

Aviation Working Party

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Introduction

This paper is intended as a basis for a workshop session at the conference and as such is brief. An outline of the market is given with descriptions of the main classes of business and outwards reinsurance. Some references are given for further reading and the CII can provide a comprehensive reading list.

Brief History

Aviation is the youngest of the three major non-life insurance divisions: Marine, Non-Marine, Aviation. It commenced with the development of aeroplanes at the beginning of this century and has progressed in conjunction with the development and manufacture of aircraft through two world wars to the current day with the present highly developed aerospace industry.

The first international daily commercial air service, between London and Paris, commenced in 1919. This has since developed to today's world-wide airline network connecting all countries. This has been accompanied by the growth of national and international aviation law by statute, treaty and convention.

Growth of the Aviation Market

In the early days of aviation, insurers also provided advice on safety and risk management. Rates were affected by whether such advice was taken.

Insurers pooled risks to reduce exposure and to obtain greater technical knowledge with limited resources.

The first UK pool was the British Aviation Insurance Group, writing business for the Union of Canton, the White Cross Insurance Agency and Heath's syndicate at Lloyd's, expanding in response to competitive pressures to become BAIC (the British Aviation Insurance Company) in 1931.

The Aviation and General Insurance Company, A&G, was formed in 1935 by other UK companies.

The first aviation policy written at Lloyd's was the White Wings in 1911. The Lloyd's Aviation Underwriters Association, LAUA, was formed in 1935 to represent Aviation syndicates' interests.

After the second world war other general insurance companies, as well as or instead of joining BAIC or A&G, started their own aviation insurance departments. In 1949 the Aviation Insurance Offices Association, AIOA, was formed to represent their interests.

Similar developments were occurring in other countries, especially the USA, Australia, France, Germany, Holland and Scandinavia.

In 1983, Guardian Royal Exchange, Phoenix and Norwich Union merged their aviation interests as the London Aviation Insurance Group, LAIG. In 1991 this was merged with BAIC and A&G as the British Aviation Insurance Group, BAIG.

In 1986, the Airlines formed the Airlines Mutual Insurance Company, AMI, to provide additional capacity to its members and reduce insurance costs. It now has around 40 members.

Market Relationships

The world aviation insurance market needs to work closely together as the risks undertaken involve a comparatively low number of aircraft, some highly valued and with very large potential liabilities. In 1989 the world airline total net premium income was \$350m although at that time rates were severely depressed. Hull values are now several hundred million dollars and potential liability claims can be even higher. Neither companies nor countries are able to withstand such risks. Even where countries require cover to be placed locally, local companies will accept these risks and reinsure with the world-wide reinsurance market, retaining what they consider to be prudent.

International brokers are used to place much of the world-wide business on a coinsurance basis across world markets. Foreign insurers have offices or representatives in London so that brokers can visit them to obtain their participation in the risks.

The IUAI (International Union of Aviation Insurers) was formed in 1934 to provide an official body to speak on behalf of aviation insurance interests and to provide a central office to enable the flow of information between members. The world's major aviation insurers are members.

Major Aviation Market Organisations

Airclaims Limited (previously Aircar Limited) is an international organisation with regional offices at strategic locations world-wide and with field surveyors elsewhere. It took over the Air Safety and Survey Division of BAIC in 1970. It provides statistical and intelligence services for subscribing aviation insurers and aircraft operators.

AIA (Aviation Insurance Association) is based in the USA. Its objects are, inter alia, to promote the general welfare of the aviation insurance industry and to discuss educational topics. Any organisation with interests in the aviation industry may become a member.

AIOA (Aviation Insurance Offices Association) was founded in 1949 to promote, protect and advance the interests of aviation insurers, particularly in their dealings with official bodies and similar world-wide organisations.

ILU (Institute of London Underwriters) is an association of company underwriters representing insurance companies writing marine, aviation and transport business in the London market. It provides for its members the facility of its Companies' Combined Policy which gives the proportion of a risk subscribed by each member company, each company remaining solely liable for its own share. The ILU's policy department issues these policies which are considered to have high security. Centralised premium and accounting facilities are available to members as well as technical services.

IATA (International Air Transport Association) was formed in 1945 to promote safe, regular and economical air transport, to foster air commerce, to study problems and provide means of collaboration and to cooperate with ICAO and other international organisations. It is open to international airlines which are certified as eligible by their national governments. Its head office is in Montreal with a clearing house system in London. IATA traffic conferences fix airline fares.

LACC (Lloyds Aviation Claims Centre) was established in 1966 and has full authority to deal with aviation claims sent to the centre by Lloyd's underwriters. They have highly skilled experts to investigate each claim avoiding duplication by each syndicate.

LAD (Lloyd's Aviation Department) was formed in 1946. It comprises two main sections: Survey which investigates aviation claims, estimates damage and checks circumstances and Information and Records which produces Lloyd's Confidential Index and provides information to Lloyd's underwriters.

LAUA (Lloyd's Aviation Underwriters' Association) represents and supports the interests of the Lloyd's aviation market and is open to any syndicate writing aviation business.

Recent Rating

The 1990 underwriting year had the lowest rates ever. Rates trebled at the end of 1991 (*although this may not have been enough*) and were flat in 1992. 40% increases were seen in 1993 and 1994.

Different Risks

Airlines

Generally this covers hulls and liabilities of aircraft that can carry more than 50 passengers, although this is not a hard and fast rule. Aircraft are covered for loss or accidental damage and for reasonable emergency expenses for emergency landings. Legal liability to third parties is covered for bodily injury and property damage claims.

Examples of losses:

Lockerbie - Pan Am loss 12/12/88. 243 passengers killed, 16 crew.

Products

This covers manufacturers, vendors and distributors of aircraft and aircraft parts against losses from their liability arising from bodily injuries or property damage caused by these products. Costs of investigation, defence and negotiation of settlements are included.

Examples of losses:

Chevron. The loss date is May 1994. Contaminated fuel was shipped to six airports and damaged a large number of aircraft engines.

Airports and Refuelling

This covers liability and security (refuelling is linked to products). Bodily injury and property damage is covered when caused by the services of the assured or any defect in the assured's property or machinery, or when property is left in the care of the assured.

Examples of losses:

No major losses have arisen. The usual type of loss is a passenger tripping over in the terminal.

Satellites

Cover is given for launch, post separation and in orbit. Cover for launch is purchased well before the launch date, which may not be fixed, so there can be a long exposure period. This is sometimes dealt with by a portfolio transfer each year. Post separation deals with the movement to the pre determined flight path and testing the controls of the satellite. In orbit covers the satellite in the pre determined flight path.

Examples of losses:

Merretts satellite loss where the underwriter recovered the satellite.

General Aviation

General Aviation - hulls and liabilities, aircraft able to carry less than 50 passengers

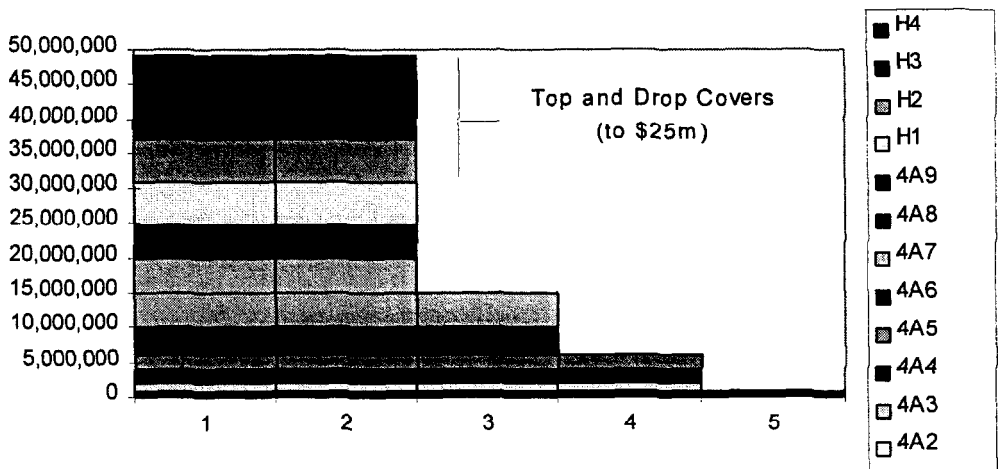
Examples of losses:

The recent plane crash in Leeds where a short haul aircraft crashed in stormy weather on its way to Aberdeen. Nine passengers and three crew died.

Outwards Reinsurance

Outwards Reinsurance used to cover the Aviation Account can be split into many sections to cover either specific or general areas. The major groups cover the Non-Proportional, Proportional and Facultative & Direct areas of Inward Reinsurance. The Non-Proportional section can then be split into various sections such as Hull and Specific Reinsurances, and the Proportional/F&D section can also be split into Quota Share, General and Main Account. Over the top of these XL covers sits the Whole Account which is high up and may 'drop down' if required. Finally, covering both Aviation and Marine may be a Blanket cover.

Traditionally structured Reinsurance Programmes are often the easiest *to read and follow*. This would usually comprise a series of layers consisting of an initial retention level with various back-up layers and reinstatements in order to protect subsequent large losses. A possible example of this is represented pictorially, as follows:



Some layers can be used on more than one loss.

The notations in the legend of the above graph represent the different layers covering this account. The progression of blocks represents the cover for each large loss that falls under this programme, i.e., the number of reinstatements. Cover is on a losses occurring basis.

Historically the recovery of losses occurs in chronological order. However there is presently an investigation into the option of recovering the losses in an alternative order, that would be more beneficial to the buyer of the Outwards Reinsurance. This problem has surfaced due to certain losses not being fully recoverable. Loss number 3, in the above example, may be pushing through the top of 4A7 whereas loss number 2 may not even be expected to reach 4A5. Hence it would be better for the reinsured in question to 'swap' the order of these losses and thus be able to recover fully on both of them. Although this looks reasonable for the individual reinsured, on an individual programme basis, chaos could be caused due to all programmes being rearranged by both Inwards and Outwards Reinsurers. If this is to come about then it may take many years to

organise, and longer to reallocate all years data, particularly for years with many large, recoverable losses. This also has implications for pricing these layers.

Outwards Reinsurance is not necessarily set up in the straightforward manner of the above example. The programme can be structured on an individual loss basis, that is totally dependant on the market value of the loss or warranty.

An example of this type of protection could be denoted as follows:

4B3	\$1m xs \$50m	
4B4	\$2m xs Underlying	
4B5	\$2.5m xs Underlying	
4B1	\$1m xs \$500,000	\$25m OLW (one loss warranty)

This is highly confusing!

The programme is dependant on the Original Loss Level. When the original loss exceeds \$25m then 4B1 is triggered. The Reinsurer's resulting signed line is then set against the total loss amount and if this exceeds \$500,000 then the excess amount is recoverable.

For example :

A large loss occurs with a resulting loss value of \$30m and so triggers this layer.

If the reinsurer has a SL% of 2% then $\$30m \times .02 = \$600,000$ and so \$100,000 is recoverable.

When the Original Loss Level exceeds \$50m then 4B3, and all subsequent higher layers, are triggered. The \$1m from 4B3 is excess of the \$1.5m coming from 4B1, and so the recovery proceeds as usual.

Another added complication to the recovery of large losses occurs when the retention incurred from other Aviation Programmes can be put into a 'Loss pot' and recovered from, say, the Hull Account or Main Account. This will be noted in the wordings attaching to each programme.

More recently cover has been written on a risks attaching basis.

References

Reference	Source
CII Coursebook - Aviation Insurance and Marine Insurance	CII
CII Coursebook - Aviation insurance / underwriting	CII
CII Coursebook - Aviation insurance	CII
CII Coursebook - Aviation law and claims	CII
Aviation Insurance - G Lyons	Institute Library