



Pooling Power: Addressing “Uninsurable” Risks

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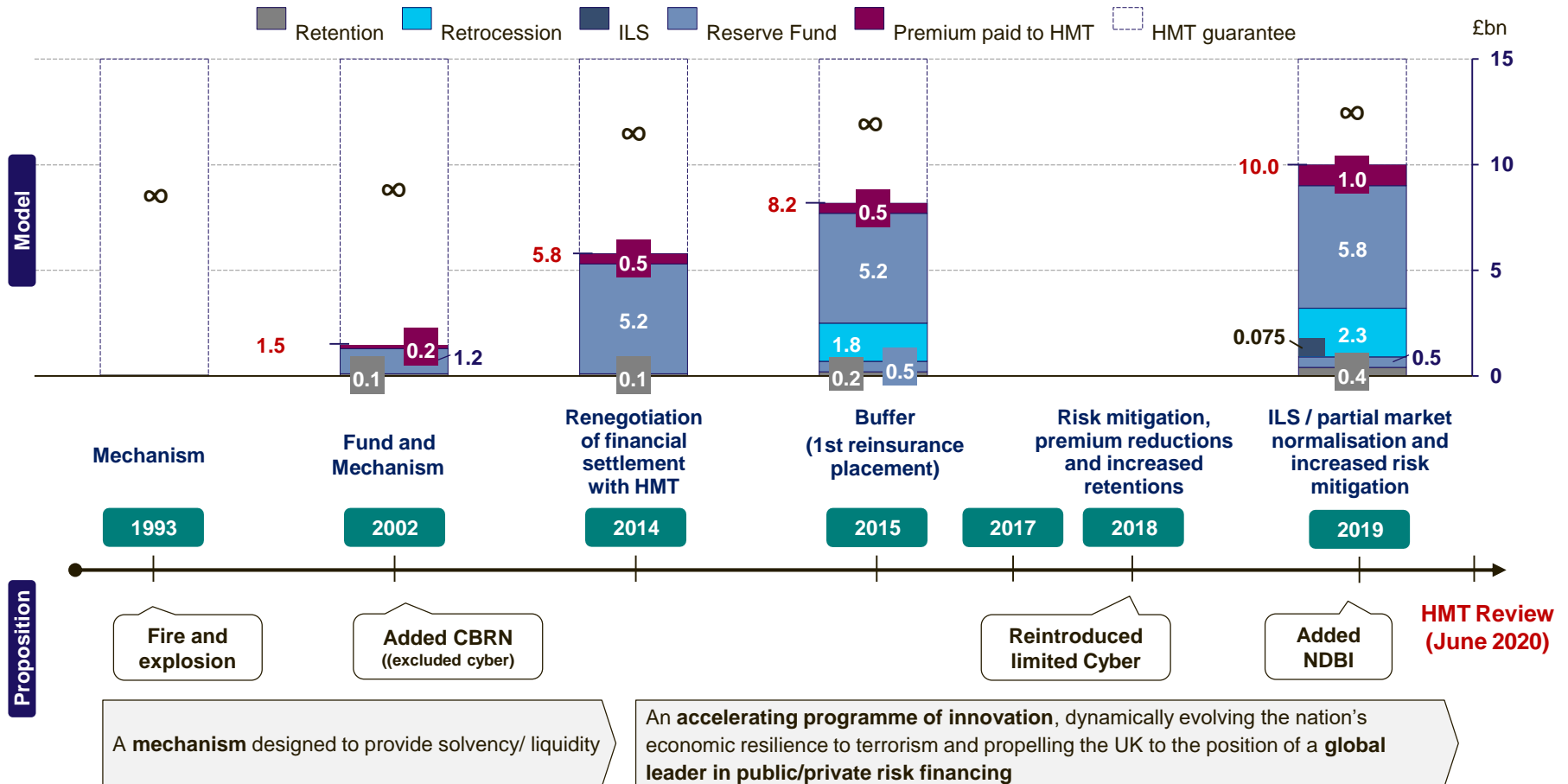
Judge Business School Risk Summit

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Pool Re has adapted its model and proposition to reflect the changing terrorism and (Re)insurance landscapes and to re-engage commercial (Re)insurers

Pool Re has **successfully fulfilled its core purpose**, which has **strengthened national resilience** while distancing the taxpayers from a terrorism incident. This will need to be **recognised as part of the outcome of the 2020 review** if it is to continue to evolve effectively.



From a simple solvency mechanism, Pool Re has evolved into a critical component of both the financial and governmental infrastructure

£340bn

of liabilities insured by Pool Re are in 11 postcode districts in London – 15% of the total £2.2 trillion insured.



>15%

of SMEs are estimated to have terrorism insurance.

£85m

of premiums are paid by central London out of a total of c£310m premiums in 2018.

90%

of the terrorism insurance market is Estimated to be reinsured by Pool Re, the rest is kept in the private sector.

£6.3bn

fund has been built up by Pool Re to meet Potential claims.



£2.3bn

of reinsurance is purchased by Pool Re from private sector reinsurers.

£635m

Has been paid out in claims, equivalent to £1.25bn adjusted for inflation.



£990m

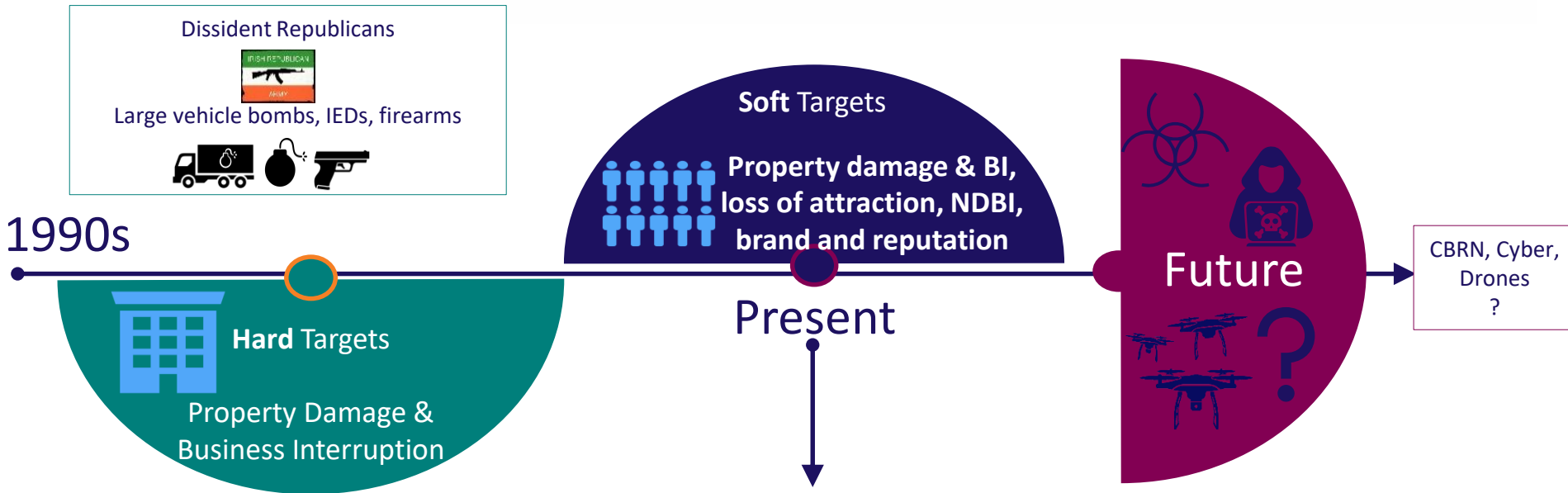
of premiums have been paid to HMT Treasury, though Pool Re can draw on this amount should government funds be required.



£75m

raised from external investors through the placement of an insurance linked security bond

Evolution of Terrorism in Great Britain



<u>Actors</u>	<u>Methodology</u>	<u>Targets</u>	<u>Attacks & Plots</u>
Islamist Extreme Right Wing Dissident Republicans Other forms of extremism	Bladed and Vehicle Homemade IEDs Firearms	Crowded Places Critical National Infrastructure Police, military and government Symbolic Property	9 attacks since March 2017 - 7 Islamist, 2 XRW 19 plots - 14 Islamist, 5 XRW 221 persons in custody for terrorism-related offences - 79% Islamist, 13% far right, 8% other

Pool Re is now widely regarded as a world-leading terrorism risk-financing solution

Pool Re has become a world-leading terrorism-risk financing solution



An exemplar terrorism risk-financing model



Increased reserves fund to **£6.3bn**

Increased Member retention to **£0.41bn**



£2.3bn of reinsurance – **largest commercial terrorism reinsurance placement in the world**



Placed **world's first terrorism ILS of £75m**, accessing capital markets



World-leading in its proposition



Fire and explosion



CBRN



Cyber Trigger



NDBI

First of the global terrorism pools to explicitly extend cover to **Cyber and Non-Damage Business Interruption (NDBI)**



A thought leader in the terrorism (Re)insurance field

Formed **Terrorism Risk Analysis Centre**

Launched quarterly publications of **Terrorism Frequency Report**

2016

2017

2018

2019

Partnered with Cranfield to develop **UK's first terrorism risk model**

Launched **Pool Re Solutions**



Investing in building national resilience



2017: Appointed **Professor of Terrorism Risk Management and Resilience** at Cranfield to establish **Centre of Excellence for Counter-terrorism**

2019: Agreed to fund a new **counter-terrorism information sharing platform**, the **first of its kind collaboration** between police, insurance sector, and the government



Internationally connected and renowned

2016: Founding member of **IFTRIP**



Positioning **London as an insurance hub of expertise and innovation** (e.g. ILS)



Recognised and valued by its stakeholders

2016: **Innovative Product Award** with NACTSO in recognition of **PSIA tool**



2016: **Reinsurance company of the year**

90%

of terrorism insurance market is estimated to be reinsured by Pool Re

£635m

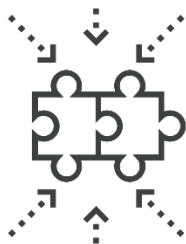
paid out in claims, equivalent to £1.25bn adjusted for inflation

Broader Application of the Pool Re Model



The success, experience and benefits of the model the UK uses to address the problem of financial fallout from terrorism, can and should be replicated to address other risks which are presently either uninsured or insufficiently insured.

Doing so would be in **the national interest, and benefit the insurance industry**, since by eliminating protection gaps, a virtuous circle of resilience, innovation and economic growth shared between insurers and HM Government would be created.



HM Government's National Risk Register recognises the increasingly complex risk universe in the UK. Old risks remain; new risks are emerging; some risks are transforming and there are increasing interdependencies between risks.

As such, **it is logical to leverage Pool Re's expertise** to first expand the model to ensure broad, clearly understood, affordable coverage with high take-up with respect to the terrorism peril and then, second, to use the model as a template and apply it to other risks.

Pool Re has proven that, with the 'safety net' of HMG's guarantee, the private sector is able to internalise a significant portion of the accrued liabilities from what would otherwise be uninsured risk.

It is possible to reach into these areas of risk which are difficult to insure and, therefore, pose existential threats to the safety and prosperity of the nation **by creating a pooling mechanism that can act as an incubator and thus allow new markets to flourish** and thereby begin to address them by creating the underwriting ecosystem.



A single, consolidated approach (a CAT Re) could benefit from economies of scale and cross-subsidy, leverage London's world leading position, bridge protection gaps, and through pooling expertise lead to a more dynamic and responsive (Re)insurance market that is able to create wealth, build societal resilience by influencing consumer behaviour to mitigate risk, accommodate the changing face of risk and position the UK as a thought leader in the field.

In engaging with other risk-financing schemes around the world, we observed that Pool Re could potentially serve as a template for creating markets in other difficult to insure perils *beyond* terrorism



Other Global Schemes

- In helping to build resilient economies, **innovative risk-financing solutions** involving the public sector are **not limited to terrorism**, nor to the UK
 - For example, Mexico's FONDEN protects against natural disasters and is funded by the government. This is supplemented with FOPREDEN, a federal fund to support disaster prevention investment



Complex Risk Environment

- The **risk universe** is continuously **expanding** and becoming more complex with **new risks emerging**, **old risks transforming** and the complex interdependencies between risks. This has led to protection gaps in the UK.
- A **protection gap entity**, such as Pool Re, could address this by making the **difficult to insure insurable**, **increasing resilience** and **creating markets where they would not otherwise exist**



Government Risk Register

- The Government, via its **National Risk Register**, recognises that the increasingly **complex risk universe is expanding in the UK** (e.g. hazards, diseases, accidents, societal risks, and malicious attack risks)
- Through Pool Re, the Government **only has terrorism covered**, though non-property terrorism protection gaps remain

Pool Re's world-leading terrorism-risk management solution could be expanded or replicated in certain situations:

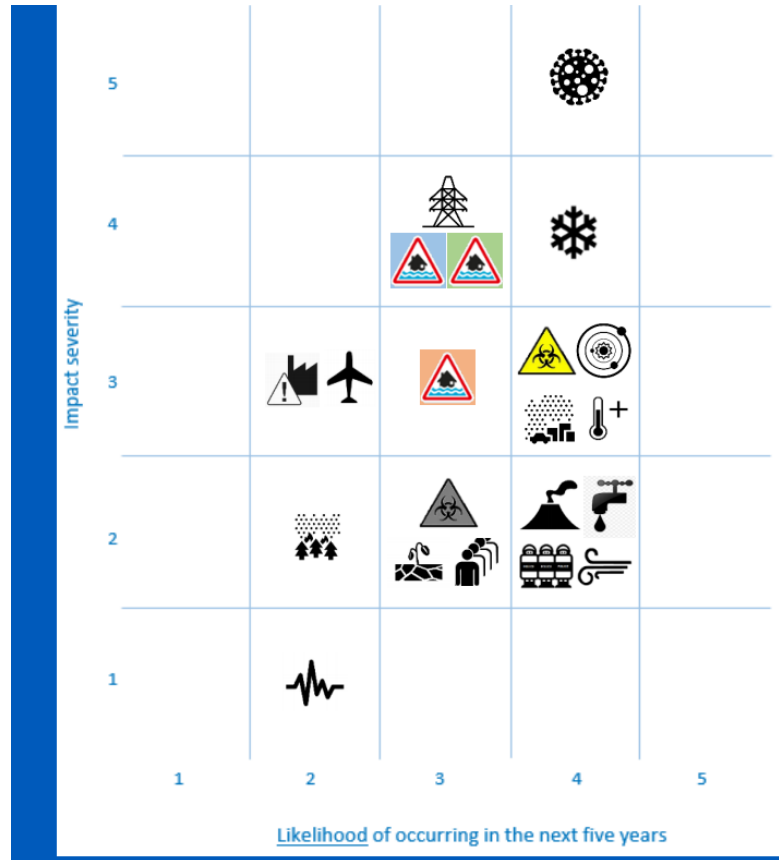
- 1** **perceived uninsurable risks** and emerging perils
- 2** where **significant risk sits on the Government's balance sheet** and it is driven to do something about it
- 3** where there are **significant protection gaps**

There are two ways of insuring additional risks:

- 1** Individual risk pools; or
- 2** Single, combined risk pool (See next slide)
- 3** Cyber is the most obvious and most pressing test case for this premise

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Matrix A – Hazards, diseases, accidents and societal risks



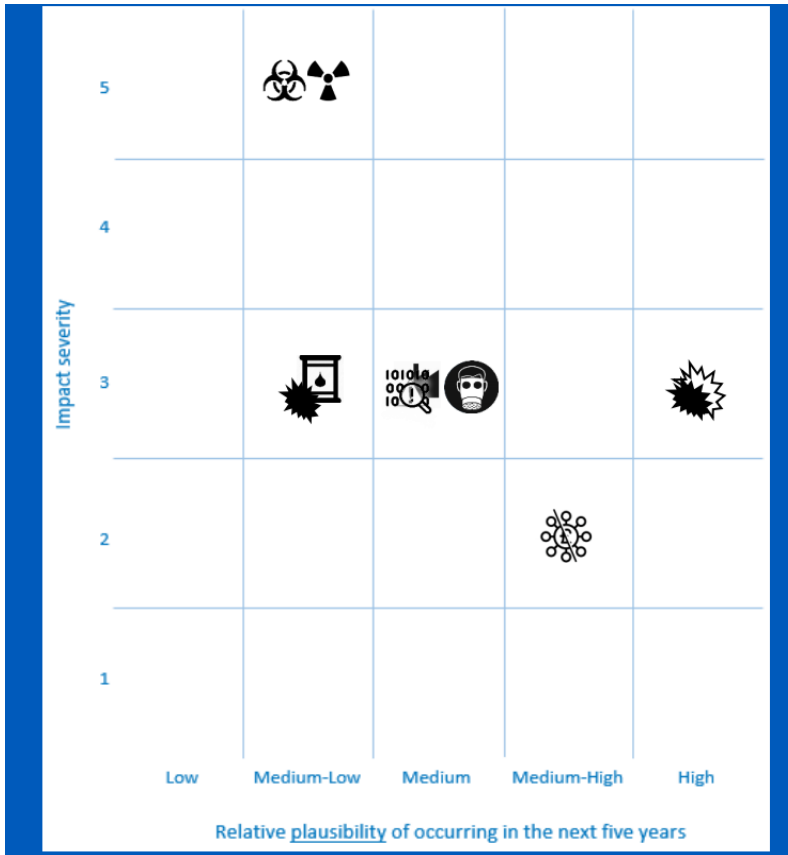
- Natural hazards
- Coastal flooding
 - River flooding
 - Surface water flooding
 - Storms and gales
 - Cold and snow
 - Heatwave
 - Drought
 - Space weather
 - Volcanic eruptions
 - Poor air quality
 - Earthquakes
 - Wildfires

- Diseases
- Pandemic influenza
 - Emerging infectious disease
 - Animal disease
- Major accidents
- Widespread electricity failure
 - Transport accidents
 - Industrial and urban accidents
 - System failures
- Societal risks
- Industrial action
 - Public disorder

Source: National Risk Register, 2017, Cabinet Office

Through Pool Re however, it only has Terrorism covered...

Matrix B – Malicious attack risks



... and even here, as has been demonstrated, there are gaps in the cover provided that could be closed if the political will existed and if the value/ potential of the model were better understood.

KEY

Malicious attacks



Attacks on crowded places



Attacks on transport



Attacks on infrastructure



Cyber attacks on infrastructure



Cyber attacks on services



Larger-scale chemical, biological, radiological or nuclear attacks



Smaller-scale chemical, biological or radiological attacks

Source: National Risk Register, 2017, Cabinet Office

The link between Pool Re and the Cyber issue

Then...



... and Now



Like NotPetya, **the costliest future cyberattacks are likely to be state-sponsored**. These will only remain an insurable risk if the losses do not rise too high. **In the aftermath of a cyber loss equivalent to 9/11, coverage may become prohibitively expensive, as it did for terrorism in 2001.**

- Accepting that they are not the same, there are nonetheless **similarities between Terrorism and Cyber**:
 - Difficult to price (frequency and severity)
 - Adaptive (unlike hurricanes, don't alter methodology to bypass protective security)
- Would the industry not be better off confronting these issues up front and **designing a solution before one becomes a necessity due to market failure post loss?**
- Doing so would allow the industry to demonstrate that protecting its profit opportunity and achieving a public policy goal are **mutually reinforcing**.
- If a **foreign government** reacts first, it may allow their economy to steal a march in making itself more attractive to investment

Benefits and Beneficiaries of State-Backed Risk Pooling



HM Treasury

- ✓ Liabilities removed from balance sheet
- ✓ Evidence based funding for disasters
- ✓ Economic efficiency: commercial capacity maximised
- ✓ Reduces moral hazard
- ✓ Drives risk-reflective pricing
- ✓ Receives a premium for its guarantee(s)
- ✓ Minimises financial involvement in risks
- ✓ Unlikelihood of market failures
- ✓ Optimised risk-sharing between policyholder, (re)insurance market, capital markets



HM Government

- ✓ Global reputation for thought leadership
- ✓ Favourable business climate post-Brexit
- ✓ Social welfare of citizens
- ✓ Conduit to / leveraging of private market, academia
- ✓ Value for money for taxpayer
- ✓ Incentivises consumer behavioural change, building social resilience
- ✓ Investment in resilience innovation



(Re)Insurance Industry

- ✓ New markets for growth and profit creation
- ✓ Opportunities for innovation
- ✓ Solvency / regulatory satisfaction
- ✓ Advances in modelling and actuarial analysis
- ✓ Advances in risk management
- ✓ Reputation
- ✓ Emerging / difficult to insure risks are incubated until sufficiently understood and commercially viable



UK Plc

- ✓ UK is an attractive place to invest
- ✓ Liquidity at point of crisis
- ✓ Businesses are able to rebuild post-disaster
- ✓ Areas will be rebuilt and regenerated
- ✓ Increase resilience from crisis
- ✓ Investment in risk planning and preparation
- ✓ Scope for innovation and growth in the financial sector



UK Citizens

- ✓ Higher take up of insurance
- ✓ Improved equality
- ✓ Capacity of insurance to drive behavioural change
- ✓ Wider spread of risk may reduce cost to policyholders
- ✓ Stronger, more resilient communities