Aviation insurance – 2009 review

Aviation insurance has expanded tremendously since the first policy was underwritten by Lloyd's of London in the early 20th Century, and its development is tightly interrelated with the growth of the aviation industry. **Mr Antoine Lamy**, Head of Underwriting, Aviation, Asia Capital Reinsurance Group, reviews both the aviation sector and the aviation insurance industry in 2009 and the opportunities and challenges.

Over the last few decades, with the introduction of new aircraft, advancements of technologies and long-haul flights, hubs and nodes air transport infrastructure developments, and the rapid penetration of budget air business models, the aviation industry has undergone substantial changes and likewise, the aviation insurance market needs to adapt itself efficiently to such changes.

Apart from the asset protection, passenger and third party liability is the most common aviation covers that airliners seek to protect themselves with. This is governed by the Montreal Convention and local regulations imposing an obligation on air carriers to maintain adequate insurance of their liabilities. From a business perspective, bearing in mind the potential severe financial repercussions of the carriers' liabilities, the aviation cover provides a vital risk transferring mechanism on their balance sheets.

What happened in 2009?

Financial performance of the airlines is very sensitive to economic growth, world trade, international investment and tourism in the areas they operate.

In 2009, the financial performance of airlines has been negatively impacted by the economic downturn, characterised with decreases in air travel volumes, international trade and aviation investments. According to the International Air Transport Association (IATA), 2009 was one of the worst aviation loss years in decades, registering a US$9.4 billion loss for the industry.

On the insurer's side, the return to capital has also shown a decreasing pattern. Even though over a 10-year period, airlines' underwriters have written a profit, the last three years actually generated losses.

We can identify three underwriting stages in 2009:

1. Because of the previous loss-making year, underwriters were targeting premium increase of 15% in early 2009. Overcapacity however drove the market down and the premium increased by only 5% despite the US Airways, Turkish Airlines and Colgan Air losses. At the end of the first quarter, claims already totalled half of 2008's annual losses.
2. The total incurred claims (with reserves) at the end of the second quarter were estimated at around US$1.6 billion, the worst recorded loss in two quarters. This is contributed by two major accidents in June - the Air France A330 crash into the Atlantic Ocean, one of the biggest aviation losses in recent history with 228 fatalities, and the Yemenia A310 accident which killed 152. Underwriters would be able to recover some of these losses from their Excess of Loss reinsurers but the loss severity was expected to intensify the pressure on them and an estimated 30% rates increase globally was required to support risk premium adequacy.
3. Bearing in mind that 75% of the airlines' premium income is written in the last quarter of the year, this strong aspiration for an adequate rate hike has unfortunately not materialised fully because of the available additional capacity (either new or dormant). The last quarter has been a rude awakening for underwriters as average rate increased 17% (far below the crucial 30% mark) due to pressure to reach income budget and to write for sufficient income yields against the backdrop of a healthy financial market.

Market needs to be sustainable

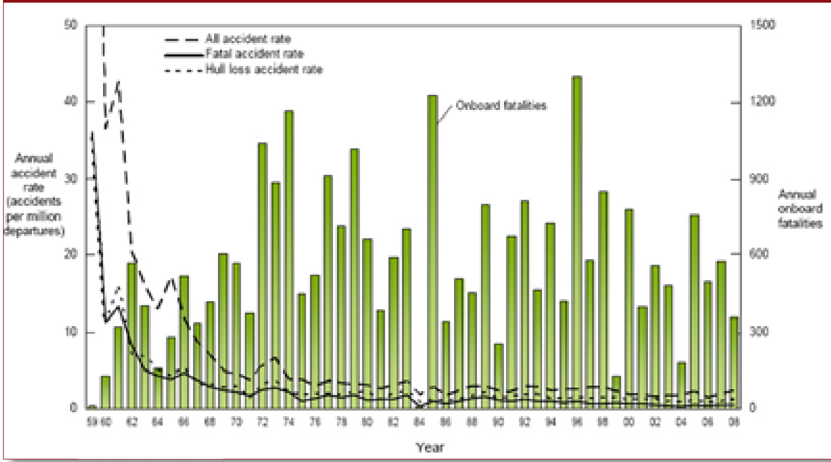
At the end of 2009, overall airlines' lead premium was around US$2 billion, 17% more than 2008, but insurers were clearly not as successful in their efforts to raise the level of premium as desired. With estimated claims of US$2.25 billion, 2009 saw losses totalling 70% more than the annual average of the previous five years.

The aviation market needs to return to profitability to be sustainable for the capital providers and more importantly to provide a stable product for the client itself (loss settlement usually happens many years after the date of loss).

Despite sophisticated actuarial models employed, the market has reacted slower in tandem to the increase in reinsurance costs and higher expectations for return on equity. It remains challenging in 2010 and we are doubtful the market could produce sustainable margins as capacity is still abundant—more than 200% on an "average risk"—

and brokers are expert in leveraging this capacity to achieve the best deal for their clients.

Accident Rates and Onboard Fatalities by Year
Worldwide Commercial Jet Fleet – 1959 Through 2008



Source: Boeing – "Statistical Summary of Commercial Jet Airplane Accidents"

A safe industry…

"Safety is the industry's number one priority. Even in a decade during which airlines had lost an average of US$5 billion per year, we still managed to improve our safety record. Last year, 2.3 billion people flew safely. But every fatality is a human tragedy that reminds us of the ultimate goal of zero accidents and zero fatalities," said Mr Giovanni Bisignani, IATA's Director General and CEO.

Aviation safety, judged by the number of accidents by million departures, has constantly improved. The last 10 years have seen the lowest accident rate in aviation history by far. The Flight Safety Foundation's "serious accident rate" (number of serious accident per million departures) dropped from 1.06 (average) in the five years before 2000 to 0.55 (average) in the last five years (2004-2009).

The industry saw tremendous changes in the last 50 years in respect of safety, especially with the adoption of new technologies: metallurgical science and new materials, Computer Aided Design and Computer Aided Manufacturing, airplane design and flight automation ("Fly by Wire", "Glass Cockpit"), flight navigation (GPS, RNAV), Enhanced Ground Proximity Warning System (EGPWS), Traffic Collision Avoidance System (TCAS), Predictive Wind-shear System (PWS), enhanced weather radar, Aircraft Communications Addressing and Reporting System (ACARS), Level D Full Flight Simulators.

Supra national organisations as well as Civil Aviation Authorities have also pushed the industry to position safety at the heart of the company culture. Safety Management System, Crew Resource Management, fatigue risk management as well as use of flight data analysis to monitor incident trends and adjust crew training and Standard Operating Procedures accordingly have been major drivers in the accident rate improvement.

…. With remaining challenges

According to IATA, there were 18 fatal airline accidents and 685 fatalities in 2009, out of 35 million flights across all sectors of the global airline industry. Although slightly better than the average for the decade, overall safety results improved very marginally during the last ten years. There is still room for progress although the quantifiable impact will not occur at the same trend as it did in the recent past

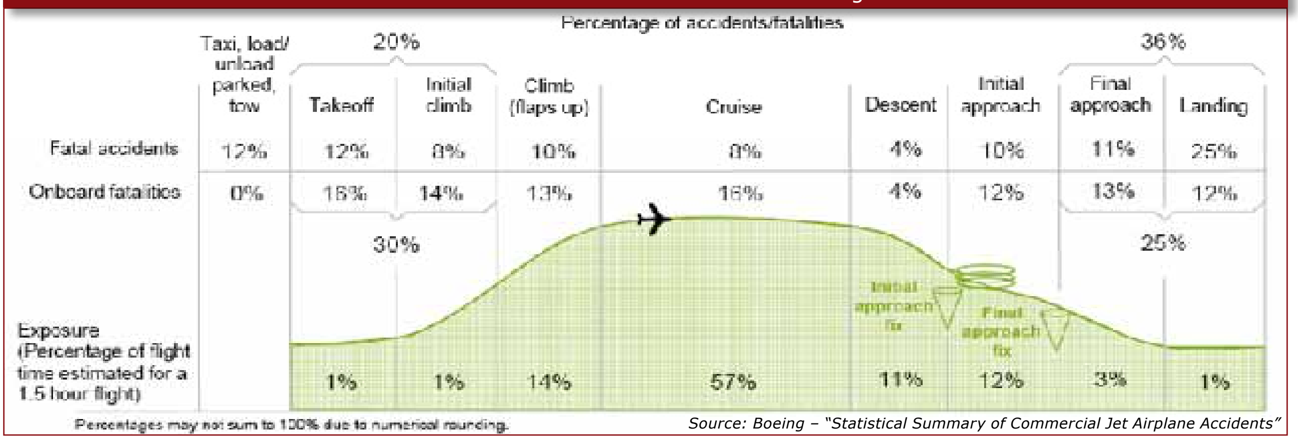
The main concerns for aviation insurers are:

1) Financial pressure on operators resulting in pilots scheduled to the maximum of Flight Time Limitation (pilot fatigue issue) and undergoing minimum training to satisfy minimum regulatory requirements.

2) New generation aircraft are mostly fly by wire and highly automated – resulting in the erosion of basic aircraft handling skills – pilots may not have adequate skills when automatics fail at a critical moment. Long-haul pilots typically log 800-900 flying hours a year, although this could include less than 3 hours of stick time, the majority of which is accumulated on final approach and flare. "We put people into our training today who have forgotten how to fly, basically. This is an issue that needs to be addressed by the industry," said Capt Jacques Drappier, Airbus Vice President, Training.

3) Basic pilot training is evolving and Multi-crew Pilots Licence (MPL) pilots may have only less than 60 flying hours on a conventional controlled aircraft because they are trained on side-stick (highly automated) aircraft for their airline career.

Fatal Accident Rates and Onboard Fatalities by Phase of Flight
Worldwide Commercial Jet Fleet – 1999 Through 2008



Source: Boeing – "Statistical Summary of Commercial Jet Airplane Accidents"

These issues are already addressed by some airlines. Underwriters need to keep following up with industry best practices to continue to value and differentiate airlines committed to safety.

Aviation insurance perspectives

Aviation insurance requires massive capital as compared to other lines of business. Insurers need to provide up to US$2.25 billion liability cover (in addition to up to US$300 million hull values) for each and every aircraft that flies.

A single total loss can absorb the whole portfolio's premium and significantly impact the insurer's balance sheet. Moreover liability claims (which take a long time to mature) are subject to local jurisdiction changes which are difficult to anticipate and quantify, and subsequently capital will be locked up until final settlement. Solvency regulations hence require aviation insurers to hold more capital which will impact "less capitalised" underwriting units

Nevertheless aviation insurance remains attractive to capital providers. A five-year aviation average combined ratio is better than other classes. The barriers of entry are almost non-existent and a well capitalised insurer can enter or withdraw from this segment easily. More importantly this specialty line is not correlated with Nat Cat which enables insurers to better spread their risks.

Asian aviation opportunity

Aviation insurance's future at this juncture does not seem wholly positive but Asia looks set to be the bright spot for the airline industry with its strong economic recovery and demographic developments which will boost air travel.

According to a Boeing market review, 29,000 aircrafts will be delivered in the next 20 years of which 30% to Asian carriers. In 2028, more than 30% of the fleet worldwide will be operated by Asian carriers. IATA anticipates that Asia Pacific airliners will see the US$2.7 billion loss in 2009 turn into US$900 million profit in 2010 on the back of rapid economic recovery, growth in demand, better load factors and improved yields notwithstanding oil price predicted to increase.

At ACR, we understand the need for sound technical expertise to meet the challenges of a complex environment and we are poised to aid our clients in capturing arising opportunities. Our strategy has proven profitable since the start of our operation in 2007 and we are confident we can continue supporting our clients in a long-term partnership.