“Considerations on Space Liability Insurance”

Philippe Montpert

Managing Director, Willis Inspace

philippe.montpert@willis.fr

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Introduction

- Any damage to a third party occurring as a result of a space operation is the responsibility of the Launching State. Most Launching States are in turn partly relying on the commercial operators to insure their third party legal liability risks.

- As a consequence a specific Third Party Legal Liability insurance market has been established.

- This insurance market is
  - a niche market, generating very small premium volume.
  - is virtually not handling any claim, as there is a (very) limited number of case law as no significant incidents have ever occurred.
  - is based on a complex legal framework, as it mixes international treaties and local legislations; international law could be interpreted differently by the national legislations.

The environment

- **TPLL insurance is designed to protect the launch providers, the satellite operator as well as all the other participants to the space project against the financial consequences of a prejudice (bodily injury / property damage) caused to a third party during the launch phase or the in-orbit operations.**
  - Damage to a third party on the ground during the initial lift-off phase
  - Collision with another spacecraft once in orbit.
  - Collision with third parties on ground at re-entry.

- **The applicable legal regime is the UN Outer Space Treaty of 1967 and the Liability Convention of 1972.**
  - Launching State is liable *in fine* to pay compensation
  - The procedures for settlement of claim are unclear
  - Could be interpreted differently in each nation

National Legislations

- UK: Outer Space Act 1986 – minimum acceptable level of cover is £100m per satellite.
- France: Arianespace provides €61m, any amount above this is met by the government. Space operators shall also insure a minimum of €61m.
- US: Commercial LSP must obtain insurance protecting the government from Property Damage as well as third party claims. The amount generally does not exceed $500m, but the actual amount is set depending on the MPL (Maximum Probable Loss) which is determined by the US government. Excess of this amount is US government indemnification up to $1.5bn.
- China: LSP provides Launch plus one year of $100m. Government meets any additional claims
- Russia: LSP must provide $300m, the government will indemnify any excess.
- Japan: LSP $166m, any further met by the government.
- Australia: Government sets the MPL and states required amounts of private insurance protection.

Why buying a TPLL insurance?

- Some nations oblige the space operators to secure a commercial insurance contract for the first layer of risk.
- Two cases can then be seen:
  - Launch Provider:
    - For marketing reasons, have included the insurance in the Launch Contract, at no cost.
    - Have an easier access to the insurance market as “bulk” buyer.
  - Satellite Operator:
    - To add some comfort in the event of a law suit
    - To secure an in-orbit coverage once the previous coverage stops.

- In the event there is no national legislation, the space operators have still an incentive to purchase an insurance:
    - What if a third party is suing them?
    - Will the Launching State admit its liability immediately and relieve the operator from its responsibility?
    - What quantum of loss will be defined?
    - How many years will it take to indemnify the prejudice?

Why buying a TPLL insurance? (cont'd)

- Hence, the TPLL coverage is to avoid directly exposing the operators to large third party claims. However, these operators expect in fine the Launching State to be responsible and indemnify them (and their insurers) back.

- and some reasons not to buy…

  – Very few claims made to the insurers so far with respect to third party liability coverage.

  – The only one which is publicly known is JCSAT 11 on 6 September 2007 for an amount of about $1m. Ground pollution caused by the fall of the Proton rocket in Kazakhstan.

  – Russian spy satellite fall on Canada in 1978 with radioactive debris. Agreement between States for an amount of $CAN3m. No insurance had been purchased.

What is & is not insured

- **The Insurers shall:**
  - defend on behalf of the Insured any suit against the Insured, even if any of the allegations thereof are groundless, false or fraudulent, but the Insurers shall have the right to make such investigation, negotiation and settlement of any claim or suit as they deem expedient;
  - pay all costs taxed against the Insured in any such suit and all interest accruing after entry of judgement until the Insurers have paid, tendered or deposited in court,
  - pay all expenses incurred by the Insurers for investigation, adjustment and defence, and reimburse the Insured for all reasonable expenses, other than loss of earnings, incurred at the Insurers' request;
  - pay all expenses incurred by the Insured for such immediate medical and surgical relief to third parties as shall be imperative at the time of an Occurrence.

What is & is not insured (cont'd)

- **Exclusions:**
  - Nuclear Risks
  - War, Hi-jacking and other perils
  - "Launch Drop zones"

- "Launch Drop zones" can be insured by some very specialized insurance market (only two leaders)

What is the cost of the TPLL?

- The insurance market can collectively provide an overall capacity of $500m
- The TPLL premium is about $250k for a sum insured of $250m (i.e. a premium rate of 0.1%). The coverage will be for the launch phase and 365 days therafter.
- The TPLL premium, once the satellite is in orbit, reduces to about $120k for a sum insured of $100m while, shall the operator insure its fleet of satellite under the same insurance contract, the premium could drop down to $35k per satellite
- Unusual cases (very low / very high sums insured) will pay proportionally more.

Participating insurers

Market	Line Size
AIG Europe (UK) Limited	20% - 25%
Allianz Marine & Aviation	20.000%
Amlin Lloyds Syndicate 2001	20.000%
Assicurazioni Generali S.p.A.	2.000%
Global Aerospace Underwriting Managers Ltd	20.000%
International Insurance Company of Hannover Ltd	5.000%
Hiscox Lloyds Syndicate 33	$20m Line
Inter-Aero	17.50% or $87.5m
Kiln Lloyds Syndicate 510	2% - 20%
La Reunion Aerienne	7.500%
Mitsui-Sumitomo Lloyds Syndicate 3210	20.000%
St Paul Travelers Lloyds Syndicate 500	10.000%
Tokio Marine & Nichido Fire Insurance Co Ltd	5.000%
Wurttembergische Versicherungs AG	2.500%
XL Aerospace	20.000%

The claim collection process

- **There is a well defined process:**
  - Upon the happening of an event likely to give rise to a claim, notice containing reasonably obtainable information with respect to the time, place and circumstances thereof shall be given by or for the Insured to the Insurers as soon as reasonably possible.
  - If a claim is made or a suit is brought against the Insured, the Insured shall immediately forward to the Insurers every demand, notice, summons or other process received by them or their representatives.
  - No admission, offer, promise or payment shall be made by the Insured without the written consent of the Insurers.

The claim collection process (cont'd)

- The Insured shall co-operate with the Insurers and upon request will assist in making settlements, and in the conduct of suits; and the Insured shall attend hearings and trials and assist in securing and giving evidence and obtaining the attendance of witnesses.

- The Insured shall render such further information and assistance as the Insurers may reasonably require and shall not act in any way to the detriment or prejudice of the interest of the Insurers.

- **The Launching State shall have the right to settle reasonably a claim but only after consultation with and the agreement of the Insurers**

The Future of TPLL

- **An insurance contract will be commercially viable if there is a market willing to provide a guarantee, which means**
  - A minimum volume of premium each year to pay the claims (less the possible recourses), the G&A expenses and leave a profit over a reasonable period of time
  - A limited volatility.
  - A willingness of the Insureds to secure insurance contract on a regular basis.

- **Unfortunately, one single large loss could wipe the market out! It is the largest threat to the continuation of the insurance coverage.**

The Future of TPLL (cont'd)

- **The market shall develop into different areas to have long term perspectives:**

  - Space Tourism. Growth of commercial passenger flights would create a need for a new market and a new product. Currently, the only risk of this nature is the United Space Alliance which insures the inhabitants of the Space Station.

  - Galileo programme

  - In-orbit liability. As Space Debris increases, more and more operators are choosing to buy after the expiry of their launch plus one year policy.

  - De-orbiting insurance for LEO satellites (Mir Space Station was covered for a 5 day risk for $200m)

Willis Inspace,

your partner for your space program

Willis Inspace Paris
2-8 rue Ancelle
92202 Neuilly-sur-Seine, France
Telephone +33 (0)1 41 43 62 50
Fax +33 (0)1 41 43 62 59

Willis Inspace London
The Willis Building,
51 Lime Str.
London EC3M 7DQ, UK
Telephone: +44 (0)20 7860 9281
Fax +44 (0)20 7860 9141

Willis Inspace Washington
12505 Park Potomac Avenue
Suite 300, Potomac, Maryland 20854
Telephone: +1 301 581 4264
Fax +1 301 897 8817

Willis Inspace New York
One World Financial Centre
200 Liberty Street
New York NY 10281-1003
Telephone: +1 212 915 8888
Fax +1 212 915 8511

Willis