

Life and PA Cat Reinsurance Pre 9/11 Market

Pierre-Yves LE CORRE

SCOR VIE

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Life / PA Cat Risks and Covers Market and Experience

Life and PA Catastrophe Protection

- Portfolios and risks covered :
 - Group and / or individual
 - Death and disability
- Mechanics:
 - Double trigger : life warranty and amount deductible
 - MAOL
 - Loss consolidated and paid after one year

Market characteristics pre 9 / 11

- Large available capacity :
 - reinsurance
 - retrocession
- Commoditised product :
 - Low triggers
 - basic pricing
- Simple model : low price, low level of information

Historical Experience (1/2)

- Natural perils : limited impact
 - Developing countries :
 - Serious impacts of natural events (floods, earthquakes)
 - But limited by small development of insurance
 - Developed countries :
 - Insurance far more widespread
 - But good levels of prevention and protection

Historical Experience (2/2)

- man-made accidents:
 - transport :
 - Individual risks (trains, tunnels, ferries) : diluted impacted
 - sometimes groups (planes)
 - groups : example of industrial accidents
 - recently: AZF (Toulouse, France)
 - other events: Seveso, Tchernobyl; long term consequences
 - But limited short term impact in losses of lives
- ➡ No event seriously damaging for the Insurance Industry

Technical Characteristics

Reinsurance and Accumulation

- Through explicit covers : XL per event
 - Directly measurable in their potential size
 - Through implicit covers :
 - proportional covers, which represent most of the business
 - individual
 - group, with « bulk » underwriting
 - XL per life, with « reinstatements » (but limite aggregate)
- ➔ Accumulations more difficult to estimate

Risks of Accumulation

- Group Insurance in front line
 - employees : time and place potential accumulation
 - Same locations
 - Group travels (transport risk)
 - Industrial and travel perils:
 - used to appear as the most concerning
- Other types (group policies) : less exposed
 - Self employed, creditor : usually atomised
 - although some potential issues (local affinity)

Specificities of life accumulations

- Information :
 - Group insurance :
 - profiles per site ? on site or out of site working people ?
 - Taking into account working hours, seasonality ?
 - Individual insurance :
 - personal address is not enough
 - What about working place ?
- Modeling mobility ?
 - Difficulty: people move !
 - Good new: people run ! ... in case of threat

Life Cat and Life Reinsurance technology

Technical refinements and modelling :

- no significant and relevant experience available for pricing
- Some theoretical studies and developments...
 - using concentration assumptions, distribution of sums insured, incidence of accidents per country
- few practical applications for sophisticated approaches...
- ... due to low price differentiation impact and market conditions

Life Cat and Life Reinsurance

- A necessary tool in portfolio protections
 - Especially for group business
- But a side line of business, due to:
 - cheap capacity ...
 - ...through reinsurance / retrocession pre 9/11
 - ...giving an easy way to monitor the risk

9/11 Seen Through pre 9/11 Vision

A Striking Event

In terms of

- Size :
 - number of deaths...
 - ... far larger than expected in usual scenarios
- Target :
 - Western country
 - Financial sector
 - ... not seen previously as very risky
- Cause : terrorism, mass peril and not only « individual »

Claim Impact

The most costly event in the history of Life Industry: \$ 3 Bn

- quite heavy for some players:
 - More than \$ 50 M for 8 players,
 - Sometimes hundreds million
- Large groups hit: > 500 people !
- And also accumulation of individual claims

Size of Claim for Life and Health Industry

- Cost shared between :
 - Life and Health insurers: \$ 2 Billion
 - pure life players: \$1Billion, split between insurers (0.3 Bn) and reinsurers (0.7 Bn)
- For pure life Insurance/Reinsurance WTC event represents:
 - 0.1‰ additional loss in term of number of deaths for the year
 - 2.5 % additional loss in term of amount for the year
- ➔ Therefore a manageable event for the industry

Life Cat Market Seen from post 9 / 11

New Market Practices ?

- 9/11: a market and psychological shock
 - really damaging to North American life Industry
 - but not a revolution in European life Industry
- Strong price increases
 - Capacity shortage
 - Including cost of unknown (see NBC !)
- Exclusion practices
 - terrorism, NBC, nuclear only

Europe / North America divergence

— Prices

- very high in North America, dampening buying covers
- strong increases in Europe, but not to such high levels
- mixed example: BCAC pool (France)

— Knowledge of exposures and monitoring of risks

- more proactivity in North America
- Continental Europe only limited improvements yet

New Technical Developments ?

- 9 / 11: an experience for the Industry
- but no structural change in:
 - Seriatim data and life Cat experience
 - Possible impact of global modeling techniques
 - market driving forces: capacity availability still
- Reaction through tightening of underwriting criteria
 - Capacity is restrictively provided (more counterparties)
 - new practices of exclusions push to more monitoring

Life and PA Cat Reinsurance