

IFTRIP 2018

International Forum for Terrorism
Risk (Re)Insurance Pools

Conference Review



IFTRIP 2018

**International Forum for Terrorism
Risk (Re)Insurance Pools**

IFTRIP conference 2018

The IFTRIP community continues to gather momentum and we have expanded since the conference in Paris in 2017. Insurance has always been a global industry, but never has it been more responsive to international market forces than it is today. The sad fact is that the challenges posed by terrorism to the individual pools and countries represented at this conference are national facets of an international problem. But as the risk grows and becomes more interconnected, so too must the collaboration and network of the world's reinsurance pools committed to ensuring that terrorism does not damage the economic situation of a targeted country.

RATIP was honoured to host the conference, and we are deeply grateful to all the organisers, delegates and contributors for their work in bringing IFTRIP to Moscow in 2018.

IFTRIP conference 2019

The IFTRIP community will gather once again in 2019, hosted in Brussels. The conference will run from 8th October until 10th October.

More details can be found on the IFTRIP website: <http://iftrip.org/>



Conference Presenters



**Leigh
Wolfram**

(Policy Analyst
(insurance),
OECD)



**James
Stephens**

(Partner, JLT Re)



**Gordon
Woo**

(Catastrophist,
RMS)



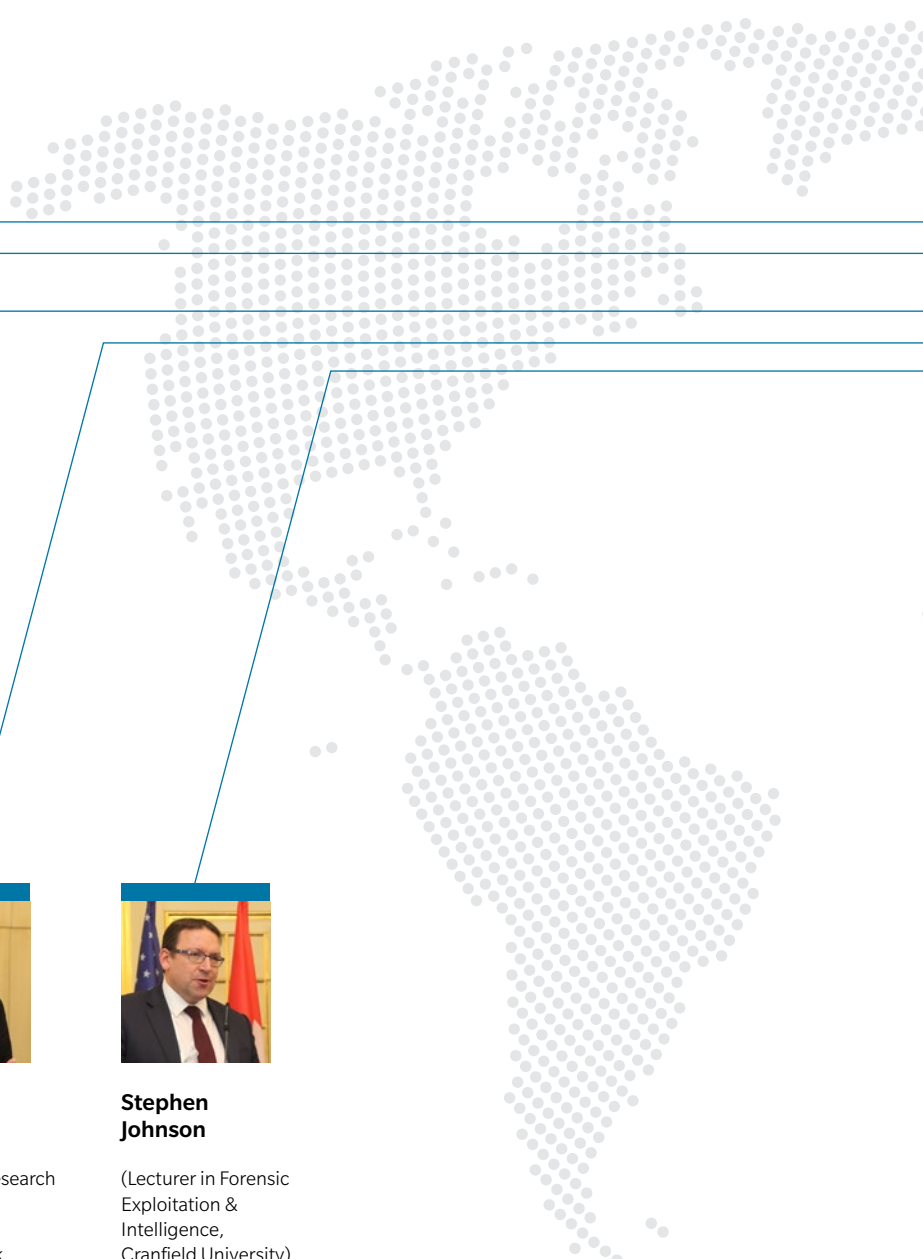
**Simon
Ruffle**

(Director of Research
& Innovation,
Cambridge
Centre for Risk
Studies)



**Stephen
Johnson**

(Lecturer in Forensic
Exploitation &
Intelligence,
Cranfield University)



**Alexander
Gulchenko**

(Chairman,
RA TIP)



**Elena
Nebolsina**

(PhD, Associate
Professor, MGIMO
University)



**Alexander
Pozdnyakov**

(Associate Professor,
Academy of Management
of the Ministry of Internal
Affairs of Russia)



**Andrey
Khokhlov**

(CEO, Industrial
Insurance
Broker LLC)



**Andrew
Silke**

(Professor,
Cranfield
University)



**Professor Paula
Jarzabkowski**

(Associate Dean of
Research & Enterprise
– Cass Business
School, University of
London)



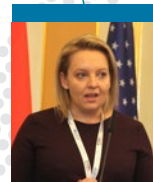
**Des
Potter**

(Managing Director,
GC Securities
Europe)



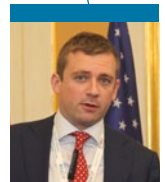
**Rowan
Douglas**

(Head of Capital,
Science & Policy
Practice, Willis
Towers Watson)



**Emma
Karhan**

(Head of Terrorism
Specialty & Public
Private Enterprises,
Aon)



**Vlad
Polyakov**

(Broker, Aon
Benfield)

An overview and summary of terrorism threat from Pool Re

Pool Re were delighted to join more than 200 insurance industry professionals from around the world during IFTRIPs 2018 flagship event in Moscow. Indeed, we were grateful for the outstanding hospitality shown by our colleagues at RATIP, the Russian Terror Pool.

The conference attracted a wide range of representatives including insurance brokers, academics, government officials and counter-terrorism specialists. Attendees had an opportunity to explore the changing dynamics of terrorism and cyber risks sharing thought leadership and best practice as they did so.

Delegates heard first-hand about developments within the industry including contemporary methods for insuring and reinsuring terrorist threats.

Presenters, speakers and panellists offered a balanced perspective, including global, regional and local dimensions.

We heard from a range of leading academics including Professor Andrew Silke, Cranfield University, Professor Elena Nebolsina, Moscow Institute of International Relations and Professor Paula Jarzabkowski, Associate Dean of Research & Enterprise, Cass Business School, University of London. Presentations described the determined and effective global terrorist entity which remains Islamist extremism, the growth of extreme right-wing (XRW) groups and individuals, and the underlying threat posed by dissident groups that are continuing to concern international agencies.

Research identified threats posed by terrorists' use of emerging, unconventional methodologies, such as Chemical, Biological, Radiological and Nuclear (CBRN) material, cyber and drones. Concerns were raised that several terrorist groups have the intent to utilise a CBRN device in an attack and it was disclosed that Daesh has tested and used chemical devices in Syria and Iraq.

In all, the conference provided an opportunity for learning with insight into useful foreign experience in loss adjustment, international jurisprudence in the reinsurance sphere, and recent trends and developments in the Russian and international insurance markets - no doubt many attendees departed with much to consider.

Pool Re are proud to support IFTRIP and its central role in bringing together an exceptional group of specialists whose work is invaluable in understanding and reinsuring the emerging terrorism risk.

We look forward to attending the 2019 conference, to be held in Brussels from 8-10 October.



POOL REINSURANCE COMPANY LIMITED



Julian Enoizi CEO Pool Re

An Introduction from James Nash CEO International, Guy Carpenter

I am delighted to present this review of the 2018 IFTRIP Conference which Guy Carpenter, as a sponsor, has assembled on behalf of the conference. We hope that this provides conference delegates, as well as a wider audience, with a useful overview of topics discussed over the course of the main conference. For reasons of confidentiality we have not provided any commentary on the closed session(s).

Guy Carpenter sent a strong delegation to the conference and it is clear from their reports that this was a timely and hugely successful coming together of prominent thought leaders in the terrorism insurance space. Delegates were exposed to commentary from academia, industry participants and technical experts in a wide ranging debate and this document sets out the content and a high level review of each contribution.

The substance of the conference ranged widely from discussions around the terrorism peril and how it will continue to change with time, through to the utility and relevance of market solutions that are in place to ensure the end consumer can access terrorism insurance. Like with so many aspects of the insurance sector, technology must continue to be seen as the industry's ally as we seek to better understand the peril. Through improved modelling and scientific development, our ability to ensure the right cover is available will be enhanced, and therefore the continued relevance of terrorism products.

Guy Carpenter is committed to being a leader in the terrorism (re) insurance sphere and continues to look for ways to support current solutions and provide innovative input into new ideas to ensure a vibrant role in shaping the industry's response. Our most recent report on Terrorism can be downloaded at the following [link](#) and we commend it to delegates of the conference.

We will maintain our support of IFTRIP as it continues its important work in ensuring that the (re)insurance industry is driving the right change within this highly specialized, yet hugely relevant component of our industry.



James Nash CEO International, Guy Carpenter

Agenda

WELCOME

Francois Vilnet (President. IFTRIP)
Alexander Gulchenko (Chairman, RA TIP)
Representative of the Ministry of Finance of Russian Federation

SESSION 1

Moderators

Alexander Gulchenko (Chairman. RATIP)
Sergey Danilychev (President. Industrial Insurance Broker LLC)

10:15 The nature and level of the terrorism threat

RA TIP-the key instrument for insuring terrorism risks in the former Soviet Union Region States

Alexander Gulchenko (Chairman, RA TIP)

Best practices of Russian law enforcement agencies on the prevention of terrorist attacks

Alexander Pozdnyakov (Associate Professor. Academy of Management of the Ministry of Internal Affairs of Russia)

Administration of insurance and reinsurance pools

Andrey Khokhlov (CEO, Industrial Insurance Broker LLC)

The radicalisation and the changing nature of the threat towards non-damage and its economic cost

Andrew Silke (Professor. Cranfield University)

SESSION 3

Moderators

Chris Holt (Managing Director, CHC Global)
Steve Coates (CUD, Pool Reinsurance Company Ltd)

14:00 How do terrorism re/insurance pools ensure their continued relevance?

Trends and market developments in terrorism risk insurance

James Stephens (Partner, JLT Re)

14:45 CBRN, cyberterrorism and risk modelling

CBRN

Stephen Johnson (Lecturer in Forensic Exploitation and Intelligence, Cranfield University)

Cyber terrorism scenarios and modelling challenges

Simon Ruffle (Director of Research and Innovation, Cambridge Centre for Risk Studies)

The cyber insurance response

Vlad Polyakov (Broker, Aon Benfield)

SESSION 2

Moderators

Alexander Gulchenko (Chairman, RA TIP)

Chris Wallace (CEO, Australian Reinsurance Pool Corporation [ARPC])

Julian Enoizi (Chief Executive, Pool Reinsurance Company Ltd)

11:45 The terrorism insurance market and national terrorism schemes: adapting to a changing environment

The role of (re)insurers in Public Private Partnerships

Leigh Wolfram (Policy Analyst (insurance). Organization for Economic Cooperation and Development [OECD])

Is it possible to return to a normalized market in terrorism insurance and, if so, is it desirable?

Emma Karhan (Head of Terrorism Specialty and Public Private Enterprises, Aon)

12:25 The different types of risk sharing model for catastrophe risks

Professor Paula Jarzabkowski (Associate Dean of Research & Enterprise - Cass Business School, University of London)

12:50 The story of the IDF and its application in emerging markets and non-terrorism perils

Rowan Douglas (Head of Capital. Science & Policy Practice. Willis Towers Watson)

SESSION 4

Moderators

Laurent Montador (Deputy CEO, CCR)

16:00 Possible insurance linked securities solutions for terrorism

Des Potter (Managing Director, GC Securities Europe)

16:15 The modelling challenge for terrorism

Gordon Woo (Catastrophist. RMS)

16:30 Main trends and prospects of terrorism and cyber insurance in Russia

Elena Nebolsina (PhD. Associate Professor, MGIMO University)

16:45 Closing speech

The Nature and Level of the terrorism threat in Russia

Moderators

Alexander Gulchenko (Chairman, RATIP)

Sergey Danilychev (President, Industrial Insurance Broker LLC)



RA TIP-the key instrument for insuring terrorism risks in the former Soviet Union Region States.

Alexander Gulchenko (Chairman, RA TIP)



Best practices of Russian law enforcement agencies on the prevention of terrorist attacks

Alexander Pozdnyakov (Associate Professor, Academy of Management of the Ministry of Internal Affairs of Russia)



Administration of insurance and reinsurance pools

Andrey Khokhlov (CEO, Industrial Insurance Broker LLC)



The radicalisation and the changing nature of the threat towards non-damage and its economic cost

Andrew Silke (Professor, Cranfield University)

RATIP (the Russian Anti-terrorism Insurance Pool) serves as the key instrument for insurance of terrorism risks in Russia

Alexander Gulchenko | Chairman, RATIP

The sobering facts and incidents of terrorism, sabotage, SRCC and political violence in Russia (a country with a 5.33 Global Terrorism Index (GTI) score and ranked 33/163) were presented and put into perspective. The pool was established in December 2001 by the six major Russian

insurance companies and today has 25 members with a total capacity of USD \$240M and an online presence. In conclusion, the presentation described the Pool's guidelines involving outward versus inward terrorism risks and how they are divided into dangerous vs. non-dangerous risks.

“The guiding philosophy of the IFTRIP Community is that now, more than ever, it stands as an example of the pressing need for the nation states of the world to unite against a threat which seeks above all to de-stabilise and divide.”

Best practices of Russian law enforcement agencies on the prevention of terrorist attacks

Alexander Pozdnyakov | Associate Professor, Academy of Management – Russian Ministry of Internal Affairs

The concept of terrorism is defined in the Russian criminal code and via federal laws on counter-terrorism; a different approach to the U.S. and Europe. Details on 30 organisations were briefly covered, with a focus on 13 specific terrorism groups in the Russian Federation. Radical Islam, Secessionist Terrorism and Cyber Terrorism (e.g. electronic jihad) are among the 20 defined terrorism acts defined in the Russian code. A review then covered the period between 2008 and 2017 when ISIS increased their terrorism acts within Russia as well as on a more global scale. Alexander commented on the financing of terrorist organisations within the Russian Federation and neighbouring countries as well as the potential negative impact of insufficient control over the flow of labour migrants across Europe and Russia. Next covered was the new article entered into the Russian code allowing for expansion to pre-incident warnings - to prevent terrorism acts. As international terrorism impacts all lives, the conclusion was that the OECD needs a joint platform to share data.

“The sharing of data is crucial to fighting global terrorism. The OECD needs a platform, to facilitate this”

Administration of insurance and reinsurance pools

Andrey Khokhlov | CEO, Industrial Insurance Broker LLC

Terrorism events in the Russian Federation have reduced from the 1,003 events that occurred in 2007 down to 20 in 2017. Currently, all institutions in Russia participate in counter-terrorism measures and it is evident that the frequency of attack has decreased due to the success of counter-terrorism activities and the involvement of local Russian municipal governments. The case was presented that the International definition of terrorism should be commonly defined. No single country, no matter how strong, can combat terrorism alone and all countries should form a pool of experts beyond the current database of 27 countries undergoing such a joint exchange. The countering of ideology is an essential issue that the international community must research together; young people across the world remain the most vulnerable to be radicalized. Andrey next reviewed the operations of Industrial Insurance Broker LLC that encompass: insurance, reinsurance, risk consulting, loss control, and pool management. In conclusion an online Reinsurance and accumulation management capability for members was presented, including the ability to access additional limits when certain accumulated limits are exceeded.

“No one country can fight terrorism in isolation. By expanding the pool of experts we will be stronger and more effective”

The radicalisation and the changing nature of the threat towards non-damage and its economic cost

Andrew Silke | Professor, Cranfield University


Professor Silke described the preconditions of terrorism including the nature of terrorist leadership, their level of resources and the new strategic direction of a group's structure (as well as targets). The IRA's bombing campaign in the UK was cited as an example of a group with a primary aim of causing economic damage rather than causing casualties and death. Today the opposite can be said with a shift towards soft targets where the infliction of mass casualties is the primary aim.

“The intention of terrorism has moved from economic damage to mass casualties as a guiding strategy”

The future direction of the peril will depend on the level of resources, weapons, skills and funding available to the terrorist. ISIS has the desire but, for now, lacks the resources it could call on 3 years ago. The causes of change were discussed: new security environments, factional competition and new strategic directions. ISIS was used as an example with their priority now becoming local (e.g. Iraq/Syria) and not one towards the west.

The history of terrorism from the 1860's to the present day was illustrated as four waves, each lasting a few decades. Each was triggered by large geopolitical events and with each one replacing the previous based on various symptoms. The four waves cover the gradual decolonization of Africa; the rise and fall of Fascism; the spread of Communism and the Cold War; and the current phase of extreme religious ideologies driving terrorist activities.

Talking about the future of terrorism in today's world. Themes driving the threat were identified: Rising populations from



“Terrorism is adaptable and will find a new directions when operations are curtailed. The future will be driven by the competition for resources and the fears of the population”

2015 to 2050 will likely result in several hot spots emerging in Africa, South/Central America, Middle East and Southeast Asia; Climate Change’s impact, mainly on ideology; and Increasing Migration.

Illustrating the Climate Change impact Andrew provided a fascinating case study of the emergence of Boko Haram in Africa in the 1960’s after Lake Chad was impacted by Climate Change and a key area water resource for several

neighbouring countries was compromised. Increasing Migration, a key factor of right wing politics in Europe, started in 2005-10 after Syria’s big drought decimated eastern Syrian water supplies and coupled with Iraqi migration into Syria, resulted in notable population shifts to eastern cites two years before the beginning of the Arab spring. The inability of the Syrian government to deal with the mass migration allowed the Islamic state to fill the void.

The Nature and Level of the terrorism threat in Russia

Moderators

Alexander Gulchenko (Chairman, RATIP)

Chris Wallace (CEO, ARPC)

Julian Enoizi (Chief Executive, Pool Reinsurance Company Ltd)



Leigh Wolfram (Policy Analyst (insurance), OECD)



Emma Karhan (Head of Terrorism Specialty & Public Private Enterprises, Aon)



Professor Paula Jarzabkowski

(Associate Dean of Research & Enterprise – Cass Business School, University of London)



Rowan Douglas

(Head of Capital, Science & Policy Practice, Willis Towers Watson)

The terrorism insurance market and national terrorism schemes: adapting to a changing environment

Leigh Wolfram | Policy Analyst (insurance), OECD

The presentation outlined the various reasons why (Public Private Partnerships) PPPs were needed for insuring catastrophe risks, including; controlling high exposures; societal interest; protecting against political failures; and the provision of protection against post disaster financial burden. These organisational structures benefit from the combination of both public and private sector expertise. Various terrorism insurance mechanisms were compared against recent terrorism losses to compare how the schemes would react to each event. Leigh concluded by reviewing ways of maximising the private market role in terrorism insurance via increasing retentions, use of retro covers and by minimising the scope of public coverage.

“Catastrophe risk requires the expertise of both public and private sector to manage.”

“The trend is for the private market to assume more risk in the Terrorism market, the Public sector can accelerate this by reduce the scope of its coverage both by its definition and its quantum.”

Is it possible to return to a normalized market in terrorism insurance and, if so, is it desirable?

Emma Karhan | Head of Terrorism Specialty & Public Private Enterprises, Aon

The session looked at how Terrorism would operate in a market driven by supply and demand (e.g. can terrorism operate in a normal market?). The core challenges for the insurance market with regards to terrorism were reviewed, namely; the unpredictable nature of human behaviour; and the difficulty of modelling the peril. Emma concluded that public and private partnerships form a crucial part of solving the issues that the market faces.

“The reinsurance market relies on modelling to assess risk but terrorism is notoriously hard to model. Long term solutions require the development of trusting partnerships.”

The different types of Risk Sharing Model for Catastrophe Risks.

Professor Paula Jarzabkowski | Associate Dean of Research & Enterprise – Cass Business School, University of London

The presentation began by recapping the increased frequency and severity of recent natural catastrophes as well as other risks on the rise. The financial resistance to disaster in fragile economies could be increased by Protection Gap Entities (PGEs) bringing global capital to notable local gaps in coverage. The Protection Gap Strategic Framework was detailed in the context of various mismatched nations removing risk versus redistributing risk, each with its advantages and its challenges. In the first mismatch considered, the PGE remit fell short of matching stakeholder

expectations. The second mismatch identified how addressing one problem creates another. The third mismatch considered how a PGE may be irrelevant to the evolving gap in protection. Paula next discussed several critical questions for PGEs and Governments including: How terrorism is different than natural catastrophe in the context of modelling and predictability?; What can really be solved by PGEs?; How to address ever new emerging protection gaps (mission creep)?, and lastly; Do PGEs represent the heavy hand of government and/or the invisible hand of the market?

“Resistance to disaster is a problem in both fragile and developed economies; the threat of a terrorist incident exacerbates an existing dilemma.”

The story of the IDF and its application in emerging markets and non-terrorism perils

Rowan Douglas | Head of Capital, Science & Policy Practice, Willis Towers Watson

The session began by defining the Insurance Development Forum's (IDF) history and its context as a high level public-private partnership that aligns the skills, capabilities and resources of the insurance sector to deliver the UN 2030 Agenda, including the Sustainable Development Goals, the Paris Climate Agreement and the Sendai Framework. The IDF's structure was reviewed which includes: a Steering Group of 14 CEOs/Chairs from (re)insurance companies, regulators, industry associations and UN Agencies; an Operating Committee Group chaired by Industry (WTW & Swiss Re), UNDP and World Bank Group; various working groups that include Sovereign and Humanitarian Solutions, Risk

Modelling & Mapping, Microinsurance, Insurance Regulation & Resilience Policies and Investment. Lastly there is an IDF Secretariat. Early IDF Priorities identified include: Climate & Natural Hazard Resilience with a G20 Target of 400m more people covered through insurance by 2021; Understanding Risk using risk modelling; Risk & Insurance Regulation, Legislation and Policy; risk sharing, transfer & response using sovereign, micro and traditional insurance and; risk relevant national institutions that cooperate internationally for building capacity at all levels to combat terrorism, in particular in developing countries.

“The primary goal of the IDF before 2021 is to protect 400m more people through insurance.”



The United Nations Sustainable Development Goal 16 : **Peace, Justice & Strong Institutions**

Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, **to prevent violence and combat terrorism and crime**

How do terrorism re/insurance pools ensure their continued relevance?

Moderators

Chris Halt (Managing Director, CHC Global)

Steve Coates (CUO, Pool Reinsurance Company Ltd)



James Stephens (Partner, JLT Re)



Stephen Johnson

(Lecturer in Forensic Exploitation & Intelligence, Cranfield University)



Simon Ruffle

(Director of Research & Innovation, Cambridge Centre for Risk Studies)



Vlad Polyakov (Broker, Aon Benfield)

Trends and market developments in terrorism risk insurance

James Stephens | Partner, JLT Re

The Terrorism risk insurance market was presented as being vibrant; it has challenges, like all markets, but is alive and well, profitable and growing.

The demands have changed and while large explosive device scenarios remain a serious concern, the last few years have revealed new attack types, some violent, some non-physical. James described that new attack perpetrators have emerged, ranging from impossible to track Islamic micro cells, to the impossible to understand involuntary celibates. He noted the adoption of new target types, and different consequences. The traditional definitions of terrorism no longer serve the buyers on insurance - as a business owner suffering a Non Damage BI claim, when is a racial hate crime involving vehicle attack any different from the same incident but when perpetrated by a Terrorist? Insureds are buying larger risk limits, probably fuelled by uncertainty, and are buying across a far broader range of coverages than thought possible or in fact necessary

a few years ago. CBRN still remains a more limited request from buyers which, validates the approach of the State Pool approach where CBRN can often be included for the membership via the Pools' structure. Demand for Cyber Terror cover has increased and in general, the trend is that coverage is now wider and more innovative to meet the perils insureds face. This is very much an area of 'known unknowns' whereby markets are aware of the exposure they are running but not, potentially, the full quantum of downside. To help them manage this complex range of exposures there are increased data requirements, modelling of many different varieties and more actuarial input to help define pricing.

In conclusion if insurers have increased claims experience from some of the newer terrorism coverages, and no reduction in expenses then rates go up, or the supply chain is slimmed down both of which could prove challenging.

“Insurance needs to evolve with the needs of the customer, as well as threats from the terrorist.”

CBRN, Cyber Terrorism and Risk Modelling

Stephen Johnson | Lecturer in Forensic Exploitation & Intelligence, Cranfield University

The presentation defined the Conflict triangle between the Target, Weapon and Attacker and proceeded to review the current CBRN threat in perspective. Although Chemical, Biological and Radiological threats are all small scale-moderate and large scale-low, Nuclear are small scale-very low and large scale very-very-low. The cost of the terrorism and the distance travelled to the attack are very low for shooting and conventional weapons but increase dramatically for Cyber and

CBRN and attack modes. Small scale incidents have increased 12 fold between 2010 and 2017. Similarly acid attacks as reported by BBC FOI have increased from 180 to 500 since 2012. Chemical and Biological attacks can be easy to carry out in combination with Cyber with potential disruption/business interruption.

They can also erode preparedness as well as create a diversion from a real attack. In summary, small scale chemical use will continue to be a challenge and may rise and the availability and simplicity will drive selection of most actors - not all. The more prestigious the target the more the potential attack and de-industrialisation will present threats as well cargo screening challenges increase risk. Drones and other remote vehicles will change accessibility of targets and ability to stop/limit. While there are future developments of concern we should be careful not to fix on overly elaborate or technical threats.

“ Whilst exotic threats of terrorism capture the imagination, the less sophisticated opportunistic threat is just as dangerous.”

Summary

- Small scale chemical use will continue to be a challenge and may rise
 - Availability and simplicity will drive selection of MOST actors not all
 - The more prestigious the target the more elaborate the potential attack
 - De-industrialization will present threats
 - Cargo screening challenges increase risk
 - Drones and other remote vehicles will change accessibility of targets and ability to stop/limit
 - While there are future developments of concern we should be careful not to fix on overly elaborate or technical threats
-

CBRN, Cyber Terrorism and Risk Modelling - Cyber terrorism scenarios and modelling challenges

Simon Ruffle | Director of Research & Innovation, Cambridge Centre for Risk Studies

The studies being undertaken with Pool re focus on disruptive (e.g. data exfiltration and financial theft) and destructive (e.g. cyber-attack on power generation and industrial chemical plants) scenarios. Viewing these scenarios through the Cyber Terrorism Capability Framework, which categorises several threat categories by capabilities, the centre has been able to formulate a view of cyber terrorism risk. This work includes model development to assess the possible losses to the Pool Re portfolio from destructive cyber terrorism scenarios.

The scenarios developed fall under two broad descriptions; targeted destructive attacks on high value facilities achieved through cyber means; and systemic cyber-attacks using an automated attack vector. Future work involves simulating variations in the potential severity of loss to the Pool Re portfolio for each of these scenarios, which can be augmented with probability assumptions. Addressing a continuing theme of the conference Simon highlighted the modelling challenges that face the industry, such as: How do cyber physical attacks impact different building types and how to identify building usage categories in portfolios?

“The allocation of risk capital is dependent on the difficult task of assessing the likelihood of an attack, as well as its type.”

Cyber Terrorism has the potential for both disruptive and destructive attacks”

CBRN, Cyber Terrorism and Risk Modelling - The cyber insurance response

Vlad Polyakov | Broker, Aon Benfield

Cyber terror is covered both in the Property Damage Business Interruption (PDBI) market, and the Cyber Market. The PDBI coverage is characterised by physical damage, loss of revenue, rebuilding time and cost, as well as industry and peril specialisms. This market tends to cover first party perils such as Non-Physical Damage BI (either malicious or by failure), Contingent BI and Physical Damage & BI. The second market, the Cyber Market, is characterised by Data protection regulations, IT Security, is growing rapidly, and currently profitable. The Cyber market covers both first party data breach costs, crime and non-physical BI as well as third party data breach liabilities. The Cyber market overlaps with

PDBI market as both cover Non-Physical Damage BI and this was illustrated by the insurance market's responses to cyberterrorism via three areas. In the first, cyber breach and non-damage BI, war and terrorism are excluded and there is a write back for cyberterrorism. Here, TRIPRA in the U.S. could also respond on TRIPRA embedded lines of business. The second area includes coverage for cyber PD/BI, Lloyd's cyber risk codes apply and according to Pool Re, an act of politically-motivated violence involving physical damage or personal injury caused by a remote digital interference with technology systems. The third area is where silent cyber is being offered on policies having exposure on an incidental basis.

“The cyber insurance market continues to evolve and cyber terrorism cover must continue to keep apace.”

How do terrorism re/insurance pools ensure their continued relevance?

Moderators

Laurent Montador (Deputy CEO, CCR)



Des Potter (Managing Director, GC Securities Europe)



Gordon Woo (Catastrophist, RMS)



Elena Nebolsina (PhD, Associate Professor, MGIMO University)

Possible Insurance Linked Securities solutions for terrorism

Des Potter | Managing Director, GC Securities Europe

Des opened by reconnecting with Paula Jarzabkowski's topic earlier in the day - Risk sharing between nations and the protection gap of uninsured risks. Illustrating this gap is the estimate that only 30% of all catastrophe losses over the last 10 years were covered by insurance (US \$1.3T of uninsured economic loss) (Swiss Re). Emerging industry themes included: How the nature of (re)insurance business is changing; how mix of capital supporting insurance is increasingly fungible; the redefinition of the relationship between risk and capital by focusing on structured insurance risk vs. traditional debt or equity and lastly; the transformational role of brokers in structuring and distributing risk by taking a broader advisory approach to risk.

The presentation delved into four key areas: The emergence of Insurance-Linked Securities ("ILS") via capital's pursuit of low correlation and relative value yield's, seeking an optimal investor base and matching the sources and destinations of convergence capital. Second was the diversification opportunity for the ILS market away from non-traditional property catastrophe risk by writing emerging risks in new territories and new perils, such as terrorism. The market factors responsible for this include asset driving strategies; capacity deployment; diversification beyond peak natural

cat; growing expertise of ILS fund managers relying less on 3rd party models and underwriting non-modelled risks; lower costs of capital have created a more efficient market for reinsurers to transfer risk. The third area was the appeal of terrorism risk as a diversified risk in the ILS market. This appeal in part stems terrorism risk already existing in many ILS portfolios because of its inclusion in general property programs. ILS is well-suited for low frequency, high severity risk, and the risk is sufficiently short-tail, making collateralization efficient. During the financial crisis, (re) insurance maintained its value whilst other asset classes fell. A key requirement for ILS involvement is the clear articulation and quantification of the terrorism risk combined with a transfer structure that generates a reasonable risk-adjusted return. Terrorism presents challenges with coverage scope, event definition and trigger types, but once those are resolved risk modelling is key to unlocking the new sources of capital. Once the three issues of robust and transparent modelling; investment horizon and underwriting returns are resolved, the ILS market prefers non-indemnity triggers. Whilst this is complex due to lack of historical data and un-modelled risks, transactions are achievable with good exposure data and a credible risk analysis story.

"New capital is plentiful and waiting to be deployed within the terror market, but requires participants to resolve the barriers to market entry."

The Modelling Challenge For Terrorism

Gordon Woo | Catastrophist, RMS

Using the quotation ‘The great principle is that, in producing its effects, Nature acts always according to the simplest paths’ (Pierre de Maupertuis) Gordon explored the Six principles for addressing the modelling changes of Terrorism the 1st principle: terrorists will follow the path of least resistance. If two targets are equally attractive, a terrorist will attack that which has the relatively worse security. Citing the Nice attack on Bastille night 2016 - the kinetic energy of a refrigerator truck was substituted for chemical energy of explosives. The 2nd principle - that Terrorism is the language of being noticed was summarised using the simple formula: $\text{Leverage} = \text{impact} / \text{cost}$. The 3rd principle is that Terrorist attacks leverage maximum impact was illustrated using the concept of contact chaining – where aggregated webs of

known terrorists close in on any operatives planning new attacks. The 4th principle, that Too many terrorists spoil the plot quoting Osama bin Laden “For a large operation against the US, pick a number of brothers not to exceed ten.” On principle 5 - A suicide bomber can only die once, Gordon cited the Manchester Arena attack that killed 22 and considered to be worse than the IRA bombings due to the “loss of life tragic element”. With the 6th and final principle - There are multiple versions of conflict history, Gordon cites the 2017 Barcelona terrorism attack where based on preparations that were intercepted, there might have been three propane gas-laden vehicle bombs, targeting Las Ramblas, the Sagrada Familia Cathedral, and the port.

“Terror modelling must not overcomplicate the threat; opportunistic and crude attacks will always be attractive to the terrorist.”

Main trends and prospects of Terrorism and Cyber insurance in Russia

Elena Nebolsina | PhD, Associate Professor, MGIMO University

The START Global Terrorism Database (GTD) puts terrorism trends in Russia into perspective with other countries. In 2018, there were 971 attacks in the Russian Federation resulting in 5,321 fatalities – ranking it 33 (out of 50 countries) in the Global Terrorism Index. In 2018 Russia hosted the FIFA World Cup where the insured value of the event is over US \$10 billion. A total of twelve stadiums were insured for physical damage to a sum of around US \$1 billion. A further \$250 million covered terrorism liability and \$100 million for active shooter policies. Policyholders paid \$5,000 in premium for every \$1 million of cover. Statistics of terrorism exposures (by region) for the entire Russian Federation were presented, showing a near doubling (from 622 in 2011 to 1,101 during 2018) most of which occurred in the Northern Caucasus, Dagestan Republic and Chechen Republic. According to the Prosecutor General's Office of the Russian Federation, crimes of a terrorism nature and terrorism attacks have been decreasing in Russia

since 2003. This is as a result of an increase in federal laws enacted since 2002 on combating terrorism. On the topic of cyber-crimes, Russia showed the largest increase at 29% relative to five other western countries including the U.S. Although several new main federal laws on data protection have been enacted since 2016 there are several challenges in Russia that include a) low level of insurance culture, b) delays in the enhancement of legislation and the regulatory enforcement, c) limited information on actual and potential losses, and d) possible increases in the accumulation of losses. Ongoing positive changes include the 2017 state program on Digital Economy, that covers areas as regulation, education and human resources, cyber security, research and IT infrastructure. In addition the Central Bank of Russia announced the launch of the regulatory sandbox, which welcomes all entities that develop or use innovative services whose implementation requires regulatory changes.

“Government regulation can play an important part in enabling the resistance to terrorism by supporting education, infrastructure and security in developing innovative solutions.”

Terror pools

Spain

Consortio de Compensacion de Seguros (CCS)

Belgium

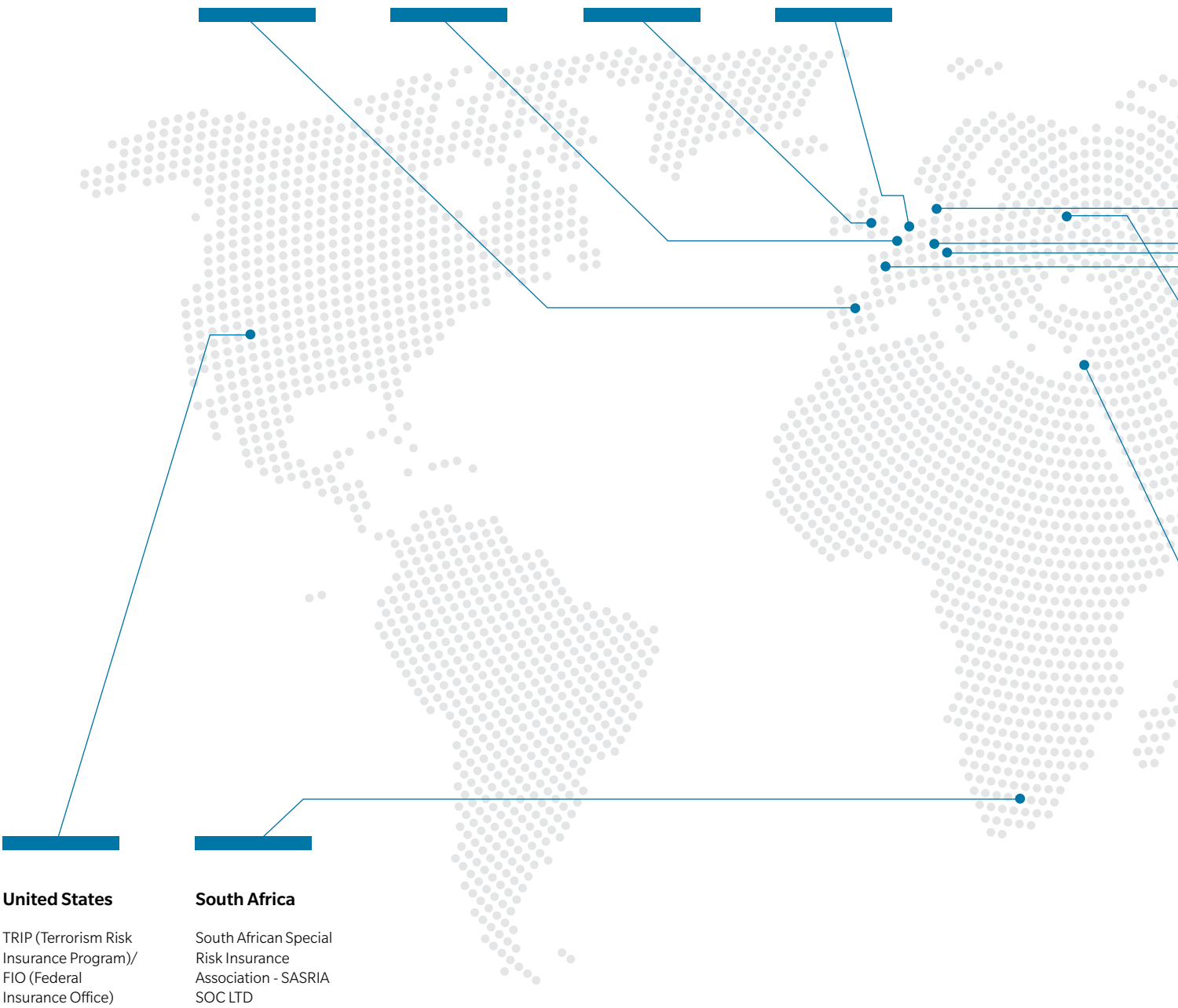
TRIP (Terrorism Reinsurance and Insurance Pool)

United Kingdom

Pool Re

Netherlands

Herverzekeringsmaatschappij voor Terrorismeschaden N.V. (NHT - Dutch Terrorism Reinsurance Pool)

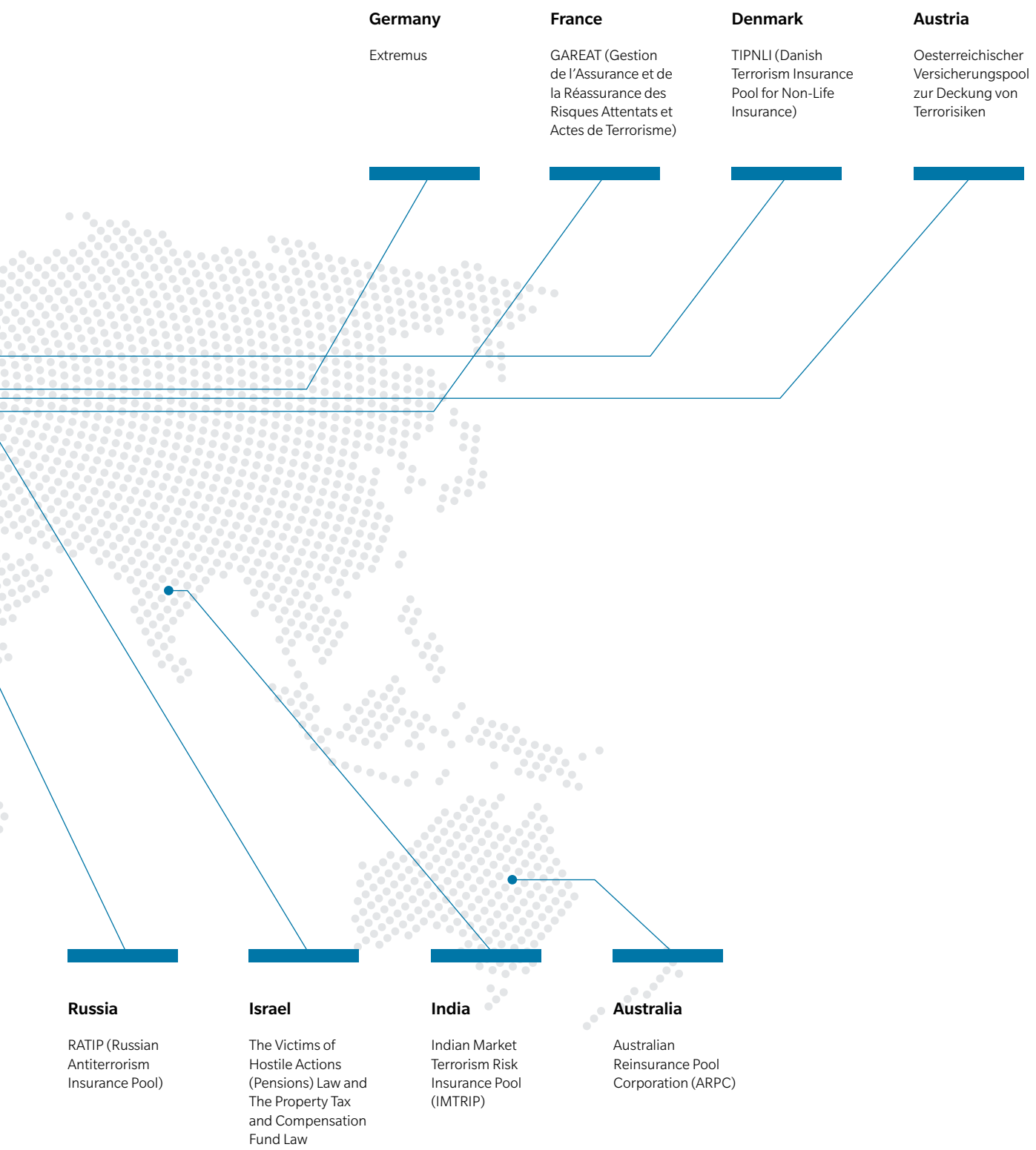


United States

TRIP (Terrorism Risk Insurance Program)/ FIO (Federal Insurance Office)

South Africa

South African Special Risk Insurance Association - SASRIA SOC LTD





IFTRIP 2018

International Forum for Terrorism
Risk (Re)Insurance Pools

The 3rd annual conference of IFTIP, held in Moscow in 2018 was a great success. The complexity of managing the risk from the threat of terrorism can be effectively addressed by the members of the global community pooling their expertise. Our shared knowledge across the spectrum, from risk financing to the latest advances in modelling is most effective when shared with those that are tasked with managing and confronting this dynamic risk. We have produced a video for the benefit of those that were unable to attend, and hope that you find this stimulating. To view the video follow the link:
<https://www.youtube.com/watch?v=7p7hxvVsF-k>



IFTRIP 2018

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