$6 billion up to the anticipated needed capacity of over \$100 billion.
- Insurers' responses to the potential expiration of TRIA vary considerably. Some are unwilling to provide any coverage post-TRIA.
- In 19 of the 29 states that use some version of the Standard Fire Policy (SFP), regulators may not allow a terrorism exclusion for fire losses.
- Ten SFP states allow terrorism to be excluded from property policies for fire losses resulting from an act of terrorism.

TRIA and Captives

- U.S. captives are subject to TRIA and have been used in a number of ways to address both certified and noncertified terrorism risk.
- Captives provide their owners a viable means to directly access reinsurance markets and potentially realize cost, capacity, and breadth-of-coverage benefits.
- Captives used in concert with TRIA are arguably the only means of securing protection in meaningful quantity for nuclear, biological, chemical, and radiological exposures.
- Certain benefits of using a captive to insure terrorism risk will be diminished or eliminated without TRIA.

Terrorism Risk Management

- When it comes to terrorism risk management, one size does not fit all. Every insured requires a different plan that will need to be continuously updated relative to changing global security conditions.
- A primary security goal of any potential terrorist target is to deter an attack by aggressively influencing the terrorists' target research and risk/reward assessment.

Since its enactment in November 2002, TRIA has helped stabilize the terrorism insurance market, making coverage for this risk more available and affordable. Debate about whether or not to extend TRIA will take place on Capitol Hill this spring and summer. If TRIA is allowed to expire, the terrorism insurance market is likely to once again become unstable, with potentially harmful effects on the economy. Marsh supports extending TRIA in some form for the next few years to allow government, insureds, brokers, insurers, and reinsurers the time to develop a more permanent solution.

3

An Overview of the Terrorism Risk Insurance Act—TRIA

President Bush signed TRIA on November 26, 2002, as a direct response to the terrorist attacks of September 11, 2001. The intent was to provide temporary reinsurance relief to help insurers manage the risk of terrorism in the wake of the attacks.

Insurers—including captives licensed in the United States and surplus lines insurers approved as nonadmitted insurers in any state—are generally subject to TRIA's provisions. The Act applies to almost all commercial lines of insurance, including surety, auto, property, liability, and workers compensation. Although it is mandatory for these insurers to offer terrorism coverage, it is not mandatory for insureds to purchase the coverage. Some key issues under TRIA follow:

Certification: For an act of terrorism to be covered under TRIA, it must be certified by the Secretary of the Treasury, the Secretary of State, and the Attorney General. The act must involve violence or be dangerous to human life, property, or the nation's infrastructure; and it must result in aggregate losses of \$5 million or more. It must also have been committed on behalf of a foreign person or interest as part of an effort to coerce the civilian population of the United States or to influence the policy or conduct of the U.S. government. The loss must occur within U.S. borders, to the premises of a U.S. mission, or to a U.S. air carrier or vessel. TRIA defines the "United States" to include the U.S. territorial seas and the U.S. continental shelf (see "Noncertified Acts of Terrorism" on page 5). No act may be certified if it is committed in the course of a war declared by Congress, with the exception of coverage related to workers compensation.

Domestic terrorism: An act of domestic terrorism—one that takes place in the United States and is perpetrated by a person or group that is not being directed by a foreign source—would not qualify for reinsurance under TRIA. Insurers are not obligated to offer coverage for such acts.

Cost of coverage: TRIA does not provide specific guidance on pricing; however, insurers may charge an additional premium for coverage provided under TRIA. From its enactment until December 31, 2003, TRIA pre-empted state regulations for prior approval of rates. However, the Act has always retained a state's right to invalidate a rate as excessive, inadequate, or unfairly discriminatory.

Terms and conditions: Insurers subject to TRIA are required to make available to their policyholders coverage for "certified acts" on terms and conditions that do not materially differ from the policy's other property and/or casualty coverages. Insurers are required to offer the coverage at each renewal even if the insured has declined coverage previously. The Act does not prescribe specific terms and conditions for required coverages.

Adequate disclosure: The Act requires insurers to provide to their policyholders "clear and conspicuous disclosure" of both the premium being charged for TRIA coverage and the share of reinsurance provided by the federal government. If the insured rejects an offer to purchase terrorism coverage, the insurer may then reinstate a terrorism exclusion.

Government participation: The federal government will cover 90 percent of certified losses once an insurer's deductible is reached; the other 10 percent is the insurer's responsibility. An individual insurer's deductible is a percentage of its direct earned premiums for the prior year for the commercial lines of coverage subject to TRIA. This percentage is set at 15 percent for 2005. The Act caps the total liability of the program and of the insurers—including the insurers' 10 percent participation and their deductibles—at \$100 billion in any one program year. If insured losses exceed \$100 billion for a given program year, then the allocation of loss compensation to insurers within the \$100 billion cap will be determined by Congress. Insurers would not be liable for certified losses in excess of this amount unless Congress were to pass legislation increasing the limit.

Government recoupment: If the government makes any payments following a TRIA-certified loss, the Act includes provisions for both mandatory and discretionary recoupment. The Act mandates that the government recoup payments if the insurance market's aggregate retention—comprising the insurers' deductibles and 10 percent participation excess of the deductible—is less than the amount established by TRIA, which was \$15 billion in 2005. The Act also gives the Secretary of the Treasury the discretion to require additional recoupment when the government determines that the economy can sustain such additional payment. To accomplish recoupment, all commercial property and casualty policyholders would be assessed a surcharge as a percentage of their commercial property and casualty premiums that are subject to TRIA—whether or not the policyholders purchased any terrorism coverage. The assessment percentage is limited to 3 percent per year, but may continue until full recovery of all government payments is accomplished.

Noncertified Acts of Terrorism

The Terrorism Risk Insurance Act (TRIA) says the federal government will act as a reinsurer should there be a “certified” act of terrorism (see page 4).

An act of terrorism that does not meet the certification test is called a “noncertified act.” This refers to such events as acts of domestic terrorism that, despite taking place on U.S. soil, are not committed by or sponsored by a foreign party. For example, the April 19, 1995, bombing of the Alfred P. Murrah Federal Building in Oklahoma City would have been a noncertified act under TRIA. Other noncertified acts would include those committed against U.S. companies that occur outside the United States.

Acts of domestic terrorism have the potential to inflict massive damage, as evidenced by the Oklahoma City bombing, which took 168 lives. In August 2003, an ecoterrorist group claimed responsibility for the firebombing of a condominium project in California that caused an estimated \$43 million in damage.

Equally chilling in their potential for damage are the domestic plots law enforcement officials say they have prevented, including:

- the sentencing in May 2004 of a Texas white supremacist found guilty of stockpiling weapons and enough sodium cyanide to kill hundreds of people; and
- the arrest in October 2004 of a man in Tennessee authorities say was attempting to purchase explosives and chemical weapons to blow up a federal building.

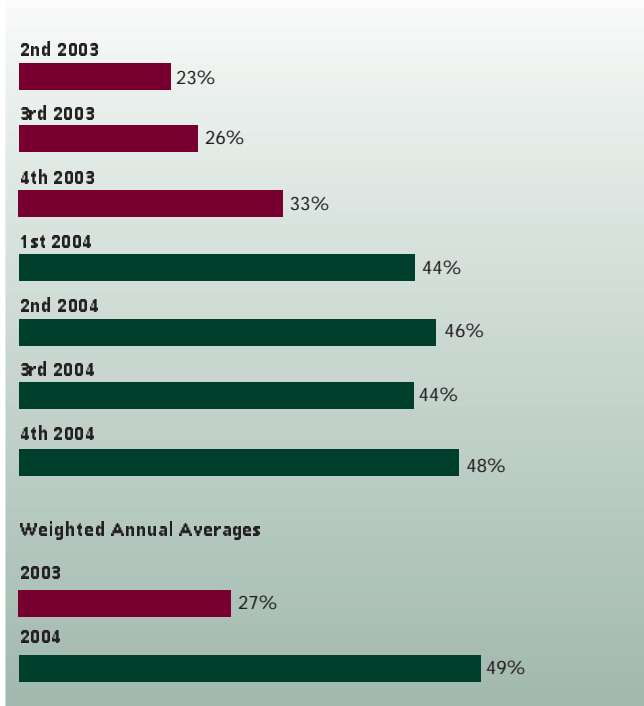
Competitively priced insurance for noncertified acts of terrorism is available. Marsh's data indicate that 70 percent of companies that purchased property terrorism insurance in 2004 bought a combination of TRIA and noncertified coverage.

4

Findings and Analysis: Property Terrorism Insurance Purchasing in 2004

Over the seven quarters that Marsh has tracked the purchase of property terrorism insurance by our clients, there has been an almost continuous increase in the take-up rate—the percentage of companies buying the coverage. The take-up rate in the fourth quarter of 2004 was more than double the rate in the second quarter of 2003, the quarter Marsh’s analysis began. And 2004’s annual take-up rate of 49 percent was an 80 percent increase over the 2003 annual rate (see Chart 1).

Chart 1: Terrorism Take-up Rates by Quarter



Methodology

This chapter relies on data drawn from Marsh’s offices across the United States. It focuses on which of Marsh’s risk management and middle-market clients are buying property terrorism insurance, what coverage they are buying, how they are buying it, and how much they are paying for it. This year’s report also looks at why some companies are not buying terrorism coverage.

Purchasing patterns are examined in the aggregate and also on the basis of client characteristics such as size, industry, and region.

The 2004 data come from property insurance placements incepting during calendar year 2004. To account for skews within the regional and TIV data sets, the national annual figures were weighted to allow the findings to be extrapolated to the overall population. The study population does not include placements in the United States for foreign-based multinationals or for small-firm placements made through package policies.

The 2004 study included 2,371 firms with the following characteristics:

	Minimum	Median	Maximum
TIV	\$500,000	\$200 million	\$208 billion
Property Premium	\$1,300	\$275,000	\$75 million
Terrorism Premium	\$1	\$13,000	\$6.75 million

(Continued on page 7)

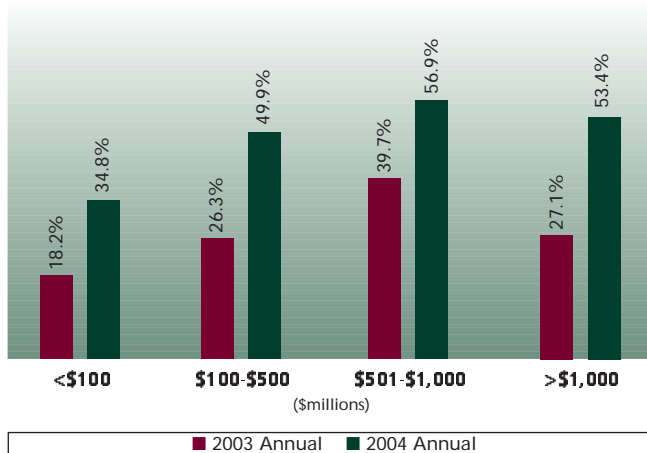
Take-up Rates by Company Size

Marsh's analysis established four categories of TIV as the measure of company size:

- Companies with TIV in excess of \$1 billion are major accounts for insurers, paying large premiums due to size alone. They typically work with several insurers. Many of these companies used their existing captives or established new captive insurers to provide TRIA coverage.
- Companies with TIV between \$500 million and \$1 billion are large organizations that also typically work with multiple insurers and have layered programs.
- Companies with TIV between \$100 million and \$500 million tend to have no more than three insurers involved in their insurance programs.
- Companies with TIV less than \$100 million generally entail a smaller spread of risk, have lower overall premiums, and work with a single insurer.

In 2004, take-up rates within all TIV ranges nearly doubled (see Chart 2). There was a distinct difference in take-up rates at the \$100 million TIV breakpoint—52 percent among companies with TIV over \$100 million; 35 percent among companies with TIV under \$100 million.

Chart 2: Terrorism Take-up Rates by TIV



Methodology (Continued from page 6)

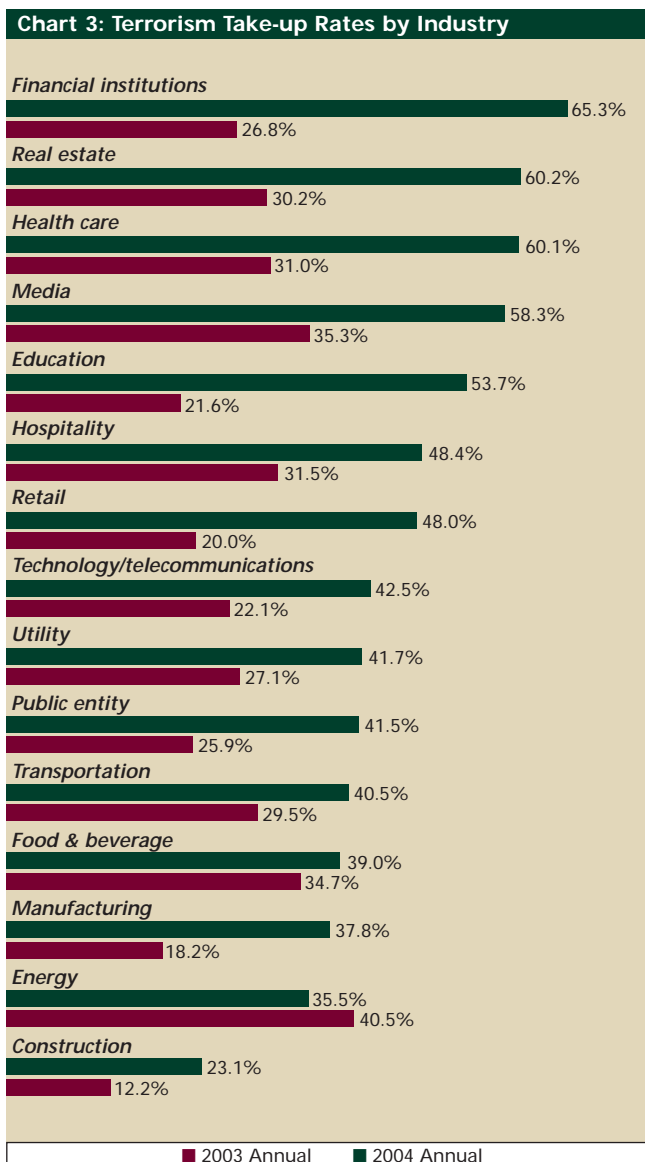
Unless otherwise noted, the calculations include TRIA policies, noncertified policies, standalone policies, and placements made through captives. For comparison purposes, the 2003 figures do not include the first quarter of 2003, which had unique circumstances.

For a few companies, insurers quoted only a nominal terrorism premium of \$1. These \$1 premiums were omitted from the calculations of the median terrorism premium rates. In respect to the calculation of terrorism premium as a percentage of property premiums, standalone terrorism premiums were omitted.

Companies were assigned to regions based on the locations of the Marsh offices that serviced them. This was generally the Marsh office located closest to a company's headquarters. Many of our clients have multiple facilities spread across the country and around the world, meaning the potential risk for a terrorist attack may not be fully represented by where a company is headquartered. That having been said, the decision as to whether to purchase terrorism insurance is usually made at headquarters.

Take-up Rates by Industry

Among 15 major industry groups in Marsh's analysis, financial institutions, real-estate firms, and health care facilities had the highest property terrorism insurance take-up rates in 2004, each exceeding 60 percent (see Chart 3). Next were media companies, at 58 percent; educational institutions, at 54 percent; and hospitality firms and retail firms, at 48 percent. In contrast, about one-third of energy, manufacturing, and food and beverage organizations and 23 percent of construction companies bought the coverage.



Industry Categories

This report examines property terrorism insurance purchasing patterns for 15 industry groupings. These industries were selected based on criteria that included sample population size, perceived exposures, take-up rates, and premium rates. Other industry groups that are part of the overall analysis—but are not reported on individually—include agriculture, automotive, aviation, distribution, nonprofits, professional services, and general services.

The industry groupings in this report included, but were not limited to, the following lines of business:

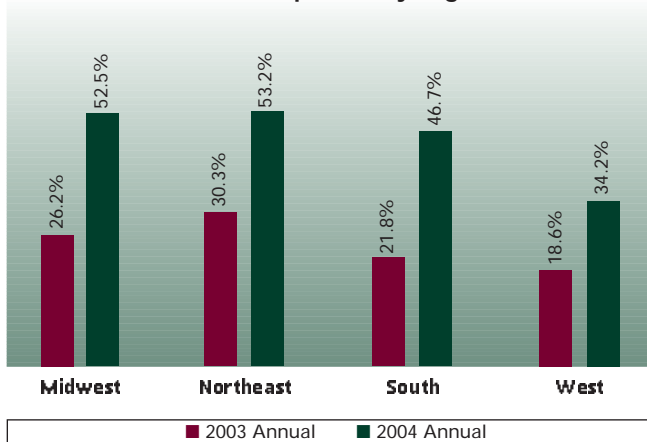
- **Construction:** contractors, homebuilders, and general contractors
- **Education:** universities and school districts
- **Energy:** oil, gas, and pipelines
- **Financial institutions:** banks, insurers, and securities firms
- **Food and beverage:** manufacturers and distributors
- **Hospitality:** hotels, casinos, sporting arenas, performing arts centers
- **Health care:** hospitals and managed-care facilities
- **Manufacturing:** all manufacturers, excluding automotive and aviation
- **Media:** print and electronic media
- **Public entity:** city, county, and state entities
- **Real estate:** real-estate and property-management companies
- **Retail:** retail entities of all kinds, including restaurants
- **Technology/telecomm:** hardware and software manufacturers and distributors, telephone companies, and Internet service providers
- **Transportation:** trucking and bus companies
- **Utility:** public and private gas, electric, and water utilities

Almost every industry sector saw a significant increase in take-up rates in 2004, with education, finance, and retail showing the largest increases. The sector with the highest take-up rate in 2003—energy—was the only one to experience a decline in 2004, a moderate 12 percent reduction.

Take-up Rates by Region

The property terrorism insurance take-up rate in 2004 was 53 percent in both the Northeast and Midwest, 47 percent in the South, and 34 percent in the West (see Chart 4). Perceived risk and price were likely major factors affecting the regional take-up rates. Almost half of the firms in the South, Midwest, and Northeast insured against the risk of terrorism—arguing against the oft-expressed opinion that terrorism is a concern only for major Northeastern urban areas.

Chart 4: Terrorism Take-up Rates by Region



Types of Coverage Companies Are Buying

The vast majority of companies—92 percent—purchased terrorism insurance as part of their property policies rather than as standalone placements. However, standalone policies are an important alternative or supplement to TRIA coverage for some companies (see Chapter 5). The primary purchasers of standalone policies tended to be large real-estate firms and finan-

cial institutions; although companies in the hospitality, media, and transportation industries also purchased significant, though lesser, amounts.

When companies purchase terrorism coverage as part of their property policies, they can purchase either TRIA coverage, noncertified acts coverage, or a combination of the two. In 2004, 70 percent of companies purchased both TRIA and noncertified acts coverage, up from 60 percent in 2003. About 25 percent purchased TRIA-only coverage, and fewer than 5 percent purchased only noncertified coverage.

The Cost of Terrorism Coverage

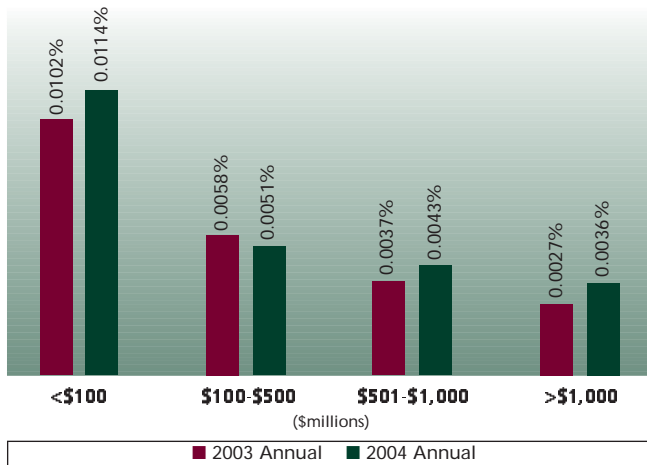
For this report, the cost of terrorism coverage was measured both as a premium rate—premium divided by TIV—and as a percentage of a company’s overall property premium. The first method—premium rate—allows companies to track what they paid in absolute terms; the second measure shows how terrorism coverage affected a company’s overall property insurance budget.

The median terrorism rate for 2004 was 0.0057 percent, essentially unchanged from 2003. However, there was a slight rise in the median percentage of a company’s annual property program costs attributable to terrorism premiums—from 4.4 percent in 2003 to 4.7 percent in 2004. This occurred because terrorism rates did not decline as dramatically as other property rates in 2004, meaning that terrorism coverage represented a slightly larger percentage of overall property insurance budgets.

Cost by Company Size

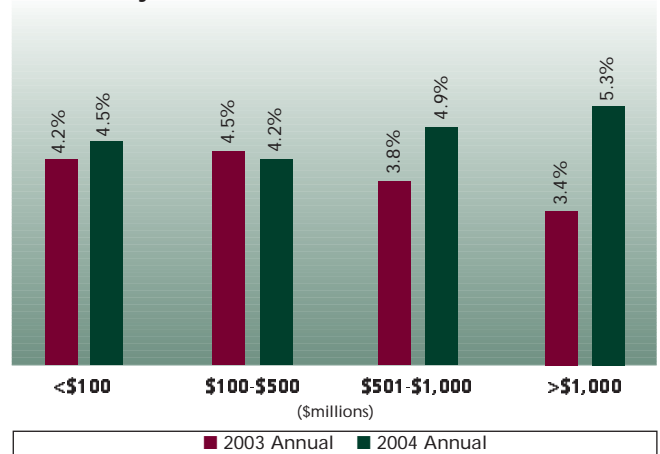
In both 2003 and 2004, median property terrorism rates decreased steadily as the size of the company increased (see Chart 5). The 2004 rates were higher than the 2003 rates in all but one TIV category. In 2004, median rates for the largest companies increased by 31 percent, for the second largest by 18 percent, and for the smallest by 11 percent. Only for companies with TIV between \$100 million and \$500 million did the median rate decrease, by 13 percent.

Chart 5: Terrorism Pricing—Median Rates by TIV



When cost as a percentage of overall property premiums was examined (see Chart 6), a different trend appeared.

Chart 6: Terrorism Pricing as Percentage of Property Premium by TIV



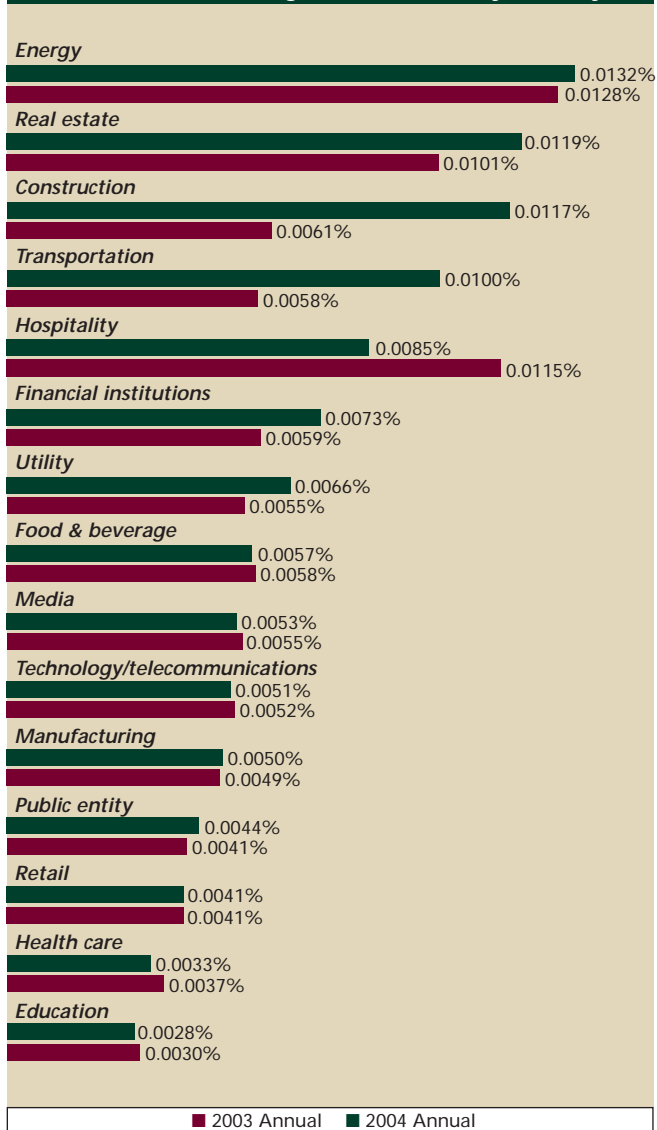
For larger companies in 2003, a smaller percentage of premium dollars could be attributed to terrorism coverage. In 2004, the opposite occurred—the largest companies spent 5.25 percent of their property premium budget on terrorism insurance, compared to only 4.5 percent in companies with TIV under \$100 million.

Marsh believes this trend reversal can be explained in part by the fact that the largest companies tended to obtain the largest percentage price reduction on their standard property policies and not quite as large a reduction on their terrorism premiums. Thus, terrorism represented a larger share of the overall property premium budget for the bigger companies.

Cost by Industry

Comparing 2004's median terrorism premium rates by industry to those in 2003 showed that energy companies had the highest median rate in both years (see Chart 7).

Chart 7: Terrorism Pricing—Median Rates by Industry

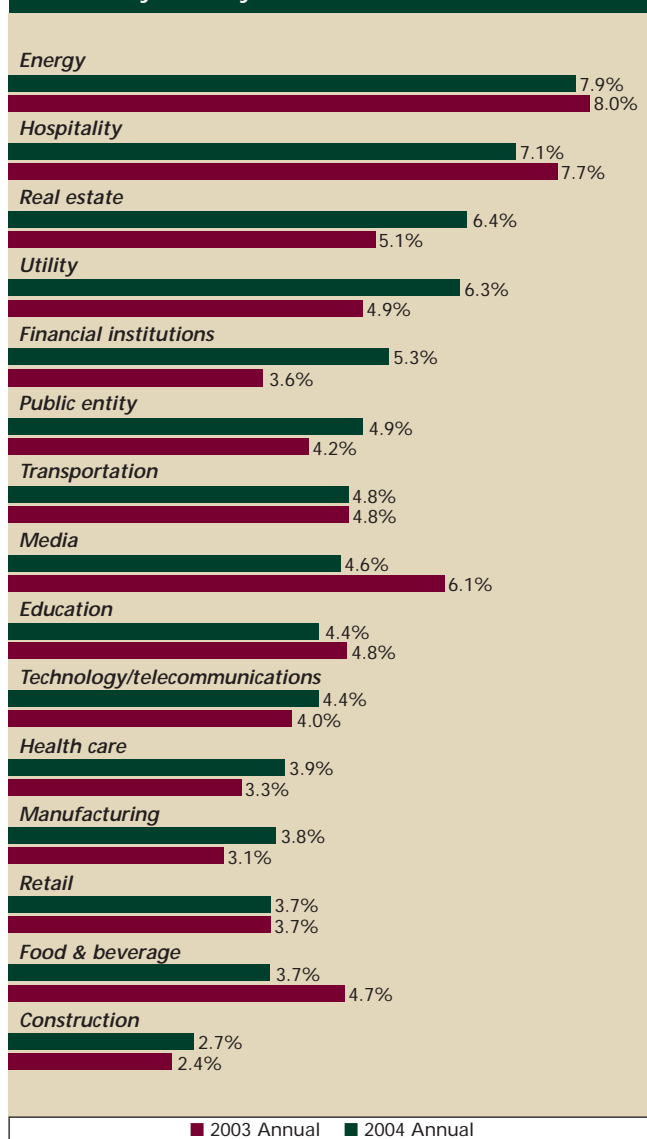


Real-estate and construction firms had the next-highest median premium rates in 2004, although their take-up rates differed greatly—60 percent for real estate and 23 percent for construction. The large difference in take-up rates between these two industries, despite their similar pricing in 2004, is likely due to their differing obligations to purchase terrorism coverage. Real-estate firms are frequently required by loan covenants to purchase terrorism coverage, while construction firms generally have *force majeure* contract clauses that release them from having to insure terrorism risks.

Transportation companies also saw a dramatic increase in terrorism insurance pricing in 2004, up 71 percent. In contrast, hospitality companies, which had the second highest rates in 2003, saw rates decline by 26 percent in 2004.

When looking at terrorism pricing as a percentage of overall property premiums, financial institutions had the largest percentage increase—49 percent—while media companies had the largest decrease—23 percent (see Chart 8).

Chart 8: Terrorism Pricing as Percentage of Property Premium by Industry



Cost by Region

Terrorism insurance was most expensive in the Northeast, based on premium rate (see Chart 9) and calculated as a percentage of property premium (see Chart 10). And while the median rate in the Northeast remained stable between 2003 and 2004, the cost as a percentage of property premium increased 28 percent—the largest increase in any region.

Chart 9: Terrorism Pricing—Median Rates by Region

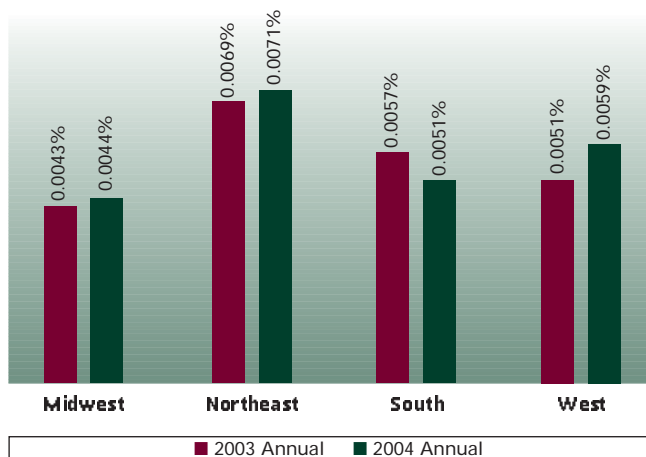
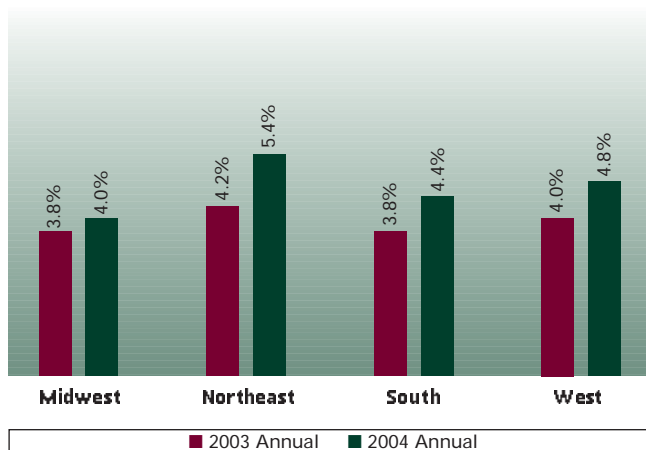


Chart 10: Terrorism Premium as Percentage of Property Premium by Region



The Midwest had both the lowest median rate and the lowest price as a percentage of property premium. The region's median rate did not change from 2003, and the percentage cost increased only about 5 percent. These lower costs may help explain the high take-up rates in the Midwest.

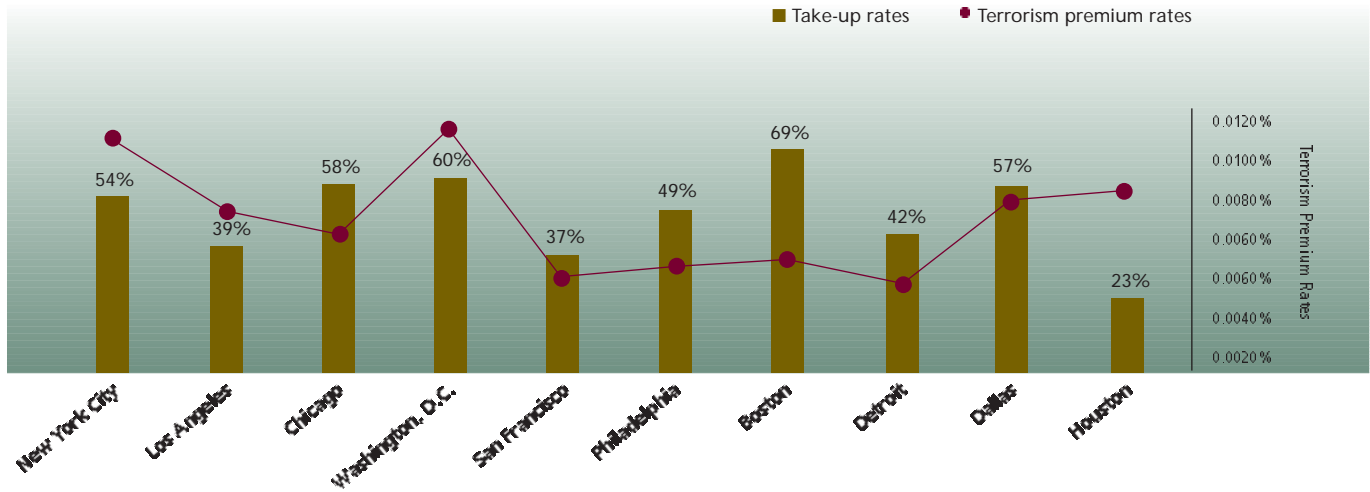
The median premium rate in 2004 decreased 11 percent in the South, but terrorism premium as a percentage of overall property premium increased there by 13 percent. The fact that the take-up rates more than doubled in the South likely indicates that some companies purchased terrorism coverage with the savings from rate reductions on their standard property programs; thus, the increase of terrorism premium as a percentage of overall property premium.

In the West, both the median rate and the percentage of overall premium increased by about 17 percent in 2004. The West trailed only the Northeast in both measures. It is unclear whether these relatively high premium rates held down take-up rates in the West or whether the only companies that purchased property terrorism coverage were those with perceived greater exposures.

A Closer Look at Major Metropolitan Zones

It appears that a metropolitan area's experience with terrorism—and specifically with the events of September 11—has the most impact on pricing of property terrorism insurance. Further, the interaction of pricing and experience has an effect on take-up rates, as does the hard-to-define notion of “perception of risk” (see Chart 11).

Chart 11: Take-up and Premium Rates by Major Metropolitan Areas



- New York and Washington, D.C., are obvious financial and political targets that were attacked on September 11. Both have high premium rates and high take-up rates.
- Los Angeles and Houston are leading centers of culture and the energy industry, respectively, but neither was targeted on September 11. Each has high premium rates, but relatively low take-up rates.
- Boston and Philadelphia are Northeast cities that have relatively low premium rates and moderate to high take-up rates. Boston was the departure point for the September 11 planes that struck the World Trade Center, while Philadelphia has close ties to “neighbors” Washington, D.C., and New York City.

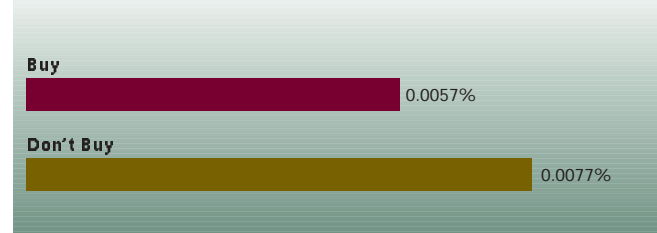
Take-up rates in these major metropolitan areas are not directly correlated with premium rates. Perception of risk is a significant intervening factor in the decision to purchase terrorism insurance.

Why Companies Do Not Purchase Terrorism Coverage

Marsh asked companies that did not purchase terrorism coverage in 2004 to explain their decisions (see Chart 12).

- About 90 percent of the 232 companies responding to this question said they did not purchase property terrorism insurance in 2004 because they did not perceive any risk.
- About 25 percent cited the price of terrorism insurance as a reason for opting not to buy coverage.

Chart 12: Buy vs. Don't Buy—Median Terrorism Premium Rate



- Nearly 20 percent of the companies that said they did not perceive any risk also cited price in their decision not to purchase terrorism coverage. [Note: Because multiple reasons were permitted from each of the companies responding to this question, the percentages add to more than 100 percent.]

A comparison of the terrorism premium rates quoted to companies that did not buy coverage with the quotes for companies that did buy coverage reveals a substantial difference. The median 2004 terrorism premium rate quoted to nonbuyers was 35 percent higher than for those that actually bought the coverage.

These findings were surprising because most companies that declined coverage said they did so based on their perception that they had no terrorism risk—not because of price. There appears to be a mismatch between some companies' perceptions of risk and some insurers' perception of risk, resulting in the declination of coverage by these companies.

Amount of Coverage Companies Are Buying

Insurers operating under TRIA must make available limits for acts of terrorism that are not materially different from the limits they offer for nonterrorism exposures. In early 2003, this requirement prompted some insurers to lower their fire limits, allowing them also to lower TRIA limits. However, this proved to be ineffective because their competitors were willing to offer substantial TRIA limits.

In 2004, most companies with TIV under \$500 million that bought terrorism insurance purchased the equivalent of their full fire limits. Companies with TIV over \$500 million that purchased terrorism insurance—especially those with layered programs—tended to purchase TRIA-only coverage on the lower layers. In some quota-share programs, the limits purchased for the largest companies tended to be skewed by the prevalence of captives, which often provide higher TRIA limits than does the commercial insurance marketplace.

The amount of noncertified coverage insurers are willing to offer varies considerably because it depends on each insurer's treaty reinsurance arrangements (see Chapter 7). Financial institutions purchased the most noncertified coverage, with median limits of \$300 million.

The median standalone limit purchased was \$100 million; the largest placement in Marsh's sample was over \$1 billion.

The Standalone Insurance Market

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After September 11 and prior to TRIA's enactment, the relatively small standalone insurance market became the main source of capacity for companies looking to obtain property terrorism insurance. Mainstream property insurers were generally unwilling or unable to provide the coverage.

With TRIA in place, the standalone insurance market continues to provide coverage, competing with “all-risk” property insurers that provide TRIA coverage. Standalone insurance markets also serve companies with needs not met by TRIA. Competition from “all-risk” insurers has forced the standalone insurance market to reduce rates—typically by 10 percent to 25 percent, sometimes by more. In 2004, capacity in the standalone property terrorism insurance market grew slightly.

The standalone property terrorism insurance market offers coverage for both TRIA-certified and noncertified risks, with no distinction made between the two. Other features of this insurance market include the following:

- **Coverage for noncertified risks only:** Some companies buy TRIA-certified terrorism coverage within their “all-risk” property programs to cover U.S. locations and use a standalone policy for noncertified risks.
- **Coverage for gaps in other policies:** In situations where the “all-risk” program limits cannot be filled by “all-risk” markets—typically, for noncertified risks rather than TRIA-certified risks—the standalone insurance market can be used to fill gaps in limits.

- **Noncancelable coverage:** Standalone policies are available that cannot be canceled by either party other than for nonpayment of premium.
- **Coverage for international locations:** Unlike TRIA coverage, standalone coverage is available for almost any location worldwide. Companies with overseas exposures often look to the standalone market to provide solutions not satisfied by local government terrorism insurance schemes such as Pool Re in the United Kingdom, GAREAT in France, Extremus in Germany, Consorcio in Spain, SASRIA in South Africa, and TIA in Australia.
- **Reinsurance of U.S.-domiciled captives for terrorism:** Some of the standalone insurance markets will reinsure captives for both the deductible and the 10 percent excess share of TRIA-certified losses that the federal government does not cover. Captives by their nature can also take advantage of the reinsurance market, which has greater capacity than the direct standalone market, and can take a financial approach to pricing rather than an underwriting approach. This tends to be more cost-effective.

If TRIA is extended, the standalone insurance market can be expected to continue to satisfy many companies that have needs not addressed by TRIA. If TRIA is not extended, demand for standalone coverage can be expected to increase dramatically. However, the standalone insurance market would be unlikely to have sufficient capacity to satisfy all of the expected demand at commercially reasonable prices. Standalone capacity is supplied on a first-come, first-served basis, meaning that if TRIA expired, then aggregation issues in major

metropolitan areas would likely worsen. Without TRIA, organizations could be left with few options to address the potentially catastrophic and ongoing risk of terrorism and could face the possibility of being left with no insurance for this risk.

Market Capacity at Q1 2005

The standalone insurance market as of the first quarter of 2005 has a limited number of insurers, as follows:

Insurer (Group)	Insurer	S&P Rating*	Maximum Capacity in First Quarter 2005
AIG	Lexington, WorldSource, AIU, or StarrTech	AA+	\$100 million
ACE USA	Illinois Union or Westchester	A+	\$100 million
AXIS	AXIS Specialty Ltd.	A	\$200 million
Berkshire Hathaway	National Fire & Marine	AAA	\$500+ million
Hannover Re	International Ins. Co. of Hannover	A+	\$10 million
Lloyd's	Various Syndicates	A	\$400 million
Montpelier Re	Montpelier Re Ltd.	A-	\$50 million
QBE	QBE	A+	\$10 million
*As of 04/01/05	Theoretical Maximum: \$1,370+ million		

In the standalone property terrorism insurance market, overall capacity is relatively stable. However available capacity can vary considerably by insured, due to the following issues:

- **Location of risk:** The demand for coverage in major metropolitan areas has a substantial effect on the available capacity.
- **Insurers' accumulation of exposure:** Insurers have aggregation constraints on the risks they can take. Capacity can be limited in certain locations, particularly in major metropolitan areas such as New York City, where some insurers currently have severe aggregation issues.

Standalone Pricing

Many factors can affect the pricing of standalone policies for terrorism risk, including:

- the location of the risk;
- the insurer's accumulation of aggregate exposure in specific areas;
- the limit/amount of coverage required;
- the insured's TIV;
- the extent of requests to broaden the standard coverage conditions;
- the insured's profile and ownership;
- the perception as to whether the company is a target;
- the nature of tenants, such as government agencies; and
- the terrorism loss history.

- **Concentration of exposure:** Terrorists attack targets of opportunity. Although it is certainly possible that an attack could occur anywhere—including in a remote town or shopping mall—demand for coverage will likely be higher in metropolitan areas simply because there is a greater concentration of exposures.

If a company does not have sizeable exposures in locations where insurers have aggregation problems, then approximately \$400 million to \$500 million per risk—per insured—is the typical maximum standalone capacity available at a cost companies can find acceptable. For locations where insurance markets have aggregation issues—particularly New York City—the estimated insurance market capacity is approximately \$300 million without accessing progressively more expensive capacity. For companies requiring limits above \$500 million, capacity is available, but it can be extremely costly.

Coverage Comparisons and New Products

All of the current standalone insurance markets will use what are known as the T3/T3A policy forms—developed in the London market—although AIG and ACE also have their own forms.

The following chart compares some of the characteristics of standalone coverage and TRIA coverage. [Note: A detailed policy review would be required to fully understand coverage differences.]

New Product Developments

Among the new products being developed by brokers and standalone property terrorism insurers are:

Capacity commitment: This allows companies to reserve terrorism capacity and pricing now for an up-front commitment fee. If TRIA is not renewed or extended at the end of 2005 and the insured is faced with cancelled or limited terrorism coverage, the insured can elect to use the reserved capacity at the pre-agreed premium for its terrorism coverage.

ACE USA's Threat ProtectSM: This policy covers lost income or evacuation expense triggered by a mandatory evacuation order of "your premises" (as defined in the

policy) issued by civil or military authority due to a terrorist act or a threat of terrorism. It is offered as a standalone policy with an available limit of up to \$25 million aggregate. There is a deductible of 24 hours, and the indemnity period is limited to 30 days.

AIG/Lexington's BioChem ShieldSM: This endorsement can offer a sublimit of up to \$10 million aggregate for biological/chemical terrorism; it excludes nuclear or radiological terrorism. It is offered as an endorsement to a standalone terrorism policy or to a company's "all-risk" program.

AIG/Lexington's Op ShieldSM: This endorsement covers business-interruption and extra-expense losses triggered by a civil or military authority order to evacuate that arises from either a terrorist act or a threat of terrorism. It is offered as an endorsement to a standalone terrorism policy or to a company's "all-risk" program. Lexington can offer a sublimit of up to \$25 million aggregate. There is a 72-hour waiting period, and the indemnity period is limited to 30 days.

Hiscox at Lloyd's: This syndicate offers nuclear, biological, chemical, and radiological terrorism coverage. A limit of up to \$25 million may be available at Lloyd's with Hiscox as the lead market.

Comparison of Standalone Coverage and TRIA Coverage

Standalone Property Terrorism

Can cover foreign and domestic acts of terrorism.

Can cover locations inside and outside the United States.

Limits typically aggregated or with one reinstatement.

Account- and terrorism-specific deductibles.

Location- and schedule-specific coverage.

Noncancelable policy available.

Long-term policies—up to 3 years—available.

Select markets.

TRIA as Part of "All-Risk" Property

Covers only foreign acts of terrorism.

Covers only U.S. locations and property as defined by TRIA

Per-occurrence limits match property policy limits.

Deductibles match property policy deductibles.

Coverage for all locations, including unscheduled, depending on terms of property policy.

Cancellation terms follow property policy.

Policies typically written for one year.

All markets that meet insurer definition under TRIA.

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Workers Compensation and Liability Coverages

Workers Compensation

Workers compensation presents unique challenges to insurers, brokers, and risk managers, largely because it is controlled by the states, which have not allowed exclusions for terrorism losses. Insurers and qualified self-insured employers cannot exclude coverage for acts of terrorism from workers compensation policies, as they can with other insurance lines. Nearly all states require employers or insurers to pay medical costs and wage replacement for workers injured on the job, without limits or exclusions. Because workers compensation provides lifetime medical care for on-the-job injuries, some computer models project that the worst-case cost of a terrorism incident could exceed \$90 billion dollars. In contrast, some experts put the total workers compensation capacity for the entire insurance marketplace at \$30 billion.

In view of TRIA's potential expiration, risk managers should be aware that insurers will carefully calculate and try to limit their exposure to high concentrations of risk. Multiline insurers will be particularly sensitive to site-specific accumulation of risk. This means that care should be taken to obtain insurance market alternatives for workers compensation programs likely to be affected. One major insurer has publicly stated it will limit its exposure to a predetermined amount and close its book once it reaches that amount. Other insurers may follow suit.

What will happen to the workers compensation insurance marketplace if TRIA is not extended? State regulators are unlikely to change their stance regarding covering employees for terrorism under workers

compensation. Some insurers may feel they have no responsible choice but to limit their terrorism risk accumulation by nonrenewing some workers compensation coverage, as there is insufficient reinsurance capacity to protect the insurers from the essentially unlimited workers compensation exposure arising from terrorism.

This would likely force many insureds out of the voluntary insurance marketplace and into the residual or involuntary market—the so-called insurance market of last resort—in many states. But that would only move the problem; it would not solve it. All states have some involuntary-market mechanism. About 40 percent have a state fund, with the remainder taking a pooling approach. In pool states, premiums and losses are shared by all insurers that provide workers compensation in proportion to their workers compensation insurance market share in the state. This could cause some insurers to write even fewer workers compensation policies or, perhaps, to exit perceived high-risk states entirely. Ultimately, this would not achieve the needed spread of risk.

In states with competitive state funds for workers compensation, every dollar of risk leaving the voluntary insurance marketplace would move to the state fund, again concentrating the loss exposure. The five states that have monopolistic state funds—North Dakota, Ohio, Washington, West Virginia, and Wyoming—have already concentrated this risk, but most of them are not perceived as high-risk areas for terrorism. [Note: West Virginia recently announced that it will move to an open, competitive workers compensation insurance marketplace by July 1, 2008.]

TRIA's limitation to certified acts of terrorism has prompted state regulators and insurers to give more attention to finding premium mechanisms for domestic terrorism and other potential catastrophic losses. Historically, rate makers had included a small, undifferentiated charge for potential catastrophic losses in their overall rates.

Pursuing a more explicit approach, the National Council on Compensation Insurance (NCCI) approved the Domestic Terrorism, Earthquakes, and Catastrophic Industrial Accidents Premium Endorsement (DTEC) for workers compensation effective January 1, 2005. The endorsement provides funding for some catastrophic losses, including acts of terrorism specifically excluded by TRIA, but not for TRIA-certified acts of terrorism.

The endorsement defines a \$50 million workers compensation loss aggregate threshold for:

- domestic terrorism, defined as all acts of terrorism outside the scope of TRIA;
- earthquake, defined as a single event involving underground movement along a fault plane or volcanic activity; and
- catastrophic industrial accident, which qualifies if a single event results in the losses.

This endorsement's premium is calculated as rate multiplied by payroll. However, the premium is applied after the standard premium and is not subject to any other modifications, such as premium discount, experience rating, schedule rating, or retrospective rating.

Focused Attack vs. Generic Assault

The nature of a terrorist attack could have serious implications on workers compensation coverage.

A terrorist attack could be either a focused attack on a specific site—such as a business or government building—due to the nature of the work performed there, or it could be a generic assault on a locale, city, or so on. A focused attack on a building—as in the September 11 attacks on the World Trade Center and the Pentagon—would trigger workers compensation coverage for employees injured or killed.

In some jurisdictions, however, generic assaults resulting in injury or death to employees while at work may not be deemed compensable if the risk to the employees was not greater, due to their employment, than the risk to the general public. In other words, an act of terrorism that poisoned the public water supply and caused illness or death to employees would not have created a greater risk to those employees than it did to someone in a nearby restaurant or at home. Due to that fact, some states' workers compensation laws will allow for the denial of benefits.

Liability

The premium charges for TRIA quoted for primary auto liability and general liability (GL) policies have been relatively modest. As a result, insurance buyers have purchased TRIA coverage at much higher take-up rates in those lines than in property. Interestingly, auto and GL take-up rates are declining.

Marsh's Casualty Practice continually surveys primary auto liability, GL, and workers compensation renewals among our clients, compiling data from more than 1,400 companies for the annual *Casualty Cost of Risk* report. [Note: The 2005 issue of this report is due for publication in the second quarter of 2005. For a copy, contact your Marsh representative.] Marsh's latest figures showed TRIA take-up rates for auto in 2004 were 84 percent, down from 95 percent in 2003. GL take-up rates in 2004 stood at 81 percent, down from 93 percent in 2003. The actual rate charged as a percentage of premium for the overall coverage held steady at about 1 percent, implying that the reduction in the take-up rate does not appear to have been driven by the cost of the coverage, but by the perceived risk. In fact, insureds' widely varying perception of the risk is one of the reasons most often cited for the lack of universal acceptance of the coverage.

TRIA's Impact on the Insurance and Reinsurance Markets

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Anticipating TRIA's possible expiration, some insurers may not be willing to continue to provide TRIA-like coverage without any requirement to do so. Others may be willing to continue TRIA-like coverage on their policies, but with added restrictions, such as reduced limit(s), restriction(s) on coverages or locations, higher deductibles, and/or additional premiums. These insurers may seek a TRIA exclusion or restriction in coverage at midterm if TRIA expires.

Many insurers are reviewing every account and watching their terrorism aggregation in major cities. If TRIA expires, Marsh expects reduced terrorism limits to be available after December 31, 2005, for accounts with exposures in major metropolitan areas.

In anticipation of TRIA's expiration, Insurance Services Office, Inc. (ISO) filed three new endorsements with state insurance commissioners for use with commercial policies with inception dates from January 1, 2005, through December 31, 2005. These conditional endorsements would supersede other terrorism endorsements or coverages attached to the policy. They will become effective if any of the following circumstances occur:

- TRIA is not renewed.
- A make-mandatory obligation is not made part of a TRIA extension, and there is:
 - an increase in the statutory deductible, which is at 15 percent for 2005;
 - a decrease in the government's reinsurance, which is currently 90 percent of the loss in excess of the insurer's deductible; or
 - a redefinition of terrorism within TRIA.

For property policies, the three filed endorsements either exclude terrorism, exclude terrorism if all losses exceed \$25 million, or provide a sublimit for terrorism.

For GL policies, the ISO endorsement redefines "terrorism"—both "certified acts of terrorism" and "other acts of terrorism"—if either of the following is true:

- insured damage sustained, including business interruption, to all types of property exceeds \$25 million combined for all persons and entities in the damaged property; or
- 50 or more persons are killed or sustain "serious physical injury."

Related incidents within a 72-hour period are added together to satisfy the above thresholds. When triggered, the response of the GL policy is constrained to a "terrorism aggregate limit," which is introduced by this endorsement's changing of the "Limits of Insurance" section of the policy.

As of this writing, the property endorsements have been approved in 46 states and in Guam, Puerto Rico, the Virgin Islands, and Washington, D.C. Florida, Georgia, and New York have not approved them, and Texas has approved them for certified acts only. Because Florida, Georgia, and New York have not approved the ISO conditional endorsements, property insurers may offer lower policy limits for accounts with exposures in these states. This may force an insured to seek multiple additional insurers willing to insure risks in these states in order to complete the placement with the required policy limits for terrorism.

In view of the approved filings, some insurers are adopting such endorsements, starting with the January 2005 renewals, where it is their intention not to continue terrorism coverage if TRIA is not extended.

In some cases, larger U.S. insurers have indicated they will continue to provide terrorism coverage after December 31, 2005, for policies that renew this year. The same is true for some foreign insurers that were not governed by TRIA but that nevertheless provided coverage to be competitive with U.S. insurers.

Other insurers were still developing their positions when this report went to press.

TRIA and Standard Fire Policy Statutes

The Standard Fire Policy (SFP) is mandated by statute in 29 states to cover direct losses from fire and lightning (see “SFP States” on page 23). It sets forth the conditions under which such a loss is deemed to have occurred. In some situations where terrorism is excluded under a property policy covering the peril of fire, the issue is whether losses are covered if they arise from a fire caused by a terrorist attack.

Regulators would likely consider any attempt to waive the SFP’s substantive protections to be a violation of public policy, rendering them unenforceable. Any diminution in coverage—specifically, any restriction in fire coverage—may be declared null and void by the state.

Standard Fire Policy Exclusions

SFPs generally exclude losses arising from a fire caused by:

- enemy attack by armed forces, including military action taken resisting such attack;
- invasion or civil war;
- insurrection, rebellion, revolution, or usurped power;
- the order of any civil authority;
- neglect on the part of the insured to take reasonable measures to save the property; and
- theft.

There are also several “conditions suspending or restricting insurance,” which are similar to exclusions. These include losses that occur:

- when the insured has increased the hazard;
- when the building is vacant; or
- as a result of riot or explosion, unless fire follows the explosion, in which case the loss caused by the fire, and not the loss caused by the explosion, is covered.

The SFP may be supplemented by endorsements extending coverage to additional perils, provided that such coverage is not inconsistent with the provisions of the SFP.

These statutes provide for an only actual-cash-value recovery; there is no time-element protection. In effect, if an insured's policy contains an exclusion for terrorism or if the insured decides not to purchase TRIA coverage, the SFP law for property in these 29 states may offer some protection to insureds, although ten of these—Connecticut, Louisiana, Michigan, Minnesota, Nebraska, New Hampshire, North Dakota, Oklahoma, Rhode Island, and Virginia states—have passed legislation to exclude acts of terrorism. An SFP state could compel the insurer to pay for the direct damage from a fire caused by an act of terrorism on an actual-cash-value basis, despite the presence of a terrorism exclusion in the insuring agreement.

Insurers and their trade associations have been lobbying the legislatures of the SFP states to limit fire coverage resulting from a terrorist attack. Insurers argue that their liability needs to be reduced for losses resulting from such fires in order to:

- protect their own solvency;
- ensure stable insurance markets; and
- compensate insurers, which generally have no reinsurance for this exposure.

Insurers also argue that it is unfair for them to remain potentially liable under statute for so-called fire-following losses when policyholders can reject TRIA or other terrorism coverage and pay no premium for fire-following coverage.

Recent reports indicate that insurers and their trade associations intend to focus legislative efforts during 2005 on Arizona, Idaho, Illinois, Iowa, Massachusetts, Mississippi, New Jersey, New York, Oregon, Pennsylvania, Washington, and Wisconsin.

SFP States

The Standard Fire Policy is mandated in the following states:

Alaska (personal lines only), Arizona, California, Connecticut*, Georgia, Hawaii, Idaho, Illinois, Iowa, Louisiana*, Maine, Massachusetts, Michigan*, Minnesota*, Missouri, Nebraska*, New Hampshire*, North Dakota, New Jersey, New York, North Carolina, North Dakota*, Oklahoma*, Oregon, Pennsylvania, Rhode Island*, Virginia, Washington, West Virginia*, Wisconsin.

*This state has passed legislation to exclude (or allow companies to exclude) acts of terrorism from SFP policies.

TRIA and Nuclear, Biological, Chemical, and Radiological Coverage

TRIA itself is silent on nuclear, biological, chemical, and radiological (NBCR) coverage. However, under TRIA, existing exclusions in policies issued prior to its enactment are preserved. Nuclear and radiological perils are standard exclusions in property and liability policies; hence, in most cases, insurers offering mandatory TRIA coverage can continue to exclude nuclear and radiological perils.

With regard to biological and chemical attacks, the issue is less clear. Before TRIA, primary insurance policies did not contain specific exclusions for chemical and biological events. However, many policies contained exclusions for pollution and contamination, which may exclude losses of a biological or chemical nature.

Workers compensation policies have no exclusions for NBCR. In the standalone terrorism market, limited coverage and policies may be available for NBCR events, up to a maximum of \$25 million in limits. In the environmental market, which offers coverage for damage resulting from contamination, coverage may be available if policyholders accept insurers' offers of TRIA coverage.

TRIA's Impact on the Reinsurance Market

As a general rule, the reinsurance market works best at levels where there is a relatively high probability of loss. At levels of loss where there is an extremely low probability of occurrence, reinsurers charge minimum rates for placing their capital at risk. These minimum rates mean that a large portion of the ceding premium is not purchasing coverage.

From a reinsurance perspective, TRIA has had three major impacts:

1. It provides a large amount of reinsurance protection for primary commercial insurance exposures.
2. It provides an authoritative definition of a terrorism event. Before TRIA, there was no authoritative entity in the United States that certified whether an act of terrorism had occurred.
3. It provides a framework for the management of terrorism risk that differs from the conventional approach of insurers/cedents to purchasing catastrophic protection from reinsurers. In particular, the TRIA program covers nearly all lines of property and casualty/liability insurance—including workers compensation exposures—together, combining premiums of all lines to determine retentions and potential recoveries. Conventional private-sector reinsurance tends to be purchased separately for property and casualty lines.

Managing the Gaps in TRIA Coverage

TRIA does not provide coverage for:

- personal lines insurance;
- domestic terrorism for commercial lines insurance; or
- the deductible and excess share of TRIA-certified events.

Because TRIA is basically a commercial lines program, personal lines policies of insurers are fully exposed to both TRIA-certified and noncertified acts of terrorism. In general, insurers have addressed this risk by having full terrorism—certified and noncertified—included in their property/catastrophe reinsurance programs for personal lines, but excluding NBCR losses.

For commercial lines, coverage is needed for domestic terrorism. Most insurers address this exposure by adding coverage for domestic terrorism in their private market reinsurance programs. Similar to that for personal lines, such coverage normally excludes NBCR and may be subject to event limits or other sublimits. Reinsurance markets are now routinely providing this domestic terrorism coverage within occurrence programs for little or no additional cost.

From the insurers' perspective, a large unreinsured gap in terrorism exposure exists for certified acts below the 15 percent retention set by TRIA for 2005 and within the 10 percent co-participation above the retention. Ideally, cedents' preference is to have commercial certified terrorism covered within their standard property and casualty reinsurance programs, but this coverage is available only in limited sums and can be expensive, depending on the location and values of the original insured terrorism policies.

Reinsurers put limited capital at risk to terrorism exposures, given their lack of confidence in how to underwrite, model, or price for this peril. They typically seek to manage the risk by offering terrorism coverage in a standalone contract rather than within a normal “all-perils” catastrophe treaty, especially for insurers writing a national portfolio. Some regional insurers with exposures limited to rural or suburban areas have secured full terrorism coverage within their standard reinsurance programs.

In workers compensation, many cedents have been able to add the certified terrorism peril to their excess-of-loss catastrophe programs on an occurrence basis, excluding NBCR. Typical pricing for this is a 15 percent surcharge on ceded premium. Coverage for NBCR perils is available only through aggregate standalone coverage, with limited reinsurance markets willing to offer this full coverage.

Currently, approximately 15 percent of Guy Carpenter’s major clients have purchased standalone terrorism reinsurance. Companies that have *not* purchased standalone terrorism reinsurance cite the following factors:

1. Terrorism coverage can be expensive, depending on the location of the original insured terrorism policies.
2. Cedents are comfortable with the extra coverage for terrorism added to their normal reinsurance contracts.
3. There is an inability to pass along the full cost in primary insurance policies.
4. There are limited capacity/limits available at affordable rates.
5. Exposure concentrations are controlled and/or are limited, particularly for clients with little exposure in targeted urban centers.
6. They are comfortable with the TRIA retention.
7. There is no coverage offered for NBCR.

Capacity

Typical estimates of capacity for a terrorism reinsurance program range up to \$600 million on an occurrence basis for property and casualty/liability insurance. For some programs where the terrorism exposure is limited to a single state, it is feasible to secure more than \$1 billion of capacity on one program. Such capacity may expand or contract based on price, type of risk, and overall reinsurance market conditions. The Reinsurance Association of America projects total private-sector reinsurance market capacity to be around \$4 billion to \$6 billion.

TRIA Sunset

If TRIA is not renewed, it is not realistic to expect the reinsurance market to expand from between \$4 billion and \$6 billion available today up to coverage limits in the \$100 billion range that may be required. Given this reality, insurers may find themselves bare for the risk of TRIA-like terrorism as they write annual policies in 2005 that extend into 2006. Those insurers may seek to exclude coverage for terrorism in 2006 by using specific conditional endorsements. Insurers covering the workers compensation line do not have the option to exclude terrorism, so this line is likely to have the most insurance market disruption, absent an industry and/or state or federal government solution.

Modeling Terrorism

Quantifying the economic and human losses from terrorist acts poses major challenges for insurers, but it is not an insurmountable task. A variety of approaches exist for insurers to model terrorism risk—three of the more common are discussed below. Most models involve three techniques:

1. conducting exposure concentration analysis;
2. generating deterministic loss estimates; and
3. producing probabilistic loss estimates.

Exposure concentration analysis, also known as accumulation assessment, identifies and quantifies concentrations of exposures around potential terrorist targets. Target-based accumulation assessment locates potential targets—typically with high economic, human, and/or symbolic value—and aggregates an insurer’s exposures at various distances from targets. To complement this approach, it is useful to search for clusters of exposure exceeding an economic threshold within a portfolio irrespective of perceived targets. This recognizes that some probability of attack exists at any location.

Deterministic modeling represents a compromise between the lack of accuracy in accumulation analysis and the vast uncertainty surrounding probabilistic models. By imposing an actual event’s damage “footprint” at a specified target, a specific—yet hypothetical—scenario can be analyzed with some certainty. Major modeling firms offer an array of deterministic-analysis tools for

conventional and NBCR (nuclear, biological, chemical, and radiological) attacks at target and nontarget locations. This approach can be effective where coarse screening studies show that exposures for an area or event could be high and a detailed assessment may reduce uncertainties and help decision making.

Probabilistic modeling, also known as catastrophe modeling, estimates loss based on a large number of events and their associated probabilities. A key factor is the estimated frequency of the event. Many insurers question the credibility of probabilistic terrorism modeling, as it requires predictions of human behavior. While credible probabilistic terrorism modeling remains elusive, Guy Carpenter has helped insurers explore possible terrorism losses using a judgment-based approach that goes beyond purely deterministic modeling.

Terrorism modeling is in its infancy. Insurers, reinsurers, and modeling companies are learning more each day, thus increasing their ability to manage terrorism risk in an educated and quantitative fashion.

TRIA and Captives

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Using a captive insurer to access TRIA can be an effective way for businesses to manage their exposure to certain terrorist acts. Marsh's Captive Management Services group has worked with many clients to implement captive solutions using existing and new captives. Captives offer certain advantages over traditional insurance markets, including better control over costs, broader coverage, potential to recapture premiums if no losses occur, and the capability of covering exposures that commercial insurers find unacceptable or undesirable.

In various interpretative letters and regulations issued after the passage of TRIA, the U.S. Treasury Department made clear that TRIA applies to captive insurers that meet the Act's definition of an insurer. Captives that meet the definition are entitled to all of TRIA's benefits, but also are subject to its burdens. The key benefit to insurers is the substantial amount of protection the program provides—up to 90 percent of the policy limit. The key burdens are the requirement to make coverage available for certified acts of terrorism as part of any offer of coverage for a given line of insurance and to satisfy certain disclosure and reporting requirements.

Note that non-U.S.-based captives—such as those in Bermuda and the Cayman Islands—are not insurers licensed by a U.S. state and so are not qualified insurers under the Act. Accordingly, they can not derive any benefit from TRIA, nor are they subject to its requirements. It should also be noted that if TRIA is not extended, use of a captive to access TRIA's reinsurance will provide only a short-term benefit.

One of the most attractive features of using a captive insurer to cover losses from certified acts of terrorism is the ability and willingness of a captive to carefully tailor the policy form to its insured's needs. The clearest example of this is where captives have created manuscript policy forms with provisions to include protection for perils—such as nuclear, biological, chemical, and radiological—generally excluded by their “commercial insurer counterparts. The Treasury Department has issued guidance clearly stating that to the extent a subject insurer provides protection for certified nuclear-, biological-, or chemical-based acts, TRIA's reinsurance protection will apply. TRIA does not require that the nuclear, biological, and chemical perils be covered, and as a result, most commercial insurance policies continue to exclude these perils. The reluctance of commercial insurers to offer such protection has meant captives are one of the only viable means of securing such protection in meaningful quantity.

A key objective of TRIA was to ensure the availability of coverage. Nevertheless, provisions of the Act allow commercial insurers to avoid covering a given insured's terrorism exposure. For example, TRIA compels an insurer offering property coverage also to offer coverage for certified acts of terrorism. But the insurer can avoid offering terrorism coverage by not offering any insurance for the property. In some cases, commercial insurers have taken this option, leaving companies

with no property coverage. Similar situations have occurred with other lines, including workers compensation. Captives have been used to fill the resultant gaps in coverage, thereby creating capacity and indirectly helping fulfill the Act's objectives.

Adding coverage for certified acts to an existing captive insurer generally requires the approval of the captive insurer's regulator, and the approval can usually be secured within a few days. Forming a new captive to provide such protection is more time-consuming—about 7 to 60 days—and requires the submission of an application for licensure along with associated supporting documents. Regulators typically approve a change in plan for an existing captive or license a new captive once they are satisfied that the captive's proposed plan of operation is prudent. In making this determination, regulators consider factors such as premium to be charged, net exposure to the captive, quality of commercial reinsurance to be used (if any), and the capitalization level of the captive.

The Treasury Department has taken a watchful stance regarding the use of captive insurers to access TRIA. The department has formally acknowledged the existence of captive insurers both in confirming the Act's applicability to them and in issuing some cautionary statements about the importance of not using captives to exploit TRIA inappropriately. In those cautionary statements, the Treasury has warned of concerns with three captive situations in particular—captives formed after TRIA's enactment, captives writing coverage only for certified acts, and captive transactions designed to circumvent the deductible requirement that TRIA imposes on each insurer before TRIA contributes.

To date, the Treasury Department has not used its discretionary authority to curtail the use of captives, seemingly opting instead to recognize the clear value captive insurers provide and how they can, when used appropriately, support TRIA's and captive owners' objectives. Still, given the Treasury's cautionary statements about the use of captives, users should carefully consider the objectives and appropriateness of their overall plan before implementation.

Marsh's Captive Management Services conducted a survey as of March 1, 2005, of a representative sample of our captive management client team leaders in the United States. The survey showed significant utilization of captive insurers for terrorism exposures. The survey size was large enough that it should reasonably reflect the use of U.S.-licensed captive insurers as a whole. Those captives operating in a manner making them unable to offer certain lines were excluded from the analysis. For example, risk retention groups were excluded from the property findings because such groups are prohibited by law from offering property coverage.

Marsh's survey found:

- At least one standalone terrorism agreement was in force among 17 percent of those surveyed. Of this group:
 - 88 percent had at least one policy in place covering only property-related certified acts of terrorism;
 - 18 percent had at least one policy in place covering only casualty-related certified acts of terrorism;
 - 4 percent had at least one policy in place covering only workers compensation-related certified acts of terrorism; and
 - 44 percent afforded protection for certified nuclear, biological, and chemical terrorism-related losses.
- Of captives with at least one standalone terrorism agreement in force, 24 percent purchased reinsurance to cover all or part of the captive's TRIA deductible, excess share, or both.

- To help place these results in context, consider that among the survey group:
 - 37 percent had at least one property policy in force;
 - 52 percent had at least one casualty policy in force; and
 - 43 percent had at least one workers compensation policy in force.

There are many potential benefits to forming a captive, but they need to be weighed carefully against the potential costs and risks. The decision to use a captive should be made in consultation with appropriate internal and external legal counsel and advisors.

9

Terrorism Risk Management

After the attacks of September 11, the security profession entered the public spotlight as never before. In addition to “traditional threats” such as criminal activity and workplace violence, corporate America is now faced with the threat of terrorism to its domestic headquarters and to its operations abroad. Although the threats themselves have not changed dramatically, the type and number of targets have. To thwart the element of surprise—to take the “terror” out of terrorism—an organization must identify its vulnerabilities and address them in advance with a holistic security plan.

The ultimate objective in managing terrorism risk is the prevention or mitigation of loss to an organization’s assets caused by intentional human acts. Although there are no silver-bullet answers, today’s security climate dictates that an organization should plan for operations under a variety of threat scenarios. There are now a number of so-called “contemporary methodologies” being presented within the security industry, each geared to a specific facility type, including ports, water utilities, refineries, and other critical infrastructure. However, the basic principles, practices, techniques, and concepts of physical security remain essentially the same as they have been for well over a quarter century. It is important to recognize that one size does *not* fit all; each facility will require a different plan that will need to be kept “live” and to be updated relative to changing global security conditions.

Defining the Threat

The motivation of foreign terrorists is usually religious ideology. Their weapon of choice is explosives, but terrorism experts generally expect them to use NBCR weapons in the future. Available explosives can either be conventional or may take the form of improvised explosive devices (IEDs). An IED is a “homemade” device that can be fabricated from almost any type of material and delivered through varying methods, including remote detonation using low-technology means such as cellular phones or garage-door openers. Although not likely to be the case in all future attacks, the use of suicide agents should also be considered.

Al-Qaida, in particular, is known for detailed preparation, including extensive target surveillance and planning that can span several years. Foreign terrorists aim to cause fear and thereby alter the normal comfort level and behavior of large segments of the target population far beyond those directly affected at the point of attack. In the attacks of September 11, for example, the use of commercial aircraft as weapons caused a fear of flying that had a substantial negative impact on the national economy which extended far beyond the airline industry. Al-Qaida’s primary tactic to date has been to cause mass casualties among the civilian community.

Notably, this terrorist group weighs the difficulties of an attack against the likely consequences of the attack, say security experts at risk consulting firm Kroll, a Marsh sister company. It then selects targets by identifying attack scenarios that offer the highest probability of success and impact with the lowest amount of risk of failure. For this reason, a primary security goal for any potential target facility is to deter an attack by aggressively influencing the terrorists' target research and risk/reward assessment. This goal is best achieved by:

- implementing prudent security procedures and physical security measures;
- protecting sensitive information;
- exhibiting a vigilant and unyielding security posture; and
- training facility personnel to recognize and respond appropriately to suspicious incidents.

These steps also increase the likelihood that terrorists will be detected either during their surveillance or in the early stages of an attack.

Domestic terrorists and extremists share many traits with foreign terrorists; however, their motivation is usually political. Their objective is sometimes stated as being widespread social or political change in one or several particular areas of society. Their tactics have included the use of explosives, iconic murders or assassinations, and kidnappings. Their methods are intended to be executed without apprehension and often without immediate discovery during perpetration of the attack. Typical targets include abortion clinics and doctors as well as government agencies, particularly those related to taxation and firearms control.

Activists generally have ideological motivations, and their objective is to draw public attention to their cause—often by intentionally involving the media—and/or to change the policies or practices of the target organization. Common tactics include arson, vandalism, contamination of materials or products, and sabotage. Although tactics do not typically involve intentionally causing death or injury, major property damage is frequently wrought in an effort to interrupt business operations or to publicly embarrass an organization.

Mitigating the Risk

It is important to note that many facility types must operate under specific requirements, usually in the form of federal mandates. In some cases, the legal requirement will be for an “assessment” or similar study of a facility’s security measures and potential vulnerabilities, often including recommendations for improvements, but without a legal mandate for the organization to implement any specific security measures. The nation’s water utility operators are a good example of this, as they must follow requirements set by the Environmental Protection Agency. In other cases, such as those involving ports and maritime facilities under U.S. Coast Guard initiatives, federal regulations are more specific regarding certain security measures that must be implemented. In most cases, certain documentation must be submitted to the regulating governmental agency.

In the course of a facility threat assessment, a security professional will carry out an exercise known as “adversary characterization.” This produces general, but useful, information in security planning, including the following:

- **who:** identification of people who are likely to carry out a threat to the assets;
- **how:** the tactics and techniques that may be employed in executing an attack;
- **what:** the tools, weapons, and materials available for terrorists’ use in achieving their objective;
- **when:** any historical data related to the timing of an attack;
- **where:** the geographic considerations—on both a large and a very localized scale; and
- **why:** the adversaries’ motivations for the acts and their end objectives.

The assessment will also evaluate existing facility security measures, threats, vulnerabilities, recommended upgrades, cost estimates, a general implementation schedule, and the basic tools necessary for the organization’s staff to manage and maintain an adequate level of security over a period of time, usually up to five years.

Adequate security requires a combination of elements—technological (security systems), architectural (traffic patterns and protection at access portals), and operational (policies, procedures, training, and contingency plans). Included in the operational component is the development of an exercisable all-hazards emergency-response and recovery plan. All of these measures are interrelated and must work in unison to be successful in producing an effective security posture for an organization. Many businesses struggle with the decision to invest in security, but implementing even limited security measures on the front end is well worth the time and money that could otherwise increase tenfold in the event of an actual incident.

Conclusion

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This report reviews the terrorism insurance marketplace in 2004 and provides a snapshot of trends in early 2005. As the take-up rate analysis in Chapter 4 demonstrates, concern about terrorism is not isolated to particular geographic regions or to large metropolitan areas. This is an exposure that affects a business's entire value chain—and, therefore, crosses all components of the economy.

During the spring and summer of 2005, there is expected to be significant debate on Capitol Hill on the merits of extending TRIA and continuing the government's involvement with terrorism insurance. The Treasury Department is scheduled to present its report about TRIA by the end of June. Marsh hopes this *Marketwatch* report will support constructive discussion of the issue. It is clear that the ambiguous and fluid nature of the risk makes it extremely challenging to predict, quantify, and address terrorism across all dimensions of risk management. With limited historical data and wide-ranging estimates on the value of catastrophic losses, it is difficult for the insurance industry to understand and quantify the true exposure and cost of the terrorism risk. In this context, TRIA has been quite successful. It stabilized the insurance market and improved the availability and affordability of catastrophic terrorism insurance.

A second important goal will not have been accomplished, however: that by December 31, 2005, the insurance industry will have been able to amass the necessary capital and associated underwriting tools to enable it to insure catastrophic terrorism losses without government assistance. Given that worst-case scenarios show potential losses could top \$100 billion and that standalone terrorism insurance market capacity in total stands at roughly \$6 billion today, it could take decades for the insurance industry to build up the necessary capacity.

Without a continuation of some form of government reinsurance support, the insurance market will not be able to respond fully in the event of a catastrophic terrorism loss. Scarce capacity will likely cause rates to rise dramatically, and organizations in perceived high-risk locations in large metropolitan areas will be challenged to find affordable coverage—if they will be able to find it at all. With the current uncertainty surrounding TRIA's renewal and with few alternative financial instruments available, clients are already competing for the limited amount of terrorism capacity available in the standalone insurance market.

Acting in support of our trade association representatives from the Council of Insurance Agents and Brokers (CIAB), Marsh regularly communicates with staff members of the Senate Banking Committee and the House Financial Services Committee. Marsh found that many insureds are deeply concerned about the availability of coverage for terrorism when and if TRIA ends. Marsh therefore urges its clients to voice their opinions on TRIA—whether or not they support continuation of the program—to their own trade associations and other groups with a voice in Washington, D.C.

Marsh's obligation to clients is to remain active on this topic because it involves such fundamental uncertainty and potential damage. We will continue to maximize client protection by discussing risk management strategies, developing risk transfer solutions, and offering safety initiatives to mitigate or avoid loss.

TRIA has been a valuable component of the U.S. administration's war on terror—it helped stabilize the insurance market and, thereby, the U.S. economy. The Act should be continued in some form for the next few years to allow more time for the development of a permanent solution. In partnership with the government, it should be the duty of clients, brokers, insurers, and reinsurers to investigate all potential options and develop a robust, long-term terrorism risk management and risk-transfer solution.

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Marsh meets the global needs of its clients through a wholly owned network of more than 400 offices in more than 100 countries. In every country, Marsh combines a deep knowledge of local risk issues with the ability to tap global insurance and capital markets for solutions tailored to client needs. Since its founding more than 130 years ago, Marsh has steadily built its business beyond insurance broking to encompass a full range of services to identify, value, control, transfer, and finance risk.

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Kroll provides corporate advisory and restructuring, forensic accounting, valuation and litigation consulting, electronic evidence and data recovery, business intelligence and investigations, background screening, and security services. It serves a global clientele of law firms, financial institutions, corporations, nonprofit institutions, government agencies, and individuals.

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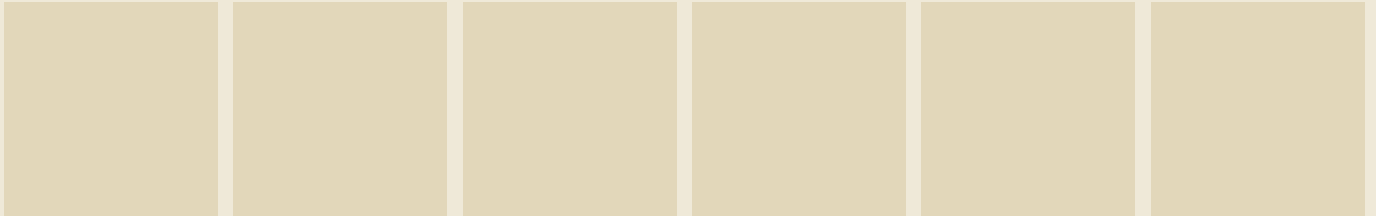
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