

2016 Terrorism Risk Insurance Report





CONTENTS

- 2 Executive Summary
- 3 Introduction
- 4 The Changing Nature of Terrorism
- 5 Terrorism Insurance Today
- 6 Captives
- 6 Nuclear, Biological, Chemical, and Radiological Risks
- 7 Political Violence Insurance
- 7 Cyber Terrorism Risks
- 8 International Schemes — Terrorism Pools
- 9 US Property Terrorism Insurance Markets
- 14 Workers' Compensation Terrorism Risks and Employee Data
- 15 Managing Global Terrorism Risks
- 16 Conclusion
- 17 Appendix

EXECUTIVE SUMMARY

Following are some key takeaways from Marsh's 2016 Terrorism Insurance Market report:

Type of Terrorist Attacks

- ▶ Many experts see recent small-group and "lone wolf" terrorist attacks as indicative of the shifting nature of terrorism.
- ▶ Such attacks in the US have yet to meet the \$5 million damage certification threshold required to trigger the Terrorism Risk Insurance Program Reauthorization Act of 2015 (TRIPRA).
- ▶ Many organizations are assessing their exposure to and coverage for indirect losses and business interruption risks associated with acts of terror.
- ▶ To address evolving threats, the insurance industry is offering coverage enhancements that consider business interruption and time-element risks.

Terrorism Insurance Benchmarking

- ▶ The passage of TRIPRA through 2020 brought greater certainty to terrorism insurance markets.
- ▶ Take-up rates for TRIPRA coverage embedded in property policies edged up slightly in 2015. It has remained relatively stable since 2009.
- ▶ Large companies are more likely to purchase TRIPRA coverage, and to see the lowest cost as a percentage of overall property premiums.
- ▶ Among industry sectors, media organizations had the highest take-up rate for TRIPRA coverage in 2015.
- ▶ Standalone property terrorism insurance capacity remained constant year-over-year. The coverage can be more competitively priced and offer broader coverage than TRIPRA embedded coverage, and does not face the same requirements in order for a claim to be paid. Also, standalone property terrorism policies can provide critical terrorism and political violence coverage to clients' operations outside the US.

Captives

- ▶ The number of Marsh-managed captives accessing TRIPRA increased by 17% from 2014 to 2015.
- ▶ However, many captives that could offer a terrorism insurance program actually do not.

Workers' Compensation

- ▶ Following the passage of TRIPRA in 2015, workers' compensation pricing and availability for terrorism risks generally reverted to levels prior to the law's temporary expiration.
- ▶ Underwriters continue to scrutinize employee concentration exposures, highlighting the importance of accurate data and risk differentiation, particularly for workers' compensation exposures.

INTRODUCTION

Paris. San Bernardino. Istanbul. Brussels. Orlando. The list of cities targeted by terrorist attacks continues to grow. Whether carried out by “sleeper cells” or so-called “lone wolves,” some experts see a marked shift to attacks aimed at soft targets in the past few years. Despite high cost in lives and suffering, these attacks typically cause minimal direct damage to property, but can bring indirect costs through business interruption.

Organizations manage terrorism risk through a combination of measures to protect people, property, and finances. On the financial side, they either retain or transfer the risk. But the changing pattern of terrorism risk has some companies questioning whether they are adequately insured for business interruption and related losses. And they wonder how to

prepare for potential losses from cyber terrorism and other events.

This report summarizes terrorism risk insurance trends, provides benchmarking related to terrorism insurance take-up rates and pricing, and offers risk management solutions for terrorism exposures.

FIGURE 1 TERRORIST ATTACKS AND CASUALTIES WORLDWIDE

Source: US Department of State



THE NUMBER OF LIVES
LOST TO TERRORIST
ATTACKS DECREASED

14%



THE NUMBER OF
TERRORISM INCIDENTS
DECREASED

13%



THE CHANGING NATURE OF TERRORISM

The interconnectedness of economic, social, and political risks has created a new type of vulnerability in the world, with interstate conflict and terrorist attacks at the forefront, a point highlighted in the [2016 Global Risks Report](#) from the World Economic Forum. Recent attacks in the US have increased concerns about potential soft targets, the availability of weapons, border safety, and the threat of homegrown extremists, which escalated dramatically in 2015, according to the US House of Representatives Committee on Homeland Security.

Terrorist attacks and deaths worldwide actually decreased in 2015 for the first time since 2012, according to the US State Department (see FIGURE 1). Yet fears of terrorist attacks in the US are at their highest level since after the September 11, 2001, attacks, according to a *New York Times*/CBS News poll taken soon after the San Bernardino tragedy.

While terrorism risks in the 1990s and 2000s were typically perpetrated by groups targeting high-value targets, recent attacks often have been carried out by small cells or lone attackers seeking maximum casualties in crowded spaces.

Related to this is an increase in “terrorist-inspired” acts, compared to “terrorist-directed” acts. These are committed by individual or small group actors who may have no direct contact with a known terrorist organization, but could be drawn to them through writings and video, particularly on the internet.

These events can significantly disrupt operations for some companies. For example, in the travel industry:

- ▶ About 10% of American travelers canceled booked trips due to the recent attacks in Egypt, France, Lebanon, and Mali, according to survey by YouGov. This affected \$8.2 billion in travel spending.
- ▶ Booking losses for Air France were estimated to be €50 million (\$56 million), the company said in a statement.
- ▶ Airlines, hotel chains, and travel websites experienced drops in their stock prices after this year’s airport bombing in Brussels.

“Recent attacks in the US have increased concerns about potential soft targets, the availability of weapons, border safety, and the threat of homegrown extremists, which escalated dramatically in 2015.”

TERRORISM INSURANCE TODAY

US TERRORISM INSURANCE

In the US, the Terrorism Risk Insurance Program Reauthorization Act of 2015 (TRIPRA) provides a federal backstop against terrorism-related losses.

Several criteria must be met in order for TRIPRA to come into play, including that insured losses must top \$5 million and that the event must be “certified” by the government as an act of terrorism, something that has yet to happen in the 14 years since the federal law was first enacted.

Under TRIPRA, an “act of terrorism” is a violent act or an act that is dangerous to human life, property, or infrastructure to have occurred on US territory and committed by

an individual or individuals as part of an effort to coerce the US civilian population or to influence the policy or affect the conduct of the US government by coercion.

The law — and the fact it has never been used — is credited with keeping terrorism insurance markets relatively stable and costs generally low.

The overall take-up rate for TRIPRA coverage in the US increased slightly in 2015, but has remained in the 60% range since 2009 (see FIGURE 4). Markets were briefly ruffled at the end of 2014 when Congress failed to reauthorize the law before it expired. However, quick action to reauthorize in January 2015 prevented any major disruptions. (For a look at standalone property terrorism insurance, see the sidebar.)

FIGURE 2 STANDALONE TERRORISM INSURANCE MARKET CAPACITY (IN \$MILLIONS)

Source: Marsh

INSURER/REINSURER	CAPACITY	INSURER/REINSURER	CAPACITY
AIG	250 to 1,000	XL-CATLIN	200
LLOYD'S OF LONDON	1,000+	AXIS SPECIALTY INSURANCE CO.	150
NATIONAL FIRE & MARINE INSURANCE CO.	1,000+	BEAZLEY INSURANCE CO.	100
IRONSHORE	350	ASCOT	75
HISCOX INSURANCE COMPANY INC.	250	ACE EUROPEAN GROUP	60
LANCASHIRE INSURANCE COMPANY LTD	200	HUDSON INSURANCE GROUP	30
TALBOT UNDERWRITING SERVICES (VALIDUS)	200	INTER HANNOVER	25
		STARR COMPANIES	25



SPOTLIGHT

Standalone Terrorism Insurance

Some companies purchase standalone property terrorism insurance, which differs from TRIPRA coverage. Unlike TRIPRA coverage, which is normally made available within an “all-risk” property policy, a standalone property terrorism insurance policy does not require an act of terrorism to be certified in order for a claim to be paid.

Available capacity for standalone property terrorism insurance remained constant from 2014 to 2015 (see FIGURE 2).

Compared to embedded TRIPRA coverage, standalone insurance can offer:

- Competitive rates. Downward pressure on pricing is expected to continue, barring a significant change in circumstances.
- Broader coverage terms. Standalone policies often do not contain certain requirements present in TRIPRA coverage. Under a standalone policy, an “act of terrorism” is the use of force or violence — of any person or group, whether acting alone or on behalf of or in connection with any organization — for political, religious, or ideological purposes, including the intention to influence any government and/or to put the public in fear for such purposes.
- Coverage for a wider area. Standalone policies can cover locations outside the US and can include political violence insurance.
- High limits. Companies with exposures in locations where insurers don’t have aggregation issues can often secure \$750 million to \$2 billion in standalone capacity per risk. Additional capacity may be available at a higher cost.
- Long-term contracts. Standalone coverage can be obtained for up to three years.

EXPANDED COVERAGE

The potential cost of property damage from a “small” attack can be outweighed by business disruption costs if, for example, a city or region were put under a curfew, businesses closed indefinitely, travelers canceled reservations, or travel was disrupted. More companies in recent years have been asking about coverage for such risks.

To address these shifting threats, coverage enhancements are available that consider issues such as:

- ▶ Active shooter situations and resulting consequences.

- ▶ Extra expense for evacuating people due to a threat.
- ▶ Contingent interruption of operations.
- ▶ Canceled reservations.
- ▶ Loss of attraction.

Policies can be structured to include nonphysical damage scenarios and are available for instances of active assailants or shooters, terrorism liability, damage resulting from a cyber event, and nuclear, biological, chemical, and radiological (NBCR) risks. These can be structured as endorsements to standalone property terrorism insurance policies or as separate policies.

NUCLEAR, BIOLOGICAL, CHEMICAL, AND RADIOLOGICAL RISKS

From anthrax scares in the US to reports of terrorists using chemical weapons overseas, NBCR attacks are a major concern. Although NBCR coverage is accessible under TRIPRA, insurers are not required to provide it. It has only recently become more widely available, with several insurers offering standalone NBCR coverage at competitive prices. More are expected to enter the market soon.

Some coverage details to consider include:

- ▶ **Defined perimeter radius:** In a site-specific policy, coverage is generally for three to 10 miles around a site. Perimeters for central business districts (CBD) are generally smaller.

- ▶ **Policy forms:** These typically follow either “conventional” terrorism language or expanded versions of standard terrorism insurance forms.
- ▶ **Aggregation of risks:** An insurer is not likely to write NBCR insurance for a large number of clients concentrated in any one region or city.

As more organizations purchase NBCR coverage, rates may become more competitive. For example, a sports organization that purchased an NBCR policy to coincide with an event at its stadium has seen significant renewal premium reductions as the take-up rate continues to increase.



SPOTLIGHT

Captives

Captive insurers can typically offer broader coverage than is generally available through policies issued by traditional carriers. From 2014 to 2015, the number of Marsh-managed captives actively accessing TRIPRA increased 17%, from 93 to 109. Through a captive, organizations can avoid some of the common restrictions or exclusions in commercial property insurance policies, including:

- NBCR attacks.
- Contingent time-element losses.

By using captives to access TRIPRA coverage, organizations can often reduce their net retained risk related to terrorist attacks. Nevertheless, many captives that could offer a terrorism insurance program do not. Those that do often find the total cost of implementing a terrorism insurance program in a captive is competitive with the cost of traditional commercial insurance. And they sometimes find a captive is the only viable option for risks such as NBCR attacks.

For more information on captives, read Marsh Captive Solutions’ benchmarking report, [Captive Solutions: Creating Security in an Uncertain World](#).

POLITICAL VIOLENCE INSURANCE

As tensions and political violence continue in the Middle East, parts of Africa, and Asia and expand into Europe and elsewhere, more organizations are exploring political violence insurance (PVI). Standalone property terrorism insurance provides coverage for the physical damage and business interruption that can result from acts that are motivated by politics, religion, or ideology. PVI provides coverage related to war, civil war,

rebellion, insurrection, coup d'état, and other civil disturbances.

To help determine PVI needs while designing the optimal insurance program, organizations should:

- ▶ Ensure purchased limits are adequate for multiple loss scenarios.
- ▶ Review the locations of assets.
- ▶ Understand policy terms, conditions, and limitations.

- ▶ Understand their property and employee exposures, which can help in making informed decisions or mitigating potential losses.

Political violence risks can vary geographically and PVI is recommended for insurance programs with significant emerging-market exposures. Policies should be coordinated with property and/or standalone terrorism policies in addition to local insurance pools.

CYBER TERRORISM RISKS

The question of how TRIPRA would respond to cyber terrorism is a relevant one, given widespread belief that an increase in such acts is likely. On June 15, 2016, a hacker from Kosovo pleaded guilty in US federal court to terrorism-related charges for accessing and releasing to a terrorist group the personal information of over 1,000 US service members and federal employees.

The Justice Department said the case was the first in which a hacker has been prosecuted in the US on terrorism charges. Commenting on the case, US Attorney Dana J. Boente said: "Cyber terrorism has become an increasingly prevalent and serious threat here in America, both to individuals and businesses."

Still, the language of TRIPRA is silent on cyber as a vector attack. A cyber terrorism event that meets TRIPRA's prerequisites — including being certified as terrorism by the Secretary of Treasury — should be eligible for coverage under TRIPRA. As a result, many lines of coverage could be triggered by a cyber terrorism event.

For example, cyber-attacks against operational technology have the potential to cause explosions or the release of toxic materials resulting in physical property losses as well as bodily injuries. In such instances (and assuming certification requirements were met) TRIPRA might apply to losses under property or casualty policies.

However, TRIPRA would likely not respond to losses under cyber insurance policies. When TRIPRA was first enacted, cyber insurance was not included as a covered line of insurance. Moreover, while many insurers treat cyber insurance as an offshoot of professional liability coverage, TRIPRA now exempts that line of coverage.

Nevertheless, even without the backing of TRIPRA, the cyber insurance market has provided a broad cyber terrorism coverage grant — usually through an express grant of coverage to disruptive activities carried out for ideological motives.

INTERNATIONAL SCHEMES — TERRORISM POOLS

Terrorism pools can help organizations manage the financial threat of terrorism globally. Typically, each pool requires a declaration by a national government that a terrorist event has occurred to trigger coverage.

In the countries where compulsory or optional terrorism reinsurance pools exist, property insurance policies can be extended to include terrorism coverage in accordance with the local pool (see FIGURE 3). In such situations, the application of the standalone terrorism,

sabotage, and/or political violence policy should be either difference in conditions (DIC), difference in conditions and limits (DIC/DIL), or primary to the locally issued property policy pool coverage, depending on the pool being accessed.

FIGURE 3 TERRORISM POOLS

Source: Marsh, Guy Carpenter, US Government Accountability Office, World Forum of Catastrophe Programmes, Organisation for Economic Co-operation and Development.

COUNTRY	TERRORISM POOL OR REINSURANCE MECHANISM	ESTABLISHED	POLICYHOLDER COVERAGE
Australia	Australian Reinsurance Pool Corporation (ARPC)	2003	Elective
Austria	Österreichischer Versicherungspool zur Deckung von Terrorrisiken (The Austrian Terrorpool)	2002	Elective
Bahrain	Arab War Risks Insurance Syndicate (AWRIS)	1981	Elective
Belgium	Terrorism Reinsurance & Insurance Pool (TRIP)	2007	Elective For Large Property Risks
Denmark	Danish Terrorism Insurance Scheme	2010	Elective
Finland	Finnish Terrorism Pool	2008	Elective
France	Gestion de l'Assurance et de la Réassurance des risques Attentats et actes de Terrorisme (GAREAT)	2002	Mandatory
Germany	Extremus Versicherungs-AG	2002	Elective
Hong Kong - China	The Motor Insurance Bureau (MIB)	2002	Elective
India	Indian Market Terrorism Risk Insurance Pool (IMTRIP)	2002	Elective
Indonesia	Indonesian Terrorism Insurance Pool (MARIEN)	2001	Elective
Israel	The Victims of Hostile Actions (Pensions) Law and The Property Tax and Compensation Fund Law	1970 / 1961	Mandatory
Namibia	Namibia Special Risk Insurance Association (NASRIA)	1987	Elective
Netherlands	Nederlandse Herverzekeringsmaatschappij voor Terrorisemeschaden (NHT)	2003	Elective
Northern Ireland	Criminal Damage Compensation Scheme Northern Ireland	1972	Elective
Russia	Russian Anti-Terrorism Insurance Pool (RATIP)	2001	Elective
South Africa	South African Special Risk Insurance Association (SASRIA)	1979	Elective
Spain	Consortio de Compensación de Seguros (CCS)	1941	Mandatory
Sri Lanka	Strike, Riot Civil Commotion and Terrorism Fund – Government	1987	Elective
Switzerland	Terrorism Reinsurance Facility	2003	Elective
Taiwan	Taiwan Terrorism Insurance Pool	2004	Elective
United Kingdom	Pool Reinsurance Company Limited (POOL RE)	1993	Elective
United States	Terrorism Risk Insurance Program Reauthorization Act of 2015 (TRIPRA)	2002	Elective

US PROPERTY TERRORISM INSURANCE MARKETS*

The passage of TRIPRA in 2015 brought greater certainty to organizations in the US that depend on terrorism coverage, and terrorism insurance take-up rates for TRIPRA coverage increased in 2015. Most companies that purchased terrorism insurance in the past still do so as insurers continue to underwrite the risk with the support of TRIPRA.

TERRORISM INSURANCE TAKE-UP RATES BY YEAR

The terrorism insurance take-up rate — the percentage of companies buying property terrorism insurance — has remained relatively constant since 2009, although it increased slightly in 2015 after dipping in 2014 (see FIGURE 4).

TAKE-UP RATES BY COMPANY SIZE

Changes in take-up rates by company size have been marginal since 2012 (see FIGURE 5). When looking at company size, it's useful to consider four categories of total insured value (TIV):

- ▶ Companies with TIV in excess of \$1 billion typically work with several insurers and likely pay large premiums. The majority of this group consists of companies that use their existing captives or establish new ones to access TRIPRA.
- ▶ 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 have a smaller spread of risks, lower overall premiums, and often work with a single insurer.

FIGURE 4 TERRORISM INSURANCE TAKE-UP RATES BY YEAR
Source: Marsh

	2015	2014	2013	2012
TAKE-UP RATE:	61%	59%	62%	62%

FIGURE 5 TERRORISM INSURANCE TAKE-UP RATES BY TOTAL INSURED VALUE (TIV)
Source: Marsh

TIV RANGE	2015	2014	2013	2012
1. <\$100M	54%	54%	60%	59%
2. \$100M - \$500M	63%	59%	61%	64%
3. \$500M - \$1B	65%	68%	68%	66%
4. >\$1B	63%	64%	64%	64%

*The benchmarking in this section refers to TRIPRA coverage embedded in a property policy.

TAKE-UP RATES BY INDUSTRY

Terrorism insurance purchasing varies significantly when looked at by industry (see FIGURE 6). Differences are due in large part to some industries having exposure concentrations in central business districts and major metropolitan

areas that are likely perceived as being at higher risk for terrorism:

- ▶ Media companies purchased property terrorism insurance at a higher rate (79%) than did those in any other industry segment in 2015.
- ▶ Education, hospitality and gaming, and health care organizations had the next

highest take-up rates among the 17 industry segments surveyed, all at or above 70%.

- ▶ Manufacturing, chemicals, and energy and mining were among the industry segments with the lowest take-up rates.

TAKE-UP RATES BY REGION

A higher percentage of companies in the Northeast (72%) purchased property terrorism insurance than in any other region, likely attributable to the concentration of large metropolitan areas, including Washington, DC, and New York; the perception that major cities may be at a higher risk of a terrorist attack; population density; and that the region was the site of the 2001 terrorist attacks. The Midwest and South saw the lowest take-up rates in 2015, at 57% and 54% (see FIGURE 7).

FIGURE 6 TERRORISM INSURANCE TAKE-UP RATES BY INDUSTRY
Source: Marsh

INDUSTRY	2015	2014	2013	2012
MEDIA	79%	61%	70%	81%
EDUCATION	75%	82%	81%	75%
HOSPITALITY AND GAMING	74%	58%	60%	60%
HEALTH CARE	73%	67%	75%	72%
FINANCIAL INSTITUTIONS	71%	73%	74%	75%
REAL ESTATE	71%	71%	68%	69%
POWER AND UTILITIES	70%	65%	68%	65%
TECH/TELECOM	65%	70%	69%	69%
TRANSPORTATION	63%	61%	66%	66%
LIFE SCIENCES	60%	55%	64%	59%
CONSTRUCTION	58%	48%	44%	56%
RETAIL/WHOLESALE	55%	56%	61%	55%
FOOD AND BEVERAGE	53%	50%	45%	50%
PUBLIC ENTITY AND NON PROFIT ORGANIZATIONS	52%	57%	66%	71%
MANUFACTURING	49%	47%	45%	48%
CHEMICALS	44%	42%	47%	42%
ENERGY AND MINING	33%	38%	47%	43%

FIGURE 7 TERRORISM INSURANCE TAKE-UP RATES BY REGION
Source: Marsh

REGION	2015	2014	2013	2012
MIDWEST	57%	56%	57%	58%
NORTHEAST	72%	74%	77%	77%
SOUTH	54%	54%	61%	63%
WEST	58%	54%	55%	53%

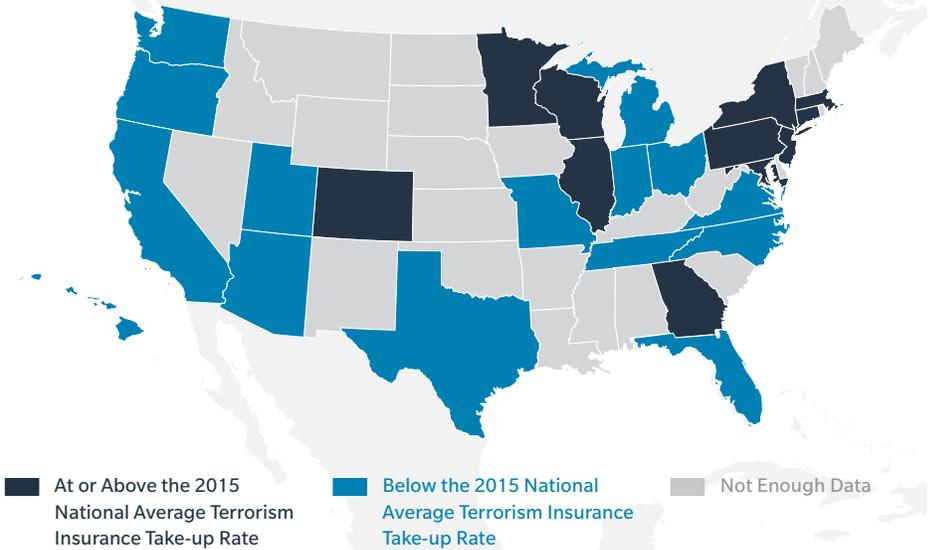
TERRORISM INSURANCE STATE INDUSTRY TAKE-UP RATES

Among the 27 US states and jurisdictions analyzed, 12 had take-up rates above the national average of 61% (see FIGURE 8). Organizations headquartered in the District of Columbia and Massachusetts purchased property terrorism insurance at the highest rate — both at 84% in 2015. Maryland, New York, and Illinois followed with the next highest take-up rates, ranging from 76% to 81%.

* Based on the state in which a company is headquartered.

FIGURE 8 TERRORISM INSURANCE TAKE-UP RATES BY STATE*

Source: Marsh



<u>ARIZONA</u> 42%	<u>CALIFORNIA</u> 60%	<u>COLORADO</u> 65%	<u>CONNECTICUT</u> 69%	<u>DISTRICT OF COLUMBIA</u> 84%	<u>FLORIDA</u> 40%
<u>GEORGIA</u> 73%	<u>HAWAII</u> 58%	<u>ILLINOIS</u> 76%	<u>INDIANA</u> 50%	<u>MARYLAND</u> 81%	<u>MASSACHUSETTS</u> 84%
<u>MICHIGAN</u> 46%	<u>MINNESOTA</u> 61%	<u>MISSOURI</u> 56%	<u>NEW JERSEY</u> 69%	<u>NEW YORK</u> 78%	<u>NORTH CAROLINA</u> 54%
<u>OHIO</u> 45%	<u>OREGON</u> 43%	<u>PENNSYLVANIA</u> 64%	<u>TENNESSEE</u> 49%	<u>TEXAS</u> 58%	<u>UTAH</u> 37%
<u>VIRGINIA</u> 55%	<u>WASHINGTON</u> 58%	<u>WISCONSIN</u> 67%	The 27 states and jurisdictions listed met the minimum threshold of available 2015 peer data.		

PRICING OF PROPERTY TERRORISM INSURANCE

It is useful to measure the cost of terrorism insurance both as a premium rate — premium divided by TIV — and as a percentage of a company's overall property premium. Analyzing costs by premium rate allows companies to track what they paid in absolute terms; evaluating as a percentage of total premiums shows how terrorism coverage affected their overall property insurance budgets.

COST BY COMPANY SIZE

Property terrorism insurance rates typically decrease as the size of the company increases (see FIGURE 9).

- ▶ The median rate for companies with TIV less than \$100 million increased from \$53-per-\$1 million of coverage in 2014 to \$57-per-million in 2015. Their terrorism premium rates remained significantly higher than those of larger companies.
- ▶ Median rates for the largest companies decreased from \$18-per-million in 2014 to \$15-per-million in 2015, generally reflecting the overall property insurance pricing environment. Also, larger companies typically purchase higher limits of insurance, which can lead to lower rates when compared with smaller companies.

The cost as a percentage of overall property premiums (see FIGURE 10) was similar for all companies, regardless of TIV.

COST BY INDUSTRY

Compared with rates in 2014, median property terrorism insurance premiums decreased or stayed the same in 2015 for 11 of the 17 industry categories (see FIGURE 11). Although each company's policy

typically is priced based on its unique exposures, it is possible that a combination of prior catastrophe (CAT) losses and location — namely businesses located in a central business district — may have contributed to any increases.

FIGURE 9 TERRORISM INSURANCE TAKE-UP – MEDIAN RATES BY TIV (PRICE PER MILLION)

Source: Marsh

TIV RANGE	2015	2014	2013	2012
1. <\$100M	\$57	\$53	\$51	\$49
2. \$100M - \$500M	\$25	\$25	\$23	\$25
3. \$500M - \$1B	\$20	\$18	\$16	\$20
4. >\$1B	\$15	\$18	\$18	\$19

FIGURE 10 TERRORISM INSURANCE PRICING AS A PERCENTAGE OF PROPERTY PREMIUM BY TIV

Source: Marsh

TIV RANGE	2015	2014	2013	2012
1. <\$100M	4%	4%	4%	4%
2. \$100M - \$500M	5%	4%	4%	4%
3. \$500M - \$1B	5%	5%	5%	3%
4. >\$1B	4%	5%	5%	5%

FIGURE 11 TERRORISM INSURANCE PRICING – MEDIAN RATES BY INDUSTRY (RATE PER MILLION)

Source: Marsh

INDUSTRY	2015	2014	2013	2012
CONSTRUCTION	\$68	\$77	\$66	\$63
ENERGY AND MINING	\$57	\$28	\$45	\$38
MEDIA	\$47	\$53	\$36	\$50
POWER AND UTILITIES	\$41	\$47	\$48	\$53
CHEMICALS	\$41	\$40	\$37	\$49
TRANSPORTATION	\$38	\$48	\$46	\$42
FINANCIAL INSTITUTIONS	\$36	\$39	\$42	\$45
PUBLIC ENTITY AND NON PROFIT ORGANIZATIONS	\$34	\$33	\$39	\$29
REAL ESTATE	\$33	\$39	\$32	\$34
HOSPITALITY AND GAMING	\$28	\$32	\$22	\$41
LIFE SCIENCES	\$27	\$24	\$28	\$30
RETAIL/WHOLESALE	\$20	\$20	\$21	\$22
TECH/TELECOM	\$20	\$22	\$24	\$24
MANUFACTURING	\$16	\$19	\$17	\$20
EDUCATION	\$16	\$17	\$17	\$16
FOOD AND BEVERAGE	\$16	\$18	\$18	\$14
HEALTH CARE	\$15	\$14	\$14	\$17

When analyzing terrorism insurance pricing as a percentage of overall property premiums, financial institutions paid the largest share, allocating 9% of their total property programs to terrorism insurance (see FIGURE 12). Many of these companies typically have a large footprint in key business districts and in potential target cities.

COST BY REGION

Companies in the Midwest again paid the lowest rates, on average, for property terrorism insurance in 2015, followed by companies in the West (see FIGURE 13). Based on median premium rates, terrorism insurance was most expensive, on average, in the Northeast at \$29 per million.

Terrorism insurance pricing as a percentage of property premium values varied slightly in the four US regions analyzed (see FIGURE 14). Much of this difference can be explained by variations in terrorism exposure. Companies in major metropolitan areas are likely to pay a higher premium for their terrorism coverage, which results in a larger percentage of their overall property insurance costs being allocated to terrorism coverage.

COST OF TERRORISM INSURANCE IN 2016 AND BEYOND

Barring unforeseen changes in conditions, favorable pricing is generally expected for insureds through the remainder of 2016.

The favorable market is due to TRIPRA's 2015 authorization, significant surplus of underwriting capital in the insurance/reinsurance segments, and a low level of attritional and

severe catastrophe losses. Most organizations have seen rate and premium decreases as well as coverage improvements, driven primarily by a competitive marketplace.

FIGURE 12 TERRORISM INSURANCE PRICING AS A PERCENTAGE OF PROPERTY PREMIUM BY INDUSTRY

Source: Marsh

INDUSTRY	2015	2014	2013	2012
FINANCIAL INSTITUTIONS	9%	7%	7%	4%
MEDIA	6%	5%	6%	4%
EDUCATION	6%	6%	4%	4%
TRANSPORTATION	5%	6%	6%	7%
REAL ESTATE	5%	4%	6%	5%
PUBLIC ENTITY AND NON PROFIT ORGANIZATIONS	5%	6%	5%	5%
HEALTH CARE	5%	5%	5%	5%
POWER AND UTILITIES	5%	5%	5%	4%
HOSPITALITY AND GAMING	5%	5%	3%	7%
TECH/TELECOM	4%	4%	2%	3%
ENERGY AND MINING	3%	3%	2%	1%
LIFE SCIENCES	3%	3%	4%	3%
RETAIL/WHOLESALE	2%	3%	5%	3%
MANUFACTURING	2%	3%	3%	2%
CONSTRUCTION	2%	4%	2%	3%
FOOD AND BEVERAGE	2%	4%	2%	4%
CHEMICALS	2%	2%	3%	4%

FIGURE 13 TERRORISM INSURANCE PRICING – MEDIAN RATES BY REGION (RATE PER MILLION)

Source: Marsh

REGION	2015	2014	2013	2012
MIDWEST	\$20	\$23	\$21	\$24
NORTHEAST	\$29	\$29	\$32	\$31
SOUTH	\$27	\$31	\$28	\$31
WEST	\$23	\$24	\$27	\$26

FIGURE 14 TERRORISM INSURANCE PRICING AS A PERCENTAGE OF PROPERTY PREMIUM BY REGION

Source: Marsh

REGION	2015	2014	2013	2012
MIDWEST	3%	4%	5%	3%
NORTHEAST	6%	5%	6%	6%
SOUTH	3%	5%	3%	3%
WEST	3%	3%	3%	6%

WORKERS' COMPENSATION TERRORISM RISKS

The awareness of the potential loss of life stemming from small-group or lone-wolf style attacks is growing. Employers are increasingly concerned over incidents occurring in or near their workplaces.

Workers' compensation insurance is unique in that insurers cannot exclude terrorism-related losses and employers are required to buy it. Following TRIPRA's reauthorization, pricing and availability generally reverted to levels seen before the uncertainty over the fate of the federal backstop.

Workers' compensation insurers operate in a competitive market. However, underwriters carefully select the workers' compensation risks they insure as they manage their overall portfolio exposure. For example, large employee concentration exposures and the associated loss potential remain key factors in workers' compensation underwriting and pricing for terrorism risk.

For employers with large concentrations of employees in urban areas or campus settings, accurate data and risk profile differentiation is crucial. Insurers strive to understand the exact risk a company presents. Simple payroll data by location is unlikely to be sufficient.

Employers should be prepared to provide underwriters with information about such areas as:

- ▶ The number of shifts at a location.
- ▶ Campus settings.
- ▶ The number of telecommuters.

Insurers will request details about the maximum numbers of employees in particular buildings at a given time. The quality of the data provided to underwriters can make a significant difference in how insurers evaluate an organization's terrorism risk – and thus how that risk is priced.

“Following TRIPRA’s reauthorization, pricing and availability generally reverted to levels seen before the uncertainty over the fate of the federal backstop.”

MANAGING GLOBAL TERRORISM RISKS

TERRORISM RISK MODELS

As the modes of terrorist attacks change, more companies are using terrorism risk models and other analytical tools to:

- ▶ Better understand their financial exposure.
- ▶ Determine appropriate insurance deductibles and limits.
- ▶ Optimize risk finance strategies.
- ▶ Rate the terrorism risk to negotiate insurance premiums.
- ▶ Understand the risk's potential impact on capital.
- ▶ Build efficient business continuity plans.
- ▶ Address terrorism risk aggregation issues.
- ▶ Prioritize risk mitigation strategies.
- ▶ Make informed decisions on implementing loss control measures, such as building retaining walls, increasing security, and establishing gated entryways.

PREPARING FOR THE WORST

Terrorist attacks are a harsh reminder of the threat of mass violence and of the need to develop, maintain, and exercise corporate-level plans for crisis management, emergency response, and business continuity.

Companies with such plans in place can better [help employees through a crisis](#). Some considerations include:

- ▶ **Crisis management:** Develop and test an overall framework for management, response, and recovery. After an attack, organizations need to move quickly and efficiently to understand the potential impacts to people, property, and operations, and make policy/strategy decisions to address and manage those impacts.
- ▶ **Crisis communications:** Companies may have to contact employees, customers, investors, and others. During a crisis, messages and communications should be linked to reinforce the overall strategies and decisions made by the crisis management team.
- ▶ **Emergency response:** Responding to physical incidents may involve life safety, event mitigation, evacuations, and the protection of physical assets.
- ▶ **Humanitarian assistance:** Providing support during and after an incident may include physical, social, emotional, and financial help, as needed. Making professional counseling and support services available is an example of how companies can support employees.
- ▶ **Business continuity:** Keeping the business running is a key concern once safety issues have been addressed. Plans should account for the management and logistical process for continuing or resuming operations, and



SPOTLIGHT

Addressing Business Interruption Risk

Events from terrorist attacks can cause significant business interruption losses. Steps to take to manage business interruption risk can include:

- Develop and test business continuity plans.
- Test various scenarios that could have direct or indirect impacts on business.
- Coordinate business interruption insurance with other coverages, including political violence and terrorism insurance.
- Be prepared to gather appropriate information in the event of a claim, including recording damage via photographs and video.
- Maintain separate accounting codes to identify all costs associated with the potential damage.

recovering partially or completely interrupted critical business functions.

- ▶ **Information technology/disaster recovery:** In a tech-driven age, recovery includes plans to ensure the availability of networks, applications, and data. Ensuring that technology is up and running efficiently may help support business continuity, including work-from-home and other strategies.

Integrated and well-practiced crisis and continuity plans can help you to be risk ready should a crisis occur.

CONCLUSION

The passage of TRIPRA in 2015 maintained the certainty that has been a staple of US terrorism insurance markets since 2002. Although pricing and take-up of terrorism insurance has remained relatively stable through the years, organizations should regularly assess their needs and mitigation strategies.

The changing nature of terrorist attacks globally has caused the risk management and insurance industry to explore coverage enhancements that further address risks related to business disruption and extra expenses. With a thorough understanding of terrorism exposures and cost-effective risk transfer options — as well as with developed business continuity and corporate preparedness plans — organizations can better assess, manage, and respond to their terrorism risks.

APPENDIX

INDUSTRY CATEGORIES

This report examined property terrorism insurance purchasing patterns for 17 industry sectors, selected based on such criteria as sample population size, perceived exposures, take-up rates, and premium rates. Other industry groups were part of the overall analysis but not reported on individually. The industry groupings included, but were not limited to, the following lines of business:

- ▶ Chemicals: specialty chemicals, agrochemicals, distributors, industrial gases, and personal care and household companies.
- ▶ Construction: contractors, homebuilders, and general contractors.
- ▶ Education: colleges, 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, and restaurants.
- ▶ Health care: hospitals and managed-care facilities.
- ▶ Life sciences: research, manufacturers, biotechnology, and pharmaceuticals.
- ▶ Manufacturing: all manufacturers, excluding aviation.
- ▶ Media: print and electronic media.
- ▶ Public entity and nonprofit: city, county, and state entities and nonprofit organizations.
- ▶ Real estate: real estate and property management companies.
- ▶ Retail and wholesale: retail entities of all kinds.
- ▶ Technology/telecom: hardware and software manufacturers and distributors, telephone companies, and internet service providers.
- ▶ Transportation: trucking and bus companies.

Power and utility: public and private gas, electric, and water utilities.

METHODOLOGY

The report analyses relied on aggregated data concerning Marsh clients that purchased property terrorism insurance across the United States. Purchasing patterns were examined in the aggregate and were also based on client characteristics such as size, industry, and region.

The 2016 data came from property insurance placements incepting during calendar year 2015. The study population does not include placements in the US for foreign-based multinationals or for small-firm placements made through package policies.

The 2016 study was based on a sample of 2,051 firms with the following characteristics:

	1ST QUARTILE	MEDIAN	3RD QUARTILE
TIV	\$58 million	\$241 million	\$1,082 million
PROPERTY PREMIUM	\$82,366	\$244,840	\$789,739
TERRORISM PREMIUM	\$2,121	\$7,068	\$24,761

It is important to note:

- ▶ The sample size for the energy industry sector was relatively small and therefore may not be statistically significant. There may be a larger margin of error in the data analyzed, which may result in property terrorism take-up rates and pricing for energy companies varying more widely than the data indicates.
- ▶ For some companies, insurers quoted only a nominal terrorism premium of \$1. These \$1 premiums were omitted from the calculations of the median terrorism premium rates.
- ▶ Companies were assigned to regions based on the locations of the Marsh offices that served them. Generally, this was the Marsh office most closely located to a company's headquarters. Many clients have multiple facilities across the US and the world, meaning the potential risk for a terrorist attack may not be fully represented by where a company is headquartered. That said, the decision as to whether to purchase terrorism insurance is typically made at headquarters.

For more information, please visit marsh.com or contact:

TARIQUE NAGEER

Terrorism Placement Advisory and Leader,
Marsh's Property Practice
tarique.i.nageer@marsh.com
+1 212 345 5073

CHRISTOPHER FLATT

Marsh's Workers' Compensation
Center of Excellence Leader
christopher.flatt@marsh.com
+1 212 345 2211

MATTHEW MCCABE

Senior Vice President,
Marsh's Cyber Practice
matthew.p.mccabe@marsh.com
+1 212 345 9642

CHRIS A. VARIN

Managing Director,
Marsh Captive Solutions
chris.a.varin@marsh.com
+1 802 864 8133



About This Report

This report is a coordinated effort among Marsh's Property Practice, Marsh's Casualty Practice, Marsh Captive Solutions, Marsh Global Analytics, and Guy Carpenter. For more information, please contact your Marsh or other Marsh & McLennan Companies representative, send an email to questions@marsh.com, or visit marsh.com.

About Marsh

Marsh is a global leader in insurance broking and risk management. Marsh helps clients succeed by defining, designing, and delivering innovative industry-specific solutions that help them effectively manage risk. Marsh's approximately 30,000 colleagues work together to serve clients in more than 130 countries. Marsh is a wholly owned subsidiary of Marsh & McLennan Companies (NYSE: MMC), a global professional services firm offering clients advice and solutions in the areas of risk, strategy, and people. With annual revenue of US\$13 billion and approximately 60,000 colleagues worldwide, Marsh & McLennan Companies is also the parent company of Guy Carpenter, a leader in providing risk and reinsurance intermediary services; Mercer, a leader in talent, health, retirement, and investment consulting; and Oliver Wyman, a leader in management consulting. Follow Marsh on [Twitter](#); [LinkedIn](#); [Facebook](#); and [YouTube](#).

MARSH IS ONE OF THE MARSH & McLENNAN COMPANIES, TOGETHER WITH GUY CARPENTER, MERCER, AND OLIVER WYMAN.

This document and any recommendations, analysis, or advice provided by Marsh (collectively, the "Marsh Analysis") are not intended to be taken as advice regarding any individual situation and should not be relied upon as such. The information contained herein is based on sources we believe reliable, but we make no representation or warranty as to its accuracy. Marsh shall have no obligation to update the Marsh Analysis and shall have no liability to you or any other party arising out of this publication or any matter contained herein. Any statements concerning actuarial, tax, accounting, or legal matters are based solely on our experience as insurance brokers and risk consultants and are not to be relied upon as actuarial, tax, accounting, or legal advice, for which you should consult your own professional advisors. Any modeling, analytics, or projections are subject to inherent uncertainty, and the Marsh Analysis could be materially affected if any underlying assumptions, conditions, information, or factors are inaccurate or incomplete or should change. Marsh makes no representation or warranty concerning the application of policy wording or the financial condition or solvency of insurers or reinsurers. Marsh makes no assurances regarding the availability, cost, or terms of insurance coverage. Although Marsh may provide advice and recommendations, all decisions regarding the amount, type or terms of coverage are the ultimate responsibility of the insurance purchaser, who must decide on the specific coverage that is appropriate to its particular circumstances and financial position.