

Innovation in Risk Engineering and Risk Sharing

Jean-Luc Besson CRO SCOR Group

SCOR

20th September 2007

Risk Transfer Solutions - Reasons for purchase

- ▶ Respect Shareholders' Risk Tolerance for larger than usual annual losses:
 - Usually due to a major event or several medium sized events.
 - Analysis of more probable scenarios (belly of profit/ loss distribution).

- ▶ Protection of capital base:
 - Likely to be caused by several major events happening in same year.
 - Analysis of extreme scenarios (tail of profit/loss distribution).

Risk Transfer Alternatives

- ▶ Traditional Retrocession programmes (Non-Life and Life) including collateralised deals.
- ▶ Industry Loss Warranties and similar.
- ▶ Replicat and Select Cat (Index Cover).
- ▶ Capital market risk transfer solutions:
 - Insurance Linked Securities (CAT Bonds, Mortality Bonds, Motor Portfolios etc).
 - Sidecars.

Traditional Retrocession Market for Nat Cat

- ▶ Supply greatly reduced post Katrina ⇒ retro crunch i.e. no longer deep retro capacity in market:
 - CAT reinsurance price similar to Cat retro price ⇒ arbitrage by retrocessionnaires in favour of pure reinsurance/ insurance.
 - More exclusions (Lines of Business, Territories, Specific covers).
 - Goes beyond question of retro price cycle ⇒ more an issue of capacity availability.
- ▶ Security of individual retrocessionnaires always an important issues but assumes even greater importance when choice is limited.
- ▶ No visibility of future years' retro capacity ⇒ very difficult to plan and budget.

Industry Loss Warranties

- ▶ ILWs are index-based hedging instruments:
 - Wider adoption of these instruments inhibited by basis risk.
 - Recent retro crisis has lead to crazy trading of these instruments.
 - Can be sold as such or as a collateralised ILW.
 - Reporting agency can be problematic.
 - Treatment by Rating Agency is unclear.

Replicat & SelectCat

▶ Replicat:

- Uses a single programme as a proxy for the covered portfolio.
- Priced based on the original plus a loading.

▶ SelectCat (Index Cover):

- Based on a basket of reinsurance programmes (to reduce basis risk).
- Attachment point and limit can be selected.
- Tested in the US: priced almost as retro. However more capacity available as underwritten by certain markets who do not write traditional retro.

Capital Market Solutions: Cat Bonds – advantages for buyer

- ▶ More Nat Cat coverage supplied by capital market investors.
- ▶ No retrocessionnaire security problem-recoverable collateralised up-front in SPV.
- ▶ Rating agencies' capital charge reduced.
- ▶ Multi-year deals.
- ▶ Quick settlement.
- ▶ Objective Risk Assessment.

Capital Market Solutions: Sidecars

- ▶ Fairly recent innovation.
- ▶ Similar to a capped quota share arrangement.
- ▶ To date the sidecars have been created to take on high severity catastrophe risk but there could be application to other diverse lines of business going forward.
- ▶ As some of the existing sidecars have too much US exposure, this could be a way for them to diversify into a region which is harder to access.
- ▶ Provides investors with opportunity to benefit from the upturn in the market on a short-term basis by partnering an entity which has the expertise and infrastructure in place.