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Terrorism – exposures, insurability, pools and other solutions

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Abstract

Since September 11, 2001, the global reaction to terrorism has changed dramatically. The attack on New York and Washington and subsequent events in Bali, Madrid, London and other cities has brought the reality of terrorism attacks to the global community. Reinsurers and insurers responded to the WTC attack by removing automatic cover for terrorism events from most commercial policies and Governments established national pools to provide required cover, sometimes with commercial reinsurance support. Given the magnitude of potential exposure and the sunset clauses that exist with a number of the pool solutions, what are the prospects for the return of the private sector insurers and reinsurers to the provision of commercial terrorism insurance?

"Terrorism – exposures, insurability, pools and other solutions"

Introduction

It can be argued that for most of humanity the morning (New York time) of September 11, 2001 changed the world for all time.

Whether you are a resident of a major western city or of a village in the developing world, the reality is that life has fundamentally changed.

Prior to September 11 only those travelling by air were subject to any significant security screening in Australia, and even then explosives seemed the only target of the inspection. With the use of relatively unsophisticated weapons to take control of the planes used in the September 11 attack the scrutiny at airports changed dramatically.

Today, in hotels, at conferences and in the street we are all conscious of unattended baggage. Security screening is now required upon entry to many commercial buildings and public facilities including major sporting venues.

Part of this paper was written whilst visiting London, mid-July 2005, only a week after the Underground and bus bombings of 7 July and the concern of the community, both locals and visitors was palpable. The subsequent explosions on the Underground and a bus on 21 July heightened concerns and in early August we hear reports of Underground passenger numbers down 5-15% on weekdays and down as much as 30% on weekends.

On Sydney buses and bus shelters we now find posters requesting:

"If you see something, say something,
unattended bags and packages should be reported to transport staff or the police…"

The scale of the attack on the World Trade Centre (WTC), the Pentagon and the unknown target of the plane that crashed in the Pennsylvania countryside on September 11, 2001 took all of us by surprise. The dramatic film footage of the attack on the WTC in New York has become an iconic image of the 21st century in the same way that images of the Vietnam War beamed via television into living rooms around the world are an enduring reminder of the 1960's.

Subsequent to 2001, events in Bali, Madrid, Beslan, Turkey, Saudi Arabia, Jakarta, and most recently London continue to remind us that life is not as it was. War in Afghanistan and Iraq, hostage taking and suicide bombings in other parts of the Middle East and ethnic and civil unrest in a number of counties are a potent reminder as well.

Far reaching security legislation was enacted in many countries, granting powers to security agencies that would not have been acceptable prior to September 11. Most Western communities have accepted the potential restrictions on some personal freedoms in the interests of preserving overall community freedom, although, there has been concern in many countries at the potential for misuse of some of the powers granted to security authorities. In the aftermath of the London bombings the UK Home Secretary noted that one of the fundamental rights that must be preserved at all costs is the right not to be blown up whilst going about your daily life.

The continued terrorist activities and the subsequent response of authorities, keep the issue at the forefront of consciousness of many communities. Maintaining a state of fear among the targeted population is one of the identifying characteristics of terrorism. It is perhaps ironic that by invoking a war against terror the countries attacked have continued to remind their citizens of the enormity of the attack of September 11 and subsequent events, and therefore might have unwittingly furthered this objective.

Insurance industry response to September 11

Within a short period of time after September 11 it became apparent the vast majority of the loss would fall to reinsurers. As a result of the scale of the loss and the dramatic accumulation of many classes of business, reinsurers responded by seeking to exclude terrorism coverage from reinsurances of most commercial and industrial insurance policies, particularly those policies covering physical damage to property. One of the most quoted rationales for this decision came from Warren Buffett of Berkshire Hathaway, who wrote in a letter to shareholders of 9 November 2001:

"We, and the rest of the (insurance) industry included coverage for terrorist acts in policies covering other risks – and received no additional premium for doing so. That was a huge mistake and one that I myself allowed"

Without reinsurance coverage for terrorism events insurers followed by seeking to exclude cover from primary insurance policies where possible.

Personal property insurances (house and contents, motor, small craft etc) generally did not have a terrorism exclusion imposed except for events occasioned by "chemical, biological or nuclear causes"

Reinsurers concerns at exposure to terrorism and many other "unanticipated" perils stems from the willingness of the insurance industry to grant coverage for *"all risks of loss or damage except for"* (i.e. all risks cover) rather than the traditional form of defined peril cover where each peril covered was individually analysed and priced. In all risks cover the pricing tend to relate only to actual loss experience with perhaps an additional premium for acknowledged exposures, rather than the potential for losses from all unknown or unanticipated perils.

At the time of the withdrawal of coverage for terrorism, the then President of ARIMA, Bruce Ferguson, criticised insurers, stating "we (risk managers) expect coverage for the unexpected". When challenged he acknowledged an unwillingness to pay an unexpected premium for unexpected cover.

Exposures

Exposures can be considered under the following headings:

- concerted physical attack on physical assets, population or infrastructure;

- chemical or biological attack on physical assets or population;
- contamination of resources or infrastructure by chemical or biological means;
- … or…?

Examples of the first category include September 11, Bali, Madrid, Beslan, Jakarta and London. The release of Sarin gas in the Tokyo subway system in 1995 fits the second and contamination of a city's water supply would be an instance the third. Recent instances of the despatch of unknown white powder to the Indonesian Embassy in Canberra reminds us of the concerns about anthrax and similar biological attacks in the immediate aftermath of September 11.
As to the fourth and as yet unknown category of losses…?

Sydney has already experienced contamination of water supplies from apparent natural causes in early 1999; the possibility this could be replicated with malicious intent and a catastrophic outcome is real, and a matter for community and government concern.

Part of the reason behind Warren Buffett's concern about terrorism exposure was the realisation that it would be relatively easy for a suicide terrorist to contaminate a large part of a city with toxic biological or radioactive material resulting in massive losses to the community in general and insurers specifically. In the Berkshire Hathaway shareholder letter quoted above, Buffett continued:

"…had the attack in New York been nuclear it is likely that most of the US insurance industry, as well as reinsurers worldwide, would have been destroyed. Such an attack could have caused US$1 trillion or more of insured damage…"

In such instances the losses may well be from contingent exposures rather than direct physical loss. Thus protection or risk mitigation becomes a matter for policy form rather than physical measures.

Can we get an estimate of what the total potential exposure to a terrorism event might be by looking at natural catastrophe exposures? In this analysis we look at the experience of actual natural catastrophes losses and compare this with assessments of the estimated maximum loss from an event with an assessed return period.

For a Californian earthquake, insured losses from the Northridge quake of January 1994 are estimated at US$17.8 billion in 2004 values compared with an estimated maximum loss of US$75 billion from a quake with a return period of 200 years. For a Florida windstorm, the largest loss was caused by Hurricane Andrew in August 1992 with an estimated cost of US$21.5 billion in 2004 values compared with US$65 billion for insured losses from the 1 in 100 year storm.

For these natural catastrophes, the largest insured loss to date is in the range of 22.5% to 33% of the maximum expected.
Best estimates of the overall cost of September 11 losses are in the range of US$30 - 40 billion for all lines of business.

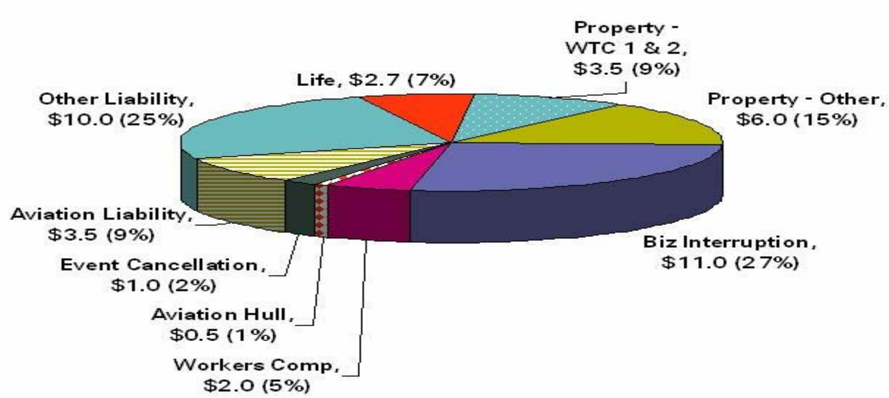
Does this represent a similar percentage of a potential 1 in 100 or 200 year loss as for a California quake or a Florida windstorm? If we were to apply the same escalation percentage to a mid-range of the September 11 insured losses in New York (i.e. US$35 billion) losses we might expect a maximum loss in the range US$100 to 150 billion.

This extrapolation assumes a repeat of the circumstances of September 11, i.e. a direct physical attack on a city resulting in massive destruction or loss of use of buildings and facilities over a very wide area. To achieve a loss of this magnitude requires significant ongoing dislocation of infrastructure resulting in large losses from contingent exposures, e.g. failure to supply, loss of markets, suppliers and customers premises and the like. However, if the attack was one involving contamination by radioactive or biological means and resulted in the inability to use the transport system and city streets and buildings, for a significant period of time, the exposures may well be of an extraordinary magnitude.

A loss in the order of US$100 - 150 billion would represent around 10% of global property and casualty premium income. Is this an acceptable loss magnitude for the global insurance industry to absorb? We will return to this question when considering insurability.

Accumulations

September 11 also proved the potential for multi-class accumulation from a single event. The latest data from the US Insurance Information Institute dates from mid 2002 when the WTC loss was estimated at US$40.2 billion with the largest component of this property and business interruption at US$20.5 billion, or 51%. The following chart gives a breakdown of the total loss by major line of business:



Source: Insurance Information Institute, July 2002

How do we measure potential accumulations and therefore assess the amount of cover that should be purchased? Is the process different for terrorism cover than for other perils, e.g. natural catastrophe?

Assessment of exposure to losses from traditional natural catastrophe events such as earthquake, windstorm, conflagration etc, has involved issues such as engineering assessment of asset vulnerability to the particular peril, the likelihood of an event of a particular intensity occurring in the location and the return period of the event combined with classes of business likely to be exposed to the particular peril.

As an example of the results this process might lead to, consider earthquake exposure in Sydney.

Although different analysts and models may produce differing results, there is reasonable consensus that for the Greater Sydney area, an earthquake of a similar magnitude to the Newcastle quake of December 1989 has a return period of 500 - 1,000 years and would be expected to result in a property loss of the order of 1.8% of insured values. In $ terms this represents an insured loss of some A$15 billion. To this amount one would need to add exposures from non property classes in an overall portfolio which, depending on the insurer, might include motor, marine, engineering and construction, personal accident etc. Worker’s compensation is a potential exposure in a disaster scenario although the impact on an individual insurance portfolio will depend on whether coverage is written in the private market or is part of a government scheme such as Workcover which covers the majority of insureds in NSW.

Contrast this with the experience of the September 11 attack on the WTC in New York and Pentagon in Washington.

Because of the use of aircraft as the “weapon” to attack New York, aviation hull and liability covers were exposed as were the liability covers of airport operators who had “allowed” the hijackers to board the involved aircraft.

As can be seen from the chart above showing the major lines of business affected for US insurers, the major exposures were to property policies covering the WTC and other property as well as business interruption covers, other liability (i.e. non-aviation), life assurance, worker’s compensation and event cancellation.

For insurers outside the US significant exposure also arose under travel and similar policies as a result of flight cancellations, travel delays etc.

If we were to extrapolate to a much larger event, would each of the component classes of business be equally affected?

Logic suggests this would not be the case. In the post September 2001 world one cannot envisage occurrence of an event of any magnitude involving civilian aircraft as the “weapon of destruction”. Similarly away from a location with a substantial concentration of high income and high net worth individuals it is difficult to extrapolate life assurance losses to US$10 billion or more.

It is also difficult to postulate a situation where liability losses might contribute 25% of a total loss of US$100 billion. Simply put, one would need a large number of insureds with significant liability limits found equally liable for such an event. This again is most unlikely.

In order to reach a total loss of US$100 billion, property damage would need to occur over a very wide area and have very substantial losses to business interruption covers affecting many insureds.

A loss of US$100 billion is thus possible but would require a combination of very remote circumstances.

Government responses to the withdrawal of terrorism coverage

Following the decision of insurers and reinsurers to withdraw coverage for terrorism events, particularly for commercial insurance covers, post September 11, 2001, a variety of responses were implemented by governments and the insurance industry around the world. In some jurisdictions a new structure was not necessary as infrastructure to provide coverage for terrorism events was already in place.

Example of these existing structures include Pool Re in the UK, established in 1993 in response to the IRA bombings in London including the destruction of the Baltic Exchange in April 1992.

Pool Re is mutual owned by the participating insurers and provides cover for:

- commercial property damage and consequent business interruption; and,
- all risks due to a terrorist event as certified by the Secretary of State.

War and nuclear risks are excluded from the pool. Members of Pool Re must cede all UK terrorism covers to the pool. Insureds may not select properties to cover for terrorism, but rather must buy terrorism cover for their whole portfolio of assets.

In Spain the Consorcio de Compensacion de Seguros has existed for many years providing catastrophe cover for both natural catastrophes and man-made catastrophes including terrorism. In Spain, terrorist acts have mostly been a result of the activities of the Basque separatist organisation, ETA.

Other existing arrangements continue to operate in Northern Ireland and South Africa.

What new arrangements have been put in place since 2001?

Appendix 1 sets out some details of terrorism insurance solutions put in place in Australia, France, Germany and the USA.

Whilst these solutions vary significantly in form, they are substantially similar in substance. In each instance there is a deductible retained by the insurers involved in a terrorism event with this amount shared between them according to a pro-rata allocation of the total loss.
Above this retained amount cover is provided by the "pool" and may include layers of coverage provided by the professional reinsurance sector (France and Germany), a mix of commercial funding and government guarantee as in Australia or 100% government cover as is applicable in the USA under Terrorism Risk Insurance Act (TRIA).

As noted in Appendix 1 the various Government sponsored and supported schemes provide cover for some, but not all classes of insurance. It is worth examining the impact the coverage under the schemes have on the exposure of insured and insurers in the event of a terrorism event.

Australia

Under the Australian scheme administered by the Australian Reinsurance Pool Corporation (APRC), cover is only triggered in the following circumstances:

- cover is for policies relating to commercial property and infrastructure and public liability and business interruption associated with commercial property;
- the policy must have a terrorism exclusion (if there is no exclusion the commercial insurer naturally provides the cover);
- a terrorism event must be declared by the Commonwealth Government;
- declaration of the terrorism event renders the exclusion ineffective and provided the insurer has a reinsurance agreement with ARPC and has paid the relevant premiums to the pool, cover will apply excess of a retention per company per annum and for the overall insurance industry per event;
- the limit of the Pool coverage is A$10.3 billion – if anticipated that an event will have a cost greater than this the Treasurer may declare a reduction percentage such that the amount of cover provided is limited to $10.3 billion; and,
- in the event of the reduction being invoked the reduction in cover is to the original insured, not the insurer (i.e. insurers are not left unreinsured if there is insufficient cover).

Where does this leave insurers?

In respect of commercial property insurances, the cover for physical assets, business interruption and associated public liability cover the position is clear; coverage will be provided by ARPC to the A$10.3 billion of pool capacity.

However commercial and industrial property is not going to be the only assets affected by a terrorist event. In all cities we now have substantial residential populations, many of those people living in buildings which, apart from the occupants living rather than working there, are little different to a major office tower. Under the provisions of ARPC if the occupation of the building is predominantly residential there is no cover from the pool.

Reinsurers have generally not been willing to give terrorism cover for residential buildings with a sum insured greater than A$10 million. This results in either the insurer (if there is no terrorism exclusion in the original policy) or the building owner, carrying the terrorism exposure for these properties.

A similar situation arises statutory classes of insurance, workers' compensation and motor CTP. Cover is not provided by reinsurers, and in most jurisdictions, insurers are protected by a legislative provision amending the statutory cover to provide liability arising from terrorism events will be excised from the insurance cover.

Is the limit of A$10.3 billion available from ARPC enough?

We can consider this in the context of the assessed exposure to a natural catastrophe and the resultant limit of reinsurance cover purchased. As noted earlier, the earthquake probable maximum insured loss for greater Sydney (Wollongong to Gosford) is approximately A$15 billion and catastrophe reinsurance cover for this limit is purchased. This represents 1.8% of insured values implying total insured values of A$830 billion in greater Sydney.

The ARPC terrorism reinsurance cover limit of A$10.3 billion represents 1.25% of total insured values. Could a terrorism event result in damage to property of this scale? The major geographic concentration of values in the region is the Sydney CBD. A concerted terrorist attack on the CBD could lead to very large losses but to reach the limit of the ARPC cover would need to result in the destruction of many CBD office towers. One would hope such a scenario would not occur.

USA

TRIA was enacted on 26 November 2002 and for the period to end 2005 provides up to US$100 billion of cover excess of a scaled retention held by those insurers seeking to claim. The retention was 7% of premium in 2003, 10% in 2004 and 15% in 2005 plus 10% of the amount of cover in excess of the retention up to a coverage limit as noted of US$100 billion.

What would have been the application of TRIA if the WTC loss had occurred in 2004?

Assume the loss amount is	US$35 billion (all covered)
Deductible	US$16 billion (10% of subject premium for industry)
Co-insurance	US$1.9 billion (10% of amount recoverable above deductible)
Recovery from TRIA	US$17.1 billion

This assumes that all insured with losses from the WTC event had purchased terrorism coverage as a part of their commercial insurances.

Is the amount borne by the insurance industry (US$17.9 billion) a reasonable retention?

The USA property & casualty insurance industry surplus (free funds) at 31 December 2004 was US$393.5 billion. A retained loss of US$17.9 billion is approx. 4.5% of surplus which whilst a significant amount is obviously not a threat to the survival of the industry.

Insurability

Is terrorism insurable?

In considering the concept of insurability, it is appropriate to remind ourselves of the principle of insurance. Alfred Manes, Principal of the Berlin Business School from 1906 to 1935, described insurance as follows:

"Insurance is the mutual cover of a fortuitous, assessable need of a large number of similarly exposed businesses."

Berliner (1982) set out the criteria of insurability, including such factors as randomness, maximum possible loss, average loss amount per occurrence, assessability, mutuality, economic feasibility and moral, legal and social policy considerations.

It is easy to explain these criteria in the context of natural catastrophes including , for example earthquake and windstorm notwithstanding that some locations are more prone to one or other peril than other locations. Even an insured property on an earthquake fault line is subject to random or fortuitous shaking.

In considering these criteria when applied to terrorism, we might test the limits of insurability.

Let us consider the criteria of fortuity. If there has been one successful terrorist attack in a particular location the likelihood of a second occurrence increases rather than decreases. The reasons for this include "increasing political tension, reprisals by rival groups and copycat attacks. In contrast , it can be assumed that major international terrorist attacks are many years in the planning, which means that an immediate, un-prepared follow-up attack – at least by the same terrorist group – becomes unlikely".

Whilst the above example might suggest the fortuity test is not met, we need to consider this from the insured's perspective. The terrorist may well be deliberate in the choice of targets, however, unless the insured is able to influence events randomness from the insured's perspective remains.

We can also analyse the criteria of assessability in relation to the September 11 attack. No-one could have envisaged the scale or the form of the attack; the use of fully laden commercial passenger aircraft, a major city commercial building complex as the target or the devastating affect of fully fuelled aircraft striking a modern steel and concrete structure.

From an insurer's perspective the use of multiple aircraft to carry out the attack and the breadth of the accumulation of loss across classes were clearly not anticipated. As noted above, in the comment from Warren Buffett of Berkshire Hathaway, terrorism coverage for many lines of business had been freely granted without insurers considering the potential for accumulation of classes or the possible scale of an event.

But does this failure to recognise the scale of a terrorism event suggest that the criteria of assessability cannot be satisfied?

In setting out the criteria of insurability, Berliner notes they are not independent of each other, however, none of the criteria can be replaced by others. Assessability has a dependency on economics. Assessment has to include the realistic probability that the loss suffered can be met by the insurance industry. If this assessment is such that the loss is larger than the ability of insurers to pay, then the additional criteria of economic feasibility cannot be met.

The attack of September 11, 2001 now estimated at US$30-35 billion represents something less than 3% of world-wide non-life premium income for 2004 (Swiss Re sigma 2/2005) and is significantly less than might be expected for a large earthquake in California or Japan or a Hurricane in Florida.

As noted earlier even if we treble or quadruple the size of the loss we are still considering a loss amount within a range that would not lead to total collapse of the insurance industry. The surplus of the global property & casualty insurance industry is of the order of US$750 billion. A loss of US$100 billion would represent a reduction of 13% of published surplus and some 7% of global premium income.

To put this in context, non-life shareholders' funds for the Australian market were A$23.4 billion at December 2004 and gross premium for the 2004 year A$25.7 billion(APRA performance statistics). A loss of 13% of shareholders funds would equate to A$3 billion, or approximately 1 ½ times the total cost of the Sydney Hailstorm of April 1999 and 1 ½ times the increase in shareholders funds in the 2004 year. It should be noted that a loss of A$3 billion is before reinsurance outside of the Australian market.

It is not possible in this paper to examine all of the criteria for insurability and their application to terrorism exposures.

Other impacts on the insurer's balance sheet

Obviously the direct insurance claims from September 11 had a significant impact on insurers' balance sheets. Perhaps of greater concern to managers of insurance companies globally, than the direct insured losses, would be the potentially destabilising impact of a mega-terrorism attack on the robustness of financial markets. In the two years after September 11, 2001 insurance company losses from falling stock and bond markets far exceeded the insurance claim payouts for the insured terrorism losses. Estimates of the losses have varied but were well in excess of US$75 billion, i.e. more than twice the insured losses of September 11.

If we can ascribe the diminution in investment values to the same cause as the insurance losses this is possibly the first time the insurance industry has experienced a reduction in asset values from investment losses at the same time as an increase in insurance liabilities: a "double whammy"!

Investment risk management strategies post September 11 have seen a number of major companies reduce their exposures to equity investments in order to take the risk out of the asset side of the balance sheet.

A conclusion. Where to from here?

Are the existing arrangements established as a result of the passage of the Terrorism Insurance Act of 2003 the best solution for Australia? Will the private sector insurers return to underwriting terrorism insurance?

In an address to the Insurance Council of Australia Canberra conference in August 2002, Ken Henry, Secretary of the Treasury, commented that the establishment of the Australian Reinsurance Pool Corporation was a direct result of market failure, i.e. the inability of the private sector insurance industry to provide the insurance cover for terrorism demanded by insureds and their financiers. It was not the Commonwealth Government's wish to be in the insurance business but there was a clear need for a solution to the withdrawal of cover by the insurance industry.

Has this situation changed?

There's been various indications of private sector insurer interest in the provision of terrorism cover. The form of this cover is of interest. As noted earlier in the comments from Warren Buffett and the analysis of all risks cover, one of the major concerns of insurers was the inability to measure exposures and assess accumulations.

Whilst much has been done in the last four years to improve the analysis of risks and the scope of cover granted, the situation in relation to all risks cover persists. The losses from September 11 demonstrated the multi-class accumulation that occur as a result of a terrorism event. Given this accumulation potential it is not likely that we will see a blanket removal of the terrorism exclusion.

It is likely that the return of private sector underwriting will be gradual and we can look to other markets and solutions implemented there to see how this might develop.

In a number of markets, including France and Germany, the pool solution includes a mix of private and public sector backing. The reinsurance cover for the pools is layered with private sector reinsurers providing tranches of cover with the ultimate layers provided by the state. It is feasible that layers of privately placed reinsurance protection for the ARPC could be provided replacing the existing line of credit and part of the government guarantee. However, it is difficult to envisage the government avoiding being the reinsurer of last resort and providing protection against an apocalyptic event.

A return of private sector participation in the provision of terrorism coverage, by way of reinsurance of ARPC, would be one way of resolving the market failure described by Ken Henry and perhaps over time moving to direct underwriting of terrorism cover by insurers and reinsurers.

Even if we do not return to universal coverage for terrorism would it be feasible for insurers and reinsurers to provide coverage for individual risks on a stand alone or similar basis? We might term this proposal "the new insurability or re-insurability".

What are the necessary characteristics to ensure "the new insurability or re-insurability?"

In analysing these questions Brauner & Galey (2003) consider a number of questions relating to the criteria of insurability:

- mutuality – this relates to the risk community, i.e. the number of insureds with sufficiently similar exposures to the same peril so as to be grouped together;
- premium sufficiency – is the premium that will be gathered from the risk community when pooled together be sufficient to meet the anticipated risk (i.e. loss) burden;

- limitation of losses **-** is it possible or feasible to limit losses from terrorism to an amount that bears a reasonable relationship to the premium pool; and,
- reasonable premium rate **-** is the actual risk community (i.e. the number of insureds exposed to the threat of terrorism) large enough to obtain a reasonable premium rate?

As noted earlier one of the outstanding issues arising from the operation of the ARPC is the provision of terrorism cover for large residential buildings. These are specifically excluded from cover under the Terrorism Insurance Act Regulations and reinsurers generally exclude terrorism cover for residential risks with a sum insured greater than A$10 million.

Would it be feasible to establish a pool for these risks outside the ARPC? Would such a pool satisfy the criteria of mutuality, premium sufficiency and limitation of loss amount? Given the growth in development of inner city apartments over recent years, there is a significant asset class presently uninsured for terrorism coverage. This represents a potential opportunity for the insurance and reinsurance industries and a worthwhile project for the industry to consider.

Within the constraints of an active and competitive insurance marketplace in Australia and globally, it is unlikely that all issues will be resolved in the short-term and to the satisfaction of all. Nevertheless, and notwithstanding the ongoing occurrence of terrorism events, the understanding of insurers and reinsurers grows and within an agreed limitation of cover per occurrence capacity is increasingly available in other markets. There is no reason why this cannot apply in Australia.

One of the requirements of the Terrorism Insurance Act is that the operation of the scheme and ARPC is to be reviewed and the result reported to Parliament to ascertain whether a commercial market for terrorism insurance has returned. This report to Parliament is due by the middle of 2006.

The insurance industry should ensure that it takes an active part in this review and that the views of insurers are well understood by the Parliament.

References

Berliner B, *Limits of Insurability of Risks*, Prentice Hall 1982
Brauner C & Galey G, *Terrorism risks in property insurance and their insurability after 11 September 2001*, Risk perception series, Swiss Re 2003)

Appendix 1

Country	**Australia**	**France**	**Germany**	**USA**
Name	Australian Reinsurance Pool Corporation (ARPC)	Gestion de l'assurances at de le Reassurances des Risqes attentats et Actes de Terrorisme (GAREAT)	Extremus AG	Terrorism Insurance Program established by the Terrorism Risk Insurance Act of 2002
Period of operation	1 July 2003 (review after 3 years)	1 Jan 2002 to end 2003, option to renew	Commenced 1 November 2002	1 January 2003 to 31 December 2005
Form	Federal statutory authority	Co-reinsurance pool	Commercially owned reinsurer	Support program for insurers in cases of terrorism
Cover	Commercial property & infrastructure Public liability and BI associated with commercial property Nuclear events excluded	Commercial cover only incl. BI Includes nuclear but not weapons exposure	Commercial property incl BI Only risk over Euro 25 million	Property & casualty losses in USA & US flag aircraft & vessels outside USA
Participation	On declaration of event terrorism exclusines inoperative Reinsurance to ARPC optional	Covers all commercial risks with sum insured over Euro 6 million	Optional	Insurers must offer terrorism cover, optional for insureds
Scheme limit	$300 million funded by reinsurance premium $1 billion commercial line of credit $9 billion Government indemnity	Unlimited	Euro 13 Billion	US$100 billion