

## AVIATION INSURANCE AND RISK MANAGEMENT

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Article abstract

This article is a collaborative effort from an academic perspective and a pragmatic approach on the risks related to the aviation industry in 2001. In the first part, we summarize the status of the aviation insurance law with its legal formation. It is a good introduction to the second part where we discuss the new realities in the aviation insurance market since the tragedy in the United States. We do encourage the reader to consult the IATA web site at [www.iata.org](http://www.iata.org) to see more documentation on these terrorist attacks and how IATA contributes to raising the strength of aviation security worldwide.

## AVIATION INSURANCE AND RISK MANAGEMENT

by Philippe Fortin and Louis Haeck

### ABSTRACT

This article is a collaborative effort from an academic perspective and a pragmatic approach on the risks related to the aviation industry in 2001. In the first part, we summarize the status of the aviation insurance law with its legal formation. It is a good introduction to the second part where we discuss the new realities in the aviation insurance market since the tragedy in the United States. We do encourage the reader to consult the IATA web site at [www.iata.org](http://www.iata.org) to see more documentation on these terrorist attacks and how IATA contributes to raising the strength of aviation security worldwide.

### RÉSUMÉ

*Cet article est le fruit d'une collaboration étroite entre deux auteurs, l'une sous une perspective académique, l'autre pragmatique, en ce qui concerne l'industrie de l'aviation en 2001. Dans la première partie, l'article met en relief les aspects juridiques du droit aérien. Dans la seconde, l'article présente les nouvelles réalités du marché de l'assurance aviation depuis la tragédie survenue aux États-Unis. Les auteurs encouragent le lecteur à visiter le site web de IATA à l'adresse [www.iata.org](http://www.iata.org) pour obtenir de plus amples renseignements sur ces attaques terroristes et pour savoir comment IATA peut contribuer à rehausser mondialement la sécurité aérienne.*

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The first part of the article was written by Philippe Fortin and the second one by Louis Haeck.

## ■ PART I : AVIATION INSURANCE LAW

### □ Introduction

Aviation insurance has developed greatly since its beginnings some ninety years ago. Today, its size is quite remarkable. In the absence of a codifying statute such as England's *Marine Insurance Act of 1906*, aviation insurance sometimes refers to England's *Insurance Companies Act of 1982* (and the *Lloyd's Act of 1982*) as well as the common law principles of insurance (as applied to the aviation business).

Unlike the case of marine insurance, there is no formal definition of «aviation insurance»<sup>1</sup>. Although it resembles marine insurance in which it has its origins, aviation insurance is a specialized form of insurance written in a specialized market<sup>2</sup>. In broad terms, it covers (i) loss of or damage to an aircraft; (ii) liability to passengers; and (iii) third party liability<sup>3</sup>.

In the international law, there are no compulsory aviation insurance requirements. No international treaty governs the liability of an air carrier for injury or damage (caused to cargo, baggage or passengers) occurring on board the aircraft. However an air transport license is usually issued only if proof of adequate insurance exists. The *Rome Conventions* of 1933 and 1952 relate to damage caused by aircraft to third parties on the surface<sup>4</sup>.

### □ Aviation Insurance Market

Many insurers worldwide offer cover against aviation risks. The most important insurance markets are located in London (England) and in the United States. However other important marketplaces exist in Scandinavia, Japan, Italy, France and Germany.

#### *The London aviation market*

The aviation market is truly international. However the London market remains the support of aviation insurance (and reinsurance). Thus this article often refers to the law and practice of aviation insurance in the London market.

The London aviation market is divided into (i) the Lloyd's underwriters (the «Lloyd's market»); and (ii) the insurance companies (the «company market»). However there is considerable co-operation between these two sectors of the market<sup>5</sup>.

Many other bodies play an active role in the aviation insurance market. For instance, there is the Lloyd's Aviation Underwriters Association (LAUA)<sup>6</sup>, the Aviation Insurance Offices Association (AIOU)<sup>7</sup>, the Joint Technical and Clauses Committee (JTCC)<sup>8</sup>, the Lloyd's Aviation Claims Centre (LACC)<sup>9</sup> and the International Union of Aviation Insurers (IUAI)<sup>10</sup>.

### *The U.S. aviation market*

The aviation market in the United States consists of numerous «markets» located in various states. Themselves these markets consist of numerous insurance companies<sup>11</sup> and insurance pools<sup>12</sup>. In addition the London market provides an important facility for the insurance of U.S. risks. The various states regulate the activities of underwriters at Lloyd's that do business in the U.S.<sup>13</sup> Other organizations serve the U.S. aviation market. The Aviation Insurance Association (AIA) and the Organization of Flying Adjusters (OFA) both provide a forum for aviation insurance interests to exchange views on various aspects of aviation insurance.

### **The various types of insurance**

There are many types of aviation insurance policies. The most important forms are : (i) hull insurance; (ii) passenger liability insurance; (iii) cargo insurance; (iv) product liability insurance; (v) airports operations liability insurance; (vi) loss of licence insurance; (vii) personal accident and life insurance; and (viii) war and hijacking insurance.

### *Hull insurance*

Under this form of cover, the insurers undertake to pay for accidental loss of or damage to the aircraft. Coverage also includes disappearance of the aircraft after the commencement of the flight<sup>14</sup>.

If the aircraft is damaged, the insurers have three options : (i) arrange for the damage to be repaired and bear the cost; (ii) make a cash payment to the insured; or (iii) pay for repairs of the damage to the aircraft. Hull policies are written on an «agreed value» or «insured value» basis. In the case of an «agreed value» policy (or «valued» policy), the parties agree to effect the policy on the basis of the value of the aircraft for the purposes of the insurance. Here the insured must pay to the insured the value agreed upon in the event of a total loss or a constructive total loss (ie if it is so dam-

aged that it is beyond economical repair), the insurers have the option to replace the aircraft or pay the insured an amount (in such a case, the insurers can take the aircraft).

Sometimes the insured may effect cover in respect of spare parts, engines or other equipment destined to be installed on the aircraft. At other times, aircraft hull will be insured on a total loss only (TLO) basis. On the other hand, a number of hull policies covering loss of or damage to the aircraft exclude defect or failure, breakdown, deterioration or wear and tear in any unit of the aircraft<sup>15</sup>.

Also there exists a form of hull cover known as «loss of use» (or consequential loss) insurance. Here the insurers agree to pay to the insured an amount representing the loss arising from the insured being denied the use of the aircraft as a result of accidental damage.

Finally the «breach of warranty» insurance exists when a bank (or other financial institution) has advanced a loan to an aircraft operator to finance the purchase of the aircraft<sup>16</sup>. The «breach of warranty cover» will be effected in the favor of the lender up to the amount of the loan. Here the bank (or other lien holder) will not be prejudiced if the aircraft is damaged in consequence of a breach by the insured of a warranty in the policy (which would entitle the insurers to repudiate payment to the insured).

#### *Passenger liability insurance*

The insurers undertake to indemnify the insured for all sums which he legally has to pay as damages in respect to bodily injuries to (or the death of) the passengers<sup>17</sup>.

The policy can also cover loss of or damage to baggage and personal articles of passengers arising out of an accident to the insured aircraft. Usually it is understood that a passenger is a person who rides or travels in an aircraft. He does not perform any duties associated with the operation of the aircraft.

#### *Third party liability insurance*

This form of insurance protects the insured against liability to third parties (other than passengers) who suffer damage or injury as a result of the operation of the aircraft. A proper case will establish a casual link between the noise of the aircraft in flight and the loss or damage to persons or property on the surface. Note however that policies usually exclude claims occasioned by noise, vibration or

sonic boom. Exclusions also relate to claims arising from injury (or death) sustained by employees or partners of the aircraft while acting in the course of their duties including the crew engaged in the operation of the aircraft. Also excluded are claims caused by pollution, electrical or electromagnetic interference and interference with the use of property (unless caused in the case of an emergency situation).

### *Cargo insurance*

Two different types of cargo insurance exist : (i) cargo legal liability insurance; and (ii) cargo all risks insurance<sup>18</sup>.

Cargo legal liability insurance aims to protect an air carrier against legal liability for loss of or damage to goods while in the care, custody and control of the carrier. Such cover may be effected by means of separate policy. It may also be done by means of an endorsement to an existing liability policy. Cargo all risks insurance is usually effected by a consignor or consignee of goods. It protects him against loss or damage to goods during their shipment by air. «Cargo/goods in transit» policy against loss of or damage while the goods are being transported from one place to another.

The Institute of London Underwriters introduced a series of clauses to be used in connection with the insurance of air cargo. These clauses are to be attached to a «marine» policy<sup>19</sup>. The «Institute air cargo clauses» consist of (i) the Institute Cargo Clauses (Air); (ii) the Institute War Clauses (Air Cargo); and (iii) the Institute Strikes Clauses (Air Cargo).

### *Products liability insurance*

Products liability concerns the legal liability of aircraft product manufacturers to the third party in case of injury, loss or damage caused by a defective design or manufacture of aircraft products. However it is a difficult type of aviation business to insure. The difficulty lies in attempting to establish a rate of premium<sup>20</sup>.

### *Airport operations liability insurance*

This type of insurance covers the liability of entities which operate and provide facilities at airports. It includes : maintenance, repair and service facilities, air traffic control services, aircraft refuellers, hangarkeepers, airport owners and operators. Usually the liabilities of airport operators are divided into three categories : (i)

airport premises liability; (ii) products-type liability; and (iii) hangarkeepers liability<sup>21</sup>.

Airport premises liability covers the liability of an owner (or lessee) if premises at an airport for loss, damage or injury occurring on the premises. «Product-type» liability insurance covers the liability of airport owners and operators as well as other entities which provide maintenance, service, repair and refueling facilities and which supply aircraft parts at an airport. Hangarkeepers liability is the liability imposed in respect of aircraft (or related property) which are damaged or lost while such aircraft or equipment are on the ground and in the care of the insured, or while being serviced or maintained by the insured.

In the London market, standard forms are also available to cover the liability of flying clubs and flying schools as well as the organizers of air meets.

#### *Loss of license insurance*

This is a form of combined personal accident and sickness insurance. It is designed to compensate an air crew member (or pilot) for the loss of his license resulting from an illness or bodily injury. The policy sets out a table of benefits which provides for the payment of one benefit to the insured<sup>22</sup>.

#### *Personal accident and life insurance<sup>23</sup>*

This policy is designed to provide cover against the risks of the insured sustaining injury or death as a result of an aviation accident. It usually seeks to exclude liability for injury or death caused by the risks of aviation. It permits the insured to fly on an aircraft operated by an air carrier. Many formulations have been used to achieve this. Cover can be taken out in respect of a specific flight or for a specific period. Another way in which personal accident cover can be taken out is by coupon insurance. This form of cover does not require the insured to complete a lengthily proposal form. Instead the insured only has to furnish certain personal details and to warrant that he is in good health. Another form of insurance that exists is the group personal accident insurance (passengers). This type of cover is used when employees are required by their employers to undertake frequent trips by air in the course of their employment. In that case a group personal accident policy may be arranged on a personal basis. In addition to the various forms of cover already examined, it is possible for an airline to arrange an «admitted liability» and «automatic personal accident» cover in



respect of its passengers. Here industrial, commercial and business concerns may effect admitted liability insurance to cover executives, business acquaintances, relatives or friends injured (or killed) as passengers on board of an aircraft owned by the business. Similarly it is possible for an airline to arrange automatic personal accident cover in respect of its passengers. Finally if a person flies on a commercial aircraft as a professional pilot or cabin crew member, it is possible for him to be covered under a «crew personal accident insurance» policy.

#### *War and hijacking insurance*

In the London market, there exists a clause (known as AVN 48B) which is inserted in every aviation hull and liability policy. However it provides that the policy does not cover numerous sorts of claims (like hostile detonation of nuclear weapons, acts of sabotage, confiscation, nationalization, strikes or labor disturbances, etc.). Still in the London war market, it is possible to obtain a combined «war, hijacking and political risks» policy. This policy covers claims usually excluded from the insured's hull all risks policy.

#### **Other types of insurance**

##### *Hovercraft insurance*<sup>24</sup>

An hovercraft possesses the characteristics of a land vehicle, a ship and an aircraft. Under England's *Insurance Companies Act of 1982*, an hovercraft falls within the definition of «vessel». Thus hovercraft liability insurance falls within the definition of «vessel». Thus hovercraft insurance is a relatively new form of insurance. Thus the London market uses standard policy forms for hull and liability risks. The terminology of hovercraft policies resembles those in aircraft policies (more than marine policies). Passenger liability cover in relation to hovercraft is usually placed in the aviation market.

##### *Spacecraft insurance*<sup>25</sup>

Because spacecraft insurance involves the insurance of a vehicle which passes through the airspace, it is modeled on aircraft insurance. However insurance cover is tailored to the requirements of the insured. The risks associated with spacecraft operations are divided into : (i) the risk of damage to the spacecraft and equipment; and (ii) the risk of liability to third parties and occupants.



## ■ PART II : AVIATION RISK MANAGEMENT

### □ Introduction

The 11 of September 2001 is the worst catastrophic day of the civil aviation. A dark day, where terrorists used commercial airline Members in good standing of IATA to destroy thousands of innocent lives in New York, Washington and Pennsylvania.

The impact on aviation risk management is very severe and the aviation insurance market reacted quickly and harshly. We are not aware that any Chief Risk Officer did anticipate such air attacks. Obviously all the insurers were not even thinking of the possibility of such attacks.

In this short section we will concentrate on the aviation insurance market but, as you are well aware, most lines of insurance were severely affected. In fact, the total invoices for the consolidation of insurance claims will be in the dozens of billions of dollars. Already the airlines are suffering from the reduction in the numbers of passengers and several carriers are in serious financial difficulties and some were forced to declare bankruptcy. Of course, IATA is trying to transfer, mitigate and reduce some aviation risks with the cooperation of many States and more so with ICAO (International Civil Aviation Organisation).

The impact was clear: in our normal scenario of analyzing the aviation risks, such type of air attacks were not on the list. The solution is to improve the security of all air operations (airports, in flight, etc.) in coordination with the intelligence of the proper authorities like Interpol, etc...

The increased costs now to operate a commercial airline company is extremely high, due to aviation insurance premiums being raised and to added costs to improve the security of all operations on a worldwide basis. Proper surveillance and screening are the key factors to reduce the threat to the civil aviation. Collaborative work is essential among all suppliers and service providers to our aviation industry in order to avoid or at least reduce some risks in the future, with a global approach, to better protect our passengers<sup>26</sup>.

We want to stress the excellent work of ICAO and IATA specialists in coordinating measures to achieve a better effective worldwide security system with the help of the States and carriers. Of course, we must mention also the Airport Council International,

Airbus, Boeing, the International Federation of Airlines Pilots Association and other suppliers for their respective expertise.

#### □ **The aviation insurance market**

The market is extremely hard. The hull risk coverage as mentioned in part is still available but at exorbitant cost. The main problem for the airlines and service providers is to find proper war risk for third party coverages at a reasonable cost. Most States did provide short term guarantees for airlines in excess of the USD50 million third party war risk, to cover the difference between the capacity of insurance available on the aviation market and the legal requirements of several States.

However, the airlines need not only a short term solution but a long term alternative. IATA did submit an industry paper to ICAO to convene a special working group to study the insurance problem.

The pressure from the aviation insurers for higher premiums of course does not help the financial statues of airlines with declining revenues. Already several reinsurers did give a notice of major increases before any renewal and some are just getting out of the aviation market. Of course, a revised AVN52 clause with all its restrictions is not popular with aviation risk managers.

A further consequence of the disaster is that the large differences in terms available from vertical placings have been substantially reduced with co-insurers not being prepared to accept terms that are substantially lower than the leader's or warranty company terms. This is causing further increases in the composite premium paid by airlines<sup>27</sup>.

As you know, some proposals put forward were based on the establishment of a government backed pool like in England. We do believe that the States should help their aviation industries with government assistance, to permit the carriers and suppliers to find a reasonable insurance and re-insurance aviation market. You could read the report "Why do we need Federal Re-insurance for Terrorism?" at <http://www.towers.com/towers/servicesproducts/tillinghast/reinforterror.pdf><sup>28</sup>.

Several international aviation brokers did work together and with their respective clients to find viable solutions because of the unwillingness of insurers to broaden cover or even extend the coverages, the reduction of capacity and the refusal to offer new multi-year placements or even to extend existing multi-year placements.

Clearly all bad news for the airlines looking to renew in a hard market. Now we are facing an extremely complex aviation insurance market with a lot of changes in their respective programs with less coverages for higher premiums<sup>29</sup>.

The Chief Risk Officer continues to track, control, identify, analyze and plan his risk management strategy according to his limited resources, including his budget. The bad surprise on the 24 September 2001 was to read the formal withdrawal by aviation insurers of third party war risk insurance coverages. It is a big challenge to be managed in order to protect the passengers and stakeholders of all airlines.

We do believe that the ICAO and IATA expertise will help the airline business including that of its suppliers (manufacturers, lessors, financiers, etc.) to find a viable solution to deal with new risk liability limits in the future with respect to third party damages resulting from acts of terrorism. Security environment today is everywhere so it is our collective duty to manage those new risks together. That is why each organization/corporation should have competent professionals in their internal risk management services to advise their management of all risks in their respective "flight plans".

## □ Notes

1. In other words, aviation insurance is some kind of a specialized form of «non-marine insurance».
2. Aviation insurers have always made sure that aviation policies would not be interpreted as marine insurance. They absolutely did not want to be bound by the huge body of case law that exists in marine insurance.
3. R.D. MARGO, *Aviation Insurance*, London, Butterworths, 3<sup>rd</sup> ed., 2000 at 20.
4. The *Rome Convention of 1933* was supplemented by the *Brussels Insurance Protocol of 1938* and the *Rome Convention of 1952* by the *Montreal Protocol of 1978*. For text, see SHAWCROSS & BEAUMONT, *Air Law*, London, Butterworths, 4<sup>th</sup> ed., 1988, vol. 2, App A.
5. Thus, large risks are almost always subscribed by both Lloyd's underwriters and the insurance companies.
6. It represents the interests of aviation underwriting members at Lloyd's.
7. It is the official body representative of insurance companies transacting aviation business in the UK.
8. It considers the technical aspects of aviation underwriting in the London market.
9. It provides a central office for the handling of claims on behalf of Lloyd's syndicates which write aviation business.
10. It is a body through which the interests of aviation insurers worldwide are represented.
11. Few U.S. insurance companies specialize in aviation insurance. They usually employ their own aviation underwriters, claims managers and other personnel.

12. Such pools consist of a group of insurance companies which have combined to write aviation business through a managing agent or manager.

13. A trust fund (known as the Lloyd's American Trust Fund) is maintained by underwriters at Lloyd's that do business in the U.S.

14. Lloyd's Aviation Policy (AVN) 1, s.1, App 363.

15. AVN 1A, s 1, 2(a).

16. AVN 28.

17. The term «bodily injury» (fatal or otherwise) is actual physical or mental lesion or trauma of some kind. However it does not extend to cover mental anguish or emotional distress. See SHAWCROSS, *supra* note 3 at vol. 1, p. 153.

18. However the cover effected does not indemnify the insured against the losses incident to a marine adventure (thus it does not constitute a contract of marine insurance). England's *Marine Insurance Act of 1906*, s.1; s.3.

19. Jean Louis MAGDELÉNAT, *Air Cargo : Regulation and Claims*, Toronto, Butterworths, 1983.

20. D. DANN, *Insuring the Risk*, (1974) *Journal of Air Law and Commerce* 431.

21. See MARGO, *supra* note 2 at 194 seq.

22. *Ibid* at 201 seq.

23. For a detailed treatise, see E.R. Hardy IVAMY, *Personal Accident, Life and Other Insurances*, London, Butterworths, 2<sup>nd</sup> ed., 1980.

24. For a discussion, see L.J. KOVATS, *The Law of Hovercraft*, London, Lloyds of London Press Ltd., 1975.

25. Generally see B. JOHNSON, *Spacecraft Insurance*, (1986) *FICC Quarterly* 247.

26. IATA, Chief Executive Brief, 07-11-2001.

27. Aon Aviation and Aerospace Insurance Market News, October 2001, issue 10/2001, p.1.

28. Aon World Trade Center Bulletin, Issue No. 5, 18-10-2001, p.16.

29. Client Alert, Insurance Market Update, Global Professional Services, Aon, October 3, 2001.