Insurance and September 11 One Year After

Impact, Lessons and Unresolved Issues

Edited by Patrick M. Liedtke
and Christophe Courbage

THE GENEVA ASSOCIATION
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Introduction

September 11: Might of the Moment – Enduring Effects

Much has already been written on the September 11 attacks and their impact on our lives. The perspectives, from the political to the social, from the philosophical to the economic, are as diverse as the backgrounds and the motivations of their authors. The Geneva Association, taking - due to the nature of our research organisation - a strategic macroeconomic view of events, first thought that producing an overview of the impact of September 11 on the national insurance markets would be enough to complement the work that has been going on in other institutions and insurance companies. However, after receiving such extraordinary encouragement from many different quarters, including political and media ones, we decided that there was indeed a further role to play. We needed to highlight the key issues that the insurance industry has been, is and will be facing as a consequence of the September 11 attacks. We strive not only to research in abstract terms but also to create and disseminate a better understanding about the direct effects of the events themselves as well as their impact on the mechanisms of insurance and the relevance of insurance as a basic and fundamental tool in the organisation of our modern economies.

Following the huge success of the first special issue of our working papers "Etudes & Dossiers" related to the September 11 events – which was reprinted twice – we are now publishing a special monograph with the title "Insurance and September 11 - One Year After: Impact, Lessons and Unresolved Issues". It regroups the updated and in some cases extended contributions of the first issue. With hindsight we can say that, almost a year later, the general picture is somewhat different. This corresponds to part one of the monograph. Part two looks at specific lines of business from a company perspective and discusses what the key issues and problems are. In the final third part, the contributions deal with systemic questions linked to the event and draw a broader picture of where we are still facing unresolved issues. At the very end we have included a contribution in the form of a postscript that takes a much broader view.

Some things are unthinkable until they happen – and then they rest as an enduring imprint in the collective memory of humankind. September 11, 2001, has been a day that profoundly marked the history of the United States and of the whole world. The general suffering, the loss of thousands of human lives and the thoughts and images it has provoked will stay in our minds probably for as long as we live. For the insurance industry, it has proven to be the most expensive event in history. As of today, it is still difficult to assess the financial insured loss. Yet, it is largely assumed that the costs for insurers worldwide could amount to approximately US$ 40-50 billion. As a sinister comparison, the second most expensive catastrophe, Hurricane Andrew, is estimated to have caused losses of US$ 20 billion (in today's dollars), less than half the amount of the losses on September 11.

Following this dramatic event, the insurance and reinsurance industry have been facing some important challenges to their capacity. At the time when this introduction was written, it seemed that the large majority of the risk carriers involved would be able to meet their obligations. This is remarkable as there was not a single premium dollar set aside specifically for such an event, which figured in no insurance scenario. Plus it probably amounts to well over twice the sum for the most expensive event ever in the history of insurance claims, and this at the end of an extended soft market.

In insurance, risk coverage is usually given (sold) under specified circumstances for suffered losses due to *ex ante* defined improbable events. Understanding the frequency and severity of a potential claim and when and how the losses that arise from an insured event are to be compensated is a necessary precondition for sound insurance business. More information, more efficient tools and instruments will improve the understanding why, when, where and how certain events happen. This leads to better business models for insurers and their clients. We are, however, from time to time confronted with events that we would have qualified *ex ante* as impossible, unrealistic or that we were simply unaware of – the unthinkable. The use of jumbo jets as flying bombs crashing into the former Twin Towers of the World Trade Center in New York City is such an event. It is an event that under the terms and conditions of many insurance policies qualifies for compensation, regardless of the lack of understanding or foresight at the time the contracts were negotiated that such an occurrence could ever take place.

The future costs of any claim have to do with uncertainties, probabilities and finally risk management in a dynamic sense. The price determined in a contract at any given moment expresses a reasonable probability at best, but more often than not previous experiences extrapolated into the future. A new experience then triggers a readjustment in the markets through two mechanisms: the adjustment in premium due to a better comprehension of the vulnerabilities associated with an insurance contract and, if the readjustment follows a major event with a big capacity reducing effect, a temporary recapitalisation effort to adapt again the reserves of the risk carriers. The new information is then absorbed. How the (new) risks associated with terrorism will penetrate the insurance markets in the longer term has still to be seen, the short-term impacts are well described in the contributions in this monograph. That the event of September 11, 2001 has triggered a move towards a new equilibrium in the markets and a certain recapitalisation effort is obvious. Furthermore, very importantly, it leads to a deeper rethinking of the insurance mechanisms.

It is clear that the terrorist attacks have led to a shift in conceptions of the sheer magnitude of a potential loss. The losses on September 11 were important indeed, involving extraordinary cumulative consequences. The concern is no more to know the probable maximum loss but to evaluate the possible maximum loss as well. Or put in other terms: Risk exposure does not end with the often arbitrary cut-off point of the normal distribution curve. However, at the very end of the distributional function there lie risks that go beyond the capacity of private risk solutions.

Disregarding a modern and efficient insurance sector, the ultimate uninsurable risk has to be borne by society. Insurance can only operate within the limits of insurability. These limits are defined not only by a finite insurance capacity, but also by other parameters. The risks can be of a very minute nature and hence do not lend themselves to a transfer since the associated secondary costs would be too high. There are costs of repairs or simple maintenance, which like other occurrences, do not qualify as uncertain events. Problems of anti-selection and moral hazard might prevent insurance solutions, as could asymmetric information. Another problem is that the level of uncertainty might become so high as to be rationally unmanageable. In some of these cases, dealing with such vulnerabilities can be only taken over implicitly or explicitly by society at large. We need not only to better understand where those limits of insurability are and how we might be able to influence them, i.e. push them back so that market mechanisms can take hold, increasing the efficiency of the economic system. We also have to rethink the role that the nation states play as a potential "insurer of last resort".

The airline industry suffered not only the loss of four airplanes (which were insured) but more importantly in the immediate aftermath of the attacks a severe blow to their business as a result of a general temporary halt in air traffic in the US and the subsequent reduction in travelling. Some of that cost has been and will be compensated undoubtedly through insurance. When approaching the point of insolvency, some carriers were helped by the injection of state funds.

One of the questions to answer will be how the state, if and when acting as an insurer of last resort, should complement the functioning market place. How far does this provide a call option with a strike price to be variably set by the beneficiary in the form of underinsurance and heavy or "managed" exposure? Furthermore, does it make sense in a globalised world for a single state to bail out a company with capital owners, employees, customers and dependent suppliers in many different countries? Is the state really such a good insurer of last resort or do we need another system to complement what we cannot (or do not) want to organise in the market place? And where does the legal system draw the borderline when analysing the consequences of the event and the extent to which any party in the world might be affected? (As a side-thought: Business people in Asia have asked their employees to specify any sort of cost that might have been caused – however indirectly – by the tragic events.) Let us extrapolate into the absurd for the sake of the argument: Can the flap of a butterfly change the climate thousands of miles away? And who is liable for the consequences if the resulting hurricane destroys hundreds of homes?

A central question is how to ensure the provision of future cover for insurance and reinsurance risks – including liability issues. Several countries have followed the British example by setting-up some kind of government-backed solution or pool. Such a pool is generally built up to a certain amount through private capacities and above that limit, it is backed by a state guarantee or another public mechanism that assures that bigger risks are also covered.

The current discussions in so many different countries on how to best use our knowledge in devising the most efficient private and public partnerships will stay with us for a while. Our present understanding of the highly complex interactions of risk management and transfer issues is still inadequate. More advancements in this terrain will create a better and more efficient environment for our economies and ultimately societies.

At the same time, the September 11 events have highlighted another important issue: regardless of the importance of the insurance industry for the functioning of modern economies, its role and the mechanisms it uses are unfortunately too often only poorly understood by the public and its political agents. In some instances even the informed media has contributed to a confusion of concepts and tools. The questions “Why do we need insurance in the first place?” and “What conditions are necessary for its efficient operation?” have to be answered publicly and with vigour. It is not the role of the Geneva Association to lobby on behalf of the insurance industry – there are many organisations purposely created to this end – but our research, especially in the aftermath of September 11 where insurance questions came to the forefront of public concern, shows that the general level of understanding about insurance is not befitting our modern societies. We therefore try to help create the new knowledge and further the networking of those who can contribute to a deeper comprehension.

One of those aspects is that while insurance – even after such a huge and sudden surge in damages as in 2001 – generally is not a major source of financial instability (as we will see in the following chapters and as underlined in the IAIS publications on September 11, the global insurance industry is in good shape), the absence of insurance creates enormous problems. It was precisely the unwillingness of insurance companies to continue to underwrite the existing aviation policies (for the same premium) that created the necessity for governments to step in and guarantee cover for terrorist attacks. In a risky environment where no reliable (or at least to an operational degree reliable) assumptions can be made on the probability of insured events happening, insurance has and must have the right to opt out. Nevertheless, exactly this very precondition for a private market solution through insurance, and sound operation of insurance, can create financial instability. The private market solution to individually unbearable risks, which we call insurance, has to be complemented by social mechanisms to guarantee its continued functioning and avoid financial instability that could spread through the whole economy. Regulators and legislators are working with insurance companies to solve this problem and find the most efficient solution.

However, there are other aspects that are troubling insurers (and their investors and clients, indeed the whole economy) and that is the pronounced slump of stock markets. The damage done to the balance sheets of insurance companies due to the fall in the value of their investments over the past year and a half has destroyed much more claims handling capacity than the tragedy last September. It seems that the times when underwriting results could be reinforced through investment returns are over, at least for a while. This combination leads to more risk adjusted capital management on both sides of the balance sheet, more prudent (some would even say stringent) insurance underwriting and an increase in insurance premiums.

Almost one year after the September 11 events, we thought that it was important to identify the various challenges to the insurance industry the world over. We have asked experts from insurance companies, the major national insurance associations and other organisations to write articles describing and analysing the economic consequences of the terrorist attacks and discussing the key issues for the future. The result of their endeavours is this monograph. The Geneva Association is very grateful to all the authors for their contributions.

Patrick M. Liedtke
Secretary General

Christophe Courbage
Head of Research Project

September 11, 2001: The Terrorist Attack against the United States

by William E. Bailey*

It was a comfortably cool September morning in New York City. Millions of New Yorkers and residents of neighboring states routinely worked their way through the traffic jams and crowded subways headed toward what appeared to be another typical, relatively uneventful day at work. Earlier that morning, four aircraft, United flight # 175 and # 93 and American flight #11 and # 77 had departed for destinations on the west coast, their crews and passengers settling in for the 5 and ½ hour flight. The activities of the Department of Defense at the Pentagon in Arlington, Virginia, proceeded routinely with no great global conflicts to be managed. What had appeared to be just another day in New York and Virginia was instantly changed into one of the most memorable days in history when, at 8:46 a.m., American Airlines Flight # 11, which had left Boston's Logan Airport at 7:59 a.m. bound for Los Angeles with 92 people on board, crashed into the North Tower of the World Trade Center between the 94th and 98th floors. Occupants of the building, mostly those on floors below, who escaped with their lives, heard the loud thud of the airplane, a huge, guided missile, piercing the tower's glass and steel frame and felt the building shudder from the impact, but they were unaware and uninformed for several terrifying minutes about what was unfolding above them.

At 9:03 a.m., United Airlines Flight # 175, which departed Logan at 8:14 a.m. bound for Los Angeles with 65 people on board, struck the South Tower at somewhere between the 78th and 84th floors. If anyone listening to radio reports or watching the television special broadcasts of the first crash had harbored lingering hopes during those tense 17 minutes that it was just a freak accident - a small, single-engine plane inexplicably way off course trying to land at one of the areas three major airports - the second plane's flight path into the South Tower erased those thoughts. The United States was under attack! By whom and in what strength and numbers was pure speculation in the early moments and for the next several hours.

At 9:43 a.m., American Airlines Flight # 77, which had departed Washington-Dulles airport at 8:10 a.m. bound for Los Angeles with 64 people on board, crashed into the outer ring of the Pentagon. Information gleaned months later from captured Taliban soldiers and Al Queda terrorists has confirmed that the pilots' intended target was the White House, but they were unable to find it because of the tall trees and heavy foliage obscuring it from the pilots' view from the cockpit. At the last minute, the Pentagon was selected as an alternative target to continue the terrorists' assault upon some of the country's most recognizable symbols of economic and military power.

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* Special Counsel, Insurance Information Institute, New York.

At 10:10 a.m., United Airlines Flight # 93, which had departed from Newark airport at 8:01 a.m. bound for San Francisco with 45 people on board, crashed into an open field in Shanksville**,** Pennsylvania, a small community a few miles south of Pittsburgh. It was later learned that several passengers were able to make calls on their cell phones to their loved ones or business associates describing the onboard terrorists' murder of several stewardesses and the pilots and seizure of the plane's cockpit. In an incredible act of bravery and sacrifice, several large male passengers attacked and killed the terrorists in the main cabin and then stormed the cockpit and fought the terrorists at the controls, forcing the plane to crash into this remote field. It is not known what was the terrorists' intended target, although it is speculated that it was probably a prominent landmark in Washington, such as the House or Senate Office Buildings.

At 10:05 a.m., the South Tower collapsed in a horrifying, ear-shattering roar of twisting steel, breaking glass and pulverizing cement into a huge pile of rubble, carrying with it an unknown number of bodies who had not been able to escape the building and coating lower Manhattan for blocks around with a thick layer of cement-like ash. Eighteen minutes later, at 10:23 a.m., the North Tower collapsed, adding to the awful, terrifying experience for those on the streets in the area and adding an unknowable number to the purely speculative estimate of the total number of lives lost. At first it was thought there might be as many as 25,000 deaths, based upon estimates of the daily occupancy of both towers at that time of the year. On December 16, 2001, the City of New York released the following report regarding the death toll from 9/11:

World Trade Center victims (workers, visitors, police, firemen and other emergency personnel)	3,001
World Trade Center hijacked jets (including 10 hijackers)	157
Pentagon victims on the ground	125
Pentagon hijacked jet (including 5 hijackers)	64
Pennsylvania jet crash (including 4 hijackers)	44
TOTAL	3,391

The 102 minutes of the terrorists' air attack, from the moment of the first plane's crash into the North Tower until its collapse an hour and forty-two minutes later, ended as abruptly as it began. Awkwardly at first, still reeling from the sheer implausibility and incredibility of the audacious, carefully planned attack upon the most prominent symbols of the United States' preeminence as the financial center of the global economy, the government began to react and take charge of the situation. The FAA grounded every flight in the United States and turned back every foreign flight headed for this country. The President was informed while reading a story to a classroom of school children in Florida and was spirited off in Air Force One to a command center on a military base in the mid-west. The Vice President was literally carried out of his office by Secret Service agents and taken to a secure war room deep in the bowels of the White House. The Pentagon scrambled scores of jet fighter air craft to patrol the skies over the eastern half of the United States. In New York, Mayor Giuliani and his top level team - the police commissioner, fire commissioner, director of emergency management and a few, carefully selected staffers - had set up a temporary emergency operations center in the basement of building #5 in the World Trade Center complex. However, they were soon forced to evacuate because of fears that the building was about to collapse and moved their operations to another make-shift command headquarters in a building nearby, meanwhile using cell phones and runners to gather information and communicate commands to their ground forces at or inside the twin towers.

By the end of the day, President Bush went on national television to address the country with as much information as he could prudently reveal about the terrorist attack, the suspected perpetrators and the emergency orders he had issued. He declared, “America is at war!” As cabinet members and members of Congress were interviewed during the next several days, that phrase was often repeated. “America is at war!”

Part I. National Perspective

The Impact of the September 11 Attacks on the American Insurance Industry

by Robert P. Hartwig*

Summary

The terrorist attacks of September 11, 2001 produced insured losses larger than any natural or man-made event in history. Total life and non-life insurance losses are expected to reach at least US$ 40 billion. The losses sustained by the insurance industry were unprecedented in virtually every respect, producing catastrophic losses not only in property coverages, but also for the first time in life insurance, disability and workers compensation lines. Aviation and liability insurers also suffered their worst-ever losses stemming from a single event. The sheer enormity of the loss—coming from an entirely unforeseen peril for which no premium had been collected—combined with the possibility of future attacks and uncertainty arising from the United States' rapid military response to the threat produced financial shockwaves that shook insurance markets worldwide and provoked an extraordinarily swift and severe underwriting and pricing reaction by insurers and reinsurers. Insurers, who are regulated by the states, also took the unprecedented step of seeking financial protection from the federal government in the event of future attacks. This article surveys the insurance industry's immediate and short-term market and regulatory responses to the events of September 11—essentially the first 12 months—and analyzes the near-term economic, financial, structural and political implications of those decisions.

1. Recalling the events of September 11

On a bright, sunny late summer morning four airliners departed from airports in Boston, Massachusetts, Newark, New Jersey and Washington, DC for what would soon become the most infamous flights in commercial aviation history. Unbeknownst to anyone, the four or five middle-eastern men seated in the first-class cabins in each of the four aircraft were hijackers on a suicide mission. Armed with box-cutters, the hijackers executed that mission with military-like precision by overpowering and murdering crew members on each of the jets and commandeering the aircraft. Instead of demanding money, the release of prisoners or safe passage to a rogue state, the hijackers steered the aircraft toward buildings in New York City and Washington, DC that symbolize American economic, military and political power. The hijackers were now at the controls of what amounted to four guided missiles, brimming with tens of thousands of gallons of jet fuel.

* Senior Vice President & Chief Economist, Insurance Information Institute (III), New York. The author was an eyewitness to the September 11 attack in New York. The III's offices are located less than one kilometer from the World Trade Center site.

At 8:46 a.m. the first of the four hijacked aircraft reached its target as American Airlines flight 11 from Boston to Los Angeles slammed into the north tower of the World Trade Center in lower Manhattan, the heart of the U.S. financial district. Just 17 minutes later, at 9:03 a.m., United Airlines flight 175 also out of Boston and bound for Los Angeles crashed into the south tower of the World Trade Center. A third hijacked jet, American Airlines flight 77 en route from Washington Dulles airport to San Francisco smashed into the Pentagon at 9:43 a.m. The fourth hijacked aircraft, United Airlines flight 93 en route from Newark, New Jersey to Los Angeles crashed into a rural area south of Pittsburgh, Pennsylvania at 10:10 a.m. after passengers fought back against the hijackers in a valiant attempt to gain control of the aircraft. While that attempt failed, the struggle prevented the jet from reaching its target in Washington, DC, widely believed to be the White House. Meanwhile, the force of the impacts of the World Trade Center crashes structurally compromised both buildings and the intense fires that followed weakened them still further, leading to the collapse of the south tower at 10:05 a.m., and the north tower at 10:23 a.m.

The collapse of both towers killed thousands still trapped inside, including almost 400 firefighters and police officers, and caused billions of dollars of collateral damage. The 1.8 million tons of debris that crashed down in the vicinity of the towers destroyed or severely damaged many nearby buildings, spread fires and produced a hailstorm of shrapnel that rained down over a wide area. A dense cloud of acrid, black smoke shrouded much of lower Manhattan, plunging it into a toxic darkness. A thick coating of fine, gray ash and pulverized concrete settled over much of the area, infiltrating thousands of homes, businesses, machines and countless pieces of equipment.

2. Tallying the losses

Within a span of less than 100 minutes, more than 3,000 people had been killed and 2,500 injured. Two of the world’s tallest buildings had collapsed and 16 square acres of some of the most valuable real estate on earth—26 per cent of all the office space in lower Manhattan (31 *million* square feet)—had been reduced to rubble. Moreover, the Pentagon had sustained serious damage and four large commercial aircraft had been lost. Exhibit 1 summarizes the loss of life resulting from the events of September 11.

Exhibit 1
Death Toll from September 11 Attacks

WTC victims (workers and visitors)*	2,666
WTC hijacked jets (incl. 10 hijackers)	157
Pentagon victims on the ground	125
Pentagon hijacked jet (incl. 5 hijackers)	64
Pennsylvania jet crash (incl. 4 hijackers)	44
TOTAL	**3,056**

*New York City Medical Examiner estimate of 2,823 (as of 30 May 2002), less 157 killed on hijacked jets. The remains of only 1,102 victims had been identified as of 30 May with only 289 intact bodies recovered. Numbers are subject to further revision.

It was immediately apparent to life and non-life insurers alike that the September 11 attacks had the potential to become one of the most expensive insured events in history.

The extent of the physical destruction of property was obvious and early death toll estimates indicated that 6,500 people had been killed at the World Trade Center (WTC) site alone.

Within minutes of attacks, insurers began to receive a torrent of inquiries from the media and regulators centered on three main issues:

- How much will this cost?
- Could insurers afford to pay such an enormous loss?
- Would insurers deny payment of claims based on ‘act of war’ or terrorism exclusions in policies they had written?

Within days of the attack, an equally important and unprecedented public policy debate began to unfold regarding the role of the insurance industry in providing financial protection against the new “peril” of terrorism. This debate focused on the following issues:

- Is terrorism insurable?
- Can/should terrorism insurance be provided through the private sector, public sector or through a private/public sector partnership?
- Can such coverage be made both widely *available* and *affordable*, or are these mutually exclusive ideals?

Finally, insurers themselves had to grapple with a continuous series of underwriting, pricing and financial challenges in the months following the attack, focusing on the following concerns:

- How can exposure to future attacks be limited?
- How should any remaining exposure be priced?
- Is it possible to attract and retain much-needed capital during a period of such extraordinary market volatility?
- How can profitability be restored?

The remainder of this study will discuss all of these issues at length.

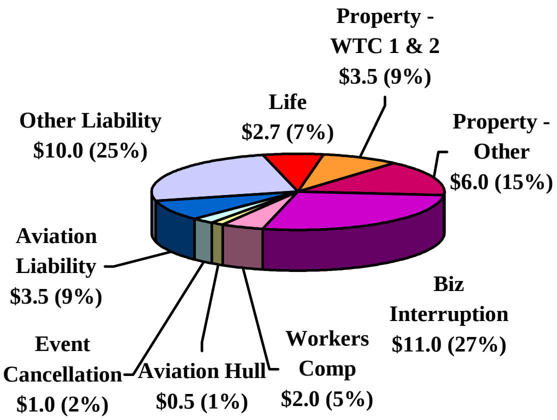
2. The Question of cost: insured losses from September 11

As of this writing (early August 2002), the “official” insured loss estimate issued by the Insurance Services Office (ISO) stood at US$ 20.3 billion. The figure was revised upwards in June 2002 from the previous estimate of US$ 16.6 billion. The figure is comprised of 51,000 claims in total (49,000 of them in New York and 2,000 in Virginia): 15,200 commercial claims (15,000 in New York, 200 in Virginia), 31,500 personal property claims (30,000 in New York, 1,500 in Virginia) and 4,300 auto claims (4,000 in New York, 300 in Virginia).

ISO estimates, however, are limited to property damage and associated business interruption losses and therefore do not produce a full accounting of the losses from

September 11. Unlike most major disasters, where the vast majority of losses result from claims on commercial and residential property policies, the September 11 attacks produced catastrophic losses in lines of insurance that had never before experienced catastrophes. Life insurance, workers compensation and disability insurance are among those lines. An accounting of losses by line is displayed in Exhibit 2.

Exhibit 2
Estimated Insured Losses from 11 September Terrorist Attacks by Line ($ Bn)



Source: Insurance Information Institute, July 2002

Exhibit 2 suggests that losses stemming from the September 11 attacks will ultimately cost insurers about US$ 40 billion, based on August 2002 estimates. Non-life insurers will pay an estimated US$ 37.5 billion or 93.3 per cent of total insured losses while life insurers will pay approximately US$ 2.7 billion, or 6.7 percent. The current insured loss estimate is somewhat lower than the US$ 43 billion midpoint estimate from a December 2001 survey of insured loss estimates from 19 different organizations (including investment banks, rating agencies, insurers and government organizations). The decline is attributable to numerous downward revisions in the estimated World Trade Center death toll. Some organizations continue to estimate insured losses as high as US$ 50 billion, while others put the total at US$ 30 billion. Nevertheless the range is considerably narrower than the US$ 25 billion to US$ 70 billion estimated late in 2001. Significant uncertainty in the estimate remains, however, in large part due to the potential for extraordinarily large non-aviation liability costs, presently estimated at US$ 10 billion or 25 per cent of total insured losses. Consulting firm Tillinghast-Towers Perrin estimates that liability costs could range from as little as US$ 5 billion to as much as US$ 20 billion.

Additional uncertainty over the ultimate cost of the September 11 attacks to insurers arises from many sources. Adjustments to the dollar value of claims will continue for many more months, though the frequency and magnitude of these refinements will diminish over time. Moreover, not all claims arising from the attack have been reported, though large numbers of newly arising claims also become less likely over time.

Additional uncertainty stems from the fact that payments on many claims will continue for years and in some cases decades. Survivor and medical benefits for those killed or injured (in workers' compensation cases, for example) can last for the rest of the beneficiary's life.[2] Some of the thornier liability issues will not be settled for many years. Some recovery workers at the site had elevated levels of mercury in their blood, for example, while others claim to suffer from respiratory disorders or to have been exposed to asbestos. Local residents also claim to have been exposed to toxins such as asbestos, mercury, lead and dioxin. The Environmental Protection Agency is now involved in testing and cleanup operations at residences in lower Manhattan. Studies were also underway to evaluate the impact of exposure to the WTC pollutants on pregnant women living in the area. Adverse legal judgments against the industry could also push insured loss estimates upward.

Consulting firm A. T. Kearney estimates that 15 per cent of the losses will paid in 2001, 35 per cent in 2002, 15 per cent in 2003 and 35 per cent in 2004 and beyond. According to the Disaster Insurance Information Office, non-life insurers had received 31,580 claims valued at US$ 16.7 billion through early July 2002.

2.1. Economic losses

It is important to distinguish between economic losses and insured losses. Failure to purchase insurance, underinsurance, uninsurability, retentions and coinsurance provisions guarantee that the insured losses in major disasters will usually fall well short of economic losses. According to a recent study by Munich Re, insurance payments associated with major disasters in modern economies typically amount to 62 per cent of economic losses (compared to just 6 per cent of such losses in less-developed economies).

Damage to New York City itself accounts for the vast majority of losses stemming from the September 11 attacks. The most recent estimate of the city's total economic loss is US$ 83 billion, a figure that includes not only damage to property and loss of life, but also lost business income and tax revenue and the additional expenses the city will incur to deal with the disaster. Exhibit 3 shows a breakdown of the expected economic losses to New York City. Lost output will account for nearly half (US$ 39 billion) of the losses, while capital losses account for 36 per cent of the total or US$ 30 billion. Cleanup and associated costs will make up the remaining 17 per cent or US$ 14 billion.

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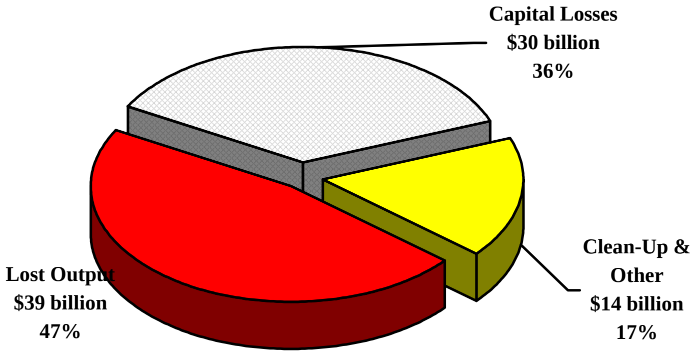
[2] New York's workers' compensation law, for example, provides surviving spouses with a tax-free benefit of US$ 400 per week for life or until remarriage.

Exhibit 3
Economic Losses to New York City From September 11 Terrorist Attacks



Source: New York City Partnership/A.T. Kearney.

It is estimated that the attacks cost the city 125,000 jobs during the fourth quarter of 2001 and that the city will still have a net loss of 57,000 jobs by the end of 2003. Despite the loss of office space, commercial rents and occupancy rates in the area have fallen.

The US$ 40 billion in payments from insurance companies will be the single largest and most important element in New York City's recovery from the September 11 attacks, offsetting roughly half of the economic void the attacks tore in the city. The federal government is committed to approximately US$ 20 billion in aid to New York, while about US$ 1.5 billion will come from charitable sources. Insurer disbursements to date have helped to stabilize the city's economy. At least US$ 9.5 billion in property insurance payouts will fund most of the rebuilding at the World Trade Center site, eventually stimulating the entire New York metropolitan area economy. A number of site plans are now under consideration by the city with building likely to commence in 2003.

Injured or disabled workers and the survivors of those who died will receive between US$ 1.5 and US$ 2.5 billion in income replacement benefits from workers' compensation and disability insurers. Some of these benefits will be paid out over a period of decades (throughout the life of a surviving spouse, for example). Life insurance payments will add another US$ 2.7 billion. Businesses affected by the attacks could see as much as US$ 12 billion in business interruption payments and payments for cancelled events. Thus as much as US$ 17.2 billion of the US$ 40.2 billion insurers expect to pay will go directly toward stabilizing the finances of thousands of households and businesses in the New York City area. These payments have effectively prevented the local economy from entering an economic tailspin.

3. Solvency: how did insurers manage to absorb the financial shock of September 11?

Less than 100 minutes after the first jet struck its target, both WTC towers lay in ruins. Would the insurers join them? It was a natural question to ask. After all, two of world's tallest buildings had just collapsed, thousands of people were dead, the Pentagon was severely damaged and four commercial airliners were destroyed. The insurance tab was going to be enormous. While insurers are accustomed to scenes of devastation and routinely dream-up doomsday-like scenarios to run through their computer models (such as two jumbo jets colliding over a major city), nothing like the events of September 11 had ever been envisaged.

3.1. Ability to pay

The insurance industry's most pressing need was to assure policyholders, regulators and investors that the industry had sufficient resources to meet its obligations under the tens of thousands of policies that would be called upon to respond. The industry was able to successfully allay those fears by issuing press releases through its major trade associations, postings to web sites and by direct contact with hundreds of print, broadcast and Internet media. Within 48 hours of the attacks, virtually all such doubts were erased. This was vitally important to avoid a loss of investor confidence and pre-emptive seizures of insurers by regulatory authorities. As of July 2002, no primary insurers and only one reinsurer had failed, principally due to an overexposed position in the aviation reinsurance market, while one other had stopped writing new business.[3]

The fact that so few insurers became insolvent was due to one factor: spread of risk. As of July 2002, 119 insurers (nonlife, life and reinsurers) worldwide had publicly announced exposure to the attack. Generally speaking, larger companies with the greatest financial resources (i.e., capital/surplus) suffered the heaviest losses, while smaller companies with more limited resources experienced fewer losses (Exhibit 4). Widespread use of reinsurance was essential to this spread of risk. Gross losses (i.e., losses prior to adjusting for reinsurance receivables) exceeded net losses (losses after adjusting for reinsurance receivables) by an estimated US$ 27 billion. In other words, approximately US$ 27 billion in reinsurance was in play in September 11-related loss settlements.[4]

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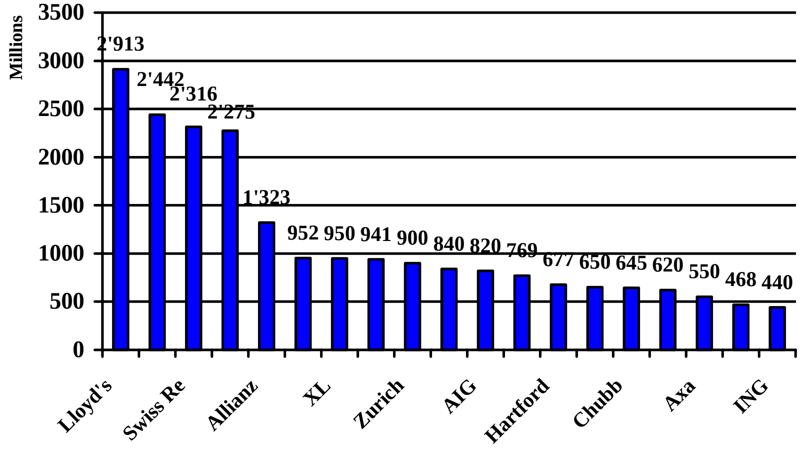
[3] The failure of Japanese reinsurer Taisei, a member of the North Carolina-based Fortress Re pool was announced on November 22. Aviation losses from the September 11 attacks greatly weakened the company and the unrelated November 12 crash of American Airlines flight 587 worsened the company's financial situation. Copenhagen Re was not accepting new business.

[4] Includes net reinsurance and retrocessions by all insurers, not just professional reinsurers.

Exhibit 4
Insured Losses, by Company ($) As of July 19, 2002



Source: Morgan Stanley, Benfield Research, Insurance Information Institute

Exhibit 4 clearly indicates that large reinsurers suffered some of the heaviest losses from the September 11 attack. The possibility of future attacks of unknown frequency and magnitude led virtually all reinsurers to impose terrorism exclusions upon treaty renewal. Changes in reinsurer underwriting practices are discussed in more detail in subsequent sections of this article.

4. To pay or not to pay: 'act of war' and terrorism exclusions

Ability to pay is distinct from willingness to pay. While insurers made it clear that they had sufficient resources to pay losses arising from the attacks, the question of whether the attacks themselves represented a covered cause of loss became a temporary sticking point for some companies. First, some insurers and reinsurers seem to conclude more readily than others that the attacks were compensable. A number appeared to be quietly wondering whether the attacks could be interpreted as an 'act of war.' Such an interpretation would have freed insurers from their liability to pay because *act of war* exclusions are found in virtually every commercial property and personal property insurance policy. The possibility of invoking the *act of war* clause was probably very tempting because President Bush and many other top administration officials repeatedly referred to the attacks as "acts of war." Political rhetoric and saber-rattling aside, insurers and reinsurers quickly concluded that invoking the *act of war* exclusion would probably not withstand a court challenge. This decision was reached after considering court precedent as well as observation of the fact that no formal state of war between the United States and any nation (including Afghanistan) existed on the morning of September 11, 2001.

Rumors that there might be terrorism exclusions in some of the affected property policies were also quickly debunked. Nevertheless, for a period of time it seemed plausible, even likely, that terrorism exclusions might have been negotiated into the terms of the property policies sold to the owners of the World Trade Center complex. After all, terrorists had already tried to blow up the buildings in 1993 by detonating a truck bomb in a parking garage under the towers. Insurers paid US$ 510 million to cover the costs of that attack. Insurers had also paid US$ 125 million to settle claims arising from the 1995 Oklahoma City bombing. No such exclusions were in place, however. The fact that the industry was providing coverage against terrorist attacks for little or no additional premium is a practice that Berkshire Hathaway president and investment guru Warren Buffett would later deride as "foolish" and "a huge mistake." In the wake of the attacks, however, Berkshire quickly emerged as one of the few insurers to offer coverage against terrorist acts, but in exchange for tight limits and a sizable premium.

5. What about the next attack: war risk and terrorism exclusions

While insurers concluded that the September 11 attack was an act of terrorism and not an act of war (and therefore covered under the terms of contracts in force at the time), it is likely that a large proportion of losses in similar future events will be excluded through newly introduced terrorism exclusions or possibly invocation of long-standing "war risk" exclusions.

5.1. War risk exclusions

War risk exclusions are found in virtually all nonlife insurance contracts and have been in existence since the 19th century. The exclusion reflects the realization that damage resulting from acts of war is fundamentally uninsurable. It is important to recognize that *no formal declaration of war by Congress is required for the war risk exclusion to apply*. Indeed, while the United States Congress has not issued a formal declaration of war and is very unlikely to do so (the last time Congress declared was more than 60 years ago at the onset of World War II), the country has taken many warlike actions, most notably attacking a sovereign state (Afghanistan), toppling its government (the Taliban) and sending advisors and troops to several other nations (such as the Philippines and Yemen) to ferret out terrorists. The Bush Administration also made no secret of its plans to oust Iraqi president Saddam Hussein.

The United States is also on a war-like footing, replete with warnings from the highest level of government that additional attacks are imminent and heightened security at borders, ports and airports. Legislation to create a massive new government agency, the Office of Homeland Security (second in size only to the Department of Defense), has been introduced and is likely to become law in late 2002. Finally, the President himself, his staff and members of Congress have repeatedly characterized the September 11 attack as an act of "war."

The fact that no formal declaration of war is required for the war risk exclusion is made clear in the war risk exclusion clause included in standard property and business income (i.e., business interruption) policies promulgated by the Insurance Services Office (ISO) [emphasis added]:

5.2. War and military action

(1) *War,* ***including undeclared*** *or civil war;*
(2) ***Warlike action*** *by a military force, including action hindering or defending against an actual or expected attack, by any government, sovereign or* ***other authority*** *using military personnel or* ***other agents****; or*
(3) *Insurrection, rebellion, revolution, usurped power or action taken by governmental authority in hindering or defending against any of these.*

While the language in the war risk exclusion appears sufficiently broad to apply in the event of future attacks orchestrated by al Qaeda or other groups sympathetic to their cause, it is likely that insurers invoking such exclusions would face litigation—in part because of the difficulty in discerning war risk from the risk of terrorism and the very limited case law in this area.[5] Insurers have responded to this potential ambiguity by introducing terrorism exclusions, which are discussed at length in the next section.

5.3. Terrorism exclusions

One of the most significant changes in United States nonlife insurance markets since September 11 has been the widespread introduction of terrorism exclusions. The basic language for the exclusion was developed by the Insurance Services Office soon after the September 11 attack. The language in the original ISO terrorism exclusion for property damage reads as follows:[6]

<u>Exclusion of</u>:

"Loss or damage caused directly or indirectly by terrorism, including hindering or defending against an actual or expected incident of terrorism. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss."

Insurers have since modified this language to suit their own purposes. An excerpt from one major commercial insurer's terrorism exclusion, for example, has the effect of clarifying who can be held responsible for the commission of a terrorist act:

<u>Exclusion of</u>:

"Any act of one or more persons, whether known or unknown and whether or not agents of a sovereign power, for Terrorist purposes…"

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[5] For a detailed discussion of this issue, see "The War Risk Exclusion: Distinguishing Between "War" and "Terrorism" After September 11," by Randy Manilof, *Property/Casualty Insurance*, National Association of Mutual Insurance Companies, March/April 2002.

[6] ISO has also proposed an exclusion for general liability coverages with very similar wording.

Of paramount importance in any terrorism exclusion is the definition of terrorism itself. The ISO definition used in both property and liability coverages is sufficiently broad to apply to events similar to September 11, as well as a wide range of other possible terrorist activities, including disruption or interference with communications and information systems, whether actual or threatened:

*"**Terrorism**" means activities against persons, organizations or property of any nature:*

1. *That involve the following or preparation for the following:*

   a. *use or threat of force or violence;*
   b. *commission or threat of a dangerous act; or*
   c. *commission or threat of an act that interferes with or disrupts an electronic, communication, information, or mechanical system; and*

2. *When one or both of the following applies:*

   a. *the effect is to intimidate or coerce a government, or to cause chaos among the civilian population or any segment of the economy; or*
   b. *it is reasonable to believe the intent is to intimidate or coerce a government, or to seek revenge or retaliate, or to further political, ideological, religious, social or economic objectives or to express (or express opposition to) a philosophy or ideology.*

Insurers will not be able to completely exclude terrorism because policy forms are regulated in each state, many of which require that forms cannot be changed without the approval of the state insurance departments.

However, when Congress adjourned in December 2001 without producing a bill establishing the federal government as the reinsurer of last resort, the National Association of Insurance Commissioners (NAIC) urged its members in all 50 states to approve the terrorism exclusions. The NAIC made this recommendation in order to avoid unnecessarily exacerbating the scope of the availability crisis that was already in progress. If insurers were not allowed to exclude losses due to terrorist acts, then the only way to limit exposure was to severely restrict or cease operations in particular types of coverage, categories of business or geographic zones likely to suffer such losses. The impact would cause a spillover crisis in the availability of coverage for routine perils such as fire (unrelated to terrorism), wind, water, theft and so forth. As of August 2002, 45 states, the District of Columbia and Puerto Rico had approved the exclusions while only a few, California, Georgia, Florida, New York and Texas had rejected them or withheld approval. [7] Insurers have argued that failure to gain approval

[7] New York rejected the exclusion believing that it would leave business owners in the state "holding the bag" in the event of future attacks. California believed the wording of the exclusions to be too broad and could be construed to apply to permit the exclusion of damages attributable to "hate crimes." It was generally believed that the language in the exclusions could be modified to accommodate those concerns. However, the state then stated that insurers would have to abide by the provisions of the Community

for such terrorism exclusions could cause insurers to decline to issue policies to businesses presenting high risk of terrorism losses, (*e.g.*, high-rise buildings or public arenas) so as to lower their exposure to large terrorist losses.

It is important to note that the five states that failed to approve the exclusions—California, Florida, Georgia, New York and Texas—account for approximately 36 per cent of the commercial insurance premiums written in the United States, leaving many insurers with unacceptably high levels of exposure to terrorism risk, forcing them to consider other options (e.g., nonrenewal).

5.4. Workers' compensation: a big exception

While most states approved terrorism exclusions in key commercial coverages, no state permitted exclusions in the workers' compensation line. Workers' compensation, which pays the medical expenses and lost wages of those injured on the job (and death benefits to the survivors of those killed), has historically been a no-fault form of coverage, and few favor carving out terrorism. Most of those killed in the September 11 attacks were killed while at work. Primary workers' compensation insurers are very vulnerable because of the compulsory nature of workers compensation, the tendency for large numbers of workers to concentrate in small areas (e.g., office complexes), the lack of reinsurance and heavy rate regulation. Many companies were reducing their exposure to employers with more than 50 workers at any one location, for example.

The absence of a terrorism exclusion for workers' compensation risk, the continued lack of a federal reinsurance facility for handling terrorism-related losses, the limited availability and high cost of reinsurance and regulatory resistance to approving terrorism-related contingency loadings in the workers' compensation rate base leaves insurers with few options. Insurers may be able to reduce aggregate exposure by achieving better geographic spread of risk or by simply nonrenewing contracts. Either way, the impact is most severe in areas where high densities of workers create the potential for catastrophic loss. Employers in these areas, and in other high-risk zones or in industries thought to be at an elevated risk of attack have in some cases been forced to seek coverage through residual market plans. The National Council on Compensation Insurance reported a sharp increase in plan premiums in 2001, a trend that continued into 2002.

6. Creating a federal "backstop" for the insurance industry

It was immediately obvious to businesses around the world that the terrorist attacks of September 11 would have a devastating impact that extended well beyond the borders of New York City. None saw this more clearly than the airline industry, which was already reeling from a slowing economy, high fuel prices and a sharp decline in business travel. The attacks forced an unprecedented total shutdown of the nation's air

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Reinvestment Act (CRA) in order for the exclusions to be allowed. The CRA is federal *banking* legislation that requires investment in economically disadvantaged zones.

traffic system and shattered the confidence of the flying public. Within 48 hours of the terrorist attacks airlines began to lobby Congress and the Bush administration for a federal bailout, which they received. The package, signed by President Bush on September 21—just 10 days after the attacks, gave the airlines US$ 5 billion in cash grants, up to US$ 10 billion in loan guarantees, established an open-ended taxpayer financed fund to pay claims against the airlines from victims and their families, obliged the government to pay terrorism-related losses over US$ 100 million for the subsequent 180 days and required the government to reimburse the airlines for any increases in their insurance premiums. The government has renewed the program several times since the initial expiration of the legislation in March 2002, keeping it in force through the first anniversary of the attacks.[8]

The speed and generosity of the federal bailout of the airlines resulted, not surprisingly, in a stampede of industries and organizations seeking federal assistance. Property/casualty insurers were among them, along with the city of New York, hotels, travel agents, Amtrak, airports, the steel industry and a multitude of others. Business groups lobbied Congress for big tax cuts. Congress clearly could not afford to respond so generously to every business interest adversely affected by the September 11 attacks and some lawmakers—nor was it clear from a public policy perspective that it should.

Every industry believes that its activities are vital to the nation's interests. Yet the events of September 11 had special significance for insurers not shared by most other industries. On that day the fundamental nature of economic risk to society changed irrevocably. Because insurers sell protection on the people and property now at greater risk of terrorist attack, the financial risk to insurers rose. Therefore, just as the U.S. government had to adapt in order to confront the expanded threat from terrorism, insurers also had to take steps to protect their own economic security. For property/casualty insurers this meant waging an aggressive campaign to secure federal assistance to protect the stability of the industry in the event of future terrorist attacks.
Insurers' request for federal intercession was unprecedented for several reasons. First, U.S.-domiciled insurers are regulated by the 50 states, not by the federal government as is the case in most countries. Second, the industry had rarely, if ever, shown such unity on an issue regarding federal involvement in the industry's finances. While some insurers (prior to September 11) had publicly stated their support for optional federal chartering of insurers while others vehemently opposed the idea, even the staunchest supporters of the current state-based system of regulation backed industry efforts to secure federal assistance.

Government-backed terrorism insurance is neither a new nor a radical concept. Exhibit 5 shows that a number of countries that historically have had problems with terrorism long ago opted for government involvement. In the wake of September 11, France and Germany have created such plans.

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[8] Airlines have formed a Vermont-based captive, Equitime, that would eventually build sufficient capacity to provide coverage of up to US$ 1.5 billion for passenger and third party war and terrorism risks, with the federal government remaining the insurer of last resort.

In the remainder of this section we detail the property/casualty insurance industry's rationale for requesting federal assistance in the wake of the September 11 attacks, as well as the many different proposals that have been put forth for that assistance.

A review of this issue remains relevant at the first anniversary of the September 11 attack because no such legislation has yet been made law. Instead, two vastly different pieces of legislation were passed by the House of Representatives and the Senate. A House-Senate conference committee must overcome many difficult issues before a bill can be sent to the President for his signature. A summary of the two competing bills is offered at conclusion of this section.

7. Insuring the uninsurable: insurer rationale for requesting federal assistance following the September 11 attacks

7.1. Rationale: pricing and reserving

Prior to September 11 insurers did not price for or reserve for losses from terrorism. Terrorism was simply not considered a significant peril (cause of loss) in the pre-September 11 rating and underwriting of insurance in the United States. While the 1993 World Trade Center bombing and the 1995 Oklahoma City bombing certainly illustrated the potential for significant loss of life and property, insurers were no more prescient than anyone else in or outside of government in foreseeing the events of September 11. Consequently, little, if any, premium was charged for terrorism risk. Also, because tax-favored pre-event reserving is not allowed under current United States tax law, there were no reserves specifically set aside for the peril of terrorism.

Exhibit 5
Countries with Government-Backed Terrorism Insurance Plans

Country	Provider	Details
UK	Pool Re	The international reinsurance market withdrew capacity as a consequence of IRA terrorism in the 1990s, which, in turn, led to a state-supported solution: Limited private cover with additional excess cover for both property damage and business interruption made available for insurance companies to cede to Pool Re (which sets rates and terms). The British government acts as Pool Re's "reinsurer of last resort", in case of insolvency.

Spain	Consorcio	Consorcio CCS (Consorcio de Compensacion de Seguros) is a state insurance facility guaranteeing cover for "extraordinary risks" such as earthquake, volcanic eruption, flood, storm, terrorism and civil commotion. The cover is for property damage only and is integrated into policies issued by private insurance companies which collect premium on behalf of CCS. After deregulation in 1990, it became possible to insure these risks privately, whereupon CCS provided subsidiary cover only and in accordance with the legal minimum. However, policyholders must pay CCS premium in any case and thus maintain the solidarity principle for catastrophic risks.
South Africa	SASRIA	In 1979, South Africa's particular political situation led to the creation of the national institution SASRIA (South African Special Risks Insurance Association) for the (voluntary) insurance of political risks in respect of property damages and, in later, standing charges. While the political situation has improved considerably in recent years, SASRIA still exists.
Israel	PTCF	Terrorism is excluded from standard property policies but the private insurance market grants cover by separate endorsement. Reinsurance coverage is provided by catastrophe excess of loss treaties. In addition, the state of Israel covers property damage losses triggered by politically motivated violence (including terrorism) through the Property Tax and Compensation Fund (PTCF) which was established to cover property losses resulting from war and war-like activities.
Northern Ireland	Government	Terrorism cover for local risk is excluded. Criminal Damage Compensation Order has been in force since 1978 providing compensation on an indemnity basis for property damage and business interruption.
Sri Lanka	Riots and strikes and terrorism fund	Government-sponsored riot fund, set up in 1988 includes the risk of terrorism. Limit is Lkr30 million (approximately US$300 000) per risk, per location and is subject to 10 per cent deductible.

France	GAREAT	Reinsurance pool established to cover the terrorism exposure of all eligible risks. Membership of the pool is obligatory for all members of FFSA, the French insurers' association. The minimum limit for cover through this scheme is 20 per cent of values or Euro 20 million (US$17.7 million).
Germany	Extremos AG	Specialty terrorism reinsurer set up by the government to offer cover up to €10 billion in excess of €3 billion.

Sources: Swiss Re, Willis

7.2. Rationale: unprecedented magnitude of loss and potential future losses

The losses incurred on September 11 were unprecedented – *substantially* larger than any prior man-made or natural disaster losses. As discussed previously, insured losses are presently estimated at US$ 40.2 billion, easily surpassing Hurricane Andrew as the most expensive single event in insurance history (see Exhibit 6). Only the industry's long-term asbestos liability, which is estimated at $60 billion and was incurred over many years from hundreds of thousands of claims—exceeds the expected losses from September 11. Likewise, the insurance industry's costs for Superfund and other long-term environmental liabilities have been estimated at US$ 30-US$ 40 billion.

In terms of future losses, Berkshire Hathaway CEO Warren Buffett wrote an editorial that appeared in the *Washington Post* and made the following ominous comment:

"*Indeed, had a nuclear device been available to Osama bin Laden, the loss could have bankrupted most of the industry, Berkshire very much included. Given that kind of horrendous, but not impossible, nuclear scenario, insured losses could have been US$ 1 trillion, an amount that exceeds the net worth of all property-casualty insurers worldwide.*"

– Warren Buffett, November 19, 2001, in an editorial appearing in the *Washington Post.*

Federal Reserve chairman Alan Greenspan, likewise indicated that designating the federal government as the reinsurer of last resort is appropriate in extreme circumstances:

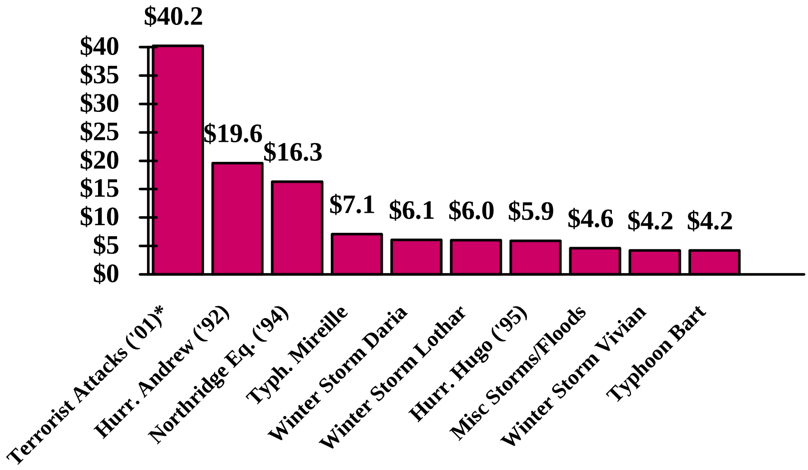
``…*the viability of free markets may, on occasion, when you are dealing with a degree of violence, require that the costs of insurance are basically reinsured by the taxpayer* ..."

– Alan Greenspan, October 17, 2001, in comments before the Joint Economic Committee of Congress.

Recognizing that a federal backstop for terrorism insurance benefits the entire economy—not just insurers—President Bush in April 2002 made a personal appearance before a coalition of concerned interests (lenders, business leaders, insurers and labor) and appealed to Congress to pass legislation. The President stated that the lack of such legislation was having a negative impact on the economy, and cited examples. His comments were echoed by various administration officials.

In short, the industry and top government officials believed—and continue to believe—that a federal "backstop" for the industry was necessary because capacity is finite while the loss potential from a terrorist attack is virtually unlimited. To quote Vice President Cheney in a May 2002 interview: "It's not a matter of if, but when."

Exhibit 6
Largest Insured Losses in History



**III Estimate; Includes life, liability and workers compensation losses.*
Source: Swiss Re, Insurance Information Institute.

7.3. Rationale: capacity constraints

Another terrorist attack of a magnitude similar to that of September 11 would seriously destabilize the global non-life insurance industry and could push a significant number of insurers into insolvency. Larger attacks could wipe out large numbers of insurers altogether. For these reasons, insurers contend that they simply cannot continue to provide coverage for terrorist acts within standard insurance policies.

One key to understanding the need for a federal backstop is an appreciation for the true claims paying ability of the insurance industry, which is much less than commonly assumed for reasons discussed here. Many industry commentators as well as government officials have inappropriately focused on *assets* as the metric that defines the industry's claims-paying ability. While it is true that the combined assets of the U.S. life and nonlife insurance industry as of December 31, 2000 exceeded US$ 4 trillion (Exhibit 8), this figure has little bearing on the industry's ability to pay claims. The vast majority of assets on insurer balance sheets are offset by liabilities, which are effectively "owned" by parties to whom the insurer has a legal or fiduciary obligation. Unearned premium reserves belong to policyholders, for example, while claim reserves belong to the beneficiaries of past insured events (e.g., a widow's annuity). Moreover, since nonlife insurers will bear more than 90 per cent of September 11 losses and because high-profile structures and the individuals who work in them appear to be the target of choice for terrorists, it is more appropriate to focus on the claims-paying ability of the nonlife (property-casualty) sector.

Exhibit 9 shows that 66 per cent of the property-casualty insurance industry's US$ 932 million in assets is offset by liabilities or is "non-admitted" (i.e., assets that are not easily converted to cash for the payment of claims, such as real estate or office equipment). This means that as of December 31, 2000, the aggregate claims paying ability or policyholder surplus of the property-casualty insurance industry was US$ 317.4 billion.[9] By June 30, 2001, surplus had dropped to US$ 298.2 billion, due to a combination of high underwriting losses, near-record catastrophe losses and a swoon in the equity markets—all completely unrelated to the events of September 11.

Yet a policyholder surplus figure of about US$ 300 billion still grossly exaggerates the funds available to pay claims from future terrorist attacks. Unfortunately, this figure has become the most widely cited figure when the issue has been discussed in the media and in legislative debates. Exhibit 10 shows why the US$ 300 billion figure is illusory. Specifically, the targets most attractive to terrorists are likely to be commercial in nature. Therefore, the policyholder surplus of insurers that are predominantly personal lines writers (e.g., auto and home) should be excluded. State Farm, for example, is the largest insurer of homes and cars in the United States, yet its US$ 38 billion surplus in 2001, is simply not available to pay claims on the World Trade Center or any similar event in the future. The surplus associated with "target commercial" lines of coverage was just US$ 100 billion *before* September 11 and fell to as little as US$ 80 billion after the attack.

7.4. Rationale: terrorism exclusions in reinsurance contracts

The potentially unlimited loss potential associated with terrorist attacks was recognized almost immediately by insurers and reinsurers around the world, as was the impossibility of determining the appropriate price for terrorism coverage. Reinsurers reacted to this situation by excluding terrorism from treaties beginning in January 1, 2002.[10] Since roughly 70 per cent of treaties expired on December 31, the effort to get a bill through Congress took on an added sense of urgency, but fell short of the mark in the Senate (a House bill passed in November 2001). The majority of the remaining 30 per cent of treaties not expiring on January 1 expired on either April 1 or July 1. With

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[9] "Policyholder surplus" is a term peculiar to insurance and reflects the fact that such funds are held as a cushion against unforeseen losses (such as the September 11 attacks). It is analogous to "owners' equity" or "net worth" in most other industries.

[10] Reinsurers are not required to submit their forms for insurance department approval, so regulatory approval was not required prior to the implementation of terrorism exclusions in treaties.

no federal reinsurance facility, primary insurers were forced to exclude coverage as well. Consequently, many corporations in America today have little or no terrorism coverage.

As indicated in Exhibit 4**,** reinsurers are essential to the global spread of risk. Without reinsurance, obtaining the necessary capacity to adequately insure large risks such as the World Trade Center complex is virtually impossible. In fact, reinsurers will likely finance 50 per cent or more of the losses arising from the September 11 attacks.

7.5. Rationale: economic consequences

Insurers assert that the exclusions and withdrawals could have a detrimental impact on millions of businesses that depend on insurance to thrive and that "going bare" is potentially destabilizing should another attack occur.

Higher prices and/or reductions in insurance availability will raise the cost of doing business and expose some firms to dangerously high levels of uninsured risk. Insurance is essential to an expanding and healthy economy. Banks typically require property insurance coverage before granting a commercial mortgage, for example, and workers compensation coverage (or its equivalent) is compulsory for almost every employer in all 50 states. Insurers also pointed to the fact that the United States economy fell into recession in 2001, and remained vulnerable in 2002 and could ill-afford an insurance crisis that could further weaken an already fragile economy.

Contrary to the industry's dire warnings, the United States economy did not collapse on January 1. In fact, a number of insurers were offering at least limited terrorism coverage to some risks. The industry was therefore forced to demonstrate what economic damage had occurred, was occurring or would occur. Congress demanded "concrete examples" of the impact.

Extracting this information was fraught with difficulty because insurers cannot disclose details regarding individual policyholders and few owners of noteworthy structures or CEOs of major corporations were anxious to disclose the fact that their property or business was uninsured for terrorism. The first formal attempt by the government to assess the state of the post-September 11 insurance environment and the associated impacts on the business sector was a report produced by the Government Accounting Office (GAO) in late February 2002. The major findings of the report are summarized in Exhibit 7.

Exhibit 7
Major Findings of GAO Study on Terrorism Insurance (February 2002)

1. **Insurers are shifting terrorism risk to property owners/businesses**
    - Reinsurers withdrawing from market for terrorism
    - Primary insurers are excluding coverage as their exposure increases

2. **As business exposure to uninsured risks rise, so do potential economic consequences**
    - Economic consequences from next attack could be more severe

3. **Potential economic consequences of not having terrorism insurance are cause for concern**
    - Congressional action is "properly a matter of public policy"
    - Consequences of inaction "may be real and potentially large"
    - "A decision not to act could have debilitating financial consequences for businesses…their employees, lenders, suppliers, and customers."
    - Government will face difficulties if it waits to act after an attack: "difficult to implement quickly—and extremely expensive."

A subsequent report by the Joint Economic Committee of Congress in May 2002 was released shortly before a new round of hearings on terrorism insurance and appeared to have a greater influence on the opinions of lawmakers than did the GAO report. Several months had passed and much more evidence of economic dislocation and hardship in the business sector had emerged and in June 2002 the Senate passed a bill, summarized in Exhibit 8.

Exhibit 8
Major Findings of Joint Economic Committee of Congress Study on Terrorism Insurance (May 2002)

1. **Market for Terrorism Insurance Remains Limited**
    - Only a small number of insurers are actively providing stand-alone terror cover
    - When available, coverage is expensive, limited and offered with restrictive terms
2. **Problems Associated with Terrorism Insurance Pose a Significant Threat to Sustained Economic Growth**
    - Lack of terror insurance stopping some business deals, esp. real estate and construction projects where terror cover necessary to obtain funding
    - High cost of terror insurance diverts resources from other more productive uses, negatively affecting investments and jobs.
    - Low coverage limits mean that businesses are bearing a huge amount of risk themselves. In the event of another attack, insurance payments will not be available to the same degree for rebuilding.

8. Nature of federal "backstop" plans

While the United States Senate finally passed legislation in June 2002, neither that bill nor the House bill passed in November 2001 had much in common with the industry's original backstop proposal in October 2001.[11] The following is a chronology of the various backstop proposals offered by insurers, the Bush Administration and Congress since September 11.

8.1. Insurance industry's pooling proposal

Insurers began their effort to create a federal "backstop" very shortly after the September 11 attacks. By late September insurers had already drafted an outline describing their plan for a federal backstop and legislation was drafted in early October. Dubbed the "Insurance Stabilization and Availability Act of 2001," the bill proposed the establishment of a privately run and financed terrorism reinsurance pool, organized as a federally-chartered mutual insurance company, that would reinsure the terrorism risks of U.S. licensed insurers and reinsurers and purchase reinsurance from the federal government in exchange for a premium. The organizational structure of the pool would have been similar to that of Pool Reinsurance Company Ltd. (often referred to as "Pool Re"), a mutual insurer established in Great Britain after several bombings attributed to the Irish Republican Army (IRA) made insurers reluctant to offer coverage for terrorist acts. Unlike Pool Re, which was established in 1993, the draft legislation establishing "Homeland Mutual Security Insurance Company" also included a three-year sunset provision.

Despite the success of Britain's Pool Re and the existence of the sunset provision, the plan was opposed by some in Congress who feared that the pool would require the establishment of a permanent new bureaucracy to oversee the plan. Attempts to salvage the plan (by organizing the pool under a state rather than federal charter, for example) failed.

8.2. The Bush Administration's quota share proposal

The Bush administration's counter proposal to the insurers' pooling plan caught many in the industry by surprise. Whereas the industry's proposal established the federal government as the reinsurer of last resort, the administration proposed using taxpayer funds on a first dollar basis. The proposal was surprising—coming from a Republican administration—because it actually appeared to put more tax dollars at risk than the industry's pooling proposal, at least initially. Nevertheless, since no new insurer was incorporated, the administration plan was politically palatable to some because it avoided the creation of any new bureaucratic authority.

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[11] Consistent use of the term "backstop" also made clear that insurers were not seeking a "bailout" similar to what the airlines had received.

The administration proposal called for a three-year plan where the federal government in the first year would pay 80 per cent of the first us$ 10 billion in loss due to terrorist acts, while private insurers would pay 20 per cent. A 50/50 sharing arrangement applied to the next US$ 10 billion, with government paying any losses in excess of US$ 20 billion. The maximum industry exposure in the first year of the plan was therefore US$ 12 billion. In the plan's second year, private insurers would retain the first US$ 10 billion with a similar 50/50 sharing arrangement above the retention. In the second year, the industry's maximum exposure would be US$ 23 billion. In the third and final year of the plan (a sunset provision was included in the proposal), insurers would retain the first US$ 20 billion in losses with a 50/50 sharing arrangement that effectively capped the industry's total losses at US$ 36 billion.

Because the plan was perceived as being too generous to insurers, it was attacked by opponents at both ends of the political spectrum. The proposal was quickly scuttled. However, certain elements of the proposal—the retention and coinsurance concept included in years two and three—were salvaged in plans put forth in the Congress.

8.3. The House proposal: retention and loans

The United States House of Representatives (Republican-controlled) passed its "Terrorism Risk Protection Act" (H.R. 3210) on November 29, 2001. The distinguishing feature of the Terrorism Risk Protection Act is that any funds received by insurers must be paid back, whereas there is no repayment in the Senate proposal. Federal involvement is triggered if industry wide losses exceed US$ 1 billion *or* if industry wide losses exceed US$ 100 million *and* some part of those losses were to exceed 10 per cent of the surplus (capital) *and* 10 per cent of the net premium written of an *individual* commercial insurer.

The House plan was generally criticized in the industry because as a loan program, it essentially addresses the issue of liquidity, not availability. The assessment mechanism for the repayment of loans was also criticized for its complexity while some insurers viewed the triggers as too high.

8.4. The Senate "proposal": retention and coinsurance

The United States Senate (Democratic-controlled) passed its "Terrorism Risk Insurance Act of 2002" (S.B. 2600) on June 18, 2002. The two-year plan calls for a sharing of losses between insurers and the government and is essentially a quota share arrangement with the government serving as the reinsurer of terrorism risk. The bill calls for an aggregate industry retention of US$ 10 billion for the first year of the plan and US$ 15 billion during the plan's second year. An individual insurer's deductible is calculated as its market share multiplied by US$ 10 billion in the first year and US$ 15 billion in the second. For losses below the aggregate industry retentions, 20 per cent of the losses will be paid by insurers while 80 are paid by the government. If the cost of a terrorist attack exceeds the industry retention, 90 per cent of the losses are paid by the government. The government's cap on liability in all cases is US$ 100 billion.

8.5. Criticism of the federal backstop proposals

Insurers' efforts to establish a federal backstop received a great deal of support from many legislators, high ranking government officials and various business groups, such as bankers and realtors. Numerous editorials in favor of a backstop appeared in newspapers across the country, including the *Wall Street Journal*. Nevertheless, the proposal to establish the federal government as a backstop was occasionally characterized by some as a "bailout." Others criticized the industry for "price gouging" while at the same time seeking protection in Congress and filing for terrorism exclusions. Many insurance executives appeared in their public comments to be positively ebullient over the prospect of dramatically higher rates and new underwriting opportunities. In addition, skepticism over the need for a bailout was fueled in part by the large number of insurers that announced start-ups, joint ventures and the formation of new subsidiaries in order to capitalize on the post-September 11 market opportunities. Many insurers managed to successfully raise capital through the issuance of debt or equity. The industry's ability to attract capital in the wake of its worst disaster ever is discussed in more detail in the next section of this study.

The apparent contradiction between the industry's pursuit of a federal backstop while raising rates and forecasting improved profitability for 2002, successfully attracting capital and filing for a terrorism exclusion were even the subject of a front page *Wall Street Journal* story in mid-November.[12]

Insurers' claims that failure to enact a federal backstop would cause significant economic disruptions was also met with skepticism by some, as the following excerpt from a *Wall Street Journal* op-ed piece (tellingly titled "Hurry Up, Washington, or Insurance May Fix Itself") suggests:

"Some would have you believe that all real-estate lending and similar projects would come to a halt [if no federal backstop is established]. Bankers would no longer be willing to lend, investors to invest, builders to build, because they would no longer be able to lay off the risk of potential loss from a terrorist attack. To buy this alarum, you would have to believe real-estate lenders would wake up Jan. 1 and decide to liquidate their businesses and end their careers. You would have to believe, against all evidence of prosperous wartime economies, that the U.S. economy would fold up and die because financiers and entrepreneurs are too weenie to find a way to proceed despite the absence of insurance for terrorism risk. You would have to believe, contrary to every assumption of economics, that large numbers of people would act in arbitrary ways that are contrary to their own interests. Not a likely scenario." [13]

9. Rebuilding the insurance industry: attraction of capital

Almost immediately after the horrific terrorist attacks of September 11, entrepreneurs large and small around the world and in many different industries began to wonder how

[12] "Insurance Companies Benefit form Sept. 11., Still Seek Federal Aid*,"* by Christopher Oster, *Wall Street Journal*, November 15, 2001, p. A1.

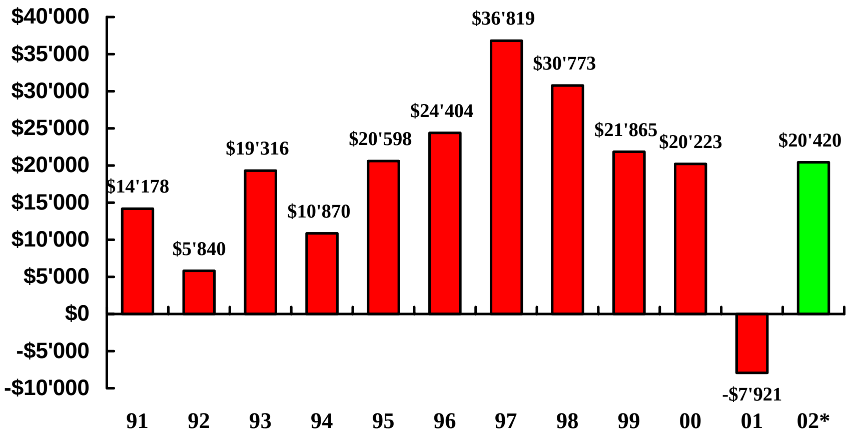
[13] December 5, 2001, p. A21, by Holman W. Jenkins.

they could profit from the tragedy. Before the smoke had cleared over New York City, street vendors in Manhattan were hawking World Trade Center memorabilia, factories in China were pumping out U.S. flags 24-hours a day and architects were touting their plans for rebuilding on the World Trade Center site. The city of New York even installed a viewing platform overlooking "Ground Zero," which quickly became the city's top tourist attraction, benefiting local businesses. Moving so quickly to cash-in on such a tragic event may seem exploitative and insensitive. Yet in each case these entrepreneurs were performing an essential role in the recovery of the United States from the psychological and economic trauma caused by the attacks.

The recovery of the global nonlife insurance industry from the devastating financial blow of September 11 is no less dependent on the motivated self-interests of profit-seeking entrepreneurs and investors. Forty billion dollars in global claims-paying capacity went up in smoke that fateful day, another US$ 40 billion or so was lost as insurers and reinsurers worldwide pulled back from key markets.

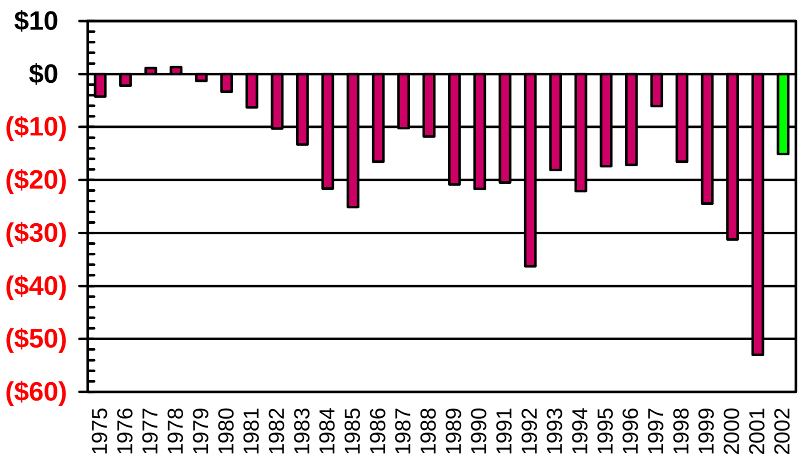
The industry's recovery very much depended (and continues to depend) on its ability to successfully attract new capital. Without this ability, unique opportunities will be missed and the instability stemming from the September 11 losses will last much longer, to the detriment of the economies of the United States and world economies. At first glance, the odds of anyone putting a dime into the nonlife insurance industry seemed remote. After all, 2001 was the worst in the history of the nonlife insurance industry. For the first time in history, net income for the entire U.S. property/casualty insurance sector was *negative*—negative US$ 7.9 billion to be precise (see Exhibit 9)**.** Underwriting losses (the amount insurers pay out in losses and expenses relative to the premiums they earn) soared to US$ 53 billion, also a record (see Exhibit 10). And let's not forget that there is an open-ended, armed conflict underway against an elusive enemy bent on destroying the very people and property insurers protect.

Exhibit 9
Net Income, U.S. Property/Casualty Insurers



**I.I.I. estimate based on first quarter 2002 data.*
Sources: A.M. Best, ISO, Insurance Information Institute.

Exhibit 10
*Underwriting Losses, U.S. Property/Casualty Insurers, 1975-2002**

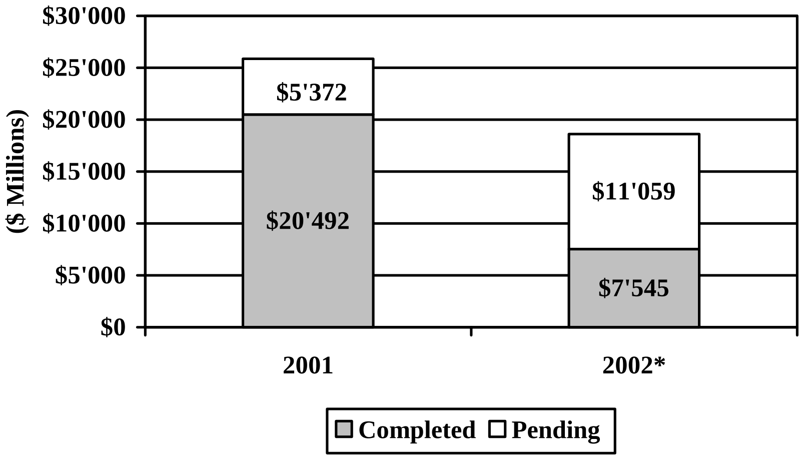


**Annualized estimate based on first quarter 2002 data.*
Source: A.M. Best, Insurance Information Institute

Such a hostile environment would drive the average investor away. But investors in the insurance world understand better than most the tradeoff between risk and reward. Between September 11 and yearend 2001, 40 insurers had successfully raised US$ 20.5 billion in new capital (Exhibit 11). Through mid-July 2002, a total of 66 firms had raised US$ 28 billion. Forty-seven other deals valued at US$ 16.4 billion are pending.[14] While more deals are expected to be announced, the pace of new capital being raised has clearly slowed in 2002.

Most of these funds will be used to support specialty lines insurance and reinsurance operations in market segments suffering from acute capacity shortages, rather than in the underwriting of terrorism risk directly.

Exhibit 11
*New Capital Raised by P/C Insurers Since September 11**



**As of July 12, 2002.*
Source: Morgan Stanley, Insurance Information Institute.

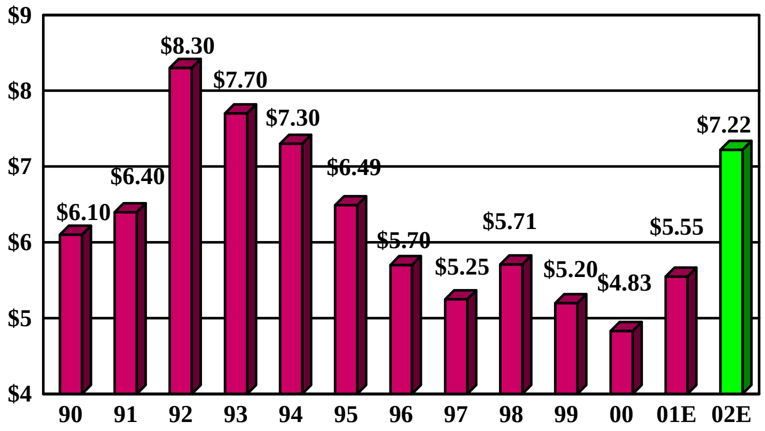
10. Pricing

A successful financial recovery from the financial shock of September 11 depends on much more than successfully attracting capital, of course. The appropriate pricing of risk is even more important. Through most of the 1990s, U.S. businesses saw the cost of insurance fall. The cost of risk to businesses, for example, fell by 42 percent, from US$ 8.30 per US$ 1,000 of revenue to just US$ 4.83 per US$ 1,000 of revenue between 1992 and 2000 (see Exhibit 12). Neither improving loss cost trends nor bullish investment performance can entirely justify that quantum decrease. Consequently, years worth of chronically underpriced business continue to assault the industry's balance sheet in addition to the trauma of September 11. Purging the pricing and underwriting sins of the past, while chasing the cost drivers of the future (terrorism included) will prove to be a long process. The cost of risk rose by an estimated 15 per cent in 2001 and 30 per cent in 2002. The Council of Insurance Agents and Brokers rate survey for the second quarter of 2002 reported increases across most major commercial lines that are consistent with this estimate (Exhibit 13). Roughly half the

[14] It is likely that some of the 47 pending deals will never be completed.

2002 increase is related to heightened risk from terrorist acts, while the other half is due to factors that predate the September 11 attacks, such as rising medical inflation and sharply higher jury awards.

Exhibit 12
Cost of Risk per US$ 1,000 of Revenue: 1990-2002E



Source: RIMS Benchmark Survey; Insurance Information Institute estimates

Exhibit 13
Change in the Price of Commerical Insurance, By Line

Rate increase by line of business

	No change	Up 1-10%	10-20%	20-30%	30-50	50%-100%	>100%
Comm. Auto	**2%**	**6%**	**28%**	**39%**	**21%**	**1%**	**1%**
Workers Comp	**5%**	**13%**	**19%**	**32%**	**15%**	**5%**	**2%**
General Liability	**2%**	**9%**	**24%**	**45%**	**15%**	**2%**	**1%**
Comm. Umbrella	**2%**	**4%**	**10%**	**20%**	**27%**	**17%**	**16%**
Comm. Property	**3%**	**4%**	**16%**	**30%**	**31%**	**13%**	**1%**
Business Interr.	**3%**	**8%**	**32%**	**33%**	**10%**	**1%**	**0%**
Surety Bonds	**10%**	**13%**	**16%**	**14%**	**6%**	**0%**	**1%**

Source: Council of Insurance Agents and Brokers

11. Availability of insurance in 2002

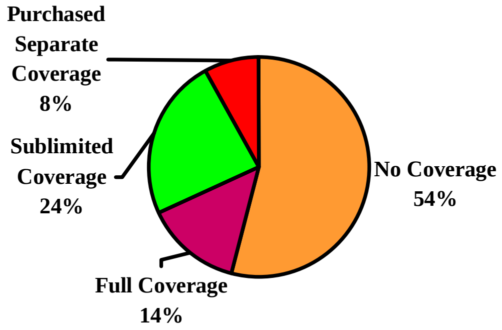
While a few insurers began to write limited amounts of stand-alone terrorism coverage during early 2002, the amounts were small in comparison to pre-September 11 limits, which were generally equal to policy limits (since terrorism was not previously recognized as a distinct peril and was therefore not excluded or otherwise limited). With reinsurance for terrorism risk generally unavailable, primary insurers were offering the coverage only on a very selective basis with limits of US$ 150 million or less on even the highest value structures. Such coverage might represent just 10 per cent of the limits for the risk's basic commercial coverage for all other perils. The coverage was also typically subject to a separate and much higher deductible (often double the standard deductible) and much higher premiums (7 to 10 per cent or more of the stated value of coverage was not unusual).

By mid-2002 additional stand-alone capacity had entered the market, with 1st -party property and 3rd -party limits available up to US$ 500 million in multiple markets. The majority of insurers offering stand alone coverage, however, were offering limits of US$ 100 to US$ 200 million. Coverage is usually offered with a one-time aggregate limit with no reinstatement and a 24-hour occurrence period.

Many insurers, of course, are offering at least some terrorism coverage through ordinary property and liability policies. As mentioned previously, terrorism cannot be excluded from workers' compensation policies, and no personal lines insurer has excluded terrorism from dwelling or auto policies (less than two per cent of September 11 losses were personal lines). Commercial property policies often exclude terrorism or include sublimits, but buy backs are increasingly common, though expensive.

Many businesses are unable to obtain terrorism coverage at any price, especially higher-profile structures with potential for catastrophic property and 3rd-party losses. Other businesses, when offered coverage, have frequently declined, citing cost, the belief that they are unlikely to sustain damage from a terrorist attack or their expectation that government aid will be available in the event that such an attack does occur. A July 2002 survey by Prudential Securities indicated that less than half of commercial customers had any terrorism coverage at all (Exhibit 15).

Exhibit 15
Extent of Terrorism Coverage (mid-2002)



Source: Prudential Securities: 2002 Insurance Buyers Survey, July 2002

12. Evolving legal and liability issues

The legal and liability issues arising from the September 11 attacks are certain to require many years to resolve. Within the first 90 days of the attacks, the first major dispute to emerge was the contention by the leaseholder of the World Trade Center, Larry Silverstein, that the attacks on the WTC towers should constitute two distinct events (rather than one) because two separate aircraft hit the tower. The distinction is very important from an insurance perspective because the towers were insured for US$ 3.55 billion per occurrence, meaning that Silverstein is entitled to US$ 7.1 billion if successful, and just US$ 3.55 billion otherwise. Litigation on this issue is ongoing, but there is discussion that Silverstein may sell his interest in the World Trade Center site to the city of New York, meaning that the city itself will be entitled to at least some of the insurance proceeds.

Liability issues, as previously discussed, are the single largest source of uncertainty in the total insured loss estimates stemming from the events of September 11, ranging in cost from US$ 5 billion to US$ 20 billion. The large number of people killed or injured, combined with the uncertain impact of government-backed victims' compensation fund and subsequent legislation limiting the liability of some parties made estimating the liability of the parties involved nearly impossible so soon after the event. Trial lawyers even announced a temporary moratorium on lawsuits related to the events of September 11 to avoid being branded as ambulance and hearse-chasers, making it difficult to see where the major legal battles would be waged.

The Victims Compensation Fund established within the airline bailout package was written very quickly with language that some lawyers regard as very ambiguous. The intent of the fund is to deliver fast and fair compensation to the victims and survivors of the September 11 attacks. Claims will be paid within 120 days of the date filed and generally accepted methodologies for determining awards will likely be adopted. A "special master," Kenneth Feinberg, was appointed in November 2001 to administer the fund and develop rules for its operation. The most important and controversial of those rules, which were announced in December 2001, was a formula based on income, age, marital status and number of dependents to arrive at award amounts for claimants (i.e., survivors). The formula produced a minimum payout of US$ 250,000 and an average award of US$ 1.65 million, though any awards were to be reduced by amounts received from life insurance, workers' compensation and other benefits received, such as pension awards (though not by any sums received from charitable sources). In March 2002, the plans rules were revised, providing an average benefit of US$ 1.85 million with deductions for life insurance and pensions, but not Social Security. The total expected cost of the Fund is expected to be US$ 4 billion.

As of early August 2002, only 650 out of potentially thousands of families had filed even partially-completed applications with the fund. In late July and early August, the fund sent the first notices of award (approximately "two dozen") to families.[15] Separately, at least six suits had been filed against the airlines involved and approximately 200 families had filed a notice of claim (which preserves the right to sue) against the Port Authority of New York and New Jersey. So far, the fund appears to be generally successful at achieving its goal of keeping most claimants out of the court system, though the pace at which families are applying to the fund is below expectations.

Congress has also broadened the mission of the Victims' Compensation Fund. Although established to handle the claims arising from the September 11 terror attack, the fund will now compensate victims/families of those injured or killed in the 1993 bombing of the World Trade Center, the 1995 Oklahoma City bombing, the bombing of U.S. embassies in Africa in 1998 and the anthrax mailings in 2001. The expansion is expected to add US$ 300 million to the cost of administering the fund. Importantly, the expansion seems to establish a precedent for funding the losses suffered by victims of future terrorist attacks.

Separately, Congress agreed to limit the liability of the Port Authority of New York and New Jersey to US$ 650 million (which runs Newark International Airport and owns the World Trade Center complex), Silverstein Properties (the WTC leaseholder) to US$ 1 billion, and the city of New York to US$ 350 million. Also limited was the liability of Boeing (which manufactured all 4 aircraft used in the hijackings), the Massachusetts Port Authority (which runs Boston's Logan Airport) and the Portland, Maine, airport (where some of the hijackers boarded connecting flights to Boston).

[15] Reports of the first family to acknowledge acceptance of an award appeared in the media on August 8. The person killed in the attack was a college-educated male in his 20s earning nearly $60,000 per year. The Fund determined that a payout of $1.19 million was appropriate based on the deceased's expected future earnings and the family's pain and suffering. The award was reduced by $150,000 to reflect other benefits collected such as life insurance and workers compensation for a net payout to the family of $1.04 million.

All of these parties are likely to be sued to the limits of their insurance or their legislatively-capped liability, whichever is higher. There is also concern that the limits on liability granted to some parties will merely incent trial attorneys to expand the list of potential defendants to those with a more peripheral connection to the issue (e.g., manufacturer of airport screening devices, jet fuel manufacturers, architects of the WTC towers, etc.). If successful, the impact on liability insurers is potentially enormous. Finally, insurers retain a right to subrogate against various parties, the airlines in particular, though no legal actions have yet been taken in this area.

13. Wall Street impact

It should come as no surprise that 2001 was the worst year on record for property/casualty insurers. As discussed previously, net income was negative for the first time ever and underwriting losses reached new records. Also not surprising is the fact that insurer share prices plummeted immediately after the September 11 terrorist attacks as investors considered company liabilities for losses and the possibility of future attacks.[16] While insurers stocks on the day before the attacks were down about 8 per cent for the year, they were down more than 18 per cent after the first full week of trading.[17]

It may come as some surprise, however, that insurance company stocks fully recovered those losses within a few weeks. In fact, by the end of 2001, property/casualty insurance stocks (on a market cap-weighted basis) were down just 1.9 per cent for 2001, compared to declines of 13 per cent in the Standard & Poor's 500 index and 21 per cent in the Nasdaq. As Exhibit 20 illustrates, the stock performance of all segments of the insurance industry (as well as the broader markets) had improved markedly within 90 days of the attacks. The broker segment showed the most improvement, moving from a year-to-date decline of 20 per cent on September 10 to a gain of 1.6 per cent by year's end, indicating investor's anticipation of both higher prices and greater demand for broker services.

P/C insurance company stocks basically treaded water through the first half of 2002, compared to declines in the broader markets, but began to fall along with the rest of the market as the crisis in corporate governance sent investors into a selling frenzy in July. Despite this, p/c insurers stocks have performed well relative to their peers outside the p/c group and very well against the broader market indexes.

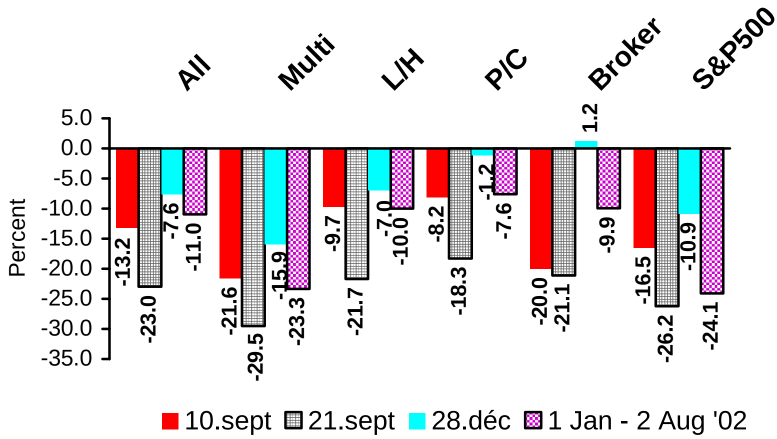
Industry wide, investors clearly recognize that insurance companies are solvent, are able to pay all claims stemming from September 11, and are taking steps to adapt to a very different environment in the aftermath of the attacks—including raising prices,

[16] There were numerous press reports in the days following the attacks that Osama bin Laden's al Qaeda terrorist network had sold European reinsurance company shares short in advance of the attacks in order to profit from the expected drop in prices. A subsequent investigation, however, produced no evidence of any such transactions.

[17] Trading on major U.S. stock exchanges was suspended Tuesday, September 11 through Friday, September 14 and resumed on Monday, September 17.

reducing exposure and tightening underwriting standards to reflect the increased risk they face. These efforts will help assure the preservation of insurers' long-term financial strength.

Exhibit 16
Stock Performance of Insurance Stocks Before and After the September 11 Attacks (total return)



Source: SNL Securities, Insurance Information Institute

14. A look ahead

Catastrophic events often lead to fundamental changes in the way insurers operate. The scars of Hurricane Andrew, for example, which occurred in 1992, are still very visible throughout the non-life insurance and reinsurance industry. Insurers charge much higher premiums in coastal zones, require special windstorm deductibles, sometimes require separate windstorm policies underwritten by special windstorm pools. Andrew was also the impetus behind the rise of the Bermuda market and sparked widespread interest in catastrophe-linked securities and sophisticated computer modeling.

The events of September 11 will have a similar enduring effect on the insurance industry. As was the case with Andrew and the peril of windstorm, the events of September 11, 2001 are leading to permanent changes in the underwriting and pricing of terrorism risk, including research and development of terrorism models. September 11 may also lead to a new and closer relationship between the insurance industry and the federal government.

With time, the financial wounds insurers suffered on September 11 will heal, as will the wounds of New York City itself. Insurers have, in effect, given New York and the nation a US$ 40 billion transfusion that for tens of thousand of businesses and individuals represents the difference between survival and despair. The changes insurers make in the wake of the horror of September 11 will help ensure that the industry can continue to make that difference for the millions of policyholders who count on insurers every year in their hour of greatest need.

Cover for Terrorist Acts in Europe after 11 September

by Jean-Louis Marsaud*

On the morning of 11 September, New York's twin World Trade Center towers collapsed after both were struck by airliners. At the same time, a third plane crashed into the Pentagon and a fourth nosedived into the ground in, at first, what appeared to be unclear circumstances but which subsequently proved to be the result of an attempt by passengers – who by that time were aware of the events that had just unfolded – to overpower hijackers in an effort to divert the course of the aircraft which it was suspected was heading for the White House.

Very quickly, it became clear that these aircrafts had been hijacked and were part of a concerted, planned action by radical Islamic movements to attack the military and financial symbols of the American nation, the Pentagon and the twin Towers.

Gradually after the immediate impact of these events, broadcast worldwide by live television coverage, and further to the considerable emotion caused by these unprecedented terrorist attacks, the world very quickly became aware of the long-term consequences of these events.

Firstly, the downturn in the American economy which was at the start of a recession, or at the very least an appreciable decline in numerous sectors, continued its fall which had an immediate effect on stock markets in the US and the rest of the world including, of course, Europe.

Then, the insurance sector, already facing a number of challenges, was obviously hit hard, doubly so since the fall in stock-market values leading to a devaluation of capital and technical reserve investments combined with the direct financial cost of the catastrophe itself.

From the initial even fragmentary and limited estimates, it soon became obvious that this claim would be the biggest the modern insurance industry had ever known since the insurance and reinsurance companies concerned all confirmed that they would respect their commitments in settling this unprecedented event.

Consequently, the question arose of the industry's capacity to deal with such events should they ever be repeated.

Even more so because uncertainty about the possible occurrence of other terrorist attacks on the same scale in the US or anywhere in the world and the fear of seeing the frequency of similar acts increase, made it impossible to estimate Maximum Probable

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* Deputy Secretary General, Comité Européen des Assurances (CEA), Paris

Loss (MPL). This includes even the most improbable and most pessimistic estimates, for terrorism or large risk cover.

The threat of a possible biological terrorist attack with the dissemination of anthrax spores in the post and the circulation of rumours about the dismantling by the FBI of a group preparing a "dirty nuclear bomb", merely added to public concern.

Everyone became aware that this was an event of universal scope not only limited to the US but also affecting Europe. It raised major questions about insurance funding but also about the insurability of risk, the capacity of other operators, and in particular state authorities, to cover such risk, and the pooling or sharing of costs for such unprecedented events.

- What were the direct and indirect financial effects on European insurance?

- What about cover for terrorist risks and insurability in the European Union before the events of 11 September? Were existing schemes not compromised? Was there not a problem in defining risks? What now was the capacity for covering risk in Europe?
- What answers could European insurers provide?

These are the main points analysed in this article with particular emphasis on non-life insurance and on the WTC claim.

1. The financial impact

1.1. The direct financial impact: the global cost of the claim

It is still difficult to put a definitive figure on the global cost of September 11 because several factors remain unknown regarding liability:

- the definitive position of certain reinsurers taking into account, in particular, the real consequences of retrocessions and finite risk contracts;
- the level of intervention by American federal authorities to compensate for human loss and material damage and loss in New York City itself;
- uncertainty about the final amount of indirect losses (business interruption);
- uncertainty about the level of compensation for beneficiaries;
- uncertainty about the final appreciation of the nature of the event: was it a single or several events? This could affect the final cost for insurers and reinsurers.

Even if reference is made to the Financial Times' estimate of 20 November (US$ 16.5 billion) or to various known estimates which range from US$ 30 to 50 billion (with, solely for liability, amounts ranging from US$ 5 to 20 billion (Tillinghast) or limited to US$ 5 billion (Morgan Stanley)), 11 September will exceed by far the cost of Hurricane Andrew in 1992 (US$ 15.5 billion) and the Northridge earthquake in 1994

(US$ 12.5 billion). Some more recent estimates even talk of a total cost of US$ 70 billion.

The most recent figures are still in the same line, with a total amount around US$ 40 billion (including US$ 20 billion for liability and business interruption, Insurance Information Institute), despite the important increases in costs announced by some insurers or reinsurers (e.g. Lloyds + 45 per cent or Swiss Re).

Whatever the final amount, European reinsurers and insurers will have to bear approximately 50 per cent of the final cost. This will have a serious effect on accounting systems already rendered fragile by 1999s natural catastrophes and several industrial accidents, including the most recent one in France (AZF plant in Toulouse) costing not far short of €1.5 billion.

1.2. The indirect financial impact

The impact of 11 September on the world economy and the resulting slowdown, with a considerable drop in stock-market values, led to a devaluation of insurance and reinsurance company assets naturally affecting their financial solidity. An initial survey conducted by the CEA Secretariat on 21 September, found that all markets concerned reported a devaluation problem.

1. This secondary effect revealed the inability of a number of measures imposed by the European supervisory authorities to adapt to insurance accounting.

   Hence, in Germany and in the United Kingdom mandatory provisions oblige insurance companies to offer cover. This implies the sale of shares if there is a sharp drop in the market (the downward phenomena being accentuated mechanically in the event of a massive sale of shares by insurance companies).

   In the United Kingdom, the Resilience Test means that life insurers have to maintain adequate reserves to resist a 25 per cent drop in the market share. The Financial Services Authority (FSA) already lowered this threshold to 10 per cent on 10 September. In future, insurers will not have to meet this obligation and are free to estimate the necessary reserves whilst complying with their solvency obligations.

   An identical solution was agreed in Germany where legislation has been drafted to abolish the obligation for insurance companies to constitute provisions when the price of shares in their portfolio falls below their book value.

2. Similarly, on the French market, the FFSA (Fédération Française des Sociétés d'Assurances) asked its supervisory authority to adopt a number of measures to improve the financial situation of companies following such major catastrophic events:

- the revision of the fiscal status of provisions against eventual risks (PRE) and the possibility of constituting them from own funds taking into account any bond market gains;
- measures to smooth out the evaluation of investments;
- the widening of the possibility of establishing equalisation provisions (tax deductible);
- the abolition of the winding-up tax.

3. What about the impact of 11 September on the rating of insurance and reinsurance companies? Since this event, numerous rating agencies have declassified companies, referring in particular to their risk exposure for terrorist cover or cover for large risks.

Such practices may be open to question since they establish no link between financial rating and the basic job of a company. Is it effectively logical to lower the rating of a company only because of its exposure to the risk of having to pay claims whereas this is an insurer's "raison d'être"? The real question must be the assessment of insurance solvency (which may have to be increased vis-à-vis certain risks) or other forms of financial guarantees but not exposure to risk in the strict sense.

In addition, in the specific case of the World Trade Center (WTC), the final cost will be shared out amongst a large number of insurance and reinsurance companies which demonstrates, despite everything, the technical effectiveness of the global insurance system (as noted in particular by Standard & Poor's).

The fact remains that it will be necessary to inject supplementary capital into the industry if some companies are not to go under because of claims' costs (such as the Japanese company Taisei Marine & Fire which has been wound up). For some of them, reconstituting their own funds will be a priority.

This should be done by raising insurance premiums or via the advent of new participants ready to share the risk. Alternatively, new solutions such as the issuing of shares to transfer the risk to investors or other alternative risk transfer (ART) strategies should be considered.

This was the case in 2002, with an increase in tariffs by an average of 40 per cent for property and liability cover of great risks, an average roughly around 200 per cent for aviation risk.

In addition, important new capacities, dedicated to terrorism cover, were set up after 11 September, principally in Bermuda (US$ 10 billion for reinsurance). Capital share increases of around US$ 10 billion were noted in US companies[18].

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[18] S. BOURTHOUMIEX, Société anonyme française de réassurance.

Unfortunately, the consequences of recent bankruptcies of large companies (Enron, WorldCom) have worsened the situation even further and will not facilitate solutions in the near future.

On the one hand, this highlights the limits of measures imposing the sale of shares on insurance or reinsurance companies with the sole purpose of respecting solvency rules. On the other hand, it makes it very difficult in the short term to convince investors to enter the insurance business.

2. Insurability of risks linked to terrorism

The question never really arose before 11 September since cover existed and had been on offer following the occurrence of terrorist attacks. Other questions needed quick answers after 11 September. Before answering the question of insurability, the risk first needs to be defined.

2.1. Cover of the risk in Europe before 11 September

Taking classical non-life and liability insurance but excluding aviation or marine insurance, which have special conditions to cover acts of terrorism or even acts of war, a distinction must be made between states with specific schemes for acts of terrorism and those without.

European states with specific schemes for covering terrorist risks

These are Belgium, France, Spain and the United Kingdom.

In the first three countries, the system is based on compulsory insurance which obliges the insurer systematically to issue cover for acts of terrorism alongside certain guarantees for loss or damage, generally fire/explosion.

This is the case in Belgium, France and Spain but with variants. Hence, in France, cover for bodily injury is via a special public fund (the "Fonds de garantie des victimes des actes de terrorisme et autres infractions") financed by an additional premium applied to all non-life insurance contracts. Material loss or damage is covered by the insurer directly under the same conditions as the basic contract.

In Spain, it is also a public fund, the "Consorcio de Compensacion de Seguros", which is responsible for material damage and bodily injury. It is also funded by an additional premium on fire, natural events and other contracts for loss or damage to goods, and benefits from state guarantees.

In Belgium, there is nothing like this, claims are borne directly by insurers.

In the United Kingdom, the approach is different. There is no so-called compulsory insurance, terrorism is covered automatically in non-life contracts up to £ 100,000. If an insurance company wishes to issue terrorist cover above that limit, it may do so by joining a specialised mutual company, Pool Re, which fixes the conditions for cover and which receives all premiums paid by member companies for terrorist risks. In the event of a claim, Pool Re assumes the total cost of loss or damage up to the amount of its global financial capacity (premiums plus reserves). In the hypothetical case that Pool Re's resources are inadequate to cover one or more events, the state would intervene in the last resort.

Insurability of the terrorist risk was not an issue before 11 September. Although certain countries suffered waves of terrorist attacks, loss or damage was nothing compared to the WTC. The problem was solved by very broad mutualisation of the risk via compulsory insurance.

In other European countries, in the absence of a specific system, the situation is generally as follows, in particular for damage risks and more often for personal insurance: terrorist risks are covered but war risks are excluded.

In liability insurance, the terrorist risk is often excluded.

Cover can therefore be offered by direct insurers by means of a specific premium and reinsured in the framework of classical schemes (treaties or optional for large risks).

2.2. Questions about current schemes

The first reaction was from aviation insurers who, using a specific clause in their contracts, quite soon after 11 September, closed all their current contracts and proposed new conditions with considerably lower levels of cover and much higher premiums[19].

We all know what happened then: to enable airline companies to continue to operate (already adversely affected by the events), European states (but also the USA and Japan) envisaged taking over responsibility for additional premiums. They also agreed to offer guarantees over and above the amounts offered by insurers in accordance with international regulations.

In Europe, these provisions, which are considered as state aid, were endorsed by the Commission. They were just extended until 30 October 2002.

The European Commission agreed to this extension calling on the aviation industry to find a solution based on pooling either at a regional or at a global level, and recommending that the costs and obligations for state authorities be limited.

Only the Swedish government recently announced that such public aid could not be extended and that the risk would have to be borne by the market.

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[19] The IAIA President announced that insurance premiums would rise from 1 to 10 per cent of operating costs for airline companies.

It also insisted on the setting-up of a mutual fund based on the proposal of the Association of European Airlines (AEA) on May 2002 (Eurotime), similar to the US initiative (Equitime) or based on the world mutual insurance scheme under the aegis of the International Civil Aviation organisation (ICAO).

Reinsurers, with the arrival of the renewal period, announced that they would exclude the terrorist risk. Without reinsurance cover, direct insurers alone would financially find it impossible to insure terrorist risks in their policies without adequate protection; they would run the risk of getting into serious difficulties if another 11 September-type catastrophe occurred.

This also posed a serious problem for insurers in countries with compulsory insurance. Whilst not being able legally to refuse cover, they would find themselves without reinsurance.

Finally, three months after the events, reinsurers, especially the market leaders, envisaged continuing to cover terrorism (including for large risks) but more restrictively than in the past and based on solutions adopted in the aviation class, i.e.:

- strict limitations in cover;
- very short cancellation periods in the event of a claim (14, even 7 days);
- premiums reviewed significantly upwards.

In addition, in future, there will probably be a better breakdown in reinsurance programmes between treaty business and individual treatment by optional reinsurance. This will, of course, depend on the size of the risks to be covered. There should also be a finer distinction between risk by risk cover and cover per event enabling exposure to be better measured.

Another point caused a problem, however, the definition of the risk covered.

Since then, six insurance and reinsurance companies[20] decided to set up a new company, Special Risks Insurance and Reinsurance (SRIR), based in Luxembourg, to meet the demand for terrorism cover.

As a first step, the policies will cover only damages to property directly linked to a terrorism attack and only for risks up to € 275 million within a 600-metre radius of the site where the attack occurs.

2.3. The definition of the terrorist risk

Before 11 September, although the risk was covered, definitions varied from one market to another or even within the same market: acts of terrorism, terrorist attacks, civil war, riots or popular movements, etc.

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[20]Allianz, Zurich Financial Services, XL Capital Ltd, Swiss Re, SCOR and Hanover Re.

The need for a uniform, clear and precise definition did not arise.

The attacks of September 11 were by their size and impact, and by the very nature of their aims, on another scale. They raised a major issue: what was the legal and therefore contractual definition of such new events which were neither acts of terrorism nor veritable acts of war but seemed able to be assimilated to acts of war?

This idea did not so much cover exclusion of liability for such events but defined a new type of risk, that of hyper-terrorism which by the uncertainty of its possible scope, its duration, its impact, made the quantification of probabilities impossible. This is not the case with natural catastrophes, for example, where a certain amount of statistical data is available. This meant that the insurance industry could not face the cost of such risks alone.

This is why, over and above immediate solutions, it would be preferable in future to arrive at the European level at a definition of an "insurable" terrorist risk (in other words, does hyper-terrorism assimilated to acts of war still count as a hazard?) or, at the very least, given the difficulties of achieving a uniform definition, to determine a threshold over and above which this guarantee is no longer a matter for insurers.

3. Possible answers?

3.1. Excluding terrorist risks

The first possible answer is to exclude the risk by assimilation in definitions of war risks as occurs on certain markets[21] but there are at least two difficulties with this approach:

- incompatibility on markets with compulsory insurance;
- possible negative reaction by the supervisory authorities as in the USA where the state supervisors refused such an exclusion.

This is why, like the solutions envisaged by reinsurers, another answer exists which is better suited to the basic technical constraints of insurance: to modify current conditions for covering terrorism around a number of ideas:

- reduction of the notice for cancellation;
- higher premiums;
- higher deductibles/excesses;
- limiting amounts of cover with thresholds over which cover cannot come from insurers;

[21] This is the proposal of Dutch insurers to their government: “We want to see whether it is possible to have the greater terrorism risk put under the law which forbids insurers to offer war risk”.

- different approaches and conditions for mass risks and large and industrial risks.

The two final points raise other issues.

3.2. Pooling risks

Firstly, that of pooling risks. Generalising compulsory cover, as already occurs on certain markets, may seem the best way to broadly pool the risk.

But over and above the legislative problems this might raise, such a solution does not solve problems of accumulation, which, even for individual risks, can result in considerable commitments.

This is why current consideration tends to favour a different approach to large risks and industrial risks with different considerations in both cases. (Such a solution was adopted by the French market which, however, has a law on general compulsory insurance. It is also a solution being floated on the Belgian market.)

3.3. Fixing an insurance threshold

There is also the option of limiting insurance intervention to below a certain threshold. Any request for cover over and above this threshold would have to come from the state. This is a clear trend in the ongoing discussions in various European countries.

On the British and Spanish markets, there are also discussions on the possible extension of existing systems (Pool Re on the one hand[22], Consorcio on the other) to classes which are not currently included (personal insurance or business interruption, for example). The Norwegian market is considering extending the scope of intervention of existing pools to fire and natural catastrophe risks.

At the same time, since the 11 September event, several initiatives have been set up[23].

In France, to complete the existing legal regime, a co-reinsurance pool: GAREAT (Gestion de l'Assurance et de la Réassurance des Risques Attentats et Actes de Terrorisme) for the cover of risks up to € 6 million was set up on 1 January 2002, for one year with the possibility of renewal.

The scheme is based on 4 tiers:

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[22] The British government (UK Treasury) just confirmed at the end of July 2002 that it agreed in principle to such an extension, which now allows Pool Re to provide cover for all terrorism risks including biological contamination, impact by aircraft and flood damage, computer hacking and viruses.

[23] Including in the Russian market where six of the major insurance companies decided to set up a terrorism pool to compensate for the important increase of the cost of reinsurance for terrorism cover.

First line, insurers (€250 million); second line, reinsurers (€ 1 billion); third line, Caisse centrale de reassurance (a state company - € 1.5 billion); then unlimited guarantee by the state. The whole system is on the basis of a cover in excess of an annual aggregate.

In Germany, a specialised company Extremus AG was set up for risks up to € 25 million and for the cover of damage to property and business interruption up to € 13 billion on an annual aggregate basis, with a first €1.5 billion reinsurance layer provided by the German government, with a second reinsurance layer by Berkshire Hathaway and the government adding € 10 billion last layer.

In Finland, after the obligation in the market to exclude terrorism cover from commercial policies, six non-life insurers (Tapiola, Fennia, Local Insurance, Pohjantahti, Turva and Veritas) decided to set up a terrorism pool, under the Finnish Motor Insurers' Centre, to cover any damage in excess of a deductible of € 0.5 million up to € 10 million jointly.

In Austria, the market agreed to set up a similar terrorism pool on 1 September 2002 with a capacity of € 200 million. So far the Vienna government has not yet agreed to participate in the scheme.

In the rest of the world, it seems that Japan is abandoning earlier plans to set up a terrorism cover fund for non-life insurers. And in the USA, despite intense pressure coming from President Bush and despite an agreement to extend aid to aviation companies, no solution has yet been adopted, draft proposals are still in discussion in Congress and the House of Representatives.

4. Towards a European solution?

All of these discussions and debates could result, preferably, in a European solution with several tiers:

As **a rough draft**, the scheme could be structured in four tiers (purely indicative, specific features to be defined):

Layer 0: **retention by the insured**:
- for industrial risks and large risks: via captive companies or self-insurance;
- for individual and mass risks: via a generalised deductible/excess (?).

Layer 1: intervention by the direct insurer up to a maximum level (for example, 5 or 10 per cent of the capital covered):
- without obligation for the insurer to issue cover (free participation);
- with free rating, incorporating the cost of the various risk layers;
- with a minimum retention for each direct insurer participating.

Layer 2: intervention by a private trans-European reinsurance pooling system combining insurers' and reinsurers' retentions up to the maximum of the combined capacity:

- with an obligation for participating direct insurers to retrocede terrorist premiums;
- with minimum capacity of several billion Euros;
- with capital open to insurance and reinsurance companies covering risks in the EU or EEA and willing to participate.

NB: for layers 1 and 2, the possibility of taking out classical reinsurance should remain open (quote part, XL, …) for each direct insurer for its retention but also for the pooling system itself.

Layer 3: State intervention (by way of excess or stop loss) to take over after the pooling system’s resources are exhausted, in a harmonized way between EU or EEA Member States and through the production of a “certificate of cover” issued by the public authorities involved.

This layer is not only intervention by each state for its own local risks – some may not be able to do it - but a co-ordinated European mechanism combining local public resources at EU or EEA level.

Although complex to organise, a scheme of this type is under study in the US and is favoured by numerous parties involved: European insurance markets, large European industrialists (FERMA), North American insurers, etc.

5. Conclusion

Since 11 September, European markets have been faced with a real problem of insurability for terrorist risks because, on the one hand, it is impossible to quantify probability and, on the other, for direct insurers no reinsurance cover is available, particularly for large risks and industrial risks.

The issue is in fact "the ability of private insurers to achieve sufficient spread of risk", especially via state intervention for such catastrophe-type events.[24] This could eventually mean a European solution possibly extended to types of risk other than the consequences of terrorist acts.

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[24] Even if in the past year many governments have been reluctant to engage in long-term solutions, participation in this field has been noted (in Europe, for example, in Austria, Sweden and theUK, and also in Japan and the USA). And even if, in reality, states have been obliged to intervene and to give aid, and in the case of the aviation risk, to avoid the sinking of one industry, or, at European level, to avoid putting one industry in a worse competitive situation than the American companies.

The Impact of the September 11 Attacks on the Austrian Insurance Market

by Herbert Retter*

Almost one year after the September 11 attacks in New York it is not possible to estimate the exact extent of damage and losses caused by these events.

First assessments talked about US$ 20 billion. At the end of October 2001, international reinsurers already mentioned an amount of US$ 40 billion clearly stating that this amount was not supposed to include all insured damages. Recently, international reinsurers revised their estimates upwards. At present, it is estimated that the total damage ranges between US$ 80 and 100 billion.

Almost immediately after the tragic events, the insurance industry signalled that in view of the capitalization of worldwide reinsurance markets to the tune of about US$ 210 billion, it would be possible to cope with damages in their insured entirety. Further, the catastrophic risks accepted by reinsurers are diverse and according to the rules of probability theory, insured catastrophic events should not occur within the same policy period.

The European market will pay for about half of the total damages caused by the terror attacks in New York; the main part will be borne by reinsurers.

Austrian insurance companies took individual decisions on the short-term action required to deal with the threat of terrorist attacks.

According to recent estimates – and at present, one can only rely on estimates – Austrian insurers, which are part of the European insurance market, sustained relatively small losses as a direct result of the September event. Payments by way of reinsurance will not exceed a one million dollar amount.

However, the Austrian insurance for industries is indirectly affected because of the shortening of risk capacities of international reinsurers by 25 to 30 per cent. From the beginning of next year, the consequences of acts of terrorism, which up to now were not explicitly excluded from industry insurance contracts, will be uninsurable or will only be insured at significantly higher rates. Insurance rates across industry could be increased by 50 to 200 per cent.

Further, Austrian insurers have been hit hard by the impact of the September 11 attacks on the capital markets since their profits from capital investments have been reduced.

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* Secretary General, Association of Austrian Insurers

Due to falling share prices, (variable) participation in profits in life insurance will have to be reduced.

As to long-term solutions to the problem, it should be said that they cannot be elaborated individually at national level. The world of insurance is a global one where everything is connected with everything. The danger remain that the attacks could be repeated and the target of any further terrorist incident could be located in Europe. Therefore, the Austrian insurance market cannot rely on the fact that it has not been affected by September 11 attacks to the same extent as other markets.

In all European countries, the question is up for discussion on how to ensure the provision of future cover for reinsurance risks. The approaches are very similar everywhere and provide for the establishment of an insurance pool for very high sums insured apart from cover which is usually provided by direct insurers and reinsurers for terrorism risk for the private and small enterprises area. This pool should build up private capacities up to a certain amount and above that limit, it should be backed by state guarantees.

In Austria, insurers agreed on setting up a mixed co- and reinsurance pool open to insurers and reinsurers doing business in Austria. The cover for terror risks includes all lines of property insurance business except transport insurance, with cover limit of € 5 million per contract. A further € 20 million cover is available for an additional premium. The cover is limited to terror risks within Austrian territory. Some further details still need to be clarified.

Prior to 2001, the concept of terror attacks was rarely used in the contract bases of Austrian direct insurers, this means that – on a private basis at least – the consequences of terrorism attacks were covered and required no separate negotiations. But after the September 11 attacks, which were completely unprecedented, it became clear that this type of event on this scale is not calculable and therefore uninsurable. Therefore, it is reasonable that insurers adapt contracts to reflect the changed risk situation.

It remains to be seen what the outcome of all these current discussions will be.

The Financial Impact of September 11 on the French Insurance Market

by Denis Kessler[*] and Jean-Marc Lamère[**]

Without a doubt, 2001 will be remembered as the year in which an unprecedented series of blows rocked the insurance industry.

One such blow was the immense, horrible and unspeakable attacks of September 11, which produced by far the most devastating disaster in insurance history, with 3,000 victims and tens of billions of dollars of damages. One year later, the total cost is still difficult to estimate – between US$ 30 and US$ 100 billion according to the expert analysts who engage in this sort of exercise. The uncertainty is due in part to the fact that the attack struck at the financial heart of the United States, and to a lack of clarity about the scope of the losses, both today (although there have been extremely large indirect losses, they are impossible to quantify accurately) and in the future (some of the impact will continue to be felt over time, like financial losses, litigation, etc.). Finally, there is also uncertainty as to what is covered by insurance, what is covered by other measures, and finally, what is not covered at all[25]. The final cost of the September 11 attacks to the worldwide insurance industry will, in all likelihood, not be known for many years to come. In addition to the direct impact on insurers and reinsurers' bottom line, the aftershock shook the entire insurance industry, as the cost of reinsurance rose and insurance capacity for certain activities was restricted.

In France, the chemical blast that destroyed the AZF plant in Toulouse just 10 days after the terrorist attacks in the US also turned the known universe of risks on its head. The worst industrial accident in France since the Second World War, this terrible explosion left 30 people dead and several thousand others with injuries. It also resulted in damages that were highly concentrated geographically: nearly 70,000 claims were reported in the southern section of the Greater Toulouse Area. A number of natural blows were also dealt in 2001, illustrated by the unusually persistent flooding in the Somme, which continued unabated for several weeks.

The year also saw its share of financial disasters, due not only to the volatility of the world's stock markets when the terrorist attacks of September 11 occurred, but also, and above all, to ongoing market depreciation throughout the year, which had particularly serious consequences for the insurance industry. The economy was also threatened by the prospect of a global slowdown.

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[**] Managing Director, French Federation of Insurance Companies (Fédération Française des Sociétés d'Assurances)

[25] The Pentagon and other federal buildings, for example, were not insured on the commercial insurance market. The same goes for road, rail and waterway networks, civil engineering, infrastructure, etc.

In the face of this unmitigated onslaught, the insurance industry proved to be remarkably resilient. Insurance companies honored their obligations to policyholders, maintained a high level of solvency, and offered novel solutions to the problems engendered by the new operating environment.

One such example is the system put in place in France in December of 2001 to cover the risk of terrorist attacks. Due to French legislation, which has no equivalent in other developed countries, the post-September 11 withdrawal of reinsurance capacity to cover the terrorist risk could have created major problems in commercial property lines. Fortunately, French insurers quickly organized, responded, and worked with the government to come up with a solution that enabled not just the normal functioning of the commercial insurance market, but which also provided a level of coverage for the terrorist risk in France that is unmatched in other industrialized countries.

Under these exceptional circumstances – a time of neither war nor peace – it was necessary to set up an organization capable of managing events which, because of their magnitude and nature, no longer fall within the province of random occurrence and hence of insurance.

1. The French insurance market: the highlights of 2001 and outlook for 2002

1.1. The highlights of 2001

The September 11, 2001 terrorist attacks comprise the largest loss in the history of the insurance and reinsurance industries. In France, the investment environment was troubled throughout the year and a number of industrial and weather-related disasters also took a heavy toll.

Total premium income for French insurers and reinsurers increased by 2.2 per cent in 2001, reaching 210 billion euros. Although life and health insurance premiums (primary business) decreased by 6 per cent in 2001, falling to 93.4 billion euros, premiums from property and casualty insurance operations rose by 6 per cent, totaling 33.6 billion euros. Despite the decline in investment income and a number of one-off charges, consolidated underwriting results for the industry were positive.

The French reinsurance industry (including subsidiaries) reported a substantial 29.5 per cent rise in premium income, bringing the total to 13.6 billion euros. Notwithstanding this improvement, the reinsurance industry posted a loss of 576 million euros, attributable to the impacts of September 11.

Total assets under insurance company management grew by 5 per cent compared with the prior year (expressed in terms of fair market value, i.e. including unrealized capital gains), to 903.8 billion euros as of December 31, 2001. New investments, i.e. the net difference between total invested assets on December 31, 2000 and total invested assets one year later, were 42.8 billion euros.

1.2. The outlook for 2002

Insurable property: flying at half-mast

Although the attacks that occurred on September 11 did not cause the current slowdown in the world economy, they clearly exacerbated it. The impact on financial markets, GDP and consumer and business spending, and specific sectors (air travel, tourism, etc.) in the US has undoubtedly spread to the rest of the world. Because of the structure of its international trade, France is not as directly exposed to a US economic downturn as some other European countries. Nevertheless, because European markets are also shrinking, France has only been partially shielded from adverse global developments.

Because of the targets selected and the country in which they were located, this major disaster came at a delicate time for the world economy. The US economy was already weakened before the attacks occurred. By the end of 2000, the US had set a decade-long record for the longest period of economic growth. The gradual slowdown in the US economy, long predicted by market analysts and postponed countless times to the following year, appears to have started in 2001. It gradually spread to the rest of the world and did not spare France along the way (although the impact on France was delayed, because of the structure of our GDP).

The first signs of an economic downturn had already emerged in France before the September 11 attacks. Consumer and business confidence was flagging, reflecting uncertainty over the near future. After September 11, all of these indicators plummeted, and they have been struggling to stage a convincing recovery in France and most of Europe, reducing the likelihood of robust growth in 2002.

Weakened in part by the September 11 attacks, the economy will be less robust in 2002 than it was in 2001. A closer look at economic forecasts prepared by survey research institutes shows that the French economy will post modest growth in 2002 – of between 1 per cent and 1.5 per cent overall, with the pace of growth picking up to 2-2.5 per cent by the end of the year, moving in line with the rest of Europe. This level of growth is not adequate given the domestic employment and public finance situation, and will not allow France to maintain its standard of living relative to the average level in other countries.

Regardless of the method used to calculate per capita GDP, France makes a rather poor showing (it is ranked ninth out of the 12 euro area countries). At the same time, France is losing market share to its euro area partners. The link between this sub-performance and certain other factors – i.e. the fact that France has the lowest employment rate, the lowest number of working hours, and the highest level of public spending – is undeniable. France and France alone holds all of the keys to liberating the drivers of economic growth.

France suffers from a number of endemic problems. The recently elected government needs to send out a clear signal to the French business community, which plays a key role in increasing the wealth of the nation.

Government leaders in our most important neighboring countries have focused their efforts on research and competitiveness. Businesses are recognized as playing a valued role, social dialog is viewed as a positive thing, and entrepreneurs are given a voice. None of this has happened in France in recent years. On the contrary, the authorities have acted like they are living in a different era: heavy taxes, archaic laws, and regulations that are impossible to understand, never mind follow. Is it possible to become competitive in a global economy when, by failing to reform the bureaucracy[26] in timely fashion, the authorities have repeatedly discouraged domestic and foreign investors?

Both the substantive and the procedural aspects of the latest development initiated by the previous government, the social "modernization" act, further jeopardize France's ability to attract investment now and in the future. Even before that act was passed, the World Economic Forum ranked France last for its inflexible labor regulations, level of public spending and taxes. France's ability to attract investment is rapidly dwindling and the changeover to the euro – unless there is a radical policy shift – will be a rude awakening for those who believe that France will be included in the winners' circle. The immediate transparency of prices and costs and the increased mobility of the workforce, capital and technology will necessarily make it even harder to compete in Euroland than it is today.

Regardless of whether growth reaches 1 per cent or 1.5 per cent in 2002, the overall economic outlook will not be too bad for the French insurance industry, especially since premium income in any given year is linked more to how the economy performed in the previous year than in the current year. However, the drop in reinsurance coverage available on the world market, the inclusion of special rates for insurance against terrorist attacks, and disruption on the financial markets are all factors that will result in significant rate adjustments. The attacks on the World Trade Center could also change behavior patterns of insureds. Certain products, such as Personal Accident Coverage (*Garantie accidents de la vie - GAV*) may increasingly attract individuals who wish to provide for any eventuality. The trend is clearer for the "savings" behavior of individuals. The move from life insurance contracts denominated in accounting units toward contracts denominated in euros will continue as long as no clear trend emerges on equity markets.

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[26] France spends €90 billion more than Germany each year, and has 50 per cent more civil servants providing comparable public services. Far from narrowing, this gap has widened since 1997, by more than €15 billion compared with the Euroland average.

The real price of risk: an alternative to enhancing profitability through financial investments

The scale of the losses on September 11 was a dramatic reminder that risk has its price, and that this price must be reflected in rates. The buoyancy of the financial markets over the past few years, particularly equity markets, has somewhat obscured this fact, so much so that insurance was viewed more as a form of asset management than risk management. As the new, key link in the chain of value, asset management has enabled market players to offset deteriorations in underwriting results with recurring investment income and by realizing unrealized capital gains. Investment management certainly lies at the core of an insurance company's business: its assets are the counterpart to legal commitments it has made to insureds. Performance and security are no doubt central to asset management, because of the contribution they make to balanced accounts. Although it is crucial in creating a solid financial base in the industry, asset management should never replace risk management as its central focus.

Risk has a value, and insurance players must explain the fundamentals, particularly in France where, although the term "risk" is frequently used, and often misused, there is little true understanding of insurance and risk. Risk analysis and prevention and technical rating should be emphasized. Companies and shareholders must understand that the counterpart to the cost of insurance is the creation of value over the long term. Insurance can help firm up a number of balance sheet items, particularly income. It enables companies to predict future performance (which is the very essence of capitalism) based on corporate strategy, by taking calculated risks and excluding risks that cannot be quantified. Actuaries and financial analysts will understand that "fair value" cannot be calculated without knowing net risk[27] exposure. Since risk is not included in the balance sheet, it should be added as an off balance-sheet item, for it is equivalent to an off balance-sheet commitment[28].

This argument does not, however, resist very well when confronted with the facts. Since insureds simply see insurance as an additional cost that will ultimately impact on profits (or the budget) for the year, they use their negotiating leverage to compel insurers to bring their prices into line with the lowest rates. In a market characterized by increasing concentration of both supply and demand, increased competition only benefited clients in the form of under-rated coverage. To prove this, one need only look at the changes in the underwriting margin over the last few years: from a balanced margin in 1996, it gradually declined to reach a low in 1999 due to the impact of the storms Lothar and Martin at years' end. At the same time, investment income (all categories combined) was up considerably.

This inverse relationship between investment income and underwriting results is not unique to France. A recent study by Sigma highlights the negative correlation between these two components of insurance company profitability on the world's leading

27. Overall exposure using standard risk analysis, minus the various types of coverage.
28. This lack of transparency, which may mislead shareholders, is exacerbated by the lack of knowledge about retention and the existence of captive insurance companies, in the case of many large companies.

markets. Investment income is, in fact, one of the main components of the underwriting cycle. The insurance industry, particularly non-life branches, is characterized by 6-year cycles[29], with alternating periods of rising and falling rates. These cycles can also be due to late premium adjustments.

The low point of the cycle seems to have been reached at the end of 1999, when the storms Lothar and Martin clearly helped put a stop to deflationary pressures. Let us not forget that the French insurance industry paid a hefty price for these events – no less than 6.9 billion euros. This was, however, far less than the cost to the international insurance industry of the tragic attacks on the World Trade Center. Nevertheless, the storms of 1999 only accelerated the end of the cycle, which would probably have been reached in 2001. The weakness on the financial markets in 2000, which increased in 2001, points to the start of a new underwriting cycle with even tighter rates.

Both the high volatility of stock markets when the September 11 attacks occurred, and their marked contraction since the beginning of 2002, should confirm this upturn in the cycle.

The drop in global reinsurance capacity: what impact will it have on primary insurers?

Paradoxically, it is precisely when the market has the least to offer that demand for coverage is growing. The undetermined costs of the attacks on September 11 and the number of branches affected by the destruction of the Twin Towers radically changed the rules in the global reinsurance market. From an environment of surplus supply, which generally forces prices downward, the market suddenly reversed course, faced with a lack of capacity[30]. Under these circumstances, predicting the impact of the forces at play following September 11 is made easier by the fact that it came on top of prices that were already firming up. The growing cost of natural disasters over the last two years (the storms Lothar and Martin in Northern Europe, Typhoon Bart in Japan and Hurricane Floyd in North America) has left its mark on risk history in the insurance field. The effect these storms might have had on the rates set out in reinsurance treaties was delayed as long as financial markets were booming. However, since the contraction in 2000, reinsurers had no choice but to rate risk at its true value in order to improve profitability.

The drop in reinsurance capacity, price increases and the exclusion of risks such as terrorist acts from reinsurance coverage are some of the reasons for the renewed interest in alternatives to traditional insurance. Self-insurance and coverage on financial markets are two such options. However, neither seems to offer a miracle solution. It is difficult to imagine using financial markets in the current context of non-transparency.

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[29] 7.3 years in France, according to Sigma "Rentabilité de l'assurance non-vie : il est temps de se reconcentrer sur l'essentiel" (Profitability of non-life insurance: it is time to return to the essentials), No. 5/2001.

[30] While it is true that new capacity has been created since September 11, particularly in Bermuda, the funds raised will only partially make up for the drain on finances brought about by these dramatic events.

In addition, although options to cover terrorist attacks exist, they are expensive and volatile. As for self-insurance, creating captive insurance companies or tax-exempt reserves will not be enough to deal with the scale of exposure linked to such attacks. The reason why the cost of terrorism coverage, mutualized at the international level, is reaching these heights is because of the potential for accumulation of catastrophic risk. Compared to the shareholders' equity of insured companies (no matter how large the company), this level of exposure would be even less acceptable today than it was in the past.

2. What coverage solutions for terrorist acts and attacks?

In addition to problems of legal and political definition, a risk should technically be both probable in the sense that it is "possible and can be modeled" and unpredictable, in other words, the likelihood of its occurring should be structural, and not depend on the circumstances. Terrorist acts, by definition, do not fulfill these criteria, since they cannot be modeled and their likelihood depends on the political situation.

The lessons learned from the dramatic events of September 11 have caused key players on the global reinsurance market to firmly support a more restrictive underwriting policy for the risk of terrorist attacks. Because of the current shortage of coverage, some direct insurers have even been forced to cancel their large risk portfolio. A solution urgently needed to be found, failing which several large French corporations could have found themselves without any property damage coverage on January 1, 2002. An agreement was reached on December 10, 2001 by insurers and reinsurers, in consultation with the government, on the coverage of large risks, which combined market capacity and a government guaranty through a pool named GAREAT (Managing Insurance and Reinsurance of the Risk of Terrorist Attacks and Acts of Terrorism – *Gestion de l'Assurance et de la Réassurance des Risques Attentats et Actes de Terrorisme*).

2.1. The legal definition of attacks: blurred boundaries

The events of September 11 fall outside the scope of terrorism, but do not fall under the classical definition of a state of war between nation states (which would fall within the realm of the state). Many geo-politicians feel that the attacks were more than just an unusual event with disastrous economic consequences. The notion of a "classical" war, in which belligerents are identified, and weapons as well as targets are primarily military in nature, may be giving way to a "creeping" terrorist war, without obvious state involvement, where both the weapons and most of the targets are "civilian" in nature.

It is difficult to define the term "terrorist". Nationality cannot be the key criterion. Rather, terrorists belong to an ideological group that is usually international in nature, although they may also be citizens of the country against which they commit their terrorist acts. The disaster in New York is therefore difficult to characterize and define.

In the current context, the lines between a war between belligerent states, civil war, riot and civil commotion, terrorist attacks and acts of terrorism are no longer clear-cut.

In addition, it is difficult to distinguish between terrorist acts and attacks on the one hand, and acts of sabotage and malicious acts on the other. A domestic or international terrorist group may or may not claim responsibility for or be accused of such attacks. When a company falls victim to such an act, the attack may have originated inside or outside the company. The same is true of acts of sabotage and malicious acts.

2.2. The only boundaries between attacks and other risks are economic ones

In addition to the political and legal debate, insurance criteria – mainly financial – inform our decision about whether attacks are insurable. First, we must review the fundamentals of insurance. The insurer must model an unforeseeable risk in order to mutualize it across a large number of insureds, over many years. The end result is a contract setting out the scope of coverage and the rates.

It is clear that, while we have statistics and models for property damage on the ground caused by a plane crash, the same is not true of aviation terrorism. Not only is there no experience to rely on, but the act itself is not random: both the method and the targets are selected. It is also clear that exposure to the risk of terrorism and particularly "hyper-terrorism" depends on political and military choices that are made by governments. There is thus no model for us to use, since the risk depends on the position taken by governments and terrorist groups. It is also a risk whose financial impact may resemble that of war.

Assuming that we nevertheless wish to cover this risk, we need to tackle the problem of the financial capacity of the insurance and reinsurance market. For example, the cost of the attack on the Twin Towers represents four years of worldwide airline insurance premiums collected by the aviation insurance branch. This leaves us with only the option of mutualization over a long period of time. But this will only be possible if the risk can be modeled (in other words if we can reasonably say that losses can be valued globally over 10 or 20 years), and if the risk to which the shareholders' equity of insurance and reinsurance companies' is exposed does not threaten their survival. None of these conditions are met, which means that the risk of "the new 21st century terrorism" is uninsurable. At best, one can imagine that insurers and reinsurers may have the capacity to deal with run-of-the-mill attacks, but that coverage of terrorism on the scale of a full-fledged war should be the responsibility of governments.

Although the risk of hyper-terrorism cannot be defined legally, it can, on a more practical level, be defined in economic terms, based on the volume of financial capacity available on the world market. In fact, the risk of war is uninsurable, and what we are dealing with is the risk of something approaching war. Historically, losses due to war have been compensated after the war was over, when parliaments voted for reparations. The special nature of hyper-terrorism and the need for ongoing financial coverage that characterizes our era calls for solutions for risk coverage that combine market capacity and government guarantees in the event of major disasters. All developed nations are busy implementing such measures for 2002.

2.3. Measures implemented on the French market

Regardless of whether we are dealing with aviation, marine or non-marine insurance, the risk of future terrorist attacks cannot be insured by the market alone. Since governments have refused to treat this new type of risk as a war risk (except, in part, under marine insurance), insurers have had to quickly work out solutions with the authorities.

Non-marine commercial property insurance

Pursuant to French legislation[31] - which has no equivalent in the rest of the developed world – the withdrawal of reinsurance capacity for terrorist risks following the September 11 attacks forced French insurers to issue policy cancellations (as a conservative measure) or suspensive quotes. By October of 2001, the situation had reached crisis proportions, compounded by rate hikes enacted at about the same time due to operating conditions in the commercial/industrial risks market (which included higher loss experience and lower investment income). Four solutions to these related issues were considered at that time.

The first was to simply enforce the 1986 Act, without requesting that the Caisse Centrale de Réassurance (CCR) or the government intervene in any way. Risks would have had to be carefully screened and many companies would have been unable to obtain property insurance due to limited capacity. The result would have been unacceptable exposure for businesses and an economic slow-down, placing the government in an impossible position.

The second was to eliminate the requirement of insurance against terrorist attacks. That step, however, would have made it difficult for many companies to obtain coverage. In addition, that solution was unacceptable to the government in view of the underlying principles of the 1986 Act.

The third solution was to have the CCR intervene directly, i.e. provide reinsurance against the risk of attack, backed by a government guaranty, as provided for by the 1986 Act. Under those circumstances, the risk of attacks would have been placed on the CCR's terms, and the CCR could have acquired a monopoly position with respect to that risk. The government's budget would have incurred maximum exposure as well.

The fourth solution, which is the one that was finally chosen, is based on sharing out the risk of terrorist attack between the insurance and reinsurance markets and the government through the CCR. Attack risks were thus placed through a co-reinsurance

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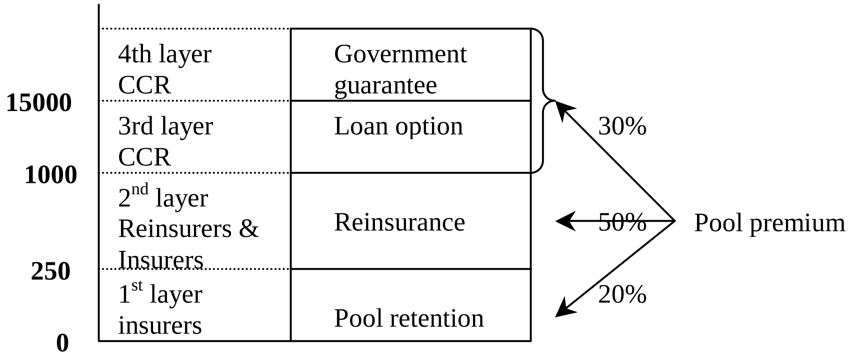
[31] The Act of September 9, 1986 requires that all property-casualty insurance policies extend the same terms of coverage to terrorist acts or attacks that they provide for other events insured under the policy. This makes it impossible to offer property coverage in France without also covering terrorist attacks.

pool, which was itself reinsured by the market up to the limits of the market's capacity, and then by the CCR backed by a government guaranty.

In order to arrive at this last solution, insurers had to reach agreement among themselves and with reinsurers, intermediaries and risk managers so that they could develop a proposal that was in the public interest and would make it possible for businesses in France to obtain insurance against the risk of terrorist attacks. That proposal was discussed at length with the authorities, who delayed their decision, convinced that the reinsurance market, and thus the insurance market, would return to near-normal conditions before policies came up for renewal in 2002. It was a complicated exercise because all of the parties had to be brought on board and a solution had to be found to the problem posed by the enormous diversity of the risks involved (size, kind of business, type of arrangement, etc.), all the while keeping in step with ongoing developments in Europe.

After this concerted effort, the government finally announced on December 10, 2001 that the CCR would cover acts of terrorism in excess of a defined threshold, backed by the government. Following two weeks of intensive preparation, French insurers, working in collaboration with the world reinsurance market, set up a reinsurance pool called GAREAT. This pool is designed to insure and co-reinsure damage to property caused by acts of terrorism or terrorist attacks. The pool covers businesses, local governments, very large buildings and technical risks whose insured value exceeds 6 million euros. This pool is reinsured by the CCR, backed by the government, for annual aggregate losses in excess of 1.5 billion euros. GAREAT's bylaws and internal regulations were drafted, and the terms of cession as well as rates for the various layers were determined[32]. GAREAT mandated two brokers to collect payments on the second layer, and reinsurance treaties were drafted with second layer reinsurers and the CCR. This enabled the renewal of corporate and global risk policies by the beginning of 2002.

[32] For risks with an insurance value within the €6 million-€20 million range, the rate is 6 per cent. For risks with an insurance value of €20 million-€50 million, the rate is 12 per cent. In excess of €50 million, the applicable rate is 18 per cent.



GAREAT: annual stop loss coverage

In its first year of existence, GAREAT will feature four layers or lines: 1st layer (insurance), €250 million; 2nd layer (reinsurance + facultative), €750 million; 3rd layer (CCR), in the form of a financial reinsurance arrangement, €500 million; 4th layer (CCR backed by government), over €1.5 billion.

In addition, a decree and an order appeared in the Official Gazette *(Journal Officiel)* of December 31, 2001 that allowed severing terrorist attack coverage from basic coverage for major risks as defined in the Insurance Code, for over 20 per cent of the principal sum for basic coverage, and a €20 million minimum. This solution should offer greater flexibility in applying the rule to very large accounts. It must however be understood that it is not supported by analyses of the maximum possible loss for terrorist attacks and that the drop in the cost of reinsurance through the GAREAT is small. Reliance on this special provision must of course remain the exception if the market-based solution is going to work.

Aviation insurance

In response to the events of September 11, 2001, aviation insurers worldwide placed limits on the third-party liability of civil air carriers for property damage that occurs on the ground due to war and terrorist risks. For passenger liability, however, pre-September 11 levels were maintained.

To rebuild existing capacity and maintain future payload capacity worldwide, a surcharge of US$ 1.25 is being applied per passenger. As in any free market, once capacity has been rebuilt and exposure reduced (over the medium term), the cost of coverage will fall.

For third-party civil liability coverage against war and terrorist risks, governments have introduced subsidies for air carriers in Europe and the United States. Airlines require civil aviation liability insurance if they are to continue to assume the risk of carrying passengers. Given the strategic importance of air transportation, governments cannot refuse to accept liability arising from the sudden increase in war and related risks. But they must coordinate their response to avoid distorting competition.

The European Commission has extended until October 31, 2002 the authorization granting governments the right to subsidize coverage for air carriers. The United States has indicated that it plans to extend this period for another sixty days as of June 19, 2002. Since the agreement was concluded on September 25, the French government has several times extended the authorization granted to the CCR to reinsure terrorist risks with government backing. The conditions under which the CCR may intervene have not been modified[33].

At the same time, the aviation industry is setting government-backed war-risk insurance policies, at both the European level (Eurotime[34]) and in the US (Equitime[35]). The International Civil Aviation Organization (ICAO) has recommended pooling risks on a worldwide basis[36]. For the time being, only two solutions are available in the commercial insurance market[37].

Marine and transport insurance

Acts of terrorism are covered under war risks coverage generally taken out on large risks (hull insurance) and cargo insurance. If policyholders choose not to take out this coverage, they are covered for acts of terrorism under their property insurance policies pursuant to the Act of September 9, 1986.

If the terrorist threat were to worsen, causing reinsurers to cancel treaties, then "ordinary risk" insurers exposed to the risk of terrorist attack by virtue of the Act of September 9, 1986 would lose their reinsurance coverage.

To prevent this type of coverage gap, the CCR is authorized to offer government-backed reinsurance coverage for "ordinary risks" without applying the short-notice termination clause[38]. This coverage is granted under the same terms and conditions as

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[33] The Caisse Centrale de Réassurance intervenes in "airline" and "service provider" coverage in excess of US$ 50 million. The cost of coverage is US$ 0.35 per passenger from US$ 50 million to US$ 150 million, US$ 0.35 per passenger from US$ 150 million to US$ 1 billion, and US$ 0.25 per passenger from US$ 1 billion up to the insurance value of the policy.

[34] Under the auspices of the Association of European Airlines (AEA), the air transportation industry has devised Eurotime, a pooled fund that enables carriers to acquire insurance against the risk of terrorist attacks. Eurotime premiums will be paid through a €0.50 tax per passenger and contributions from related industries (airports, manufacturers, etc.). The exact mechanism has yet to be determined Eurotime. coverage will attach from US$ 100 million to US$ 150 million, and will be capped at US$ 1-US$ 1.5 billion dollars. The pool will require government backing in its first few years.

[35] Set up and funded by the major US airlines in the Air Transport Association (ATA), this risk retention group will be reinsured from US$ 300 million by the US government and will provide third-party and passenger war-risk liability coverage capped at US$ 1.5-2 billion. The premium is expected to be between US$ 0.50 and US$ 0.70 per passenger.

[36] The solution recommended by the ICAO is to pool risks on a global basis through a non-governmental organization to which ICAO contracting states would be obliged to deliver a guarantee proportional to their voting rights within the organization. An ICAO task force, working in conjunction with the IUAI and the London Market Insurance Brokers' Committee (LMBC), is devising the scheme. IT would provide third-party war-risks liability coverage in excess of the US$ 50 million limit the market currently offers. The pool will be funded through a premium collected by airlines and paid by passengers. Domestic airline carriers whose governments have backed the pool would be covered. Government intervention would be triggered over and above the first layer, and coverage would be capped at US$ 1.5 billion.

[37] AIG and Allianz are currently the only two companies on the market that offer third-party war-risks and terrorist liability coverage. Since September 24, 2001, AIG has offered coverage of up to US$ 1 billion in connection with a pool of insurers. Since May 8, 2002, Allianz (with Berkshire Hathaway as coinsurer) has been providing coverage of up to €1 billion per aircraft and €2 billion per airline per annum.

[38] From 48 hours to 7 days.

"ordinary risk" policies, which generally may be terminated on the policy anniversary date, pending advance notice of 30 to 60 days. It falls under the CCR's so-called War Risks "B" coverage (Article L431-4 of the Insurance Code), and was implemented by a January 1, 2002 amendment to "exceptional risk" treaties between the CCR and its ceding insurers. The CCR reinsures risks as per the terms and conditions of standard market policies.

3. Adapting statutory, regulatory and tax measures to the nature of the risk involved

Moving beyond terrorist attacks and their financial impact on the French insurance market, we believe it would be helpful to expand the discussion to include all risks that share the features of catastrophic risks. Other kinds of risks relating to industrial risks, the climate, the law and technological innovation may warrant the development of additional capacity (by adjusting rates, but essentially by modifying the applicable regulatory and statutory framework). The greenhouse effect entails substantial risks due to the growing number of increasingly extreme climatic phenomena (storms, floods, droughts, etc.). Developments in the case law also have an impact on liability. Because advances in technology are leading insurers into unexplored territory (electromagnetic radiation, GMOs, new types of medical treatment, etc.) this branch of the insurance industry is even more strongly affected by catastrophic risks.

In order for insurance to continue to play its proper role, rates must accurately reflect the risks involved. However, although rates that are more in line with technical risks are a solution, they do not solve the whole problem. The government must also provide insurers with a stable statutory and regulatory framework that allows them to strengthen their own prudential mechanisms. The financial security that economic agents need is based on legal predictability. The right of contract must be strictly respected. Extending the scope of equalization reserves to include the risk of terrorist acts and attacks is a first step in this direction. But it must also be expanded to include other branches, including those broadest in scope, such as liability, a branch that is exposed to a potentially recurring risk that could result in the unforeseeable appearance of extremely high loss premium ratios in certain years.

The prudential mechanism of insurance is not limited solely to equalization reserves. It also consists of reserves for outstanding claims, which must be encouraged through tax and regulatory means. It must be emphasized that this type of prudential reserve is an essential prerequisite for security in the insurance industry. Setting aside such reserves may be tricky, even for a statistically-defined class in a given branch, due to variations in the amounts of claims in property damage and liability insurance. Although it is normal for surpluses to be generated and therefore taxed, the rate at which they are taxed should not work as a deterrent.

With this in mind, the tax on liquidation premiums, which applies to surpluses in reserves for outstanding claims, should allow companies to set aside reserves for claims on terms that they feel are necessary without compromising the rights of insureds, while ensuring a return to the Treasury for the benefits derived from the use of the cash. Obviously, from this standpoint, the rate applied in France (9 per cent) is far higher than it should be. In order to avoid violating the spirit of the law, that rate must be indexed to the cost of money, at a maximum.

The ongoing development of insurance is an indispensable component of economic and social progress, because it enables human beings to manage risks, promote risk prevention, and provide the guarantees that individuals and businesses need to function. Insurance protection enables economic actors to resist the blows they suffer. In 2001, the insurance industry demonstrated that it was capable of bouncing back from a series of extraordinary blows. It will continue to do so in the future if it has the full support of a favorable and stable regulatory, tax, and legal framework.

The Implications of 11 September for the German Insurance Industry

by Michael Wolgast*

1. Introduction

At the beginning of the 21st century the German insurance industry is going through a period of radical change. Globalisation, increasing European integration, the new IT world and the drastic demographic changes are some of the factors leading to new orientations in many areas of the insurance business. A new definition of target markets, changing sizes of companies, a fundamental change in the relationship with other parts of the financial sector, the opening of new distribution channels and the introduction of innovative products are on the agenda for many German insurance undertakings. In these eventful times 11 September came as a shock.

The consequences of 11 September - apart from the fact that the US naturally is hit most severely - challenge the international insurance industry in its entirety. Nevertheless, each country responded to 11 September in a different way. In the following we describe some noteworthy reactions which are emerging in the aftermath of 11 September on the German insurance market. However, nearly one year after the terrorist attacks on New York and Washington the insurance industry in Germany is still in full process of reconsidering its targets and policies even if short-term adjustments following 11 September have by now been largely accomplished. On the other hand, 11 September is already in danger of fading as a trigger of important adjustments due to other events in the course of time.

2. Direct consequences of 11 September for German insurance undertakings

2.1. Amount of damages

Reliable figures about the entire amount of damage caused by the terrorist attack of 11 September 2001 will not be available until a later time. Meanwhile, it is assumed that the total costs to be borne by the insurance industry worldwide could amount to US$ 32 to US$ 56 billion.[39] The largest insurance claim to date world-wide, caused by hurricane Andrew in 1992, had been estimated to have caused an insured property loss of US$ 20 billion at the time. Broken down by insurance class, the business

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[39] Source: Tillinghast-Towers Perrin.

interruption, property, general liability, aviation liability and also life and accident insurance are the first affected.[40] As the majority of claims were covered by reinsurance, the events of 11 September affected above all reinsurers.[41] According to estimates about half of the losses of 11 September are borne by European insurance companies through reinsurance. This is enough to show that via reinsurance the insurance markets are strongly linked to each other in a global network, so that it is hardly possible to talk about "national markets", perhaps with the exception of the direct insurance sector on account of the still existing diverging legal systems, but also of the presence of domestic insurance companies in the market – in any case domestic by trademark, by name, not necessarily by ownership.[42] On the other hand, the extra-European reinsurers, and thus again the insurance industry world-wide, would probably have been affected in the same way if a comparable attack had been directed against a target in Europe.

Therefore, it is not by mere accident that the bulk of the losses arising for the German insurance industry after 11 September lies in the reinsurance sector. Munich Re at first expected, on its own account, that it would have to pay about 2 billion Euro in claims. In July 2002 the company reported that the provision for the World Trade Center claim had been increased by another 500 million Euro to more than 2.6 billion Euro.[43] The share of other German reinsurers in the losses of 11 September very often also amounts, on their own account, to three-digit million figures (in Euro) (cf. the table below). The Allianz reported to be liable for net losses resulting from the terrorist attack amounting to 1.5 bn Euro.[44]

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[40] The extent to which the different classes are affected, depends also on a multitude of legal questions which are not yet definitely solved (e.g. TPL, possibly under-insurance problems, state subsidies). A first technical analysis of the attack on the WTC had been submitted by Munich Re in October 2001, entitled "11 September 2001".

[41] According to General Cologne Re a 40 per cent to 60 per cent distribution of the WTC loss to the direct insurance market and to the reinsurance market respectively appears to be probable.

[42] The international networking of reinsurance markets is by no way a new phenomenon. A major part of the losses caused by the earthquake of 1906 in San Francisco was already covered through Munich Re and Swiss Re. Incidentally, according to experts, the loss then arisen in San Francisco could absolutely be compared with the loss of 11 September as far as its economic impact is concerned.

[43] In a press communication of 10 July 2002 Munich Re stated: "This increase of the loss reserve for the WTC claim has to be considered against the background of the singular complexity and size of this event. Thus, Munich Re makes provisions for groups of claims which have not yet been notified and which are therefore especially difficult to assess. This concerns above all workers' compensation insurance, but TPL and business interruption insurance as well."

[44] The figures quoted in the text and in the table about the loss burden falling on selected German insurers as a result of 11 September will generally have to be understood as net figures (claims payments net of reinsurance or retrocession). In addition, distinctions must be made according to the burden before or after tax, if necessary also taking account of the change in the equalisation provision. Liabilities arising for German direct insurers and reinsurers on account of their membership in the German Aviation Pool (Deutscher Luftpool – DLP) are not separately stated. The DLP provides considerable capacities for aviation risks in particular in the German, but to an increasing extent also in the international market. After the attacks of 11 September the DLP expects a record loss for 2001. However, it is hard also in this case to quantify the exact expenditure.

Table 1
Burden of loss falling on selected German insurers after 11 September

Company	Amount
Munich Re	2.6 bn Euro
Allianz	1.5 bn Euro
Hanover Re	400 million Euro
Gerling Global	300 million Euro
Cologne Re	245 million Euro
Swiss Re Germany	81 million Euro
AXA Germany	55 million Euro
Gothaer Re	no less than 12 m. Euro
Victoria	7.5 million Euro

Source: press reports, statements from the companies

Naturally, it is not easy for German direct insurers and reinsurers, either, to shoulder a burden of loss of this size. September 11 left its more or less visible marks on the balance sheets in 2001 and it was also reflected in the insurance indicators, first of all in the loss ratio.[45] Nevertheless, in the end, the German insurers concerned have coped with the events of 11 September without suffering major breaks. On the contrary, you might say that exactly the particularly hard hit insurers have proven their resilience and financial strength in an impressive way.[46]

2.2. *Impact on the financial markets*

Naturally, the German insurance companies were also affected by developments on the financial markets in the aftermath of 11 September; this may even be the area where the most significant short-term impact of the 11 September events on the German insurance industry was felt. On the one hand, this applies to the share prices for quoted German limited insurance companies. On the other hand, it applies also because insurers in their role as important investors were greatly affected by the general price trends on the stock markets. On the eve of 11 September insurance companies in Germany, being the largest institutional investors, had a shares' portfolio amounting to a market value of roughly 700 billion DM (situation as per year-end 2000). Thus, they held, directly or indirectly, approximately one third of all shares in Germany. Moreover, 11 September hit the financial markets in a period where these were already going through a critical development. Even before 11 September many assets, in particular shares or technology shares, suffered a decline in prices, which alone was an unfavourable situation for insurers as investors. In this environment the first shock reactions resulted in a considerable deterioration of security prices, affecting in

[45] The Allianz Group for example had stated that its loss ratio in non-life insurance in the first nine months of 2001 would have decreased, without 11 September, by 2.9 percentage points to 75.0, but that in fact it had risen to 80.9 per cent (press communication from the company of 14 November 2001).

[46] At present it is difficult to assess whether and to what extent German direct insurers and reinsurers have taken the events of 11 September as yet another reason to further increase their technical provisions and, if necessary, also their own funds.

particular shares of insurance companies. Until 21 September 2001 both the shares of most German insurance companies and the German share index (DAX) dropped to a record low for the year (cf. table below).

However, just over two months after 11 September the shares of insurers – in keeping with the general price trend – in Germany, Europe and the USA had recovered, with, in some cases, the price level at the end of 2001 even above that before the attacks. This was also reflected in the development of the current insurance indexes (Dax 100 Insurance, Euro Stoxx Insurance, Dow Jones US Insurance).[47] Meanwhile, during the first half of 2002 share prices once again dropped across the board. This, however, can hardly be any longer attributed to the uneasiness triggered by 11 September. Besides, the general evaluation of the consequences of 11 September for the long-term price trend of insurance shares differs. Contrary to sceptic comments on the burdens and problems coming up for insurance companies you can also maintain that an increased need for security will probably result in an increased demand for insurance, which again will have a positive impact on insurance share prices.[48] Obviously, the players on the financial markets had soon recognised that the volume of claims caused by 11 September has almost no influence on the market value of companies (in terms of the current value of future profits).

Table 2
Price trend on the German stock market after 11 September 2001[1]

	Allianz	Munich Re	Hanover Re	AMB	DAX	DAX 100 Insurance
10.09.01	262.00	275.50	79.30	119.20	4670	3633
11.09.01	232.00	232.00	65.00	114.00	4276	3112
12.09.01	233.50	245.50	69.90	113.50	4335	3208
13.09.01	233.00	252.50	69.10	112.50	4392	3305
14.09.01	219.00	246.00	57.30	109.00	4116	3088
17.09.01	229.50	255.00	63.50	107.00	4236	3249
18.09.01	241.60	261.50	56.50	114.00	4195	3358
19.09.01	233.20	255.20	57.80	107.00	4042	3285
20.09.01	217.00	239.00	48.20	97.00	3810	3043

[47] In early December the Dax 100 Insurance was at 3878 after it had declined to 2781 on 21 September (10 September: 3633); the Eurostoxx Insurance was in early December with 328.80 clearly above its lowest point of 247.70 on 21 September 2001 (10 September 2001: 334.70); the Dow Jones US Insurance was at 366.50 in early December, thus also a good deal above its September low of 301.30 (10 September 2001: 346.20) (source: Handelsblatt).

[48] In reinsurance, in the aftermath of 11 September some share prices nearly boomed after temporary declines. The positive market environment was of benefit, for example, to the Zurich Financial Services (ZFS) when it introduced its reinsurance holding Converium to the stock exchange in November 2001. The scarcity of capital or the premium increase in reinsurance, on account of the expected related yields, resulted generally in an increased inflow of new capital into the market (see also title 3d).

21.09.01 Closing price Low	203.00 193.50	236.50 219.50	43.30 39.00	99.50 90.00	3787 3539	2955 2781
Change of closing prices between 10.09.01 and 21.09.01						
As %	-22.5	-14.2	-45.4	-16.5	-19.0	-18.7
Prices at year-end 2001						
28.12.01	266.00	304.95	67.39	117.89	5160	3797
Annual high/low 2001						
High Low	401.90 193.50	395.80 207.00	105.00 39.00	135.60 90.00	6795 3539	5213 2781

Source: Handelsblatt

1) Except as differently indicated, the closing prices are stated in Euro.

In view of the dramatic price drop at the stock exchanges following 11 September the attention had also been directed to those supervisory, fiscal and accounting regulations which hindered the stabilisation of share prices. On account of special accounting rules applicable only to them, the German insurance companies would have been forced to sell substantial share and investment holdings in a difficult stock exchange situation, in order to minimise fiscal disadvantages and take precautionary accounting measures. If the majority of insurance companies had ceded to this constraint, the result would without doubt have been a further drastic drop in prices on account of the volume of shares thrown on the market. The Federal Government has taken away this pressure to sell from the insurance industry by adopting new accounting regulations, which, moreover, are more in conformity with the rules applicable to other financial services providers and internationally accepted accounting standards. Basically, the Article 341b of the Commercial Code was modified to the effect that, in the future, shares, investment bonds and other fixed- or variable- income securities can be valued according to the provisions applicable to fixed assets to the extent that they are permanently used for the activities of the undertaking. This again means that in case of price fluctuations of quoted securities it may be assumed, in principle, for accounting purposes, that the devaluation will not be permanent. Consequently, the valuation will not have to be made on the basis of the minimum value, but it will be possible to disclose a different book value for the securities concerned. Insurance companies, therefore, in the case of temporary price losses, are no longer forced to sell under value high income - in the medium term - securities in order to avoid depreciations.

2.3. Termination of certain insurance contracts

After 11 September, the German insurance companies – like other insurers in many countries - felt compelled to give the airlines notice of termination of the liability cover applicable until then to the amount of US$ 1 billion per aeroplane. War and terrorism risks should generally be excluded from aviation insurance.[49] As a response the Federal Government offered state third party liability coverage for loss or damage caused by war or terrorism in German airlines because otherwise the aeroplanes would not have been allowed to take off. This coverage has in the meantime been renewed several times. At present, a permanent solution of the problem is sought in particular at European level. Other cancellations of existing insurance contracts in Germany – effective at year-end 2001 – concern a large number of liability and property insurance or business interruption insurance contracts in industrial business, equally with the aim to revise the calculation of terrorism risks or, if necessary, to exclude them from coverage. Not least these developments renewed in the public at large the awareness of the economic function of insurance. It became clear that entire air fleets would have to stay on ground if they were not covered by insurance.[50] Nevertheless, during the weeks following 11 September the German insurers received a great deal of criticism exactly in relation to the coverage of aviation risks. They were accused of stealing away from their responsibility and of even being eager to make money from the horrific events. Insofar it became clear that large parts of the public still have only a poor understanding of the functioning and the prerequisites of the transfer of risks through insurance.

The basis for the response of the German insurance companies was the outstanding character and novelty of the occurrence of 11 September. In the case of the World Trade Center insurers had considered the possibility of an areoplane crashing into one of the buildings – not to speak of both towers – as so highly improbable that it was not even taken into account in the calculation of the Probable Maximum Loss (PML). The PML calculation referred to the outbreak of a fire, and on account of fire prevention measures and the presence of sprinkler systems in the building it was assumed that no more than 30 floors would be destroyed. That would have caused a damage of no more than US$ 2.5 billion. Obviously, after 11 September both the issue of the probability of occurrence and that of the maximum loss (the PML) will have to be reexamined for other objects as well. Apart from these considerations, of course the fundamental question is to what extent losses caused by terrorist attacks can be covered in actuarial terms at all.

2.4. Insurance tax increase

It is also worth mentioning that in order to finance measures to fight against terrorism the Federal Government has adopted, effective 1 January 2002, a further increase of the insurance tax paid by the policyholder to 16 per cent. The insurance tax is levied as a percentage of the premiums payable in non-life insurance (not in life or health

[49] The very short 7 days' cancellation period in the conditions of physical damage and liability insurance for air carriers served exactly the purpose of covering unexpected direct losses such as the terrorist attacks of 11 September, but then allowing a new assessment of the general risk situation. Otherwise the calculation would have been made on a different basis from the start. Besides, there would have been the risk that in case of continuing acts of violence the agreed services could in no case be provided any longer. The 7 days' cancellation period, however, gave the contract partners the possibility to adapt immediately to the changed circumstances of the risk.

[50] This was also stressed by Dr. Henning Schulte-Noelle, CEO of the Allianz group, in a press interview (Süddeutsche Zeitung, 29 October 2001).

insurance); special rates are applicable to some fire insurance contracts (see the following table). The German insurance industry at the time accepted that higher expenses for internal and external security were necessary. What it opposed (though without success) is the fact that the insurance tax increase is directed to just those groups of the population who are already responsible enough to reduce their consumption for the benefit of security against risks. But also with a view to commercial and industrial policyholders the tax increase is problematic; in the economic and political context it was related to the efforts of the Federal Government first of all not to put the fiscal consolidation in danger. In their autumn expert opinion the leading economic research institutes in Germany had rightly underlined that in the economic situation of autumn 2001 this was hardly the right policy signal.

Table 3
Development of insurance tax rates in Germany
(as % of the insurance premium)

	Standard rate	Fire rate**	Fire – Buildings	Fire – Contents
1988	5	5	5	5
1989	7	7	7	7
1990	7	7	7	7
1991*	10	10	10	10
1992	10	10	10	10
1993*	12	10	11.5	11.6
1994	12	10	11.5	11.6
1995	15	10	13.75	14
1996	15	10	13.75	14
1997	15	10	13.75	14
1998	15	10	13.75	14
1999	15	10	13.75	14
2000	15	10	13.75	14
2001	15	10	13.75	14
2002	16	11	14.75	15

** from the 2nd half-year ** special regulation because a fire brigade charge is levied at the same time*

2.5. Further direct consequences

The entire extent to which 11 September had direct consequences for, for example, the acquisition of new business and the trend of premiums in the different lines and classes of the insurance industry in Germany is difficult to assess. With regard to new business, at the time, both its decline as a result of the economic situation and its recovery due to the increased risk awareness were being discussed as a possible reaction. Figures meanwhile available on business trends in 2001 hardly show any direct influence of 11 September. As far as the claims development is concerned, one example of the direct consequences of 11 September for insurers is that after 11 September German travel insurers suffered an unprecedented wave of travel cancellations on account of sickness.[51] In addition, in this line the general decline in the travel market after 11 September also had a retarding effect on new business.

3. Medium-term adjustment on the German insurance market

3.1. Limits of insurability

In the past, the insurance industry has always been capable of covering emerging new risks though these were often far larger and more complex than any risk covered before (e.g. nuclear reactors, space satellites, barrages, offshore oilrigs, huge oil tankers, etc.).[52] However, 11 September possibly stands for a new dimension of the size of the probable damage and in particular of the origin of damage. Therefore, in Germany as well, the evaluation of political risks, in particular of terrorism risks, formed a centre of the considerations in the insurance industry exploring necessary adjustment strategies after the events of 11 September. Terrorist attacks like those of 11 September are not calculable nor insurable in an unlimited way, in particular because with regard to these acts the factor of intentional conduct largely escapes mathematical calculations.[53] It was therefore quite logical that after 11 September German insurers adjusted the contracts which were optional to the changed risk situation.

The general situation in Germany before 11 September, described in a simplified way, was that the war risk was normally expressly excluded in insurance policies. Terrorism, however, was not excluded in many non-life insurance conditions, i.e. it was implicitly included. The only exemption was damage caused by terrorist acts where a causal link to a war could be established.

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[51] The German market leader in this class of insurance, the Europäische Reiseversicherung, reported that in October 2001 it had recorded approximately 3000 cancellations of trips per day while usually there are only 1200 claims per day in this month. Mainly for trips to Muslim countries, physicians had frequently attested gastrointestinal troubles, slipped disks and feverish infections to justify the cancellation (source: Geo Saison, July 2002).

[52] The increase of so-called large risks is an immediate consequence of rising wealth and technical progress. As a result higher and higher values must be insured which, in addition, often appear in a massive concentration. This is necessarily accompanied by an increasing vulnerability to large claim occurrences. However, in the past, maximum losses have been triggered off by natural catastrophes (blizzards, hurricanes, tornadoes, typhoons, cyclones, earthquakes, floods). With the exception of 11 September, 18 out of the 20 largest catastrophe damages since 1970 were caused by the effects of forces of nature, the other two damages resulted from explosions in large industrial plants (cf. Swiss Re, sigma no. 1/2002).

[53] As is generally known, insurability always reaches its limits where the following conditions are not fulfilled: 1) The occurrence of the insurance claim must be fortuitous. 2) The insurer's liability must be clearly defined. 3) The probability of loss must be calculable (in advance). 4) The risks must be independent. 5) The risks must not be too large. To put it more shortly, insurability depends on the criteria for insurability of fortuity, clearness, assessability, independence and largeness (cf. for example B. Berliner, *Versicherbarkeit* (Insurability), in: Farny, D. et al. (editors), *Handwörterbuch der Versicherung,* Karlsruhe 1988, pp. 951 to 958, or Karten, W., *Versicherungsbetriebslehre – Kernfragen aus entscheidungsorientierter Sicht* (Insurance business management – key issues from the point of view of decision-making), Karlsruhe 2000, pp. 127-135). No profound analysis is needed to recognise that events like that of 11 September raise greatest problems in respect of insurability.

Already shortly after 11 September, the President of the German Insurance Association (*Gesamtverband der Deutschen Versicherungswirtschaft* - GDV), Dr. Bernd Michaels, had described the fundamental position of German insurers in the following words: “Our business is insurance and that means that we will continue to provide cover as far as possible. However, as far as possible also means that with regard to large and exposed risks there have to be exclusions and limits on the amounts insured.“[54]

After 11 September terrorism risks must be considered to be not fully insurable any more. This is reflected in the fact that since 11 September reinsurers no longer assume full coverage of such risks. In this respect it is also of relevance that an accumulation of large claims following a terrorist attack may have a special cumulative effect for reinsurers and that due to the resulting difficulties on the retrocession market the limits of reinsurability may be earlier reached than the limits of insurability at the direct insurance level, where the different ceding insurers might be each affected by a limited volume of claims.

In view of the lack of congruence between direct insurance and reinsurance markets, reinsurance was at first a bottle neck factor determining the market. However, reinsurers will continue to assume, to a certain extent, their share in the coverage of terrorism risk. For example, as early as late November 2001, Munich Re had proposed a concept for the insurance of terrorism risks.[55] It provides for limited liability and short cancellation periods (two weeks for the reinsurer vis-à-vis the direct insurer, one week for the direct insurer vis-à-vis the customer). Nevertheless, a different approach seems to be indispensable for maximum terrorism risks. Such maximum risks would include, for example, large-scale contamination by nuclear, biological or chemical pollutants as a result of terroristic attacks.[56] No general exclusion from reinsurance, however, is provided for in the Munich Re concept with regard to particularly exposed risk objects with high insured amounts, which could be attractive targets for terrorists on account of their symbolic value.

3.2. Solutions involving the state

In view of the practical uninsurability of maximum terrorism risks there was scarcely an option left other than state intervention.[57] An approach developed already shortly after 11 September was to the effect that the insurance industry would continue to

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[54] Statement at a press conference on 14 November 2001 in relation with the GDV General Assembly in Berlin.

[55] Cf. press communication from Munich Re of 29 November 2001 (on the Internet under: www.munichre.com).

[56] In the meantime, such terrorism risks had come to general awareness in particular following the anthrax attacks in the USA.

[57] Cf. also M. Wolgast, *Zweckgerichtete Arbeitsteilung zwischen Versicherungswirtschaft und Staat ist erforderlich* (Target-oriented work-sharing between the insurance industry and the state is required), in: *Zur Diskussion gestellt: Risikoübernahme – sollte der Staat bestimmte Versicherungsgarantien übernehmen?* (Put up for discussion: risk assumption – should the state assume certain insurance guarantees?), ifo schnelldienst, Vol. 54 (2001), N° 24, p. 12-14; id., Global terrorism and the insurance industry: New challenges and policy responses, paper presented at the DIW Workshop “The Economic Consequences of Global Terrorism”, Berlin, 14/15 June 2002.

assume the terrorism risk – in theory unlimited – in the retail business on the basis of private law within the existing system of direct insurance and reinsurance. The same was to apply to the field of commercial mass business, i.e. for the small and medium commercial risks below an agreed limit. For risks exceeding this limit, which are located in Germany, that is for high insured amounts, a pool – a reinsurance group of direct insurers and reinsurers operating in Germany – could have been established in order to cover the damages due to terrorism.[58] This pool would have covered damage and consequential damage resulting from terrorist and sabotage acts. The direct insurer would have excluded the terrorism risk in the contract with his customer and covered it again in a supplementary contract which could be reinsured with the pool against payment of an agreed premium. The pool would have built up private capacities up to a certain limit – a billion Euro amount. Above this pool capacity the State would have had to assume a kind of residual liability according to the proposal.[59]

Within the specific environment in Germany this proposal would have implied the following procedure: In retail business in comprehensive insurance on buildings and contents and in commercial business with small insured amounts insurers would refrain from the separation of the terrorism risk. However, for city centres in densely populated areas, fairs and airports, large industrial plants, exposed building complexes and perhaps also large cultural and representative buildings which after 11 September appear to be threatened by terrorist attacks a different course of action would have been possible. Related to the number of risks insured, in Germany the major part of all insured risks would not have been subject to the exclusion of terrorism.[60] The remaining risks not eligible for compensation, however, would not have been insignificant if not by their number. The insured amount and the liability would have been substantial, above all, these risks would have represented the exact part of the insurance portfolio which would be exposed and threatened by accumulation. However, in the foreseeable future, it would certainly not have been possible – according to the line of argument at the time - to find sufficient coverage in Germany for these high-sum and exposed risks without a pool solution.

A pool solution would neither have been new nor a special German way. The “nuclear pool” which has been in existence in Germany for decades for the coverage of nuclear risks, functions on a similar basis. The German nuclear insurance pool (*Deutsche*

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[58] Insurance pools are always considered when in the case of rare risks, which are hardly assessable and exposed to large claim and cumulative claim potentials, a distribution between a great number of insurers is appropriate for reasons of policies followed in respect of risks, and when this distribution cannot be left to free competition, but must be organised in a predetermined form. In these cases it seems to be inevitable that a pool restrains competition insofar that the form of the insurance cover and the premiums are settled in a contract. Otherwise the risks concerned would not be covered at all on account of the lack of coverage capacities.

[59] This proposal for a solution was brought forward in the statement of Dr. Bernd Michaels, President of the German Insurance Association (*Gesamtverband der Deutschen Versicherungswirtschaft – GDV*), in a press conference during the GDV General Assembly on 14 November 2001 in Berlin.

[60] It is estimated that this would have meant that for more than 99 per cent of all risks insured in Germany the exclusion of terrorism would be eliminated (cf. paper by Dr. Robert Pohlhausen, Vice-Chairman of VGH-Versicherungsgruppe, on “Property Day” (*Sachtag)* in Leipzig on 8 November 2001, or R. Pohlhausen, *Die Allgemeine Sachversicherung am Jahresende 2001* (General property insurance at year-end 2001), in: Versicherungswirtschaft, 2001, p. 1933 et seq.).

Kernreaktor-Versicherungsgemeinschaft (DKVG)) is a community of insurers who offer, within certain limits of liability, TPL and property insurance cover for hazards in relation with the erection and the operation of nuclear reactors. The DKVG operates mainly as a reinsurance pool. A reinsurance exchange exists with foreign nuclear pools in particular in non-compulsory reinsurance. Other insurance pools existing in Germany are in particular the aviation pool (*Luftpool*) (covering aviation risks) and the pharmaceutical pool (*Pharma-Pool*) (covering pharmaceutical liability risks).[61]

Internationally, the "Pool Re", established in Great Britain in 1993 after IRA terrorist attacks on buildings in the London financial district, could have served as an example of the model discussed at first in Germany as well for the coverage of terrorism risks.[62]

3.3. Foundation of the "Extremus AG" to cover terrorism risks

Late in April 2002, in Germany, considerations on involving the state in the insurance of terrorism risks led to an agreement between the Federal Government, the insurance industry and industry[63]: According to this agreement, on top of a capacity to be procured by the insurance industry in the amount of three billion Euro, the Federal Government will provide – for the moment only until the end of 2005 – a state guarantee to the extent of 10 billion Euro to cover the risk of terror attacks which has so far not been insurable in high-sum property business. The new arrangement relating to terrorist attacks in Germany concerns damage to buildings and property damage and business interruption losses resulting from these insofar as they occur in Germany. Insurance cover applies to large risks with an insured value of more than 25 million Euro. In the other classes of business the terrorist risk is borne by private insurers alone. For instance, in non-life insurance there is no exclusion of terrorist risks for the entire private and commercial business. In the TPL, transport and engineering insurance classes this applies to industrial risks as well. However, TPL insurance for airlines is excluded from the agreement. It will continue to be subject to a state guarantee, at least for the time being.[64]

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[61] Of a different kind is the solution which in Germany as elsewhere has been applied for a long time to cover export credits against political risks. The private Hermes Kreditversicherungs-AG, acting on behalf of the German government, is authorised to issue export credit guarantees. *De facto* it is a state export credit insurance, where, however, the state does not appear as an insurer.

[62] The "Pool Re" is a mutual reinsurance association whose members are 200 direct and reinsurers. If the funds of the Pool Re should not be sufficient to cover damage caused by terrorists, the British government guarantees the solvency of the Pool Re. Cf. also Tillinghast-Towers Perrin, Pool Re and Terrorism Insurance in Great Britain, October 2001 (on the Internet under: www.tillinghast.com).

[63] Considerations temporarily made by German industry after 11 September on founding on its own account a (re-)insurer to cover terrorism risks have not been put into practice and – according to press reports on information provided by industry – are not followed up, at least for the time being.

[64] Early in July 2002, the European Commission agreed to a renewal of state third party liability guarantees for European airlines for another four months until the end of October 2002. In fact, since April 2002, a syndicate of several internationally-operating insurers led by the German Allianz group once again offers to airlines third party liability insurance covering third party damage following terrorist attacks. The insurance package includes third party liability cover up to one billion US dollars per aeroplane and up to two billion US dollars for each airline. A master policy combines the contracts of all clients concerned. If more than four severe losses occur under this master policy, insurance cover is terminated. On the other hand, individual

The time limit set for the state guarantee, which will be furnished until the end of 2005, is to enable the state to consider its gradual withdrawal from its guarantee commitment. The idea is that private markets might then be able to provide higher capacities to cover terrorism risks.

The German insurance industry is currently working out specific concepts for coverage and has held first coordination talks with trade and industry. Now it is envisaged to found a specific insurance company (no pool solution).[65] The special insurer (working title: Extremus AG) is to purchase as a reinsurance policyholder the capacity of three billion Euro to be provided by the private insurance industry in two so-called layers (of cover). The first layer is to cover losses from zero to 1.5 billion Euro and to be written exclusively by direct insurers and reinsurers operating in Germany. The second layer is to be purchased in the international reinsurance market.[66] The formal foundation of Extremus AG is scheduled for late in August 2002, operations could start in September 2002.

The new terror insurance comes relatively close to an all risks cover since it includes not only risks specifically mentioned (such as fire, explosion, collision or crash of flying objects, etc.), but also a wide range of "other malicious damage". Among the risks and losses which are nonetheless not insured (exclusions) are war and warlike events, but also attacks by B and C weapons.

The premiums to be paid by German trade and industry to the new special insurer are estimated at about 550 million Euro.[67] This represents approximately 1 per cent of domestic premium income of German non-life insurers or 5 per cent of premium payments of German industry. However, for the German insurance industry, the

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contracts may not be terminated unilaterally by the insurer. Thus, a catastrophe, such as that of September 2001, would not lead to automatic termination of the contract (press communication from Allianz of 25 April 2002). The airlines, however, at first showed a negative response to the new offer because the premiums to be paid for it seemed too high to them. Instead, they are seeking a fund-based approach under the auspices of European airlines. However, according to Lufthansa CEO Jürgen Weber, this will require some time. Therefore, the current state guarantees for European airlines should continue to be renewed (Handelsblatt, 3 June 2002).

[65] Even before, German insurers had been involved in providing new cover for terrorism risks. For instance, early in April 2002 in Luxembourg, Allianz and Hanover Re, together with Zurich Financial Services, XL Capital Ltd, Swiss Re and SCOR, had founded a special insurer for terrorism risks named SRIR (Special Risk Insurance and Reinsurance). Policies offered by SRIR are to cover only losses which are a direct consequence of a terrorist act. Business activity is focused on Europe. Losses from business interruption and third party liability are not covered. Cover within a distance of 600 metres around every insured building is limited to EUR 275 million. It was probably also with these restrictions in mind that the founders of SRIR stressed that private-sector solutions to provide cover of terror were only able to complement state solutions, but not to replace them. – Since April 2002, coverage of losses due to terrorism is also offered by HDI, Germany's third largest industrial insurer. Companies are able to protect themselves against domestic risks up to a maximum of 50 million Euro.

[66] Thus, no net retention is to remain with the new special insurer.

[67] This estimate is based on considerations according to which in Germany there will be approximately 40 000 prospective clients with an insured value in property insurance of more than 25 million Euro each. Of these, mainly clients with insured values in property insurance of more than 1 bn Euro are likely to seek insurance cover.

additional premiums do not nearly constitute any improvement of earnings. Apart from payments to the state[68] and to international reinsurance a provision for large risks, which has been set up before, will have to be serviced. The tax treatment of these provisions in connection with the foundation of "Extremus AG" has at present (as per July 2002) not yet been definitively settled. However, the German insurance industry has made clear to the Federal Government that without any recognition of these provisions for tax purposes the foundation of the new special insurer could not take place.

3.4. Premium adjustments and impact on supply and demand on insurance markets

Often, the current premium adjustments in *industrial insurance* are discussed in the context of the 11 september events. However, even before 11 September, premium rates in industrial insurance appeared to be inadequate. In the public, this has been wrongly connected with 11 September. Therefore, premium increases made since then in the industrial insurance sector in Germany are hardly connected with 11 September. They rather represent an adjustment to the level urgently required from the point of view of corporate policy which had got under way even before 11 September.

Table 4
*Structure of business in German non-life insurance 2001**

Insurance class	Premium income in Euro billion	Share as %
Total	49.9	100.0
of which, a.o.:		
Motor insurance	21.4	42.9
General liability	6.0	12.0
Private accident	5.5	11.0
Legal expenses	2.7	5.4
Industrial property	3.1	6.2
Private property	6.4	12.8
Commercial property	2.4	4.8
Agricultural property	0.5	1.0
Marine insurance	1.7	3.4
For information: Credit/aviation/nuclear	1.6	-

** Source: GDV*

As already mentioned, there was a particular situation in industrial insurance in Germany which – independently of the events of 11 September - was in urgent need of *reorganisation* which had already got underway even before 11 September. During recent years, the technical deficits of the market in industrial property and business interruption insurance amounted to no less than 1 billion DM in each class per year or nearly 20 per cent of the premiums relating to this business. In a time, where

68 In exchange for the state guarantee the state will claim its share in premium income, which could amount to more than 10 per cent of total premiums. At first, this percentage is to be slightly lower in order not to put too great a burden on the new special insurer during its start-up and development period.

investment income is less and less capable of compensating technical deficits, it is all too comprehensible that both the direct insurers directly concerned and the reinsurance markets could no longer accept this development in the long term. Another aspect to be considered is the fact that, due to competitive pressure, the average premium rates in this business class had fallen to less than half.

In concrete terms, reorganisation in industrial insurance (especially in industrial fire and fire/business interruption) seems to show the first signs of success. However, forecasts for premium development in 2002 suggest that premium increases will be relatively moderate. For the whole of industrial property insurance the increase in premium income in 2002 is estimated at 10 per cent. The relatively broad range of possible premium adjustments in this area of the insurance business results from the great divergencies between the different risk situations. Besides, even with the measures which have now been initiated, these lines are often still far from returning into the profit zone.

Nevertheless, some insurers operating on the German market will not consider exclusion clauses and premium increases sufficient for being able to continue to assume certain industrial risks in the future. Therefore, further market adjustments might be possible. The *number of operators* in certain market segments might further decline. On the other hand, the number of "real" industrial insurers has always been relatively small as compared with the total number of all insurance companies.

On the whole, the industrial business is today a relatively narrow segment of the German insurance market (cf. table above). Even if an exact delimitation is not possible, industrial insurance at present accounts, even from the sole non-life insurance sector (which itself holds a share of 38 per cent of the total German insurance market), for no more than about one quarter of the business; thus the impact of the current premium increases, related to the total non-life market, is limited.

Not least *reinsurance* had become significantly more expensive and in short supply in the aftermath of 11 September. Actually, the acute shortage of capital and the simultaneous increase in demand on the reinsurance markets resulted in a considerable increase in premium rates.[69] At the same time the demand for first-class reinsurance cover had augmented and this stronger differentiation by quality ("flight to quality") had been an additional factor in the market still getting tighter. On the other hand, the yields expected from considerably higher reinsurance premiums soon led to an inflow of new capital and thus to an expansion of offers on the reinsurance market, in particular as the barriers to market access are low and the world-wide capital markets offer nearly unlimited possibilities of raising capital[70]. Insofar it cannot even be

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[69] According to market players the reinsurance rates increased by 25 to 30 per cent, terrorism risks are excluded to a large extent or regulated by by-letters. Other measures to restrict risks include shorter duration periods and restrictions of coverage; the latter may include also more restrictive reinstatement rules for exhausted limits.

[70] According to recent estimates (April 2002; source: Insurance Information Institute/Morgan Stanley), the total inflow of new capital into global insurance markets has to be estimated at more than US$ 33 billion. A considerable part of this has been raised by insurance companies newly founded after 11 September.

excluded that even in the medium term there will be a new trend towards overcapacities and a decline of reinsurance premiums (“cyclical course” of the reinsurance markets), especially if the emphasis on qualitative aspects once again declines.

Also, it was not by mere chance against this background that 11 September brought about a revival of the discussion on the future role of *alternative risk transfer* products, which are similar to reinsurance.[71] A so-called catastrophe bond, for example, would, at least in theory, provide the possibility to nearly “atomise” large risks over a multitude of investors. However, risk limits exist also on the capital markets. Besides, at present the alternative risk transfer is of nearly negligible importance in comparison with reinsurance. Only a tiny fraction of the funds spent for reinsurance cover is paid for alternative risk transfer.[72]

As far as the *demand side* is concerned, some observers expected that the growing scarcity of offers on the direct and reinsurance markets could meet with a growing and possibly even less price-sensitive demand as a result of an increased risk awareness after 11 September. Even if no really clear signs of significant structural changes in demand for insurance have as yet become apparent, in the medium term there could be an influence of 11 September on both private and commercial and industrial policyholders:

On the one hand, it is conceivable that citizens will be inclined to repress the extreme threat which is marked by the term “11 September”. On the other hand, a rising demand for security and thus for the commodity “insurance” is conceivable as well. To a significant degree this will probably depend on how the danger will present itself in the future. The risk awareness will develop depending on the extent to which new terrorist acts will be committed. In this context, however, national divergences in safety-mindedness are of relevance. Germans, e.g., are deemed to be particularly averse to risks.[73]

In the business sector the wish for adequate coverage against risks contrasts with the constraint of cost reduction. The tendency of companies to think in terms of cost has always left its mark on the business trend in industrial insurance. No doubt, 11 September has made business discover again the issue of security. To what extent,

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[71] The core of the insurance business is the risk transfer from the policyholder to the insurer against payment of an, in general, fixed premium. The compensation of a great number of risks is effected within the collective of the insured. Recently, a category labelled “alternative risk transfer” (ART) is emerging beside the risk transfer through insurance, even though its limits, in particular as regards certain forms of reinsurance, are not always clearly defined. A basic version of an ART business consists in a direct insurer or a reinsurer paying a fixed premium to an investor (player on the capital market). The latter takes the commitment to make payments or provide capital whenever an agreed index value for claims amounts or technical losses is exceeded.

[72] The total volume of capital market transactions attributable to the alternative risk transfer since 1994 amounts (until 2001) only to roughly US$ 13 billion (cf. Munich Re, Munich Re ART Solutions – *Risikotransfer in den Kapitalmarkt* (Risk transfer to the capital market), 2001, p. 11), as compared to a yearly premium income in world-wide reinsurance of an estimated US$ 120 billion.

[73] This is also reflected in the relation of premium income in non-life insurance to gross domestic product, which in Germany is at over 3 ½ per cent, representing a world-wide peak value.

however, the sharpened risk-consciousness will be sufficient to accept significantly higher expenses for insurance cover remains to be seen. In this respect also, much will depend on the further development of the risk situation.

3.5. New risk management and claims prevention techniques

The use of traditional technical instruments played a leading part in coming to terms with 11 September. But beyond that the risk management in its entire extent is challenged by the possibility of maximum claims due to terrorism.[74] There is still no precise information, of course, about what really happens if certain limits of claims are exceeded (that is in so-called stress cases). What is clear is only that the stress case is not simply an "inflated" normal case. The actuarial risk models, which at least in principle would be capable of mapping also maximum claims, remain to be determined in an evolutionary dialogue on risks. On the whole, 11 September has probably created, within the insurance management, in actuarial calculation, a new awareness of cumulative risks or of the correlation of occurrences in the case of large claims. This inspires the development of new risk models and of more sophisticated calculation techniques.

The medium-term adjustment measures taken as a response to 11 September will probably also include giving a larger part to prevention, that is the avoidance of damages due to terrorism and other maximum damages. For example, in the future, more efforts will be made to reduce possible vulnerable areas to terrorist attacks and sabotage acts. A possible example is the so-called just-in-time delivery in the industry which has been made possible through modern technology and which helps the industry to cut back on costs of storage. In the future, insurance clients might give up again the pure just-in-time production in order to reduce their vulnerability. The result would be a new tendency to set up temporary stocks again.

Beyond insurance coverage, risk management measures are conceivable in many other areas. The spectrum extends from cockpits secured against unauthorised access via the prevention of "cyber terrorism" to the defence against kamikaze attacks on nuclear reactors. In this context terrorism risks raise a special problem in the IT sector. Here is an enormous risk potential for attacks with minimum economic means, for example using computer viruses. In this area as well prevention through adequate technical measures seems to be of crucial importance.

4. Conclusion

It is still impossible to analyze once and for all to what extent 11 September will have long-term durable and practical consequences for the insurance markets in Germany. However, beyond short-term adjustments following the terrorist events, part of the

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[74] Cf. M. Haller/St. Wehowsky, *Verwundbarkeit als neue Dimension im Risiko-Management* (Vulnerability as a new dimension in risk management), in: Neue Zürcher Zeitung, 29 September 2001; regarding fundamental issues of risk management also B. Michaels, *Risiko und Risikomanagement als Forschungsgegenstand und als Aufgabe des Unternehmens* (Risk and risk management as a subject matter of research and as a corporate task), in: Zeitschrift für die gesamte Versicherungswirtschaft, 1999, p. 233 et seq.

significance of 11 September is related first of all to its psychological aspect. The public has come to realise again the importance of the commodity “insurance” to a degree which previously was hardly imaginable.

During the weeks following 11 September 2001 a German economic journalist wrote: “The importance of insurance issues for society as a whole should not be under-estimated. Modern economy would never have been possible if people had not learned to make the fundamental insecurity of the future calculable.”[75] The terrorist menace which in this form had been unimaginable before 11 September has made it a great deal more difficult again to calculate the future. Nevertheless, the insurers in Germany and elsewhere make efforts to prepare themselves rapidly for this new challenge. They cannot do everything alone. Sometimes it is necessary for the State – at least temporarily - to intervene in order to help find insurance-like solutions for risks which are not exactly insurable. Nevertheless, German insurers are ready to bring in their wide-ranging know-how about risks. To say that the government remains challenged to continue unwaveringly the fight against terrorism would be stating the obvious.

[75] N. Piper, *Vom Umgang mit Risiken* (On the handling of risks) , Süddeutsche Zeitung, 30 October 2001.

The Events of 11 September 2001 and Italian Insurance

by Alfonso Desiata*

1. Initial thoughts on the matter

When the news regarding the dramatic events in New York hit me, my first reaction was to think about coincidences: the mortal spectacularity of the event, the mass suicide of the authors, the indifference towards the death of thousands of people. I asked myself: how was all this possible?

I immediately understood that the answer lied in the anthropic principle, according to which our life justifies events that seem impossible, but are possible, and are necessary to life. Possible, almost impossible events don't need a sequence: I deeply admire Spinoza, because in the XVIIth century he denied the biblical statement of creation. He thought that if before the beginning there had been nothingness, the fragmentation of time into temporal events wasn't a possibility.

Men hate the unknown, this is why so much effort is devoted to repressing it: from religion to philosophy, from consequential models to the theory of probability and of frequency, to extrapolation; all this to distance oneself from the void, from the unknown.

The events in New York call for a reflection on insurance techniques and financial management.

2. The insurance technique

Regarding insurance technique in general, the New York events emphasize the gap dividing tendential extrapolations inherent to a given model and the passage from one model to another, from one scenario to another, from one conceptual scheme to another. In "The art of the long view", by Peter Schwartz, the author strives to present models where a future is imagined rather then extrapolated from the past to remodulate the variables supporting study models.

The probabilistic school clearly operates within a model where the unknown is restricted through the theory of probability and, where possible, through the technique of frequency, a fine product of experience. So the unknown dissipates, it does not disappear, allowing the coverage of many risks: technical and operational obstacles to economic development.

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The gradual passage from the uncertain, to the possible and to the insurable risk always takes place within the same development cycle or model.
On the other hand, the uncertainty and the unknown resulting from the New York events place insurance techniques back to square one in a completely new scenario, creating the “long view”, as Peter Schwartz would say, therefore expanding the area of non-insurable risks, that is, TSRCC (terrorism, strikes, riots, civil commotion): in this case, the unforeseeable, the anxiety of everyday life, irrationality, in a nutshell, the unknown is predominant.

TSRCC events may be insurable again as long as each calculus scheme is deprived of the uncontrollable receding event: it concerns reinsurance Pools or State-conventionalised firms, where generally the uncontrollable variable or oneiric tail drowns.

3. The financial dimension

Each and every calamity plunges the financial community into panic. It happened in 1992, when hurricane Andrew cost US$ 22 billion paid for the damage it caused, in 1994 when US$ 12 billion were spent for the Los Angeles earthquake and it happened again in New York, where damage could amount anything from US$ 35 to 41 billion, according to Morgan Stanley’s assessment, but with a particularly significant feature: this time the terrorist attack has triggered a war process which has worsened panic, a depression connected to the current economic situation, a general decrease on the financial markets.

Unlike other calamitous events, this time damages linked to the depression of financial markets must be added to the damages to be paid. In general, financial damages must be added to physical damages.

However, insurance is a peculiar field because it is able to make progress and take financial advantage of both positive and negative events. When negative events occur, the world becomes more precarious or, at least, it is perceived as being more precarious, therefore the premiums increase in order to face the increased threshold of risk, and to recoup technical losses of the first stage. This certainly happens in reinsurance. The cost of damage struck reinsurers such as AIG, Allianz, Berkshire Hathaway, Munich Re, Swiss Re, and Zurich Financial Services. And premiums have consequently increased, mostly those of reinsurers, therefore the financial availability has decreased and the barriers to entries in the insurance industry have increased. In this particular moment the shortage of capitals and the decreased financial availability have caused both insurance and reinsurance premiums to increase. Nevertheless, there’s no doubt that the total of the losses to be paid and the widespread crisis of financial markets has emphasised the risk of a collapse of the insurance industry. At all events, it has made us aware of the virtues and limits of the solvability margin: the possibility to demonstrate the limits has even paradoxically emphasised the model’s virtues, and the insurance industry will face these unprecedented events without serious problems, proposing in fact new methodologies to face new TSRCC risks.

4. Italian insurance vis-à-vis the events of 11 September

The common Italian policy clauses that insure people and property against damage, which concern the extended guarantees to the socio-political risks, not only include damage linked to acts of terrorism in the strict sense of the word, but also those caused by acts of sabotage, strikes, riots, civil commotion and vandalistic acts. In reality, very often clearly determined premium portions do not correspond to these extensions of guarantee, and even when they are determined, their calculation only regards strikes and acts of vandalism.

As a matter of fact, Italian insurers have always considered damage caused to property through acts of terrorism as a purely theoretical hypothesis, unable to justify an increase in value in terms of premium, even when the *Brigate Rosse* were active, and their subversive actions were directed against individuals and not against property.
In this situation, the reinsurance market does not feel in a position to face acts of terrorism with the capacities offered up until this year and has decided to introduce heavy restrictions on coverage, but this kind of guarantee cannot continue to be supplied without being charged.

It is therefore clear that the events of 11 September call for a total re-elaboration of the situation and that an intervention on behalf of the State is now to be considered mandatory, just as is already the case for risks linked to undertakings that manage aeronautic transport and airports. Italian insurers are presently fostering a plan for an insurance policy that would cover acts of terrorism.

The need for a plan

- insurance and reinsurance undertakings are at the moment unable to assess terrorism risk features and incidence and, thus, to offer an appropriate coverage;
- events like those of 11 September risk taking place more frequently and with similar or even more serious consequences;
- a serious emergency is now surfacing, due to the fact that many insurance contracts that cover these risks should have been renewed by the end of 2001;
- the new forms of catastrophic risk may be covered only within the established limits, considering that the insurance and reinsurance market is unable to offer at present the same level of guarantee previously offered;
- the lack of insurance coverage for terrorist risks could drastically and suddenly jeopardize the whole economic system on an international level;
- the subscription policy for this type of risk has been modified, especially in the case of pooling and aggregates;
- the CEA (Comité Européen des Assurances) has already expressed its support for a trans-national solution to terrorism, even though a plan of this type may be difficult to obtain in the short-term;
- a proposal has been drafted at national level, which takes into account the present situation of the main EU countries.

Objectives of the plan

The following issues are part of the plan's objectives:

- to find a short, medium and long-term solution to terrorism, which would combine private and public intervention;
- clear definition of the concept of terrorism which takes into account its many aspects, in particular, that of sabotage;
- the establishment of a Pool of National Reinsurance which would cover this type of risk;
- coordination between newly created national entities in European Countries – both on structural, operational and on prescriptive levels;
- problems linked to terrorism do not exclusively concern air transport, even though in the present we have managed to obtain results only in this field. The solution will necessarily imply all possible realistic cases of damage, to be inserted in the extension clause in the base policy.

Operational proposals

Operational proposals – that may take as their model experiences already implemented in other European Countries – have to propose a solution regarding the terrorism/insurance problem that may operate in short and medium/long-term periods. This combined solution is established on different levels:

a) insurance excess must be covered by the *insured*;
b) intervention of the *private insurer*. The insurer can ensure in full for risks of a "sustainable" amount – covering them directly or transferring them to the international reinsurance market, where available – or he may decide to transfer the risk to a national organism, respecting its conditions.
c) *National Reinsurance Pool* to which direct insurers may submit risks in excess as opposed to their deductions. This entity should take the form of a Reinsurance Consortium and should concern the transfer of all risks undertaken in Italy that we are not able to place elsewhere.
   Following the events of 11 September an exception to the Community regulation n. 3932/1992 should be easily obtainable, allowing the establishment of reinsurance consortia including premiums up to a maximum of 15 per cent of the reference market premiums.
   The existence, configuration and operativeness of the Pool should be regulated by a clause that should be approved by the European and National anti-trust authority – in line with regulation n. 3932/1992 – and could, initially, function in the following manner:
   - all Italian and foreign enterprises operating in Italy which are free to provide services will be able to adhere to the Pool;
   - the Pool is responsible for damage to property belonging to private natural and juridical people and excludes from the discipline property

belonging to public bodies, subjects that are directly or indirectly part of the state, which renders them potential objects of terrorist attacks;

- companies that will resort to this Pool will be obliged to cede to the organism terrorism risk premiums – fixed by the Pool with a special rating – withholding a share of the part of premiums they retained;
- the premiums will be ceded according to a standard terrorist attack definition clause;
- a Committee – whose members shall be representatives of insurers and reinsurers, as well as a person appointed by the government for supervision – should decide tariffs regarding the pure premium and a further premium portion destined to cover the Pool's functioning expenses. The insured should pay the premium thus defined, integrated by modest charges destined to cover acquisition and management expenses of ceding companies. The Committee should also define standardized clauses, offered in addition to a main policy;
- the Pool will cover the amount of acquired premiums and, in case of an active balance, the amount will be placed in reserve and used to cover future damages;
- accidents will be dealt with by adhering companies;
- a reinsurance treaty will control risk transfer to the Pool, and a statute will control the relations between adhering companies;
- the Pool will be exempted from tax and will proceed in a non-competitive way, fixing premiums respecting the binding conditions set by the Committee;
- the Pool will have the chance to gain ulterior reinsurance capacity;
- in spite of a predisposition for a clear and univocal definition of terrorism, an internal Committee in the Pool should be established in order to assess, in each specific situation, if we are dealing with an act of terrorism, so as to render the activity within the system less problematic.

d) *State* intervention as last warrantor of risk coverage and reinsurer beyond the Pool's capacities.

If the amount of the accidents due to terrorism exceeds the limit of the Pool's capacities, state intervention will be necessary for the portions in excess.

Initially this may be more likely, because the allocation system assumed within the Pool of the premiums acquired net of the settled accidents and of the expenses should allow – if no particularly relevant catastrophic accident takes place – an increase of the capacities in time and thus fewer interventions on behalf of the State.

The State's involvement needs to be defined on a scale of manner and time.

Insurance Consequences of 11 September, One Year after - The Norwegian Case

by Olav Vannebo[*]

1. Introduction

This article is an updated version of a contribution to the special issue of “Etudes et Dossiers” in February this year, on the consequences on the national insurance markets of the September 11 attacks. That article was delivered early December 2001. I will now try to reflect the situation as it is seen in the late summer of 2002, but there will also be some remains of the picture we had in Norway in the months just after the tragic event.

Although it was immediately clear that the event would have consequences in relation to insurance cover and the assessment of the risk for terrorist attacks, it took some time to fully grasp the effect on the Norwegian market. Being a small country on the outskirts of Europe, with (at least in our own eyes) a good reputation as a peace-loving nation, the risk of being singled out as a target, is considered to be rather small. Even if hit, the consequences are not likely to be extremely severe, as the population density is quite low and installations rather scattered. On the other hand, we have a number of installations especially in connection with various forms of energy production, which are vulnerable to damage and potentially endanger both people and property, in addition to representing extensive environmental risks. The risk thus cannot and should not be neglected.

The general situation is that premiums have risen steeply, and that it is difficult or perhaps impossible to obtain full cover in all areas. The key players are the reinsurers. The situation at the end of year 2001 was extremely unclear as to what limitations and exclusions insurance covers of Norwegian risks would be subject to. Generally the insurance companies in Norway have adapted themselves according to an assessment of their capacity and their availability to reinsurance cover. We still do not have a complete overview of what this means in practice for every insurance company in Norway, but we know for certain that the cover offered is only a fraction of a full cover in a worst case scenario.

In the following I will shortly review the situation in the man markets. Thereafter I describe the initiatives taken by the insurance industry in order to try to come up with solutions. Thirdly, I touch upon the role of the Norwegian authorities. I restrict myself to impacts regarding insurance cover, leaving aside effects on the capital markets, which of course are important especially for the life and pensions’ business.

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2. The situation in the various markets

Reinsurance

There are three reinsurers in Norway. Two of which are in the run-off stage. The remaining reinsurer specializes in ART solutions and is not likely to be affected to any considerable extent.

Life insurance

In life insurance there are statutory limitations restraining amendments of clauses or premiums on running contracts. Hence the insurers have to live with the existing terms. The general clauses are quite identical in most policies and lines of business, and have the following limitations:

- persons staying in or travelling to an area in which a war or warlike political disturbances have broken out, are not covered if the insurance period commenced less than two years ago;
- if Norway becomes involved in an armed conflict, the cover is only upheld for policies written more than six months ago;
- persons participating in acts of war in which Norway is not involved, are not covered;
- in case of war or other catastrophes, the Government may impose a limitation on the rights of the assureds pursuant to Section 8-5 of the Norwegian Insurance Activity Act.

Only the last of these bulletpoints seems to be directly relevant in relation to terror. But it is a *force majeure* regulation, and may be of small comfort to the companies. The wording of the law itself is restricted to war. Even if the regulation is interpreted to embrace political use of terror, it may be expected to be taken into use only if the total claims threaten to be of a dimension beyond the funds of one or several companies. This means that the companies have little space for manoeuvring, and will probably not be able to avoid increased risk and increased costs, as the reinsurers also for life business are likely to introduce various forms of limitations, and raise their premiums. Still the life companies do not seem to be deeply concerned, and do not prepare for any immediate remedial action.

General non-marine insurance

Most lines of business have exclusion clauses for loss caused by war or warlike acts regardless of whether war has been declared or not, and by riots or serious disturbances of the public order. There is serious doubt, however, as to whether these clauses exclude terrorist acts. Insurers started relatively soon after 11 September to issue notices of termination for large (industrial) risks, to be reinstated with exclusion or limitations regarding cover of damages due to terrorist acts. For households and smaller enterprises, the terms have not been changed so far.

As was already mentioned in the introduction, the insurance companies in Norway have adapted themselves according to an assessment of their capacity, and their availability to reinsurance cover. We do not know the actual situation for every insurance company in Norway, but for the time being the larger companies supply insurance cover for terror damages up to a total (for all lines) of 500 million NOK per event, in some cases also with a total limitation per calendar year. If total claims should exceed this limit, compensations have to be reduced proportionately. Some special installations and buildings have also been excluded for cover altogether.

The cover supplied is far below an estimated worst case damage of about 30 000 million NOK. The companies have felt that the situation is unsatisfactory and have through the Norwegian Financial Services Association discussed ways of improving it, which I will return to later.

The situation for liability insurance is as a starting point more or less the same as for property insurance. Focus is mainly on aviation insurance, as airliners are particularly exposed as means of terrorist strike. Exclusion clauses for terrorist attacks are more extensive in aviation insurance than in other non-marine lines of business. On the other hand, airlines usually have an extra cover for third party liability for personal injury and property damage (ranging from US$ 1,000 to 1,750 million per aircraft and incident) resulting from war or terrorist activities. After 11 September the insurance industry was able to come up with only a small fraction of the need for cover. The message from the airline companies was clear: the planes would be grounded until the gap in cover was filled. This was the situation until several European governments with the UK taking the lead decided to take on responsibility for top cover. The Norwegian Government followed suit and issued a guarantee for Norwegian airports and aircraft registered in Norway. The guarantee has been prolonged in several stages and is still in force.

In Norway, like in many other countries, we have compulsory insurance in some fields. Two of these areas may be affected more than others. One concerns the workmen's compensation insurance. The principle of strict liability implies that all injuries that employees suffer during working hours are covered by the insurance. The compensations are standardized so that each separate claim is limited. Accumulation of risk may, however, cause the total number of claims to exceed the capacity of the insurance companies. In motor insurance, there is also strict liability, and in addition unlimited amounts in third party liability insurance. Cars have also been used to launch terrorist attacks. The damage may be severe, although somewhat limited compared to the damage hijacked airliners can cause.

Marine insurance

The conditions of The Norwegian Marine Insurance Plan of 1996 are widely used for marine insurance written in Norway. (For further information see the website of The Central Union of Marine Underwriters Norway, www.cefor.no). The Plan follows the same main principles as in other marine markets. There is a main distinction between marine perils and war perils. Insurance against marine perils has an exclusion clause for war perils. Insurance against war perils is written separately. An act of terrorism is regarded as a war peril, and covered by the war risk insurance of the Plan. This treatment has been explicitly stated in the plan after 11 September, and the same goes for transportation of goods. As in other war risk covers, there are quite short time-limits for termination. In the event of a change of risk, both parties have the right to terminate the insurance by giving a notice of seven days. If the insurance is terminated in this manner, the insurer shall submit a proposal for new conditions and a new premium, before expiry of the time-limit.

For insurance of goods under transportation there is a governmental insurance scheme for war risks. This scheme is now being evaluated, and its future destiny is uncertain.

The Norwegian marine war risk insurers seem to be rather calm in relation to the consequences of 11 September. A circular letter from “Den Norske Krigsforsikringen for Skib (DNK)” (The Norwegian Shipowners' Mutual War Risks Insurance Association), dated 13 September 2001 sent the following message to the market:

“Following the terrible events which took place 11.09.01 the global insurance and reinsurance markets have been thrown into turmoil. The majority of the aviation war risk business is placed with marine market underwriters and some of those may be in the position of having exhausted their reinsurance protection and being unable to reinstate such cover. The war risk market has not yet issued a General Notice of Cancellation. It is regarded that it will be more beneficial to agree on a voluntary mid-term increase on current annual war premiums, rather than issue a General Notice of Cancellation which would most likely lead to even higher increases and perhaps limited capacity. We must however expect that the premium increase will be considerable, in particular for cruise and passenger vessels. The additional premiums for breach of trading warranties is also anticipated to increase significantly.

Since DNK's reinsurance treaties are placed in London the situation is affecting the club to a large extent. The administration is negotiating with London leaders at the moment and will be able to give advice about new rates in the middle of next week. The current cover expires 31.12.01 and we expect no further amendments to the terms and conditions for the remaining period. The increased p.a. rates will come into effect pro rata from date to be advised and until 31.12.01. DNK will seek to obtain the most competitive solution for the members and ask for your support in this dramatic and unique situation.”

In a circular letter five days later the Association (CEFOR) imposed with immediate effect an advance notice for voyages to port/ports in a number of specially mentioned areas, stating further that the obligation to advise in advance will be in respect of vessels and mobile offshore units in or heading for the areas, and that additional premium will be furnished on request to the Association.

The general situation is then that the market is handling the terror risks in the marine area.

3. Search for solutions

The insurance companies and the Norwegian Financial Services Association have set up a Working Group with terms of reference to prepare the outline of a pooling arrangement. The group has submitted its proposal in two reports. The first report was delivered in mid-December last year, and gave on overview of the situation at that time, together with some sketches for solutions. The second report submitted in March 2002 focused on the consequences of the lack of insurance cover, and the role of the government.

The working party outlined two main alternatives:

- the government taking over at least some of the risk for damages due to terrorist attacks;
- the government chooses not to take part in any schemes.

It was clear to the working party that it would not be possible to obtain a satisfactory cover in the ordinary insurance market, at least not at a reasonable price. A pooling arrangement without any risk taking from the side of the authorities could only represent a marginal effect on the ability to supply insurance cover. Government involvement is thus seen as an imperative for a real solution to the problem. The assessment of the social consequences of a lack of insurance cover for damages as a result of a possible terrorist attack is clearly the responsibility of the authorities.

Under the first of the alternatives above, the insurance industry has indicated that it is open to various solutions and ready to participate depending on the positions taken by the authorities. The working group has, however, suggested as a starting-point a scheme with insurance cover in three layers:

- cover supplied by the direct insurers (including the reinsurance obtained by the direct insurers);
- cover supplied by a pooling arrangement among the direct insurers (including the reinsurance obtained by the pool);
- reinsurance supplied by the Norwegian state.

The matter has been brought to the attention of the authorities in several letters, including the two reports from the working group. The matter has also been discussed with the Minister of Justice in a meeting in February.

The minister stated his position in a letter dated 13 May: the probability of a terror attack on a target in Norway is not so high a general as to deem necessary a general insurance scheme for the time being. He does however not exclude the possibility of reconsidering this position at a later stage. He also states that if Norway should be exposed to a terrorist attack, the authorities would have to provide economic assistance to the affected parties.

That means that we are faced with the second of the two main alternatives above, which also means that the policyholders are left with a cover against terror damages and injuries, that is far from being sufficient. The companies will now have to decide whether they in the future should continue to offer some cover, or just exclude terror risks completely. This decision has to be taken by each company, but there will probably be some element of concerted action through the Association, at least in the form of exchange of information.

The predominant position in the non-life insurance companies at this stage is to exclude cover of damages resulting from terrorist activities in all ordinary insurance policies. In the mandatory insurance schemes regarding workmen’s compensation and motor liability, there may be legal obstacles to such exclusions, and the Association has asked for a change if necessary in the laws regarding these schemes, to clear the way for exceptions.

4. The future

One must always hope that the threat of terrorist attacks will be defeated. Still it is not possible to turn the clock back. The world will have to live with the thought that attacks may occur, but one may expect the risk to be somehow brought under control. First of all by the serious efforts of democratic governments to fight terrorism, but also with the development of the insurance market offering cover for at least some share of the risk, and finally by the governments taking responsibility for damages beyond the ability of the insurance industry. Regarding the last element, hopefully some common understanding and some common patterns for governmental involvement could be developed, which the Norwegian Government may join.

The most likely outcome in the short term for Norway is that general insurance policies will ordinarily not offer cover for damages due to terror actions. Such cover will be left to a special risks market, which does not yet exist in Norway, and is still in its infancy on the international arena. This also means that it is unlikely that any pooling arrangements for covering terror risks will be established in Norway.

The impact of the Terrorist Attacks on the Polish Insurance Market

by Krystina Baran*

The tragic events that took place on 11 September 2001 in Washington and New York brought about a worldwide commotion. After an initial wave of sympathy for families of the victims and solidarity with the American nation, commentators started to consider whether these attacks would impact the world economy and if so, to what extent. In particular analysts and economists reflected on the possible consequences on the world and European financial markets.

The Polish Chamber of Insurance called an extraordinary meeting on 13 September, attended by representatives of Polish insurance companies, to discuss these events.

These events will undoubtedly go down in the annals of insurance history as the most serious events ever. Analysts estimate that the 11 September attacks will cost insurers about US$ 30-40 billion. Large international companies will incur most of these losses; these may significantly impact their financial standing.

Although most of the international insurance companies have to pay huge compensations which will affect their financial situation, none of the Polish insurers are directly involved in the US insurance market and hence, September 11 will have no direct impact on the Polish insurance market. Foreign insurance companies are financially involved in insurance companies present on the Polish market, however, September 11 losses will have no direct impact on them. Under Polish insurance law (Act of 28 July 1990 on insurance activity, the Law Gazette 1996 No 11, pos. 62) capital generated by Polish insurance companies cannot be withdrawn or transferred abroad nor can it be used to cover losses or other insurance costs incurred outside Poland.

Events in the USA did not cause any direct losses for insurance companies acting on the Polish market. Because there were no direct consequences on Polish insurers' financial situation and there was no threat to Polish insurance companies solvency, no legal or other actions (i.e. special funds) have been taken by the government or the insurance supervisor.

The consequences of the terrorist attacks will only indirectly impact the Polish market. These consequences can be divided into two groups. The first group consists of the effects resulting from activities of large world insurance companies that will try to cover their losses. As these international companies are financially involved in Polish

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insurance companies, there could be an indirect influence on Polish companies. The second group of consequences relates to the increased likelihood of terrorist attacks, i.e. an increase in risk and - as a result – increase in insurance rates, cutting companies' costs, etc.

The insurance industry has been affected, on the one hand, by the direct consequences of the September 11 attacks, and on the other hand, by the expectation that such events may happen again and cause further extensive damage.

These events may impact property and American insurance companies acting in Poland, especially those connected with terrorism risks (e.g. increased rates or exclusion of risks). They may also have a negative impact on insurance premium income from tourists due to the growing fear of travelling. Lots of people have chosen not to travel, especially long distance, others have chosen to travel by train rather than fly.

Although shares in insurance companies fell on the majority of world stock exchanges, share prices of Polish insurance companies quoted on the Warsaw Stock Exchange (Warta, Compensa, Europa) did not change.

As a result of these events, the planned privatisation of PZU may be affected. Confusion on the world financial markets and decreasing stock exchange indexes are not favourable for introducing such a large company as PZU to the stock exchange. Large insurance companies expected to invest in PZU shares are calculating their losses and are not interested in new markets at the moment. Confusion on world capital markets is also a threat to Polish insurers' investments. Polish insurance companies invest part of their assets in foreign markets and even the momentary breakdown has an impact on the results of Polish insurers.

The majority of Polish direct insurers have not changed their general conditions of insurance. However, far-reaching changes cannot be expected in this area as none of the standard policies offered in Poland cover war risks or terrorists attacks. Some insurance companies have decided to cover these risks under special conditions and for an additional premium (i.e. PZU). The war risk exclusion clause and the terrorism action clause apply to property insurance. For life insurance there is a liability exclusion for terrorism. After 11 September a lot of customers of insurance companies applied for a change in conditions in their insurance contracts to cover terrorism and war risks.

The USA events will not cause changes in individual insurance prices, i.e. property insurance.

There will be an increase in large risk premiums for reinsurance (huge industry and buildings). Reinsurers of Polish insurance companies are amongst others Axa, Munich Re, and Swiss Re – companies, which suffered the largest losses after the USA events. These reinsurers are likely to alter their reinsurance politics; this will impact reinsurance costs and result in an increase in insurance rates. This in turn will affect the price of insurance connected with deep reinsurance or terrorist attack risks the most. An increase in insurance rates and tariffs is expected. This is more likely to affect smaller companies that don't have sufficient technical provisions and don't own capital.

The September events will affect aviation insurance prices. In connection with these attacks insurance companies cancelled previous conditions and reduced the cover of war risks to US$ 50 million. They also introduced an additional payment of US$ 1.25 per passenger, which increased insurance rates paid by airlines more than tenfold.

The Polish Airlines LOT is insured by WARTA Insurance and Reinsurance Company, which cancelled all war risk insurance and reinsurance contracts on 18 September 2001. The USA events resulted in a change in general conditions of aviation insurance. LOT applied to the Polish Treasury to request an insurance guarantee to cover third party damages in the scope of war and terrorism risk. The Polish government issued a draft act giving a guarantee to LOT for a period of two months – till the end of the November 2001 - which was passed by the Polish Parliament. According to this act the state budget will cover the Polish air carrier for losses exceeding US$ 50 million upto a limit of US$1 billion. This guarantee was then extended till the end of June 2002. A general draft act on State Treasure guarantee for domestic air carriers is currently working its way through the Polish Parliament. This general act is also a result of the September 11 events, it is a direct consequence of the airline's financial situation resulting from terrorist attacks.

Further to the change in aviation insurance conditions, one would expect to see a change in the general insurance conditions of ship owners, railways, travel agents, building companies as well as administrators of the tallest buildings. These all carry large risks and are more exposed to terrorist attacks.

In addition, it should be remembered that the sales' volume of products offered by insurance companies is closely connected with the macroeconomic situation in Poland. If the situation in the US has a negative impact on the world economy and as a result on the Polish economy, it surely will influence the sale of insurance products.

Some investments may be withdrawn from Poland. It depends on future developments in the Polish insurance market. Undoubtedly, insurance companies that are part of an international group will try and cut costs. However, this cannot be entirely attributed to the terrorist attacks, it is also a result of the general economic situation in Poland.

Generally speaking Poland is not considered as a high-risk country for potential terrorist attacks. Although Polish insurance companies' activities are likely to follow the same direction as that taken by foreign insurers, they are likely to affect the insured to a lesser degree in Poland.

In summary, the September 11 attacks will not have a direct impact on the Polish insurance market. The indirect consequences of these attacks mainly consist of an increase in reinsurance rates and a change in the general conditions and prices of aviation insurance. The insurance companies will have to pay more attention to the costs of their activities. A change in the general conditions of insurance and an increase in insurance rates are also expected. The insurers must also take into account fluctuations in the business outlook and unfavourable circumstances in the world and Polish economies.

It is too early to estimate the whole impact of the terrorist attacks that took place on 11 September in the US on the insurance market and the global economy. The scale of this event is too large to enable us to forget its moral and financial effects. The real dimension of the consequences of the 11 September events on the US economy, which will surely impact the European market, including the Polish insurance market, will only appear in the long-term

Insurance Consequences of 11 September - the UK Insurance Market

by Mary Francis[*]

The year since the attack on the World Trade Center has demonstrated its steadily widening effects. Even now, it is difficult to arrive at an accurate assessment of the losses in their entirety. But it is clear that the scale of the losses represents the biggest ever insurance claim and exceeds any comparable recent catastrophe. In addition, September 11 occurred at a time of significant volatility, both in world stock markets and in property/casualty premium rates. All these factors taken together contributed to a widening ripple of economic effects bearing down on the operations of non-life insurers and life assurers alike.

Inevitably, it has taken time for the insurance industry to appreciate what has really "changed" after 11 September. But a number of factors can now be identified:

- a shift in conceptions of the sheer magnitude of possible losses. The losses on 11 September were greater than previously envisaged in disaster scenarios, involving cumulative consequences going far further beyond a specific risk than previously imaginable;

- the emergence of a new debate as to whether there is a fresh and different class of risks arising from actions akin to acts of war, and whether such risks, with their cumulative levels of aggregation, should be regarded as different in kind from conventionally insurable risks. In the event, this proved not to be a helpful concept, but the debate was necessary and instructive;

- a shift of perception (as happens periodically) in the understanding of "risk": true, "risk" may always have been perceived as including suicidal perpetrators of destruction; but there is acceptance of a change of scale, taking account of the possibility of thousands of civilian casualties, and of the use of biological weapons;

- fresh thinking on the role and responsibility of commercial enterprises involved in higher risks (such as tall premises), and the need for them to cater for novel hazards through disaster recovery plans. Insurers, for their part, have moved towards market-pricing that takes greater and more explicit account of commercial clients' approach to disaster contingency planning;

- a multiplicity of effects on the public, and the public's perception of risk and insurance: the global nature of insurance and its interdependencies have been

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impressed on the public mind; the public has - perhaps for the first time – placed reinsurance in its mental spotlight; and the public has enhanced its uptake of insurance.

No short article, even a year after the event, can hope to encompass all the effects. This article - which also reflects the views of the International Underwriting Association of London and of Lloyd's - tries to look at the effects, one year later, of the attack on the World Trade Center on 11 September 2001, both as regards the UK insurance market and the wider world market in which the UK plays a significant role.

1. The World Trade Center claims

The attack of September 11 created a range of issues which the insurance industry worldwide needed to deal with. The principal issue, however, was the complexity of the claim itself. All estimates of losses and their breakdown still need to be treated cautiously. The US Insurance Information Institute (III) has recently produced a consensus insured loss estimate totalling US$ 40.2 billion with a percentage breakdown, which has remained stable since the first quarter of 2002, as follows:

Line of Insurance	US$ Billions of Incurred Losses	Percentage of Total
Life	$2.7	7.0 %
Other Liability	$10.0	25.0 %
Aviation Liability	$3.5	9.0 %
Aviation Hull	$0.5	1.0 %
Event Cancellation	$1.0	2.0 %
Workers' Compensation	$2.0	5.0 %
Property: Other	$6.0	15.0 %
Property: WTC 1 & 2	$3.5	9.0 %
Business Interruption	$11.0	27.0 %

2. The UK as an international insurance market

The UK insurance market is strong, deep and resilient. It is the biggest insurance market in Europe and the third largest in the world. Unsurprisingly, a significant proportion of the losses arising from September 11 were covered by insurers operating in the London Market. Inevitably, the consequences were principally felt by members of the International Underwriting Association of London and by Lloyd's.

As at 31 December 2001, the Lloyd's market reserved for a gross loss of £6.13 billion, after inter-syndicate reinsurance, and a net loss of £1.98 billion. This is the largest single loss Lloyd's has ever dealt with. Lloyd's is the world's second largest commercial insurer and third largest reinsurer. Its single largest market is the United

States, which provides 35 per cent of its premium income. Lloyd's clear conclusion is that the loss is manageable and can be contained within its total assets of £18 billion.

There are comparable effects in the wider London international insurance market, among the members of the International Underwriting Association of London (IUA). The IUA represents the companies participating in the international wholesale insurance and reinsurance market in London. Its 83 members include all the world's major reinsurers. IUA members wrote around £8.4 billion premium in 2000. Of this, gross non-marine treaty reinsurance amounted to an estimated £5.4 billion - two thirds of such business underwritten in London. A substantial proportion of the claims arising from the WTC will lead to reinsurance claims on policies underwritten by IUA members. It remains difficult, however, to assess the amount, because it is not feasible to dissociate the claims made on London reinsurers and their parent companies in Europe, the USA and elsewhere.

3. The UK domestic insurance market

Inevitably the further effects on the worldwide insurance market have revealed the degree of interdependence in the global insurance market as a whole, the critical role of reinsurance, and the key issue of the cost and availability of reinsurance in the future. It was the reinsurance issue which, naturally, first made for much uncertainty, heightened by the imminent prospect of the 2001 year-end and the need to renew many commercial lines policies. UK insurers first reacted – naturally enough – by seeking to limit exposures. The desire for urgent action to control exposures, which events showed could be much greater than anticipated, was understandable. Nevertheless, widespread and uncontrolled withdrawal of cover could have had far-reaching consequences for personal lines policyholders and so were viewed very negatively by politicians and the media.

The pre-eminent need was for a carefully thought-out approach to the provision of terrorism cover, distinguishing between whether it was desirable to provide cover for terrorism in the original policies, and how reinsurance capacity for the exposures could be obtained where there was a desire to provide cover in the original policy.

Following the annual Baden-Baden reinsurance conference in November 2001, reinsurers signalled that cover for terrorism was likely to be restricted, or indeed unavailable, including in the case of compulsory liability classes such as motor or employer's liability insurance. Lloyd's and the IUA had long had clauses enabling their members (on an entirely voluntary basis) to exclude terrorism from reinsurance treaties they write, if they so wish. These clauses (including Lloyd's clauses NMA 2918 to 2920) potentially excluded losses from causes wider than terrorism. A recent version of the IUA's clause (G51A) had been intended for risks outside the UK, but could also be used for UK risks.

In the event, post-Baden-Baden developments in 2002 meant that the effects of reinsurance restrictions were less dire than first feared. The extent of withdrawal of cover across the globe has varied enormously and new capital has come in to the worldwide market, particularly to Bermuda. London companies reinsuring British risks have acted in a variety of different ways, depending on their relationships with individual clients and on the different corporate strategies of their capital providers and parents. Reinsurance for terrorism has been withdrawn in many cases, but often alternative more restricted terrorism cover can now be purchased from companies that have introduced new products to meet the demand. In the compulsory classes mentioned above cover has not been withdrawn, even though it may now be confined to the statutory minimum required by law. These factors mitigated the worst effects, particularly for commercial policyholders who, it had been feared, might be forced to cease business for want of compulsory lines cover.

4. Terrorism insurance in the UK market at 11 September 2001

For a decade before 11 September the United Kingdom had had Pool Re as a government-backed terrorism reinsurer. This meant that the UK was better positioned to deal with terrorism than many other countries. At the time of September 11 Pool Re's statutory scope was limited to property damage caused by fire and explosion and consequential loss. It provided cover for terrorism as defined by the Reinsurance (Acts of Terrorism) Act 1993; one of the explicit purposes of this Act was to give a definition of terrorism for insurance purposes. Coverage granted to policyholders, through buyback of the terrorism exclusion in commercial property policies, was individually reinsured to Pool Re, at rates prescribed in the Pool Re tariff.

The Terrorism Act 2000 had widened the definition of terrorism to include for example acts which "create a serious risk to the health or safety of the public" or acts which were "designed seriously to interfere with or seriously to disrupt an electronic system." At the time of September 11 insurers protected these exposures – to the extent that they covered them in original policies – through their commercial reinsurance arrangements, while Pool Re limited itself to property damage and business interruption losses arising from fire and explosion, but did not provide cover against other forms of terrorist attack.

5. Approaches to expanding UK terrorism insurance

Immediately after 11 September it was recognised that steps would need to be considered to extend the scope of Pool Re to cover the full range of property damage and consequential loss perils traditionally provided in the market. Because of the statutory limitation of its scope to property damage and consequential loss Pool Re was unlikely to provide a solution if, for example, reinsurance cover for liability classes was withdrawn. Nor did Pool Re cover war, which is generally excluded (by "war exclusion" clauses) for first party policies when war is declared by the Government. However the entry into operation of the war exclusion clauses is not solely dependent on Government definition, because the war exclusion clauses exclude not only war but also an act of foreign enemy, and hostilities (whether war be declared or not). There were questions about the extent to which future events would fall within these definitions; and these questions clearly assumed greater importance after 11 September.

There was also concern, post-September 11, that the range of terrorist weapons was potentially wider than previously envisaged. An obvious example was chemical or biological attack – most obviously anthrax. The use of terrorist weapons of this kind could result in claims under two extensions to commercial property policies - especially those aimed at the hotel and retail sector - notifiable infectious and contagious diseases, and loss of access due to action by competent authorities. There could also be product recalls by businesses as a result of contamination. It was also possible that where biological or chemical attack required decontamination then all risks Material Damage or Business Interruption policies could pick up these claims.

In addition, there was concern in the UK market to continue to provide cover for terrorism in policies covering commercial risks. Household policies in the UK do not explicitly exclude terrorism; and events which result in a claim under a household policy, even if caused by terrorism, would be met. Until September 11 terrorist attacks had been targeted on commercial projects, so household losses have been small and incidental. It was argued that, post-11 September, the potential exposures were now greater.

Finally, there were certain unresolved issues relating to terrorism and employer's liability (EL) cover in the UK market. It was not difficult to imagine scenarios in which terrorist activity could result in EL claims – for instance, if lax security resulted in terrorists entering business premises and harming employees. However, a key question was the extent of the exposures. In the UK, EL is not a no-fault workplace compensation scheme; it is tort based, so negligence on the part of the employer has to be proved. In this it is different from the workers' compensation system in the USA. In the UK terrorist activity which results in employees being killed or injured will not generally result in EL claims unless the employer has negligently contributed to these deaths and injuries. The UK legislation requires employers to insure their liability to employees. Before September 11, terrorism had not generally been excluded from EL policies; but it was open to insurers to exclude it and so withdraw cover for terrorist-related EL risks. There was therefore a major question of how to provide employers with the necessary cover to meet their legal liabilities under EL legislation, as these liabilities would not be extinguished by the withdrawal of insurance cover.

6. Changes to the Pool Re scheme: July 2002

In response to representations from industry which expressed grave concerns about the gap between Pool Re cover and that provided by reinsurers, the UK Government agreed in December 2001 to discuss possible changes to Pool Re under specified Terms of Reference (Annex A). The discussions would cover a range of issues which could be addressed without the need for primary legislation.

A Working Group was established under Treasury chairmanship involving representatives of the Association of British Insurers, the British Insurance Brokers Association, the Association of Insurance and Risk Managers in Industry and Commerce (AIRMIC) as buyers of commercial property insurance and Pool Re itself.

This Group convened regularly to try to develop a package of measures which met the Terms of Reference. In July 2002 these negotiations produced broad agreement on a package to address the industry's concerns as well as taking account of changes in the market since the setting up of Pool Re in 1993. The elements of the package are set out in the following five sections.

(1) Extension to Pool Re's cover

Pool Re currently (July 2002) covers commercial property damage and business interruption costs arising from an act of terrorism which results in fire or explosion. This means that an act of terrorism resulting in other causes of damage (e.g. a major flood or contamination) but which did not involve fire or explosion would not be covered by the current Pool Re scheme. September 11 demonstrated that terrorists could find methods of attack which go beyond "normal" scenarios and the uncertainty which surrounds the method chosen by a terrorist is a source of great concern for insurers and buyers of insurance. Cover provided by Pool Re will therefore be extended to cover all risks arising from terrorist attacks which cause commercial property damage and consequent business interruption.

There will be no change to the existing exclusion for war risks, nor to the type of property covered by Pool Re. There will however be an exclusion in respect of computer hacking and virus damage to electronic components because of the likely inability to prove a virus was a terrorist attack. It is intended that the present exclusion which exists under the scheme for damage caused by nuclear devices will be deleted as soon as practicable.

The extension in cover to all risks will be reflected in a doubling of the existing rating charged for Pool Re cover under existing Heads of Cover arrangements until the end of 2002. (The rating is currently discounted at 85 per cent, and this proposal does not affect that discount).

(2) Retention

Pool Re currently operates a "retention" under which insurers bear the first amount of any claims for an event covered by Pool Re, for each "Head of Cover", i.e. section of policies they issue. This retention is generally £100,000 per Head of Cover (though different retentions apply in certain circumstances). This means that the total cost borne by an individual insurer depends on the number of Heads of Cover affected.

The Terms of Reference emphasised the objective of encouraging competition within the market, given the fact that Pool Re is the dominant provider of terrorism reinsurance in this sector. In the current market, the scope for commercial capacity to re-enter the market is clearly limited. The most practical way of encouraging commercial capacity back into the market will be to raise the retention, opening the possibility for insurers to seek commercial reinsurance to cover these retentions.

The Group believed a big increase in the retention would be difficult for insurers (particularly small insurers) to bear, particularly given the proposal that cover should be extended to “all risks”, since the current basis for the retention could lead to a very high overall loss for an individual insurer. The group therefore considered alternative models for the retention, and concluded that it should move to a *per event retention, combined with an annual aggregate limit for each insurer*, based on the overall terrorism market share of each insurer.

The intention is that the retention will be set for each insurer annually as a proportion of an “industry wide” figure. This will make a larger retention easier to bear for insurers, because they will have certainty about their maximum exposure in any one year, leaving Pool Re, and if necessary the Government, to bear the cost of a major incident or a terrorist campaign involving a sustained series of incidents.

In contrast to the old basis, each insurer will have its losses capped under the new basis, both per event and per annum. Insurers will know in advance the maximum amount they could be called to pay out in any one year.

From 1 January 2003 the maximum industry retention will be set at £30 million per event, with individual insurers’ retentions being based on market share. Extensive modelling work done on behalf of the group suggested this represents a moderate increase on retentions under the old basis (£100,000 per Head of Cover per policy).

Over the next four years it is intended that the retention will increase steadily, bringing commercial reinsurance in to cover insurers’ retentions or permitting insurers to retain this element of risk themselves. This increase will be phased in order to allow the market to get used to the new arrangements gradually, and to allow substantial time for the reinsurance market to re-establish terrorism capacity following September 11, 2001.

The intention is that the *maximum* industry retentions set for the next four years will be as follows:

Applying from	**Per event**	**Per annum**
1 January 2003	£30m	£60m
1 January 2004	£50m	£100m
1 January 2005	£75m	£150m
1 January 2006	£100m	£200m

In practice, the actual amount of retention borne by the industry following an event would probably be considerably less than this, depending on the distribution of claims between insurers. An individual company would never experience a larger retained loss than implied by its market share, regardless of its actual experience. For example a company with a 5 per cent market share in 2004 would retain £2.5 million per event, £5 million per annum even if it suffered 10 per cent of the losses in a given event.

(3) Reinsurance and insurance premiums

The way in which Pool Re charges for its reinsurance will be reviewed to take account of the change in the basis and size of the retention for insurers.

Under the new arrangements from 1 January 2003, insurers will be free to set the premiums for underlying policies according to normal commercial arrangements. This will result in greater competition in the market and will neutralise the "crowding out" effect a dominant provider such as Pool Re might have in setting market rates.

From 1 January 2003, the following arrangements will be discontinued:

- arrangements under which Pool Re may call additional premium from Members in respect of years which result in loss to Pool Re;
- payment of premium rebates in respect of years which result in a surplus;
- payment of reinsurance commission to Members.

(4) Governance

The Working Group proposed a set of objectives (Annex B) which it believed summarised the aims of the Pool Re scheme as a whole.

Pool Re and the Treasury have agreed that as part of the overall package of changes to Pool Re they will re-examine the detailed involvement of the Treasury in day-to-day decisions. Under the new arrangements the Public Interest Director of Pool Re will provide a formal annual report to the Treasury on how Pool Re has performed against the objectives at Annex B. This Director may report more often than once a year in exceptional circumstances, and will bring to Treasury's attention any issues which have a particular bearing on the objectives or some other aspect of the public interest.

(5) Transitional arrangements

These changes will involve considerable operational changes for Pool Re and insurers. The detail of the changes will also be subject to further discussion between insurers, insureds, brokers, Pool Re and the Treasury. The Treasury will also discuss the changes with the Office of Fair Trading.

However, given the problems faced by insureds who are having to cope with gaps in their insurance cover for terrorism, it is essential that the extended cover should be implemented as soon as possible. The package will therefore be implemented in stages as follows:

- Once formalities are completed the present restrictions in the Pool Re scheme to fire and explosion only will be deleted. The wider "all risks" cover will apply to renewals from then. Premiums for the extended cover will be calculated at double the premium on the existing basis. In addition, Pool Re Members will be able to offer the extended cover as an optional addition to policies which have full terrorism cover in force. Insureds will choose whether they wish to have their policies extended or not. If they wish to do so they may backdate the extended cover to any date from 1 January 2002. In this case an appropriate "pro rata" premium will be charged for the period on risk.

- The Nuclear exclusion clause will be deleted as soon as practicable. This will be, at the latest, 1 January 2003.

- The rest of the changes to the scheme will be put in place from 1 January 2003.

- The changes will be reviewed as appropriate in the light of changing conditions in the insurance and reinsurance markets.

- The retrocession agreement and supporting documents will be amended to reflect these changes as appropriate.

7. Underlying principles in the approach to Pool Re

The joint industry/government approach to changing the role of Pool Re can be seen as meeting some important underlying principles:

<u>Timescale</u>: the approach needed to be long-term: there could not be a "quick fix";

<u>Flexibility</u>: the approach needed to be flexible: terrorist threats will vary in intensity, and any approach needs to be modified to match both the threat and current market conditions;

<u>Balance</u>: the approach needed to be proportionate, assigning the right role to the insurance industry, financial markets and to the government as insurer/financier of last resort. Here too the balance may ebb and flow, depending on the availability of new capital in the insurance market and financial markets;

<u>Crowding out</u>: given that the approach involved the public sector, it had to be careful not to institutionalise a role for government that "crowded out" the private sector and discouraged adaptation in insurance markets and the attractiveness of insurance markets for new investment, whilst recognising the lack of appetite for such risks in the private capital markets over the short to medium term;

<u>Externalities</u>: the approach had to look further than the immediate cost and availability of insurance cover, so as to take account of the wider economic costs of insufficient cover, and the risks of business interruption, economic instability and discouragement of investment and wealth-creation that would ensue.

8. Regulators' role in securing deep insurance markets

September 11, and the claims arising from that day, threw into sharp relief the exposure of the insurance and reinsurance industry worldwide to heavy catastrophe claims and to the economic disruption and stock market instability which can follow terrorist attacks. The situation in 2002 remains one in which there is the threat of heavy claims, accompanied by the need for world insurance markets to be as deep as possible. In this situation, the immediate short-term requirement is for the insurance industry worldwide to remain as resilient as possible, and for regulators to combine watchfulness with the avoidance of measures militating against a deep and flexible worldwide insurance market.

In large part, this is a matter for the insurance industry itself, the investment that it can attract, and its consequent ability and capacity to cover risks of the largest size. But it is also a matter for regulators. Regulators have a duty to ensure that the industry is properly regulated so that contractual obligations can be met. At the same time, regulators have a duty to ensure that their own regulatory activity makes for a world insurance market that is as large and deep as possible, and that they do not take steps which have the perverse effect of placing unnecessary barriers on the supply of insurance services or weakening or localising the asset base which ought to be available to facilitate insurance and reinsurance worldwide and allow the deepest possible worldwide market to cater for the needs of insured.

These issues inevitably focus on certain regulatory practices in the United States. However, they are relevant to insurance markets generally. And the remedies, which probably lie in more widespread mutual recognition of insurance regulators, and enhanced mutual trust between them, are likewise relevant to insurance markets worldwide.

Even though roughly two-fifths of reinsurance in the US market is provided by foreign (known as "alien") reinsurers, the US reinsurance market carries onerous compliance costs. Since 1984, individual states have required foreign-regulated reinsurers either to be licensed or to establish a local funding mechanism, as local security for their outstanding liabilities in the US.

The purpose of these arrangements was originally to protect American insurance companies and their policyholders from the possible failure of foreign reinsurance companies over which the American regulators would otherwise have no control or knowledge. But the international environment has changed significantly since 1984. The London Market and the large international European and American reinsurers are the main participants in the area of internationally-traded reinsurance. Mergers and acquisitions and the globalisation of trade mean that they operate worldwide and are big, well-regulated and well-capitalised. Their security is not seriously in question. Their technical and financial stability are universally recognised and now well-known to the US regulators. They operate in a market which knows no boundaries, offering an attractive range of customer-tailored reinsurance at competitive rates.

The losses from the events of September 11 clearly show the importance such reinsurance has in offering necessary protection to US cedents and consumers. Analysts have estimated that over 50 per cent of the losses will fall to non-US reinsurers.

Against this background, the persistence of US requirements for a local funding mechanism stands out as perverse in the way it restrains reinsurers' ability to spread risk and capital right across the globe. The US requirement to be licensed or hold reserves in either local US trust funds or via collaterized letters of credit severely hampers the ability of insurers licensed outside the USA to manage their capital to optimum effect. It also reduces their ability to draw on their overall funds when meeting claims that arise from other policies which may well also cover other American risks.

The consequence is that while the services of non-American reinsurers are required in the US market they cannot spread risks and capital to optimum effect. And the American reinsurance market is not as open as it should be when the need for deep insurance and reinsurance markets is paramount. Insurers pay more than they should for their reinsurance and their alien reinsurers could be even more stable and secure if they had the freedom to place their capital as securely, widely and profitably as possible.

Ultimately, the solution to these regulatory issues will need to be mutual recognition between Europe and the USA of regulated reinsurance companies, with jurisdictions on both sides each trusting that each others' companies are adequately regulated by their home supervisors. One model for this system would be the European single market and the work currently being undertaken in Europe to develop a system of mutual recognition of reinsurers through a single-passport arrangement.

Mutual recognition is, however, not a goal that will be achieved in the immediate future. In the meantime, there are some more immediate prospects for progress. At the instigation of the industry in the UK and Europe, the American regulators and legislators have shown themselves to be open to giving serious examination to various proposals for a reduction in the 100 per cent funding, to wider use of letters of credit instead of trust funds, and to the introduction of a "white list" of international companies. Under this last proposal, a reinsurer would, by voluntary application, subject itself to a meaningful set of US regulatory criteria, in addition to its home state regulation. By meeting these criteria and demonstrating that its home state regulation and judicial system are well understood and highly developed, the applicant could be listed and therefore entitled to fund at not less than 50 per cent of the outstanding liabilities. This proposal would create a system to overcome the outdated "one size fits all" model and reflect the realities of today's global reinsurance market.

In parallel with these proposals, Lloyd's is in continued discussions with the National Association of Insurance Commissioners (NAIC) and the New York Insurance Department (NYID) regarding its US funding obligations. At 31 March 2002 Lloyd's completed the transfer of US$ 5bn into its US situs funds which provides US policyholders with additional security. The NAIC and the NYID have been constructive in their discussions with Lloyd's and recognise the magnitude and the associated financial burden of the loss, and as a result they have provided Lloyd's with funding dispensations specific to September 11. Lloyd's welcomes this approach and maintains an open line of dialogue with its US regulators in order to ensure the continued development of the regulatory environment.

It remains a fact however that funding requirements of the current kind distort the market by making it more difficult and expensive for non-US insurers to supply US insurance requirements. And the presence of such measures, in one significant market, could create the risk that other regulators in major markets would feel bound to follow suit and apply similar constraints. If they did so, the result might be that major reinsurers could not effectively cover insurance risks outside the borders of their own home states. Such an outcome would be a complete reversal of the public policy objectives that regulators, and the governments to which they belong, seek – quite rightly – to pursue.

9. Other factors

The issues facing the insurance industry, in the UK and elsewhere, should not all be laid at the door of 11 September. It is worth pointing out however that, for the insurance industry, September 11 happened at a time when general insurance premiums were widely on an upward trend as part of the natural market cycle. So, while consumers have seen sharply higher insurance bills in 2002, only part of this is due to the impact of the New York and Washington atrocities.

Other factors include a general hardening of rates following many years of little or no growth because of intense competition in the marketplace. Almost all forms of general insurance have been making an underwriting loss for years (for instance, total UK motor underwriting loss in 2000 was £916 million). In time, such cumulative losses produce pressure to increase prices.

Secondly, the insurance industry – certainly in the United Kingdom – is having to cope with increasing levels of claims because of litigation (personal injury claims), storm and flood damage (UK storms and flooding cost over £1 billion 2000) and, regrettably, fraud (it amounts to over £1 billion a year on personal lines general insurance alone – around 10 per cent of all motor claims and 15 per cent of household claims).

Thirdly, for the UK insurance industry, reduced returns on capital investments will mean that more of the burden of paying for insurance needs to be covered by premiums.

The aftermath of September 11 has added very significantly to all these pressures. A key factor remains increased pressure on the reinsurance industry. The largest re-insurers are most exposed to the costs of New York and Washington. The market has had to absorb those costs and adjust its assessments of risks for the future and its approach to risk-modelling. The long term effect on insurance and reinsurance capacity will depend on the extent to which new players are permanently attracted into the market. Put simply, this means that there will be additional upward pressure on prices for British consumers.

10. Conclusion

One year on, it is clear that the tragedy of 11 September 2001 confirmed the role of insurance in covering risks and the requirement for insurance to be available. It also demonstrated the resilience of the worldwide insurance market in the face of unprecedented claims. Inevitably, however, the aftermath highlighted several fresh issues that needed to be tackled by the industry and regulators alike in ways that were rigorous and principled, but also flexible. In the first months after the disaster, a spirit of cooperation has been very much in evidence. In the longer run, we have yet to see how far we are entering a changed world. Whatever that world brings, it will require continuing effort from the insurance industry to meet the challenges, together with regulatory responses that combine prudence with attracting capital to insurance markets. I believe that the UK insurance market and its regulators have risen to all these challenges and will continue to do so.

ANNEX A

TERMS OF REFERENCE FOR POOL RE NEGOTIATIONS

The Government recognises there are circumstances in which it has a role as reinsurer of last resort to prevent or mitigate market failure: where there is a substantial public policy interest in pooling risk, and where the market is currently unable to provide insurance. It will not step in wherever the market does not offer cover.

In this case, there are issues for the insurance of commercial property for material damage and business interruption in the event of terrorist attack, for perils other than fire and explosion. In order to find a mutually acceptable way forward the Government will discuss with the industry changes to the Pool Re scheme to reflect the situation post-September 11 and changes in the market since Pool Re was set up in 1993.

Discussions with the industry will cover:

- Extending Pool Re to cover additional perils for commercial property damage, within existing legislative boundaries.

- The way Pool Re is financed. Issues to be addressed will include premium rates, thresholds for industry participation and ways of accessing commercially available terrorist insurance capacity. This will be with a view to encouraging competition in the insurance and reinsurance markets and protecting customer's interests.

- Considering other ways in which the public (including consumer and taxpayer) interest can be reflected in the Pool Re arrangements, in particular through the governance of Pool Re.

Any solution must be practical; be commercially and economically viable; it must respect the taxpayer and consumer interest and should encourage the re-entry of commercial reinsurance into the market.

Discussions will be undertaken with a view to any solution being applicable to liabilities arising on or after 1 January 2002.

ANNEX B

POOL RE OBJECTIVES: PROPOSAL BY WORKING GROUP

Background

Pool Re exists to provide reinsurance cover, in the face of ongoing terrorist threat, where the market will not do so, and where this market failure would threaten the ability of British industry to function in the absence of Pool Re.

Objectives

Pool Re seeks to do this at reasonable cost, in respect of loss or damage to property located in Great Britain (and consequential losses), resulting from or consequential upon, acts of terrorism. In doing so it seeks to ensure (subject to the Retrocession Agreement, the various Reinsurance and other Agreements, and its other legal and regulatory obligations), that:

(a) it achieves a reasonable level of equity of treatment of, and contribution from, insurers whose risks it covers;

(b) its arrangements and practices do not unduly inhibit other commercial suppliers of reinsurance from entering or operating in the market, for example by ensuring that premiums reflect Pool Re's operating risks; and

(c) it secures an appropriate balance between the interests of those who bear the financial risk, and in particular the ultimate stakeholders (insureds, members and taxpayers).

Constraints on Pool Re

The Governance arrangements which support these objectives must acknowledge the legal and regulatory responsibilities and limitations of the Pool Re Board.

Insuring Terrorism Losses in Switzerland: Assessment and Definitions

by Mathias C. Berger*

1. Introduction

September 11 was a watershed. Never before has the Swiss insurance industry had to take such a hard look at the insurability of terrorism risks on its own territory. This is largely a result of historical factors. Over the last few decades, Switzerland has only been a direct target for attacks on rare occasions, however the nation's complex global activities have meant that it has time and again been indirectly affected by international terrorism. It may therefore be valuable to outline briefly how terrorism in Switzerland has evolved since 1960, take a look at how the insurance industry defines terrorism, and analyse how the market is responding to these developments.

1.1. Survey of terrorist activities in Switzerland since 1960

The sixties were marked by the Palestinian attack on an Israeli aircraft at Zurich-Kloten in 1969 and the Swissair jet crash in Würenlingen caused by a bomb. On 6 September 1970, Palestinian terrorists again hijacked and blew up a Swissair DC-8 and two other foreign aircraft. In 1977, following a border incident in Fahy (Canton of Jura), members of the German Red Army Fraction (Rote Armee Fraktion - RAF) were arrested; four RAF members consequently attacked a Zurich bank in 1979, causing the death of a policeman. In 1980 an incident involving a supporter of a German right-wing splinter group led to an exchange of fire with fatal consequences. The Eighties were characterised by repeated bomb attacks, hostage takings and foreign embassy occupations. In 1987, in Geneva, a hijacking drama involving an Air Afrique plane carrying 145 passengers ended with the arrest of a Lebanese hijacker, but only after he had shot dead one French passenger. Switzerland was also exploited as an operating base for groups generating political propaganda, plotting attacks, or seeking to acquire logistical information. In 1982 the Libyan chargé d'affaires was dismissed as he was perceived to be a security risk for Switzerland. Some parts of the trail in the Lockerbie case (1988) were traced back to Switzerland and the case involving the murder of the Iranian opposition politician in Coppet (Canton Vaud) in 1990 illustrates how international terrorism can have a direct impact on foreigners residing in Switzerland. The nineties were overshadowed by the violent acts of Kurdish/Turkish extremists. The exile of supporters of extremist Algerian groups in Switzerland during the Nineties was also abused for the purposes of illegally acquiring weapons and explosives. At the end of the nineties, procurement networks connected with the Tamil independence organisation Liberation of Tamil Eelam were also uncovered in Switzerland and

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donation money and illegal weapons trafficking relating to the Kosovo conflict were traced. Swiss citizens can also be victims of terror abroad as was made tragically clear in the attack by Islamic fundamentalists in Luxor (Egypt) in 1997. In Switzerland itself other isolated (terrorist-style) acts of violence motivated by domestic political factors were committed. We should also bear in mind the string of bomb and arson attacks carried out by various political groups over more than three decades since the early sixties and the frequently fatal consequences of such acts.

1.2. The Swiss government's assessment

The Swiss government has analysed the post 11 September situation and has published several reports on the status of terrorism threats [76], [77]. These government assessments of the situation contain the following basic conclusions:
On the evidence of a current analysis of the aims and modes of operation of terrorist organisations, the probability of Switzerland/Swiss citizens becoming the primary object of terrorist attacks is *low*. However, in view of the capabilities and intentions of terrorist organisations, Switzerland and its inhabitants could, at any time, be affected by acts of terrorism. Terrorist or extremist activities taking place in Switzerland may not only represent a threat to domestic security but also lead indirectly to political pressure being exerted on Switzerland by nations that are directly opposed to such organisations. As regards available means and loopholes: it is becoming increasingly clear that terrorism, violent extremism and organised crime have to be tackled by the international community at large and that this task requires new forms of cooperation at both federal and cantonal level, and between foreign authorities and international organisations. Switzerland's open democratic society, high standard of living, liberal economic order and extensive global business networks also make it a potential platform for international crime. Extremist violence, of whatever type, does not stop at national borders. International terrorism has taken on entirely new proportions and instability and conflicts, even in remote areas of the world, may impact Switzerland's domestic security and have consequences for relatives of the conflicting parties residing in Switzerland.

1.3. The insurance industry's assessment

The insurance industry basically supports the assessment of the Swiss government with respect to the terrorism threat (see section 1.2 above). It will use this assessment as the basis for developing technical threat scenarios and, using mathematical models, will attempt to calculate – and thereby render insurable – the maximum possible loss of terrorist attacks.

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[76] Assessment and analysis of the threat to Switzerland after the 11 September terrorist attack, report of the Swiss Federal Council to parliament, passed by the Swiss Federal Council on 26 June 2002 ("Lage- und Gefährdungsanalyse Schweiz nach den Terroranschlägen vom 11. September 2001)

[77] Swiss Internal Security Report 2001, Federal Office for Police Matters , published July 2002

2. The insurance industry's definition of terrorism

Terrorism – like organised crime – is difficult to define. Both areas are currently in a state of social and political flux. The European Union's attempts to come up with a uniform definition of terrorism illustrate just how difficult this process can is [78], [79].

It is crucial for the insurance industry to define the term "terrorism" as precisely as possible if it is to be able to quantify and limit this risk effectively. It is also important that terrorism should be clearly differentiated from war and civil unrest. The following definition of terrorism – which is essentially aligned with comparable formulations used abroad – is generally observed by the market at present:

> *An act of terrorism means any type of violent action or threat of violence committed for political, religious, ethnic or ideological purposes. These violent actions or threats of violence are aimed at spreading fear or terror amongst the population or sections thereof for the purpose of gaining influence over government or state authorities.*
>
> *Civil unrest does not count as terrorism. The term civil unrest is applied to violent actions against persons or property that are committed in the context of insurrection, riots or disturbance, and to the looting that occurs as a result.*

3. Market activity

3.1. Reinsurer/direct insurer relations

The 11 September attack had a profound impact on reinsurer/direct insurer relations in virtually all lines of business in the Swiss insurance industry. The effects were particularly dramatic in aviation where the extended coverage endorsement against terrorism risks was cancelled, following a short seven-day notice period. In Switzerland this led to a situation in which the state itself became the insurer of last resort, issuing a guarantee to Swiss airlines of a maximum of USD 2 billion, valid until the end of 2001. Similar events took place in other business lines, however the state did not intervene with guarantees. In the meantime, the market has stabilised again, albeit with significantly higher premiums and clear cover limitations. In Switzerland the so-called *illimité* cover for motor liability insurance is currently the subject of much debate. In the future, this type of unrestricted liability cover will almost certainly be phased out.

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[78] Report on the role of the European Union in combating terrorism, Brussels, 12 July 2001, A5-0273/2001, 2001/2016 (INI)

[79] Council Regulation on specific restrictive measures directed against certain persons and entities with a view to combating terrorism, Brussels, 30. November 2001, KOM 2001 713, 2001/0228 (CN)

3.2. Relations between direct insurers and their business partners

Many direct insurance business lines are tending towards an approach that only offers terrorism protection in the form of additional cover and on payment of an additional premium. In other words, they are increasingly excluding terrorism risks from standard covers. This applies to risks located in *Switzerland* and is particularly relevant to *property and building insurance for large risks*. The 11 September was a dramatic and tragic illustration of the kinds of enormous losses the insurance industry may have to absorb in the future. Private consumers will, however, remain virtually unaffected by these market developments.

In other lines there will be virtually no material effect of the exclusion of terrorism risks/inclusion on payment of additional premiums. This is due to the long-term nature of some contracts (eg in life insurance) and the clear *legal* prescriptions governing others (eg accident and health insurance). Moreover, personal insurance lines are generally better able to factor in the risk of death and disability resulting from acts of terrorism, provided this risk is quantifiable on the basis of morbidity and disability figures.

4. Conclusion

The insurance industry shares, by and large, the Swiss government’s view that the *probability of Switzerland/Swiss citizens becoming a primary object of terrorist attacks is low*. Where answers are still lacking, it is in the process of developing workable insurance solutions to cover persons and risks located in Switzerland against acts of terrorism. These solutions will be adapted in response to fluctuations in supply and demand.

The Current Condition of the Japanese Insurance Market after the Terrorist Attacks of September 11

by Katsuo Matsushita*

1. Overview of the Japanese economy after September 11

1.1. Trends in the whole Japanese economy

The adverse effect of terrorist attacks on September 11 added to the prolonged stagnation of the Japanese economy. Each of the major economic indicators such as personal consumption, capital investments and exports fell further from December last year to January this year. The unemployment rate rose to a record 5.6 per cent last December, and the Nikkei average stock price dipped to the 9,000 yen mark at the end of January 2002 for the second time since just after the terrorist attacks. However, after April, the Japanese economy showed signs of halting the downturn mainly in exports following the rapid recovery of the US economy. In its monthly economic report in May, the Japanese government recognized that the economy was bottoming out. This was due to an increase in exports mainly to Asian countries and that mining and industrial production had stopped declining. In the same report, the Gross Domestic Product marked a high growth rate, with a 1.4 per cent increase in the real rate (+5.7 per cent for annual rate) and 1.1 per cent increase in the nominal rate (+4.6 per cent annual rate). Furthermore, the government's judgement on the economic condition in the monthly economic report in July was reviewed upward, announcing that there were signs of partial recovery in the economy.

On the other hand, both personal consumption and capital investment continue to stand at low levels, and there is a growing feeling of uncertainty in the future economy. This was occasioned by a fall in stock prices in the US due to a series of accounting scandals at Enron and Worldcom, and there was also a fall in the US$/Yen exchange rate. The Nikkei average stock price has gradually fallen from a high of 11,979.85 yen in May to a low of 9,591.03 yen on July 26, hitting the 9,000 yen mark for the third time since September last year.

1.2. Impact on the airline and travel industries

According to the interim statistics for 2001 (January-December) released by the Ministry of Land, Infrastructure and Transport, the number of passengers of international airlines fell to 17.5 million, a decrease of 9.1 per cent from the previous year, due to the impact of the terrorist attacks and the depressed economy. This conspicuous decrease in international airline passengers represents a fall of -15.5 per cent for North America, -15.3 per cent for Europe, and -14.9 per cent for Pacific. On

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the other hand, the number of domestic airline passengers stood at 94.2 million, an increase of 1.3 per cent from the previous year.

According to the sales statistics produced by the 50 major travel agencies for fiscal 2001 (April 2001-March 2002) released by the Japan Association of Travel Agents, domestic travel sales stood at 3,381.7 billion yen, 0.2 per cent down, the sales for overseas travel fell drastically to 2,118.1 billion yen, a large decrease of 18.3 per cent from the previous year, and wholly attributable to the terrorist attacks on September 11. While the amount of sales for the first half of fiscal 2001 (April-August) increased by 1.5 per cent from the previous year, sales for the latter half of fiscal 2001 (September-March 2002) decreased by 33.8 per cent. The fall of sales just after the terrorist attacks was especially prominent, and October-December showed a decrease of 46.1 per cent and January-March, a decrease of 24.3 per cent.

1.3. Trends in financial industries other than non-life insurance

The life insurance, banking and securities industries all recorded severe business results for fiscal 2001. Although those results were affected by the downturn in the economy as a whole which was worsened by the September 11 atrocities, they were not as badly damaged by the direct impact of the terrorist events as the non-life insurance, the airline and the travel industries were.

The severe business results for the life insurance industry were attributed to customers' moving out from life insurance products, which was triggered by a series of bankruptcies of life insurance companies starting from 1997, due to the increase in negative spreads resulting from a prolonged economic stagnation and ultra-low interest rates.

An outline of the business result of all 43 life insurers for fiscal 2001 released by the Life Insurance Association of Japan was as follows: The insured amount for new business in individual insurance and individual annuities stood at 130,008.7 billion yen, a decrease of 5.2 per cent, and business in force of individual insurance and individual annuities marked 1,325,216.2 billion yen, a decrease of 4.4 per cent from the previous year. Total assets amounted to 184, 370.9 billion yen, 3.8 per cent down from the previous year.

According to the business results of the 133 Japanese banks at the end of March 2002 released by the Japanese Bankers Association, operating profits stood at 4,559.6 billion yen, a decrease of 1.9 per cent, ordinary profits marked minus 5,702.9 billion yen for the first time in three years, and net profits for the current year marked minus 4,198.9 billion yen for two years in a row. This was due to an increase in the accumulation of reserves for possible loan losses and a write-off of bad loans, as well as the devaluation of the book value of securities.

According to the business results of the 287 securities companies for fiscal 2001 released by the Japan Securities Dealers Association, operating profits stood at minus 36.3 billion yen, ordinary profits posted minus 18.8 billion yen, and net profits for the current year marked minus 339.3 billion yen. All those figures had turned to minus from positive in the previous year. This was attributed to a large decrease of 22 per cent in operating profits (dealing commissions, consignment fees, etc.), due to a continued low in stock prices.

2. Trends in the non-life insurance industry and future prospects

2.1. Estimated claims paid related to the September 11 events

The Marine and Fire Insurance Association of Japan, Inc. has conducted surveys of its 29 member companies on estimated claims for losses arising from September 11. In the survey results of October 2001, the estimated claims were 30.4 billion yen. However, in the second survey conducted after the failure of Taisei Fire and Marine Insurance Co., Ltd., estimated claims paid rose to 132.8 billion yen. Although the Association has not investigated its members' revised estimates of losses since then, the latest estimates of losses should be expanded to approximately 143 billion yen. The revised estimates, which 11 major non-life insurers revealed at their closing of accounts at the end of March 2002, increased by 10.1 billion yen. This is the possible figure assuming there are no changes in estimates from other insurers.

2.2. Business results of non-life insurers for fiscal 2001 and their business prospects for fiscal 2002

The business results for fiscal 2001 (April 2001-March 2002) of the 28 member non-life insurers (excluding Taisei Fire & Marine) which account for 95 per cent of the total market, showed that net premiums had increased by 0.4 per cent and marked 6,811.8 billion yen, and that the loss ratio had improved by a 0.4 percentage point thanks to a decrease in losses arising from natural catastrophes. However, both ordinary profits and net profits went into the red for the first time since fiscal 1947. Ordinary profits showed minus 124.0 billion yen, a decrease of 454.4 billion yen (137.5 per cent down), and net profits for the current year after corporate tax marked minus 154.8 billion yen, a decrease of 258.4 billion yen (249.4 per cent down) from the previous year. These deficits were caused by the overlap of two specific factors: One was the increase in claims payments and the provision of outstanding loss reserves caused by the impact of overseas reinsurance losses including those related to the terrorist attacks on September 11. The other factor was the large losses caused by the devaluation of the book value of securities due to a fall in stock prices. As all the losses and estimated losses related to the terrorist events have been dealt with as expenses in the fiscal 2001 account by each company, those losses or estimated losses related to the terrorist attacks on September 11 will not have an impact on business for fiscal 2002.

2.3. Trends in industry consolidation

With the aim of enhancing business efficiency and strengthening capital base, mergers, consolidations under a holding company, and capital and business affiliations have rapidly advanced in order to cope with the severe competitive business environment in the non-life insurance market since fiscal 2001. The 14 major and medium-sized non-life insurers except a few insurers have been consolidated into 6 major insurance companies/groups. Two of these newly merged companies/groups were impacted by September 11. Aioi Insurance Co., Ltd. which was established in April 2001 by the merger between Dai-Tokyo Fire and Marine Insurance Co., Ltd. and Chiyoda Fire and Marine Insurance Co., Ltd., suffered huge reinsurance losses arising from the transactions with Fortress Re Inc. which Chiyoda Fire & Marine had been engaged in. Similarly the formation of Sompo Japan Insurance Inc. has been impeded. Originally this company was to be formed through the merger by Yasuda Fire and Marine Insurance Co., Ltd., Nissan Fire and Marine Insurance Co., Ltd. and Taisei Fire & Marine in April 2002. However, this plan had to be reviewed after Nissan Fire & Marine and Taisei Fire & Marine suffered huge losses from their transactions with Fortress Re Inc. Taisei Fire & Marine was forced into bankruptcy as a result, and the merger of Yasuda Fire & Marine and Nissan Fire & Marine to create Sompo Japan Insurance was postponed until July 2002.

2.4. Condition of underwriting of terrorism risks

“War risks” such as war and civil war are generally excluded in the general policy conditions for ordinary non-life insurance products. However, acts of terrorism are generally interpreted as not being classed as war risks, and many non-life insurance companies treat acts of terrorism as being covered under the general policy condition. Exclusion clauses for acts of terrorism in insurance policy conditions had not been seen until March 2002 in the Japanese market, as many non-life insurance contract renewals for commercial risks date from April 1, and are linked to the year-end financial closing. Many of those renewals for treaty reinsurance contracts are also dated April 1.

Many non-life insurance companies have set a certain limit on the payment of losses caused by acts of terrorism under renewed contracts for commercial risks after April. This corresponds to the trend in the overseas reinsurance market.

In many cases for commercial fire insurance contracts, those properties for general risk, such as buildings and warehouses, whose insured amount exceeds 1 billion yen, are underwritten with a special exclusion clause on terrorism risks attached, and these will not be covered even from the first loss. Properties insured for factory risk with an insured amount exceeding 1.5 billion yen are also underwritten with the same exclusion clause. In such cases as underwriting of miscellaneous pecuniary loss comprehensive insurance for corporations, business interruption insurance and business continuing expenses insurance, many contracts whose insured amount exceeds 1.5 billion yen are attached with an exclusion clause for terrorism risks.

Further, in the case of miscellaneous insurance such as movable comprehensive insurance, contractors' all risks insurance, machinery and erection insurance, many insurers underwrite those insurance contracts with a terrorism risk exclusion clause attached, irrespective of the amount insured. However, as for other insurance contracts such as commercial fire insurance for risks less than those limits mentioned above, automobile insurance, personal accident insurance and insurance for personal risks, there seem to be no cases underwritten with a terrorist exclusion clause.

Negotiations between each non-life insurer, overseas reinsurers and reinsurance brokers to renew reinsurance contracts concerning water perils and windstorm and hail, etc., for extended fire coverage and for earthquake coverage for commercial risks started from the middle of February this year. Those negotiations were suspended for a while but were concluded in the middle of April. The negotiations were tough, as there had been a big fall in capacity and a large increase in reinsurance premium rates owing to the severe market trends caused by the terrorist attacks on September 11, etc. We understand that the contracts of coverage for water perils and windstorm, etc. have been concluded with reinsurance premiums increased by more than 20 per cent on average, and those for commercial property earthquake risks were raised by more than 25 per cent from the previous year, but all in all a similar amount of capacity has been maintained.

As for aviation insurance, liabilities for aviation risks undertaken by non-life insurers of Japan are provided in the aviation insurance pool, and then ceded to overseas reinsurance markets through the pool. Premiums of aviation insurance for airlines in the pool for fiscal 2001 amounted to about 38.4 billion yen, an increase of 163 per cent from the previous year. This was due to a big rise in premiums caused by the terrorist events. However retained premiums in the pool did not increase, as a large part of those premiums were ceded to the overseas reinsurance market.

3. Current conditions and future prospects of systemic issues

3.1. Rehabilitation of Taisei Fire & Marine

Taisei Fire & Marine had been engaged in overseas reinsurance transactions that dealt mainly with aviation reinsurance through a reinsurance pool arranged by the Fortress Re Inc., which acted as the agent. Aioi Insurance (the former Chiyoda Fire & Marine) and Nissan Fire & Marine had also participated in the reinsurance pool. However, Taisei Fire & Marine as well as Aioi Insurance and Nissan Fire & Marine suffered huge losses arising from the terrorist attacks on September 11 and airline crashes after the terrorist events combined with the accumulated losses of previous years. Losses were heavy because reinsurance liabilities had been ceded using a Financial Reinsurance scheme, under which once reinsurance claims are paid from the ceded reinsurer, the same amount of money is returned as ceded reinsurance premiums and paid in installments. Under this scheme, there is no effect on the transfer of reinsurance risks but only an effect on leveling out the timing of occurrence of losses. As a result, Taisei Fire & Marine had gone into a situation of liabilities exceeding assets and went bankrupt. It applied for the reorganization process to the Tokyo District Court on November 22, 2001.

After the Court decided the commencement of the reorganization process, the reorganization plan was drawn up by trustees. The plan was submitted to the Court on June 28. The liabilities of Taisei Fire & Marine related to overseas reinsurance business including business through Fortress Re Inc. stood at 132.8 billion yen on present value basis as of November 2001, and liabilities including other liabilities exceeded assets by 94.5 billion yen.

Nissan Fire & Marine had completed the commutation procedures for its portfolio of Financial Reinsurance related to Fortress Re Inc., by June 2002, before the merger with Yasuda Fire & Marine. According to newspapers, the final estimated losses of Nissan Fire & Marine related to Fortress Re Inc. reached 128.8 billion yen. On the other hand, estimated losses of Aioi Insurance related to Fortress Re Inc. stood at 148.8 billion yen at the closing account at the end of March 2002. Although its outstanding claims for those losses has been accumulated in outstanding loss reserves, Aioi Insurance intends to transfer these accounts to other foreign reinsurers, according to the press.

An outline of the reorganization procedure for Taisei Fire & Marine released on June 28 is as follows:

1) Taisei Fire & Marine will be separated into a reorganized company operating direct insurance business and a reinsurance company operating run-off business. Taisei's liabilities and assets will be allocated to those two companies.

2) The reorganized direct insurance company will become a 100 per cent subsidiary owned by the sponsor company[80] through the process of reducing its liabilities and being injected with capital by the sponsor company. Then, the subsidiary company will be merged into Sompo Japan Insurance.

3) The reinsurance company will cede its liabilities related to reinsurance and entrust its claims payment procedures to an independent insurance company which will be established in Bermuda.

4) By asking the Non-Life Insurance Policyholders Protection Corporation for financial aid, claims payments for certain policies shall be secured under the Policyholders Protection Corporation Scheme. In practice, claims payments for Compulsory Automobile Liability Insurance and Earthquake Insurance on Dwelling Risks will be secured at 100 per cent. Claims payments for certain other policies related to personal risks such as voluntary automobile insurance, fire insurance for private individuals and small-sized business owners and personal accident insurance will be secured at 90 per cent. Further, those 90 per cent secured claims payments will be made up to 100 per cent by funds provided by the sponsor company, Sompo Japan Insurance. However, claims payments for other policies which will not be secured under the Policyholders Protection Corporation Scheme will be reduced to 74.21 per cent.

5) The former management will be responsible for negligence in risk management and be sued for damages

[80] Yasuda Fire & Marine and Nissan Fire & Marine were chosen as the sponsor companies by the trustees at the end of November 2001, the two companies were merged into Sompo Japan Insurance in July 2002.

The reorganization process will be implemented in accordance with the following schedule.

The reorganization plan will be presented at a meeting for relevant parties. After the Court approves the plan, the decision to give financial aid will be made by the Policyholders Protection Corporation. Taisei Fire & Marine will then be separated on October 1, and the reorganized direct insurance company will be merged into Sompo Japan Insurance on December 1, 2002.

3.2. Review of policyholders protection corporation scheme

In order to deal with its 94.5 billion yen liabilities over assets, under the reorganization plan for Taisei, those liabilities will be reduced and capital will be injected by the sponsor company. In addition, an application for financial aid will be submitted to the Non-Life Insurance Policyholders Protection Corporation. The Corporation will also be required to continue to give financial aid to Daiichi Mutual Fire and Marine Insurance Co., which went bankrupt in May 2000. Although the financial aid to those failed companies will not exhaust the funds, the Policyholders Protection Corporation Scheme shall be reviewed as necessary by June 2003 under the Insurance Business Law. The Association is studying the Scheme in order to improve the protection of policyholders, taking into consideration the specific nature of non-life insurance. Under the current scheme, protection measures are taken by changing contract terms partially in order to continue contracts, but at the same time claims payments are reduced. In some cases policyholders may not be able to cover the reduced part of such a large amount of claims paid from automobile liability insurance, and thus the protection of policyholders will not be ensured. In review of these, an idea to secure 100 per cent of claims payments for a certain period, and to encourage policyholders to transfer their contracts to other sound insurance companies during that period, has also been considered. However, a number of elements still remain to be resolved. These include how long the period of securing 100 per cent payments should be extended and how to treat long term insurance including nursing care expenses insurance. It might be difficult to transfer these long term insurance contracts to other insurance companies, but a concrete review plan has not been decided.

3.3. Strengthening risk management system and thorough implementation of disclosure

Following the court decision on Taisei’s commencement of reorganization procedures, the Association issued the following statement from its chairman: “We recognize that this situation urges each non-life insurance company to re-examine its business operations which includes the proper retention of risks meeting with the company’s capacity, the proper operation of risk management and the provision of adequate disclosure in a timely manner to respond to the rapid changes in business conditions.” The Association also resolved to adopt the following two basic principles at its board meeting in December 2001 to continue to make every effort to provide customers with stable insurance coverage through its member companies.

1) Strengthening risk management

> Our non-life insurance industry is always required to maintain the soundness of business under the principle of self-responsibility in order to fulfil its social missions. Drawing a lesson from such new kinds of risks as were identified by the occurrence of the terrorist attacks on September 11, 2001, our industry strives to establish a newer risk management system.

2) Expanding and strengthening disclosure

> It is essential for our non-life insurance industry to maintain the trust of society so that the industry can fully demonstrate its functions. With the objective of ensuring transparency, our industry makes efforts to disclose corporate information actively by communicating extensively with all members of society.

Nissan Fire & Marine and Aioi Insurance have disclosed information on the revised and estimated losses arising from the terrorist attacks each time those revisions were ascertained.

The Association adopted its disclosure standard for fiscal 2002 including an improvement of disclosure of information on reinsurance at its board meeting in April 2002. This disclosure standard takes into consideration the above basic principles. Although the items disclosed are stipulated in the Insurance Business Law, the Association sets out its own disclosure standard with a wider range of items and will review the standard annually.
In the revised standard, items describing major management indicators and risk management systems have been improved. Reinsurance has become an independent item and an explanation of the reinsurance system has been added. General reinsurance policies such as the selection of reinsurers, matters to be considered in underwriting reinsurance contracts, and figures of reinsurance underwritten by line will also be explained.

3.4. Deliberations on terrorism risk pool

The Association has studied the creation of an industry-wide terrorism risk pool, and there are several types of pooling system under consideration. Under the Insurance Business Law, concerted actions are limited to a joint reinsurance pool for ordinary insurance, and those joint actions are limited to common decisions on conditions of reinsurance contracts, amount of reinsurance transactions, reinsurance premium rates, reinsurance commissions. Concerted actions with regard to Earthquake Insurance on Dwelling Risks, Compulsory Automobile Liability Insurance, aviation insurance and nuclear energy insurance (so called Item 1 type) are permitted to the extent where business operation including direct business are allowed, because of the specific nature of those 4 insurance risks and their social importance. In view of extraordinary aspects of and social problems inherent in acts of terrorism, it is crucial for non-life insurers to be able to deal commonly with terrorism risks and to obtain the government’s financial support as a last resort. The non-life insurance industry of Japan is aiming at the creation of a joint pooling system with the government’s financial support and gaining permission to take concerted action in not only reinsurance business but also in direct business.

As the Japanese insurance market faces several serious problems such as the disposal of bad loans and the response to negative spread, with a difficult budgetary situation in the government, public opinion is a crucial factor in persuading the government to move forward to give financial support for terrorism risks. The Association has made every effort to create a terrorism risk scheme by lobbying relevant parties. However, there is still only a limited voice for the scheme from large corporate customers, and strong public support on the issue has not yet arisen. Although the non-life insurance industry strongly wishes to create a terrorism risk pool with government financial support, talks are currently in abeyance until the industry has collected further feedback from customers with regard to their own coverage needs.

Insurance and September 11 - One Year after: Impact on Indian Insurance

by K. Ramachandran*

1. National perspective

The impact of September 11 was visible and was felt, soon after the attacks, on the Indian insurance sector. The unilateral withdrawal of cover for terrorism by reinsurers was followed by efforts by the Indian industry to design and put in place alternative arrangements particularly for airlines who were and are answerable to their lenders and lessors. The Indian insurance industry introduced a surcharge of 10 per cent for terrorism on the tariff premium in fire and engineering lines of insurances with terrorism cover continuing to be inbuilt and backed by reinsurance treaty arrangements.

As of 1 April a standalone tariff provision is put in place to rate the terrorism cover and offer it as an option to the buying public. This followed the universal cancellation of terrorism cover by reinsurers from 1 April. Terrorism insurance is now backed by a local market pool which in turn is supported by reinsurance.

Terrorism is defined by tariff as follows "an act of terrorism means an act, including but not limited to the use of force or violence and/or the threat thereof, of any person or group(s) of persons whether acting alone or on behalf of or in connection with any organisation(s) or government(s), committed for political, religious, ideological or similar purpose including the intention to influence any government and/or to put the public, or any section of the public in fear." The demarcation line with malicious damage is clear. Malicious damage continues to be grouped with strike, riot and civil commotion.

There are yet the mega risks, power plants and refineries, which require cover in excess of what is available as per tariff per risk – US$ 41.25 million – and for them an additional limit of US$ 103.10 million is available at reinsurance driven rates and no more. Thus the insurance industry in India can be considered to have stabilized after the attacks.

1.1. Economic perspective

Soon after the attack, the International Monetary Fund made a mention in its report that the Indian economy was still "relatively closed", and could, therefore remain insulated from the global economic slowdown.

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The then Finance Minister, Mr.Yashwant Sinha, said "Indian financial markets had mirrored the fall in the global markets after the attacks, but were "stabilizing". The Indian economy is finding its moorings and the incremental recession induced by hurt to the global economy is expected to be put back over the next 12 months." The manufacturing and services sectors apparently took the worst hit. Airline, tourism and software development were the key sectors to be affected. Agriculture and some sub-sectors in the service industry however remained untouched.

US-based direct investments withdrew from power utilities though not as a fallout of the attacks. Investments in IT, oil and gas and pharmaceutical industries continue to be on the upswing. Insurance joint ventures have come to be established as a matter of due course which include those of AIG, Chubb, CGU, Lombard and Sun Life from USA or Canada. Swiss Re has set up a subsidiary for risk consulting and a back office operation.

Exports of garments, gems, consumer goods and engineering goods stagnated Indian jewellery exports surpassed the US$1 billion mark during the year to reach US$1.16 billion, a 1.5 per cent increase in spite of economic slowdown and 9/11 terror attack. Indian exporters have achieved a 28 per cent growth in the first 2 months (April-May 2002) of the current year at US$113million and with the favourable Exim policy and improved market sentiment they hope to do still better.

The infrastructure sector though not stagnating suffers from a lack of activity in FDI inflows. Recent months have shown increased interest and activity.

Dr. Manmohan Singh, India's former Finance Minister, speaking at the India Economic Summit 2001 stated that due to international terrorism and threat of war, uncertainty prevalent in the region has gone up. Foreign capital flows could be adversely affected and spending on defence go up. Despite these uncertainties, Dr. Singh felt that with good foreign exchange reserves and a comfortable food grains situation, the risks associated with fiscal expansion would be much less in India. Hence, the government should invest in basic infrastructure as this will create investment demand.

The Reserve Bank of India has been talking of converting a major chunk of its Dollar reserves to Euros. It appears given that both currencies being nearly on par and with US regulators coming down heavily on Indian corporates and businesses abroad after the September 11 incident this would provide greater stability to forex management.

An unusual fallout is the shipment to India of the scrap from WTC debris for recycling to produce ingots. Scrap consignments arrived at Chennai and Kandla ports and targeted to deliver a total of 50,000 tons of scrap from a total estimated 300,000 tons disposed by the Port of New York. The Indian consignee bought the scrap through a Dubai-based trader at a cost of around US$120 per ton.

1.2. Political perspective

Dialogue with USA

Speaking on the post-September change in the Indo-US relations, Mr. Arun Shourie, Minister for Disinvestment, said the terror attacks had made the Western world realize the dangers that India was trying to highlight earlier. "It brought home the fact that terrorism knows no boundaries and revealed the highly sophisticated network that terrorists have." He added "if evil can have networks, the good powers should network even stronger to counter such attacks". "The September 11 tragedy has brought the two nations closer, and they should try to strengthen this strategic relationship," he said.

Ms Christina B. Rocca, US Assistant Secretary of State for South Asia while addressing a meeting organized by the Confederation of Indian Industry said that the growing military relationship between the US and India was an important element of the process of transformation occurring between the two countries in the areas of strategic and technical cooperation. Appreciating the lead role played by India in the war against terrorism, Ms Rocca said that South Asia was a key front in the global war against terrorism.

Dialogue with Australia

The campaign against international terrorism figured prominently in the talks between Mr. Downer, the Australian Trade Minister and Mr. Jaswant Singh, India`s External Affairs Minister. The Afghanistan issue also figured in the talks. Responding to a query, Mr. Downer said that Australia was looking for a military to military cooperation with India and warned Pakistan to curb terrorism on its soil, while justifying India's concerns regarding cross-border terrorism in the wake of the December 13 terrorist attack on Parliament.

Kathmandu Declaration of SAARC countries

On 1 January 2002, concluding its three-day meeting in Nepal, the Standing Committee comprising the Foreign Secretaries of the SAARC countries on Tuesday recommended that the United Nations Resolution 1373 (on terrorism) be implemented in its totality in the region.

The anti-terrorism resolution was unanimously passed by the UN Security Council on September 28 after the terrorist strikes in the USA. Besides condemning the September 11 attacks in the US, the Council had asked all States to prevent and suppress the financing of terrorism, as well as criminalise the wilful provision or collection of funds for such acts. It asked for the freezing of all terrorists' accounts without delay. The Council also decided that States should refrain from providing any form of support to entities or persons involved in terrorist acts and deny safe haven to those who finance, plan, support, commit terrorist acts and provide safe havens to the terrorists, among others.

The Standing Committee agreed that the member states need to speed up the enabling legislation on the SAARC convention on terrorism. They called upon the international community to assist member states of SAARC, to “deal effectively with the adverse economic effects of terrorism in general and to meet the rising insurance and security related costs in particular.”

Indian officials said the declaration “was very encouraging”.

The Associated Chambers of Commerce and Industry of India (ASSOCHAM) welcomed the Kathmandu Declaration and reaffirmation of the SAARC nations to establish a free trade area in the subcontinent and to collectively repudiate terrorism.

<u>Statute</u>

India enacted a law making it easier for law enforcement authorities to handle potential terrorists. The US appreciated India, amongst other countries, for enacting such legislation following the terrorist attacks. Admitting that Prevention of Terrorism Act [POTA] or any law by itself cannot be a panacea for terrorism, the Home Minister, Mr. L.K.Advani, said, "Our objective is to fight terrorism and especially state-sponsored cross-border terrorism, which is even more dangerous than an open war." POTA seeks to deal with heinous crimes like subversion, insurgency and terrorism. It replaced an ordinance first promulgated in October last year and re-promulgated in December.

<u>Special combat personnel</u>

India currently has four Special Forces units that have traditionally been asked to do the toughest jobs in the battlefield. Currently they specialize in counter-terrorist work where using their own intelligence, they operate independently against terrorist concentrations in remote mountain and jungle regions in Kashmir and the Northeast. They are backed by electronic sensors and network equipments.

1.3. Insurance perspective

Much has changed in the global insurance industry after the September 11 terrorist attack on the US and it was in ferment over the January 1, 2002 renewals in the western hemisphere. Though the Indian reinsurance treaties were to come up for renewal later on 1 April 2002, they were already feeling the heat and the Tariff Advisory Committee [TAC], the rate making statutory body, imposed a surcharge of 10 per cent of premium for terrorism cover within fire and engineering insurances.

The global reinsurers withdrew terrorism cover for renewal of mega risk polices [sum insured in excess of US$ 2 billion] after September 11.

The plan for a catastrophe fund was mooted by Mr. N. Rangachary, Chairman, IRDA, even before September 11. But the subsequent cancellation of cover by reinsurers, acts of terrorism that caused considerable damage to the Jammu and Kashmir Legislative

Assembly and the near impossibility of getting a cover on terrorism got the government and the IRDA moving fast and the Terrorism Pool was established for the Indian market providing cover for a limit of US$ 41.25 million for each risk.

On 15 March, 2002, the Tariff Advisory Committee [TAC] informed that the risk of "Terrorism" would not be automatically available from 1 April and that additional premium would have to be paid if the clients opted to have this cover with its restricted limit.

Indian Corporates who consider their operations vulnerable to earthquake and terrorism are willing to pay a higher premium for higher limits for terrorism but they are offered only a restricted limit as global capacities have shrunk and rates are very high. However, most other companies in India have indicated their non-interest for terrorism insurance.

1.4. Reinsurance perspective

The insurance rates were firming up in the international market even prior to the September 11 terrorist strikes, but after September 11 they rose sharply, much to the inconvenience of Indian Corporates whose policies came up for renewal.

The attacks on Indian Parliament on December 13 and the talks of Pakistan at war added to the Indian insurance industry's woes. It came at a time when the Indian insurers were trying to convince the global reinsurers that India was a safe destination when negotiating the terrorist reinsurance rates.
The General Insurance Corporation of India [GIC] received cancellation notices from global reinsurers that terrorism cover would be excluded from 1 April 2002. This encompassed all lines of insurances.
Rates for renewal of India's reinsurance programme for 2002-03 were higher by 25 to 300 per cent, depending upon the lines of business for which reinsurance was sought. The single important reason for the increase in cost was that global reinsurance capacities had reduced drastically.

Usually by mid-March, the Indian market would have concluded the renewal of the reinsurance programme for the ensuing year. However, the communal riots in certain parts of India and concerns regarding cross border terrorism delayed renewals for 2002-03.

Impact of WTC on inward reinsurance

General Insurance Corporation of India [GIC] took an exposure in the US insurance market on account of a treaty signed by it with a London broker. This exposure, which is concentrated on the World Trade Center and properties nearby, meant a loss of US$5 million to GIC. Of this US$1 million is retained and the balance taken care of through an excess of loss protection. With a net worth of around US$540 million as on March 31, 2001 the fall out of US attacks was marginal.

<u>Direct claims to Indian insurers</u>

Potentially direct claims arise from loss or injury to persons and who are insured with Indian life, personal accident and hospitalization insurances. There are no statistics on this. Information for potential claims arise from reports on number of dead and missing persons.

At least 34 Indians were killed in the terrorist attack on the World Trade Center on September 11 as immediately reported. The people from India suffered second largest number of casualties among foreign countries and was after Britain who lost 53 persons.

According to the Indian Consulate and community leaders in New York, more than 250 Indians and Non-Resident Indians [NRIs] are estimated to be missing following the attacks on the WTC. It is likely that some of them have life insurance cover with the Life Insurance Corporation of India [LIC] for which their nominees and legal heirs could stake their claims. LIC of India may have coordinated the potential accumulation from WTC claims but such information is not available.

Overseas travel insurance would have assisted for hospitalization through Mercury International Assistance. Personal accident would have been handled by Indian insurers with legal heirs or as appropriate. While life insurance is pursued for claim, often personal accident is overlooked by Indian families.

Again, credit insurance while generally affected was not directly affected by an importer based in WTC being extinguished.

Indian insurers did not face any other direct claims as a result of the attacks on the US.

2. Company/business perspective

2.1. Property insurance

In India terrorism cover has been capped at Rs.2 billion [US$ 41.25 million] per location at the rate of 0.5 per mille for industrial risks and 0.3 per mille for non-industrial risks. The maximum loss limit under terrorism cover is Rs.2 billion for any one risk [MD+LOP]. For this purpose one risk is defined as one compound or one location. In respect of several insurances within the same compound/location with all Indian insurers, the maximum aggregate loss (MD+LOP) payable per compound/location is Rs.2 billion. If the actual aggregate loss suffered at one compound/location is more than Rs.2 billion, the amounts payable under individual policies will be reduced on a pro rata basis Premium is based on total sum insured of the policy and the deductible is significant at 0.5 per cent of the total sum insured.

In case increased limit for cover is required and if the national reinsurer [GIC] manages to arrange for cover beyond Rs.2 billion, insureds requiring additional limit would have to pay an extra premium for the same which may range between 1 to 3.5 per mille of the total sum insured. In any case GIC restricts assistance to an additional limit of US$ 103.10 million..

Companies in the oil and power sector and many large sized firms who see terrorism as a threat want additional limit than is presently available in the Indian market. BPCL, HPCL, Tata Power and Reliance Petroleum are some companies wanting and/or having purchased terrorism cover over and above Rs.2 billion.

Motor vehicles which are governed by a separate tariff include cover for terrorism if fire or comprehensive insurance is purchased.

2.2. India: oil and gas

With global insurers deciding to hike war and terrorism risk rates in the oil and energy sector, Oil and Natural Gas Corporation [ONGC, India’s near monopoly state producer] had to pay an additional US$ 4.5 million as premium soon after September 11. A notice was received seeking additional premium or face the risk of termination of cover with effect from midnight on September 27, 2001. ONGC chairman, Mr. Subir Raha, confirmed the development “Under the circumstances, we had no option but to agree. But we are hopeful that after some time we can renegotiate and bring down the premium.” Reports suggest that a reduction close to 18 per cent was achieved.

The renewal of the ONGC insurance package went through on 1 May 2002 and the reinsurance driven package was restructured from a Quota Share protection to a layered Excess of Loss protection. The deductible was maintained at US$ 20 million. Yet the premium at US$ 51 million is nearly double with cover for terrorism restricted to only offshore risks and with strict underwriting checks incorporated. Placement was completed after commencement of risk. This increase and the conditions clearly evidence significant reduction in quality reinsurance capacity and hardened world markets – a situation accelerated by the Sepember 11 attacks.

2.3. India: aviation

Insurance companies worldwide have resorted to cancellation of war-risk cover following September 11. Airlines around the world and in India have sought government support to help meet higher insurance costs and the fall in third-party liability cover. The governments of many countries have agreed to provide short-term-insurance cover for their respective country’s airlines.

Within a week after the attack insurers cancelled the coverage and offered to provide US$ 50 million of limits to airlines. Before the attack, the commercial aviation insurance market covered hijacking and terrorism risk within war and allied perils up to an airline's or airport's full liability insurance limits.

The government initially gave Air India and Indian Airlines guarantees by way of a letter of comfort to cover war and terrorist risk for a period of 15 days to prevent any disruption in their operations. The government's guarantee excluded private airlines. At the end of the 15-day period, the government sought the Cabinet's approval to extend the cover for another 15 days. Thereafter all airlines were asked to arrange their own operational risk protection.

Indian Airlines' insurance was renewed on October 1 for a premium of US$17 million. New India Assurance arranged reinsurance cover for the Airlines that has a fleet of 52 aircrafts. The premium of US$ 17 million did not include covers for third party liability and war and terrorist attacks, while prior to the attacks on the WTC this premium took into account these covers. The reinsurers however did not take into consideration the proximity of India to Afghanistan and a possible outbreak of war while quoting the premium rates. Hence the exclusion caught Indian Airlines by surprise.

Reinsurers imposed a special surcharge per passenger carried on all airlines to cover contingencies in case of war and terrorist attacks payable as from October 1. The surcharge was structured based upon choice of limit of cover as purchased by an airline. This has added significantly to cost of fare at the individual passenger level more particularly for international travel.

European airlines raised ex-India air cargo rates on freighter and passenger flights in September for having to fly a longer route to avoid the war risk zone of Afghanistan. India's domestic air freight has been slower this year due to an economic slowdown, but volumes have not shown a major impact after the September 11 attacks. Indian Airlines, the country's No. 1 airline which flies to 63 domestic destinations with a fleet of 55 aircrafts, increased cargo rates by 10 per cent on 1 October 2001. The privately owned Jet Airways hiked rates by a similar 10 per cent. Jet Airways covers 44 destinations with a fleet of 29 aircrafts. Blue Dart, the all cargo airline, followed suit.

All smaller aircrafts for private and industrial use have faced an increase in premium for continued cover for terrorism risks.

Ground liability, which is the liability of the insurer in case the grounded aircraft meets with an accident, has been limited to US$ 50 million. This limit was set in place following the LTTE strikes on grounded aircrafts in Colombo that cost insurance companies US$450 million from a pool size of US$ 1 billion. Also the insurers have limited their risk cover on loss of life to the passengers in the aircraft.

International carriers operating out of India are under a squeeze. Airlines are increasingly feeling the heat due to higher insurance premium and enhanced fuel costs. Over and above this, the significant fall in international passenger traffic adds to the woes of airlines operating from India. Many withdrew or suspended their services out of India. After a year foreign airlines are increasing their attention to India. With a new government policy expected to allow 49 per cent equity by foreign airlines in India's domestic airlines new growth opportunities are expected.

Recent renewals

The hard international reinsurance market has forced the state-owned Air India [AI] and privately owned fleet, Jet Airways, to pay almost a 50 per cent increase to renew their insurance cover for 2002-2003. The renewal cost does not include the premium for the terrorism cover which has already been secured by paying an additional premium of Rs. 400 million in October 2001 immediately after the September 11 tragedy and is valid until October 2002. AI with a fleet of 26 aircraft paid a renewal premium of over US$12 million as against last year's US$7 million. While Bermuda based Ace Insurance has taken the lead in providing the reinsurance quote for AI, AIG took the lead in quoting for the Jet Airways` renewal.

2.4. India: shipping

Indian shipping companies continue to pay high war risk premiums (WRPs) despite the fall in war risk premiums in the international market.
The Shipping Companies in India have to underwrite their risks with the four national insurers who then underwrite these risks with reinsurers abroad. Following the terrorist strikes on the US, international insurers had raised the war risk premiums and Indian insurance companies hiked the premiums to 0.05 per cent of hull and machinery value per voyage.
Companies like Shipping Corporation of India have paid more than US$ 500,000 as WRP in the four months since the hike in premiums. Others like Great Eastern Shipping paid US$ 190,000 and Essar Shipping paid US$ 250,000 as WRP.
Sources in the shipping industry say that the heavy premiums imposed on the Indian vessels have made them non-competitive against foreign shipping lines. The WRP being paid in India is much higher than the premiums quoted in the London market.

Government of India had excluded 19 zones and the vessels calling on ports of these zones attract higher premiums. Some of the zones are the Arabian Gulf, Egypt, Pakistan and Sri Lanka. While the premiums in the international markets have dropped, the Indian shipping companies continue to pay higher premium than those imposed following the September 11 attacks.

Marine cargo war risk rates rose a minimum of 82 per cent from 0.0275 per cent of sum assured to 0.05 per cent of sum insured. This remains unchanged.

War risk premium effective October 1 has seen freight rates firm up by US$ 150 per TEU to US$ 400-450 per TEU to the ports in the war zone like Abu Dhabi, Aden, Bandar Abbas and Dubai from Mumbai/JNPT. These rose further following notification of war risk between Pakistan and India.

Protection and Indemnity Clubs have also increased their rates to ship owners and renewals in 2002 are expected to witness further increases of 25 per cent and upwards.

2.5. Liability issues

There were Indians who were killed in the WTC. There is no known case of litigation for compensation from India.

In India risk of legal exposure is not significant. This arises due to the protracted process of litigation and the costs involved. Further, filing a suit is considered a social stigma and “supported” by condescension.

2.6. Life insurance

Life insurance in India excludes risk of terrorism.

Personal Accident which is a worldwide cover includes insurance against terrorism and the rates are not affected by terrorist attacks. This is a contradiction as reinsurers specifically exclude terrorism and sabotage. Insurers have been informed of the same. By using wording that does not exclude terrorism and sabotage Indian insurers provide such cover to the insureds.

Premiums for overseas travel mediclaim insurance for traveling to the US or Canada have been raised. There is an across the board increase between 10 to 30 per cent. The increases in premium for travel to other countries are modest in comparison to those for the US and Canada. The increase in premium occurred even before September 11 but the terrorist attacks acted as a trigger to hike the premium.

2.7. Business interruption

Coverage and rate increases follow property insurance. The Tariff for terrorism addresses coverage and rating issues of loss of profits [LOP]. This is not a popular cover in India.

2.8. Credit insurance

Premiums on credit insurance were last hiked following the Asian crisis in the late 1990s. This time the hike has been forced by the recession in the global economy that has intensified since the September 11 terrorist strikes in the US. This has impacted the Indian exporters who have been required to pay around 10 to 20 per cent more for their credit insurance requirements.

2.9. Workers’ compensation

Employers to whom the Employee State Insurance Act applies are required to subscribe to the Employee State Insurance Scheme administered by the state in respect of all employees earning less than Rs. 6,500 per month in salary. Such employers are exempt from the Workmen Compensation Act and Maternity Benefit Act.

Others to whom the Workmen Compensation Act applies face strict liability for workplace death/injury/disease. It is an option to insure the risk with insurers.

Insurance provides cover for both strict liability as per statute and under common law. Covers remain unchanged.

3. Systemic perspective

3.1. Balance sheet management techniques

A recent survey commissioned by Lloyd's and conducted by Harris Interactive found that two out of three US chief financial officers (CFOs) believe their companies' domestic assets are more at risk of terrorist attacks than their interests overseas. The survey also found that 64 per cent of CFOs have little or no confidence in the insurance industry's ability to provide comprehensive cover against future terrorist attacks.

<u>Survey in India</u>

KPMG India carried out a survey on risk management in 2001. As mentioned by Mr. Gautam Dalal, CEO, KPMG India, the survey " is an initiative to compile a profile of current risk management structures and practices, and the way risks are being managed by Indian corporates. Survey further aims to determine the overall level of awareness of the importance of risk management amongst senior management and their attitude towards critical risks faced by them."

It is a key finding of the KPMG survey that the importance of risk as a potential action or event that threatens to adversely affect an organization's ability to achieve its objectives is understood and widely appreciated but very little is currently being done in this direction.

The corporates appear divided on the role of risk management as whether it is minimizing losses or optimizing risks to facilitate good returns. Notwithstanding 80 per cent of respondents believe that good risk management is a requisite for achieving organization objectives and responsibility for this lies with senior management.

The major risks cited are strategic, market and staff risks. The physical and process risks that can be insured are considered least risky. It is not out of context to mention that lending norms for banks simply mention insurance as a collateral requirement. This is not reviewed by banks seriously and aids to merely complete a procedure. As noted earlier, as an option terrorism insurance is not purchased by most businesses particularly in view of its cost, restricted limit and high deductible.

Corporate governance

In as much as Securities and Exchange Bureau of India [SEBI] has amended the listing agreement to include Audit Committee review of risk management and a Directors' report on risk and control it would be useful to have the Company Law Board [CLB] to provide similar direction within the Companies Act.

Government properties

The September 11 attacks on the US provided the necessary impetus to the Indian companies that had not taken an insurance cover to rush for the same. But the same is not valid for the government of India and the political heads of state. Government properties like the Parliament, the state assemblies, the Supreme Court, the high courts, government hospitals, Indian embassies worldwide and a host of other properties that belong to the government are not insured.

Borrowings

In the US the lack of comprehensive and affordable terrorism insurance for commercial properties has taken a toll on development projects in 2002, according to a report based on a survey by the Mortgage Bankers Association of America [MBA]. According to the MBA, terrorism coverage problems precluded an estimated US$ 3.7 billion in deals this year and delayed or changed the pricing on another US$ 4.5 billion. Forty-four percent of respondents said that the lack of adequate terrorism coverage had "greatly impacted" their ability to make loans on commercial properties, while 40 per cent said the lack of such insurance had "somewhat" affected their business.

In India, initially it was the airlines who were concerned in view of their leasing agreements. In the recent renewals it is the project sponsors and utilities who are concerned as their borrowing is impacted for want of a fuller limit following cancellation of cover at renewal this year. An anecdotal example would be the barge mounted power plant, Tanir Bavi, off India's western coast for which the Indian insurers found a solution through local co-insurance.

3.2. Global financial stability and architecture

"Historically, terrorism insurance has been associated with countries in the Middle East and South America considered unstable regions, characterised by political unrest and violence. Before the terrorist attacks, the US accounted for as little as 1 per cent of the typical terrorism underwriter's book of business. But since September 11, as Ascot says, 80 per cent of its terrorism insurance business is derived from North America.

"Immediately after the terrorist attacks on September 11, terrorism cover became a rare commodity and rates soared. Underwriters' knee-jerk reaction was understandable given the circumstances: insurers had never experienced an event that hit them from so many angles. The most shocking fact of all was that it happened in the US where businesses rarely gave terrorism cover a second thought."

Report of American actuaries

September 11 attacks - its effect on the cost and availability of property/casualty business was the theme of a report released by the Extreme Events Committee, American Academy of Actuaries. This Academy represents all US actuaries, which provides regular analysis to regulators, lawmakers and the media.

The committee's chairman John J. Kollar said, "The evidence is growing that insurance companies are significantly raising premiums and eliminating or limiting terrorism coverage, because of the tremendous financial risks posed by the threat of terrorism."

The report notes that a tangible negative effect on the economy is emerging, particularly in the real estate and construction sectors. "As insurers and reinsurers try to find ways to protect themselves from potential losses due to catastrophic terrorist events, the burden of risk will be shifted to the business community as an out-of-pocket expense. This will likely imperil new investment and place a greater drag on the economy," Kollar added.

World insurance markets

It is apparent that worldwide less fortunate insurers and reinsurers have their capital impaired or in the extreme become insolvent. There are shifts for obtaining covers from insurers and reinsurers due to their superior financial strength much like institutional investors move their positions from growth stocks to blue chips in uncertain economic times. New capacity has emerged based on Lloyd`s market and new insurers which exclusively addresses terrorism cover requirements. The US Army international bases were insured by a terrorism policy especially designed and written by Lloyd's, and the US market has accepted these wordings as the template for cover - including its definition of a terrorist event – to take forward their future business.

India emerging as the hub of Asia reinsurance

The hardening of reinsurance rates world over, post-September 11, has had the insurers of developing countries approach General Insurance Corporation of India [GIC] for support. India's national reinsurer was receiving proposals from foreign insurers seeking support for policies that came up for renewal in January 2002 and later. The countries from which proposals were received include Bangladesh, Indonesia, Kenya, Nigeria, Sri Lanka, Sudan, Taiwan, Tanzania, and Zimbabwe and a few other nations in Africa. Most of these countries do not have much bargaining power in the international market.

GIC is aiming to constitute a regional reinsurance pool for Asia. GIC is in talks with insurers in Asia. The Asian insurers are driven by the mounting reinsurance charges in

European markets and the difficulty in getting reinsurance following September 11 particularly in London, which is the hub of world reinsurance market

Trade liberalisation

Explaining the rationale behind the success of the Doha conference on GATS it is stated: “It has been argued that there is a relationship between trade liberalisation and terrorism. The relationship is inverse. Terrorism tends to flourish in an atmosphere of protectionist tendencies.”

“Higher the degree of trade liberalisation, lesser is the need for terrorist activities. Besides, if countries are bound together in a bond of liberalisation and globalisation, then it will perhaps be in everybody's interest to curb terrorism.”

“Now that the fight against terrorism is a priority, as the argument goes, one should use every possible tool to fight terrorism and substantial liberalisation of trade and investment is one such potent tool.”

“It is around such an understanding of the relationship between terrorism and trade that the US and the EU seem to have come together and forged an alliance for paving the path for substantial trade liberalisation in Doha.”

3.3. Management of the insurance media interface

In a retrospective assessment of the media following September 11, Indian media gave an extensive coverage to the event and to related events in insurance and reinsurance. Insurance industry in India responded to the media for reporting requirements and the media in turn did its best to bring out the most information to present a good understanding of the insurance and reinsurance implications. In this context there was no effort to manage the insurance media interface by any of the insurers and the authorities.

3.4. Insurability and its limits

Terrorism risk is not new to India. But with equity and free reserves of around Rs. 65 billion the four Indian state insurers, and with much less capitalization of the private insurers, the Indian insurance industry is heavily dependent on the international market for reinsurance protection.

The key issue in India relates to terrorism insurance for mega risks [US$ 2 billion and above], oil and gas and power plants. A limit of US$ 41.25 million is available to all others for an extra premium as per tariff. GIC as the national reinsurer put in place a facility for an additional limit of US$ 103.10 million. Together with US$ 41.25 million the total of US$ 144.35 million falls short of a full property value of US$ 2 billion and more. GIC has restricted the availability to a total of US$ 144.35 million. For further additional limit the world reinsurance market is approached on a facultative basis and,

of course, the rates are high. The available world capacity at present as per an estimate is as follows:
Maximum capacity per risk/assured is summarised as:

Lloyd's:	up to \$100m
AIG/Lexington:	up to \$100m-\$150m
Axis, Bermuda:	up to \$100m
London/European companies:	up to \$50m
Ace, Bermuda:	up to \$100m
Total (max. per risk/assured)	up to \$500m

Underwriting terrorism exposures is no mean feat in the wake of September 11. Many insurers have learned it is unwise to bypass the complex modeling techniques and years of experience required to write this cover. Covers still exclude nuclear terrorism, bio-terrorism and cyber-terrorism.

Simon Koe, at Lloyd's broker Humphreys Haggas Sutton (HHS) informs, "The international capacity for terrorism insurance has developed dramatically over the past six months. The private global insurance markets - who paid the World Trade Center losses and who have received some US\$ 15bn of new capital since then - have the capacity, expertise, experience, appetite and energy to insure US property risk for terrorism covering both physical damage and business interruption loss."

3.5. Recovery scenarios after major catastrophes

The attack on WTC was remote to India. The effect of the immediate hurt to the US economy was in the nature of negative permeation into India's trade with the world, foreign direct investments and an incremental recession. One year since these incremental impacts have been factored into routines and assimilated.

Different natural calamities can be distinguished from each other in terms of their nature and extent of their impact. Calamities like earthquakes, hailstorms, avalanches, landslides, etc. occur quite suddenly but they are restricted in their impact in terms of time and space. Similarly, though floods and cyclones occur with some element of warning their occurrence is confined in duration. Drought, on the other hand, spans over a much longer time-frame and its adverse impact on the economic activities and life of an area is of a more lasting nature. The measures required to meet the threats posed by different calamities, therefore, differ considerably in terms of disaster preparedness and amelioration of the economic and social life of the affected people.

In India recovery scenarios occur on three levels:

- government initiated post-disaster management;
- non-governmental relief assistance;
- self-management including support from insurance.

India is significantly vulnerable to risks of cyclonic storm and floods along both its peninsular coastlines to its East and West. Based on past experience a National Disaster Management Policy was established with a coordinating arrangement at the field level which brings together the various administrative wings of the central and state governments in delivering evacuation and relief. As per reports one can expect to see this process complete in about 7 days and then followed up by non-governmental assistance and support for rehabilitation.

The government initiated post-disaster management is triggered by the Department of Agriculture and Cooperation within the Ministry of Agriculture. The response to cyclonic storm and floods are established with precautionary safety actions initiated across the geographic areas identified as vulnerable to an oncoming strike. Reports from the Indian Meteorological Department assist the government in initiating precautionary measures. Soon after the strike by a cyclone or flood evacuation and relief interventions are initiated and generally completed within 7 days. The highest political and administrative oversight exists during this period. A calamity such as Bay of Bengal Cyclone 2001 would bear out such post-disaster management. The first information was received on 17 October 2001 and a detailed report of consequences and actions was provided by 24 October 2001.

A Calamity Relief Fund was established for the financial year 2000-01 that pools contribution by the central and state governments. In addition, there is a National Calamity Contingency Fund that meets any excess requirement for relief. These schemes are dovetailed with the central and state government administration. These funds address calamities of cyclone, drought, earthquake, fire, flood and hailstorm all of which affect India in its different parts to facilitate recovery and rehabilitation.

Gujarat earthquake

A severe Earthquake of the magnitude of 6.9 on the Richter scale occurred at 8.46 a.m. on 26 January 2001 with the epicenter at 20 k.m. North East of Bhuj. Its impact was felt in various parts of the Country. Gujarat was very severely affected. It caused colossal loss of life and property damage in Gujarat particularly in Kutch, Ahmedabad, Jamnagar, Rajkot and Surendranagar. Aftershocks were felt even two months after the event.

Extent of damage:

- 7,904 villages affected in 182 talukas in 21 districts
- 15.9 million people were affected out of a population of 37.8 million
- human lives lost: 20,005; persons injured: 166,000; seriously injured: 20,717
- missing persons : 247 in Kutch
- cattle deaths reported: 20,000
- houses fully destroyed: 187,000 (permanent), 167,000 (temporary) & 16,000 (huts)
- houses partially destroyed: 501,000 (permanent), 387,000 (temporary) & 34,000 (huts)
- Property damage:

- personal property: Rs. 3.87 billion
- household properties: Rs. 111.95 billion
- public utilities: Rs. 6 billion
- public infrastructure & amenities: Rs. 10.80 billion
- industrial establishments: Rs. 50 billion
- commercial establishments: Rs. 30 billion

Total estimated loss/damage: Rs. 212.62 billion [US$ 4.5 billion]

In a massive orchestration of government resources both at the national and state level, with aid and relief assistance pouring in from all over the world, infrastructure, communications and transportation arrangements were restored as a priority. Power lines and utilities were restored or backed up. More than a year later the impact of the Gujarat earthquake has been overcome with the trauma of this dark event still etched in people's memories. The people of Gujarat are resilient and have taken in their stride the subsequent riots and floods. Even as rehabilitation continues development of the state is continues in parallel.

Interestingly, insurance including cover for earthquake was for industrial and commercial establishments and for power plants. There was close to 7.2 million life insurance policy holders for a total sum insured of US$ 6.8 billion; of these, 13,000 policies for a sum of US$ 12 million responded. Personal accident insurances responded to loss of life and injury and were not significant. The insurance industry estimates that the insured sum is of US$ 165 million as against US$ 4.5 billion for total life and property lost/damaged. This low level of insured loss is independent of the low rates for earthquake premium that are available as an add-on cover. This situation is the result of a lack of awareness amongst the public and inadequate selling by insurers.

ANNEX

SOCIAL, ECONOMIC & HEALTH CONSEQUENCES OF NATURAL CALAMITIES

S. No.	Consequences	NATURAL CALAMITIES				
		Earth-Quake	Cyclone	Flood	Fire	Drought/ Famine
1.	Loss of life	X	X	X	X	
2.	Injury	X	X	X	X	X
3.	Epidemiological threat		X	X		
4.	Loss of crops		X	X		X

5.	Loss of housing	X	X	X	X	
6.	Damage to infrastructure	X	X	X	X	
7.	Disruption of communications	X	X	X	X	
8.	Disruption of transport	X	X	X	X	
9.	Panic	X	X	X	X	
10.	Looting	X	X	X	X	
11.	Breakdown of social order	X	X	X		
12.	Short-term migrations			X		X
13.	Permanent migration					#
14.	Loss of Industrial production	X	X	X	X	#
15.	Loss of Business	X	X	X	X	#
16	Distruption of marketing systems	X	X	X	X	#

<u>Legend</u>

X - Direct Consequences
- Secondary Consequences

Source: Contingency Action Plan, National Committee on Disaster Management, India

Part II. Company Perspective

The Impact of 9/11 on the United States Insurance Industry's Business Interruption Underwriting

by William E. Bailey*

Summary

It is estimated that the terrorist attack against the United States on September 11, 2001, will cost the insurance industry US$40 billion. It appears that business interruption coverage will be the largest single component of the total losses. Dr. Bailey recounts the details of the 9/11 attack discusses aspects of its potential long-term impact on insurance underwriting with particular emphasis on the different types and forms of business interruption and extra expense coverage. He concludes with an assessment of the special hazards and vulnerabilities that the threat of terrorist attacks poses with regard to future insurance underwriting.

1. "Will the insurance industry pay for this?"

Before the day was out, the members of the media who regularly cover the insurance industry were reaching out to any source that could respond to the President's comment about the nation being at war. Insurance policies specifically exclude coverage for damages caused by "…flood, earthquake, war or nuclear accident." Will the insurance industry assert the war exclusion as grounds for denying liability for these claims, the media asked. Several individual companies' and the Insurance Information Institute's media spokespersons quickly responded. "War" has been defined by the courts as armed conflict between sovereign nations. There was no known recognized government involved in planning or carrying out this attack. It appeared to be the action of a small group of highly trained terrorists under the control of Osama Bin Laden, who is not the head of any government or nation. As quickly as that answer was accepted by the media, the clear follow-on question was asked: "If the attack was the act of terrorists and not an act of war, will the insurance industry pay for the billions of dollars of losses that have resulted?" Again, individual companies and the Insurance Information Institute responded quickly. Terrorism is covered under most policies, they pointed out, not necessarily in explicit terms but rather by virtue of not being specifically excluded in the grant of coverage section of the standard policy that says, "We will pay for…"

Many months later, as the magnitude of the losses became more clearly defined, a group of industry top executives met in Geneva to discuss ways to deal with financial consequences of future acts of terrorism worldwide. Several members of the panel were

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complaining that the events of 9/11 had cost their companies billions of dollars in losses, "… for which we never collected a premium." One member disagreed. "We collected a premium for the perceived risk of terrorism. It was practically nothing, because we were convinced this could never happen in the United States", he said. "The real question is, how much are we going to be able to collect in the future when faced with such enormous risks with such total unpredictability." By that time, Warren Buffett had been widely quoted as saying that the explosion of a nuclear device in New York City would cause trillions of dollars of damage which was way beyond the capacity of the private sector to pay for.

During the next few weeks, as the data regarding the losses by line and by company were collected and analyzed, the estimates of total losses climbed steadily from US$25 billion to US$35 billion to US$45 billion to as much as US$80 billion. At first, financial analysts noted that the total capital of the U.S. property-casualty industry was around US$290 billion. Therefore, the impact of the 9/11 losses would not be that severe. However, after more careful examination, it was noted that not all companies, notably some of the very largest personal line carriers in the country, had a significant share of the total losses. The total capital of the companies with the greatest amount at risk was in the US$100 billion to US$120 billion range. Therefore, the impact on those companies' surplus was much more troubling, especially when the possibility of other potential mega-catastrophes such as additional terrorist attacks, an Andrew-sized tropical storm on the east coast and a Northridge-sized earthquake on the west coast were taken into consideration.

It also became increasingly clear that the reinsurance industry was going to bear the biggest share of the total burden - some 56 to 60 per cent, according to some analysts. The worldwide reinsurance industry capital was estimated to be around US$105 billion, and the U.S. reinsurance industry capital in the vicinity of US$26 billion. Another mega-catastrophe in the same policy year would have been devastating for a number of reinsurers.

The insurance industry's earlier response, "We will pay," was revised to "We will pay - for this one - but not another one. We don't have the capital to survive another event like this and still be able to pay for all of our other, existing commitments."

Within a few weeks time, as the President and the Congress worked closely together to craft a bill that would shore up the already weak financial condition of the airline industry and provide financial support to the families of the victims, the insurance industry met with the President and members of Congress to lay out the financial consequences of a series of major catastrophic losses and the potential impact that would have on the U.S. economy. Although some reporters initially described the industry's proposal as a "bailout", that mischaracterization was quickly corrected. "The insurance industry is not looking for a handout," the Insurance Information Institute said in interviews. "We are, however, seeking some kind of federal safety net - a 'backstop' - in case the worst case scenario should occur." The Air Transportation Safety and System Stabilization Act, which contained the victims' Compensation Act, breezed through Congress in two weeks. By comparison, consideration of the industry's requested "backstop" legislation dragged on for months as the special interest groups came forward with a variety of proposals that resulted in further hearings at which questions were raised as to why the insurance industry needed this federal, taxpayer-funded relief from its past underwriting shortcomings. With encouragement from the White House, some amendments had been tacked onto the Senate bill - barring payment of punitive damages, for example - that convinced the Democratic Majority Leader, Tom Daschle, that they were a "backdoor" attempt to sneak tort reform measures through the Senate, many of whose members have close ties to the trial bar. For the balance of the year and well into 2002, this remained a major sticking point blocking passage of a bill.

The reinsurance industry, which is not subject to state regulation of its policies, announced that it would exclude terrorism losses from all of its existing contracts as they came up for renewal and in all new contracts unless Congress provided some kind of legislative relief. Faced with the withdrawal of the reinsurance market from the terrorism risk, the primary carriers immediately announced that they would be forced to seek state regulators' approval of a similar exclusion in their policies. For the next two months, all parties - primary carriers, reinsurers and regulators - were unusually optimistic that the Congress would act by the end of the year and provide an acceptable form of backstop, despite the fact everyone was well aware that a similar proposal had been floated around Washington after Hurricane Andrew and had never resulted in any bill being enacted. In that spirit of hopeful anticipation, many companies did not send out the non-renewal notices in time for the January round of renewals, believing that the backstop would be in place. Although the Republican led House did pass a backstop bill, the Democratic controlled Senate tied it up in committee. When the threatened non-renewals did not flood the market, some industry critics interpreted that as a sign that the industry had backed off and the threats of massive non-renewals in the fall were the industry just "crying wolf again."

The industry and the media began making comparisons between Hurricane Andrew, the largest natural catastrophe in U.S. history, and 9/11. Andrew was a relatively narrow, powerful Category 4 hurricane with winds gusting over 200 m.p.h. It flattened whole neighborhoods of residential communities and business establishments as it moved across the peninsula, leaving south Florida devastated in its wake. It's greatest losses were in personal lines - homeowners, renters and personal auto insurance. There were very few injuries or deaths reported that were directly attributable to the storm. By comparison, 9/11 was a man-made, geographically concentrated attack in New York and at the Pentagon. It's devastation was confined and mostly vertical rather than horizontal, and the losses were predominantly commercial lines rather than personal lines. While the loss estimates for hurricanes, tornadoes, fires and floods are generally accumulated rather quickly, it will likely be years before we know the full impact, insured and uninsured, of 9/11.

2. 9/11 losses

The area in south Manhattan impacted by the events of 9/11, generally designated as bounded by Canal Street on the north and all of the island south to Battery Park, was a thriving business and residential community comprised of over 150,000 residential units and over 24,000 businesses ranging from the small store, dry cleaner, etc., to some of the world's largest companies.

The losses by line of business were estimated to be as follows:

Line:	US$ In Billions	% of Total
Real Property - North and South Towers of the World Trade Center	US$ 3.5	9%
Property - other	US$ 5.0	12%
Business Interruption	US$ 10.0	25%
Workers Compensation	US$ 3.5	9%
Aviation - hull	US$ 0.5	1%
Event Cancellation	US$ 1.0	3%
Aviation Liability	US$ 3.5	9%
Other Liability	US$ 10.0	25%
Life	US$ 2.7	7%
Total	US$ 39.7	

3. 9/11's business interruption and extra expense losses

The terrorists' attack on September 11 destroyed or severely damaged businesses of types and size, ranging from small delicatessens, dry cleaners, restaurants and drug stores to branch offices of some of the largest U.S. and international companies. A number of them lost several key executives and a significant number of their staff, who would have to be replaced before the business could resume operations. Huge computer files containing information critical to the conduct of the business were destroyed, and a surprising number of companies did not have adequate back-up files stored in computers located some distance from New York.

It became increasingly clear, as the catastrophe claims adjusters who were dispatched to the scene began processing claims from their insureds, that business interruption losses and extra expense payments were going to be a major portion of the ultimate total loss. In fact, by the end of the year, it was estimated that these two coverages combined would account for more than 25 per cent of the total.

The industry has been offering business interruption coverage for more than a century in recognition of the fact that a business' total property losses, in addition to the covered real and personal property, includes net income losses while the business is closed. In the 1920s, the industry added coverage for actual loss of earnings (now termed "Extra Expense"), which provides the insured the interim financing needed to re-open the business at a temporary location as quickly as possible to mitigate the ongoing business interruption losses.

There are number of different business interruption coverages available today, which will be subject to a large volume of claims from 9/11. They include the following:

1. The ISO standard form designed primarily for small to medium-sized businesses. It requires that there be "direct physical damage" to the insured's premises for the coverage to apply. The coverage period is typically limited from 30 to 60 days. However, there is coverage for the interruption caused by the action of civil or military authority that imposes a quarantine on the area, blocking access to the insured's property even though there has been no direct physical damage to the insured's premises. The standard policy has a waiting period of 72 hours before the coverage is triggered and has a time limitation that varies from 3 weeks to 30 days. These are generally considered to be the most restrictive business interruption policies.

2. For more sophisticated and complex businesses, many insurance companies provide their own HPR ("Highly Protected Risk") form containing terms and expanded coverages that meet the insured's unique business needs.

3. The third type of policy form is the manuscript policy that is substantially negotiated and ultimately tailored to provide the broadest coverage for the complex operations of the large national and international companies.

The HPR and manuscript policies will most likely contain extended coverage for a number of additional risks. For example:

a) Ingress and egress coverage. These provide coverage when ingress and egress to the premises are blocked by a covered cause of loss, such as a fire, hurricane, flood, etc., and presumably acts of terrorism unless specifically excluded. The policy covers the time period from the occurrence or date of loss until access is restored.

b) Loss of income due to service interruption. This policy provides coverage when the utilities, such as water, electric power and telephone service are not available to the premises as a direct result of a covered cause of loss.

c) Some policies contained a provision covering an extended period of indemnity. The "extended period" commences after the business is re-opened at its old or a new, permanent location and continued until the business had restored its pre-loss level of income. The coverage is typically sold to the medium-sized or large business in 90 day increments.

d) Extra Expense is, as described above, the amount an insurer will pay for the special expenses incurred by the insured to resume operations on a temporary basis until the damaged premises are re-built or a new, permanent location is opened. It would include such items as rent, furniture, equipment supplies, etc. It is in the best interest of the customer to get back in business as soon as possible to reduce loss of customers to a competitor. It is equally in the best interests of the insurance company to have the customer doing business as soon as possible to reduce its business interruption liability.

e) Loss of income from contingent business interruption. This policy provides coverage when an insured's major supplier or a major customer is put out of business by an event that is a covered cause of loss under the insured's policy. For example, the ABC Manufacturing Co. buys some of its key components for its product from the DEF Co. Without those DEF parts, ABC cannot produce its product, and there are no substitute components available. DEF is the only supplier. DEF suffers a major fire loss, closing it down indefinitely. As a result, ABC must cease its operations. Since fire is a covered cause of loss under ABC's business interruption policy, even though the direct physical damage was to DEF's building, ABC can collect until it can find another supplier or modify its product to allow it to resume business operations. This is called "upstream" business interruption coverage, since the supplier is "upstream" in terms of the flow of products and materials. "Downstream" business interruption coverage applies when a key customer is put out of business by an event that is a covered cause of loss in the insured's business interruption policy. In this case, ABC sells 65-70 per cent of its annual production to one key customer, XYZ Co. XYZ suffers a severe fire loss, which closes it down indefinitely. ABC cannot continue to operate without XYZ's sales revenues. ABC can collect under its business interruption coverage because the fire was a covered cause of loss under its policy, even though the direct physical damage occurred at XYZ's premises.

Claims for contingent business interruption from 9/11 have raised some very complex coverage issues. Some of the claims being filed by businesses hundreds and thousands of miles from New York City raise troubling questions about the conflict between the underwriters' intent and premium charged and the customer's alleged "understanding of the policy's coverages" and "reasonable expectations". A few examples. A large hotel located a short distance from Washington Reagan International Airport, which was highly dependent on the income from business travelers, has filed a claim with their insurer for their significant losses after the FAA closed the airport for several weeks. Two hotels in New Orleans brought suit for its contingent losses based upon the FAA action on 9/11. A restaurant at Boston's Logan Airport filed a claim based upon the Massachusetts Port Authority's decision to close that airport, thus shutting down its business. Hotels, resorts and restaurants, located a considerable distance from New York City or the Pentagon, have filed claims for their losses from event cancellations after 9/11. A major stock brokerage firm has filed a claim for US$700,000,000 in extra expenses. That was what it cost to acquire a new building in mid-Manhattan and to move its New York operations from its offices in the World Financial Center to the new location.

One issue regarding contingent interruption losses has already surfaced in the loss calculations for such operations as hotels, restaurants, etc. in New York City. Insurance policies pay for net income losses that are directly related to the covered causes of loss. Insurance does not cover loss of revenues due to a general economic downturn, such as the one the entire country was experiencing well before 9/11 but even more intensely after 9/11. Was the enterprise's significant drop in income due to a widespread fear of air travel after 9/11 affecting the hospitality industry or to a general "belt-tightening" brought on by the recession? Or a little bit of both? And how will insurers and their insureds reconcile what is a covered business interruption loss and what is not?

Given the billions of dollars at stake and the complexity of some of the issues, it is quite likely that many of these claims and coverage questions will ultimately be decided in the courts.

4. The potential impact of certain hazards on future insurance underwriting

The market has already started the process of re-assessing the degree of risk presented in underwriting certain businesses. Underwriters are concerned with the hazards presented by existing conditions that could magnify future losses from terrorism or other, powerful natural catastrophes. Hazard is defined in Volume 1 of the American Institute for Property and Liability Underwriters as, “a condition that increases the probability or likely magnitude of loss arising from some peril.” (p.8) In particular, underwriters and property owners will be assessing the following concerns:

1. Building height. For several years, property owners in different countries around the world competed for the right to claim they built and owned the tallest building in the world. At 110 stories each, the World Trade Center twin towers shared first place with the Sears Tower in Chicago. (See “The World‘s Tallest Buildings”, Infoplease.com.). After 9/11, building height became a matter of grave concern to both insurance underwriters and the building’s occupants. The adequacy of evacuation routes and their fire resistance were the principal concern. Typically, during a fire loss or other disaster, the building’s elevators are shut off and the occupants are directed to the nearest fire escape, usually a stairwell. Unfortunately, a number of people on the higher floors of the World Trade Center towers had been told to evacuate vertically to the roof, where they would be rescued by helicopter. However, on 9/11 the intensity of the flames from the jet fuel created such intense heat - over 2000 degrees Fahrenheit - and powerful updrafts that attempted helicopter rescues were thwarted. Building owners have reported that tenants’ concerns about the adequacy of means of escape from tall buildings’ upper floors has caused a reversal of the usual rental market rate structure. In the past, it was prestigious as well as attractive to occupy the upper floors, in large part because of the commanding view they had of the area. The “Windows of the World” restaurant on the top floor of the North Tower was a local favorite as well as a popular tourist attraction because of the view. Since 9/11, it has been widely speculated that any new buildings that are erected on the World Trade Center site will most likely not exceed 50 stories, reflecting a totally different attitude about the “value versus the risk” of height in buildings.

2. Building Design and Construction. Another concern is the potential for hazardous materials, especially in older buildings, being released into the ambient air from the building collapse or other causes, e.g. the asbestos dust released into the ambient air by the collapse of the North Tower. When construction started on the WTC towers, architects and engineers were still using insulation materials containing asbestos. By the time 40 stories of the North Tower had been completed, New York City building codes were revised to ban the use of asbestos containing products. When the towers collapsed on 9/11, that asbestos insulation was, along with all of the other building materials, crushed into dust, which then was carried by the winds created by the collapse as well as the prevailing winds of that day to all of lower Manhattan and quite possibly across the Hudson into neighboring New Jersey. Of greatest concern was the exposure of the dedicated and hard working clean-up crews, who spent incredibly long hours day after day without rest pouring through the 1,250,000 tons of rubble in search of living victims as well as to recover the bodies of the dead. For the most part, they

were given but did not wear the protective face masks that would have filtered out the asbestos and other potentially harmful particles in the ambient air. Complaining that the face masks obscured their vision and made breathing even more difficult, the fire and police rescue teams frequently took them off. Whether or not a number of these people will develop an asbestos-related or other disease at the end of a long latency period is anyone's guess. Probably a few will, even though the 9/11 exposures may be only a part of their lifetime exposures in other environments. In the future, underwriters will have to take into consideration the possibility that the World Trade Center will remain a potential target for these health-related claims for many years to come.

3. The moral hazard of a significant volume of false or inflated claims by those attempting to take advantage of the mass confusion and many distractions after a terrorist attack. There is no way of knowing what degree of claim fraud has and will be committed related to the events of 9/11. The possibility of obtaining "easy money" from insurance companies has always been a thriving business. Unfortunately, it is difficult for insurance adjusters to sift out the fraudulent claim for personal property allegedly lost in an event like the towers' collapse, such as a personal laptop or new, handheld computer, cell phone, jewelry, etc. Fraudulent workers' compensation claims will also be an area of concern. What kinds of unrelated and non-covered expenses might be loaded into the business interruption/extra expense claim - such as claims for temporary living accommodations, clothing and meals - will be carefully scrutinized.

4. The potential, large volume of litigation following a terrorist attack. Immediately after 9/11, President Bush and the Congress acted quickly to head off a potential flood of litigation that would have clogged the courts and cost billions of dollars in legal expenses. Within a few weeks, Congress passed the Victims' Compensation Act as a part of the Airline Security and System Stabilization Act. It applied exclusively to the victims, their estates and their "immediate family members" - a term that briefly caused some controversy as to who was intended to be included - and provided for an exclusive jurisdiction in the federal district court in Manhattan to hear all such cases. Its critical feature was the provision that those eligible to apply had to agree to waive their right to sue. Instead, they could collect as much as US$1,800,000 in no more than 90 days from the federal fund. However, income the victims received from collateral sources - such as life insurance, workers comp benefits, etc., would be deducted from the final award. Funds received from charities and religious organizations were exempted. In a bold and extraordinary move, the President of the American Trial Lawyers Association, Atty. Leo Boyle of Boston, announced his organization's support for passage of the Victims' Compensation Fund when it was working its way through the legislative process. He rationalized that it might take years before the victims' lawsuits would come to trial, and by then the bulk of the available insurance funds and assets of the long list of potential defendants might well have been exhausted. He also promised that ATLA members would provide free legal counseling to any victim who asked for their help. Although a few noteworthy trial lawyers, aviation related litigation specialists for the most part, objected strenuously to Leo Boyle's pre-emptive action just as they were preparing to start soliciting the victim's business, the vast majority of ATLA members supported the move. However, they were quick to point out that their actions should not be interpreted as setting a precedent for future mega-catastrophes.

There has been no great onslaught of claims filed with the managers of the Victims' Compensation Fund. In fact, the number of claims filed thus far has been surprisingly small. It is much too early to tell whether that indicates that a majority of the victims have decided to take their chances with litigation of their claims.

5. Vulnerabilities to future business interruption losses

What are the present vulnerabilities of future business interruption underwriting? They are both external and internal.

A. External

1. There are additional air attacks in one or more major cities. For weeks after 9/11, it was feared that the Sears Tower in Chicago might be the object of a similar, hijacked airplane attack. In January 2002, it was feared that the Super Bowl stadium might be attacked in some fashion. Underwriters will have to take into consideration that any future acts of terrorism will also trigger a heavy volume of business interruption losses.

2. In a similar vein, the United States is vulnerable to a biological or chemical warfare attack, with the threat of shutting down whole cities in the same manner as the anthrax scare closed down the United States Congressional buildings and the U.S. Postal Center in Washington, D.C., network television studios and offices in New York City and the National Enquirer building in Palm Beach, Florida. It is simply not possible for the United States to completely secure its borders from terrorists bringing lethal chemicals and biological weapons of mass destruction into the country.

B. Internal

1. We are only beginning to asses the potential internal, process vulnerabilities that have been brought to light since 9//11. For example, a colleague has estimated that if a tropical storm similar to the 1950 hurricane, which swept up the Atlantic coast causing extensive damage in eleven states, were to occur today, it would result in some 3,000,000 losses and the industry would have to marshal some 25,000 claims adjusters who would likely need more than three years to resolve such an enormous volume of claims from a single event based upon current claims settlement policies and procedures and the requirements of the states' Unfair Claims Practices Acts. Even more disconcerting is what is termed "The Double Bang Theory." It hypothesizes a simultaneous major storm striking the U.S. east coast while an earthquake rolls through several states on the west coast. Add to that a "Third Big Bang" in the form of a widespread, devastating terrorist attack, which would cause a massive shut-down of businesses in the affected cities and surrounding communities. The potential claims volume would overwhelm the insurance industry's available resources and take years to resolve.

2. The insurance industry was quick to declare, right after 9/11, that it would not assert the war exclusion in its policies, and that it would pay for the losses because terrorism was not specifically excluded. However, the mounting financial pressures on the primary carriers from an economy struggling with a recession, reduced dividend income, the steadily declining value of their surplus from a volatile stock market and significant underwriting losses, especially in the homeowners line, combined to push

the industry toward one of its worst years in decades. When the reinsurance industry announced that it would begin to add a terrorism exclusion in its policies as they came up for renewal, unless the U.S. Congress enacted legislation that created a financial backstop for future terrorism-related losses, the primary carriers were forced to follow suit. It is clear that the industry does not have the financial resources to absorb certain mega-catastrophic losses, such as a terrorist explosion of a "dirty bomb" containing radioactive material in a major metropolitan area. Of potentially equal or greater impact is a carefully coordinated cyber attack through the Internet on the interconnected computers that run the U.S. and global financial system, crippling the electronic information exchange and funds transfer capabilities of the stock exchanges and stock brokerage firms around the world, the Federal Reserve system, and the major world banks. Warren Buffet has estimated that the explosion of a "dirty bomb" in New York City would cause over US$1 trillion in damages. The potential volume of business interruption losses that would result from any one of these scenarios could threaten the economic viability of the worldwide insurance industry. In the future, underwriters will have to carefully consider some explicit limitations of the amount of business interruption coverage the industry can afford to provide in its commercial lines, property insurance policies. Hurricane Andrew had exposed the industry's excessive "concentration of risk", under-pricing and over-extending its volume of homeowners insurance in a geographically concentrated area. September 11 revealed the industry' vulnerability to an excessive "aggregation of risk", providing several different forms of coverage to a single insured entity contained in a highly concentrated, geographical location.

6. Conclusion - the threat of future terrorist attacks - application of principles of risk management

On September 11, 2001, the world as we knew it had suddenly and irrevocably changed. The citizens of the United States had always felt secure inside the country's borders. Even after the World Trade Center bombing by Islamic fundamentalists in 1993, our usually sensitive alarm buttons did not signal that this was a precursor and not an aberration. Our national security and defense instincts were not prodded and aroused into action. Our guard was down. Our collective attitude toward terrorist threats was confident. "No one - no country or band of wild-eyed terrorists - like the ones we have seen depicted over the years in movies and on television, who are always crushed in the end by the forces of goodness and justice - would ever dare to attack us on our own soil," we thought, convinced that this message was clearly understood and accepted around the world. The threat of retaliation by the world's greatest superpower was enough to scare off any would-be adventurers who might plot and scheme to harm us or disturb our peaceful communities, we comfortably assured ourselves.

Unfortunately, our government's spy agencies misgauged the audacity and boldness of Osama Bin Laden and the Al Queda terrorists, who had been placed in small cell groups around the world including here in the United States. We have been told that, due to budget cuts, the CIA and other agencies didn't have the numbers of "moles" and counter spies infiltrating these terrorist organizations that they had in the past, and therefore the information flow from these critical sources had substantially dried up. One commentator has said, “There wasn’t a lack information. There was a failure of imagination.”

In the months since 9/11, we have had repeated warnings from top officials in the Bush administration that, “The probability of another terrorist attack upon the country is 100 per cent!” From time to time we have been advised by the F.B.I. and the director of Homeland Security that this, that or another landmark site may be a target for a terrorist attack in the next few days or weeks. “Be alert and report anything you see out of the ordinary or suspicious,” we have been admonished. While it may be prudent for the country to maintain a certain level of preparedness and vigilance, keeping up this constant degree of uncertainty and heightened level of anxiety is taking its toll on our citizens and on our economy, most heavily on certain sectors, such as the travel, leisure, recreation and hospitality industries.

The insurance industry is a very forward looking enterprise. Although we look to the past to see what we have experienced and hopefully learned, we are issuing contracts which we have priced based upon our current estimation of future events. So it was with insurance coverage for losses caused by acts of terrorism. Since we felt so completely safe and secure inside our national borders, the industry never added much to our premium calculations to cover for this type of loss. As the executive at the Geneva conference said, we charged our customers just about what we thought the coverage was worth, which was just about nothing.

The attack on 9/11 has tipped over that calculation completely. We now ask, can we afford to write any form of terrorism coverage based upon the absolute uncertainties and unpredictability of what shape, form, magnitude, location and intensity future terrorist acts might entail?

However, the insurance industry is also very creative and resilient. Once we have paid for and closed the books on a major catastrophic loss, we begin to look for ways to perform our societal role of providing the means for our customers to manage risk. We look to the traditional avenues for guidance and a starting point and build new mechanisms and programs from there.

6.1. Risk avoidance

What can be done to prevent these losses from occurring? As long as our borders are so open and we continue to allow tourists, visitors, students and immigrants to freely travel in and out of the country, we will remain terribly vulnerable to terrorists who obtain false passports and student visas and bring their deadly weapons of mass destruction into our country. Since we cannot start training underwriters and claims adjusters to infiltrate the terrorist cells so we can thwart a planned strike of some kind, we are dependent upon the federal government to wage war with the terrorists to prevent their deadly attacks. However, we can assess the potential hazards and vulnerabilities involved in future property loss underwriting to adjust the capacity allocated to these risks.

6.2. Risk transfer

Since the uncertainties as to when, where, and how are too great for the private sector to properly and adequately price but public policy dictates that some form of affordable, economic loss protection be made available, we look to the federal government to step in and assume a share of the burden. That approach has worked in some specific instances in the past, such as flood insurance, crop insurance, etc. A federal backstop or reinsurance program was proposed after Hurricane Andrew, but it never attracted sufficient adherents in the Congress to get out of committee. In truth, the industry was never solidly united behind any of the proposals. The Congress undoubtedly sensed that. Congress very rarely passes legislation affecting insurance when the industry is a divided house. A federal government backstop is being proposed now to restore stability to the property insurance market in light of the re-insurance industry's inclusion of a terrorist exclusion in its policies and the addition of a terrorist exclusion in many of the primary insurers' commercial lines property insurance policies, which has been approved in 45 states. The house is not divided on this one. The industry is wholeheartedly united behind the proposal. Congress should act quickly to bolster confidence in the future of the U.S.'s economic strength even in the face of threats of terrorist attacks.

6.3. Risk retention

After Hurricane Andrew, the insurance industry obtained the Florida insurance department's approval for a significantly increased deductible for the wind coverage. It ranged from 2 to 10 per cent of the policy limits. It allowed companies to hold down the projected premium increases for this high risk line by getting the insureds to share the risk, especially those who lived closest to the ocean in south Florida. That approach to terrorism insurance coverage makes sense and will increase both availability and affordability in commercial lines. However, businesses of all types and sizes need to build a contingency reserve to cover a portion of their terrorist exposure. Congress should encourage this move by giving tax credits for contributions to these reserves. Over the past couple of decades, the industry has seen a very large portion of its commercial lines business migrate to alternative markets - risk retention groups, captives and pooling arrangements. There have been indications that some large insurers and international brokerage firms believe there is still a very substantial market for terrorism coverage of manageable proportions. They are planning to, or may have already, capitalize specialty reinsurers in Bermuda specifically aimed at the small to medium-sized business to capture a significant portion of that market and to prevent a mass exodus to the alternative markets.

In his February 25, 2002, letter to insurance company CEO's, Frank J. Coyne, President and CEO of the Insurance Services Office wrote:

"…the line between war and terrorism has become blurred. Like war, terrorism can be catastrophic, is often state-sponsored, and its operatives may be state-trained, though anonymous. Various policy makers and national leaders have referred to the tragedy of September 11 as war. And just as guerilla warfare has become an alternative to conventional warfare, so terrorism is, for some, the preferred method of fighting a war today."

As the lines of distinction between war and terrorism continue to fade, it is time for the insurance industry to re-assess whether or not there be some stop-gap limitations placed on future terrorism coverage based upon some severity calculations written into the policy.

In addition to the above traditional risk management exercises, there is some thought being given to a modernization of the terms and definitions in our policies. President Bush and his top advisers called the 9/11 attack an "act of war." Since the days of World War II and Korea, the conduct of war has changed drastically, due in large part to the introduction of very sophisticated technology to the "battlefield." Unmanned drones fly over enemy territory and engage in laser-guided, pin-point bombing. Guided missiles travel hundreds of miles to strike a target within just a few feet of dead center. Smart bombs, cave busters and all kinds of new weapons increase the likelihood of inflicting enormous damage on an enemy country within a very short period of time with startling accuracy and little loss of life.

The evolution of military activities that constitute "modern warfare", starting with the guerilla warfare in Viet Nam to the "hit and run" tactics against the Russian Army a decade ago in Afghanistan to the massive bombing runs in Desert Storm, Bosnia, and recently in Afghanistan, should trigger a re-examination of what activities the private sector can underwrite and where the line needs to be drawn.

Terrorism, by its very name and nature, is intended to sow fear into the minds and hearts of its victims, to cripple their resolve to fight back by the shock effect of its terrible, senseless death and destruction. It is more political than military. That is why it seeks out symbols - a prominent political figure such as the president of a targeted country, or a real estate landmark like the White House, the Golden Gate Bridge or the World Trade Center. It has become the attack strategy of choice for those determined to bring capitalistic democracy to its knees, because it can cause maximum, long-term damage with just a few people and limited resources. As the industry examines what magnitude of financial commitment it can make to its customers to protect them from the threat of future terrorist attacks, it is probably also an appropriate time to take a look at how well its policies' definitions of "war" and "terrorism" address the realities of the current geo-political environment.

Complexity of Managing a Global Company - Regional Exposure versus Global Exposure

by Gérard de la Martinière[*]

The end of the 20th century witnessed a powerful movement of economic globalisation, with liberalisation of trade, internationalisation of the financial markets and the information technology revolution.

The financial services industry, which had long remained an organisation based on domestic markets, gradually followed the path traced by the manufacturing industry and also opted for international development. The insurance sector, which experienced great demand in terms of the cover of large companies and was no doubt favoured by a supervision system that was less protectionist than that of the banking sector, made a considerable contribution to this movement. European groups were particularly dynamic in terms of their international expansion, not only by endeavouring to establish a European network that was relatively complete, but also by extending their initiatives towards America and the Asia-Pacific region.

This international expansion, which mainly took place in a rather short period of time, corresponding to the eighties and the nineties, took various forms. The liberalisation of services, authorised and encouraged by the European Commission, had very little success. It was through the creation of subsidiaries and, especially, the organisation of existing companies that the world’s leading groups achieved external growth. Due to the short space of time in which this took place, the groups formed were composite and rather heterogeneous.

In general, insurance companies clearly saw the benefit they would achieve from the globalisation movement and made the most of this until recently, as reflected in the rising valuation of their securities on the financial markets. The experience of the last few years along with the combination of a very high technical loss and expense ratio and a serious financial crisis have raised new questions about the risks of globalisation. In their attempts to find a response, the leading insurance groups tended to opt for greater integration of operational management but, for some considerable time this clashed with an institutional framework which remained rather poorly adapted.

1. The benefits of globalisation

1.1. Risk diversification

The basics of the insurance business consist of establishing risk portfolios that are sufficiently diversified to benefit from the effects of the law of large numbers and thus limit the probability of suffering a loss on the cost of claims they agreed to cover.

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By operating on a grand scale on the markets of a given country, it is possible to build such portfolios and more than 200 years of accumulated experience, particularly in European countries, has demonstrated that the insurance trade can be performed efficiently and with a good degree of security, whether for damage or life insurance. However, the national context may be subject to significant differences in the loss and expense ratio, particularly as regards the elements. The two storms in France in December 1999 showed that an isolated event could have serious consequences affecting practically all of a major national market.

In principle, the use of reinsurance limits the impact of this sort of event by reproducing, through a transfer, a second level of pooling of the risks on a global scale. But the cost of this sort of protection can be rather high.

The dependence of the insurance company in regard to its national market is also related to the cycles it inevitably has to face: the pricing cycle when the main actors introduce cumulative price cuts in an attempt to win market shares, the legislation cycle when the authorities try to limit pricing adjustments or stipulate non-economic insurance obligations, and the jurisprudential cycle when courts order retroactive modification of the conditions under which victims of accidents or illnesses are compensated. The use of reinsurance is generally inoperative in such circumstances and the only way to limit exposure is to spread business over several markets in such a way that the probability of concomitant adverse cycles developing is very low.

In a rather more scientific way, it can be demonstrated that the diversification of business lines and business markets has a considerable effect on risk reduction measured, for example, by the probability of ruin. Work done in the context of what is generally known as “internal models” in order to measure the capital requirement necessary to guarantee the solvency of insurance groups shows that the effect of diversification can reach as much as 40 per cent to 50 per cent of absorption compared to the simple addition of requirements analysed separately.

In the projection of results, financial analysts themselves are able to determine a portfolio effect which can secure short or medium-term forecasts by minimizing the “noise” provoked by the inevitable slippage which occasionally happens here or there.

1.2. The constitution of global business lines

Thanks to the development of business in a large number of countries, the leading European insurance groups have progressed in terms of specialisation through the development of transactional business lines; as such, they benefit from a better established excess and enhance their range of services. This is the case in particular in matters of financial assets and fixed assets whose structures have been remodelled in order to be better suited to the globalisation of stock markets. It is also the case with assistance services which are based on a very broad networking of platforms and services. The same approach is also found in the field of reinsurance, whether transferred or accepted; consequently, the aim of this activity is to develop pooling on a worldwide scale. Finally, certain subscription lines can be organised in a trans-national way in which either the targeted clientele itself is international (large industrial risks insurance, for example) or the insurance offered is very specialised and independent of the local market characteristics (insurance for works of art).

Since they lead to the mobilisation of top-quality staff and the development of specialised know-how, these international business lines themselves constitute a factor of risk reduction. Developed on a pan-European basis since the introduction of the euro, asset management has helped to decompartmentalize insurance portfolios and obtain more balanced investments.

1.3. Optimisation of resource allocations

Thanks to the structure of an international group, better resource allocation can be achieved. This is a guarantee of operational efficiency and financial yield.

In the case of human resources, international mobility encourages the acquisition of multiple experiences and expands the choice of directors. Vocational training can lead to the very large-scale development of tools that are best adapted to the group's requirements. Technical assistance, diagnostics and expertise tasks can be applied in an interlinked way and the distribution of knowledge and solutions can be organised for use by everyone.

The effect of size constitutes a great advantage in reducing the acquisition costs of goods and services. The grouping of orders, both for reinsurance cover, computer hardware or for air travel or audit services, should lead to substantial savings in operating costs while guaranteeing a standardised level of quality. Certain logistic functions of companies may be organized through internal services in order to rationalise their large-scale execution (for example, the supply of IT services).

Obviously financial optimisation constitutes an important factor in the performance of international insurance groups. The use of a holding company as a suction and pressing pump, to ensure proper irrigation of all the subsidiaries in terms of their capacities and their requirements, guarantees the best use of resources on the basis of preferential access to the leading international markets by achieving a focalized stock-market status and a synthetic rating. The unified management of shareholders' equity, permanent capital and cash enables the group's financial resources to be treated as a whole regardless of their economic or historic location.

2. The risks of globalisation

2.1. The involuntary accumulation of exposure

In the organisation of a multinational group with decentralized management, risk management takes place at the level of each business line and each market segment.

Risk analysis is done independently by each subscriber, in the same way as its pricing and accumulations of risks are managed inside the corresponding portfolio.

In the case of a major event, the accidental conjunction of risks involving several portfolios may be detected inside a national space, in a relatively difficult way, thanks to the inventory or identification systems which exist in each country (for example, the ZIP code or Siren code for France); here again, the corresponding information has to be encoded in the subscription's processing and the computer file structure must allow for cross-referencing. But it is obvious that there is no detection system common to all countries which would enable efficient comparison of individual risks.

The increasing use of extraterritorial cover, due to the greater mobility of persons and property, as well as the previously-mentioned development of global business lines, considerably complicates the detection and prevention of accumulated risks. The attack on the World Trade Center on September 11, 2001, was a very striking illustration, with the instantaneous and very unexpected conjunction of different insurance categories:

- aviation insurance;
- property disaster reinsurance;
- reinsurance accepted from other reinsurers;
- insurance for works of art;
- European corporate insurance on companies located in New York;
- American accidental death insurance.

This type of experience should provoke a systematic re-examination of the implied hypotheses of independence or non-correlation which underlies most of our subscription policies. Since we cannot use a random and generalised combination in order to treat any correlations which could be detected – since this is probably impossible to do – we no doubt have to start with a typology of standard events and apply them to geographic regions where there is the highest concentration of insured risks.

The same phenomenon of involuntary accumulation can be seen in investments. Due to the international spread of stocks, exposure to the same security, in capital or in debt, could arise in a uncoordinated way in the portfolios of many subsidiaries of the same group. Recent scandals which hit the headlines of the financial press (Enron, WorldCom, etc.) often revealed accumulated positions which were barely acceptable in leading international insurance companies. The phenomenon is amplified every more when the asset management subsidiary of the group has been developing substantial management for third parties at the same time, with the risk of confusion in the advertizing of these situations.

2.2. The risks of image contagion

The visibility surrounding large insurance groups and the substantial amounts they invest in developing the awareness of their trademark, their stock-market status and their public rating constitute as many commercial advantages for the development of their activities but also weaknesses. If something were to damage the group's reputation, even a minor matter in a marginal activity on a secondary market, the risk of contagion amplified by the media and relayed by the financial markets would have to be taken very seriously.

This is valid not only for the fundamentals which are the basis of client confidence, like solvency or service quality, but also for more specific matters which are widely echoed by public opinion, such as "misselling", the fight against money laundering or lasting development.

Faced with this type of risk, in order to protect itself the company has no choice other than to strictly comply with all the rules which might apply to its activities; these rules may be very diverse in the case of a multinational group which operates under the supervision of several dozen different jurisprudences.

2.3. The complexity of global management

This is mainly due to the fact that although globalisation has made great strides in the economy, it is not very developed at the cultural level. Other than the language barrier which is insurmountable, the great difficulty is the coexistence and confrontation of mentalities, education systems, social organisations and managerial experiences which differ considerably from one country to another.

Since most of the activity is deployed on a series of domestic markets, each of which has its own specific and well-established characteristics and habits, the organisation of companies belonging to a group and their management must be considerably decentralized. This is also what is needed in the case of external growth which leads to the juxtaposition of companies with a specific pre-existing status in one and the same group.

The great challenge of terms of management an international group is to successfully federate the various national companies into an efficient and coherent multinational group without losing any of the local adaptation of each of its entities. Hence the need to share, as much as possible, a group culture based on recognised values, common ambitions, integrated training, meetings and events, including extra-professional.

The acceptance of group policies and respect of reporting requirements, according to strict formats, can only be achieved through a good understanding of what makes up the common interests of all the components.

3. Promoting the integration of groups in an institutional context adopted to their trade

3.1. Insufficient recognition of group structures

In general, national legislation only considers companies on an isolated basis without recognising, either fully or partially, the fact that they belong to a group or the practical consequences which should result from this. This delay in adapting company law constitutes a serious handicap compared to the operational requirements intended to make subsidiaries a group of components of an integrated whole. The result is unnecessary costs through the duplication of numerous procedures and serious constraints for business management.

The difficulty in having the existence of group structures recognised increases as the group expands at international level. Tax protectionism leads to a number of constraints based on the suspicion of a group's determination to organise a transfer of taxable income. The only way to get round this problem consists of introducing very time-consuming procedures for the collection of documentation and the production of voucher copies in order to check the internal invoicing system.

Due to the lack of legal recognition of group structures, even inside the European Union, due to the considerable delay in harmonizing company law, it is difficult to build up common know-how intended to rationalise the use of several subsidiaries by relying on the effect of specialisation and economies of scale. In the insurance sector, the application of VAT to internal invoices can be very penalizing.

The follow-up of accumulated positions at group level, or the prevention of infectious and image risks is such that new functions have to be created at the level of central HQ (ALM, risk management, fight against money laundering, etc.). Even if these functions are exercised in liaison with all the subsidiaries, the difficulty of assigning a specific service to each of them can make it difficult to cover the corresponding costs, whose sharing and justification must be very strict. Since the legal context is not adapted, there is no connection between the interest of the company and the interest of the group.

3.2. Fragmentation of insurance supervision

Single insurance legislation, like that of banking, is based on public confidence, it is subject to a regulation aimed at protecting the rights of policy-holders in return for the premiums they pay. This regulation, which is mainly national, may differ considerably from one country to another. In the insurance field, there is no equivalent of the Cooke ratio for banks which the Basle Committee managed to impose as a standard for a really international equity adequation standard.

Inside the European Union, directives are supposed to establish the bases of a standard prudential regulation but so many options are left to the judgement of member states that their implementation, through national legislation under the influence of local supervisory authorities, actually leads to a great diversity of structures that are ill-suited to the optimisation of operational structures.

The understanding of group structures recently progressed with the adoption and transposition of directives relative to French insurance groups and conglomerates but only for the introduction of additional constraints; it did not introduce any flexibility in the supervision of subsidiaries. The new system which superposes the different levels of requirements and supervision, without integrating them, does not take into account the effects of absorption of risks which result from the composition of groups. Based on suspicion, *a priori* in regard to inter-group operations, it is liable to make the declaration obligations even more time-consuming without necessarily improving detection and prevention of accumulated exposure.

To avoid the drawbacks and prevent an increasing gap between the economic reality of international companies and the monitoring system which should assess the risks of their activities, in-depth reforms are necessary. In the European area, prudential legislation should be fully standardised and implemented in a closely coordinated way, as proposed for some time by the European Insurers' Committee. An additional stage would consist of devoting specialised teams to the supervision of insurance groups and, as such, exonerating them from the fragmentary supervision of each member state.

At international level, one solution could be that of mutual recognition, in particular between Europe and the United States, in order to avoid interference from multi-risk checks and the discrepancies which could result from them.

3.3. Adaptation of insurance accounting standards

The insurance trade has special characteristics and a certain degree of technical complexity: inversion of the production cycle, uncertainty on costs while the sale prices are fixed, and the possibility of very long contracts. The representation of this activity in company accounts is all the more complicated and accounting standardisation has so far not produced an unquestionable reference database for retracing insurance operations.

In view of economic globalisation, the need for a universal standard to report the results of insurance groups is becoming urgent: the effective comparability of performance conditions access to the capital markets and the best allocation of resources in terms of the specific quality of structures and profits. In this sense, the proposal of a new standard by the IAS Board is an initiative that is welcome and the decision of the European Commission to make the IAS standards compulsory from January 1, 2005, is a step in the right direction even though the insurance industry is running out of time given the considerable amount of work that remains to be done.

In order to meet the requirements of the financial market, companies and all their partners (policy-holders, controllers, employees, etc.), the future accounting standard should endeavour to:

– take into account the main characteristics of the insurance business without deforming them: pluri-annual duration of contracts – compensation through an excessive assessment of the doubts about future charges – coordinated management of assets and liabilities;

- promote comparability through the establishment of strict and standardized rules about the valuation of balance sheet elements and operations which contribute to the result;
- maintain the maximum continuity between internal reporting and external financial communication;
- avoid a pro-cyclical effect which would prevent insurance companies from playing their natural part of long-term investors.

Under these circumstances, the future IAS standards could make a decisive contribution to the integration of insurance activities by considerably facilitating the internal management of multinational groups and through clarifying their relations with the financial markets.

4. Conclusion

The globalisation of the insurance business is taking place in the same way as for the whole service industry. It will provoke considerable changes which will revolutionise the industry of risk insurance by encouraging natural phenomena of absorption and, at the same time, revealing new types of exposure.

At the same time, it will offer the most dynamic companies promising perspectives for development and profitability while forcing them to respect demands for renewal and adaptation. It will also encourage them to get together and exercise any influence they could have on politicians in order to change the institutional environment in which they operate.

New economic and social prospects on a global scale, new company management in order to take on the challenge of internationalisation and a new approach by politicians to the follow-up of multi-national groups will represent the guarantee of progress to optimise the allocation of resources to all clients and partners of the company.

The Effects on Business Interruption and Important Trends in the Future

by Werner Meier*

It is far too early to draw final conclusions as large parts of the 9/11 claims have not yet been settled and paid. This is especially the case for time element coverage. Property damage and extra expense can usually be assessed much quicker and with more certitude than covers referring to the financial consequences of impacted business activities. The large number of businesses directly or indirectly affected makes timely and accurate claims adjustment very challenging. It will take years until a more reliable overview on the extent of business interruption insurance losses is possible.

1. Magnitude of business interruption losses

There have been many statements that business interruption losses following this terrible tragedy are enormous. Some fear they could reach 25 per cent of all insured losses. It is somewhat difficult to imagine such magnitude, as the attack was on a financial district mainly hosting service companies. Many of them were able to move their operations to new locations within a relatively short period of time, meaning that they would not lose any income. In some instances hundreds of temporary work places were installed overnight or within a few days at new locations, including computer terminals with access to networks. In addition, larger companies with several locations in the New York area were able to use their own staff, which reduced the extra expenses.

Opposite examples exist too, of course: What did it help when contingency planning foresaw to move operations to another country to resume business activities quickly, if employees were not able to fly there because of a total standstill or serious impairment of international air traffic? Other examples are hotels, department stores and shops, which were destroyed or damaged and lost their business. For many firms, rents were considerably higher at new premises.

2. General impact on insurance and reinsurance

Whatever the final consequences of 9/11 to time element covers will be, there are certainly a lot of lessons to be learned by insureds and insurers. This catastrophe cost a lot of lives and brought misery to an enormous number of people. It not only caused huge property damage of previously unthinkable scale for man-made events, but it

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interrupted or affected thousands of businesses directly or indirectly and even slowed down the worldwide economy. Many of the lessons to be learned are valid for all classes of insurance:

- "international" terrorism is basically uninsurable - mainly because of the impossibility to assess the risk - unless cover is provided on a limited basis and for an additional premium;
- capacity of the private insurance industry is not sufficient for widespread covering of larger commercial and industrial risks unless pooling arrangements can be combined with a partnership between state and private insurance industry;
- new ways and means have to be found to assess and control terrorism exposures and to price insurance and reinsurance covers;
- the accumulation potential between the different lines of business is much higher than previously assumed and needs to be better controlled not only for terrorism but for other man-made exposures as well.

Very special in this case was the effect this event had on the economy and the subsequent financial losses companies suffered in addition to the insurance loss.

3. Consequences specific to business interruption

Overall, this event revealed that BI type of insurances represent huge exposures not only for manufacturing industries but for service companies too. Over a long period of time, changes in manufacturing practices (most famous example: "Just in Time") and intensive use of IT, particularly also in the service industry, made business operations much more vulnerable and created substantially higher BI risks. Usually such risks are outside the control of the insured as, for instance, in case of suppliers or customers' extensions. Many insureds, becoming aware of the potential exposures in this area, wanted to transfer the risk to the insurance industry. Due to the soft markets insurers and reinsurers steadily increased scope of covers and limits, often without the corresponding risk assessment and without the necessary premium charges, and increased their commitments without always controlling their exposures in the appropriate manner.

Already before 9/11 some risk carriers started to take measures to better control this situation and to bring back best underwriting practice. This horrible attack showed how important such actions are: the broad covers and the high limits of liability for time element coverages and in particular for contingent business interruption could lead in other scenarios to a never expected loss amount of shocking magnitude.

This awareness creates an increase in demand for corresponding protection but it is, for the same reason and because of a hard market, facing more restrictive underwriting behaviour with clearer defined and narrower covers, lower limits and higher prices. This trend not only applies to terrorism covers but can be observed for time element covers in general.

4. Issues to be addressed in the future

In the following some of the issues to be addressed and the unresolved issues are mentioned, again almost all of them not specific to terrorism.

4.1. Design of coverages

Underwriters must verify previously used forms more thoroughly. In many instances clarifications or alterations have to be made in the following areas:

- *Interests covered:* It is important to exactly now the subject matter of the insurance and how it is defined. It should be specified if loss of income or extra expense or rental values or leasehold interest, etc. is covered.
- *Trigger:* In order to allow risk assessment and exposure control, basic cover should only apply if the loss is a direct consequence of insured physical damage at the insured's premises. For a broader scope, coverage has to be clearly defined and reasonably limited; safety margins should be included in premium charges to compensate for problems with adequate risk assessment and exposure control.
- *Coverage extensions:* Loss of income or extra expenses should be covered only when access to the insured business is prevented by order of civil authorities following an insured property damage. There is a trend that these extensions only apply if the insured event occurs within a certain distance (e.g. one mile) of the insured premises; this should limit the accumulation potential and also help to reduce the problems with dubious claims.
- *Contingent business interruption* (i.e. suppliers or customers' extensions, public utilities) has to be limited to named exposures only at reasonable limits. If exceptionally blanket cover is given, limits should be very low. As it is difficult to calculate the necessary premiums, underwriters are challenged to use their best judgements and, again, include safety margins. For terrorism or natural perils, such extensions should be given selectively, taking into account accumulation potentials, and should be avoided for unnamed locations.
- *Indemnity period:* Forms used in the USA often cover loss of income during the period of restoration of the damaged property. As this period will be very long in case of 9/11, an additional time limit (e.g. 12 months as from the date of the loss) is introduced, as this is normal for BI covers in the rest of the world. Without a concrete time limit, not only can losses achieve levels which were never catered for, but also claims assessment for such long periods would become extremely difficult.

4.2. Sums insured, limits of liability

Up to recently, time element insurance for service companies did not get the same attention as it is customary for manufacturers or traders of goods. Originally, service companies mainly bought coverage for property damage at full values and extra expenses on first loss basis. In recent times they started to also buy cover for loss of income which they could suffer after property damage impacting their operations (e.g.

trading activities). As 9/11 showed previously unknown extent of damage to office buildings, the following considerations should be made:

- For Extra Expense a sublimit must always be set at a reasonable level. Under no circumstances should it be covered up to the overall policy limit.
- Rental Values, Leasehold Interests and when conventional Loss of Income is covered, the insured interests have to be clearly defined. The corresponding full values have to be established and shown in the policy as sum insured together with the sublimit (if applicable). Also the maximum period of indemnity in time units should be stated.

4.3. Risk assessment, premium and capacity

A proper risk assessment should take place with quantification of loss potentials not only for manufacturing risks, but also for the service industry. The findings should lead to loss prevention measures and contingency planning and should have the appropriate consequences for premium charges and capacity considerations.

Risk assessment and contingency planning for business interruption is time consuming for all parties concerned. Because of the workload, it is not always possible to carry out these works in a sufficient manner and, therefore, the exposure remains to a large extent unknown. Here we have to remember, if risks cannot be assessed, they are basically uninsurable!

The following aspects, which actually represent best underwriting practise, need to be thoroughly addressed:

- What are the effects of insured property damage on the business operations?
- Are necessary loss prevention measures taken?
- Are data backups safely stored at locations sufficiently away from the insured's critical operations?
- Does the insured have contingency plans? Is there a business continuity management concept in place?
- What is the likelihood and extent of potential losses (MPL/PML) for individual insureds?
- What is the accumulation potential when one event affects several insureds? How can it be controlled?
- What premium is required to cover such exposures?
- What is the influence of BI elements on capacity usage?

These are the most difficult aspects of business interruption coverages with the most unresolved issues – again, not specific to terrorism but in general. As soon as there is more than one location involved, it is often not possible to assess the risk and achieve transparency. Interdependencies within the same corporation are normally automatically covered if all locations are included in the same(master) policy. A loss at a bottleneck or an event affecting several locations at the same time can produce a huge loss. Because of lack of risk information and time, these scenarios are often not satisfactorily analysed and therefore premiums and capacity usage do not properly reflect exposures.

If this means that limits of insurability are already reached for single fire or explosion scenarios then they are most probably exceeded in case of natural catastrophes and for terrorism. Therefore, when BI coverage for such events is given, it has to be limited and exposure control for accumulations has to be tight.

4.4. Claims adjustment

The adjustment of an individual BI loss is already a challenging undertaking and requires special skills, a lot of time and a lot of negotiation. In case of a catastrophe with hundreds or thousands of policies affected this becomes extremely difficult. And when the event coincides with a general slow-down of the economy, which started before the loss occurrence and influences business far beyond the directly affected area, it becomes almost impossible to find out the actual insured losses. How much is directly caused by the insured event? How much is caused by contributing effects, which are not insured? How much would have been the impact of the general economical trend not linked with the insured catastrophe?

It has to be feared that in the case of 9/11 many losses cannot be properly assessed. Many insureds will never know what the actual loss sustained was. Many insurers will not arrive at reliable results even by using professional claims adjustment procedures. And it will – as said at the beginning – take an extremely long time until all the claims files for BI can be closed for this terrible tragedy.

5. Final remarks

The terrorism attack on the World Trade Centre with its serious effect on the insurance and particularly reinsurance industry made clear that many changes are needed. Where terrorism continues to be insured, limitations are key and premiums have to be charged. There are not so many issues exclusive to business interruption covers and its derivatives, but some of the more generally applicable lessons are of special importance for BI. Many of the deficiencies and needs for change in BI underwriting mentioned above were known before 9/11. To a large extent, it simply means back to basics. This event demonstrated in a scaring way the urgency and importance for considerable change in underwriting behaviour.

Property Insurance - One Year after 11 September

by Hans-Jürgen Schinzler*

The year 2001 will go down in the annals of insurance as the year in which some of the industry's worst nightmares became reality. For the international insurance market, the terrorist attack of 11 September on the twin towers of the World Trade Center in Manhattan, with losses of between US$ 40bn and US$ 60bn, was by far the biggest single burden it had ever had to bear. Only the rising tide of insured asbestos claims, which is currently estimated at around US$ 120bn, albeit spread over several decades, significantly exceeds the insured cost of the 11 September disaster.

And as if that were not enough, two natural catastrophes, each running into the billions, hit the earnings of property insurers worldwide: Tropical Storm Allison, which gave rise to losses of US$ 2.5bn, and the widespread severe weather of April in the USA with flooding, hail and windstorms, and claims costs of US$ 1.9bn. Individual major risks were also affected by heavy losses, the biggest by far being the explosion of a chemical plant in Toulouse on 21 September, leading to claims of around US$ 600m, while a further major explosion loss occurred on one of the oil rigs off the coast of Brazil. In contrast to the situation in the 1990s, around 70 per cent of last year's major losses were predominantly man-made, thus outweighing claims due to natural catastrophes. This unexpected ratio cannot be seen as a trend reversal, however, the shift towards ever-higher losses is persisting in the area of natural hazards as well. The main risk factors continually driving up exposures are the increasing population density in conurbations, particularly in coastal areas, and the concentration of values in areas exposed to natural hazards.

Finally, there was another factor that had a huge impact on results and ended up costing the insurance industry even more than the exceptionally heavy burden on the claims side, namely the more than unsatisfactory trend on the capital markets. The sustained low level of interest rates reduced earnings from investments, while falling stock market prices practically ruled out any capital gains on shares and equity interests. This combination of underwriting losses with reductions in investment earnings and values made 2001 an "annus horribilis" which caused the results of international insurers and reinsurers worldwide to plummet. Realistic estimates put the capital depreciation suffered by the industry from the combination of negative effects on the assets and liabilities sides of the balance sheet at almost US$ 100bn. The influx of new capital that has taken place in the meantime has not come anywhere near making up for this.

Given the magnitude of the losses, one positive verdict that can be given is that insurers – with only a very few exceptions – withstood the test and succeeded in meeting the exceptional challenges. This was by no means a foregone conclusion and therefore

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deserves to be highlighted: the industry showed its mettle in a critical situation. On the other hand, 2001 also revealed considerable weaknesses. In particular, the World Trade Center loss taught property insurers lessons of vital importance. Not only was there a need for action to cope with the risks posed by a form of terrorism that operates globally and is able to cause damage far in excess of total insurance and reinsurance capacity worldwide. In a single, "exemplary" event, 11 September made it painfully clear that one risk with enormous loss potential had been quite generally underestimated: the risk of unknown accumulations which can have a major impact not just on a few companies but on the whole risk-carrying system. The growing trend towards the networking of risks in a world characterized by globalization, economic interdependence, advanced division of labour, common control technologies, and both political and social dependence, makes it difficult for insurers – even at the international level – to build up balanced portfolios of independent risks and to offset different stages in performance cycles in markets against each other.

By contrast, insurers nowadays face extremely demanding requirements from their clients. In many markets – first and foremost the USA – property and business interruption covers have been expanded considerably over the last 10 years to include the most varied additional risks, all the way to complete “all risk” covers. This has often happened without it being really clear what potential risks and accumulations were being assumed as a result. The pressure of competition in mature industrial markets left little opportunity for insurers to put forward underwriting arguments against the demands constantly being made by clients. On top of this, a “modern” image of an entrepreneurial form of insurance geared to “problem solving” was often propagated, which made it seem inadmissible to point out that, even for insurers, there were limits to what was possible.

The past year has shown some of these limits quite dramatically and at the same time demonstrated how quickly they can be exceeded. For this reason alone, our industry – and not just ours – should not forget 2001.

1. New dimensions to the terrorism risk

Political terrorism is not a new phenomenon. It has always been one of the strategies of extremist minorities to attack a country’s prominent individuals or institutions in order to draw attention to themselves or undermine power structures. Terrorism thrives on the shock effect, and it is precisely this that makes the risk so difficult for insurers to manage. It is rooted in human behaviour which cannot be extrapolated from past data and therefore cannot be calculated.

All the same, various intensities of exposure can be identified in a rough analysis, a fact that was already taken into account even before 11 September through special underwriting treatment of the relevant sub-portfolio. The level of exposure was assessed above all on the basis of a country’s political stability or concrete experience with individual acts of terrorism. In “critical” markets, either terrorism was excluded or there were market solutions with government involvement, as in Israel, South Africa, Spain, and ultimately also in the UK following the IRA attack in the City of London in 1992.

Market solutions for the insurance of terrorism risks prior to 11.9.2001				
	Founda-tion	Cover	Capacity	Government liability
Spain	*Consorcio*, statutory contributions to state company			
	1941	Property/business Interruption	Company capital	Unlimited
Israel	PTCF: Property Tax and Compensation Fund			
	1961	Property		Unlimited
South Africa	SASRIA: South African Special Risks Insurance Association			
	1979	Property	R 300m per location	R 1bn
UK	Pool Re, voluntary reinsurance pool			
	1993	Property/business interruption following fire/explosion	Pool capital	Unlimited

In markets considered to be politically stable, terrorism was generally covered, although even then there were isolated major losses, e.g. in Oklahoma in 1995. The World Trade Center, too, had been the target of an attack in 1993. But that particular example had shown that conventional terrorism was not sufficient to really hurt giants made of tons of steel and concrete. And so terrorism did not play an independent part in insurers' deliberations on liability control and pricing. It was more or less assumed that the loss potential was comparable to that of conventional fire and explosion losses, and could be borne within one and the same portfolio. For that reason, terrorism was not normally excluded in standard policies and was therefore covered as a primary cause.

However, 11 September 2001 showed new dimensions of the terrorism risk: the unstoppable devastation caused by suicide commandos deliberately crashing a hijacked plane with more than 90,000 litres of kerosene into the top of a building so that, contrary to all experience, the fire penetrated all barriers from top to bottom. What is more, in future we will have to expect terrorism with a destructive force that may reach warlike proportions. In this respect, 11 September 2001 created quite new realities.

Implicit in this new kind of terrorism is the possibility of attacks being carried out over wide areas or at short intervals, thus giving rise to a loss potential that presents international insurers with unprecedented challenges.

1.1. Manifestations of the changed risk situation as exemplified in the loss profile of 11 September

- *Exceeding of the PML*

The insurance and reinsurance of industrial and commercial property risks is generally based on the probable maximum loss (PML), which is understood to mean the maximum claims burden that could arise from a loss event under unfavourable but not extreme circumstances. Megatowers have so far always been classified as “highly protected risks” because of the particularly strict building requirements applicable to them, in combination with other safety measures. When the PML was being determined for the World Trade Center (WTC), some market players worked on the assumption that the maximum damage that could occur would involve no more than ten floors. Even before 11 September, Munich Re was unable to follow such an assessment of the PML and, for its part, established a figure that was almost three times as high. At the same time, though, it was clear that each of the providers in the market was proceeding on the assumption that, even in a worst-case scenario, their liability would be restricted with sufficient certainty owing to an additionally agreed limit.

Because the PML had been fixed at “substantially less than 100 per cent liability”, primary insurers found that their involvement in the original overall loss for the shares they had written was many times higher than originally calculated. For reinsurers involved through proportional covers, the losses were similarly much higher than expected, with an additional multiplier effect linked to the number of reinsurance treaties concluded with the insurers affected.

- *Property policy accumulations*

One problem having wide practical implications – something demonstrated quite dramatically by 11 September – is the accumulation of a large number of policies covering the same insured premises. Where the owners and users of a building complex are not identical, the question arises as to how tenants’ property and business interruption policies can be included in the calculation of the total liability. Primary insurers would in principle be able to determine their gross and/or net total liability by checking their various liabilities per insured premises. By contrast, in obligatory reinsurance the necessary transparency for reinsurers is almost entirely lacking. Reinsurers are only able to incorporate this aspect in their underwriting – whether treaty or facultative – on a general basis in their underwriting capacity.

Given the spatial isolation of the loss effects assumed at the World Trade Center, only quite limited contagion effects on neighbouring risks were expected. In fact, the material damage to the surroundings alone affected a total of around 100 buildings. In particular, however, the accumulation of business interruption losses was catastrophic in scale. Besides around 1,200 firms in the Center itself, firms in an extensive surrounding area suffered loss of earnings – partly due to streets being closed off and restrictions on access, but also in the form of contingent business interruption involving suppliers, customers or public utilities such as electricity and gas suppliers, and also operators of telecommunications networks.

- *Multi-line accumulations*

The possible coinciding of losses from different classes of insurance in connection with one and the same event had previously only been taken into account systematically in connection with the accumulation control of natural disasters. It is clear that what happened on 11 September will form a quite new empirical basis for determining the probable maximum loss for a high-rise complex in future. The scale of the surrounding damage and the coinciding of claims from the most varied classes of business (property, business interruption, aviation, workers' compensation, liability, cancellation of events, life) led in particular to big national insurers and global players with high original shares or substantial participations via local group subsidiaries being affected disproportionately. Another reason for this was that the companies and building-owners in New York's financial district are generally large-scale enterprises which protect themselves with international programmes of cover that are insured and reinsured with particularly strong capacity providers.

Besides the market solutions mentioned above, the insurance industry already had a set of underwriting tools especially designed for terrorism risks (separation of liability from the basic cover, annual limit of indemnity, separate deductible, separate price, separate short period of notice) which, depending on the estimated exposure and the relevant market practice, had been used to a greater or lesser extent. If these risk management tools had been employed when covering the World Trade Center, they would no doubt have had a favourable effect, but the accumulation effects just described would not have been significantly prevented as a result. Following the WTC event, therefore, the insurance techniques hitherto available for covering terrorism risks had to be given a thorough rethink.

1.2. Market solutions to stabilize the supply of capacity for terrorism covers

Today, various scenarios involving internationally organized terrorism are conceivable that could develop into a worldwide loss potential beyond the capacities of both insurers and reinsurers:

- Several target mega-risks are destroyed simultaneously or within the same period of cover by acts of terrorism;

Estimable: Locally limited event islands and accumulation effects from "contagion" losses involving bodily injury, property damage, loss of earnings and liability claims
Unknown: Frequency

- An incalculable number or risks are destroyed or damaged over a wide area by atomic, biological or chemical (ABC) contamination.
  Unknown: Frequency, spatial extent, accumulation effects from "contagion" losses involving bodily injury, property, loss of earnings and liability claims

Such loss potentials can far exceed the diversification potential of insurance and reinsurance markets. In future, terrorism will be more uninsurable than ever if liabilities are written with the aim of producing a balance in the portfolio and over time in the conventional way. Apart from the fact that the independence of risks has been called into question, there is practically no statistical material available either for spreading the loss amounts or for estimating the loss frequency. If financial protection is to be offered against this risk nevertheless – insofar as this is possible – new concepts will have to be found.

As stated above, in some countries in which terrorism losses have previously occurred, there are market-wide pools in which the state is involved to cope with the financial consequences of such atrocities. New schemes of this kind – like the French terrorism pool – have been set up as a consequence of the WTC event or are currently still in the process of being established. For the insurers and reinsurers concerned, they provide a clear demarcation of liability and full transparency of the commitments entered into. Most terrorism pools are restricted to property damage (with business interruption losses being included in some cases).

New market solutions for insuring terrorism risks since the WTC event

	Foundation	Cover	Capacity	Govt. liability
France	‘Gareat’ terrorism pool, obligatory reinsurance pool			
	2002	Property/BI	€1.5bn	Unlimited
Germany	Special terrorism insurance company with cover through reinsurance market			
	Probably 2002	Property/BI	€3bn	€10bn
Austria	Terrorism loss pool with cover through reinsurance market			
	Probably 2002	Property/BI	€250m	?
Netherlands	Terrorism pool under discussion			

Since acts of terrorism are aimed at changing power structures, they are directed primarily against the state, as the representative of a particular political, economic or social system, even if private individuals and personal property suffer as a result. From the outset, carrying risk by spreading the burden widely is therefore the most appropriate approach to countering a phenomenon which, with its attacks, is pursuing objectives relating to society as a whole.

The practical application of such solutions to date has shown that where the state acts as the driving force and risk carrier within a combined market solution, private capacity can also be generated on a large scale, enabling insurance coverage to be offered on as broad a basis as possible.

For various reasons, solutions which could harness the risk-absorbing power of private and institutional investors on the capital market to provide capacity for covering the terrorism risk do not offer a promising alternative to this. Capital-market covers largely involve standardized liabilities in order to attract a sufficient number of providers and investors. The uncertainty surrounding exposure to, and frequency of, terrorist activities means that there are major problems involved in modelling the risk. Moreover, it is almost impossible to define claims for terrorist damage clearly and unequivocally using concrete parameters such as a market trigger.

1.3. The primary insurance markets' response to the 11 September disaster

In personal and small-scale commercial property insurance, terrorism continues to be covered in most markets. In the large-scale commercial and industrial business sector, on the other hand, exclusions have generally been introduced, though in some cases terrorism can be written back, subject to limitation of the sums insured and additional restrictions in the conditions. This is the case above all in markets with pertinent insurance-law regulations, e.g. in the USA where, in a number of states, fire damage resulting from acts of terrorism cannot be contractually excluded from the cover. To at least partly offset the restriction in normal capacity which is affecting industry in particular, the insurance industry has adopted various approaches:

- Establishing specialized insurers for property terrorism risks, such as Special Risk Insurance and Reinsurance Luxembourg S.A., which covers damage to buildings within a 600-metre radius of the scene of the attack for an amount of up to €275m (excluding liability).
- Setting up special terrorism capacities, as practised by AIG, ACE, Berkshire Hathaway, Lloyds (e.g. AXIS). On the US insurance market, capacities of US$ 250m to US$ 1bn are reportedly now available, depending on the risk.
- Introduction of terrorism pools with no state involvement in order to create capacity, e.g. in India and Russia.

1.4. Concept for ensuring the reinsurability of terrorism risks

It is clear that the ability of insurers to cover terrorism risks is crucially dependent on how much reinsurance capacity is available, and at what price and conditions. Although there is no uniform strategy in the reinsurance market in this respect and companies follow different concepts to some extent, certain common features of risk management policy can be identified. These will be demonstrated here using the example of the concept developed by Munich Re for the limited cover of terrorism risks.

This concept was presented to the market after the World Trade Center loss and is essentially geared to the following objectives:

- clear limitation of the liabilities accepted;
- significantly more transparency than hitherto as regards the risks assumed;
- use of a pricing procedure which, despite the lack of a statistical basis,
- allows the necessary risk premium to be calculated in a transparent way.

Budgeting for the total liability

The mainstay of the concept is the consistent limitation of all treaty and facultative terrorism liabilities. This limitation is geared to the degree of willingness to carry risk, which is fixed anew each year. Budgeting procedures in the form long-employed for the coverage of natural hazard risks can only be used to a very limited extent. There is neither an appropriate data pool available, nor can scientifically-based loss scenarios be established. At the end of the day, in view of the dynamics and the international nature of the terrorism risk, the basis for any planned spread of risks is lacking, both geographically and over time.

Terrorism risks therefore essentially have to be treated like new technologies. This means moving towards an adequate underwriting assessment step by step on the basis of provisional assumptions which have to be constantly adjusted and corrected through consistent claims control.

These assumptions form the basis of what are initially more or less hypothetical scenarios, which determine the budget for the maximum liabilities that are to be assumed per period of cover. They are, of course, subject to a considerable risk of error, particularly as regards frequency and accumulation effects. If the budget estimate turns out to be clearly too low, there must therefore be the contractual option of terminating commitments if need be, by means of short-term notice of cancellation with future effect.

Exclusion of mass accumulations

Any right of termination is only of value if it ensures that a single act of terrorism does not trigger an avalanche of losses which far exceeds the budget limit as such. The second mainstay of the concept is therefore protection of the portfolio against widespread accumulations by agreeing so-called “ABC exclusions”. It is clear that virtually incalculable losses resulting from the use of atomic, biological or chemical weapons cannot be covered through private insurance.

Transparency of individual exposures

As the World Trade Center loss showed, one of the greatest challenges for reinsurers is to limit the risk of unknown concentration accumulations. This objective – as the third mainstay of the coverage concept – is served by improving the transparency of liabilities on the level of individual business relationships as well.

Another concrete measure that appears logical in this connection is the selective switching of parts of the reinsurer’s treaty business to facultative covers. Central to this as far as property insurance is concerned are “target risks”. These consist of particularly exposed mega-risks, plus risks occupying a key position in the supply system of the market in question or constituting prime targets for attacks due to their symbolic content for presumed terrorists. In order to proceed systematically, risk potentials exceeding a defined limit – normally a PML of several billion – are excluded from the material scope of cover under obligatory property reinsurance treaties and reinsured individually. Channelling in this way means that, in “hand-picked” facultative business, it is possible to check the loss potential in each individual case because of the far greater density of risk information. The question of any “contagion effect” of the exposure on the local environment by way of accumulation can also be assessed far better in facultative business than it can under treaty covers.

In personal and small-scale commercial property insurance, the individual and accumulation risk for fire or explosion resulting from acts of terrorism must normally be regarded as assessable loss potential (outside the US) in terms of both extent and amount. This means that, as things stand, such risks can continue to be reinsured under obligatory covers. This also applies in principle to large-scale commercial and industrial risks, provided they are not especially exposed target risks. In this business segment, however, particularly in conurbations, very substantial accumulations may still arise due to the contagion effect on neighbouring risks. In order to restrict this risk, limits on any one occurrence and in the annual aggregate are now always agreed for such business.

These measures mean, on the one hand, that the amount of liability is limited and the calculated premium is safeguarded. On the other hand, such limitations are also the prerequisite for being able to carry out efficient accumulation control in relation to the planned total budget. Only if a reinsurer’s maximum share of a loss is known for each participation can the reinsurer assume that the overall budget it has accepted represents the upper limit of its liability.

2. Impact of 11 September on the rehabilitation of the property classes of insurance

*2.1. Trend in premium lev*els

In almost all markets – the exceptions being just a few emerging markets – policies expiring during the last twelve months, especially in industrial business, have been renewed only at substantially higher premium rates. The renewal of reinsurance treaty business at 1 January, 1 April and 1 July 2002, and the writing of facultative risks during this period also generally took place at appreciably improved prices and conditions for the providers. It would be reasonable to assume that this trend is connected with the events of 11 September.

Connections do exist, but not in the sense that the World Trade Center loss essentially led to the need for rehabilitation in the property insurance sector. There is no doubt that the industrial market in particular has hardened significantly in the past year. And the rising premium income will also have to be used by the companies involved in the WTC loss to finance the huge claims burden. However, although premium levels were raised during the latest renewals, this was certainly not done in order to profit from a catastrophe. There was an overdue need for the property classes of business to finally emerge from the loss-making situation into which the market had manoeuvred itself in the second half of the 1990s.

With hindsight, it was not altogether an advantage that the years of deregulation and liberalization in many markets had been accompanied by a stock-market boom which seemed to bring constant – sometimes double-digit – growth in share prices and investment income. The results of insurers' actual core business could be more or less ignored with no immediate consequences, and underwriting experiments were risked in order to benefit as much as possible from the clearly imminent redistribution of the markets.

Roughly two years after the peak of this trend, things have come back down to earth with a bump. Reserves have been exhausted in many cases or have shrunk with falling share prices, and income from investment business is far below the average for previous years. The return to risk-orientated underwriting and the restrictive course that has now become established is therefore decisively linked to the negative trend in the capital markets. However, 11 September accelerated this turnaround in the market: large companies in particular, which act as market leaders, were forced to implement their rehabilitation programmes faster and in a more sustained manner than planned. At the same time, the catastrophic events of 2001 made even industrial clients in the strongest negotiating positions realize that if there is no profitability in this business, not only will supply soon decrease but the providers themselves could also end up being in short supply. Signs of such a polarization of the insurance market already exist, with as yet unforeseeable consequences should the trend continue.

However, the need for rehabilitation will certainly last for a few more renewals yet. We have to remember the extent of the under-rating which has become the norm in many markets. For example, in German industrial fire insurance the market premium level at the end of last year, was so far below requirements that an increase of at least 50 to 70 percentage points would have been needed to take the business back into the profitability zone. Today, the market is still a long way from this goal. If consistent rehabilitation efforts are criticized for being too rigid, it should be remembered – staying with the example of the German market – that in 2002 we still have a premium level well below that of 1990. This means that clients are paying far less for the same risk than ten years ago. And the situation is similar in many other markets. Figures published recently by the Insurance Services Office (ISO) show that, despite a considerably improved combined ratio in the first quarter of 2002, American non-life insurers saw their net income fall by 7.3 per cent compared to the previous year. The fall in net claims by more than a third – 38 per cent – was more than offset by losses in value and income on the assets side of the balance sheets. And all this was against the background of a substantial need to strengthen reserves for prior underwriting years.

2.2. Exclusions of unlimited liabilities and incalculable risks

It is no less urgent to regenerate awareness of the fact that insurance and reinsurance are technically sophisticated financial services that are linked to the existence of certain prerequisites. Private companies cannot offer “problem solutions” with which critical potentials of our risk society can be eliminated at will. Their task is not to provide the most comprehensive cover possible, but to reliably keep promises of protection given after due consideration.

- *Computer viruses*

Losses in the form of loss or corruption of data caused by programs or parts of programs fed into electronic systems with destructive intent were previously covered mainly under special electronic equipment policies. The background was that, until very recently, such viruses could only be spread by copying software using diskettes or the hard disk, i.e. via individual data carriers. This situation has now changed totally. Attacks on the IT systems of commercial or private users can be launched by relatively simple means programming-wise, and have found an ideal distribution medium in the Internet. A virus can now appear worldwide within the space of a few hours and thus harbours a huge accumulation risk for liability carriers. Although there have been no major loss occurrences on a global scale as yet, there have recently been cases where the insured loss amounted to several million US dollars (e.g. DELL in 2000).

When one considers that the economic damage caused by virus attacks can already amount to tens of billions of dollars, it is clear why the insurance and reinsurance markets feel unable to cope with a virtually unlimited risk potential and are increasingly excluding virus attacks and claims for compensation for pure loss of data from their covers. Apart from the huge accumulation risk, it is mainly the serious influence of the moral hazard and a whole host of unsolved problems with settling claims that make such a limitation inevitable.

Only a few years ago, many market players saw things differently. The trend initially moved towards extensions even in standard industrial property insurance policies. This was most pronounced in the USA and many international programmes, with “loss or corruption of data” often being included in the definition of property damage. Support for this was provided by individual courts who chose to interpret policy wordings along these lines, a landmark ruling being Ingram Micro vs. American Guarantee of April 2000.

Leading reinsurers countered this trend with a campaign clarifying the agreements contained in their conditions of cover. A large proportion of the markets – including Lloyd’s – gradually joined them. The threat of cyber-terrorism on a global scale, which has since become real, has been a major factor in this message being increasingly understood.

- *Extended coverage in business interruption insurance getting out of hand*

This risk sector, too, has been strongly influenced by the American market in the last ten years. The problems mainly lie in the continual extension of grounds for claims and authorized claimants under suppliers’/customers’ extension and contingent business interruption (CBI) covers. In practice, this mainly involves contingency losses, interdependency losses, suppliers’ and customers’ losses, business interruption resulting from the interruption of services provided by public utilities or due to de facto or officially ordered restrictions on access.

In a highly interconnected economy, there is no question that disruptions of the circulation of goods or communication links in the business environment represent serious operational risks. Similarly, there is also no question of these risks being uninsurable per se. However, a prerequisite for cover is that they are accepted on a limited basis and that additional agreements enable insurers to estimate the maximum financial exposure accepted. The system risk of dependencies associated with a national division of labour, on the other hand, cannot be offloaded en bloc to insurance companies.

But this is precisely what has often been branded as a gap in cover in recent years and used as grounds for buying and selling comprehensive covers against disruptions in a company's area of influence which is not further specified. Such risk factors included "anonymously" in this way make technical portfolio planning virtually impossible. The only thing that can be said about them is that there is a strong probability of a certain cause-and-effect relationship between them, so that a more or less extended accumulation is to be expected in the event of a loss. On top of this, the principle once generally respected in developed markets that contingency business interruption can only be covered if a peril defined in the policy arises in the supplier’s business has only played a limited role in underwriting in recent years.

The catastrophic loss of 11 September showed what loss potentials had been tacitly accepted without there ever being an opportunity to calculate a premium commensurate with the risk and to get it accepted in the market. Even more than any physical damage, even more than any other class of insurance, generously designed business interruption covers with unknown accumulations have taken the global insurance industry to the limits of its capacity. If we leave aside the human victims of the events of 11 September, it was mainly this accumulation of untransparent covers which made that day so traumatic for the industry. The only positive thing that can be expected from traumatic events is the hope that they will not be forgotten and will bring about a change in behaviour. There are encouraging signs of this today. It is to be hoped that this change of attitude will persist and that it will continue to have a positive effect in the future.

Aviation Insurance - One Year after WTC

by Colin Williams*

1. Introduction

The events of 11 September 2001 illustrated the extent of a threat, which until that time had not even lodged in the scripts of Hollywood. In recognizing this new world, the insurance market has necessarily had to reconsider its own position, so that it might deal with new exposures and maintain key services to policyholders. In the new world of terrorism exposure, it will not be for the insurance industry alone to solve the issues: governments are unavoidably included in the equation.

The question needs to be posed as to whether airlines should be held responsible for the effects of such acts of terrorism or whether they should be granted immunity. Such an approach would take five or six years to negotiate and implement by means of an international convention. In the interim, alternative solutions are required, that would involve airlines, insurers and governments working together. The decision still rests with governments as to how the potential losses from such events might be handled.

2. The loss

Whilst the tragedy and emotional impact of all the September 11 events is deeply scarring, be it the Pentagon, Shanksville or the World Trade Center (WTC), it is the WTC attack which poses the greatest issues to the insurance industry. The loss was unprecedented in size, scale and complexity. The attack on the WTC using two commercial airliners brought the role of aviation insurers sharply into focus. The potential loss incurred by the aviation market, at maybe US$ 4 billion, is only a small part of the overall insured loss, which might easily exceed US$ 40 billion. The events of 11 September 2001 also demonstrated the possibility of a much wider loss scenario: four aircraft were involved – it could have been more.

In the aviation sector, many aspects of the potential WTC claims are far from being finalised. The number of litigants that may make third party claims against the aviation industry is unknown. It is also unknown in what circumstances such claims could be held to be valid. However, the federal Victims Compensation Scheme will reduce the number of litigants that might file claims against aviation parties, be they airlines, airports or security screeners.

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3. Role of reinsurance

The aviation insurance market routinely offers liability policy limits of US$ 1.5 billion to individual airlines. However, the market has a relatively small client base compared to the potential individual payments it can be called upon to make. This factor was reinforced on 11 September 2001 when two separate airlines were potentially twice exposed to losses each of policy limit magnitude, a total sum of US$ 6 billion.

With such an imbalance between client base and size of potential payouts, the primary aviation market requires a close partnership with reinsurance markets in order to help balance the numbers. This partnership was in existence, but it, too, felt the strain of September 11 and it is likely that the reinsurance market will bear a significant proportion of the aviation component of the WTC loss.

The notable major casualty in the aviation excess of loss reinsurance market has been an underwriting agency known as Fortress Re of North Carolina, USA. One of this company's pool members, Taisei Fire & Marine, was to become insolvent apparently as a result of WTC claims filed. This ultimately led to Fortress Re's withdrawal from the market, which will produce unpleasant problems for some primary insurers and other reinsurance companies as they may be faced with increased net losses because of possible uncollectable reinsurance. Fortress Re was a key player in aviation reinsurance and their absence as a provider of certain types of reinsurance cover will be widely felt across the market generally.

The 1 January 2002 renewal season certainly reflected a much tighter reinsurance market with fewer players: no arbitraged or leveraged deals were available, and radically increased retentions and prices were quoted. General terms and conditions in reinsurance contracts were also reviewed and tightened. This is the position today.

4. Outside the aviation market

The World Trade Center, Shanksville and Pentagon incidents were most certainly an attack against the United States government, and it is the recognition of this fact that has really brought about a sense of partnership between governments and commercial insurers. This was particularly evident in the days immediately following September 11 when all parties worked long and hard and removed all kinds of potential barriers to find a common solution, which would ensure that the airlines of the world kept flying. The UK vehicle became an insurance company by the name of "Troika" and was in many ways a model that was copied in varying degrees by other countries around the world.

It is worth noting that a large part of the non-aviation market, which has incurred a majority of the loss has either withdrawn terrorism coverage altogether, or significantly modified it. Indeed, the size of the WTC loss to the insurance market as a whole has caused a notable reduction in capacity as insurers have focused on core business and departed from marginal sectors. As industry capital has tightened, individual insurers and reinsurers have become more selective concerning the risks that they take on to their books.

5. Coverage changes promoted by WTC

The war and terrorism coverage that an aviation policy offered under clause AVN 52C was ultimately cancelled with effect from 25 September 2001, to allow a reassessment of new exposures and to adjust terms and conditions of coverage to meet the new realities. This reassessment led to revised coverage for airlines, clause AVN 52D, which reinstated passenger liability coverage resulting from acts of war and terrorism for full policy limits, but limited coverage to third parties for these perils to US$ 50 million in any one policy year. An additional premium of US$ 1.25 per passenger carried was also introduced on each aviation policy. These amendments were applied to all airline policies around the world. It was a notable achievement that other than for terrorism exposures, full policy limits were maintained.

The reduced terrorism limit created a “gap” in third party liability coverage resulting from acts of war and terrorism for the difference between US$ 50 million and the liability limit previously given on an airline policy. Without the higher limits, airlines would have found it difficult to fly. For example, contractual obligations to the lessors of their aircraft and airport operators required a much higher level of liability insurance to be in place than the US$ 50 million that was available after WTC.

Governments around the world, therefore, were obliged to enact temporary schemes to offer protection to their aviation industries for this “gap”. At that time, a line slip led by AIG was the only commercial market alternative offering coverage, at a price of up to US$ 1.85 per passenger carried for limits in excess of US$ 50 million up to US$ 1 billion.

Almost one year on, in August 2002, most of the temporary government schemes are still in operation, although some excess points and rating parameters have changed. The commercial market has now expanded to three participants. Berkshire Hathaway and Allianz have set up new schemes in addition to the AIG facility, and prices have reduced, to maybe as low as US$ 1.00 per passenger carried for the same US$ 950 million limit excess of US$ 50 million. However, the coverage offered by commercial markets still does not have the same scope as that offered by current government schemes, which continue to offer “per aircraft” coverage, which would cover multiple aircraft scenarios, each for full policy limits. Only two types of limitations are offered commercially; either an “aggregate” limit per airline, or a “per Major Event” limit with coverage offered for up to four Major Events for the market as a whole. Government schemes still provide top up cover to the level of US$ 2 billion.

6. Future coverage

Airlines have continued to worry about the seven days notice of cancellation still present in the commercial cover. They are also exercised by what they see as the high costs generated by the increased and extra premiums required by insurers. As a consequence, more permanent schemes, of a mutual nature, are under discussion to replace the commercial market and individual government backed schemes. Three are under consideration:

"Equitime" is proposed to be a Risk Retention Group to offer coverage only to the US aviation industry. The solvency of the scheme would be underwritten by the US Government and would cover all the third party terrorism liability including the passenger coverage currently covered by clause AVN 52D, for a base price of US$ 0.64 per passenger carried. Coverage could be cancelled with 90 days notice. Questions remain as to whether the premium levels indicated are adequate, and the US government is considering its position in this respect.

"Eurotime" is proposed by the European airline industry to offer coverage to the European aviation market along similar lines to Equitime.

"ICAO", the International Civil Aviation Organization, propose a worldwide scheme.

The latter two schemes would be funded by participating governments. Premium charges would be geared to earn in the area of US$ 850 million for the worldwide scheme. Both schemes would be non-cancelable. One major difference to Equitime is that both of these schemes are designed to cover third party liability only, whereas the US scheme seeks to cover passenger liability arising from terrorism perils additionally.

Preparations for the Equitime scheme are fairly well-advanced, and promoters of this venture hope that it may be in place by September 2002, although there has been resistance in US cabinet circles. No further progress on either Eurotime or the ICAO proposal is expected before October 2002, as both proposals are currently under ministerial review and they are expected to make their recommendation at that time.

7. Adequacy of cover

The main thrust of argument has so far been to find a mechanism to restore the scope of coverage that existed before 11 September 2001. One modification of coverage that has been repeatedly emphasized is the need to extend the seven days cancellation provision. The various mutual proposals do provide for longer notice periods but they still retain the rights to tender notice in given circumstances.

The commercial coverage now on offer is limited either in the aggregate or by the number of events. Immediately following any future incident, further aircraft could be flying that are technically no longer insured. The operation of an aggregate limit means that after the first large incident, it would be reasonable to assume that all coverage is exhausted. Similarly, if the coverage were for any specified number of incidents, and these happened simultaneously, further coverage would cease immediately.

While the seven days cancellation provision remains in original policies and could be triggered by future events, there will be considerable pressure on governments to

remain ready to step in to ensure the continuity of air transportation and provide a guarantee to lenders and banks.
The currently proposed US government scheme offers twice the limit previously available, whilst the ICAO and Eurotime proposals seek to offer a uniform limit of US$ 1.5 billion for all aviation market participants, airlines and service providers alike. This contrasts, for example, with the UK government's temporary scheme, Troika, where airlines and service providers can select a lower limit of coverage, if they see this as adequate.

The possibility exists that even these limits would still be inadequate, should an aviation industry market participant be held liable. The aviation limits currently offered are clearly not adequate to cover the entire cost of an incident on the scale of WTC, as evidenced by the small proportion that the reserved aviation market loss bears to the whole. Claims in "excess of policy limits" threaten the solvency of the aviation companies involved.

Governments have always been unwilling participants in the insurance business, but if further major attacks do occur, there is no question but that they will be in the front line of the insurance business once again. This would either be by means of the revival of "Troika" type programmes or by the triggering of government guarantees included in the proposed mutual schemes.

8. Adequacy of price

As well as being exercised over the seven days notice provision, airlines generally are also very concerned over what they see as radical rate changes. Looking ahead, it is probable that whilst the specific premium rate of US$ 1.25 per passenger may be modified, or even removed, nevertheless the aviation insurance market will still need to maintain its premium levels at circa US$ 4 billion in order to meet the new exposures in a world where far less reinsurance is available.

In the narrower area of the "gap" coverage, the costs of proposed government schemes are still speculative at this time. The commercial market line slips are currently charging around US$ 1.00 per passenger to take limits up to US$ 1 billion.

9. Role of government

As has already been mentioned, argument has centred on whether the events of 11 September 2001 were too large to be exclusively the concern of the market or whether the new threat was one better borne by "society". In the context of "gap" coverage, the additional costs have most certainly been directed at the airlines and their passengers, who have had to pay the cost of increased insurance prices as well as the increased security measures.

The US government has been active: it has offered financial support to all US airlines affected by the shutdown of US airspace and restricted future claims against airlines to the extent of their insured coverage. Beyond maintained insurance, US aviation companies have been granted immunity from prosecution arising out of the September 11 incidents. The US government has also funded a structured compensation scheme to victims of the various September 11 incidents, and filled the shortfall in insurance coverage. In addition, they are also in the process of nationalizing the security screening industry.

The European Union's (EU) stance has underscored European governments' response. The EU have allowed action to "make good the damage" caused by "exceptional circumstances". This has encompassed compensation to airlines for disruption immediately after 11 September 2001, and included short-term government schemes offering "gap" coverage. In searching for a longer term solution, the EU has emphasized the need to be "compatible with Treaty rules, in particular those involving competition and State aid, … and to offer a clear exit strategy for government involvement". It is minded, in other words, not to undermine the potential for a commercial market solution.

For as long as the terrorism threat exists, it is hard to imagine a clear and final exit strategy for governments; government is an insurer of last resort. It may choose to define some of its obligations in advance, and charge a price for them, or it may prefer an unstated role, that is defined only in times of exceptional circumstance.

10. Conclusion

Whilst the insurance market will clearly discharge all of its financial obligations to policyholders, nevertheless the loss possibilities that the events of 11 September 2001 exposed are too much for the future aviation insurance market to bear without change. It has been necessary to limit the catastrophic potential that terrorism poses, in order to protect its central purpose, that of enabling the air transportation industry to function in normal circumstances with adequate insurance protection.

A new terrorism insurance market has developed in an effort to replace government backed schemes, and these may yet be made permanent as mutual schemes, either covering airlines in US or Europe or possibly worldwide. An acceptable commercial solution may never be possible that will offer adequate coverage for all losses.
It will need insurers, reinsurers and government bodies to work together to define the boundaries of what is insurable, and where governments need to intervene or act as reinsurer of last resort. There is much work to be done to work out a solution acceptable to all parties and which allows air transportation to continue its development as a vital engine of global growth.

One possible long-term solution, which would deal with most of the issues raised in this paper, is for aviation companies to be given immunity from prosecution for all acts of terrorism that may be directed against them. In order to achieve this objective, a new international protocol or convention would be required - an approach that would take at least five years to establish and implement. When viewed from this perspective, many of the solutions discussed take on an interim or temporary nature. We must work to ensure that this ‘temporary arrangement’ does not emulate income tax, which was introduced in the sixteenth century as a temporary measure! Our future direction is clear.

Part III. Systemic Perspective

Does WTC Matter for the Investment Policy of P/C Insurance Companies ?

by Paul M. Achleitner, Jörg H. Biebel and Daniel Wichels*

Summary

The attack on the World Trade Center (WTC) had a serious double impact on insurance companies revealing a significant correlation between the asset and liability sides of their balance sheets. Insurance companies that previously considered themselves well capitalized, suddenly felt vulnerable to simultaneous shocks to their risk-absorbing capital. The unprecedented simultaneous shock challenges the previous investment assumption of P/C insurers that there is no major relation between underwriting and investment risks. The direct and indirect impact of WTC on the investment policy is threefold. First, the stronger correlation between underwriting and investment risks implies a lower overall investment risk absorption capacity. Second, an active or index-based investment attitude should be augmented by a more elaborated ALM-based counterparty risk controlling. Third, the general “risk appetite” of P/C insurers must be reviewed. All in all, a deeper knowledge and better understanding of the underwritten risk structure is necessary to derive an optimal investment policy.

1. Introduction

The dramatic events of 11 September 2001 were far beyond the insurance industry’s usual range of experience. Besides the human tragedy, there is no doubt that the economic costs relating to the destruction of the Word Trade Center (WTC) in New York will rank the tragedy as one of the worst ever catastrophes to hit the industry. The current top-down estimates of analysts will significantly surpass the previous largest catastrophes such as Hurricane Andrew and the Northridge earthquake in Los Angeles (see table 1).

As with most catastrophic events, from a financial perspective the focus during the tragedy has been primarily on the impact on the liability side of the balance sheet. Companies have repeatedly revised their estimated underwriting losses and bottom-up assessments are still below top-down assessments of industry analysts. Of similar importance, however, is the impact on the investment side for the insurance industry. The sharp decline of equity markets has dramatically reduced the value of companies’ reserves and raised concerns about the overall strength of many European insurers’ balance sheets.

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The unprecedented simultaneous shock on both the asset and liability sides has shown a degree of correlation between investment and underwriting risks that was previously unrecognized. This challenges current investment procedures in the P/C insurance industry. It is common knowledge that insurers face risks derived from the assets they hold, their liabilities and the relationship between the two. However, P/C insurance companies have often determined their optimal investment portfolios subject to maximum risk levels and the assumption of marginal correlation between risks of underwriting and investments rather than modeling a correlation of risks in detail. As a consequence, a systematic asset-liability management (ALM) has not played a key role in structuring investment portfolios so far.

The purpose of this article is to review the investment procedure of P/C insurance companies in light of WTC and to illustrate the potential implications resulting from a correlation of underwriting and investment risks. Although it is used as a starting point for the portfolio construction, the article will not explore a systematic ALM in detail. Rather it will focus on excessive cumulative underwriting and investment risk positions.

The article is structured in the following way. The second section gives a general overview of the overall impact of the WTC event on the insurance market and touches upon the simultaneous shock on the investment and underwriting side prefacing the challenge of a potential correlation of investment and underwriting risks. Section 3 illustrates the current investment approach of P/C insurers and addresses shortcomings of the previous methodology before suggesting principles for a different investment process. The article concludes with a brief summary of the key findings.

2. General impact of the WTC attack on the insurance industry

The WTC event will result in the largest ever insurance pay-out. Table 1 shows the expected amount of losses of US$ 40 billion is approximately twice the size of losses incurred during Hurricane Andrew in 1992 – the largest catastrophic event in the insurance market before WTC. Almost all major insurance and reinsurance companies are affected by the attack. Although the damages will be spread over the whole industry, it is clear that solvency has come under pressure at some groups. Several major players are already downgraded from the rating agencies (e.g. Lloyds was downgraded by S&P form A+ to A) or are currently under review.

Table 1
Major (man-made or natural) catastrophes in the insurance market

Event	**Year**	**Loca ion**	**Insure(loss***
World Trade Center	2001	New York, U.S.	US-$ 40.0 bn**
Hurricane Andrew	1992	Florida, U.S.	US-$ 19.6 bn
Northridge earthquake	1994	Los Angels, U.S.	US-$ 16.3 bn
Typhoon Mireille	1991	Japan	US-$ 7.1 bn
Great Hanshin earthquake	1995	Kobe, Japan	US-$ 2.8 bn

**) at 2000 prices   **) estimated*
Source: Swiss Re, Goldman Sachs

It is fair to state that the stability of the industry in general will not be threatened and the estimated losses will not severely reduce the overall capacity in the market. Insurance companies as organizations whose business is to absorb risk ultimately exist to make payments in the event of claims. At the same time, the diminished capacity will presumably boost rates in a broad range of insurance classes. Unlike previous significant catastrophes, where natural hazards mainly affected (personal) property, the terrorist attacks of September 11 will have a long tail effect on a variety of insurance classes (property damage, aviation liability, business interruption, life liability). As a consequence, the already hardened P/C-rates will continue to rise due to an increased demand in all affected business lines. As terrorist attacks unlike natural disasters may be frequent and incalculable government intervention might also be required to this end in order to solve otherwise “uninsurable risks” (e.g. in the airline industry).
Given the enormous total claims, the focus during the tragedy has been mainly on the underwriting losses. Yet, the impact on the investments caused by falling equity markets is likely to be of similar relevance. The international equity markets instantly dropped after the news of the WTC terrorist attack and the MSCI World Index lost more than 12 per cent within the first two weeks of the disaster, with the airline and insurance industries suffering most.

In contrast to natural catastrophes that had previously hit the industry, the WTC attack apparently had a serious double impact on insurance companies squeezing both the asset and liability side of the balance sheet. The Kobe earthquake, for instance, one of the last major catastrophic events, mainly impacted the Japan insurance market, as international players only covered reinsurance with high attachment points. Likewise, only the Nikkei index was heavily affected whereas the international equity markets did not tumble. The destruction of value in the equity markets after September 11, however, dramatically reduced the balance sheets of insurance companies heavily geared towards equities. According to Goldman Sachs, the European insurance stocks lost an estimated € 25 billion in embedded value as the stock markets declined. The market value of asset portfolios of P/C companies within the Allianz Group deteriorated, for instance, by more than € 4 billion in the initial days of the attacks – compared to the liabilities of € 1.5 billion. Possible negative medium-term effects on the global economy and equity markets might directly impact the companies’ tangible

Net Asset Values driving their value further down.[81] Additionally, many companies will also be indirectly impacted through reduced inforce values caused by lower fee levels and portfolio values respectively.

3. Implications for the investment process and policy of P/C insurance companies

As seen in the analysis in paragraph 2, the damages inflicted by the attack on the WTC were substantial when measured by historical standards. Neither the source nor the structure of the damages had been completely taken into account in the pricing of the corresponding insurance cover. The absolute size of the incurred losses, however, was in line with scenario stress testing of maximum losses, which had been developed for possible natural catastrophes. Likewise, the losses incurred by insurance companies on the investment side induced by falling equity prices were within normal model parameters to control investment risk on the asset side. In fact, both effects were covered by prevailing risk controlling procedures and had been individually taken into account. However, the combined effect of these two shocks led to a severe testing of the risk absorbing capacity for many insurers. Insurance companies, which previously considered themselves well capitalized, suddenly felt vulnerable to simultaneous shocks to their risk absorbing capital from the investment and underwriting side. With respect to *major catastrophes* P/C insurers might have to review the prevalent investment assumption to disregard a major relationship between their balance sheet sides and to restructure their current investment approaches. To this end, the subsequent paragraphs will discuss presently applied investment procedures and potential new investment principles.

3.1. Traditional investment policy and risk controlling

Whereas the asset allocation decision for life insurance portfolios has strongly been influenced by a systematic Asset-Liability-Management (ALM), P/C insurance companies traditionally have optimized their investment portfolios on maximum risk levels and the assumption of marginal correlation between underwriting and investment risks. The strong stochastic nature of underwriting risks in the P/C business has been a deterrent to the development of ALM techniques in this business field so far.[82] Especially for the coverage of *natural catastrophe and disaster risk*, the actual outcome and therefore liability structure is unknown and highly unpredictable. As a consequence, the focus has shifted towards a relatively isolated treatment of underwriting and investment risk, mostly under the implicit assumption of negligible correlation between those two sources of risk.

The underwriting risk has usually been modeled and controlled using techniques based on historic information and scenario analysis. Excessive risks have been identified and

[81] The IMF reduced its forecast for the growth rate of the global economy of this year to 2.4 per cent, down from September estimates of rates of 2.6 per cent.

[82] According to a survey of GCR Capital in 2000 limited personal resources and missing expertise are also responsible for the hesitation of insurers to implement ALM-systems.

dispersed over the industry via reinsurance or Alternative Risk Transfer (ART). The remaining insurance portfolio risk has been supported by assigning the necessary amount of capital to guarantee the fulfillment of the insurance obligation.[83] The remaining available risk absorbing capital was then usually utilized by allocating it towards capital market risk. This additional capital (excess capital) available beyond assigned capital, has often been viewed as free capital to support additional investment risk.

The strategic and tactical asset allocation itself has been based on portfolio optimization on a broad aggregated level and has been independently carried out by investment departments, often based on a significantly active investment style. Consequently, in an insurance industry characterized by excess capital and therefore over-capacity, insurers often became investment risk seekers to enhance their portfolio returns and support their product pricing. As a result of steady positive net cash flow projections, the additional risk-taking attitude was also supported by the impression of an inter-temporal risk-smoothing ability, decreasing the perceived riskiness particularly of equity investments. Under the assumption of low correlation between assets and liabilities and positive net cash flow positions, many P/C insurers increased their investment exposure to capital markets developments significantly, often holding large parts of their portfolios in equities or corporate bonds.

3.2. Shortcomings of the current investment approach

Potential shortcomings of the previously applied investment philosophy were already felt by market participants before the events of September 11, but have been revealed in more details since then. In a sense, WTC can be seen as a catalyst bringing forward some of the changes already underway in the investment attitude of P/C insurance companies. The most striking weakness revealed in the weeks after the WTC attack, was the assumption of only *marginal correlation* between underwriting and investment risks. Although capital markets recovered later on, WTC demonstrated that significant insurance events can simultaneously have dramatic impacts on the performance of capital markets.

This effect is presumably not limited to terrorist attacks. Due to globalization, the world economy has become highly interconnected with production networks and supply chains around the world. Extraordinary natural catastrophes might also have the potential to indirectly disrupt economic activities on a significant global scale, in addition to their direct damage impact.[84] A major earthquake or hurricane in a region with clusters of globally interconnected businesses (e.g. Silicon Valley, the metropolitan area of Tokyo or the semiconductor industry in Taiwan) could potentially have very similar effects on the capital markets. Being exposed to the residual risk via capital market investments creates the danger of cumulated risk towards single

[83] Based on the stochastic distribution of potential liabilities and the assigned capital, an expected shortfall probability can be determined, which can be translated into a financial strength rating. The desired rating is ultimately a management decision dependent on the business model and customer risk preferences.
[84] Business interruptions already accounted for a major share of the WTC-damages.

dramatic events, thereby increasing the probability of ruin. These risks would not be adequately captured by an independent analysis of underwriting and investment risks.

Apart from the general correlation between the terror attacks and equity performance, the market downturn also highlighted a *specific correlation of single investment exposures* with possible insurance events. The WTC attack revealed that single investments potentially exhibit a high degree of correlation with insurance losses. Specifically, the airline, airport and (non-life) insurance industries initially lost up to 25 per cent of market value. Due to the benchmark-oriented investment process of most insurers and limited knowledge about the possible micro-structure of underwriting risks, those kinds of potential liabilities are usually not systematically considered in the asset allocation process and individual stock selection. In the case of WTC for instance, many insurance investment portfolios had financial holdings in airlines and other insurance companies, thereby creating even more pronounced cumulated risk positions. However, this correlation is apparently a general feature for dramatic insurance losses and has to be taken into account in the investment process.

Finally, the WTC experience shows that in times of severe shock on both investments and underwriting the *risk-absorbing capacity* of insurance companies is *de facto diminished* and might be insufficient to guarantee required solvency restrictions. In fact, solvency has come under pressure at some insurance companies in the aftermath of WTC. Since the underwriting business is the core business of insurers based on long-term client relationships and expectations, the natural reaction for insurance groups would be to reduce risks on the investment side to guarantee solvency.[85] On an industry-wide level, selling activities would eventually be triggered and embedded in an already distressed market situation with low liquidity accelerating an initial market downturn.[86]

3.3. Lessons learned: principles for the future investment policy

The overall value proposition of any investment policy for P/C companies is to optimize capital management by explicitly considering any potential correlation between investments and underwriting. General principles have already been well established by the extensive work on Asset-Liability-Management (ALM) procedures for life insurance companies.[87] Those applications can principally be transferred to P/C insurance companies. In a general structure, underwriting insurance risk represents the core competence of an insurance company and should therefore constitute the starting

[85] An example might be the observations on the life insurance sector in various countries where lower markets induced declining reserves. As a consequence, regulators demanded lower equity quota forcing some life insurers to sell off equity investments.

[86] In the case of the WTC-attack a risk reduction in both areas could perhaps be witnessed. Insurance companies terminated policies where they felt they had underwritten excessive risk and tried to improve their risk-absorbing capacity by committing more capital through capital increases. At the same time, there were some indications for forced liquidation to protect their balance sheet in the last weeks of September.

[87] With its liability-side reasonably predictable, the focus for life insurance companies has been on controlling the risk of duration mismatch to safeguard the fulfillment of implicitly or explicitly guaranteed interest rates incorporated in its savings-oriented products. The development of market interest rates versus the interest rates used for calculating life products is the 'natural' link between assets and liabilities.

point for the investment portfolio construction. The structure of the insurance portfolio yields the necessary risk capital and establishes a transfer portfolio representing the maturity structure of expected cash outflows. Any deviation from the transfer portfolio represents an ALM-mismatch which has to be supported by risk capital that has to be charged correspondingly. The riskiness of the deviation has to be determined based on possible correlation between the mismatch and insurance events on the liability side.[88]

Now, the events of September 11 additionally highlight the danger of cumulated risks that are not adequately captured with portfolio concepts. To incorporate a potential investment-underwriting correlation, a scenario-driven approach could be used to allow for a stress testing of maximum simultaneous losses and to complete a systematic risk analysis. In other words, scenario techniques that already form the basis for common maximum probable loss estimates on the insurance side must be extended to the investment area. Various major insurance events should be tested for correlation on the macro and micro level. The overall portfolio impact should be computed providing feedback to the investment policy as well as to the underwriting business:

On a *macro level* it is crucial to identify possible insurance events with impacts on assets and liabilities. Based on stress testing, the combined value at risk should be computed and tested versus the assigned risk capital. Excessive risk positions have to be eliminated either on the insurance side through more restrictive underwriting or on the asset side through a change in the asset allocation with the latter one being more flexible.

On a *micro level* a profound knowledge of cumulated risk has subsequently to be developed and capital market implications on a sector and single issuer level have to be calculated. The result should lead to an ALM-based counterparty risk controlling. Sectors and issuers adversely affected by events, which create simultaneously significant insurance liabilities, would require a higher risk charge.[89] Consequently, those assets should be avoided in the asset allocation implementation unless they yield an adequate return. Tailoring the investment process to the results of scenario analysis, an active or index-based investment approach would then require specific restriction incorporated in corresponding investment guidelines. The focus would subsequently shift from an investment only to an investment-underwriting diversification approach tied to some direct implications for the investment portfolio structure of P/C companies.

All in all, the stronger than previously assumed correlation of asset and liability risk implies a *lower investment risk absorption capacity*. Insurance companies might therefore react by decreasing the riskiness of their asset portfolios, thereby lowering

[88] However, this generic structure has to be augmented to be applicable for P/C companies as the strong stochastic behavior of the liabilities allows only for a rough estimation of a transfer portfolio. Presumably, the relatively uncertain nature of their liabilities is the reason that insurers in the P/C sectors have generally put ALM techniques into practice to a lesser extent than the life insurance industry. See Cook and Cummins (1994).

[89] For example, in the case of WTC the exposure to the airline industry was twofold: in individual cases heavy underwriting losses incurred while at the same time the airline stocks suffered most in the downturn of the equity capital markets.

their expected returns. The lower profitability of the investment side has to be counterbalanced by a higher contribution from underwriting, necessitating hardening insurance premiums as well as rigorous cost management. By the same token, the share of equity and corporate bond investments might be reduced in a typical P/C insurance portfolios as these asset classes are supposed to be more strongly correlated with extreme insurance events. In other words, by investing in certain equities insurance companies might reacquire the residual damage risk previously precluded by restrictive underwriting or insurance caps.

There are also significant conclusions to be drawn for counterparty risk controlling. A broad index-based investment attitude should be augmented by a *more elaborated counterparty risk controlling*. Industries and individual securities, which reveal the same risk profile as major possible insurance events should be avoided or reduced. For instance, industrial insurers underwriting substantial risk from single corporates on a global base should rule out the corresponding securities from their investment process. Active asset management decisions should therefore be constrained by concrete investment restrictions, since portfolio managers typically lack the necessary knowledge about potential liabilities.

Generally, insurers have to review their general *"risk appetite"*. As already mentioned, in an industry characterized by excess capital insurers have often become active investors in the capital markets to enhance their portfolio returns. In the theoretical world of efficient capital markets, however, the overall risk position being pursued in the investment process principally does not impact the generation of value. Any additional investment risk taken by insurance companies has to be covered by additional capital, which ultimately carries the performance risk of the investments. Therefore, shareholders will demand an adequate return for being exposed to the additional risk, which is based on risk-return characteristics of similar investment opportunities available to them. In other words, any additional return generated by more risky investments should normally cover the increased cost of capital of the company. Consequently, insurers will not enhance their risk-adjusted portfolio returns unless the rigid theoretical premises of perfect markets are resolved and unless they own distinct investment capabilities allowing them to outperform the markets. Therefore, insurers have generally to carefully consider whether or not and in which areas they have proprietary investment skills worth exploiting in the capital markets. With respect to major catastrophes causing severe insurance as well as investment losses, insurers might otherwise consider to reduce the overall risk position of their investment portfolios by decreasing any equity positions in order to avoid simultaneous investment and underwriting shocks. At the same time, due to their lower correlation with capital markets "alternative investments" as distinct asset class (e.g. private equity and real estate) might offer interesting investment opportunities.[90]

In the future, a much deeper knowledge about the potential source and impact of underwriting risks is needed to derive an optimal investment policy than is often found in the industry today. Likewise, the overall aim of investment management, to

[90] Alternative investments, however, might increase liquidity risk. See Babbel and Santomero (1999).

safeguard the fulfillment of insurance obligations, requires a more profound understanding of the underwritten risk structure. At the same time, the investment process becomes noticeably more complex as detailed investment guidelines are necessary to implement the allocation restrictions in a dynamic environment.

4. Conclusion

With an estimated insured loss of over US$ 40 billion, the attack on the World Trade Center is bound to become the largest insured catastrophe for the global insurance industry so far. With respect to the pure size of the insured losses and the damage composition including an unexpected large exposure to business interruptions, the tragedy’s aftermath will change the underwriting and pricing policies for related insurance coverage for years to come. However, the revealed vulnerabilities in the prevailing business model of P/C insurance companies might be more far reaching, increasing the potential for substantial consequences well beyond the pure underwriting of insurance coverage.

The WTC event has revealed a significant correlation between underwriting and investment risks. At the same time, it is likely that the indicated shortcomings of current investment procedures are not solely confined to terrorist attacks, but could potentially unfold in other dramatic insurance events as well. The P/C insurance industry has to develop methodologies uniting their management decisions for underwriting and investment that go beyond the typical considerations of interest rate risk. Rather, the portfolio optimization has to include scenario stress testing going beyond historical observations and combining detailed assessments of underwriting and investment risks. Insurance companies are thereby forced to define in more detail the amount and structure of investment risks they are willing to take, while explicitly accounting for underwriting risks.

There are plausible arguments that these considerations might eventually reduce the “risk appetite” of P/C insurers, with potentially far-reaching implications. With respect to the industry, a lower portion of equity investments and corporate bonds and therefore a higher share of government bonds could lead to a more regular investment income. However, this will have a potential P&L impact by limiting the ability to counterbalance volatile underwriting results through the steering of realized investment income. With respect to the capital markets, the more conservative “risk appetite” might reduce the overall demand for equity by insurance companies, thereby potentially changing the composition of the institutional ownership profile in the capital markets, both in general and for specific securities.

References

BABBEL, D.F. and Fabozzi, F.J., 1999, Investment Management for Insurers, New Hope,
Pennsylvania.

BABBEL, D.F. and Santomero, A.M., 1999: Risk Management by Insurers: An Analysis of the Process, New Hope, Pennsylvania.

COOK, D.O. and CUMMINS, J.D., 1994, Productivity and Efficiency in Insurance: An Overview of the Issues, Wharton: Working paper No. 96-57.

GOLDMAN SACHS, 2001, Insurance Europe, September 19, 2001, London.

GCR Capital GmbH, 2000. Einsatz von Asset Liability Management Methoden bei deutschen Erstversicherern – Ergebnisse einer Umfrage, 19. AFIR Tagung, April 27, 2000, Hamburg.

SWISS RE, 2001, Natural catastrophes and man-made disasters in 2000: fewer insured losses despite huge floods, sigma No. 2/2001, Zurich.

Challenges to Financial Stability

by Geoffrey Bell*

The tragic events of 11 September 2001 added a new dimension of uncertainty to what had already become a financially shaky world economy, exciting widespread fears of a sharp contraction in economic growth. However, a combination of accelerated tax cuts, and big incentives for consumers meant that within a surprisingly short period of time the US economy grew rapidly. But, in last few months, the US economy has begun to falter raising questions about the prospects for future growth. Similarly, while the European economy began to look better earlier in 2002 and even Japan began to pick up some steam, this recovery looks now to be much more fragile.

One reason for this changing outlook for growth is that, after rebounding in the wake of the terrorist attacks, Wall Street has resumed, and accelerated, a long slide with the Dow Jones average falling well over 15 per cent since January 2002, the S&P 500 by over 20 per cent and the NASDAQ by almost 35 per cent. Over US$ 7 trillion (70 per cent of the US GDP) has been wiped off stock market values since the all-time peak in January 2000 and at least another US$ 3 trillion outside the United States. Interestingly, once again a movement in stock prices starting in the United States has been mirrored around the world with European prices down between 20 and 25 per cent. The only exception has been in Japan perhaps reflecting the fact that Nikkei was already down 70 per cent from its peak at the beginning of the year.

The question is whether this erosion of wealth has begun to adversely affect real spending and will intensify in the coming quarters. Although many economists argue that the negative wealth effect is and will remain weak, common sense dictates otherwise. Very importantly, the fall in stock market prices combined with a wave of failures such as Enron, Worldcom, etc. is causing major losses in the portfolios of financial institutions. This in turn, raises fears about the condition of some financial companies, especially the small and medium-sized ones. Furthermore, there are questions being raised about credit derivatives and whether counter-parties will be able to fulfill their obligations leaving banks exposed to failing credits. If indeed the world economy were to stall and, worse still, fall into recession, the risk of corporate and financial failures would escalate adversely affecting the balance sheets of financial institutions.

There are also questions about the outlook for emerging countries. Late last year, Argentina defaulted on US$ 120 billion of public and private debt and has spiraled down economically and financially ever since. Problems are arising in Turkey, Venezuela and especially Brazil where interest rates are rising sharply and the exchange rate is falling. Foreign direct investment flows are declining worldwide and there seems no reason to believe that this trend will reverse for the foreseeable future.

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Also, it is worth noting that there is still a risk of a further fall in the dollar even if this is not currently much discussed. So far the drop in the dollar has been beneficent aiding US exporters while relieving price pressures in Europe. This could well remain the case, but were the dollar to fall another 20 per cent or more this could become another drag on world growth.

1. The US economy and the stock market

The US economy grew by 5 per cent in the first quarter of 2002 but, as announced on July 31, only expanded by 1.1 per cent in the second quarter with no increase in final demand. Even so, the Wall Street consensus sees 3 to 4 per cent growth in the second half of the year and with another year of expansion in 2003 alongside a revival in business spending and continued high consumer and housing expenditures. These forecasts look particularly vulnerable given the dramatic slowdown in economic growth in the second quarter but, so far at least, most Wall Street economists are sticking to their forecasts.

Of course, it is possible that this optimism will be borne out and the fall in asset values will have only a modest impact on future spending. One reason cited for this confidence is that housing prices keep rising with the value of homes increasing by US$ 2.7 trillion in 2002 going some way to offset the US$ 7 trillion fall in stock values. However, given the scale of the fall in the stock market and its impact on institutions and pension funds, it is hard to believe that the economy will remain unscathed. The personal savings ratio is low at around 4 per cent as individuals have borrowed heavily taking advantage of low interest rates and higher house prices. Moreover, with a soft labour market and depressed asset prices, cutting back discretionary spending looks to be a distinct possibility. At the same time, it does not appear very likely that corporate executives will authorize big capital spending plans in this environment.

If this turns out to be the case and the United States enters a period of anemic growth of say 2 per cent or even less, this would almost certainly add to the risk of rising corporate bankruptcies. In the second quarter of 2002, global defaults totaled US$ 85 billion of which US$ 68.5 billion took place in the United States. This amount will grow with the bankruptcy of Worldcom the biggest corporate failure in history adding another US$ 100 billion to the total. In addition, there were 253 downgrades of corporate debt in the second quarter with the United States accounting for 162. Importantly, the speed of companies moving from investment grade to non-investment grade or even failure is accelerating. The best example is Enron, which fell from investment grade to bankruptcy in 10 days leaving investors unable to sell because of the almost lightening speed of descent.

As is well known, a major factor eroding investor confidence, in addition to the rising tide of corporate failures and investment downgrades, has been that of corporate scandals and fraud. Enron and Worldcom stand out but there are many other examples of accounting trickery designed to mislead investors. The scale of this accounting gloss (at a minimum) or outright fraud looks to have taken place on a really unprecedented scale in the 1990s and in early 2000. The stock market boom encouraged practices to polish earnings results that are now being exposed to the shock of investors. As Dr. Greenspan put it “infectious greed” became the order of the day in a significant part of corporate America and Europe was not completely immune from this contagion.

The end result has been to leave large segments of the investing public totally disillusioned. As the Bank of International Settlements points out in its Annual Report, investors have been losing faith in the quality of information they are receiving about companies. According to the BIS, the technology-led bull market of the late 1990s distorted the incentives to produce reliable information by giving major incentives to present financial reports that would inflate expectations of earnings growth. Moreover, auditing firms and stock analysts increasingly found their interests aligned with the companies aggressively managing their earnings to inflate stock prices.

Against this background, a growing concern is that the shift away from equities may begin to compound on itself. As investors withdraw from equity funds, managers have to sell; as equity values fall, insurance companies have to sell to preserve capital values and so on. Naturally, it is easy to exaggerate the risk of a financial implosion along these lines but the possibility has certainly gone from non-existent, to remote, to even thinkable. At minimum, financial risks in markets have risen with the unreliability of financial accounting.

2. Credit derivatives

An area that is raising concern in the current climate is that of credit-risk transfer instruments that became very popular in the capital markets during the 1990s. The concept was to develop instruments such as credit default swaps and collateralized debt obligations that would enable banks to transfer credit risks to other entities with insurance companies playing on a leading role as buyers of these instruments. This, in turn, released bank capital to undertake more such activities keeping up the flow of new credit transfers. Between 1997-2001, according to the IMF, the amount of outstanding obligations of these instruments increased by about nine-fold to an estimated US$ 1.6 trillion.

While there is no doubt that these instruments have increased market flexibility and efficiency there are risks that are now being recognized by the regulatory authorities. The first is a concern about seeing clearly where credit risks are actually lodged. Even more important, there are growing worries that in a very difficult market environment, the counter-party to a bank may not be in a position to meet its obligation when called upon or will find some legal excuse to delay or even not pay. Consequently, regulators are becoming more anxious about the real extent to which credit risks have been actually transferred. And, on top of these market issues, there are questions as in the case of Enron, whether such instruments were used to mislead the buyers of the credit instruments about the true nature of the risk. The end result is that credit risks may be less diversified than appears on the surface so adding another dimension to potential financial instability.

3. Financial institutions

This is clearly a challenging time for financial institutions. Insurance companies in particular have been hit by the combination of claims associated with September 11 and by the precipitous fall in stock values since January 2000. This applies more to the European insurance companies that generally have a higher proportion of their balance sheets in equities than to their US counterparts but both are affected. Banks are experiencing mounting bad debts and one bank, HypoVereinsbank in Germany, announced that 2002 was the most difficult year since the Second World War for banking. None of this is surprising given the scale of corporate failures and the only question is how much worse the situation is likely to become before conditions improve.

If there is a silver lining it is that banks led by the large US institutions have been very active in packaging loans, securitizing loans and generally selling assets into the capital markets. As a result, credit risks have been much more broadly diversified in recent years than in the 1970s and 1980s. Consequently, while banks have avoided crippling damage from the failures of Enron, Worldcom, etc., other institutions such as insurance companies and pension funds have been hurt as the value of their bonds have fallen sharply i.e., the pain has been spread more widely.

At the same time, banks led by those in the United States, have significant exposures to the housing market with an explosion in mortgage refinancing having taken place as interest rates have declined. The increase has been spectacular with banks increasing their share of consumer lending in the United States from 20 to 30 per cent since 1995 represented by revolving and fixed home equity lines. Of course, house prices have risen sharply giving banks ample cushion for their loans. But, while it might be unthinkable to contemplate a fall in house prices, it has happened in the past and could happen again. And, except for the most recent period, house prices and stock prices have moved closely in line and this correlation might re-establish itself with negative consequences for consumer debts.

Nevertheless, and despite these risks, it is unlikely that any major bank will suffer a life-threatening liquidity or capital problem. Thanks to bank regulators, capital levels are high and while banks may go through a difficult period, the risk of failure except for smaller specialist banks (concentrating on lower quality real estate loans) is low. Rather, credit stresses will be reflected in an increasing reluctance to lend except to the highest quality borrowers so adding to the weakness of business spending.

The problems in the insurance sector currently center principally on the behavior of the stock market with the biggest risk being a further slump in stock market values (apart, of course, from renewed terrorist attacks). Once again, the major institutions look to be well able to withstand these pressures especially as premium incomes are rising sharply. The question is whether smaller institutions in the sector are at serious risk and the answer is that no one knows but the fear exists that some companies could find themselves in trouble.

4. Latin America

Late last year, Argentina defaulted an almost US$ 140 billion debt and then the government proceeded to effectively bankrupt the banking system creating the worst economic crisis in memory. Output is expected to fall 17 per cent in 2002. The problems in Argentina did not have an immediate contagion effect on capital outflows across the region but neither have they been completely contained. Uruguay is experiencing a banking crisis as a direct result of what took place in Argentina. Meanwhile, the situation in Venezuela has gone from bad to worse and problems are mounting in Brazil so economic growth in the region has stopped while capital outflows are rising and foreign direct investment inflows falling. As a result, the risk of more debt defaults is increasing.

The big test is Brazil and, as leftist candidates have gained in the polls for the October Presidential election, concerns have risen. The real has fallen to below 3.20 to the dollar which is a fall of 30 per cent since April, interest rates have risen and capital outflows are mounting. The fundamental problem is that Brazil has very large amounts of outstanding debt, both public and private, and a very large amount of domestic debt which is being rolled over very short term. This amount of money, when combined with a large balance of payments deficit, means that Brazil needs to borrow US$ 70-80 billion a year of foreign capital, this is becoming more difficult. Already growth has fallen to 1 per cent or so this year which, in turn, raises the risk of a populist reaction favoring debt restructuring or default to provide room for growth.

Financial pressures could ease if the IMF poured in more money to stabilize the situation. However, given the new environment in Washington, new money will be restricted especially when it would clearly enable bondholders to take funds out of the country. Moreover, and even if Brazil weathers this storm, the country (and the region) will remain vulnerable to shocks until it becomes less dependent on external capital. With sovereign risk spreads rising, equity markets weakening and currencies already depreciating, capital flows to the region have already started to drop with the inflow from bonds, loans and equity issues falling from a monthly average inflow of US$ 7 billion in 2001 to around US$ 1 billion in recent months. Unfortunately, the likelihood is that South America will enter a period of slow or negative growth for the foreseeable future which will lead to rising political and economic tensions.

5. Future currency instability?

Currently the US dollar represents 68 per cent of world reserves rising from 50 per cent in 1990. More and more countries have adopted the dollar either as their primary or secondary currency circulating alongside their home currency. At the same time, the dominance of the United States in the 1990s has caused more investors to choose the dollar driving up the exchange rate. As a result, between 1995-2000, the dollar rose 25 per cent on a trade-weighted basis and we all remember the euro being introduced in January 1999 at 1.17 to the dollar and then quickly falling to 83 cents!

But now the situation is changing with the dollar falling 12 per cent from its peak earlier this year against the euro and the yen. Capital inflows into the United States have been reduced because of stock market turbulence and if they remain depressed then the United States will be forced to reduce its current account deficit of over US$ 450 billion. Unfortunately, such a fall in the deficit would mean a cut back in US spending on imports that has been the biggest driving force in the expansion of world trade. Apart from the needed slowdown in domestic spending, there also has to be a major fall in the trade-weighted dollar. Yet, despite the fall in the euro and yen, the trade-weighted dollar has only declined 5 per cent this year because so many countries have their currencies linked to the dollar in one way or another.

For example, the Canadian and Mexican currencies are closely tied to the US dollar by the magnitude of trade flows between the countries whereas the Chinese yuan, Hong Kong dollar and Malaysian ringgit are pegged at a fixed rate to the dollar. Overall, the currencies of roughly 40 per cent of US trade partners are likely to move up or down with the dollar. As a result, if the dollar is to fall on a trade-weighted basis, the decline against the euro and the yen has to be substantial. This may explain why historically there have been ups and downs of 40 per cent in the euro, yen and the pound since the era of floating exchange rates began almost 30 year ago.

Forecasting exchange rates is notoriously difficult and past experience is not necessarily a guide to the future. However, the fact is that either capital will continue to flow into the United States or the balance of payments will have to adjust. As capital flows look to be more problematical, the safest assumption seems to be that there will be a decline in the external deficit during the next year or two. At the same time, the possibility of a sharper fall in the dollar now does exist and this at a time when the world economy is weak. This would be harmful to global growth both reducing exports to the United States from the rest of the world and possibly putting upward pressure on US interest rates. The challenge for the authorities is to ensure that any further decline in the dollar (if it were to take place) is orderly and spread over a long period.

6. Conclusion

The biggest challenge to financial stability will arise if a number of these negative forces come together at the same time. This could be a further fall in equity prices, more corporate and bond failures, a drop in housing prices or escalating debt problems in South America. The end result would be a prolonged period of slow growth at best or even a world recession. However, this co-incidence of forces is not a high probability even though the risk does exist and, in any case, these risks can be mitigated. For example, the IMF can help Brazil, central banks in Europe and the United States could cut interest rates and financial regulators can contain problems in financial institutions giving active financial support if needed.

Still, what appears to be happening is that following a major asset bubble in the United States accompanied by a very rapid rate of growth of the economy and world trade, a very different economic and financial story is unfolding. The US economy is weakening, the stock market falling and this is spreading worldwide. Ironically, after September 11, spending rose and the stock market recovered for a few months but this is now changing as confidence is evaporating. This is why there is so much discussion about how to restore confidence. Tightening up accounting standards is one positive step forward and being tougher on corporate criminals may help. Still, it is unlikely that this will turn around sentiment when what is needed is a period of solid growth raising corporate spending and profits while bolstering the labour market.

This may take place spontaneously but, if it does not happen soon, more action on the part of central banks by lowering interest rates led by the European Central Bank should occur accompanied by more fiscal stimulus if the world economy stalls. The point is that while it is easy to be too optimistic or pessimistic about the state of financial markets, containing risks demands quick responses from the authorities. The best example was how governments, central banks and financial regulators came together so effectively in dealing with the shock of September 11. This display of cooperation amongst the authorities augurs well in dealing with risks to financial stability in the future even if the world is experiencing a testing time.

Terrorism Insurance Post 9/11: Principles for Designing Private/Public Programs

by Lawrence D. Cluff and Stefanie Jonkman[*]

The tragic events of September 11, 2001, revealed the huge potential exposures insurance companies could face in the event of another terrorist attack. Confronted with continued uncertainties about the frequency and magnitude of future attacks, both insurers and reinsurers[91] have determined that terrorism is not an insurable risk at this time. In the United States, as the insurance industry sheds or limits its risks to such exposures, the economic burden of another terrorist attack is being shifted directly onto policyholders, raising the potential for more devastating economic consequences should such an event occur. In addition, the lack of affordable and available terrorism insurance has begun to affect other sectors of the United States' economy, most notably real estate and commercial lending. As a result, considerable debate has taken place in the United States on what the federal government can do to keep commercial insurance companies involved in providing terrorism insurance, even without the protection that they normally receive from reinsurance. Several other programs in the United States and various countries exist that provide insurance for risks that the private sector is reluctant or unable to underwrite. These programs illustrate alternative risk-spreading mechanisms and funding sources to consider when structuring a terrorism insurance program in the post-September 11 environment.

This paper offers several principles with which to evaluate these alternatives and ultimately structure a program that assures adequate terrorism protection for insurance consumers and sets an appropriate level of government involvement. First, we describe how the lack of affordable and available terrorism insurance has affected the economy in the United States and provided the impetus for the federal government to consider establishing a terrorism insurance program. Next, we discuss various risk-spreading alternatives to private reinsurance employed by other government-sponsored catastrophic and terrorism insurance programs. Finally, we evaluate the risk-spreading and funding elements of these programs in light of several key principles that will help

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[91] For purposes of this paper, "reinsurers" and "insurers" refer to commercial property and casualty reinsurers and insurers.

guide such a discussion in this new world, ensuring both consumer access to terrorism insurance as well as an appropriate and responsible role for the government.

Since the September 11 attacks, the key dynamic taking place in the United States' insurance industry is a shifting of the risk for terrorism-related losses from reinsurers to primary insurers and finally to the insureds. Prior to the terrorist attacks last year, reinsurance and insurance companies considered the risk of terrorism to be so low that the potential losses from terrorist activity were not identified nor priced separately from general property and liability coverage provided to businesses. However, after the September 11 attacks, reinsurers and insurers recognized that their risk exposure was both real and potentially enormous and moved to limit their future exposure to terrorism. As reinsurance markets are global in scope and neither the prices nor the conditions of such coverage are subject to direct regulation, reinsurers have had little difficulty excluding terrorism from coverage when they renew their reinsurance treaties. A large share of these reinsurance treaties expired in January 2002. Primary insurers affected by this first wave of reinsurance terrorism exclusions were unable to spread their terrorism risk elsewhere and began moving to exclude terrorism as well from their riskiest policies. July 2002 brought another wave of reinsurance treaty renewals and terrorism exclusions, shifting this risk to even more primary insurers. Experts predict that by the end of 2002, very little terrorism risk will be retained by reinsurers.

Primary insurers in the United States, however, have not been able to shed their risk as quickly or as easily as reinsurers, because their contracts with policyholders tend to renew at a relatively even rate over the year and because state insurance laws and regulations affect these insurers' ability to completely end their exposure to losses resulting from terrorist events. For new policies and renewals, some primary insurers immediately after September 11 began excluding terrorism coverage from large commercial property and casualty (P/C) policies not subject to rate regulation. They could not begin similar exclusions for low and medium commercial risks as quickly, however, because most states do require regulatory approval to change coverage for these smaller risks. This regulatory hurdle initially slowed down insurers' efforts to exclude terrorism, but by February 2002, regulators in 45 states, the District of Columbia, and Puerto Rico had approved terrorism exclusions for all or part of these risks at the request of the industry. However, any change in coverage generally has to wait until the policy renewal date since the loss of reinsurance is usually not considered a sufficient reason for canceling or changing coverage for policyholders during the policy period. As a result, it could be as much as a year after a direct insurer loses reinsurance coverage for terrorism before a similar exclusion could be passed on to all its policyholders.

While insurers were successful in obtaining a terrorism exclusion for commercial P/C risks in most states, other state laws affecting insurers' ability to fully shield themselves from terrorism-related risks are not easily changed. For example, laws in nearly all states preclude a workers' compensation insurer from excluding coverage for a particular type of event. Workers' compensation must cover all the risks to which an employee is exposed while at work, irrespective of the cause. A significant portion of the losses that resulted from the World Trade Center attack was payment for workers' compensation claims. Similarly, insurance laws in 30 states include what is called the "standard fire policy" language. In that language, insurers are required to pay losses resulting from fire, irrespective of the cause of the fire. Thus, in an explosion like the World Trade Center attack, a terrorism exclusion would protect insurers from liability for losses resulting from the direct effects of the explosion, but not necessarily for the losses caused by the resulting fire. Efforts are currently underway in several states to explicitly exclude terrorism from the standard fire policy language, but changes to state law take time. To the extent they cannot shed the risk of terrorism, either because policy renewals are months away, or because state law prohibits it, insurers that have lost reinsurance for terrorism could be vulnerable to insolvency in the near term in the event of another terrorist attack.

As any potential terrorist event moves farther into the future and primary insurers are successful at shedding more, even if not all, of their terrorism risks, any losses will be increasingly left to affected businesses and their employees, lenders, suppliers, and customers. These entities lack the ability to spread such risks among themselves as insurers can. Thus, another terrorist attack could have significant effects on the marketplace and the public at large. These effects could include bankruptcies, layoffs, and loan defaults. However, even if no other terrorist attacks occur, some adverse conditions are beginning to appear in the United States' economy because insurers are unwilling or unable to underwrite terrorism risks. Insurance industry observers and policyholders report that while limited coverage for terrorism-related losses is currently available to businesses at very high rates, full coverage is often not available at any price, forcing larger commercial policyholders to go with little or no coverage for such risks. This lack of available and affordable terrorism coverage in turn is affecting other sectors of the economy, particularly real estate and commercial lending. Lenders and investors, faced with the prospect of absorbing additional terrorism-related risks that cannot be insured, are refusing to back certain projects perceived at risk to terrorism. For example, the Mortgage Bankers Association of America (MBA) conducted a survey of its commercial members in June 2002 and reported that the lack of comprehensive and affordable terrorism insurance for commercial properties has stopped an estimated US$3.7 billion in loans for commercial properties and has delayed or changed the pricing on another US$4.5 billion. This total US$8.2 billion in affected business is about 11.1 per cent of the total US$73.8 billion the MBA membership reported originating in commercial and multifamily property loans in 2001, according to the organization. Developers have reported canceling or delaying construction projects, with the lack of terrorism coverage being cited as a principal contributing factor.

These examples indicate the type of effects the lack of available and affordable terrorism coverage is beginning to have on the United States' economy. In response to these concerns, as well as the potentially enormous economic consequences another attack could have on underinsured commercial property owners, lawmakers in the United States began debating ways for the federal government to assist the insurance industry and its consumers.

1. Alternative programs for protecting against catastrophic risks

Regardless of the program ultimately established, the primary driving force behind the government's decision to enter the terrorism insurance marketplace should be to safeguard the economy's access to necessary insurance protection. This means that any government-sponsored program aiming to keep insurers in the marketplace for terrorism insurance must transfer enough risk away from individual insurers to protect them from insolvency in the event of a terrorist act. At the same time, if the government offers financial backing to the industry, care must be taken to ensure that the interests of both the federal government and taxpayers are protected, and that the industry is assuming its fair share of risks.

A number of insurance programs exist in the United States and in other countries to assure the availability of insurance to cover risks that the private sector has been unable or unwilling to cover by itself, including catastrophic events and terrorism. These programs vary widely. Some have little or no explicit government administration or funding, while others are completely managed and backed by the government. Alternatively, in some cases the private and public sectors share both administrative responsibilities and risks, though in several different ways. All of these programs, to a greater or lesser degree, replace private insurance or reinsurance with alternative risk-spreading and funding mechanisms.

Some catastrophic insurance programs require little or no government administration or funding. These programs aim to keep primary insurers underwriting catastrophic risks by spreading these risks among insurers participating in the program, either through a prefunded pool that replaces unwilling reinsurers, or through post-event assessments on insurer capital. In those programs using a prefunded system, losses from any catastrophic or terrorist event that affect only one or a few members can be spread across the entire pool, reducing the likelihood that individual members will become insolvent. These pools are typically funded through insurer contributions or surcharges on insurance policies. For example, Swiss law obliges insurers to include coverage for specified catastrophes in fire insurance policies for buildings and their contents at a statutorily fixed rate as part of the country's catastrophe insurance program. These compulsory premiums are the sole means of financing the program. Although this scheme does not set up a separate catastrophe insurance fund, Swiss insurers have created a reinsurance pool where these additional premiums are deposited. Membership in this pool is optional for insurers, but currently 85 per cent of claims are ceded to it. Insurers that participate in the pool are also subject to a "cash call" in proportion to their participation in the pool to cover claims that exceed pool capacity. There is no government involvement or exposure associated with the operation of the program, since the Swiss government does not provide any guarantee.

Another example of a prefunded pool system is the deposit insurance program provided by the United States Federal Deposit Insurance Corporation. In this program, federal banks are required to pay premiums into a fund until it reaches a predetermined level. When a bank fails, the deposit insurance fund is used to make up the difference between the bank's remaining assets and customer deposits, up to a legal limit. Should the deposit insurance fund fall below a certain level because of large payouts, banks must pay additional amounts into the fund to ensure that sufficient funds are available for future failures.

Similarly, in some programs a post-event assessment mechanism is used to spread risk among member insurers. State insurance guaranty funds in the United States are examples of post-event assessment plans. These are funds that protect policyholders when an insurance company fails. In nearly all states, the money used by guaranty funds to pay policyholders of failed insurers is collected through post-event assessments. After an insurance company is found to be insolvent by a state regulator, the regulator and the guaranty fund in each state where policies were sold determine by how much the failed company's policyholder claims exceed the value of the company's assets. The guaranty funds then provide sufficient funds to ensure that all claims are paid (up to each state's statutory limits). While guaranty funds are established by statute, they are generally not operated directly by state governments.[92]

Other programs have both prefunding and post-event assessment features. For example, the California Earthquake Authority (Authority) was established by state statute to insure California residents against losses caused by earthquakes. The state of California, however, does not contribute any funding to the Authority. After the Northridge earthquake in 1994, insurance companies realized that the premiums they had been charging for earthquake coverage were inadequate. Furthermore, the companies did not know how to set an actuarially sound price. Insurance companies attempted to stop selling insurance against earthquake damage but were opposed by the state. After negotiations, insurers were permitted to exclude earthquake coverage from their P/C policies if insurance companies representing at least 70 per cent of the market agreed to participate in the Authority. Participation meant agreeing to pay an initial payment totaling US$717 million plus two additional post-event assessments of US$2.15 billion and US$1.434 billion after certain levels of earthquake-related losses occurred. Thus, potential Authority losses are funded by a multilayered financing arrangement involving insurer contributions, premiums, reinsurance, and pre-established debt financing**.** In early 2000, these layers totaled about US$7 billion. In the event that all Authority funds were expended, claims payments would be prorated. The Authority currently provides virtually all of the earthquake insurance available in the state of California.

In contrast to the programs described above, which, while established by the government, are funded and operated by the insurance industry, some programs offer catastrophic or terrorism insurance directly through the government and thus eliminate any role for the private sector. Others use the government as a reinsurer and share risks with the private sector. In some cases, these programs have the statutory intent to provide subsidized coverage, while others are intended to be self-funding. The United States' National Flood Insurance Program is an example of a program that provides flood insurance directly through the government and has both subsidized and self-

[92] In some states, insurers are permitted to recoup some of their guaranty fund assessments through reductions to their tax liabilities. Where this occurs, taxpayers indirectly subsidize these guaranty funds.

funding features. This program makes federal flood insurance available to property owners living in communities that join the program by agreeing to establish certain loss mitigation, zoning, and building code standards. Some of the key factors that led to the program's establishment were private insurers' unwillingness to sell flood coverage, increasing losses from floods because of floodplain encroachment, and high federal expenditures for relief and flood control. This program, which is financed primarily through premiums, fees, and interest income, aims to reduce federal spending on disaster assistance. By design, this program is not actuarially sound, because it does not collect sufficient income from premiums to build reserves to meet long-term expenditures on flood losses. Though the Federal Insurance Administrator is authorized to subsidize a portion of the total policies in force, its annual appropriations do not cover these subsidies.[93] As a result, the Congress has appropriated funds for the program from time to time. In addition, the Federal Insurance Administration has periodically borrowed from the United States Treasury Department to finance operating losses.[94] The program is backed by US$1 billion in borrowing authority from the Treasury Department.

The Israeli government funds and administers two direct insurance programs for losses resulting from terrorist attacks. The first is the Property Tax and Compensation Fund (Property Fund), which covers property and casualty insurance. The second is the Law for the Victims of Enemy Action, which covers life and health insurance. Tax revenues, either specific or general, fund both. The Property Fund pays claims on property damages that are the direct result of a hostile terrorist attack (including losses of business inventory), on the basis of the market value of a property immediately before the attack. All indirect damages, including those for business interruptions, as well as any additional coverage desired, must be covered through private insurance. The second program provides coverage for medical care, lost wages, extended payments to the families of attack victims, and personal injury. Coverage also extends to visitors and tourists who are in Israel.

Other governments have established various programs to share catastrophic risks with the private sector by offering reinsurance to individual primary insurers or to an industry pool. In some instances, governments charge a premium for reinsurance protection, accumulating a fund they can use to pay for losses. Others subsidize the reinsurance program with taxpayer revenues. Japan's earthquake insurance program, originally conceived in 1966, is one example of a program where both the private and public sector work together to provide insurance protection. Participation by insurers is mandatory. Policyholders purchase the insurance as a supplement to residential fire insurance that covers homes and household goods. Private insurers and the government share in any losses that result from a disaster according to a three-tiered payment system, with the government's share increasing from 0 in the first tier to 50

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[93] Subsidies are permitted for properties that predate a community's entrance into the program. The subsidized premiums paid on these properties actually exceed the unsubsidized premiums paid on newer construction, but the expected losses on the properties not built to the newer code (above the one hundred year flood plain level) are even higher.

[94] Flood Insurance: Information on Financial Aspects of the National Flood Insurance Program, (GAOT-RCED-00-23), October 27, 1999, and Flood Insurance: Extent of Noncompliance with Purchase Requirements Is Unknown. (GAO-02-396), June 21, 2002.

per cent of covered losses in the second and 95 per cent in the third. The initial tier effectively acts as a deductible. The Japanese government receives reinsurance premiums from primary insurers, but its total liability is not limited to the total amount of premiums received. Japan's program has several distinguishing features. First, the private sector is responsible for the initial portion of losses. This feature helps to ensure the development of a private market for earthquake insurance that is unencumbered by a monopoly. Second, industry pooling arrangements are mandated under the program. Third, the government takes on an increasing share of losses as they rise, up to a maximum cap on the total amount of exposure, but the private sector still bears some cost even at higher levels. This maintains correct incentives for underwriting carefully and controlling loss adjustment expenses. Finally, the Japanese program was not established to provide coverage for all potential losses, but rather as a first step toward providing some level of coverage, with the government and private sector working together.

A second example of a shared-risk private/public reinsurance model is the United Kingdom's Pool Reinsurance (Pool Re) program, established in 1993 to provide insurance against losses and damages caused by terrorists attacks on industrial, commercial, and residential properties located within the British mainland. Similar to Japan's earthquake insurance program, Pool Re establishes several distinct layers of coverage. All policyholders who buy basic property coverage from insurers have the option of buying additional coverage from the same insurers to protect against terrorism. Insurers are responsible for the initial layer of exposure per claim, with no reimbursement from the government. Claims exceeding this initial layer are paid from premiums accumulated within a pool made up of insurance companies and Lloyd's syndicates. (The British government and the insurance trade group established a mutual company in which to pool the funds and provide terrorism reinsurance.) If the collected funds are exhausted, all participating insurers face a call of up to 10 per cent of the premiums they have collected during the year. Beyond the 10 per cent call, the income previously earned from investment of pool funds is expended. Finally, the government meets any claims in excess of this. To help increase the pool's assets quickly, the British government has given it a tax-free status. According to United Kingdom officials familiar with the program, the government has not yet had to bail out the pool as the reinsurer of last resort.

2. Designing a private/public terrorism insurance program

Protecting insurance consumers from the threat of calamitous risks is a daunting challenge, particularly in the post-September 11 world. The programs described above were created in response to specific market problems and public policy goals that determined the extent of the government's liability and involvement. All were established to cover difficult to quantify, unpredictable risks in a world that existed before September 11. The terrorist attacks on the World Trade Center forever changed the United States' (and perhaps the world's) view of the potential consequences of terrorism. Furthermore, in spite of similarities to natural disasters, terrorism was shown to be fundamentally different. Earthquakes, floods, and hurricanes, while devastating, always remain earthquakes, floods, and hurricanes - natural events whose defining characteristics do not change over time, that occur in known geographical areas, and whose effects people have learned how to mitigate. Likewise, pre-September 11 terrorist acts were generally perceived as the planting of conventional bombs in cars or buildings in a few troubled cities, not as war-like acts that could kill thousands of people, destroy billions of dollars of property in any population, in any place, at any time, in ways not even yet imagined.

As governments work to assess and mitigate this new threat, some are already considering actions to safeguard the continued availability of insurance and reinsurance for terrorist-related acts. As this debate continues, the following key principles can help guide such a discussion in this new world, ensuring that a terrorism insurance program provides consumers access to terrorism insurance and sets an appropriate and responsible role for the government:

- Clearly define the problem to be solved.
- Protect the government from excessive costs and inefficiency.
- Reevaluate future government involvement.

2.1. Define the problem the industry faces

A critical first step to analyzing the need for government intervention in the insurance market, as well as the extent of that intervention, is to define the problem confronting both the insurance industry and the economy, separating short-term needs from long-term challenges, and wants from genuine needs. The industry and the federal government need to work together to identify these issues. In particular, questions like the following should be answered:

- How would the lack of insurance coverage for terrorist events affect other sectors of the economy? (What are the results of government inaction?)
- What is the environment, or circumstances, of the terrorist threat that define the need for government involvement?
- What is the appropriate definition of a covered terrorist act?
- What are the public policy objectives to be achieved by an assistance program?

Since September 11, the United States Congress has spent considerable time discussing the problem of terrorism insurance. Much of that debate focused precisely on understanding the problems confronting the insurance industry and wider United States economy in the absence of private reinsurance and the resulting inability of private insurers to underwrite the amount of terrorism coverage the marketplace requires. Lawmakers' assessment of these economic effects was necessary in order to explore whether the government needed to play a role and to determine how large of a role it should take.

In addition, the design of a government program established to facilitate the market for terrorism insurance also depends on the circumstances of the terrorist threat in each nation. For example, a program developed in an environment of infrequent, relatively small terrorist events could be very different from a program designed for an environment where the terrorism perpetrated against a particular country begins to take on the characteristics of war (e.g., Israel). In the first case, a modest level of government involvement on a contingency basis may be entirely appropriate, while in the second, a level of government involvement that involves spreading losses over the taxpayer base in the form of a direct insurance program may be more realistic.

Once the government decides that a program for assuring the continued availability of terrorism insurance is necessary, it must carefully define the terrorist acts it intends to insure. This is essential for all involved parties - the government, the insurance companies, and the insured. A clear and consistent definition of a covered terrorist event is essential to ensure active participation of all parties in the program, as well as its financial soundness, since the funding mechanism that supports the insurance program must be able to cover the program's potential liabilities. Unlike an earthquake or flood, terrorism is not understood by all people to mean the same thing. It can encompass a variety of human actors and actions that some may perceive as terrorism, and others not. Thus, an act of terrorism must be defined according to the threat that exists, the corresponding need in the marketplace for insurance against that threat, and the resources the government intends to make available to adequately fund any resulting liabilities. In response to September 11, the British government recently expanded the range of perils covered by Pool Re from damage caused by fire and explosion to include damage caused by biological contamination, impact by aircraft, and flood damage related to terrorism. Beginning January 1, 2003, Pool Re will also cover nuclear contamination resulting from terrorism. This new definition of risk also expands the potential liability of the British government considerably.

Finally, as part of defining the problem it is important to identify the public policy goals that a risk-sharing program would address. One of the most significant public policy issues is identifying a mechanism for spreading the potential losses widely enough so that policyholders can have protection against catastrophic losses (and the resulting business failures), and that a large event does not push some insurers into insolvency, reducing the insurance industry's capacity and limiting the availability of insurance in the future.

Policymakers need to decide how to spread losses across the insurance industry, and whether to spread them across an even wider base, i.e., the taxpayers. The programs discussed earlier demonstrate alternative models for spreading risks. Industry-run programs typically involve an insurance pool or post-event assessment mechanism. Both models spread the losses resulting from a catastrophic terrorist attack widely across the insurance industry when reinsurance is not available. There are arguments for and against these mechanisms, largely echoing those heard in the debate about pre- and post-event assessment guaranty funds in the United States. Other programs provide insurance directly through the government and fund liabilities through taxpayer revenues or premiums from policyholders. Finally, there are programs that spread the risk between the private and public sectors, where the government reinsures primary insurers or an industry-run pool. Liabilities for these programs are offset through reinsurance premiums collected, taxpayer revenues, or a combination of both.

It is important to remember that no one risk-spreading model is intrinsically better than another - policymakers should structure a program that addresses the particular market problems in that country according to the public policy goals determined by elected officials. For example, in response to effects of September 11 on the country's insurance industry and economy, United States lawmakers developed two different proposals for providing federal government financial backing to the insurance industry for terrorism risks[95]. In June 2002, the United States Senate passed S. 2600, a bill establishing a largely taxpayer-funded model. This program does not create a direct reinsurance program, but rather substitutes the United States Treasury Department as the risk-bearer. During the first year of the program's implementation, the government would pay for 80 per cent of the damages exceeding a deductible, up to US$10 billion. For the portion of damages above US$10 billion up to an aggregate US$100 billion, the government would pay 90 per cent. If the Secretary of the Treasury determined that it were appropriate, the program could continue for a second year.

In November 2001, the House passed a bill (H.R. 3210) that would also provide financial backing to the insurance industry. However, this bill would require repayment of any taxpayer funds spent to cover the program's liabilities. It includes both a post-event assessment on insurers and a policy surcharge to recover taxpayer money loaned to the industry. Under this proposal, the federal government would pay up to US$100 billion in aggregate insured losses after a retention, or deductible. The assistance the government provides must be repaid over time - the first US$20 billion through post-event assessments on all commercial insurers, and any assistance above the US$20 billion through a mandatory surcharge on all commercial property and casualty insurance policies. This surcharge is limited to a maximum of 3 per cent of the premium the policyholder pays for terrorism insurance. With this provision, the bill provides a mechanism to spread out repayment over a period of years. The bill allows for some flexibility in recovering costs as the Secretary of the Treasury would have the authority to determine how to implement the surcharge and whether it is in the national interest to waive all or part of the debt at any given time.

Determining who will bear the immediate costs of insured events is properly a public policy decision. The bills passed by the United States House and Senate are an example of difficult choices that must be made, in this case between government grants to the industry, which spread catastrophic terrorism losses to taxpayers, or loans to the industry, which spread these losses among primary insurers.[96] As policymakers weigh their options, part of their decision-making process should include an assessment of the economic impact on the group designated to pay the program's costs. This is especially important if a goal of the program is to encourage the growth of the private sector's capacity to underwrite terrorism risk. Any program placing or leaving too much risk with the private sector may undermine their incentives and ability to stay in the business.

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[95] At this time, the House and Senate have named conferees to discuss a compromise bill that will be acceptable to both chambers.

[96] Of course, ignoring the potential cash-flow problems associated with the timing of payments (or repayments) by insurance companies, it should be recognized that ultimately it is the insurance consumer (and their customers in the case of commercial insurance) who ultimately pay those losses.

2.2. Protect the government from excessive costs and inefficiency

A second principle to consider when designing a risk-sharing program is to protect the government—and, therefore, taxpayers—from excessive costs and inefficiency. When the government becomes involved in providing insurance, either directly or as a backup, it is usually because the private insurance market is having difficulty underwriting and pricing certain catastrophic risks. The government is a sensible candidate to assume these risks because of its ability to quickly generate enormous amounts of cash to pay the cost incurred by a catastrophic event and at the same time spread these costs over all or different parts of the taxpayer base or economy over a number of years. While these factors may provide a basis for government intervention in the market, they also complicate efforts to measure the government's exposure to loss. It is important to remember that whatever merits the federal government has as a risk-bearer, the same characteristics that inhibit private insurance firms from covering certain events could also make a federally-sponsored insurance program a costly undertaking.

There are steps the government can take to control losses and improve efficiency. Unless public policy goals indicate a clear role for a program completely administered and funded by the government, any program should keep market incentives where they belong—with private firms. By keeping some risks with the private sector, the government can ensure that the program does not give up private-sector efficiencies. As long as private firms have their own money at risk, the private market is a better choice than the government for handling traditional insurance functions. Firms should retain incentives to set the best prices they can (even in an environment of insufficient information), to require risk mitigation on the part of their customers in exchange for a reduced premium, and to carefully investigate losses to ensure that claims payments are appropriate. Structuring a program that gives insurers the opportunity to earn a reasonable profit, but at the same time places part of each company's capital at risk, could maintain the correct incentive structure. In addition to cost efficiencies, another reason to keep insurers involved in a terrorism insurance program is to retain their generally effective and efficient claims-processing mechanism. If the government decides not to use the industry to process claims and disburse financial assistance to needy victims, it would have to create the necessary infrastructure to handle these functions itself.

2.3. Reevaluate future government involvement

The third and final key principle for policymakers to consider when investigating program options is to establish an opportunity to reevaluate future government involvement in the insurance marketplace within the enabling legislation. Given the current crisis environment, any government solution should be temporary and revisited periodically. While a government may decide that ensuring the continued ability of the insurance industry to serve all its customers is in the national interest, given the lack of information about the scope and nature of the long-term problem of terrorism, it does not seem prudent to establish such assistance in a program that may become permanent. Government programs that are not carefully designed tend to become self-perpetuating and risk displacing the private market entirely. We can find examples of self-perpetuating programs in some of the programs we have described above. Fortunately, several strategies are available to minimize the possibility that a program will perpetuate itself. First, government bureaucracy should be kept to a minimum. An established bureaucracy tends to find reasons for its own continued existence. Any government program offering direct insurance to the marketplace, for example, might displace the private sector and encourage a federal government monopoly in terrorism insurance, in addition to foregoing the private sector efficiencies in mitigating and processing claims that were discussed earlier. Second, any program should have an exit strategy from the beginning. An exit plan will provide the insurance industry and program administrators with guidance on how the industry should emerge from the assistance program. Finally, a primary goal of any federal insurance program must be to create an environment in which the private market can and will be reestablished.

Of course, it is possible that the insurance industry's ability to price terrorism insurance may not improve in the near term. Even if insurers find ways to model and price "routine" terrorism, the mega-event may always remain beyond the industry's ability to price. For this reason, a program's sunset provisions may need to be reevaluated and modified as time passes and the true dimensions of the problem become clearer.

3. Conclusion

September 11 demonstrated the potentially enormous losses a single terrorist attack could afflict on a nation and forced reinsurers and insurers to severely limit their exposure to this risk. The increasing lack of available and affordable terrorism coverage to commercial business and property owners in the United States and the corresponding rise in their exposure to extreme economic loss in the wake of a similar attack has convinced policymakers to consider a role for the federal government in the terrorism insurance market. Among the alternative mechanisms for spreading potential losses from terrorism are models that share risks between the private and public sectors. Whether or not lawmakers choose to spread these risks to taxpayers is properly a public policy choice, but following the principles elaborated here will assist these decision-makers in designing a program that ensures both consumer access to terrorism insurance and an appropriate role for the government.

On Insurability and its Limits

by Christophe Courbage and Patrick M. Liedtke*

1. Introduction

The insurance sector has to permanently rethink the way its mechanisms function and react. After any major catastrophes, this need becomes more pressing. The dramatic terrorist attacks of September 11 that cast gloom over the United-States are unfortunately still present to remind us of this. When such important financial catastrophes impact the insurance market, it happens that insurance companies' ability to absorb shocks of that magnitude are tested to their limits. Due to the shortage in financial provision, companies may even cancel their policies under some special clauses. This is mainly the case because the occurrence of huge financial losses can change the risk landscape so radically and so fast that the associated risk assessment becomes very problematic. Understanding the frequency and severity of a potential claim and when and how the losses that arise from an insured event are to be compensated is a necessary precondition for sound insurance business.

Insurance can only operate within the limits of insurability. These limits are defined not only by a finite insurance capacity, but also by other parameters. In particular, supply-side constraints are some of those parameters, whether it is regulatory and legal limitations, the inability to price insurance in an economically sustainable way or the incapacity to provide sufficient risk transfer solutions. Limits to insurability in economic terms are also dictated by the need to control problems related to asymmetric information, in particular moral hazard and adverse selection. Finally, another issue is that the level of uncertainty might become so high as to be rationally unmanageable.

A better understanding of where those limits of insurability are is fundamental. How we might be able to influence them, i.e. push them back so as to increase the efficiency of the economic system, is also of great concern. As in the case of natural catastrophe risk, new mechanisms have been implemented such as cat bonds or cat options that help to raise private capacity.

In the present article, after presenting the concept of insurability, we first aim at defining an "insurability framework", meaning that we list, in the frequency/severity-space, the basic characteristics of risks that are or are not insurable. We then provide some insight on the factors that prevent the provision of an efficient level of insurance. Afterwards, we show how the possibility for coverage can be extended when the composition of the framework is altered.

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2. Insurability

The essence of insurance is to transfer risk in society, and sharing risk does this. Risk sharing is essential for entrepreneurship. It is well known that without risk sharing it would have been impossible to build skyscrapers or engage in other large projects. Who could have borne such risks?

Without adequate risk coverage, the development of modern economies would have been far different from what it is now. Bearing alone the risk linked to investment has necessarily an impact on production, employment and finally on growth (see Loubergé, 1981). The current events happening in the US are a stark illustration of this point. Cases of adverse economic impact to individual firms caused by the absence or high price of coverage for terrorism-related events are becoming more and more present as policies continue to be renewed over time. Some examples of large project cancellations, especially in real estate, have surfaced, with the lack of terrorism coverage being cited as a principal contributing factor (Hillman, 2002).

As obvious and simple as it appears, insurability is the core of the insurance business as it can operate only within its limits.

Insurance provides a method for individuals to equalize the amount of money available to them over diverse states of the world, i.e. it is a method of smoothing assets over time. The insured pays a premium, reducing his current wealth, in return for monetary compensation from the insurance company should a loss occur. The amount paid out by the insurer is not absolutely equal to the amount paid by the insured.

Various definitions of the concept of insurability exist in the literature.

In his book on limits of the insurability of risks, Baruch Berliner (1982) discusses criteria by which insurance firms can determine whether they will in principle offer to cover a particular risk. Those criteria are mainly supply-side criteria.

Others (see for instance Holsboer, 1995) define insurability as the situation for which a policyholder can buy the coverage he reasonably needs. This definition focuses on demand-side arguments.

From an actuarial point of view, a risk will be considered as insurable if the Law of Large Numbers can be applied. It is the case when the maximum potential loss is not too large and when the risks are not too positively correlated.

Based on those definitions, *we define a risk as being insurable when the organization of risk transfer in the private market place can be organized so that a prospective policyholder could acquire the coverage he needs to combat the adverse financial consequences of damages resulting from an uncertain occurrence.*

On the supply side, two conditions must be met before insurance providers are willing to offer coverage against an uncertain event. The first condition is the ability to identify and quantify, or estimate, the chances of the event occurring. The second condition is the ability to set premiums for each potential customer or class of customers. If those two conditions are both satisfied, a risk is considered to be insurable. Yet, insurers may still opt not to offer coverage against this risk, as it may be impossible to specify a rate for which there is sufficient demand and incoming revenue to cover loading factors and claims costs of the insurance and yield a net positive profit.

An insurance market will take place if, given the economic environment, a mutually advantageous risk transfer can be exploited by the consumer and supplier of insurance.

To identify the risk, estimates must be made regarding the frequency at which specific events occur and the extent of losses likely to be incurred. Such estimates use historical data of previous events and scientific analyses of what is likely to occur.

Depending on the frequency and severity of the potential loss, some risks are not insurable or are not worth being insured. Insurance existence requires a framework for efficient operation. In the next section, we aim at defining this framework in the space frequency/severity.

3. The insurability framework

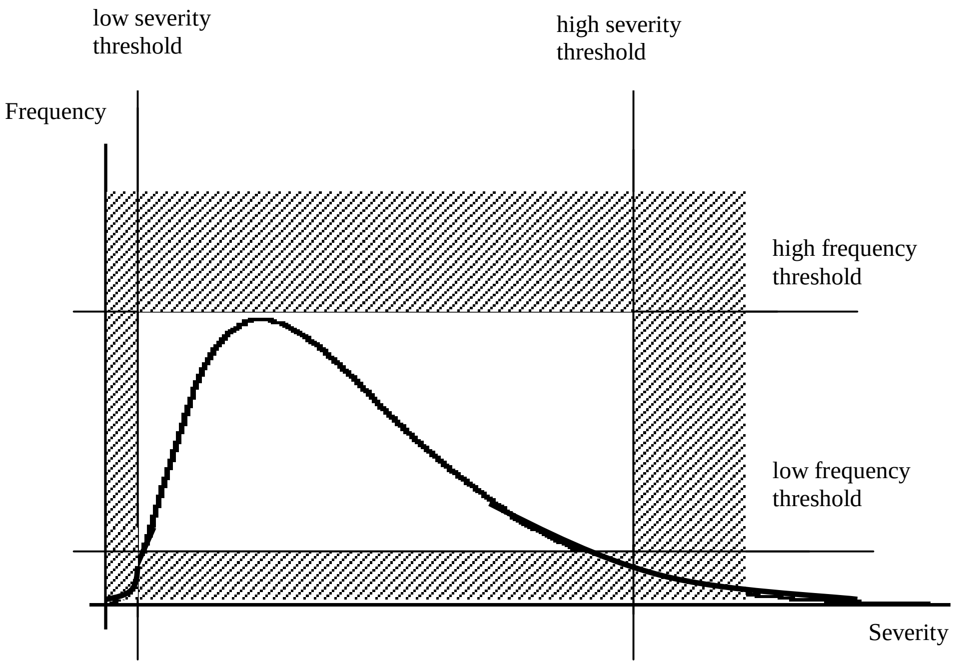
As we already pointed out, insurance requires that the losses have some probabilistic character. The risk characteristics must exist. If it were certain or nearly certain that a person would suffer a particular loss in a particular period, the solution would not be insurance as the risky element, which is created by uncertainty, is absent. Examples are costs of repairs or simple maintenance, which like other regular occurrences do not qualify as uncertain events.

On the other hand, extremely low frequency events are scarcely insurable. As the probability of the occurrence of the events is very low, the historical data may be poor or may even not exist, and then risk assessment and risk modeling may be very problematic (insuring earthquakes in areas that are considered as being not at risk might be such a risk).

Insurance also requires that the severity of the potential loss or the amount insured is not too small. For example, it is not economically efficient to insure an umbrella or tennis balls. The transfer costs created by the risk sharing mechanism are simply too high.

Finally, the fourth situation concerns the occurrence of events with huge financial consequences. Insuring the risk that a large asteroid hits earth is scarcely manageable. Even in case of possible risk quantification, raising the capacity required might be nearly impossible. We have to recognize that the world is not insurable. Only small parts are.

Once all those situations have been eliminated, it defines an insurability framework described in the severity/frequency space.



Within this framework, risks are in principle insurable based on the definition given above.

4. Obstacles to insurability

Once risks have been identified, the insurer has to price the risk he offers coverage on. He needs to determine what premium he can charge to make a profit. There are a number of factors that play a role in determining what prices companies would like to charge.

In particular, the limits to insurability in economic terms are dictated by the need to control the moral hazard and the adverse selection problem.

Moral hazard is the phenomenon familiar to all insurers that the behavior of an insured party changes simply because of the fact of having insurance. Moral hazard can occur either *ex ante* or *ex post* the occurrence of the loss.

Ex-ante moral hazard relates to the fact that as the risk is fully insured the insured party has less incentive to prevent the occurrence of the risk (see Shavell, 1979). Hence, due to this change in behavior, the probability or severity of potential accidents starts to rise so that the premium will be too low. If the moral hazard cannot be properly contained, a risk does indeed become uninsurable. At the extreme any insurance would be undesirable because the risk of accident will rise as a result of the availability of insurance. The fact that liability insurance was banned in many western European countries up until the nineteenth century and in the former Soviet Union until quite recently is a consequence of this problem (Faure, 1995). Techniques that allow insurers to fight against moral hazard are well known: partial insurance that keeps the insured exposed to risk so as to develop prevention activities is one of them; making the premium depend on preventive activities, to the extent that the insurer has the possibility to observe those activities, is another solution.

Ex-post moral hazard is the increase in claims against the insurance policy beyond the services the claimant would purchase if not insured (see Dionne, 1984). In the context of medical insurance, for instance, *ex-post* moral hazard includes excessive visits to doctors, longer hospital stays, and more elaborate and expensive methods of treatment. It is obvious that too much *ex-post* moral hazard can make insurance contracts show a deficit and then make the risk uninsurable. The problem here is to give good incentives to the policyholder to report his actual loss.

The phenomenon of adverse selection entails that an insurer, because he has no proper information about the risk constituted by the individual insured party, is unable to make a proper differentiation in premiums. This will in turn mean that insurance is relatively too expensive for the good risks, leaving the insurer with the bad risks and hence creating uninsurability. The problem comes from the fact that information is not always equally distributed among the parties. From the insurer, the point is to get hold of that information by means of adapted techniques. Hence, he can define the risk group as closely as possible and fix the premium accordingly (see Dionne et al., 2001).

Another element, also linked to the information problem that limits insurability is the concept of ambiguity. As we already pointed out, there are many instances in which the random variable describing the risk has no probability distribution. This is mainly due to the absence of historical data or to imperfect scientific knowledge. Owing to this lack of information, it may be very difficult to calculate or compute the insurance premium. The evaluation of the benefits of an insurance contract for the insured also becomes hardly possible. There is a large literature dealing with the subject of aversion to ambiguity from a demand-side point of view (see Gilboa, 1987). Regarding the supply side, ambiguity may lead to wrong estimation of the risk. Thus, the higher the uncertainty regarding the probability of loss and its magnitude, the higher the premium charged will be. As shown by a series of empirical studies, actuaries and underwriters are so averse to ambiguity and risk that they tend to charge much higher premiums than if the risks were well specified (see Kunreuther et al., 1995).

Finally, it is worth stressing that insurance is also constrained through regulatory and legal limitations. National insurance legislation determines and specifies what an insurance company can supply under its license. Hence simply because it is a new type of insurance, it can be outside the current definition of permitted insurance. Besides, certain types of insurance can be deemed to be against the public interest. For instance, it is unthinkable that homicide insurance for professional killers would be allowed. Finally, to be legally enforceable, insurance contracts usually require that the insured suffers a financially quantifiable loss and does not profit if the agreed event causing the loss occurs. Those points undeniably limit the supply of insurance.

5. Moving the limits of insurability

Once limits of insurability have been defined, the question on how to combat the problems created by these limits is at the forefront.

As explained above within the insurability framework risks are insurable. If they reside outside the framework, they have to be considered as uninsurable. Four basic scenarios can be isolated and we will state them below together with some ideas on how to extend those limits or how to make those risks insurable.

<u>Scenario 1</u>: risks located above the high severity threshold, i.e. to the right of the boundary line.

The obvious and most natural solution to increase capacity is to raise premiums so as to have enough reserve. Yet, as said before, the contract may become unaffordable to large parts of the population.

Another solution involving only the private market to increase capacity for high-severity (and often low-frequency) events is to consider catastrophe bonds. Such bonds refer to securities issued by insurance firms or re-insurance firms, with the key feature that if a prescribed catastrophic event occurs, then the insurance firm can use the cash from the bond sale to pay its insured losses. The insurance firm is then relieved of its obligation to repay the principal on the bonds.

Another way to extend the amount of capacity available in the private sector is to draw in the government as insurer of last resort.

Instead of extending the threshold, a final strategy would be to put the risk back into the framework through self-insurance activities (i.e. activities that reduce the severity of the loss, should it occur). For instance, in case of earthquake risk, the development of anti-seismic construction would be a good illustration.

<u>Scenario 2</u>: risks located below the low-severity threshold.

The idea to make those risks insurable is to reduce transfer costs. This can essentially be done through economic efficiency gain in offering insurance solutions, i.e. economies of scale, increasing competition, reducing overhead costs, and so on.

<u>Scenario 3</u>: risks located above the high-frequency threshold.

The obvious strategy is to reduce the frequency below the insurability threshold, through self-protection activity (i.e. activities that reduce the probability of the loss, should it occur).

A different strategy would be to provide coverage only under certain circumstances or in combination with other events (trigger events). An example would be basic car insurance against damages to the vehicle. Either they have to be caused by a third party (trigger) or under certain circumstances (e.g. meteorological conditions). All other damages have to be borne by the owner.

Scenario 4: risks located below the low frequency threshold.

One of the ways to insure those events is to pool them with high-frequency events. For instance, as in the case of car insurance, insurance against hail is usually included in the contract even if the car is used only in areas where hailstorms do not occur.

6. Conclusion

In theory, insurers can offer coverage for any risk that they can identify and for which they have enough information to assess the probability and magnitude of the potential loss. Yet, not least due to information problems, they may want to charge premiums that well exceed the expected loss. For some risks, the insurers will choose not to offer coverage as they fall outside the insurability framework. This is regardless of any demand issues. It is important to make a distinction between insurability and market for insurance.

Once insurability has been defined and delimited, the concern is the extension of its limits, in particular through the extension of capacity, whether it is private or public capacity. For some low-frequency high-severity risks, government-backed solutions have been created in several countries. The intervention of the state as insurer of last resort helps to make the market possible or to extend the amount of capacity available in the private sector. Pooling insurers of last resort could be a way to lighten the financial burden on states as well as to increase the capacity level, to the extent that risks are not highly correlated. Also, combining several uncorrelated risks that lie beyond the insurability threshold, such as extreme natural catastrophe risks and terrorist risks, would be a solution.

References

Berliner, B. (1982), *Limits of Insurability of Risks*, Englewood Cliffs.

Dickinson, G. (2002), “On the Concept of Insurability”, Working Papers Series of the Geneva Association, *Etudes & Dossiers*, 252, 33-40.

Dionne, G. (1984), “Search and Insurance”, *International Economic Review*, 25, 357-367.

Dionne, G., N. Doherty and N. Fombaron (2001), “Adverse Selection in Insurance Markets”, in *Handbook of Insurance*, G. Dionne (Ed.), Kluwer Academic Publishers, Boston, Chapter 7, 186-244.

Eeckhoudt, L. and Gollier, C. (1995), *Risk: Evaluation, Management and Sharing*. London: Harvester Wheatsheaf.

Faure, M.G. (1995), “The Limits to Insurability from a Law and Economics Perspective”, *The Geneva Papers on Risk and Insurance - Issues and Practice*, 20, N°76, 454-462.

Gilboa, I. (1987), “Expected Utility with Purely Subjective Non-Additive Probabilities”, *Journal of Mathematical Economics*, 16, 65-88.

Gollier, C. (1997), “About the Insurability of Catastrophic Risks”, *The Geneva Papers on Risk and Insurance - Issues and Practice*, 22, N°83, 177-186.

Gollier, C. (2002), “Insurability”, *NBER Insurance Conference*, Cambridge (USA), February.

Hillman, R.J. (2002), “Terrorism Insurance - Rising Uninsured Exposure to Attacks Heightens Potential Economic Vulnerabilities”, Testimony Before the Subcommittee on Oversight and Investigations, Committee on Financial Services, House of Representatives, *United States General Accounting Office*, 02-472T, February 27.

Holsboer, J.H. (1995), “Insurability and Uninsurability: An Introduction”, *The Geneva Papers on Risk and Insurance - Issues and Practice*, 20, N°76, 407-413.

Jaffe, D. and Russell, T. (2002), “Extreme Events and the Market for Terrorist Insurance”, *NBER Insurance Conference*, Cambridge (USA), February.

Kunreuther, H. (2001), “Risk Management of Extreme Events: The Role of Insurance and Protective Measures”, *First Paris International Conference on Risk and Insurance Economics*, Paris, December 11.

Kunreuther, H., J. Meszaros, R. Hogarth and M. Spranca (1995), “Ambiguity and Underwriter Decision Processes”, *Journal of Economic Behavior and Organization*, 26, 337-352.

Liedtke, P.M. (2002), “Special Editorial: Towards the New Insurance World”, *The Geneva Papers on Risk and Insurance - Issues and Practice*, 27, N°1, 1-4.

Loubergé, H. (1981), *Economie et Finance de l’Assurance et de la Réassurance*. Paris, Dalloz.

Marsaud, JL. (2002), “Cover for Terrorist Acts in Europe after 11 September”, Working Papers Series of the Geneva Association, *Etudes & Dossiers*, N°251, 25-37

Priest, G. (1987), “The Current Insurance Crises and Modern Tort Law”, *Yale Law Journal*, 96, 1521-1590.

Shavell, S. (1979), “On Moral Hazard and Insurance”, *Quarterly Journal of Economics*, 93, 541-562.

The Public Role of Insurers in Man-Made Catastrophes

by Gordon Stewart[*]

1. Striking terror in the heart of man

At 8:45 a.m. on September 11, 2001, an airplane struck the North Tower of the World Trade Center Complex in New York City. Our first thought was that a terrible accident had occurred. When a second large jet struck the South Tower at 9:03 a.m., the entire world knew it was a deliberate attack.

Even in the midst of the chaos and destruction visible from the windows of the Insurance Information Institute three blocks away, several things immediately became evident.

First, the attack would have enormous domestic and international consequences. Second, it could well be the most expensive insured disaster ever. And third, it would probably be the biggest media event in insurance history.

While by no means the most significant aspect of what is now universally known as "Sept. 11" or "9/11," its media effects on insurance are the unique business of the I.I.I. -- and they are profound.

This article presents the Institute's experience with the issues, decisions and actions of the insurance industry as portrayed and reflected by the news media from September 11 to December 31, 2001.

For the first few hours after the attack, the I.I.I. was able to remain open, initiating calls to national media and developing alternative communications systems through our offices in Washington, DC and Los Angeles.

With the collapse of additional buildings and the total loss of power, the communications team closed the New York office at about 6:00 p.m.

As the electricity and the telephone lines went down in Lower Manhattan, simply communicating at all with the media became problematic. Because the Twin Towers had carried antennas for the New York area stations, transmission was lost for several

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days. The collapse of the buildings also caused a programming nightmare for radio stations all over the country. Phone lines throughout the city became overloaded and service was interrupted or sporadic. Cell phone service was severely limited. The most effective means of communicating with the media turned out to be via e-mail from other cities.

Obviously the first story to be covered by the press was the devastation in Lower Manhattan and the great number of lives lost. For the insurance industry and its employees, the attack was personal – it happened where we live, work and meet. Nearly ten per cent of those lost in the WTC complex came from the insurance industry. I.I.I. gathered information from companies and presented a view of the industry not as a remote business, but as part of the tragedy. For example, A *Chicago Tribune* story: "1,100 Aon Employees Based in World Trade Center" focused on the lives lost within the insurance industry.

By the second day, loss estimates and the financial impact on the insurance industry were on the minds of most media. This is typical with major catastrophes. There is an immediate frenzy to put a number on every big event. *The New York Times* headline read: "A Day of Terror: The Insurers; Reinsurance Companies Wait to Sort Out Cost of Damages*"; Wall Street Journal:* "Insurers May See Biggest Liability Ever for Losses"; *Seattle Times:* "Claims from Attacks to top $3 billion; Worldwide Insurers Would Pay."

Normally, the I.I.I. puts out a "flash number" quickly, based on long-standing relationships with computer modeling firms and informal talks with companies. We do this reluctantly, knowing the number will certainly be revised. But we have learned the hard way that if we do not, someone, somewhere, will put out something and we are all stuck with it. A number that is way off the mark can have far-reaching negative consequences. If the industry generates the first number, we can stress its unofficial, non-binding nature while attaching our explanations and content, and thus retain some influence over the story.

However, in this special situation we decided not to use specific numbers, partly because they were simply unknowable and partly to dramatize the unprecedented nature of September 11. We simply described the disaster as the largest insured loss in U.S. history, far surpassing Hurricane Andrew. The resulting numbers in the early weeks reinforced the sense that September 11 was too big and unusual to quantify.

Interestingly, no firm figure has yet been placed on industry losses, with estimates ranging from US$ 30 billion to nearly US$ 70 billion. Estimates of total economic losses to New York City range up to US$ 105 billion, and the national and global implications are impossible to calculate. Overall, it has been in the industry's interest to preserve flexibility and credibility by not asserting a lot of numbers.

The third major issue to receive media focus, which arose soon after, was whether or not the industry would regard the attack as an insured event. There was speculation (not helped by the conflicting descriptions of public officials) that acts of war clauses would be invoked. After rapid consultations with U.S., European and other international companies, as well as organizations such as the Geneva Association, I.I.I. was able to say that the entire industry was committed to dealing with the consequences of the tragedy and counter the paranoid scenarios.

Then, barely one week after the airplanes struck, a different kind of attack took place – on computers in the U.S. and globally. A computer virus called Nimda began worming into Internet servers and personal computers. Cyber terrorism was thought to be a possibility. The virus greatly compounded the communications burden and has important lessons about emergency systems in the future.

In spite of these obstacles, it was essential that the industry establish a central, on-going information capability. In I.I.I.'s experience, how our industry is viewed in times of great crisis is central to its overall public standing. The reason for this is not complicated. Every day people are submerged in waves of information about all manner of things. Insurance, like most subjects, only stands out in rare moments. Like it or not, how we are perceived as having performed in an event like September 11 will influence the public's view of insurance for years to come. In fact, the turning point in our public standing from a low of 33 per cent to its present level in the 50 per cent range came when we as an industry for the first time organized a united, visible, and sustained communications response to Hurricane Andrew.

Therefore, less than two weeks after the attack, the U.S. insurance industry established a Disaster Insurance Information Office (DIIO) in New York City. Working through the I.I.I., the industry has created disaster insurance information offices following four other major catastrophes, including Hurricane Andrew in 1992, the "Laguna," California wildland fires in 1993, the Northridge Earthquake in 1994 and the Oklahoma City tornadoes in 1999. The DIIO following September 11 was the first time that the life, health and property/casualty sectors were brought together.

Working from the I.I.I. office in Lower Manhattan, the DIIO provides updated information on the insurance industry's response, supplies claims filing tips and maintains a dialogue with the public through an active consumer outreach program.

Equally important, the Disaster Insurance Information Office acts as a primary source of insurance information to the media. A Web site, www.disasterinformation.org, was developed immediately and continues to offer information on insurance coverages and refer reporters to companies, insurance organizations, government agencies, and other sources of assistance. A "score box," prominently displayed on the cover page of the disaster Web site, showed WTC Claims filed, both commercial and personal, the total and the claims value -- a feature the media used daily.

Representatives of the DIIO can keep in touch daily via e-mail, and regular conference calls are held to discuss emerging issues. This serves the extremely valuable purpose of helping the many industry groups speak from the same core content. In addition, the National Insurance Consumer Helpline (also run by the I.I.I.) has been available daily between 8 a.m. and 8 p.m. EST, to help with questions from businesses and individuals about the insurance implications of the disaster.

In all, more than 500 articles were written in the first 20 days after the WTC and Pentagon disasters. Television and radio stations covered the event almost uninterrupted. I.I.I. appeared in most national and local media outlets including, ABC's 20/20, ABC News, CBS Marketwatch, CBS News, CBS' The Early Show, CNBC, CNN NBC's Dateline and PBS' Nightly Business Report, Bloomberg radio, Capital Public Radio, CBS, National Public Radio, *Forbes, Fortune*, *Newsweek, U.S. News & World Report, Atlanta Journal-Constitution, Chicago Sun-Times, Los Angeles Times, Miami Herald, New York Daily News, New York Post, New York Times, Newsday, USA Today, Wall Street Journal, Washington Post*, Associated Press, Bloomberg News Service and Reuters.

In addition, there were 671 stories that appeared on the Internet involving I.I.I. explanations of issues arising from the attacks.

It is encouraging that during the first month following the September 11 event, seventy-five per cent of the stories written relative to the insurance industry were either balanced or positive. This is not accidental. In addition to the direct media work, the I.I.I. monitored newsgroups and e-mails to see what issues were emerging that needed a strong response. A process was initiated, which continues into 2002, of regular consultations with public officials from city council members to the governor, whereby the I.I.I. is advised of complaints or problems. These are then discussed with companies so as to short-circuit potential poor media.

However, as October went on, a new problem surfaced as a result of the difficulty adjusters had in gaining access to the properties they needed to inspect. Because the structures were part of a high security crime scene, and the FBI controlled the site, it meant spending hours going through security clearance just to get a pass. If unsuccessful, adjusters had to wait at a police barricade to obtain a police escort. Since checkpoints changed daily, sometimes hourly, they often didn't know where the right access points were.

Insurers grew concerned that the dominant media story would now be about the industry not paying claims fast enough. The press did not then know that within 24-hours of the disaster several companies had set up mobile insurance claim offices just outside the "hot zone" to provide immediate assistance to policyholders, including cutting checks on site. I.I.I. set-up interviews between reporters and member companies at these mobile response vans. The results were very good – numerous stories appeared about the efforts and frustrations of adjusters to get claims handled as quickly as possible.

Articles on the claims work appeared in such papers as *The New York Times*, *The Hartford Courant*, and others as well as wire services including Bloomberg Business News. The *Times* headline read: "Pay Claims Now, Quibble Later; Insurers Tend to the Disrupted Businesses in New York." Many of the stories focused on the sophistication of the CAT vans, which contained computers, onboard databases with necessary policyholder information, photocopiers, fax machines, printers and additional equipment for processing claims instantly. Reporters saw insurance people equipped with high-speed satellite communications helping customers on the spot. *The Boston Globe* wrote: "There, in a gravel-covered lot on the bruised lip of ground zero, Billy Mayberry and dozens of other insurance adjusters wait, checkbook in hand, to help New Yorkers put the financial pieces of their lives back together."

These types of stories also helped the perception of the industry by comparing the adjusters' work to those of the emergency crews on the scene. When asked by the media if they thought the jobs they were doing were extraordinary, adjusters typically stated in a low-key way: "This is our job. And we are here to get it done."

Further, with thousands of people missing in the WTC collapse, there was natural concern about how to collect life insurance benefits when death certificates could not be obtained. This was widely covered in the press including *The Wall Street Journal* on September 17. "The unprecedented destruction from the terrorist attack on the World Trade Center is expected to raise some difficult questions about payments to survivors from the victims' life insurance policies," the *Journal* reported. "Some of the families may not be able to provide proof of death and some policies may have exclusions for acts of war or terrorism that could lead insurers to deny claims."

This problem was urgently discussed, and the life insurers worked with regulators to develop a simple, one-page affidavit that beneficiaries of those killed in the September 11 attacks could use in lieu of a death certificate to claim life insurance benefits. Solutions were immediately brought to the media's attention and prominently placed on the DIIO's Web site.

Meanwhile, as could be expected, political rumblings had begun in Washington. On September 21, the White House met with insurance industry leaders, who reassured President Bush that insurance companies and agents and companies were well positioned to handle claims stemming from the September 11 terrorist attacks. Then on September 26, the U.S. House Financial Services Committee held hearings on the insurance implications of terrorist attacks. Insurers testified before the committee about the state of the industry in the wake of the September 11 attacks. Industry leaders and the DIIO assured the committee that, while the industry would honor its commitments to policyholders, "if there are additional terrorist attacks, it may compromise our ability to keep America insured."

In the midst of it all, by mid-October bioterrorism became the new hot issue. Envelopes carrying anthrax had been mailed to key media and politicians in New York and Washington. The FBI began to investigate, temporarily closing down television stations in New York and government buildings in Washington. Even the offices of the Insurance Information Institute received suspicious mail and the New York police called in the FBI. Their assessment is that I.I.I. visibility increased our attractiveness to potential terrorists and hoaxers (a greater level of significance than I personally feel we should have). More important, interruptions in the mail due to the anthrax scare resulted in the temporary cancellation of polices of some auto insurance customers, which became another media problem.

With several U.S. anthrax-related claims now filed, insurance groups began researching and debating how terrorism-spread disease fit into policies that do not mention it by name. Workers' compensation, property, liability and business interruption are lines that would certainly be affected. Biological warfare agents could mean large workers' compensation claims if people were exposed in the course of their employment. *The Hartford Courant* had already reported that

"The September 11 terrorist attacks will pump up premiums for workers' compensation insurance around the nation, an added burden for employers who were facing rising rates anyway, industry experts say."

The I.I.I. and DIIO worked extensively with the media on bioterrorism, at the same time warning that this would lead to higher costs later. Throughout, our communications stressed that even though the September 11 event was being handled, there would inevitably be higher prices and availability problems in the future, not only as a result of the attacks, but because of trends at work well before.

Yet another issue, and a particularly unpleasant one, involved fraud. Concern about fraudulent claim filing was accurately portrayed in the New York *Daily News*, which covered the arrest of a Westchester woman who allegedly tried to collect both insurance and money from charities by falsely claiming that a brother and two sisters died in the attack. I.I.I. arranged an interview for the *News* with the National Insurance Crime Bureau, the non-profit organization that partners with insurers and law enforcement agencies to facilitate the identification, detection and prosecution of insurance criminals. We expect more fraud problems in the months ahead. And of course, the one vs. two-occurrence lawsuits continue to be covered by the media including *The New York Times*, *Financial Times*, *Newsday* and *Wall Street Journal*.

Another high-profile issue was airline liability and the insurance implications. A *Los Angeles Times* article dated October 24 said: "Airports across the country are struggling to protect themselves financially after having their insurance coverage for war and acts of terrorism canceled in the wake of the September 11 attacks." A national sense of panic set in and the airlines were "bailed out" with several billion dollars of direct U.S. government aid.

But after the federal government provided such hasty and generous financial support to the airlines, the issue of government involvement with insurance became problematic. Several op-ed pieces supported the general industry belief that some form of government participation was important to help make coverage available for unprecedented, unpredictable, and so far unpriceable events. Important editorials reinforced this view, including *The Wall Street Journal* and *Washington Post.* Nevertheless, a number of news accounts, following upon the very rushed and costly airline package, used the phrase "bailout," which naturally provoked vigorous corrections of this mischaracterization.

Despite strong industry efforts, Congress ended its session without approving any proposal that would backstop the insurance industry following a terrorist attack. *The New York Times* December 21 headline read: "Insurers fail to gain help in terror costs."

The White House, business leaders and many analysts fear that the pace of the economic recovery will be slower as a result of the federal government's failure to provide support for terrorism coverage. With the incredible year 2001 finally ending, there is of course no way to know how severe the crises in availability and affordability will be. But we can say that coverage will be scarcer, tightly restricted, and very expensive. A majority of states now allow insurers to exclude terrorism attacks from basic policies altogether.

The I.I.I.'s central concern going forward is how whatever happens will be perceived by the media and thus how it will affect our public standing in the coming years. Because the industry has done a better job of anticipating problems, taking preventative measures and deploying forceful communications, public approval of insurance for the last several years has hovered just above 50 per cent, as opposed to around 30 per cent when we began our new approach. This has kept insurance from being automatically and universally singled out as a political target, and made it possible even to discuss federal participation in this unique situation.

In a sense, such a level of public approval is like a positive balance for the industry. One of I.I.I.'s tasks is to help keep it that way, and perhaps enhance our relationship with the millions of people who will know and judge us together as an industry only through the media during the evolution of the great catastrophe called "September 11." At the very least, in this limited but not insignificant aspect of the tragedy, we can say as of 31 December 2001 – so far so good.

2. Conclusions for future catastrophes and how we handle them from a communications perspective

The experience of the Insurance Information Institute from Hurricane Andrew through September 11 demonstrates that the media's portrayal of insurance in a major crisis is the biggest single factor in the industry's public standing. This occurs because the insurance industry receives its highest amount of coverage during a period when the largest numbers of people are paying attention.

Most important, it is the industry as a whole that is judged by the general public, not simply individual companies. If a particular firm or sector does poorly, it will drag down the perception of the whole, which is usually identical to the element with the lowest public approval.

Therefore it is essential that a unified, organized, alert, aggressive and sustained communications effort be put in place. This cannot be summoned out of thin air when a catastrophe strikes.

Since the news media is always among the first on the scene, crisis communications work must begin immediately and continue long after the initial drama. Acting quickly to explain a disaster's implications and reaching out to victims and their families are important first steps. Being open and honest, informing groups both internally and externally, will allow companies and the industry to get beyond even the worst scenarios.

Problems also arise from not listening closely enough to critics and failing to communicate what is being done clearly enough and long enough. The industry learned this the hard way with poor response to disasters such as the 1991 Oakland, California fires. We also learned that if long-term strategic communications planning is combined with honest, aggressive implementation, then a disaster – man-made or natural – can affect insurance positively for many years.

Global Terrorism and the Insurance Industry: New Challenges and Policy Responses

by Michael Wolgast*

1. Introduction

The events of September 11 have hit the insurance industry world-wide in more than one way. For one thing, they provided the necessity to cope with one of the largest damages caused by any single event in the history of insurance. At the same time, financial markets were reacting, providing another additional challenge for insurance undertakings both in their role as investors and in their role as listed companies relying on favourable access to the markets.

Short-term adjustment following September 11 has by now been largely accomplished: The issue of terrorism is now taken account of in many insurance contracts, premiums have had to be re-calculated, and new capacity has been created in global reinsurance at a breath-taking pace (section 2). However, the implications of global terrorism for the insurance industry go far beyond this short-term adjustment: Up to now, there is hardly any consensus whether or to what extent the protection against “terrorism” can be provided by insurance undertakings just in the same way as the insurance against damage from say traffic accidents or even natural disasters. Indeed, this question touches both on the theoretical foundations regarding the question of insurability, one of the cornerstones of insurance economics (section 3.1), and on the definition of the nature of “terrorism” (section 3.2). Even if new contracts offered in the market have been able to again (partly) include the risk of terrorism even after the September 11 events (section 3.3), this issue is far from being resolved.

The most obvious corollary of discussing the insurability of the risk of terrorist acts is an assessment of the (potential) role of the state in this field. The existence of insurance provides positive spill-overs for economic activity and especially entrepreneurial risk-taking which is crucial for innovation, structural change, growth and employment. Therefore, if the markets cannot (fully) provide coverage against terrorism, other institutional set-ups possibly including the state must be discussed in order not to fall back in terms of economic efficiency (section 4.1). Model solutions have been established e.g. in Britain and France, and are currently under discussion in the US and in Germany (section 4.2). The paper ends with some conclusions (section 5).

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2. The impact of September 11 on the markets for insurance

A first obvious implication of the attacks of September 11 for the insurance industry was that since a large part of the economic damage was covered by insurance contracts, the events caused major insurance industry losses. Even if it is still impossible to be specific about the precise volume of claims in the context of September 11, due to administrative complexities and pending legal issues[97], current estimates of the potential losses range from US$ 32 to 56 billion[98]. Other estimates predict a volume of insured losses of roughly US$ 40 billion[99]. September 11 is thus at the same time by far the worst terrorist act which occurred in recent years in terms of fatalities and insured property losses (see table 1) and also – including natural catastrophes – probably the most costly single event in the history of insurance, even if in terms of the insured loss in non-life business, according to Swiss Re, Hurricane Andrew in 1992 might still have hit a higher number (see table 2)[100]. Before 2001, the largest man-made property insurance loss – as opposed to losses triggered by natural catastrophes – was the Piper Alpha oil platform explosion in 1989 with a loss amount of US$ 3 billion in 2001 values, which in terms of the loss caused by the World Trade Center event was more than 10 times less. Most of the losses caused by September 11 are linked to property insurance and insurance against business interruption, however, liability and to a lesser extent life insurance and workers' compensation are also affected. Due to the global nature of the insurance markets, the losses were not confined to the insurance industry in the United States: Insurance undertakings in many countries were concerned, and in the reinsurance market, which is to a high degree globally integrated, European companies (Lloyds's, Munich Re, Swiss Re) were among those which suffered the highest losses[101]. For an economic assessment of these losses, it is important to realise that claims of this magnitude cannot easily be absorbed by the private insurance sector. According to calculations from Tillinghast -Towers Perrin for single lines of business, the September 11 losses vary between 9-15 per cent (workers' compensation), 66-84 per cent (property and business interruption), 8-10 per cent (life, accidental death and

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[97] One prominent example in this context is the question whether the terrorist attacks on the two towers of the World Trade Center (WTC) constitute one single occurrence or two logically independent events. In the first case, due to a clause in the property insurance contract imposing an upper limit of US$ 3.5 billion in maximum compensation per event, the insured loss would be exactly this amount, in the second case, the sum would have to be doubled. Also, the implications of the Victims' Compensation Fund set up by the government for private-sector insurance contracts are still under discussion. In the case of earlier events (Hurricane Andrew, Northridge Earthquake), it took more than one year before the final amount of losses actually emerged.

[98] Source: Tillinghast-Towers Perrin.

[99] Source: Insurance Information Institute (III), New York. Swiss Re's best estimate for the overall insured loss is "some US$ 38 billion" (Schaad (2001, p. 4)). Also, Swiss Re came out with an overall economic loss estimate of US$ 90 billion. However, it is even much more difficult to quantify the overall economic loss due to the tragic events of September 11 than the insured loss.

[100] One reason for this is the high number of fatalities in a highly industrialised country. A second reason is the high potential of liability suits which constitutes by far the most important single source of uncertainty about the entire volume of losses caused by September 11.

[101] According to statistics compiled by the III, the loss estimate for Lloyd's amounted to US$ 2,800 million, Munich Re US$ 2,368 million, Swiss Re US$ 1,300 million, compared to US$ 2,280 million for Berkshire Hathaway or US$ 1,740 million for Ace (updated through December 31, 2001).

disability) or 14-55 per cent (liability) of the industry's normal annual losses[102]. In aviation insurance, the estimated losses even amount to 400 to 500 per cent. Intuitively, it should therefore be clear that September 11 came as a severe blow for the underlying calculations in the insurance business and had a strong immediate impact on the industry's profits and capital reserves, even if the insurance sector was still able to absorb this one single terrorist event without major disruptions. On the other hand, a multitude of events of this scale would definitely put the stability and soundness of major insurance companies and of the insurance industry world-wide at risk.

An important short-term implication of the volume of losses was that since the (prospective) compensation of claims significantly reduced the capital available for writing business in the insurance markets (the "capacity" of the market), new coverage was either hardly available or only available at extremely high prices in the reinsurance markets in an immediate reaction to the events of September 11. Of course, one can argue that the price mechanism should lead to an efficient reallocation of capital, and that, as a consequence, this situation can be regarded as a temporary, exceptional phenomenon only. In the short run, however, since new capital is never instantaneously available, the events of September 11 provoked a substantial "hardening" of the insurance markets – or, more precisely, the markets for reinsurance – world-wide.

Beside the huge volume of losses and the short-term near collapse of the global reinsurance markets, a second strong impact of September 11 on the global insurance industry was due to the reaction of the financial markets. The dramatic almost immediate world-wide decline in stock market levels provided an additional challenge for insurance undertakings both in their role as investors (in particular in life and – to a lesser extent – also in non-life business) and in their role as listed companies relying on favourable access to the markets (especially in the situation caused by the events of September 11). Moreover, 11 September hit the financial markets in a period where they were already going through a critical development, as the prices for many assets, in particular shares and above all technology shares, had severely deteriorated even before 11 September. In this environment, the dramatic further decline of security prices triggered by September 11, in many countries, led to a reconsideration of those supervisory, fiscal and accounting rules for insurers which might have brought about the threat of a massive selling of their shares by insurance companies – the largest institutional investor with pension funds in OECD countries – in order to fulfil regulatory requirements. Indeed, in the aftermath of September 11, insurance companies in their role as investors were confronted with a market situation which would have forced them to sell large parts of their portfolio under current regulatory provisions. To avoid major disruptions, regulators adopted a wide spectrum of temporary measures. Forbearance measures ranged from an easing of solvency/ funding requirements, changes in accounting standards[103], changes in tax regulations,

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[102] Guinn (2002).

[103] For example, in Germany, on account of special accounting rules applicable only to them, the German insurance companies would have been forced to sell substantial share and investment holdings in an adverse stock market situation, in order to minimise fiscal disadvantages and take precautionary accounting measures. The German government has removed this pressure by adopting new accounting rules (through a modification of article 341 b of the German *Handelsgesetzbuch*).

to a relaxation of investment rules[104]. Not least as a consequence of these short-term policy measures, by the end of 2001, the markets had recovered, and both the major indices and the value of most single insurance stocks were back at their pre-September 11 levels (see table 3). Also, with respect to the destruction of capacity and the subsequent hardening of the global markets for reinsurance, the price mechanism indeed led to an adjustment process towards a new economic equilibrium, and, moreover, adjustment occurred at a breath-taking pace. The scarcity of capital and the premium increase in reinsurance, on account of the expected related yields, resulted in a substantial inflow of new capital into that market (see table 4). In total, new capacity in the order of some US$ 30 billion has been or will soon be established, mainly through capital increases (new stock), the placement of debt paper or the creation of entirely new reinsurance companies[105]. Whether this will be sufficient in order to fully balance the initial effects of the events of September 11 remains to be seen[106]. In any case, the almost immediate, substantial inflow of new capital into the market in reaction to a situation of severe shortage of supply and high prices can be regarded as a model of the extremely efficient functioning of the price mechanism in a global market which has not yet been subject to major regulation.

In the meantime, short-term adjustment following September 11 has thus to a large extent been accomplished. However, despite an efficient settlement of claims not least due to the ability of the insurance industry to absorb this one huge single loss without major disruptions and in spite of the comparatively easy recovery both of the stock markets and the markets for reinsurance following the immediate impact of September 11, the implications of global terrorism for the insurance industry go far beyond this short-term management of the event. Rather, the devastating attacks of 11 September have led to a fundamental reassessment of existing assumptions and scenarios. Historically, many insurance contracts covered damages regardless of their cause, with the exception of damage caused by war, civil war or civil commotion. Since terrorism in most countries[107] was not part of the war exclusion clause, damages resulting from a terrorist attack were covered[108]. By contrast, the staggering, entirely unexpected loss

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[104] For instance, in the United Kingdom, the FSA temporarily eased the financial investment rules for life insurance companies, amending the "resilience test", which tests the ability of a fund to withstand major falls in asset prices (such as equities and fixed interest securities).

[105] One prominent example is the creation of a high number of new reinsurance companies in Bermuda, financed mainly through private equity investment from the United States. In total, the six largest new companies founded in Bermuda have attracted some US$ 7 billion in fresh capital (source: Fortune, June 10, 2002).

[106] One aspect in this context is the "flight to quality", i.e. the augmented demand for first-class reinsurance cover due to a stronger differentiation between reinsurance companies in terms of their rating and financial strength, which provides an additional factor in the market getting tighter. In the medium term, some observers even expect a new trend to over-capacities and a decline in reinsurance premiums ("cyclicality" of reinsurance markets).

[107] Special regulations or pool solutions with state support were in place to cover terrorism risk even before September 11, but only for a few particularly exposed countries (e.g. Israel, South Africa,. Spain, UK) We shall come back to these models in section IV 2 of the paper.

[108] Otherwise the statistics provided in table 1 would not exist. However, the risk of terrorism was calculated on a different basis, and accordingly no specific provisions were allocated to meet these exposures. In the case of the World Trade Center insurers considered the possibility of an aeroplane crashing into one of the buildings – not to speak of both towers – as so highly improbable that it was not even taken into account in

amounts of September 11 and the new political dimension[109] have led insurers and re-insurers world-wide to reconsider the question whether the risks associated with national or global terrorism can at all be insured by means of standard industry techniques. Consequently, in a first, immediate reaction, insurers and re-insurers world-wide either cancelled or abstained from renewing existing contracts upon expiration, especially in the field of aviation insurance and industrial property insurance[110], or imposed new terrorism exclusion clauses[111], leaving parts of the risk uninsured[112]. Even if in the meantime new contracts offered in the market have again been able to (partly) include the risk of terrorism even after the September 11 events, there is hardly any consensus whether or to what extent the protection against "terrorism" can be provided by insurance undertakings just in the same way as the insurance against damage from say traffic accidents or even natural disasters. Obviously, one important consequence of discussing the insurability of terrorism risk is an assessment of the (potential) need for public-sector intervention in this field. These questions will be discussed in the remainder of this paper.

3. Insurability of the risks of terrorism

3.1. The limits of insurability

The basic principle of insurance consists in an institutionalised pooling or sharing of risks which from the perspective of the insured allows for a partial or complete elimination of these risks against a certain payment towards the community of the insured. (In this view, the insurance company acts as the organiser of such a collective arrangement.) Insurance therefore provides the possibility to share risks and thus to almost completely eliminate them from an individual perspective. From the standpoint of risk-averse consumers or entrepreneurs, insurance thus brings about a significant increase in economic welfare (the reduction of risks leads to an improvement in terms

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the calculation of the Probable Maximum Loss (PML). The outstanding character and novelty of the occurrence of 11 September therefore calls for a re-examination both of the probability of occurrence and of the maximum loss (the PML) and thus requires at least a recalculation of premiums needed to cover these risks (if at all possible).

[109] In the past, terrorism was primarily a national phenomenon (e.g. in Israel, Spain, the UK). Terrorism has assumed a new international dimension since 11 September.

[110] One important aspect in this context is the divergence between primary insurance and reinsurance. After September 11, many insurers had to realise that part of their portfolio – and especially exposure to the risk of terrorism – was not covered by reinsurance anymore.

[111] According to Heck (2002), as from January 1, 2002, reinsurance arrangements between primary property/ casualty insurance companies and reinsurance companies contain a large number of new restrictions on top of the exclusion clauses for terrorist acts. Kollar (2002) provides examples of terrorism exclusion clauses. Other examples for the direct or indirect exclusion of terrorism are under discussion in Germany for life or private accident insurance or motor liability insurance (removal of the unlimited liability which is currently in place).

[112] In aviation insurance, the liability cover applicable to date to the amount of US$ 1 to 1.5 billion per aeroplane was removed, taking advantage of the very short 7 days' cancellation period. As a response, the governments in most countries offered the airlines temporarily – at first restricted to one month, in the meantime renewed several times – state third party liability (TPL) coverage for loss or damage caused by war or terrorism because otherwise the aeroplanes would not have been able to take off. Not least these developments renewed in the public at large the awareness of the economic functioning and importance of insurance.

of the utility function) or entrepreneurial activity (parts of the risks associated with business activities are taken over by the insurance system). More growth and employment are the consequence. The diversification of risks which is the basic underlying principle of insurance takes place across the community of the insured, but also over time. Important extensions of the basic model include transaction costs, the degree of risk aversion and asymmetric information possibly leading to adverse selection or moral hazard problems[113].

Beside these basic tools of Insurance Economics, the theoretical conditions under which the insurance principle can actually be applied in practice (the "insurability conditions" or "insurability criteria") have been the subject of an intense discussion in the economic literature on insurance[114]. Conversely, it was established that beyond the limits of insurability, risks could not be insured, i.e. they could not be eliminated through a process of diversification across individuals and over time[115]. In an attempt to summarise the literature, the most important insurability criteria would include[116]:

1. Randomness (of the loss occurrence)
2. Definability of the (maximum possible) loss
3. Assessibility of the probability and severity of losses
4. Independence (of loss occurrences)
5. Size of the (maximum possible) loss

The first condition (*Randomness*) implies that the time at which the insured event occurs must be unpredictable, and the occurrence itself must be independent of the will of the insured. Those events which will occur with certainty cannot be insured, and it must be ruled out that the insured can manipulate the occurrence of the event. (However, for the latter condition, the borderline towards all forms of moral hazard is blurred.) The second and third condition (*Definability* and *Assessibility*) also belong to the actuarial-mathematical area. In advance, it must be possible to determine the possible (probable) maximum loss (the PML) and to calculate the probabilities of certain loss events on the basis of statistical information from the past and additional knowledge of the technical determinants of the risk in question. A prerequisite for this is the existence of an unambiguous, precise definition of the losses to be covered by the

113 Cf. e.g. McCall (1987), (1992). Standard textbooks include Borch (1989), Gollier (2001) or the handbook edited by Dionne (2000). Gollier (2002) also provides a concise summary of the main arguments.

114 Cf. e.g. Berliner (1982), (1985), (1988) or Gollier (2000), (2002).

115 It is important to note that this theoretical definition of "insurability" will not necessarily coincide with the availability of insurance in real-world markets. Deviations are conceivable in both directions: (1) Even if a risk was insurable in theoretical terms, the institutions for implementing the corresponding insurance system might not yet have emerged in practice. (This would be equivalent to saying that profit opportunities for insurance companies have not yet been identified and exploited.) (2) Even if a risk was not insurable in theoretical terms, insurance cover might be available in the markets. One example for this would be a situation in which some form of gambling is involved on the part of the insurance company. In that situation , since the system will not be able to settle all claims in the case of an extreme event, some residual risk will in fact be left with the insured, even if in legal – though not in economic – terms the insurance contract seems to fully cover the risk in question.

116 The following enumeration mainly draws on the discussion of the insurability criteria provided by W. Karten (2000, pp. 128-135).

insurance arrangement in the case of the event. The fourth and fifth condition (*Independence* and *Size*) refer to the economic side of insurance. For the practical implementation of the insurance principle, the correlation between single events should not be too high, and the size of the potential single losses must remain within certain borders, since, otherwise, it could become economically unfeasible to settle the claim or all claims in the case of the insured event.

From this short discussion of the insurability criteria, it should have become clear that they cannot be viewed as clear-cut, precise definitions. Rather, they provide an important guideline for economic policy-makers and the management of insurance companies. Still, if any benchmark can be used in order to assess the insurability of the risk of terrorism, it is these criteria which have emerged from the literature.

3.2. The nature of terrorism

The phenomenon of terrorism is difficult to define in unambiguous terms. In any case, 11 September has brought to light a new dimension of global terrorism, with a staggering, previously inconceivable scale of threat scenarios and loss potentials. Political, economic and social developments have combined to bring terrorism into the focus of international attention. What was formerly predominantly a national concern has now become a global threat. Whereas in the past, terrorism was primarily a national phenomenon (e.g. in Israel, Spain, the UK), terrorism has assumed a new international dimension since 11 September. Coupled with these geopolitical factors is the fact that terrorist organisations now have greater access to extremely effective and lethal weapons. Also, the size, complexity and vulnerability of certain targets – such as densely overbuilt downtown areas, financial centres or industrial or nuclear plants – and, in general, the growing concentration of wealth in economic centres around the world enable terrorists to trigger damage of astounding dimensions with relatively simple concentrated attacks. The unprecedented attacks of September 11 have illustrated that both the severity and frequency of loss exposure have become virtually immeasurable. The potential extent of fatal and disruptive effects is also due to the fact that terrorists will be ready to sacrifice their own lives to maximise damage, disruption, horror and the number of fatalities.

Terrorism risk bears some similarity with the so-called “new risks” which have been taken over by the insurance industry in recent years[117] or with natural catastrophe risks such as earthquakes, storms and floods. In both cases, enormous inherent loss potentials make diversification difficult to achieve; individual events can affect entire economies and many different insurance lines of business. And yet, there are also differences: Unlike terrorist attacks, natural hazards or technical accidents –

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[117] During the past, the insurance industry has been ready to cover emerging new risks though these were often far larger and more complex than any risk covered before (e.g. nuclear reactors, space satellites, barrages, offshore oilrigs, huge oil tankers, etc.). The increase of so-called large risks can also be attributed to rising wealth and technical progress. As a result, ever increasing values must be insured which, in addition, often appear in a massive concentration. This is necessarily accompanied by an increasing vulnerability to large claim occurrences.

irrespective of their dimension - occur randomly and without intent, and their probabilities and consequences can be modelled with scientific data and methods. On the contrary, 11 September not only stands for a new dimension of the probable damage, but also for a very different origin of that damage. With the political motives behind this kind of "man-made disaster", the factor "intentional conduct" provides a striking difference between the risks of terrorism on the one hand and e.g. natural catastrophes on the other hand. In that respect, terrorism has to be associated with other political risks like war or civil unrest rather than with accidents or the forces of nature[118].

In terms of the "insurability conditions" (cf. section III 1), terrorism risk clearly does not comply with most insurability criteria. Of course, terrorist attacks meet with the criterion of *Randomness* (of the loss occurrence), since they cannot be foreseen and are hardly subject to the will or the influence of the insured (apart from the standard moral hazard problem). Also, the condition of *Definability* of the (maximum possible) loss might be fulfilled, even if this remains subject to considerable doubt. Terrorism exposure would have to be estimated to arrive at reasonable premiums. However, while such estimates might take into account location and types of risk, the attacks of September 11 – unprecedented and unthinkable before that date – demonstrate that it is hard to think of all possible atrocious scenarios. In any case, however, all the other conditions are not fulfilled in the case of terrorism risks. For example, in the attempt of actuarial calculations of the risks of terrorism, insurers would be confronted with the problem that terrorism hardly complies with the criterion of the *Assessibility* of the probability and severity of losses, since historical data cannot be relied on, and technical or scientific approaches fail in the assessment of the likelihood of terrorist events. While in general, occurrences linked to "intentional conduct" are hard to estimate anyway, it becomes virtually impossible for an insurer to calculate the actions of Osama bin Laden or the *Al-Qaida* network. Due to the absence of any statistically reliable loss history and the inability to project future losses, private insurance coverage of these risks should hardly be possible, at least according to theoretical considerations. In addition, the criteria of *Independence* (of loss occurrences) and *Size* of the (maximum possible) loss – aiming at the economic capacity of the insurance industry – are clearly violated in the case of global terrorism. To the contrary, in the event of terrorist attacks, a series of occurrences, each affecting many lines of business (property/casualty, business interruption, life, liability, etc.), is highly probable, and the PML is beyond reasonable calculations. In sum, from the standard textbook insurability criteria, the unambiguous conclusion would be that in the case of terrorism, like in the

[118] This observation also corresponds to the standard definitions of terrorism applied by the insurance industry. "Terrorism" is always defined in terms of the motives behind the causes of a certain loss or damage. E.g., Swiss Re (2002, p. 16) uses the following definition: "Terrorism means an act or threat of violence or an act harmful to human life, tangible or intangible property or infrastructure with the intention or effect of coercing any government or putting the public or any segment of the public in fear". A similar definition is quoted by Kollar (2002, p. 22). However, in practice, it might turn out extremely difficult, especially for smaller incidents, to determine whether a certain event can be linked to an act of terrorism, and costly litigation procedures cannot be ruled out.

case of war or other types of social disruption, the associated risks can hardly be (entirely) covered by private sector insurance[119].

3.3. Insurance contracts offered in the markets

One important observation, which is often referred to as counter-evidence against the assertion that the risks of terrorism were not insurable, is that several weeks after the initial shock of September 11, and in contradiction to first statements, insurers began to re-include the risk of terrorism in their contracts or to offer new, separate insurance contracts covering the risk of terrorism[120]. However, examining this phenomenon more closely, the observation is by no means in contradiction with the assessment that terrorism risks are basically uninsurable. Similar to other types of insurance which are difficult to estimate, such as natural catastrophes or products liability, in the case of terrorism, ways to assume at least a certain proportion of the risk are subject to careful underwriting and exposure control. In practice, this means that upper limits are imposed on the maximum loss to be borne by the insurance industry, that coverage is limited to certain lines of business (property), while other risks (business interruption, liability losses, life/health) will not be insured, and that, moreover, short cancellation periods will allow for the necessity of being able to react almost instantaneously in case the risk should materialise. At the end of the day, these forms of insurance can therefore hardly be regarded as a full protection against the threats of terrorism. Moreover, from a more general perspective, as has been pointed out before, the theoretical concept of insurability must not be confounded with the actual availability of the corresponding insurance contracts in real-world markets[121].

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[119] Gollier (2002, pp. 16-26) argues that it would be superior from an efficiency standpoint if these risks were shared by private individuals world-wide. However, since (mandatory) world-wide insurance cover and unlimited access to the capital markets – two of the main elements in his model – are hardly feasible through private insurance (alone), his conclusion is that in view of the resulting insurability problem associated with terrorism coverage, the state must play a role, in order to avoid important adverse effects on welfare. The same conclusion – that terrorism cannot be covered by private insurance alone, especially after the extreme events of September 11 – is reached by Jaffee and Russell (2002) or Kunreuther (2002). A different view seems to be expressed – at least by first sight – by Munich Re (cf. Munich Re (2001)) or by Swiss Re (cf. Schaad (2002, p.7), Swiss Re (2002, p.20)). Also, on the Internet, Swiss Re maintains that "while the parameters have changed, terrorism is, nonetheless, an insurable risk ..." (Swiss Re, Research & Publications, Swiss Re top topics, Terrorism, Terrorism – a new dimension (available under www.swissre.ch)). However, it would be entirely wrong to take these statements as counter-evidence against the assertion that terrorism was not (fully) insurable. Rather, the statements from the industry rely on the assumption of limited coverage clauses and short cancellation periods which cannot be regarded as a full protection against the threats of terrorism (cf. section 3.3).

[120] E.g., under the name of Special Risk Insurance and Reinsurance Luxembourg S.A. (SRIR), five major European insurers and one company from Bermuda have recently founded a special insurer for terror risks. Similarly, Allianz and Berkshire Hathaway developed a concept for insuring aeroplanes against the risks of terrorism. A counter-example, however, is provided by the attempt of leading German industrial companies to create an own (captive) reinsurance company charged with covering the risks of terrorism, which after months of preparations finally collapsed in late May 2002.

[121] Cf. footnote 21.

4. The case for public-sector intervention

4.1. The social cost of uninsured risks

So far, it has been established that (full) protection against the threats of terrorism will not be available in the private insurance markets. In itself, however, this conclusion would not yet provide an argument for public-sector intervention since obviously the state cannot be charged with the provision of any good which was not available on the private markets. Still, in the case of the provision of insurance coverage against the risks of terrorism, there is a strong case for the state to intervene[122]. The main reason for this assertion is that the reduction of risks brought about by insurance is not in the first line a consumption good. Rather, the economic importance of insurance lies in the reduction of risks in the process of production. Through a reduction or absorption of some of the risks associated with the process of production, insurance enables risk-adverse entrepreneurs to take on new entrepreneurial risks to a much larger extent than would be the case in the absence of insurance[123]. The existence of insurance thus provides positive spill-overs for economic activity and especially entrepreneurial risk-taking which is crucial for innovation, structural change, growth and employment. Since this line of reasoning also applies in the case of insurance against the risks of terrorism, intuitively, welfare gains should be feasible if the state would help to remove this risk and thus alleviate the burden on private enterprise[124].

The case for public-sector intervention can also be stated in terms of the theory of public goods. Undisputedly, even in a market economy, it is the "classical" role of the state to ensure that political stability and the rule of law provide an adequate framework for private enterprise and an efficient allocation of resources through private markets. "External stability" and "internal stability", i.e. the absence of any form of violence or coercion and full respect of private property rights are indeed among the cornerstones of any market economy. Of course, if these conditions are violated e.g. by criminal activities, the state – producer of these "public goods" – cannot be made liable for any damage or loss which is caused by the state's failure to

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[122] The following arguments were also brought forward in more detail in Wolgast (2001).

[123] This important role of insurance in the economy has recently been pointed out again by Sinn (1986), (1988).

[124] One striking example of the economic consequences of a lack of insurance against the risks of terrorism is the airline industry. After the termination of the liability cover applicable to date shortly after the terrorist attacks, it became clear that entire airfleets would have had to stay on ground due to the lack of insurance coverage. As a response, the governments in most countries offered the airlines temporarily – at first restricted to one month, in the meantime renewed several times – state third party liability (TPL) coverage for loss or damage caused by war or terrorism in order to ensure the functioning of national and international air traffic. The negative effects of the current lack of insurance coverage against terrorism in the United States are also described by Heck (2002). Especially, the lack of insurance spills over to the credit markets (e.g. mortgage credit or credit to industrial companies which is usually linked to insurance coverage as a prerequisite) and hence ultimately to construction projects and investment in general. Also, in the latest edition of the Economic Outlook, the OECD (2002, pp. 124-128) pointed out that to the extent that it increases uncertainty related to investment decisions, reduced insurance coverage may have a negative effect on growth. In general, the OECD warned against the possible negative medium term consequences of September 11 through various indirect channels even though the short-term recovery from the terrorist attacks has been faster than expected (OECD (2002, p. 136)).

fully ensure that these basic principles of a market economy are completely adhered to in practice. However, in the strive to minimise deviations from the principles of full external and internal stability, removing the risks associated with global terrorism through public-sector intervention in order to help set up adequate insurance schemes can no less be regarded as the provision of a public good than the original provision of internal and external security which is undoubtedly the task of the state in a market economy[125].

The claim that the economic consequences of adverse random occurrences linked to global terrorism should not be borne by the individual, but – at least to some extent – by the community of all citizens (i.e. the state) also corresponds to historical precedents. Very often, in the case of wars, civil unrest or large natural catastrophes, the state organised some redistribution schemes for the benefit of the victims of these events. Politically, this form of implicit solidarity can also be regarded as an important constituent principle of a market economy. Since individuals and entrepreneurs can be confident that in the case of extreme events, they will be able to rely on some form of burden-sharing among the citizens, they can assume more risks and will not have to (inefficiently) reallocate resources for the sake of self-protection[126].

In sum, there is overwhelming evidence that the claim that – if (full) protection against the threats of terrorism will not be available in the private insurance markets - protection against the risks associated with global terrorism should at least to some extent be organised by the state is in full accordance with the principles of a market economy.

4.2. Model solutions

In theory, model solutions for public-sector intervention can take various forms, ranging from a complete absorption of the risks of terrorism by the state to minor subsidies for corresponding private-sector solutions, as e.g. credit guarantees or fiscal incentives. (However, the latter instruments might turn out to be insufficient remedies in view of the underlying strong economic reasons for the lack of (full) private insurance coverage of terrorism risks.) Of course, the economic disadvantages of leaving the risks associated with global terrorism without adequate insurance coverage would vanish by definition if the state promised to settle all claims connected to any damage or loss caused by terrorist attacks. However, while at first sight this would provide a straightforward solution of the problem, several reservations apply: (1) The

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[125] An additional aspect is the international competition between producers or the international competition between states or countries as a location for international investment. Clearly, if protection against the risks of terrorism is offered by the state in one country, this imposes a disadvantage on competitors from other countries where such protective schemes are not in place, and makes this country a more attractive location for investment.

[126] Beyond this rational approach, the absence of implicit solidarity would also bring about a severe set-back in psychological terms. Confidence that the state will provide a certain basic framework of existence has always been regarded as an important prerequisite for optimism and economic activity. Also, it is hard to understand why the devastating effects of terrorism should be borne by a random sample of individuals whereas the terrorists were striving to attack and possibly destroy Western society – their war-like ideological enemy - as a whole.

management and settlement of claims through public-sector administrative bodies might be inefficient, due to a lack of professional experience in the field of insurance. This argument would call for some form of public-private partnership, at least in the realm of practical management of the government guarantees. (2) It might be argued that a full and cost-free absorption of the risks of terrorist attacks by the state could lead to a distortion of incentives and hence imply inefficient economic outcomes. However, one should bear in mind that the reference scenario for this argument can hardly be a situation in which there was terrorism, but no state guarantees, even if in this case the economic distortions would be obvious. Rather, the reference scenario must be a situation in which there was no terrorism at all. If true, the argument would call for some form of burden-sharing between private insurance (fed through premium income from the insured) and the state (financed by tax revenues). (3) A third warning applies to the potential scale of the terrorist threat. If losses become too high, it is conceivable that at some point they cannot be financed by the state (i.e. the taxpayer) anymore, either. While this argument implies that some limitations must be in place for the government guarantees, it also provides a strong backing for the assertion that the risks of terrorism cannot be borne by private-sector insurance, since the (potential) financial resources of the state go far beyond the financial means of any private-sector insurance scheme. In addition to these three qualifications, it has been discussed whether the insurance against the risks of terrorism must be made mandatory and whether the state could restrict public intervention to a certain time period (both arguments only apply in the case of positive premiums to be paid by the insured). The first qualification (mandatory insurance) leads over to tax-financed reimbursement schemes organised by the state. Indeed, the borders between these two extremes are blurred, and it is often hard to tell whether mandatory insurance is not in fact a hidden tax (depending also on the way premiums are being calculated). The second qualification (state guarantees for a limited time period only) refers to the idea that over time, due to the accumulation of premium income, reserves in private-sector terrorism insurance can be built up, so that the financial capacity of the system is finally enhanced to the effect that government guarantees can be completely removed. However, this idea rests on the assumption that damage and losses due to terrorist events will not be too high, and that there is an upper limit on the size of potential claims, since, otherwise, state intervention could hardly ever be renounced.

Model solutions along these theoretical lines are in place in many countries, and take all the various possible forms which have just been discussed. In Britain, after IRA terrorist attacks on buildings in the London financial district, the "Pool Re", whose members are more than 200 direct insurers and reinsurers, was established in 1993 in order to cover the risks of terrorism. If the joint capacity of the Pool Re should not be sufficient to cover any damage, the British government guarantees the solvency of the pool[127]. Similar regulations or pool solutions with state support were in place to cover terrorism risk even before September 11 in other particularly exposed countries (e.g. Israel, Northern Ireland, South Africa, Spain)[128]. Recently, in reaction to the dreadful

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[127] For a description of the Pool Re cf. Tillinghast-Towers Perrin (2001) or Jaffee and Russell (2002, p. 28-29).
[128] Cf. Jaffee and Russell (2002, p. 27-28) or Schaad (2002, p.4).

events of September 11, a similar scheme has been created in France, equally relying crucially on the commitment of the state in this field. By contrast, the attempts to re-establish insurance coverage of the risks of terrorism after the events of September 11, equally trying to take resort to public-sector intervention, have not yet resulted in a final solution in the United States and in Germany, due to an adverse mood of the public opinion, even if substantial progress has been achieved especially in Germany[129].

In conclusion, the risk-bearing community comprising the insured, insurers and governments must reach agreement on state involvement for covering the risks of terrorism in the medium and long term. Not least the surge in demand for terrorism coverage at a time where the insurance industry is coping with the aftermath of the largest insurance loss ever calls for solutions with an equitable private/public partnership. In that sense, governments must act as an "insurer of last resort". At the end of the day, the availability and limits of the coverage of the risks of terrorism will depend on the willingness of governments to assume terrorism risk.

5. Summary/conclusions

The devastating events of 11 September 2001 abruptly forced the insurance industry to address the urgent issue of global terrorism. Short-term adjustment following September 11 has by now been largely accomplished: However, despite an efficient settlement of claims not least due to the ability of the insurance industry to absorb this one huge single loss without major disruptions and in spite of the comparatively easy recovery both of the stock markets and the markets for reinsurance following the immediate impact of September 11, the implications of global terrorism for the insurance industry go far beyond this short-term management of the event. Rather, the attacks demonstrated that this type of threat has become virtually immeasurable in terms of both the severity and frequency of exposure – making it difficult for the private insurance sector to adequately cover this risk.

In terms of the "insurability conditions" – a checklist for assessing the insurability of a certain risk known from the Insurance Economics literature – terrorism risk clearly does not comply with most insurability criteria. The unambiguous conclusion therefore is that in the case of terrorism, like in the case of war or other types of social disruption, the associated risks can hardly be (entirely) covered by private sector insurance. While insurers and reinsurers are willing and able to provide limited cover for terrorism risk, a viable long-term approach towards coping effectively with this risk will thus necessarily rely on some form of public-sector involvement.

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129 In Germany, the German Insurance Association (GDV) had called for a solution involving public-sector intervention as early as November 2001 (cf. Wolgast (2002, pp. 88-90)). In April 2002, the Federal government finally confirmed that it would be ready to take over certain additional guarantees in the context of a private-sector solution for covering property losses and business interruption in Germany beyond a certain threshold due to terrorist events. However, the details of this model have not yet been spelt out fully, and are subject to complex negotiations with the German government.

In terms of economic welfare, leaving the risks associated with global terrorism without adequate insurance coverage would be the worst solution. The consequence would be a severe set-back in terms of economic efficiency and especially entrepreneurial risk-taking which is crucial for innovation, structural change, growth and employment. Therefore, since the markets cannot (fully) provide coverage against terrorism, other institutional set-ups including the state must be relied on. In order to generate sufficient capacity in the markets for insurance against the risks of global terrorism, risks need to be spread among the insurance industry and the state.

References

Berliner, B. (1982), Limits of Insurability of Risks, Englewood-Cliffs.

Berliner, B. (1985), Large Risks and Limits of Insurability, in: The Geneva Papers on Risk and Insurance, 10 (no. 37, October 1985), pp. 313-329.

Berliner, B. (1988), *Versicherbarkeit*, in: D. Farny et al. (eds.), *Handwörterbuch der Versicherung*, Karlsruhe, pp. 951-958.

Borch, K. (1989), Economics of insurance, Amsterdam.

Dionne, G., ed. (2000), Handbook of Insurance, Boston, Dordrecht, London.

Gollier, Ch. (2000), Towards an economic theory of the limits of insurability, in: Assurances, January, pp. 453-474.

Gollier, Ch. (2001), The economics of Risk and Time, Cambridge.

Gollier, Ch. (2002), Insurability, mimeo, January 18, 2002.

Guinn, P. (2002), Why Are Insurance Prices Going up?, in: Leaders Magazine, vol. 25, number 2 (April 2002), p. 150, also available under www.leadersmag.com

Heck, Warren W. (2002), Lack of Terrorism Reinsurance Threatens Economic Recovery, Washington Legal Foundation Legal Backgrounder vol. 17 No. 10, Washington D. C., February 22, 2002.

Jaffee, D., Russell, Th. (2002), Extreme Events and the Market for Terrorist Insurance, mimeo, January 11, 2002.

Karten, W. (2000), *Versicherungsbetriebslehre: Kernfragen ausentscheidungstheoretischer Sicht*, Karlsruhe.

Kollar, John J. (2002), Terrorism Insurance Coverage in the Aftermath of September 11th, A Public Statement by the Extreme Events Committee of the American Academy of Actuaries, mimeo, April 17, 2002, available under www.actuary.org

Kunreuther, H. (2002), The Role of Insurance in Managing Extreme Events: Implications for Terrorism Coverage, December 2001, Wharton Financial Institutions Center Working Paper No. 02-07, Wharton School, University of Pennsylvania, Philadelphia.

Munich Re (2001), Press Release of 29th November 2001, www.munichre.com

McCall, John J. (1987), Insurance, in: J. Eatwell, M. Milgate, P. Newman (eds.), The New Palgrave Dictionary of Economics, vol. 2, E-J, Basingstoke, New York, pp. 868-870.

McCall, John J. (1992), Insurance, in: P. Newman, M. Milgate, J. Eatwell (eds.), The New Palgrave Dictionary of Money and Finance, vol. 2, F-M, London, New York, pp. 424-427.

OECD (2002), Economic Consequences of Terrorism, in: Economic Outlook 71, Spring 2002, pp. 117-140.

Schaad, W. (2002), Terrorism – dealing with the new spectre, Swiss Re Focus Report, Zurich.

Sinn, H.-W. (1986), *Risiko als Produktionsfaktor* (Risk as a Factor of Production), in: *Jahrbücher für Nationalökonomie und Statistik* (Journal of Economics and Statistics), vol. 201/6, pp. 557-571.

Sinn, H.-W. (1988), *Gedanken zur volkswirtschaftlichen Bedeutung des Versicherungswesens*, in: *Zeitschrift für die gesamte Versicherungswissenschaft*, vol. 77, pp. 1-27.

Swiss Re (2002), Natural catastrophes and man-made disasters in 2001: man-made losses take on a new dimension, sigma No. 1/2002, Zurich.

Tillinghast-Towers Perrin (2001), Pool Re and Terrorism Insurance in Great Britain, Update, October 2001.

Wolgast, M. (2001), *Zweckgerichtete Arbeitsteilung zwischen Versicherungswirtschaft und Staat ist erforderlich*, in: *Zur Diskussion gestellt: Risikoübernahme – sollte der Staat bestimmte Versicherungsgarantien übernehmen?*, *ifo Schnelldienst*, vol. 54, No. 24, pp. 12-14.

Wolgast, M. (2002), The implications of 11 September for the German insurance industry, in: Études et Dossiers, Working Paper Series of the Geneva Association, No. 251, Special Issue on the Economic Consequences of the September 11 Attacks on National Insurance Markets, Geneva March 2002, pp. 77-97.

Postscript

September 12: Reflections beyond Insurance and Financial Services[*]

by Tommaso Padoa-Schioppa[**]

1. Prologue: A full immersion in history

Historical tragedy, usually in the shape of *war*, is something that practically every single human being experiences at least once during his or her lifetime.

The vast majority of people that currently inhabit this planet are less than thirty years old and have often experienced the effects of war in all its gruesome detail, thanks to the coverage that is provided by television. In the past, war was an often-talked about subject. However, its true horror was something that only frontline soldiers really experienced. Often, even military commanders were comparatively unaware of what was going on. For a number of years now, live war coverage has formed an essential part of the daily news. Yet despite this, the images of the attack on the twin towers (in themselves rather incomplete in nature since no one could see what was going on *inside* the twin towers and *inside* the aircraft) will, without parallel, continue to shock anyone that lives in a democratic and affluent country. After all, almost no one envisaged that their everyday environment (houses, offices and the very roads that they travelled along each and every day) could come under attack and be destroyed. Iran, Kosovo, Kuwait, Palestine and Vietnam are all names of places that are a long way away from home. Then suddenly and unexpectedly, 11 September 2001 dispelled the old certainty that peoples' homes, schools and offices were safe from destruction and shattered the illusion that only buildings belonging to people living in remote and backward places were liable to be burned down or destroyed.

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[*] This article is an English translation of the first three chapters of the book *Dodici Settembre – Il Mondo non è al Punto Zero* by Tommaso Padoa-Schioppa edited by Rizzoli eds. © 2002 RCS Libri S.p.A, Milano. The author has not revised the translation. The book describes in ten chapters how the tragic attack of 11 September 2001, and the anti-globalisation demonstrations in Gothenburg and Genoa, are symptoms of an illness which is afflicting the world and which the author identifies as the tension between those aspects of life which unite the world (economic and financial relations, instantaneous communication of news and images, speed of transport links, or the nature of organised crime) and those which divide it (living conditions, religion and culture, and, especially, the absence of the necessary means to avert economic, political, and religious conflicts). Moving on from this assumption, the book looks beyond the old dispute between the advocates and enemies of globalisation, both of whom make the mistake of considering the economy to be the only foundation of the social order, to arrive at an appealing synthesis in which not only economic but also political and cultural aspects of international relations are considered. The remedy for the world's illness is to work towards the construction of a global political order capable of replacing the law of the jungle with the rule of law, based on universally recognised principles which can be found in all cultures and religions. This construction does not have to start from scratch. Important progress has already been made as shown by the achievements of the United Nations in defining human rights. But further progress is needed if the UN wants to accomplish its main objective of maintaining international peace and security.

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Historical tragedy changes the lives of individuals and ensures that death is no longer seen simply as something that touches our own immediate loved ones. It also forces us to ask ourselves what our own role is in terms of the broader historical context. When our lives are touched by a historical event, what will *our* role be in historical terms and how can we, in our own small way, also have an effect on the course of history? Anyone that is already familiar with these questions prior to the tragedy will realise that the effect of historical events on an individual's life is that it changes the way in which we deal with these issues as well as often changing the answers that we arrive at. On the other hand, anyone that is as yet unfamiliar with these issues prior to the tragedy, is forced to consider them with the same degree of urgency with which we deal with issues that have a direct bearing on us. In either case, events of this type can result in new life choices being made.

Increasingly, it is also the privileged citizens of the affluent countries and democracies of this world who appear to be the people that are most readily opting for the concept of peace as an absolute good. It is perhaps also true to say that never before has pacifism been as widespread among young Europeans as it is today. We used to think that peace was something that we owned. We used to want everyone, and especially the poorer among us, to enjoy its effects. And we used to think that all that was needed to achieve it was "to make peace before deciding to make war".[130]

But when war actually becomes a reality that is both clear and close at hand, the difficulties and price that is associated with peace are seen in a different light. In a similar, yet totally contradictory way, war was enthusiastically feted in 1914 in many a town square and in particular by the youngsters of the time, although all too soon it became clear that war was in fact no adventure, but rather a heinous massacre. And what New York demonstrated was that sometimes peace too, suddenly and unexpectedly, takes on the aspect of a heinous massacre.

It therefore becomes clear that "peace is actually far more complicated in nature than war. Hobbes defined peace as the state in which war is neither imminent nor being fought, although this definition is somewhat inadequate given that, at best, it describes a state of negative peace. These days peace signifies something that is far more than this. A positive peace implies that society has established a social and political order that has been accepted by the majority of its members as being fair and just in nature".[131]

The peace enjoyed in Europe over the last few decades is neither a positive peace, nor the fruit of pacifism. Peace cannot be achieved using either violence or non-violence. It can only be constructed in the political arena. And if today's war is indeed a global one, then peace too will need to be designed and established on a global scale. As the English jurist Henry Maine wrote in the middle of the Nineteenth Century, "War is as old as humankind itself, but peace is a recent invention."[132] And as yet that invention is

[130] S. Weil, "Réponse à une question de Alain", in *Œuvres,* p. 154.
[131] M. Howard, *The invention of Peace,* pp. 1-2.
[132] M. Howard, *The invention of Peace,* p. 1.

still far from having been fully thought through, and further still from having been implemented on a practical basis. The method, however, has been identified, and is the one that was first successfully implemented within city limits before then being extended to state structures. In essence, this consists of replacing the use of force with justice for all and the law of the jungle with the rule of law, placing limits on the absolute power of any given individual, and controlling weapons on a communal basis. This is the path that the world must follow in order to achieve peace. The path is indeed a long one and the efforts of many generations will be required before the final destination is eventually reached. Indeed more time is likely to be required to achieve global peace than will be needed to bring the war on terrorism that began on September 11 to an end. Suffice it to say that there is no one alive today who will ever see its final conclusion. However, it is also true to say that the path was identified a few decades ago now, its final destination is known, we know the direction in which we need to travel, and some progress has already been made, even though this progress has been marked by hesitation and contradictions. It would be untrue therefore to say that we are still stuck on the starting line.

Working for peace necessarily means working to prevent war in *this* imperfect, divided and varied world. Avoiding war on an individual basis can, and unfortunately often is, a dangerous and false path to peace. Remember that grandfathers and great grandfathers who signed up to fight in two World Wars when they were little older than students of today, did not love peace any less than their grandchildren love it today. We need to try to eradicate hatred from people's hearts and minds, although we should be under no illusion that peace can be achieved through the universal rebirth of people's souls. Pacifists will never come to rule if violent people succeed in conquering the world first. We need to help those who are suffering and demonstrate solidarity with and compassion for all humanity. However, hoping that a humanitarian push will provide a cure for fanaticism and terrorism, as well as for the sick and the poor of this world, will ultimately prove fruitless. Every effort must be made to establish common ground between cultures. But we should not expect, or even hope, that the variety and diversity between different cultures will disappear from the face of the planet.

Reason prevents us from even wanting to begin contemplating the idea that a pacifist, humanitarian approach and that a meeting of different cultures and religions will not prove to be enough in itself. However, occasionally, war is inevitable and politics is always indispensable. The following chapters constitute an attempt to discuss these claims.

2. The disease affecting the new century

The Twentieth Century has been called the "short century"[133] as (so it has been said) it only lasted 75 years. The *old* century lasted until the onset of World War I (1914) and was completely different in nature to the new century. Sovereigns, who were related to one another by marriage, governed empires and kingdoms. There was also an increased

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[133] E. Hobsbawm, *Il secolo breve*, Rizzoli, Milano, 1996.

capacity to resolve periodic international tensions through diplomacy, a gradual extension of popular participation in politics, improved employment rights, a belief that scientific and technological discoveries would result in affluence and peace, and the ability to travel between countries without any need for a passport. Already at that time, economics and finance were global. As for the *new* century, this ended ten years ahead of the chronological end of the century with the fall of the Berlin Wall and the collapse of Communism (1989-1991). Totalitarian states, which had condemned hundreds of millions of people to oppression and violent death in the name of their country, their race or their class, were at an end. With the final victory of democracy and market forces, history itself seemed to be at an “end”.[134]

History however was not at an end and the twenty-first century ‘began’ in its very first year. In the space of a few weeks, the demonstrations and violence at the International Summits in Gothenburg (June 2001) and Genoa (July 2001) were followed by the tragic attack on the twin towers in New York (11 September 2001). To anyone that was perhaps still unaware of it, this event succeeded in bringing home the disease that had been taking hold for some considerable time. Essentially an identical message was being issued, albeit in entirely different and even contradictory ways. Genoa and Gothenburg saw tens of thousands of peaceful protesters (although many of them were bent on breaking the law and even negligent inasmuch as they did not stop violent criminals infiltrating their ranks) set out to demand greater social justice, a more caring approach to the environment, and peace. New York, on the other hand, saw fanatics carrying out a premeditated attack and killing thousands of people with the aim of spreading terror.

It was at that point that it suddenly sank in that the new era would not be characterised by a peaceful expansion of affluence and democracy, but rather by a struggle to overcome this new disease. The path would be a long one, the cure difficult and the recovery uncertain.

The disease itself can be defined in terms of the conflict that arises out of the ways in which the world is now unified and the ways in which it still remains divided. It is, for instance, *unified* in terms of its production and exchanges, risk to the climate, nuclear hazards, the threat to the continued existence of life, the instantaneous transmission of news and images, the speed of its transportation links and the nature of organised crime. Yet it is also *divided* by the marked inequalities in the physical living conditions of its many inhabitants, by the chaotically fragmented nature of power and responsibility, by the rivalry that exists between nations, and by their desire to rule over others while guarding their own independence. And above all, it is also divided by the absence of any mechanism that will prevent tensions and differences from degenerating into religious, political, and economic conflict.

So why refer to this situation as a “disease”? Why not instead think of this combination of union and division as the best of all worlds? At the end of the day, it is possible to argue that *union* enables cultures to find common ground and economies to develop,

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[134] F. Fukuyama, *La fine della Storia e l’ultimo uomo,* Rizzoli, Milano, 1992.

while *division* maintains political order and lifestyles that are of traditional significance to different human societies. Even Kant observed that “nature uses two methods to ensure that populations do not mix and that they retain separate identities, namely different languages and different religions”.[135] Why then, is this simply not the best of all *possible* worlds? Would the only alternative perhaps prove to be nothing more than a straightforward and simple pursuit of the *impossible*? A dream (that might in fact be a nightmare?) that the problems associated with human suffering and globalisation might all be resolved and that history itself might truly come to an end?

However, it *is* possible to achieve a better world. Furthermore, it is also perfectly acceptable to make this claim since we do in fact have concrete proof of it. Just as it has been possible to “invent peace” for bigger and more complex groups of human beings, a similar approach can also be adopted globally. This would involve the identification of reasonable and non-bellicose methods that would permit us to deal together with issues that are of common interest. This would enable us to establish rules for living together that would result in the continued coexistence of diversity and ensure that the impulse to engage in mutual destruction did not prevail. It would also enable us to resolve disputes using mechanisms that were not reliant on violence. The ordered structures for coexistence that humans have so far succeeded in creating have not led to paradise on earth or succeeded in turning all human beings into model citizens. These are impossible goals that, when pursued and attempted, have in actual fact given rise to demagogues and to hell on earth. More modestly perhaps, such structures have succeeded in alleviating suffering and injustice as well as providing insights, moderation, and reference points.

Even if the manner itself changes depending on the particular location, culture and generation concerned, conflict between union and division is felt and endured almost everywhere. It is indeed fair to refer to this as a disease, since it results in individuals and societies failing to find any coherence between means and ends, between different ways of living and between aspirations and opportunities. A coherence that, despite never having truly been fully achieved, is nowadays more obviously lacking than it was in the past due to the rapid, but poorly balanced, rush towards union. The disease is everywhere to be seen, if albeit in different guises. For instance, the disease is clearly evident between rich and poor societies, between free and oppressed societies and between educated and illiterate ones. Poverty, hunger, terrorism, religious and political fundamentalism, violent protest, and insecurity are all symptoms of the disease.

Planetary unification is the key issue of a century that will not end quickly, if measured in terms of the amount of time needed to achieve an enduring outcome. And in particular, it is the key issue for today’s youngsters who can reasonably expect to have greater life expectancy than their forebears. It involves everyone that has taken part in a street protest as well as anyone who is wholly uninterested in world affairs. Likewise, it also involves anyone that risks his or her life as an Afghan, American, Israeli or Palestinian soldier as well as anyone who views himself or herself as a peaceful citizen and that is safely protected from any risks or dangers. It is a key issue for the Northern

[135] I. Kant, *Per la pace perpetua,* pp.115-116.

and Southern hemispheres of the world, for companies and governments, and for secular as well as religious people.

In dealing with this issue it is absolutely crucial to bear in mind that certain reference points can be identified by referring to past thinking and events. *Ground zero*, the expression used to identify the area in New York where the twin towers were located, was not intended to signify that we are back to square one in terms of seeking out reference points and starting points for achieving a peaceful status. Recognising them clearly is key to containing the effects of suffering and perhaps even in order to guarantee human civilisation's very survival. On the other hand, ignoring them would effectively seal our fate. The events of 2001 served to remind us that at this particular moment in time it would appear that the forces of destruction are even more global in nature than the forces of construction.

These days, *peace, freedom, affluence and justice* are indeed truly *universal* concepts. And not just in the sense that everyone desires them, which, let's face it, has always been the case, but rather because, unlike in the past, such goals cannot be achieved "in one country alone". Economic affluence can no longer be created or maintained within a country (irrespective of whether the country is steeped in industrial traditions or is a country that is emerging from relative poverty) without entering into financial arrangements and business exchanges with the rest of the global economy. Liberty and justice within a country's borders can no longer be guaranteed anywhere in the world, much less in open societies such as Europe and the United States, since these very same borders cannot be protected against aggression, illegal entry, or even terrorist attack from parties residing beyond them.

In industrial countries that are mainly western, European and Christian in tradition, a large section of their populations has disassociated itself from the strictest interpretation of their own traditions and has developed a wider concept of what is meant by the human family. Hence a lot of people now feel a greater affinity for the starving African peasants whose faces, contorted with pain, they see on the television than they feel for the neighbour that lives in the same neighbourhood as them. These same western countries are also home to millions of people who, as a result of their ethnicity or culture, belong to other civilisations and other geographical areas. Everyone that is currently alive today, and even more so anyone that will be born in the future, is already unified at this moment in time by the fact that they depend on one another in order to achieve the fundamental rights to which they aspire.

Extrapolating these rights across the entire globe ensures that the aforementioned mutual interdependence results in a *political* dimension that, according to the dictionary definition of the word, relates to the "science and art of government". From an etymological perspective, the word "politics" serves to remind us that mutual dependency, and with it politics, had its origins in, and was long confined to, the city or Greek *polis*. Athens and Sparta had different constitutions and yet co-existed side by side for a long time. Nowadays the city is in effect the world. That politics is involved, therefore, more than anything signifies that attainment of the rights in question demands *government*, or in other words the exercising of power. It also requires methods for allocating and controlling that power, issuing rules and regulations, administering justice, and using tactics of persuasion as well as coercion.

The following chapter deals with the efforts that the world as a whole, and not just individual areas thereof, are making (even perhaps through the disease of war itself) to unite in peace and freedom, affluence and justice. The reasoning refers to three different areas of human activity, namely economic, political, and cultural activities. Each area requires people to interact with one another and each also requires its own form of social structure. Hence, during medieval times, the city cathedral, City Hall and merchant's buildings would often face each other across an Italian city's main square. Although interconnected, the three areas were, and would need to continue to remain, separate and distinct from each other. "Three systems, operating alongside one another, each of which however operates with a certain degree of independence".[136] The three areas not only correspond to different interests and motivational factors as far as the activities of each individual person are concerned, but the principles and institutions that form the basis of the social structure in one area are not easy to adapt to another area. According to the perceived wisdom of past American society, *learn, earn, and serve* were the three distinct stages in the active life of a rounded person. A balanced social and political system would be a system in which the three different areas of human activity are pursued within a suitable setting and each in accordance with rules and principles that remain consistent with one's own character.

3. The marketplace and economics are not enough

Of the three human activities, economics is undoubtedly the activity that has most rapidly bridged political frontiers between countries over the last few years and that has succeeded in achieving global unification. This has given rise to the term "globalisation", used to describe the emergence of a market and of a financial system that operates on a global basis. Any one of a number of different potential examples would serve to illustrate this point adequately. The same car is manufactured and sold in every country, and yet contains engines, electronic components, and tyres that are manufactured at a distance of thousands of miles from one another and on assembly lines that are located across five different continents. A similar argument is also applicable to calculators, telephones, electrical goods, toys, and aeroplanes. McDonald's prepares the same *hamburger* in more than 28,000 restaurants across more than 120 countries. Taking account of local times at different points on the globe, exchange, equity, and bond markets are always open and never close. The markets keep companies and countries under the constant scrutiny of thousands of financial operators who believe that they possess the keys to wisdom and power as well as the keys to financial needs and requirements. Currently the markets are deciding the fate of Argentina and Turkey. Yesterday they decided the fate of Korea and Russia.

The events of 2001 led to an intensification of the debate on economic globalisation that had already been underway for many years and that had succeeded in bringing

[136] R. Steiner, *I punti essenziali della questione sociale,* p. 36.

together people and different generations that had had little interest in economics and politics. New arrivals to the debate are sometimes under the impression that they are expected to join one of two radically opposing camps, namely those that are strongly in favour of globalisation and those that are strongly opposed to it. In order to clarify the ultimate aims of the issues at hand, it is useful therefore to illustrate the different positions in terms of their most straightforward format, even if many careful observers do not adhere to either of them and prefer more balanced interpretations.

Wholehearted exponents of globalisation maintain that, left to its own devices, free market forces will result in affluence spreading relentlessly around the globe until poorer areas diminish in size and then disappear completely. Not only that, but economics will also lead to cultural and political redevelopment. "NGO's (Non Governmental Organisations) and governments do not have the wisdom or right to determine what *corporations* ought to do".[137] The growth in affluence, so the saying goes, will increase their profile until any requirement for freedom and democracy that still needs to be satisfied in a whole host of different countries, is finally achieved. And affluence will also bring education and culture, which will in turn lead to tolerance and moderation, since fanaticism and fundamentalism both prosper where ignorance and poverty are rife.

On the other hand, extreme opponents of globalisation maintain that current problems have actually resulted from the releasing of economic forces that are exclusively motivated by a hunger for profit and that think nothing of profiting from the ignorance and poverty that is to be found everywhere in poorer countries. These forces are also exclusively motivated by the corruption of the ruling authorities and ruling classes and by ensuring that populations are kept ignorant and under political oppression, as well as to the exploitation of child labour. People in this camp view globalisation as a means by which the rich get richer at the expense of the poor. This is achieved by the rich imposing their own consumer and lifestyle models on the poor, thereby effectively resulting in the poor becoming even poorer at the same time as also losing touch with their own culture and traditions. And in their view, the cycle of decay will only come to an end when the mechanism of economic globalisation itself is stopped in its tracks, a process that they refer to as "new liberalism".[138]

In spite of their diametrically opposite views, both exponents and opponents of globalisation do appear to be united as far as one particular fallacy is concerned, namely a view that economics is the only structure capable of supporting social order. This is a myth that has its roots in the nineteenth century and that originates from the time of the first industrial revolution. Yet even today, it continues to persist and hold a great deal of fascination in a variety of different settings. It appears to hold an appeal for the educated and the illiterate alike, as well as for materialists, religious spiritualists, traditionalists, and enthusiasts of all things modern. In short, it seems entirely impervious to all reason and experience. For opponents of globalisation, the myth has them believing that if the world economy operated differently and was not

[137] J. Bhagwati, "Coping with antiglobalization", in *Foreign Affairs,* pp. 2-7.
[138] See for example, L. Casarini in *Un altro mondo in costruzione. Le idee del movimento globale,* Baldini & Castoldi, Milano 2002, pp. 69-73; and C. Marradi and E. Ratto, *Da Seattle a Genoa,* pp. 41.

dominated by a pursuit of profit typical to the market system, then there would be no poverty in Bangladesh, no child labour in Pakistani carpet factories and no AIDS in Africa. For exponents of globalisation the myth prevents them from accepting the fact that a purely economic system (the global market) cannot hope to replace a political system. It also blinds them to the fact that the complete absence of any political dimension means that an economic system would even fail to deliver the limited benefits that it actually is in a position to provide.

Opponents of globalisation recognise the disease, but are mistaken in their diagnosis. On the other hand, exponents of globalisation deny that a disease even exists. Setting politics to one side and confining the argument to a simple question of economics, would result in the new globalisation debate risking becoming merely a continuance of an old debate that has been going on for a number of generations now, namely the choice between *alternative* economic systems.

The physical and spiritual wreckage that resulted from the tragic Soviet experiment is still on display for everyone to see. In my view, this should have also succeeded once and for all in laying to rest the concept of an economic system that does not involve human avarice and the instinct to plunder, differing outcomes and individual preference, restricted resources and an uncertain future. For many, however, the dream lives on, even if the objectives are a little more vague and imprecise in nature than is the case with the true socialist ideal. The result of this is that the time that is being dedicated to cultivating such a system actually ensures that less political and intellectual energy is available for pursuing corrections and potential improvements to the market system (imperfect as it is, but without an effective alternative). After all, it is the market system that has ensured that humankind has up to now been able to combat poverty and deprivation with some degree of success. A parallel might even be drawn with those individuals that even today continue to persist in submitting proposals for perpetual motion machines to the patent office, thereby tying up valuable scientific resources just so that they can pursue their own bizarre dream.

The fact that I have chosen to focus on the two most extreme viewpoints, namely rejection or complete acceptance, should not make us lose sight of the fact that many people hold a view that lies somewhere in between these two extremes. Even if the two opposing camps often have to be kept physically apart by police cordons and screens at the time of an international summit, they are often further apart in terms of their dress codes and age than they are in terms of the way that they view issues. And each group also encompasses a broad range of views within its own camp. Each group has members who, having rejected a simplistic approach, recognise the complexity of the issues as well as the basically sound reasoning of other individuals that happen to be positioned on the other side of the fence.

That the current disease is not the result of a failure of the market economy is clear from experiences that have been gained at different points and times throughout the twentieth century. And a clear guide is also available to us in our assessment of the aforementioned experiences. Indeed, we can start by assuming that the economic aspect to human activity consists of producing the goods and services that are needed to sustain life. In light of this, any assessment that is subsequently made of the economic system will above all depend on that system's ability to guarantee material affluence for anyone who is in that system. With this in mind, a comparative analysis of countries that have, over the last fifty years and in their own specific way, sought a route out of poverty and underdevelopment unequivocally demonstrates that the market system does indeed work.

Although convinced of the superiority of the market economy, during the 1950s and 1960s many western economists maintained that developing countries that were often emerging from colonial rule, would do well to go down the economic planning route.[139] At the time it was felt that this would be better suited to assist with the establishment of industries and in the generation of affluence. However, the experiences gleaned from Asian, African and Latin American countries served to disprove this expectation. Countries that opted for the central planning and bureaucratic approach in an attempt to counteract poverty and to promote economic growth, in fact only succeeded in increasing the levels of poverty and corruption that were previously all too apparent within their systems. Just consider the examples of Communist China up until the death of Mao Tse Tung, as well as North Korea, Angola and Cuba.

In fact, the quality of life really did improve across huge areas of the planet where market principles were active. Just consider many of the countries in East Asia and South America as well as India and China over the last ten or twenty years. The key turning point for all of the aforementioned areas was increased exchanges with industrialised countries. Technology was imported from America and Europe (selected seeds, the use of parasiticides) that enabled farming yields to be increased to a point where hunger and famine were no longer an issue. By exporting manufactured goods, poorer countries were able to develop their own industries at the same time as both generating the profit required for growth and also providing employment for a workforce that was no longer needed to work the fields.

And finally there was the Soviet Union, a region where all market forces had been ruthlessly suppressed over a longer period of time than was the case elsewhere. In this region the economic meltdown was total in scope and its effects are still apparent more than ten years after the fall of the Communist regime. It would seem that the longer and the more ruthlessly that market forces are suppressed, the greater the eventual catastrophe.

It is therefore quite incorrect to conclude that the downsides to globalisation are merely a consequence of the expansion of economics that are based on the principles of profit and exchange.

However, simply recognising the error in diagnosis is not in itself enough to repudiate the disease and to proclaim the "magnificent destiny and continuation" of the global economy. It does not signify that everything is operating correctly in the marketplace and in the economy. Poverty and deprivation are still apparent throughout the world

[139] That is a system in which decisions about what has to be produced and consumed are made by the government instead of being left up to families and companies.

and are just as repellent as ever to our conscience as human beings. They also represent something of a strategic danger and appear to be especially concentrated on particular continents and in certain geographical regions, while other areas appear to be in the grip of luxury and wastage. The risk that work effectively turns into slavery varies dramatically from country to country. As do the risks of dying from hunger, women and children being exploited, being involved in an accident in the workplace, having to contend with variable hygiene and water contamination standards, illiteracy, and of the incidence of curable fatal diseases. Even if it is not in itself economic in nature, the global disease is also apparent within the economic sector and it is therefore important to recognise this fact and to take action within the economic sphere.

Both incorrect diagnosis of the disease and denying its very existence result in serious consequences. Incorrect diagnosis, or the belief that the *cause* of the disease is economic in nature, gives rise to proposals that although different in content and scope, have something in common in that they would all seek to do away with the market system rather than reforming and augmenting it. These attitudes represent the root cause of the battle against the multinationals, the aversion to development of global exchanges, the hostility towards the International Monetary Fund (IMF) and to the World Trade Organisation (WTO). The protesters that gathered in Seattle in 1999 wanted to prevent new multilateral trade negotiations from getting under way, rather than influence their implementation and outcome.

In July 2001 the Genoa Social Forum sought “first to lay siege to and to encircle the red zone, before then invading it and ignoring the barriers that had been erected”[140], rather than demanding that certain decisions be taken in preference to others. Many critics of globalisation believe that the basic mechanisms of the global economy such as the pursuit of profit and an opening up of international exchanges, should be abandoned and replaced with alternative mechanisms and driving forces. This would then ensure that any goods that are produced would be manufactured in greater numbers, would be more useful in nature (medicines rather than televisions), and would be distributed more equitably.

An incorrect diagnosis will result in the application of the wrong remedy, since (as it should be clearly stated) the alternative mechanisms it is modelled on do not in fact exist. Any attempt to suppress the market as a general means for organising the economy will only result in deprivation and oppression. Throughout the twentieth century entire generations, in the ex-Soviet Union, Cuba, Mao’s China, North Korea, Cambodia and Vietnam, were forced to learn this hard lesson through indescribable physical and spiritual suffering. As will be commented on further on in this text, improvements and reforms are required to the market system. But perfecting and amending a system represents an entirely different proposition to the idea of abandoning it in favour of a proposal that is based on the alternative principles of compulsion rather than freedom, sham altruism rather than the pursuit of profit, and collective choice rather than individual choice. Care must be taken to ensure that the need to reform the market system is not confused with what Hardt and Negri refer to as

[140] C. Marradi e E. Ratto, *Da Seattle a Genoa,* p. 41.

"an *anti-Empire*"[141], or in other words a global world in which there are no capitalist production methods and no global market.

But denying that the disease even exists itself gives rise to dangers that are no less serious in nature. Denying the very existence of the disease is tantamount to deluding oneself into the false impression that economic growth alone can act as a purifying wind and sweep away any difficulties that might be encountered. This would effectively entail simply shutting one's eyes to the deprivation that exists in the southern hemisphere, to the destruction of life across the planet, and to natural resource depletion risks. Equally, it would also entail rejecting the significance that ideology or politics still exert over the unrestricted spread of market forces. Likewise, it would entail ignoring the fragility that is associated with global finance, thereby permitting this fragility to generate recurring tensions and crises, during which growth slows down or indeed even comes to a complete standstill. Finally, it would also involve refusing to reform institutions for international co-operation for fear of losing influence or in order to escape the discipline that such reformed institutions might be capable of imposing.

Often people that choose to deny the very existence of the disease, do not choose to defend certain *general* concepts that are associated with the market system, concepts such as the principles of freedom and responsibility, let alone recognise the fact that resources are scarce and the future uncertain. Rather, they choose to defend the *specific* format that the system may have at a given moment in history. They do not therefore choose to defend the socially useful function that personal interest has as a motivating factor for economic activity. Instead they choose to defend a specific personal interest that at *that* particular moment in time they want to use to ensure that political decisions are taken in their favour. This might involve an interest in the economy of one country in particular or alternatively an interest in a particular economic sector, ranging from IT to defence or from oil to finance. By denying the very existence of the disease, exponents of globalisation fuel hostility and revulsion with the current order that even their bitterest adversaries simply could not hope to stir up. To anyone who is able to see the effects of the disease, exponents of globalisation seem like those people who place a newspaper advert promising to supply applicants with a magic "get rich quick" scheme, so long as they are willing to pay a suitable up-front fee. Anyone responding to this advert is then simply told to "copy me".

Between the extremes of an incorrect diagnosis and complete denial that the disease even exists, are other common points that effectively act to reinforce each other. One of these is an anti-historical view, according to which global orders are seen not as evolving realities, but rather as static blocks that are capable of being rethought and replaced through a straightforward act of reasoning and will. Another is the claim that political issues are capable of being resolved via economics. Mutual reinforcement has its roots in the erroneous aspects of both of the viewpoints inasmuch as, as will often happen, poor reasoning by one of the parties gives the other party the perfect excuse for continuing to persist with their own erroneous viewpoints. Stating that there is no alternative to the market system does not mean affirming that the market is by any

[141] M. Hardt et A. Negri, *Imprero,* pp. 197-208.

means perfect, much less that it is static and incapable of evolving. Of course, a lot of effort will have to be invested and certain opposition overcome before the evolution that is required can finally be brought about. But the formulation and implementation of reforms is an entirely different matter to bringing about a revolution.

The fact is that although the spread of market principles and, more generally, a suitable approach to economic and politico-economic matters are fundamental requirements that must be in place before peace, freedom, affluence, and justice can be brought to a community of people, these things are not in themselves enough. They are not all that is required for human society as a whole or for a village community or for the inhabitants of any particular country. Three explanations in particular back up this theory.

To begin with, *to operate correctly the market needs certain legal, social, cultural, political and institutional requirements to be in place*. A market necessarily involves making exchanges, dividing up work, placing investments, offering credit, supplying services, issuing or granting ownership, and relying on trust. To express and develop these critical elements fully, a secure framework of recognised and fully implemented regulations is required. Otherwise a market cannot really be created and is instead replaced by extortion, exploitation, a descent into poverty, piecemeal manufacture on an individual basis of a pitifully small quantity of items that are required to guarantee basic human survival and all-out war by everyone against everyone else. And before such a framework of regulations can be successfully described in law and applied by the courts, the said regulations will need to have been developed and be apparent in individuals' attitudes, to have permeated social custom and to have, in effect, become part of the cultural fabric of society.

Considering the market as a purely economic phenomenon that is entirely divorced from other areas of human activity and that is compatible with any judicial and political system as well as with any custom and culture, would be tantamount to simply ignoring human nature and the experience of history. Even if it was true that all economics is the market and that all social realities are essentially matters of economics, it would still be untrue to say that politics and culture could be disregarded in establishing a system that will provide peace, freedom, affluence and justice to all humanity. It simply would not be true as *in* the market itself and *in* the way in which it operates, politics and culture have an effect and indeed have a key role to play. As with individuals, so too with social structures, the different areas of human activity are interconnected with one another, and elements from one area permeate another. This is what provides the unifying force for social structures and individuals. And this is what also causes difficulties to arise when sudden change is focussed in one area only. The market is not a technology, but rather a social phenomenon. It cannot simply be dumped unexpectedly on an unspecified island as if it were the most modern of machinery, in the vain hope that it will enable the inhabitants of that island to make the giant leap from the Stone Age to the twenty-first century.

Secondly, even when operating at its best, *the market will not produce all the goods that mankind and society in general require*. Here, I am referring to goods that in economic jargon would be called "public" goods, because the market does *not* normally produce them. They do however represent essential items such as environmental safety or protection, price stability and fulfilment of contractual obligations, social solidarity and justice. No private individual or single person would be capable of creating these on his or her own. Nobody can truly enjoy such benefits if they exclude others from also sharing in them. Neither can anyone produce them with the intention of then selling them on to others, as is possible with other equally essential items such as food and accommodation. Indeed, while everyone can get some benefit from them once they exist, no one is keen, at least on an individual basis, to pay the price of creating them. A society in which nothing is produced on a common basis and in which all work is geared towards manufacturing goods for exchange and all companies are focussed on the direct generation of profit will fatally lack so-called "public" items, such as roads and justice, traffic policing and defence.

Indeed a consequence of globalisation, of technical progress, and of increased affluence across a large part of the globe is that, among the many public items that are in existence, an increasing number are now public to all humanity and not just a small section of it. In effect they are *global public goods*. Just as there are public goods that might belong to a village (the village square and the aqueduct), a country (the penal code or the railway network), Europe (cleaning up the Rhine or single market regulations), so there are also goods that are public to the world as a whole. Atmospheric and aquatic (seas and oceans) pollution, global warming, the disappearance of the polar ice caps, the consumption of irreplaceable natural resources, and nuclear waste are all dangers that threaten the whole of humanity and that can only be dealt with on a global basis.

And lastly, *the economy is not a Holy Grail*. After all, man does not live on bread alone either on an individual basis or collectively. Peace, freedom, affluence, and justice are all required for the economy to function in an orderly fashion. Each of these requirements also has an economic *cost* associated with it, inasmuch as work, materials, education, and the production of goods and services are all required in order to achieve them. But intrinsically speaking they do not represent "just bread". In fact they represent values, aspirations and human ideals that some people are even willing to give up part of their own "bread" in order to realise.

If nearly everyone is in agreement that peace, freedom and justice are desirable qualities in a civilised human society, it is because people believe that these qualities, in turn, are the conditions that are required before other goals can be achieved. More particularly, it is because *with* the advent of peace, freedom, affluence, and justice it becomes easier (so it is said) to pursue human activities that are far more noble in nature than simple food gathering, physical self-defence, accumulation of riches, and the protection of one's own rights. Broadening knowledge and experience becomes a possibility, as does the production and enjoyment of all things beautiful, the promotion of friendship and culture, and the opportunity to travel and to meditate. In short *otium*, or the chance for contemplation.

Such is people's belief. In reality, the fact that economics in itself is not enough is driven home even more effectively by the realisation that the human spirit is not necessarily given to expressing its most noble facets when peace, freedom, affluence, and justice are guaranteed. How can anyone fail to be anything but struck by the fact that, even during the last century, some of the greatest expressions of human spirit (in terms of the Arts, philosophy, heroism, or popular courage) occurred at times and in situations when suffering, oppression, torment, and misery abounded? Simply consider Benedetto XV or Romain Rolland, Helmut von Moltke or Edith Stein, Father Kolbe or Etty Hillesum, Vaclav Havel or Varlam Šalamov, any of whose actions provides powerful evidence that man does not live on bread alone.

International Association for the Study of Insurance Economics

"The Geneva Association"

General description

The International Association for the Study of Insurance Economics, or by its short name the Geneva Association, was founded in Paris on 27 February 1973 and is a non-governmental and not-for-profit think-tank dealing with risk and insurance research issues. It is a unique world organisation formed by a maximum of 80 chief executive officers from the most important insurance companies in the world. Our main goal is to research the growing importance of worldwide insurance activities in all sectors of the economy. We try to identify fundamental trends and strategic issues where insurance plays a substantial role or which influence the insurance sector. In parallel, we develop and encourage various initiatives concerning the evolution – in economic and cultural terms – of risk management and the notion of uncertainty in the modern economy.

The Geneva Association also acts as a forum for its members, providing a worldwide unique platform for the top insurance CEOs. We organise the framework for our members in order that they may exchange ideas and discuss key strategic issues. The Geneva Association serves as a catalyst for progress in this unprecedented period of fundamental change in the insurance industry and its growing importance for the further development of the modern economy.

The Geneva Association organises directly or indirectly about a dozen lectures, conferences and seminars per year on topics linked to risk and insurance economics and related fields that are of interests to insurance professionals and researchers. The Geneva Association also publishes two renowned journals: the Geneva Papers on Risk and Insurance – Issues and Practice (quarterly) and the Geneva Papers on Risk and Insurance Theory (biannual plus special issues). The first one is dedicated to insurance professionals and researchers, tackling insurance related topics from an economics, societal and business point of view. Articles are written with academic rigour but presented in a way so as to be readily understood by practitioners. The second journal is written by and for insurance academics and concentrates on risk and insurance theory. The Geneva Association also publishes a Working Paper Seriess “Etude et Dossiers” and seven different newsletters (most of them biannually): Insurance Economics, Risk Management, Four Pillars (social security), PROGRES (regulatory and services related issues), Health and Ageing, World Fire Statistics, and General Information.

The Geneva Association furthermore assists university research through research grants, scholarships and the Ernst-Meyer-Prize, awarded once per year to an original thesis linked to insurance. From time to time, special study funding is awarded for specific research projects in risk management, on insurance topics and in related fields that are of interest to the insurance industry.

The Geneva Association also manages, organises and/ or supports several different networks of experts that share common interests. These include the Amsterdam Circle of Chief Economists (Amsterdam Circle of Chief Economists), the Applied Service Economics Centre (ASEC) network, the European Group of Risk and Insurance Economists (EGRIE), the European Association for Law and Economics (EALE), the PROGRES (programme de recherche sur l'économie de service) contacts, etc.

Organisational structure (as per August 2002)

Former Presidents of the Geneva Association: Mr. Raymond BARRE, Paris (1973-1976); Mr. Fabio PADOA, Trieste (1976-1983); Mr. Julius NEAVE, London (1983-1986); Mr. Reimer SCHMIDT, Aachen (1986-1990); Sir Brian CORBY, London (1990-1993); Drs. Jan H. HOLSBOER, Amsterdam (1993-1999).

President: Mr Walter B. KIELHOLZ, Chief Executive Officer, Swiss Reinsurance Company, Zurich.

Vice Presidents: Mr Henri DE CASTRIES, Chairman of the Management Board and CEO, AXA Group, Paris; Mr Arthur F. RYAN, Chairman and CEO, The Prudential Insurance Company, Newark; Dr. Henning SCHULTE-NOELLE, Chairman of the Board of Management, Allianz AG, Munich.

Members of the Board: Dr. Carlo ACUTIS, Vice President, Vittoria Assicurazioni, Turin; Mr Patrick DE LARRAGOITI LUCAS, Chairman of the Board, Sul America Seguros, Rio de Janeiro; Dr. Gianfranco GUTTY, Chairman, Assicurazioni Generali, Trieste; Mr Richard HARVEY, Group Chief Executive, CGNU plc. London; Dr. Dietrich KARNER, CEO, Generali Holding Vienna AG, Vienna; Mr Ewald KIST, Chairman of the Executive Board, ING Group, Amsterdam; Mr. Patrick LIEDTKE, Secretary General, The Geneva Association, Geneva, Mr Robert MENDELSOHN, Group Chief Executive, Royals & Sun Alliance Insurance Group, London; Mr Filomeno MIRA CANDEL, Vice President, MAPFRE Corporation, Madrid; Mr Patrick PEUGEOT, Chairman and CEO, La Mondiale, Paris; Dr. Hans-Jürgen SCHINZLER, Chairman of the Board of Management, Munich Reinsurance Company, Munich; Mr Martin J. SULLIVAN, Executive Vice President, AIG Inc., New York; Mr Anton VAN ROSSUM, Chairman of the Executive Board, FORTIS, Brussels.

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Editor-in-Chief of the Geneva Papers and Special Advisor: Dr. Orio GIARINI, Geneva.

Heads of Research Projects: Dr. Christophe COURBAGE (Health & Ageing); Ms Geneviève REDAY-MULVEY (4 Pillars).

Insurance and September 11
One Year After

Impact, Lessons and Unresolved Issues

Edited by Patrick M. Liedtke and Christophe Courbage

This Geneva Association publication regroups an analysis of the key questions facing the insurance industry worldwide as a reaction to the September 11, 2001 terrorist attacks on the United States of America. A first part of the book comprises contributions from different national insurance associations that look at the impact of the catastrophe on their regional markets. Part two discusses specific lines of business from a company and business perspective and highlights what the key issues and problems are in each sector. In the third part, the contributions deal with systemic questions linked to the event and draw a broader picture of where we are still facing unresolved issues. At the very end there is a postscript that takes a much broader view, considering wide-ranging aspects of the events as they relate to our societies in general.

It is clear that the terrorist attacks have led to a shift in conceptions of the risks our modern societies face and also of the sheer magnitude of a potential insured loss. The losses on September 11 were important indeed, involving extraordinary cumulative consequences. They also have highlighted an important issue: the importance of the insurance industry for the functioning of modern economies. At the same time it became obvious that the general level of understanding about insurance and the complex tasks of managing and transferring risks is not always as well developed as it could be. The Geneva Association therefore tries to help create new knowledge and further the networking of those who can contribute to a deeper comprehension of risk management and insurance.

THE GENEVA ASSOCIATION
Risk & Insurance Economics