Aviation Insurance in International Air Transport

Marc Rémy Halter

Faculty of Law
Institute of Air and Space Law
McGill University
Montréal, Canada

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Abstract

The thesis in the first part analyses the major international conventions with respect to liability exposure of airlines and aircraft operators performing international flights. Emphasis will be laid on the transportation of passengers, baggage and cargo and on the legal framework in place to award compensation for damages caused to persons and property on the surface of the earth.

The study continues with an evaluation of natural hazards inherent to air transport and explains the typical standard aviation insurance policies and the scope of cover for the hull of the aircraft, for passengers and for third parties on the ground. Furthermore, an overview will be given of the 'extended exclusion clauses for Weapons of Mass Destruction (WMD)' commonly inserted in war risk insurance policies as a result of terrorist attacks.

Finally, this study will focus on the new insurance requirements implemented by the EU Regulation 785/2004 and its implication for air carriers.

Résumé

Dans une première partie, cette thèse analyse les principales conventions internationales régissant la responsabilité encourue par les compagnies aériennes et les opérateurs d'aéronefs assurant des vols internationaux. L'accent va être mis sur le transport de passagers, de bagages et de marchandises ainsi que sur le cadre légal réglementant les dommages infligés aux personnes et aux biens à la surface.

Une seconde partie traite de l'évaluation des risques naturels inhérents au transport aérien et se focalise sur l'étude des polices d'assurance standardisées dans le domaine de l'aviation. L'étendue de la couverture d'assurance relative à la fuselage, aux passagers ainsi qu'aux tiers est examinée. Enfin, l'auteur donne un aperçu du renforcement, dans les polices d'assurance traitant du risque de guerre, des clauses d'exclusion relatives à l'usage d'armes de destruction massive lors d'attaques terroristes.

Finalement, cette étude examine en détails les nouvelles obligations imposées en matière d'assurance par le Règlement EC 785/2004 et leurs conséquences pratiques.

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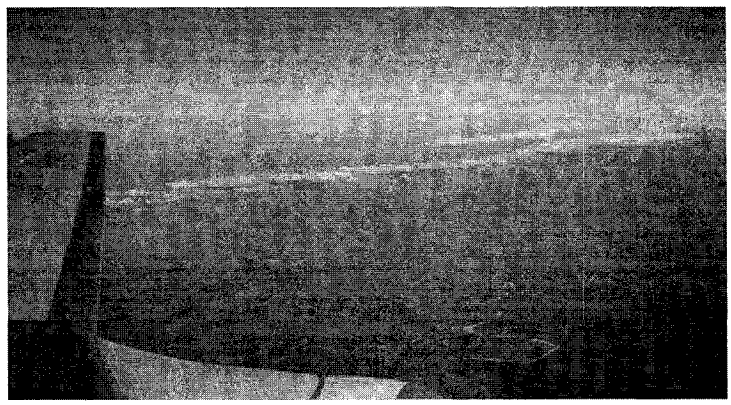
I Introduction

Every day, aircraft perform thousands of take-offs, approaches, flights, landing and runway operations across the world; thus, international air transport is at risk. Although the possibility of an accident in air transport is relatively low compared to other modes of transportation, flying without adequate insurance cover is not reasonable. Aircraft are extremely mobile, cross a significant number of countries within a short period of time and carry passengers of different nationalities and cultural backgrounds and forward cargo. Since aircraft cover such vast distances, they are subject and exposed to a multitude of national and international laws. Besides these legal exposures, international air transport is also exposed to natural perils stemming from the operation of the aircraft.

In order to handle these risks, aircraft operators transfer these risks by purchasing insurance. Although aviation insurance also follows the general category of insurance, the different risks inherent in the transportation by air have to be considered. Aviation risk represents - unlike automobile insurance - a considerably smaller number of exposure units; but, the range of the exposed risk (i.e., the value of aircraft) varies widely and includes a wide range, from low valued older single-engine aircraft to multi-million dollar aircraft. From an insurer's perspective, an accurate analysis of these risks is indispensable. This is especially true given that at the last stage the re/insurers shoulder, together with the aircraft operators, the financial burden of a loss.



Plane en-route from Cordoba, Argentina to Santiago, Chile, crossing the Andes

This paper elaborates the risks of natural perils in the operation of an aircraft as well as the legal exposure inherent in international air transport. For practical purposes, reference to the relevant provisions of an attached insurance policy of a corporate aircraft is given.

II Liability exposure in international air transport

Introduction

In international air transport a single flight represents millions of dollars of potential liability exposure for passengers, baggage and cargo and for third parties on the surface.

In the event of an accident or incident, compensation to be awarded is governed by a regulatory framework of international and domestic laws.

Whereas the underlying law for non-scheduled flights commonly performed by general aviation aircraft follows other rules, in international air transport most airlines are, with respect to liability, subject to the *Warsaw Regime*[1], its amendments, the *Montreal Convention 1999*[2] and agreements negotiated among airlines[3] as well as by unilateral acts.

The legal framework is of great significance to the aviation insurance industry in assessing the risk and establishing premiums for their clients - the airlines and aircraft operators.

In this connection it is important to mention that insurance companies play a crucial role in the handling of the claims process. In the event of a major aircraft accident, which may lead to a high amount of compensation, a representative of an insurance company is often at a very early stage, involved in the accident investigation process.

The present chapter examines the international regulatory framework which airlines and aircraft operators are subject to for liability of passengers, baggage, cargo and delay in international air transport. In addition, several leading court cases with regard to passenger liability will be considered. Furthermore, the liability system for damages and losses caused by aircraft on the surface of the earth to third parties is explained and new regulatory liability provisions in this regard are examined.

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[1] *Convention for the Unification of Certain Rules Relating to International Carriage by Air*, (entered into force 13 February 1933), online: Institute of Air and Space Law, McGill University <http://upload.mcgill.ca/iasl/warsaw1929.pdf> [*Warsaw Convention*].

[2] *Convention for the Unification of Certain Rules Relating to International Carriage by Air*, 28 May 1999, ICAO doc. 4740 (entered into force 4 November 2003), [*Montreal Convention 1999*].

[3] Such as the *Intercarrier Agreement on Passenger Liability*, adopted in Kuala Lumpur on 31 October 1995, online: IATA <http://www.iata.org/NR/ContentConnector/CS2000/Siteinterface/sites/legal/file/iia.pdf>.

A Principles of the air carrier's liability for passengers, baggage and cargo

1 The Warsaw Regime and the *Montreal Convention 1999*

Passengers flying domestically in the United States of America benefit from unlimited liability on the part of their air carriers for damages of personal injury and death. The same is not rue in an international paradigm. In determining whether a domestic or international legal regime to applied, one must first assess whether the air transportation in question is international in character. If it is not international then domestic rules apply, which have to be established according to the conflict of law rules.

The *Warsaw Convention of 1929* and the *Montreal Convention of 1999* are applicable to "all international transportation of persons, baggage, or goods" performed by an aircraft for consideration. Both instruments define "international transportation" as "any transportation in which according to the contract made by the parties, the place of departure and the place of destination, whether or not there be break in the transportation or a transhipment, are situated either within the territories of two High Contracting Parties, or within the territory of a single High Contracting Party, if there is an agreed stopping place within a territory subject to the sovereignty, suzerainty, mandate or authority of another power, even though that power is not a party to this convention."[4]

In other words, the Conventions apply where a passenger or freight begins his/its journey in one Contracting State, and ends it in another, or begins or ends it in a single Contracting State with an intermediate and agreed stopping place in the territory of another State (even one, which is not a High Contracting Party to one of these Conventions).[5]

Contrary to the general perception, the underlying legal regime is not determined by the route actually followed, the place of the accident, nor by the nationality of the airline or aircraft operator, nor whether the place of departure and destination are situated in a High Contracting State of a particular flight; it

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[4] *Warsaw Convention*, *supra* note 1, art 1(1); *Montreal Convention 1999*, *supra* note 2 art. 1(1).

[5] Paul S. Dempsey, "International Air Cargo & Baggage Liability and the Tower of Babel" in Michael Milde & H. Khadjavi, ed., *Private International Air Law: Cases and Materials,* Vol. 1 (Montreal: McGill University2003) at 398.

is rather the intention between the contracting parties – the passengers and the airline – commonly contained in a contract of carriage in which the places of departure, destination, and agreed-upon stopping places are incorporated. Thus, the passenger ticket determines whether the transportation is international and is therefore governed by the rules of the *Warsaw regime/Montreal Convention 1999*.

1. 2 Carriage of passengers

With respect to passengers, the *Warsaw regime* and the *Montreal Convention 1999* provide that "the carrier is liable for damage sustained in the case of death and bodily injury of a passenger upon condition only that the accident which caused the death or injury took place on board the aircraft or in the course of any of the operations of embarking or disembarking."[6]

The term "*damage sustained*" ensures that only compensatory damages are recoverable, whereby compensation for mental anguish and injury not accompanied by bodily injury is excluded.

The International Union of Aviation Insurers (IUAI) insisted, during the drafting process of the Montreal Convention, that the wording 'bodily injury' be inserted in order to "prevent that the possibility of 'mental injury' finds its way back through an over-generous interpretation of the word 'injury'."[7]

Under the *Montreal Convention 1999*, punitive, exemplary or other non-compensatory damages have been excluded.[8]

1.2.1 Leading cases with regard to the terms 'accident' and 'bodily injury'

Any explanation of an existing legal framework in international air transport should include the evaluation of the judgments of the bodies applying these international Conventions.

In determining awards granted to persons for damages of an 'accident' and 'bodily injury', many court judgments have been rendered as to the question of

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[6] *Warsaw Convention*, *supra* note 1, art. 17; *Montreal Convention 1999*, *supra* note 2, art. 17.
[7] ICAO DCW Doc No. 28 at p. 2.
[8] *Montreal Convention 1999*, *supra* note 2, art. 29 and preamble.

the interpretation of the above terms. Some of the most important cases are examined below.

A considerable number of settlements have been settled in the United States. Therefore, it is natural to expect much of the jurisprudence to emerge from there.

a) Interpretation of the term 'accident'

The term 'accident' has been defined by the United State Supreme Court in the landmark case *Air France v. Saks*[9] as an "unexpected or unusual event or happening that is external to the passenger". Furthermore, it is stated that "when the injury is an indisputable result from the passenger's own internal reaction to the usual, normal, and expected operation of the aircraft, it has not been caused by an accident, and article 17 of the *Warsaw Convention* does not apply."[10]

For this reason, although the "definition should be flexibly applied after an assessment of all the circumstances surrounding a passenger's injuries," issues of crew negligence are not generally implicated or relevant.[11] The accident inquiry should focus on the "nature of the event which *caused* the injury rather than the care taken by the airline to avert the injury."[12]

The definition of 'accident' set forth in *Saks* was revisited by the United States Supreme Court's decision on 24 February 2004. Under Article 17 of the *Montreal Convention 1999* (substantially repeating article 17 of the *Warsaw Convention*), the court held in *Husain v. Olympic Airways*[13] that the failure to reseat an asthmatic passenger further away from the smoking section constituted an 'accident'. The court also stated that there was an 'accident' set forth in *Air France v. Saks*, i.e. an "unexpected or unusual event or happening that is external to the passenger". The flight attendant's refusal to reseat the passenger was held to be "clearly external to the passenger, and it was

[9] 470 U.S. 392 (1985) at 405.
[10] *Ibid.* at 406.
[11] *Ibid.* at 405-06.
[12] *Ibid.* at 407.
[13] 316 F.3d 829 at 827 (9th Cir. 2000).

unexpected and unusual in the light of industry standards, Olympic policy, and the simple nature of the passengers requested accommodation."[14]

Many claims have been pending for the compensation of Deep Vein Thrombosis (DVT). It mainly affects the veins in the lower leg and the thigh. It involves the formation of a clot (thrombus) in the larger veins of the area. This thrombus may interfere with circulation of blood in the area, and it may break off and travel through the blood stream. The embolus thus created can lodge in the brain, lungs, heart, or other vital areas of the body, thus causing severe damage to that organ.[15] Prolonged sitting during a long flight, for example, constitutes a risk of developing DVT.

A lot of DVT related claims have been filed in the courts of the United States, the UK, Australia, Canada, and Israel. Up until now, no judgment in favor of compensation for DVT has been ruled. Thus, the legal exposure with respect to DVT claims has been restricted.

Other cases have been filed with arguments based on the configuration of an aircraft as well as to whether the failure to warn of the risks of DVT constitutes an 'accident' under the *Warsaw Convention/Montreal Convention 1999*. The courts have dismissed these cases by arguing that the configuration of the seat was not an unexpected or unusual event and the failure to warn could not constitute an unusual or unexpected event in the absence of any established industry standard.[16]

b) Interpretation of the term 'bodily injury'

Many disputes have questioned whether 'bodily injury' also includes 'mental injury'.

Although many attempts have been made to widen the meaning of bodily injury, the appellate courts in the United State's continue to give the term a narrow interpretation to exclude mental anguish damages.[17]

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[14] *Husain v. Olympic Airways*, 316 F.3d 829 at 837 (9th Cir. 2000).
[15] See "Deep Venous Thrombosis", online: Medline Plus <http://www.nlm.nih.gov/medlineplus/ency/article/000156.htm#Definition>.
[16] See *Louie v. British Airways. Ltd. 2003 WL 22769110 (D. Alaska Nov. 17, 2003)*.
[17] Andrew J. Harakas, "Recent Developments Affecting Air Carrier Liability under the Warsaw Convention and Montreal Convention – The Meaning of "Accident" and "bodily Injury" (Documents presented at the lecture at McGill University, February 2005) at 36 [unpublished].

With regard to whether other than bodily injury would be recoverable under the *Warsaw Convention*, the United States Supreme Court ruled in the landmark case *Eastern Airlines vs. Floyd*[18], that "Article 17 of the *Warsaw Convention* does not allow recovery for purely mental injury not accompanied by physical injury".[19]

In *Ehrlich v. American Airlines* [20] the court had to decide as to whether Article 17 of the *Warsaw Convention* provides recovery for mental injuries when they were accompanied by completely unrelated physical injuries. The court held that 'mental injuries' that are not caused by 'bodily injuries' are not damages 'sustained in the event of not the resulted in 'bodily injury' and as such are not compensable under the *Warsaw Convention*."[21]

Furthermore, in *Bobian v. Czech Airlines*[22] the United State Court of Appeals for the Third Circuit reaffirmed its previous holding in *Terrafrance v. Virgin Atlantic Airways Ltd.*[23] that post traumatic stress disorder and related maladies do not constitute 'bodily injury' for which the carrier may be held liable pursuant article 17 of the *Warsaw Convention*.[24]

From the aforementioned judgments it is evident that recovery for bodily injury is not permitted under the Warsaw System unless a physical, bodily injury is sustained. Accordingly, recovery for emotional injury is allowed only where that injury results directly from the physical injury.[25]

1. 3. Carriage of baggage

An air carrier is strictly liable for damage sustained by the (1) destruction or (2) loss of, or (3) damage to, checked baggage upon the condition that the event which caused the destruction, loss or damage took place on board the aircraft or during any period when the checked baggage was in the charge of the carrier.[26] This provision refers to events which have a broader meaning than the term "accident".

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[18] *Eastern Airlines v. Floyd*, U.S. 499 U.S. 530 at 535-536 (1991).
[19] *Ibid.* at 530.
[20] *Ehrlich v. American Airlines*, 360 F. 3d 366 (2d Circuit 2004).
[21] *Ibid.* at 385.
[22] 2004 WL 628864 (3d Circuit, 29 March 2004).
[23] *Terrafrance v. Virgin Atlantic Airways Ltd.*151 F.3d 108 (3d Circuit 1998).
[24] *Ibid.* at 112.
[25] Harakas, *supra* note 17 at 38.
[26] *Montreal Convention 1999*, *supra* note 2, art. 17(2).

However, the carrier can exclude its liability "if and to the extent that the damage resulted from the inherent defect, quality or vice of the baggage."[27]

The loss of baggage is defined as (1) an admittance by the carrier to the same or (2) the checked baggage does not arrive within twenty-one days from the time when it was designated, and gives the passenger the rights according to the provisions of the contract of carriage.[28]

With regard to damage to "unchecked baggage" and personal items,[29] the carrier is not subject to strict liability though its liability is based on fault.[30]

The carrier is able to exonerate itself either wholly or partly from liability for checked and unchecked baggage if it proves that the damage was caused or contributed to by the negligence or other wrongful act or omission on the part of the person claiming compensation.[31]

1.4. Carriage of cargo

Transportation of cargo by air is different from the transportation of passengers. It may involve transportation of articles of high value[32], those which are urgently[33] needed, and those which are extremely perishable[34]. It also comprises substances provided for medical or industrial purposes that might be radioactive. The transportation of air cargo has a different risk profile than the transportation of passengers and differs considerably from surface transportation.

It is untroubled by the risk of delays or of theft which may occur at border stops as well as by damage from transhipment from ships to trains. Consequently, insurance rates for air cargo with respect to damage, theft or loss are considerably lower when compared to that of surface transportation.[35]

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[27] *Ibid.*
[28] *Ibid.* art. 17(3).
[29] Such as handbags, watches and jewelry, personal documents, personal effects, carried on the passenger.
[30] *Montreal Convention 1999*, *supra* note 2 art. 17(2).
[31] *Ibid. supra* note 2 art. 20.
[32] Such as gold bars, banknotes, industrial diamonds jewelry and pharmaceutical products.
[33] Medicine needed to save life falls into this category, organs and spare parts for machines indispensable for the continuation of business.
[34] Such as fruits, vegetables and cut flower, live animals and newspapers.
[35] See Jean-Louis Magdelénat, *Air Cargo Regulation and Claims*, (Canada: Butterworth & Co, 1983) at 5.

With respect to cargo, the carrier's liability for damage sustained in the event of the destruction or loss, or damage, is limited upon condition that the event which caused the damage so sustained took place during the carriage by air. The liability is based on the basis of an 'event' rather than on an 'accident'.[36] The term 'carriage by air' comprises the period from when the cargo is in 'charge of the carrier'[37], but excludes any carriage by land, by sea, or by inland waterway performed outside an airport. However, if the transportation is carried out with regard to the aforementioned mode of transportation in the performance of a contract of carriage by air, for the purpose of loading, delivery or transhipment, the damage is presumed to have been the result of an event which took place during the carriage by air.

The carrier is exonerated from liability if and to the extent that it proves that the damage resulted from; (1) the inherent defect, quality or vice of that cargo; (2) from the defective carriage performed by a person other than the carrier or its servants or agents; (3) or an act of public authority connected with the entry, exit or transit of cargo.[38]

Due to the wide use of containers in packaging goods these days, the defence of the 'inherent defect' can no longer be avail.[39]

The 'all necessary measures' defence provided under the *Warsaw Convention* has been eliminated by the Montreal Convention, 1999. However, under the Montreal Convention, 1999, the air carrier can rely upon the defence of contributory negligence.[40]

The carrier is strictly liable up to a certain limit which is not breakable.[41] As a consequence, aviation insurers are forced to indemnify the insured partly without pursuing any further investigation.[42]

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[36]. See Michael Milde, "Liability in international carriage by air: the new Montreal Convention" in Michael Milde & H. Khadjavi, ed., *Private International Air Law: Cases and Materials,* Vol. 1. (Montreal: McGill University, 2003) at 300.
[37] *Montreal Convention 1999*, *supra* note 2 art. 18(3).
[38] *Ibid.* art. 18.
[39] Magdelénat, *supra* note 35 at 6.
[40] *Montreal Convention 1999*, *supra* note 2 art. 20.
[41] Even in the event that "the damage resulted from an act or omission of the carrier, its servants or agents, done with intent to cause damage or recklessly and with knowledge that the damage would probably result."(*Montreal Convention 1999*, art. 22(5)). It only applies to delay and baggage.
[42] Interview of Ms. Regula Dettling-Ott, (27 June 2005) SWISS International Airlines, Zurich-Airport.

1.5 Liability for delay

According to article 19 of the *Warsaw Convention*, the carrier is liable for damage occasioned by delay in the carriage by air of passengers, baggage or goods. The term 'delay', however, is not defined and airlines indicate that the times of departure and arrival are approximate and not guaranteed. As a consequence, damage resulting from a delay cannot be claimed when the scheduled time limit is exceeded; an unreasonable delay is necessary to support a claim[43]. The liability for baggage and goods is based on fault with reversed burden of proof[44]. Under the *Montreal Convention 1999* the carrier is not liable for any delay if it can prove that 'it and its servants and agents took all measures that could reasonably be required to avoid the damage or that it was impossible for it or them to take such measures'.[45] The same defense exists under *Montreal Protocol No. 4*[46].

The passenger, on the other hand, must prove that a delay has (1) occurred during transportation by air (depending on what was regarded as a reasonable time for carriage, and that such time has been significantly exceeded) and (2) that this delay resulted in damage.[47]

1.6 Limits of liability

1.6.1 Limits of liability with respect to passengers

The *Montreal Convention 1999* removed the considerably low liability limits of the *Warsaw Convention* and aligned it with the limits provided in the 'Japanese Initiative' of 1992[48], the IATA Passengers Liability Agreement of

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43 See I. H. Philepina, Diederiks-Verschoor, *An Introduction to Air Law*, 7th ed. (The Hague: Kluwer Law International, 2001) at 82 [Diederiks-Verschoor 2001].
44 Michael Milde, *supra* note 36 at 300.
45 *Montreal Convention 1999*, *supra* note 2, art. 19. See also *Warsaw Convention supra* note 1, art. 20.
46 *Montreal Protocol No. 4 to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air*, 25 September 1975, ICAO Doc. 9148 [*Montreal Protocol No. 4*].
47 Pablo Mendes de Leon & Werner Eyskens, "The Montreal Convention: Analysis of some Aspects of the Attempted Modernization and Consolidation of the Warsaw System" (2000-2001) 66 JALC at 1182 [Mendes de Leon and Eyskens].
48 See "Japanese Carrier's Advice on Waiver of Liability Limits of 20 November 1992" in Michael Milde & H. Khadjavi, ed., *Private International Air Law: Cases and Materials,* Vol. 1. (Montreal: McGill University, 2003) at 418.

1995[49] and *EC Regulation 2027/97*[50] as amended by *EC Regulation 889/2002*[51].

The Warsaw Convention liability system has been subject to various legal instruments over time. These instruments include not only multilateral treaties (The Hague Protocol of 1955[52], Guatemala City Protocol of 1971[53], Montreal Additional Protocols No. 1 – No. 4 of 1975[54]), but also agreements concluded between air carriers under the auspices of the International Air Transport Association (IATA).

This multiplicity of instruments led to a patchwork of different laws depending upon whether a State was a High Contracting Party to a convention or whether a particular airline was a signatory to an Agreement.

The Montreal Convention 1999 attempts to unify a majority of the above Conventions and Protocols by providing a two-tier system of compensation. For the first tier the carrier cannot exclude or limit its liability for damages up to Special Drawing Rights[55] (SDR) 100,000.[56] The carrier is therefore subject to strict - not absolute - liability up to this limit. However, the carrier may not be held liable, even for the first tier, if the damage was either caused or contributed by the negligence or other wrongful act or omission on the other part of the person claiming compensation.[57] In the case of death and

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[49] *IATA Intercarrier Agreement on Passenger Liability and Agreement on Measures to Implement the IATA Intercarrier Agreement*, 31 October 1995, in IATA Essential Documents on International Air Carrier Liability, June 1999.

[50] EU, *Council Regulation 2027/97 on air carrier liability in respect of the carriage of passengers and their baggage by air,* [1997] O.J.L 285 [Regulation 2027/1997].

[51] EU, *European Parliament and Council Regulation No. 889/2002 on air carrier liability in the event of accidents*,[2002] O.J.L. 140/2.

[52] *Protocol to the Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air,* 28 October 1955, ICAO doc. 7632 [*Hague Protocol 1955*].

[53] *Protocol to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air,* 8 Mach 1971, ICAO doc. 8932 [*Guatemala City Protocol*].

[54] *Additional Protocols No. 1-4 to Amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air*, 25 September 1975, ICAO doc. 9145-9148.

[55] The SDR is an international reserve asset, created by the International Monetary Fund (IMF) in 1969 to supplement the existing official reserves of member countries. The SDR also serves as the unit of accounting of the IMF and some other international organizations. Its value is based on a basket of key international currencies and is defined as a basket of currencies, consisting of the Euro, Japanese Yen, Pound Sterling, and the US dollar. The US dollar-value of the SDR is posted daily on the website of the IMF. It is calculated as the sum of specific amounts of the four currencies valued in US dollars, on the basis of exchange rates quoted at noon each day in the London financial market.

[56] *Montreal Convention 1999, supra* note 2, art. 21(1).

[57] *Ibid*, art. 20.

bodily injury, where claims exceed[58] SDR 100,000, the liability is based on fault with reversed burden of proof. The carrier is not liable for damages above the aforementioned sum unless it proves that (1) such damage was not due to the negligence or other wrongful act or omission of the carrier or its servants or agents; or (2) such damage was solely due to the negligence or other wrongful act or omission of the claimant or a third party. For instance, an aircraft manufacturer or a terrorist who hijacks the aircraft or a violent passenger over whom the air carrier has no control, may be considered as a third party. In practice, however, the establishment of this burden of proof would be extremely difficult for an air carrier, since an accident or an occurrence in aviation is rarely the result of one single cause but rather tends to arise from a chain of causation.[59]

Punitive, exemplary and other non-compensatory damages are especially excluded and do not fall within the category of compensatory damages. However, the actual amounts of compensation vary from country to country. While in some jurisdictions compensation for death actions is confined to "economic" damage, in other jurisdiction, substantial compensation is granted for non-economic damage, such as pain and suffering, loss of enjoyment of life, loss of parental guidance, loss of companionship. With respect to the compensation of the next of kin, it may be granted on the basis of the decedent's pain and suffering, preimpact fear and mental anguish, post-impact pain and suffering, post-impact traumatic stress and bystander shock and mental anguish. The awards may be unforeseeably high - particularly when a jury is involved in the decision, such as in the United States.[60]

In Japan for instance, the amount of awards granted is relatively higher than most jurisdiction (outside the United States). However, compensation awards are very predictable because of the standardization of the calculation They normally include funeral expenses (starting from USD 6,200 to USD 11,500), loss of profits and condolence money (starting from USD 138,000 to

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[58] The International Union of Aviation Insurer (IUAI) suggested the wording "up to SDR 100,000" to ensure that the limit is not interpreted as a minimum payment of accident, regardless of the nature and severity of the event: see DCW Doc. No. 28 at. 3.

[59] Milde, *supra* note 36 at. 300. See also The International Union of Aviation Insurer (IUAI) which regarded the word "solely" as not appropriate because of the difficulty for an air carrier to prove that liability rested 100% with a third party or group of third parties, *supra* note 58, no. 28.

[60] Milde, *supra* note 36 at 300.

USD 177,000) depending on whether the deceased was a breadwinner of the family. [61]

1.6.2 Limits of liability in relation to delay, baggage and cargo

The limit for damages caused by delay is SDR 4150 (USD 6011[62]). This is not a lump sum payable under all circumstances but reflects a maximum limit subject to proof by the claimant of actual loss suffered.[63]

With respect to baggage, the limit of liability is set at SDR 1000 in the case of destruction, loss, damage or delay for each passenger. The specific limit does not apply if the passenger made a special declaration of interest in its delivery. However, few air carriers in practice offer this type of insurance and the passengers mostly rely on private insurance coverage, often included in their credit card programs.[64] The limit is no longer calculated according to the weight, as was the case for checked baggage under the *Warsaw Convention* as amended by the *Hague Protocol 1955*.[65]

With respect to cargo the limitation of liability is fixed at SDR 17 per kilogram - the same as in *Montreal Protocol No. 4*.[66]

1.7 Jurisdiction

The worldwide amount of compensation awarded to passengers depends on the number of accidents, fatalities and injuries. However, in determining passenger liabilities awards, the profile and nationality of the passengers on board are of greater significance than their actual number. For instance, a single person at an age of 65 has a different earning capacity than a young married woman in a high position maintaining her family. Since courts establish types and amount of compensation for which an air carrier becomes liable, the place where an action can be brought plays a significant role for

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[61] Makoto Sano, "Legal and insurance developments in aviation in Japan" in *Leading developments in international aviation insurance. An Industry Report* (London: Lloyds of London Press Ltd.1991) 1 at 5-6.
[62] 1 SDR = 1.441968 USD, 1 SDR = 1.21134 EUR (exchange rate as of 8 July 2005) online: International Monetary Fund, <http://www.Imf.org/>.
[63] Milde, *supra* note 36 at 301.
[64] *Ibid.* at 301.
[65] *Warsaw Convention* as amended by the *Hague Protocol*, *supra* note 1, art. 22(2).
[66] *Montreal Convention 1999*, *supra* note 2, art. 22(3).

airlines and aircraft operators and for aviation insurers in particular in assessing risk and establishing premiums.

The 65 High Contracting States that have ratified the *Montreal Convention 1999* include major aviation nations such as the United States[67], Canada, Japan, the States member of the European Union as well as China (which has the potential to become a major aviation nation in the near future). A considerable part of the performed international air transportation is, thus, subject to the 5th jurisdiction (the place of the domicile of the passengers) provided in *Montreal Convention 1999*.

The *Warsaw Convention* provides for four jurisdictions where an action against an air carrier can be brought.[68] A plaintiff could sue the carrier for damages with regard to passengers, baggage, cargo and delay- at its option in the territory of one of the High Contracting Parties either (1) before the court of the domicile of the carrier or (2) his principal place of business, or (3) at the place the contract was concluded provided that the carrier has a place of business there, or (4) before the court of the place of destination.[69]

The *Montreal Convention 1999* introduced the 5th jurisdiction,[70] which provides for, in addition to the aforementioned jurisdictions, the place of residence of the claimant. This gave rise to controversial issues. The International Union of Aviation insurer (IUAI) feels that "the primary consequences will be the prosecution of claims by nationals of high compensation states in their own territories regardless of any link between that state and the journey performed.[71]

The 5th jurisdiction is solely available for claims pertaining to the death or injury of a passenger.[72] For baggage, cargo and delay claims only four jurisdictions are at the claimants' disposal. As a result, claims for death or

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[67] The United States became Party to the Montreal Convention 1999 on 4 November 2003 and at the same time brought the Convention into force.
[68] *Warsaw Convention*, *supra* note 1, art. 28.
[69] The next of skin of some French victims of the Swissair disaster on the New York to Zurich flight on 1 September 1998 were deprived to sue at the place of residence of the victims i.e. France, because the passenger tickets had been purchased in Switzerland. (See Milde, *supra* note 36 at 302).
[70] During the Diplomatic Conference, the United States made clear its belief that "including the 5th jurisdiction in any new Convention represents an essential element in moving forward with a revised Convention" and that a Convention without this provision or with a limit of liability "would, therefore, not be acceptable by the United States".
[71] Sean Gates, "The Montreal Convention of 1999: a Report on the Conference and on what the Convention Means for Air Carriers and their Insurers" (1999) Vol. I TAQ 186 at 188.
[72] *Montreal Convention 1999*, *supra* note 2 art. 33(2).

injury of passengers and claims for damage or loss of baggage or passengers delay might have to be filed in different jurisdictions.

However, in order to benefit from the 5th jurisdiction several conditions have to be met: Firstly, the principal and permanent place of residence of the passenger must be located in the territory of a State Party. Moreover, only the passenger's principal and permanent place of residence is taken into account.[73]

The term 'principal and permanent residence' is thereby defined as one fixed and permanent abode of the passenger at the time of the accident.[74]Secondly, the air carrier must operate services on its own or the service must be performed by another carrier with which it has a commercial agreement for the carriage of passengers to or from the principal or permanent place of residence of the claimant. Thirdly, the air carrier must conduct its business of carrying passengers by air from premises leased or owned by that sued carrier or by another carrier with which it has a commercial agreement other than an agency agreement.[75]

The term 'commercial agreement' is defined as an agreement other than an agency agreement, made between carriers and is related to the provision of the joint services for carriage of passengers by air.[76] The provision gives rise to considerable confusion. Firstly, a code-share agreement alone may not constitute a 'commercial agreement' within the meaning of Article 33 of the *Montreal Convention 1999* because the arrangement may not qualify as 'joint-service'. Secondly, the provision is unclear with regard to the scope of the phrase 'premises in which the sued air carrier conducts the business of carriage of passengers by air'.[77]

There must be premises in the jurisdiction from which contracts for carriage of passengers on that particular carrier's aircraft are made, or possibly where reservations are made.[78] The term may also be extended to

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[73] Mendes De Leon and Eyskens, *supra* note 47 at 1155-62.
[74] *Montreal Convention, 1999, supra* note 2 art. 33(3b). Gates considered this term vulnerable to litigation given that people have more than one abode and having houses in more than one country. (Gates, *supra* note 71 at 188.)
[75] *Ibid.*
[76] *Montreal Convention 1999, supra* note 2 art. 33(3a).
[77] Gates suggested as to whether it would be sufficient for the air carrier to have an office which is responsible for the purchase of items such as spar parts, training or even the aircraft itself.
[78] Gates, *supra* note 71 at 188.

include websites in the event that tickets are being offered on-line or by call centres through which tickets are sold.[79]

The premises may be leased or owned by another carrier with which it has a code share agreement.[80] The provision is not clear as to whether the code-share partner must be the same as the first code share partner (the one which operates services from and to the place of residence of the claimant).

In practice, however, there are limited effects resulting from the introduction of the "5th jurisdiction" under the *Montreal Convention 1999* compared with the four jurisdictions under the *Warsaw Convention*. For the vast majority of purchased tickets (for a one-way ticket, the place of destination is obvious; on a return ticket, the place of destination is the same as the point of origin). Given that most of the tickets are purchased from the carrier's 'home jurisdiction', they fall within the place of destination where the Convention has always allowed suit.

The repercussions of the introduction of the 5th jurisdiction only gain significance for return tickets purchased in a country other than the claimant's home jurisdiction provided that the carrier has a sufficient commercial presence to be sued there.[81]

More importantly, the extension of the 5th jurisdiction to the operating carrier gives the claimant the possibility to sue the contracting carrier even if the operating carrier does not satisfy the jurisdiction test.[82] This makes carriers that are members of an airline alliance vulnerable to the jurisdiction of courts in any of the states in which the other members of the alliance are established. This could be of great significance in light of the wide use of code-share agreements and alliances[83] existing between airlines. A passenger holding a ticket issued by a carrier other than the carrier performing the flight therefore has a possibility to sue the operating carrier.

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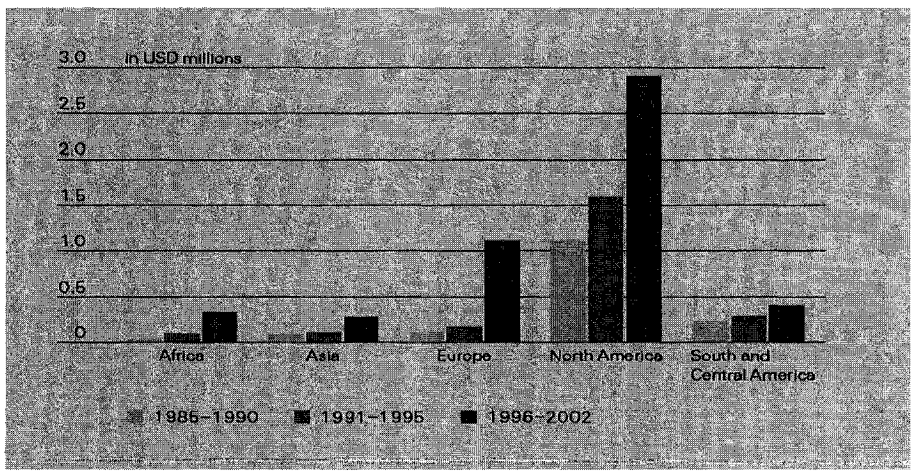
[79] Pablo Leon de Mendes *supra* note 47 at 1163.
[80] *Montreal Convention 1999, supra* note 2 art. 33(2).
[81] Harold Caplan, "A second supplement for the Warsaw Convention: a Historic Opportunity" (1999) TAQ Vol. I 70 74.
[82] *Montreal Convention 1999, supra* note 2 art. 46.
[83] The three big airlines alliances, Star Alliance, One World and Skyteam encompass the world's major airlines. Their networks cover all worlds' regions involving at least one major US carrier.

An obvious solution could be that the policy could be worded to incorporate the concept of 'Your paint, your problem', which provides that the operating carrier should be liable to handle and pay any claims.[84]

The following table reveals the liability awards per passenger in different regions of the world. The highest awards are granted in North America. On the other hand, in Africa and Asia, the awards are considerably smaller. A trend towards higher compensation for passengers can be noticed in all regions; but the percentage of the increase varies from sector to sector. While in Africa and Asia the increase in awards is more than 50% between 1996 and 2002, the same is not true for South and Central America. A very high award, as well as a very high increase in award, has occurred between 1996 and 2002 in the North America and Europe. In Europe, there has been a remarkable increase in passenger liability awards from USD 0.17 million to USD 1.1 million, representing nearly a 7 fold increase, from 1996 to 2002. Whereas in Europe and North America, little increase in air traffic is forecast, in Asia demand for air traffic will certainly surge. This increase, coupled with the expected growth of Asian markets, such as India and China,[85] will consequently lead to a worldwide increase in passenger liability costs.



Source: [86]

[84] Justyn Harding et al., "Aviation Insurance" (May 2002) online: Actuaries Professional <http://www.actuaries.org.ukfilespdfgiro2002 Harding.pdf> at 33 [Harding].
[85] In 2004, a growth rate of 14.9% for transport, post and telecommunication was reported.
[86] Crystal et al., Swiss Re Publication, "The True Value of Aviation Insurance" (Zurich) Swiss Reinsurance Company 2004, at 12 [Chrystal].

1.8 Governing legal regime outside the application of the *Montreal Convention 1999*

The *Montreal Convention 1999* provides that it will prevail, as between ratifying State Parties, over any rules which apply to international carriage by air of the *Warsaw Convention*, the Hague Protocol, and the *Guadalajara Convention,* the *Guatemala City Protocol* and over the *Montreal Protocols No. 1 to 4.*[87]

Nevertheless, an area of conflicting rules between two States is possible where only one of them has ratified the *Montreal Convention 1999* and as a result cases might have to be resolved by applying the various aforementioned international instruments.

In the following paragraphs, the various international instruments will be examined which are – as has been mentioned – still applicable even if only one of two States has ratified the *Montreal Convention 1999* while the other has not.

Under the *Warsaw Convention* air carriers are subject to a limit of liability for damages to passengers of 125,000 Poincaré (French) gold francs, the equivalent of USD 10,000[88]. The liability limit for cargo and baggage is limited to 250 Poincarés francs per kilogram, equivalent to USD 17 (USD 20 after devaluation).

For hand baggage of the passenger, the limit is set at 5,000 Poincaré gold francs. The *Warsaw Convention* entered into force on 13 February 1933 and has been ratified by 146 States[89].

Subsequently, the limit of liability for damage to passengers was raised by various international instruments and Protocols. These are still relevant today as they constitute the legal framework of liability in cases where the Montreal Convention of 1999 does not apply.

The adoption of the *Hague Protocol 1955*,[90] increased the limit of liability for passengers with respect to death, wounding, or other physical

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[87] Montreal Convention 1999, *supra* note 2 art. 55.

[88] Conversation of limits of liability, Principles Instruments of the Warsaw System, International Air Transport Association, Montreal-Geneva, 3rd. ed. 1999 at 87.

[89] ICAO List and Status of International Air Law Multilateral Treaties, online: ICAO <http://www.icao.int/icao/en/leb/wc-hp.htm>.

injury to 250,000 Poincaré francs (16,600 SDR). This instrument was ratified by most of the States that had signed the Warsaw Convention.

The *Guadalajara Convention 1961* extended the system of liability to an actual (operating) carrier that has no direct contractual relationship with the passenger or shipper. It came into force on 1 May 1964 and was ratified by 84 States[91].

The *Guatemala City Protocol 1971* shifted the system of fault liability towards strict liability with a capped liability ceiling of 1,500,000 Poincaré francs, the equivalent of USD 100,000. However, it never entered into force.

The Montreal Protocols No. 1, 2 and 3 of 1975 substituted the concept of the Poincaré franc for the Special Drawing Rights for the gold clause, applied in the Warsaw Convention, as amended by the *Hague Protocol* and by the *Guatemala City Protocol*.

Montreal Protocols Nos. 1 and 2 entered into force on 15 February 1996 and had been ratified by 48 and 49 States respectively.

Montreal Protocol No. 3 amending *Guatemala City Protocol* never came into force.

Montreal Protocol No. 4 introduced some new features with respect to cargo and baggage. However, it left the limit for damages to cargo at the level of SDR 17 per kilogram.

Apart from the international achievements with regard to liability for passengers, a series of unilateral actions were taken to modify aspects of liability, mainly with regard to the limit of liability. In 1966, under the IATA Montreal Agreement, Airline members of IATA[92] flying to and from the United States, agreed to renounce the defence available to them under article 20 of the *Warsaw Convention* (that they have taken all necessary measures to avoid the damage or that it was impossible for the carrier to take such measures) and increased their limits of liability to USD 75,000. That figure was

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[90] It came into force on 1 August 1963 and ratified by 136 High Contracting States, see online: ICAO <http://www.icao.int/icao/en/leb/wc-hp.htm>.

[91] ICAO List and Status of International Air Law Multilateral Treaties, online: ICAO <http://www.icao.int/icao/en/leb/guadalajara.htm>.

[92] The International Air Transport Association (IATA) represents the interests of approximately 270 airlines from 130 countries carrying approximately 98% of scheduled international passengers air transport worldwide. It is headquartered in Montreal and Geneva.

subsequently increased by many airlines to SDR 100,000 SDR (equivalent to USD 137,000[93]). In the same way, the Italian government implemented a law that required all carriers (including its own national carrier) operating from or to Italy to accept the limits of liability of SDR 100,000.

In Japan, carriers accepted a new liability limit up to SDR 100,000 based on presumed fault and with a reverse burden of proof. This limit also set the basis for the Intercarrier Agreement[94] on Passenger Liability established under the auspices of IATA.[95]

1.9 *Montreal Convention 1999* article 50 – insurance

Article 50 of the *Montreal Convention 1999* places an obligation on air carriers to be equipped with 'adequate insurance'.[96] The term does, however, not specify the adequacy of the insurance but rather leaves it to the State Party into which an air carrier operates to determine as to whether it considers any insurance secured as adequate. This provision, however, may disregard the insurance practice. Commonly, in insurance policies, for property damage claims (i.e. baggage and cargo), a deductible is applied. In addition, article 50 may not be in line with the practice of insurance policies commonly worded as to exclude cover for particular perils such as nuclear risks.[97]

B Third party liability – legal framework

It was on 4 October 1992 when an all cargo airplane, EL-AL Flight 1862, crashed into two apartment blocks in Bijlmermeer, a residential area located 13 kilometres east of Amsterdam's Schiphol airport, causing substantial damage on the surface to residential and other properties. Besides the 4 crew members on board the aircraft, 44 people on the ground perished. The two apartment blocks hit by the aircraft subsequently caught fire and were partially destroyed. Furthermore, the soil in the vicinity of the crash-site was

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[93] For the exchange rate see *supra* note 65.
[94] In force since 14 February 1997 for most of the airlines.
[95] Milde, *supra* note 36, 294.
[96] *Montreal Convention 1999*, *supra* note 2 art. 50.
[97] Wolf Mueller-Rostin, "Article 50 Montreal Convention, A Provision with Considerable Consequences" (2004) ZLW 53/4 551 555.

polluted by a combination of fuel, oil, and combustible materials from the aircraft and its freight.[98]

Beside the Bijlmermeer disaster, several other air crashes have resulted in major impacts on the surface of the earth - the Lockerbie disaster of a Boeing 747 Pan Am Flight 103, resulted in the death of 259 people on board the aircraft and 11 people on the ground; the crash of an Antonov-124 cargo aircraft into an apartment building in Irkutsk, Siberia on 6 December 1997, resulting in 62 people being killed on the ground. The crash of an Air France Concorde near Charles de Gaulle airport in Paris, on 25 July 2000 caused the deaths of all 109 people on board on the aircraft as well as 5 people on the ground (the aircraft crashed into a hotel).[99] An American Airlines Airbus A300 crashed on 12 November 2001 into a residential neighbourhood outside John F. Kennedy airport in Queens, New York and damaged or destroyed several homes, and killed five people on the ground.

The legal aftermath of such aviation accidents or incidents may raise questions as to the applicability of international or domestic law. Additionally, insurance issues also arise that need close consideration.

Liability for surface damage caused by international civil aviation under international air law can be found in the following legal instruments:

1. International Convention for the Unification of Certain Rules relating to Damages caused by Aircraft to Third Parties on the Surface, signed at Rome on 29 May 1933;[100]
2. Brussels Insurance Protocol 1938;[101]
3. Convention on Damages Caused by Foreign Aircraft to Third Parties on the Surface, signed at Rome, 7 October 1952[102] and

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[98] Raad voor de Luchtvaart – Netherlands Aviation Safety Board, Airline Accident Report 92-11, El-Al Flight 1862, Boeing 747-258FAX-AXG Bijlmermeer, Amsterdam October 4, 1992, at 5-9.
[99] Adriaan H. Mauritz *Liability of the operators of aircraft for damage inflicted to persons and property on the surface*, (Maastricht: Shaker Publishing, 2003) at 3 [Mauritz].
[100] David McClean et al., *International Convention for the Unification of Certain Rules relating to Damages caused by Aircraft to Third Parties on the Surface* 4.ed. Air Law, Treaties and Materials, London (2004), Vol. 2 App. B [*Rome Convention 1933*].
[101] David McClean et al., *Brussels Insurance Protocol 1938*, 4.ed., Air Law, Treaties and Materials, London, (2005) Vol. 2 App A.
[102] *Convention on Damages Caused by Foreign Aircraft to Third Parties on the Surface*, ICAO, doc. 7364 [*Rome Convention 1952*].

4. Protocol to Amend the Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, as adopted and signed at Montreal on 23 September 1978.[103]

1 Rome Convention 1933

The first regulatory framework with regard to insurance requirements for air carriers was the Rome Convention 1933. Its main purpose was the unification of the rules of law on the subject of damage caused by aircraft to third parties on the surface. It required that every aircraft operated in commercial international civil aviation should be insured or guaranteed vis-à-vis third party liability on the surface up to Poincaré francs 2 million[104]. The main objective was not to change national laws of the contracting states but to enact special rules for damage caused by foreign aircraft.[105] The Rome Convention 1933 is governed by the concept of strict and limited liability and compulsory insurance requirements of the operator of the aircraft.[106] The limitation regime is based upon the weight of the aircraft together with the maximum payload. The strict liability is coupled with a monetary limit on the amount of compensation which can be recovered in the absence of "gross negligence or wilful misconduct on the part of the operator and his agents and is in a range of 600,000 to 2,000,000 Poincaré francs[107]. Non-compliance with insurance requirements would expose an aircraft operator to unlimited liability.[108] The only defence of the aircraft operator to escape strict liability is to prove that the damage was caused by or contributed to, the contributory negligence of the plaintiff.[109] The Rome Convention 1933 is only applicable if the aircraft that causes the damage is registered in a state other than that in which the damage is caused.[110] The significance of this Convention was limited due to the few state ratifications it received.[111] The main obstacle to a

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[103] *Protocol to Amend the Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface*, ICAO, 23 September 1978, Doc. 9257 [*Montreal Protocol 1978*].
[104] *Rome Convention 1933*, *supra* note 100 art. 12(2).
[105] De Juglart, *La Convention de Rome du 7 Octobre 1952*, (Paris : Les Éditions Internationales, 1955) préface at 5.
[106] Mauritz, *supra* note 99 at 63.
[107] It is the value of 65.5 milligrams of gold at the standard of fineness of nine hundred thousandths.
[108] *Rome Convention 1933*, *supra* note 100 art. 14.
[109] *Ibid.* art. 3.
[110] *Ibid.* art. 20(1).
[111] Ratified by Belgium, Brazil, Guatemala, Romania and Spain.

wide acceptance by States of this instrument was that a provision was incorporated that provided for direct action by third parties against insurers.[112] Jurisdiction over claims for damage was given to judicial authorities of the defendant's domicile and to those of the place where the damage was caused without prejudicing the injured third party's right of direct action against the insurer at its domicile.[113]

2 Brussels Insurance Protocol 1938

The Brussels Protocol provided the insurers with extra defences against direct actions of third parties on the surface[114]. The extra defences so provided are:[115]

1. The damage occurred after the term of the insurance had lapsed;
2. The damage occurred outside the geographical limits of the policy, unless flight outside the limits was necessitated by *force majeure* or justifiable diversion for the purpose of assistance, salvage, or by the negligence in piloting;
3. The damage was a direct result of international armed conflict.

The Brussels Convention 1938 is generally regarded as the dead letter in aviation insurance practice and legal dogma since it was only ratified by two states.[116]

3 Rome Convention 1952

On 4 February 1958 the Rome Convention of 1952 came into force. It provides a compensation scheme for damages inflicted on third parties for bodily injury and property damage on the surface as a result of the operation of an aircraft. The scope of the Convention is limited to damage caused to

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[112] The Austrian regime allows direct actions of third parties against insurers whereas in other countries such as in Germany, the United States and Switzerland the national laws do not permit such direct action against insurers. Under Swiss law the insured third parties are entitled to a lien on claims for compensatory claims of the insured against the operator (Swiss Air Navigation Decree of 14th November 1973, art. 14).
[113] *Rome Convention 1933, supra* note 100 art. 16. See also Elisabeth Gaspar Brown, "The Rome Convention of 1933 and 1952: Do they Point a Moral?" (1961-1962) 28 J Air & Sp. L. 418 422.
[114] *Rome Convention 1933, supra* note 100, art. 16.
[115] *Ibid.* art. 1(1).
[116] Brazil and Italy.

third parties on the territory of a contracting state by an aircraft registered in another contracting state.[117] Consequently, if damage was caused by an aircraft registered in the territory where the damage occurred, the Convention does not apply: but, rather the domestic liability regime of the place where the damage occurred *lex loco delicti*, is triggered. Jurisdiction is established in the contracting state where the damage occurred.[118] The Convention is not applicable if:

1. The damage was caused solely through the negligence of or wrongful act or omission of the person who suffers the damage or of the latter's servants or agents, unless the person who suffers the damage can prove that his servants or agents were acting outside the scope of their authority. In that case, liability will be reduced to the extent that the negligence or wrongful act or omission contributed to the damage;[119]
2. The damage is a direct consequence of armed conflict or civil disturbance;[120]
3. The operator had been deprived of the use of the aircraft by act of public authority;[121]
4. The damage is caused due to a mid-air collision.[122]

The scope of this Convention is also limited to the extent that it provides a liability regime solely for aircrafts 'in-flight'. 'In-flight' has been defined as 'the moment when power is applied for the purpose of actual take-off until the moment when the landing run ends'.[123] However, the Convention does not apply to certain circumstances when damage is caused to third parties on the surface while the aircraft is on the ground, including; when the aircraft is at the gate, in the process of the aircraft being refuelled, reloaded and when

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[117] Rome Convention 1933, *supra* note 100 art. 23.
[118] *Ibid.* art. 20.
[119] *Ibid.* art. 6.
[120] *Ibid.* art. 5.
[121] *Ibid.*
[122] Diederiks-Verschoor 2001, *supra* note 43 at 129. See art. 1 (e) of the *Draft Convention On Damages Caused By foreign Aircraft To Third Parties* (ICAO SG-MR/1, Appendix 4, Report of the Special Group on the Modernization of the Rome Convention of 1952, Montreal, 10-14 January 2005) which defines that in the case of a collision that "third party" also means the operator, owner and crew of the aircraft and the passenger or shipper of cargo on board the other aircraft, thus also establishes liability rules for third parties in case of a mid-air collision.
[123] Rome Convention 1952, *supra* note 100 art. 1(2).

passengers are in the process of embarking or disembarking; when the aircraft is pushed back from the gate until it reaches the position of being disconnected from the towing truck until, the moment that it taxies under its own power for the purpose for take-off.

It should be noted that the Draft Convention on Damage Caused by Foreign Aircraft to Third Parties [124] provides that "while an aircraft is in motion for the direct purposes of a flight, either in the air or on the ground",[125] such activity is considered as one with the aircraft's being 'in-flight'. It encompasses the period when the aircraft is being pushed back from the gate. It is sufficient that the aircraft is in motion, regardless of when and whether power is applied on its powerplants.

Again, damage caused to third parties on the surface while the aircraft is on ground for refuelling and taking on passengers is not covered and any untoward events during that period are governed by the relevant national laws applicable in the jurisdiction of that airport. The term 'motion' has been given the strictest possible interpretation.

In spite of the success of the *Warsaw Convention*, which established the rights of the user of an aircraft, the *Rome Convention 1952* could not find world-wide recognition[126] or gain the level of popularity of the *Warsaw Convention*. Up until now, only 47 States have ratified the *Rome Convention 1952*[127]. Among Western European nations, only Belgium, Italy, Luxembourg and Spain are signatories; thus, none of the major air faring nations of Europe are party to the *Rome Convention 1952*.

The objective of the *Rome Convention 1952* was to ensure adequate compensation for persons who suffer damage on the surface caused by foreign aircraft in-flight, while limiting the liability for this kind of damage in a

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[124] Special Group on the Modernization of the Rome Convention 1952, *Report on the Meeting of the Special Group on the Modernization of the Rome Convention 1952*, ICAO, 2005, Doc. SG-MR/1 [*Draft Convention*].
[125] *Ibid.* art 1(g).
[126] Gerd Rinck, "Damages by foreign Aircraft to third Parties" (1962-1962) 28 J. Air L. & Com. 405.
[127] Algeria, Angola, Argentina, Azerbaijan, Bahrain, Belgium, Bolivia, Benin, Brazil, Cameroon, Cuba, Ecuador, Egypt, El Salvador, Gabon, Gambia, Guatemala, Guinea, Haiti, Honduras, Iraq, Italy, Kenya, Kuwait, Luxembourg, Maldives, Mali, Mauretannia, Morocco, Niger, Oman, Pakistan, Papua New Guinea, Paraguay, Republic of Moldowa, Russian Federation, Ruanda, Seychelles, Spain, Sri Lanka, Suriname, Tongo, Tunesia, United Arab Emirates, Uruguay, Vanuatu, Yemen.
ICAO List and Status of International Air Law Multilateral Treaties, online: ICAO <http://www.icao.int/icao/en/leb/rome1952.htm>.

reasonable manner so as not to impede the development of international civil aviation.[128] The limitation of liability was justified as a *quid pro quo* for the severe basis of absolute liability.[129] The limitation of liability was linked to the maximum permissible take-off weight of the aircraft (incorporated in its airworthiness certificate), on a 'per aircraft' and 'per incident' basis with respect to all persons liable under the Rome Convention 1952. The limit of liability is 500,000 Poincaré francs for an aircraft less than 1000 kilograms and a maximum of 10,500,000 Poincaré francs, plus 100 Poincaré francs 100 per kilogram for aircrafts over 50,000 kilograms.[130]

In the absence of any reference to national law in the Rome Convention 1952, some States converted the value of Poincaré franc into their national currency pursuant to special legislative enactments.[131] Under U.S. law, the maximum recoverable sum for damages inflicted on the surface by an aircraft weighing 50,000 kilograms was set at the considerably low level of USD 840,000.[132] In addition, the liability with respect to loss of life or personal injury was capped at a level of 500,000 Poincaré francs (USD 40,000).[133]

The limits of liability do not apply if "the person who suffers damage proves that the same was caused by a deliberate act or omission of the operator, his servants or agents, done with intent to cause damage"[134] and if "a person wrongfully takes and makes use of an aircraft without the consent of the person entitled to use it."[135]

Nevertheless, in the absence of any deliberate act or omission of the operator, the compensation for damage on the surface inflicted by a crash of one of the world's most popular, medium-range narrow-body commercial jet, the Boeing 737-with a maximum take-off weight of approximately 60,000 kilograms may be at a rather low level of 11,500,000 Poincaré francs, the equivalent of USD 920,000 (per aircraft and per event!). An even more serious

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[128] *Rome Convention 1952, supra* note 102 preamble.
[129] Mauritz, *supra* note 99 at 79.
[130] *Rome Convention 1952 supra* note 102 art. 11(1).
[131] For an overview of the conversion of limits of liability of PoincaréPoincaré Franc into currencies of major aviation and European Nations, see: International Air Transport Association, *Principal Instruments of the Warsaw System,* 3rd ed. (Montreal – Geneva: International Air Transport Association, 1991) at 87.
[132] Civil aeronautics Board, Order 74-1-16, 3 January 1974.
[133] *Ibid.*
[134] *Rome Convention 1952 supra* note 102 art. 12(1).
[135] *Ibid.* art. 12(2).

consequence is the potential damages caused to third parties on the surface and to properties from an impact of a crash of a wide-body aircraft with a maximum take-off weight of more than 250,000 kilograms.

From the above figures, it is apparent that on an international scale the established limitations of liability under the Rome Convention 1952 could lead to discrepancies in levels of compensation and could not have been accepted by a majority of States. Since this Convention requires for a crash to occur in the territory of the Contracting States Parties, this prompted many States to withdraw from the Convention including Australia, Canada and Nigeria.[136]

In the absence of international law governing damage caused on the ground emerging from an aircraft in flight, the majority of the proceedings after an accident are thus governed by the relevant national law of the State where the damage occurred.

3.1 Rome Convention 1952 and the requirement of insurance

The *Rome Convention 1952* does not provide for mandatory insurance of any aircraft registered in the territory of a Contracting State. It is rather on the contracting state's discretion to require aircraft operators of an aircraft registered in another Contracting State to be insured in respect of its liability for damages sustained in its territory for which a right to compensation exists under the condition of liability up to the aircraft weight-based liability limits.[137]

The Rome Convention 1952 abolished the rigorous provision of full and unlimited liability as provided in the Rome Convention 1933[138], in the event of inadequate insurance cover.[139] In contrast to EU Regulation 785/2004 of the European Parliament and the Council on insurance requirements for air

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[136] The main controversial points in the *Rome Convention 1952* have been the following:
1) The alternative between an absolute liability and a liability for fault only.
2) The limits for compensation mentioned in the Convention were considered to be too low.
3) It was considered that there was no need for international rules regarding an uniform regime for the compensation of third parties on the ground.
4) National control over foreign security (insurance) for an operator's liability.
5) The single forum in respect of actions for damages.

[137] *Ibid.* art. 15.

[138] *Ibid.* art. 14.

[139] I.H.Ph. Diederiks-Verschoor, *An Introduction to Air Law*, 5th ed.,.(Deventer: Kluwer Law and Taxation Publisher, 1993) at 138.

carriers and aircraft operators[140] (which sets minimum levels of required mandatory insurance cover for air carriers flying into the European airspace), the *Rome Convention 1952*, did not foresee the same, or make any such requirement.[141]

The *Rome Convention 1952* contains detailed rules covering the requirements of the authorisation of the insurer whether it (the insurer) is based in the State of registration of the aircraft or in the State it has its principal place of business and whose financial responsibility has been verified by either of those states.[142]

Adequate insurance can be substituted by:

1) a cash deposit in a depository maintained by the Contracting State where the aircraft is registered;
2) a guarantee given by a bank which is authorised to do so by the Contracting State where the aircraft is registered, and whose financial responsibility has been verified by that State;
3) a guarantee given by the contracting State where the aircraft is registered, if that State undertakes that it will not claim immunity from suits in respect of that guarantee.[143]

Furthermore, under this instrument insurers enjoy the privilege of extra defences, in addition to the standard defences available to the operators of aircraft. These are:

a) that the damage occurred after the security ceased to be effective.

b) that in cases where the security expires during flight, it shall to be continued in force until the next landing specified in the flight plan, but no longer than twenty-for hours".[144]

c) that the "damage occurred outside the territorial limits provided for by the security, unless flights outside those limits, were conducted due to force

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[140]EU, *European Parliament and Council Regulation 785/2004 on insurance requirements for air carriers and aircraft operators,* [2004] O.J.L. 138/1 [EU Regulation 785/2004].
[140] For an explanation see chapter IV.
[141] For an explanation see chapter IV.
[142] *Rome Convention 1952, supra* note 102 art. 15(2 a-b).
[143] *Ibid.* art. 15(4).
[144] *Ibid.* art. 16(1).

majeure, assistance justified by circumstance, or an error in piloting, operation or navigation".[145]

Thus, the *Rome Convention 1952* allows third parties on the surface suffering damages, to take direct action against the insurer or guarantor under the circumstances where the security was in force[146] and in case of bankruptcy of the operator.[147]

To prevent that the indemnification incorporated in the insurance policy provided for the benefit of a third party from being partly or wholly exhausted by claims from creditors of the bankrupt operator, the sums due to an operator from an insurer are exempt form seizure and execution by creditors of the operator until claims of third parties under the *Rome Convention 1952*, have been satisfied.[148] The rational of direct actions were regarded as a social function of the contract of insurance and that a third party should benefit from an insurance contract and not be left uncompensated if the operator was not in a position to act against the insurer.[149]

3.2 The *Rome Convention 1952* as amended by *Montreal Protocol 1978*

The *Protocol to amend the Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface*, signed in Rome on 7 October 1952[150] was signed in Montreal on 23 September 1978. The Montreal Protocol made some significant changes by excluding certain situations from the scope of the Rome Convention 1952. Primarily, the Protocol applies to damage caused in the territory of a Contracting State not only by an aircraft registered in another Contracting State but also to damages caused "by an aircraft, whatever its registration may be, the operator of which has its principal place of business or, if he has no such place of business, his permanent residence in another Contracting state."[151]

In addition, the liability is linked to the operational function of the aircraft irrespective of the identity of its owner (including the military, customs or

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[145] *Ibid*, art. 16(1).
[146] Adopted, although criticized by insurers: see Juglart, *supra* note 105 at 143-4.
[147] *Rome Convention 1952*, *supra* note 102 art. 16(5).
[148] *Ibid*. art. 18.
[149] Juglart, *supra* note 105 at 141/143.
[150] *Montreal Protocol 1978*, *supra* note 103.
[151] *Ibid*. art. XII.

police).[152] The third change introduced the exclusion of nuclear damage from the scope of the Rome Convention 1952.[153]

The most important feature of the Montreal Protocol 1978, is that it significantly increased the limits of liability and expressed them in SDR rather than in Poincaré francs. The new liability limits were on a 'per aircraft' and 'per incident' basis, depending on the maximum take-off weight of the aircraft. For instance, the limit of liability with respect to loss of life or personal injury was raised to SDR 125,000 (equivalent to USD 183,204) or 1,875,000 monetary units.[154] In contrast, the Rome Convention, 1952, provided for death and personal injury on the basis of 500,000 Poincaré Francs.

The Montreal Protocol 1978 does not include any specific provisions for damages occurred due to noise and sonic boom. Therefore, this question remains unresolved to this day. The Montreal Protocol 1978 did not find wide acceptance and was only ratified by nine States.[155] It entered into force only on 25 July 2002.

4 National liability regimes and insurance requirements for damage caused by aircrafts on the surface

The Chicago Convention,[156] national laws, and their requirements regarding minimum insurance coverage of the over flying state, have to be respected.[157] As a consequence, due to the lack of extensive ratification of the Rome Convention 1952, the scheme for compensation to parties on the ground for bodily injury and property damage sustained is governed by the law of the state where the damage occurs. It is interesting to note that relevant systems vary from state to state. For instance, in Germany, the liability for

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[152] *Ibid.* art. XIII.
[153] *Ibid.* art. XIV. The reason for the exclusion of nuclear damage was that international law placed nuclear liability on the shoulders of the operator of the nuclear installation.
[154] *Montreal Protocol 1978*, *supra* note 103, art. III (2) and (4 e).
[155] Azerbaijan, Benin, Brazil, Burkina Faso, Guatemala, Kenya, Morocco, Niger, Suriname. ICAO List and Status of International Air Law Multilateral Treaties, online: ICAO <http://www.icao.int/icao/en/leb/MtlPr78.htm>.
[156] *Convention on International Civil Aviation*, 7 December 1944, ICAO doc. 7300/6,online: ICAO <http://www.icao.int/icao/en/leb/chicago.htm>.
[157] Walter Schwenk & Elmar Giemulla, *Handbuch des Luftverkehrsrechts*, 3rd ed. (Köln: Carl Heymanns Verlag, 2005) at 760.

damages caused by an aircraft "*in Betrieb*"[158] is limited according to the weight of the aircraft.[159] In contrast, in France and Switzerland,[160] the liability for damage to third parties on the surface of the earth remains unlimited.

For example, a flight en route from London, United Kingdom, to Teheran, Iran, is thus subject to multiple liability regimes depending on the states overflown. Such a route would include the territories of the United Kingdom, Belgium, France, Switzerland, Austria, Turkey and Armenia.

From the examination of the international rules of liability for damages occurring on the ground, it is apparent that many countries have not ratified the Rome Convention 1952. In the European Union no common rules exist governing the liability for damage occurred to third parties on the ground. Thus, except for certain Member States of the European Union that are parties to the Rome Convention, 1952 – notably, Belgium, Italy, Luxembourg and Spain – there is no common rule in force which governs the liability rules for damage occurring to third parties on the surface of the earth.

5 Legal framework with regard to damage by noise

The Rome Convention 1952 provides that the damage caused has to be a direct consequence of an aircraft in flight. The Convention denies compensation "if the damage results from the mere fact of passage of the aircraft through the air space in conformity with existing air traffic regulations"[161]. Thus, for damages occurring due to noise of the engines or supersonic flights, the Rome Convention 1952 does not apply. In this connection it is important to note that the provision regarding noise pollution from an over-flight of an aircraft has been left unchanged in the Draft Convention,[162] but rather it leaves the issue regarding environmental damage to national laws. Some States provide for an obligation as to the liability for

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[158] The term 'Betrieb' has to be interpreted widely and is determined when neither wind nor motor is applied to the aircraft. Thus, the German law enhances a wider sense of its national law regarding the liability regime for damage occurred to third parties on ground than does the *Rome Convention 1952*, whose scope is limited to aircraft in flight upon condition that power is applied.

[159] *Swiss Air Navigation Act*, 14 November 1973, art. 37. For an explanation of the German compensation scheme far damages to third parties, see *Schwenk*, supra note 148 at 423.

[160] Article 64 of the *Swiss Air Navigation Act*, 21 December 1948. The air carrier liability is however limited to the amount of the insurance cover if the damage is caused by a passenger, i.e. a person who is not a member of the crew (art. 64 (2) (b)).

[161] For a discussion of this problem, see Juglart *supra* note 110 at 21-23.

[162] *Draft Convention*, *supra* note 124 art. 3(4).

damage occurred due to noise and require aircraft operators to be furnished with adequate insurance requirements with respect to such perils[163].

Insurance policies usually exclude coverage for damages caused by noise, vibration, sonic boom and associated phenomena either in the standard policy wording,[164] or by incorporating the 'Noise and Pollution and Other Perils Exclusion Clause'[165] to third parties.

6 Modernization of the Rome Convention 1952 - new proposals

Despite repeated and dedicated attempts to address third parties' liability for damage occurring on the ground, no international established liability regime with respect to third parties has obtained sufficient support and ratification to be successful.

A review of the existing liability regime of the *Rome Convention 1952* only began after the catastrophe of the 11th of September 2001 where major damage to third parties on the ground occurred and war risk insurance cover was cancelled or reduced to USD 50 million[166] for air carrier liability to third parties on the ground.

From the viewpoint of the author, the modernization of the *Rome Convention 1952* has to encompass a wide range of interests. Its main objective is to protect the interest of third parties on the ground that do not benefit from the air transportation, but are potentially exposed to risk. At the same time it has to ensure the viability of the air transport system.

The *Draft Convention* is intended to provide a long-term regulatory legal Convention. It incorporates the consolidated texts of the *Rome Convention 1952*, the *Montreal Protocol 1978*, and a number of modernizing elements taken from the *Montreal Convention 1999*.[167] Its main feature is the application

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[163] Article 127 (3) of The Swiss Air Navigation Decree of 14 November 1973 prohibits the exclusion of cover for damages of noise in insurance contracts.

[164] See for example, Special Provision Article 2.1, "Winterthur Aircraft Insurance", attached herewith as Annex 3, which explicitly excludes coverage for noise, pollution and similar events in accordance with the enclosed exclusions clause AVN 46B but reinstate it in art. 2.3.3 General Provision as to comply with the *Swiss Air Navigation Act* (Annex 3).

[165] AVN 46B (reprinted in Margo, Rod D., *Aviation insurance*, 3rd ed. (London: Butterworths, 2000) at 624.

[166] Prior to 11 September 2001, air carriers normally purchased war insurance cover for third parties up to the amount of USD 1 billon on an event basis and up to USD 2 billion on an aggregate basis.

[167] Ludwig Weber, "New Issues Confronting Carriers since September 11, 2001" (2004) XXIX Ann. Air & Sp. L. at 476.

of a distinctive liability regime for damage occurring on the ground as a consequence of 'normal risk',[168] i.e. pilot error or aircraft malfunction and for damage which occurs as a consequence of terrorist attacks ('terrorist risks'). With regard to 'normal flight risk' the *Draft Convention* provides that an air carrier shall be held strictly liable for damage occurring on the ground to third parties up to the sum of between SDR 250,000 and SDR 500,000 (the exact amount has not yet been finalized).[169]

Above those limits, the *Draft Convention* provides for unlimited liability with a reverse burden of proof. If the carrier can prove that the damage was not due to its negligence or other wrongful act or omission or that of its servants or agents, or that the damages were solely attributable to another person, then the liability remains limited.

With regard to cover for damage caused by an act of unlawful interference ('terrorist risk'), the liability is capped on a per 'aircraft' and 'event' basis according to the Maximum Take-Off Weight (MTOW) which, according to different categories, falls in the range of SDR 750,000 for an aircraft with a maximum mass of 500 kilograms to SDR 700,000,000 for an aircraft of more than 500,000 kilograms.[170]

These limits, however, do not apply in cases of intentional acts or omissions of the operator or its servant or agents from an act of non-compliance of the air carrier with applicable security regulations.[171]

The *Draft Convention* is also designed to give a legal remedy to third parties who suffered damages on board an aircraft against the operator of another aircraft in case of a collision either in the air (mid-air collisions) or during any operation of the aircraft.[172] Thus, the *Draft Convention* extends the liability to aircraft operators for damage occurring while the aircraft is taxiing and for damages as a result of runway incursions.

It is pertinent to note that the forum where actions can be brought is the place where the damage occurred, irrespective of the nationality of the passengers or where the contract was concluded.

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[168] *Draft Convention*, *supra* note 124 art. 3.
[169] *Ibid.* art. 3.
[170] These figures are similar to the ones provided in EU Regulation 785/2004. (See Chapter III).
[171] *Draft Convention*, *supra* note 124 art. 4(4).
[172] *Ibid.* art. 3(3).

Difficulties arising out of the Draft Convention are the removal of liability limits with regard to passengers and third parties for the 'basic' and, under certain circumstances, for the 'terrorist risk'; consequently, this creates an extra financial burden for airlines. The airline industry and IATA are concerned about the viability of the airlines jeopardized by this extra financial burden.

The above-mentioned difficulty, as well as the limitation of the insurance cover of USD 50 million for airlines, raises the question of by whom and under what conditions the risk of liability should be shouldered. Another factor that may increase the financial burden for airlines lies in the different levels of limitation of liability as provided by the Montreal Convention 1999 and the Draft Convention. In cases of passenger damage inflicted by two air carriers, the strict and higher liability limitation provided in the Draft Convention may encourage passengers to sue a carrier other than the one they are flying in order to benefit from a higher limitation of liability. However, the place where the accident occurred may be the determining factor whether a passenger opts to sue the carrier with which he/she has a contract, since the Montreal Convention provides for five different jurisdictions, as opposed to suing the other air carrier under the Draft Convention, which only provides for a single forum (i.e. at the place where the accident occurred).

A supplementary compensation mechanism providing cover for terrorism-related-risk could meet the twin-objectives of both victim protection and viable protection for the air transport sector.

On the one hand, there have been attempts to establish an international regime to secure war-related risks such as GLOBALTIME[173], EUROTIME[174] AND EQUITIME.[175] On the other hand, several other models have been established. A supplementary compensation mechanism has been

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[173] Proposal for a mutual fund that would provide third party liability cover for war and terrorist risks to the air transport industry as a whole. The scheme would be pre-event funded by premiums collected by the participating companies. The fund would provide cover between USD 50 million to USD 1.5 billion. [Cited: EC, Commission, *Proposal for a Regulation of the European Parliament and the Council on Insurance in the Air Transport sector following the terrorist attacks of 11 September 2001 in the United States*, (Brussels: EC, 2002 320 final) at 24 [Proposal].

[174] Proposal enacted by the Association of European Airlines (AEA) similar to GLOBALTIME. It would provide insurance not only to airlines, but also to the industry. It would provide cover between USD 1,5 and USD 2 billion [cited: *ibid* at 26].

[175] Fund paid from premiums levied on airlines and major service providers. It would require a guarantee from the government in order to be established. The scheme would provide cover for a maximum of USD 2 billion for third parties and passenger primary and excess liability [cited: *Ibid*, No. 22].

proposed which may be pre- or post-event funded or with a slow pre-funding, which, if needed, could be supplemented by post-funding.[176]

There exists the option to create an international additional compensation recovery mechanism for compensating third parties on the surface when the total damage exceeds the insurance cover available to the operator. This new model mechanism could be modelled to closely follow the legal regime existing in international maritime law under the International Oil Pollution Fund (IOPF).[177]

At this point, it should be noted that insurance cover for damage caused by certain perils will in the near future no longer be available to the full extent. The insurance market is about to exclude third party cover for air carriers, airports and service providers for full occurrence limits, and will offer it solely on an aggregate basis.[178] The term "aggregate basis" stands for a policy limit that provides cover during a particular period of time (commonly one year), as opposed to a 'per occurrence/event' basis. A modernized Rome Convention is not ready for ratification before the year 2006. Until then, the problem of shouldering the risk for certain perils will largely depend upon the development of the insurance market and/or governments stepping in to provide additional cover.

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[176] Second Meeting of the Special Group on the Modernization of the *Rome Convention 1952*, Montreal, 4-8 July 2005.

[177] International Oil Pollution Compensation Funds, online: International Oil Pollution Compensation Funds <http://www.iopcfund.org/>.

[178] *Information Paper of the London Market Insurance Brokers Commitee (LMBC),* ICAO, 2005, ICAO SG-MR/2-IP/1, at 2 [LMBC].

II. Aviation Insurance

1 Introduction

Aviation insurance follows the principles of regular insurance. It is, however, governed by rules and exceptions peculiar to it. Thus, several experts are involved in the process of a completion of an insurance contract. In seeking protection for aviation risks, airlines and aircraft operators cooperate closely with brokers[179]. Brokers solicit underwriters' subscription of a portion of risk. Aviation brokers possess special aviation insurance knowledge and cooperate closely within various companies and organisations.

Underwriters, commonly employed by an insurance company, opt for a subscription of a percentage of the risk offered by the brokers. They are faced with the fundamental problem that flight operations are constantly exposed to catastrophic losses[180]. They must have an accurate knowledge of the air transport sector and keep abreast of the developments and changes that take place almost every day in the aviation industry.

Aviation insurance policies commonly contain a clause providing that upon payment of a claim, the underwriter will become subrogated to the rights of the assured. Subrogation allows the underwriter to take legal actions against a third party who is responsible for the loss that resulted in a claim being paid by the underwriter.[181]

Given the high exposures in international aviation, the appropriate means to spread the risk is to purchase re-insurance. A reinsurance policy is a contract between the direct insurer (original insurer) and the reinsurance company designed to indemnify the direct insurer for losses the latter has sustained as a result of a contract of indemnification with the insured aircraft operator.[182]

While an aircraft operator is faced with a number of risks, such as operational, financial and strategic risks, this chapter provides a survey not

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[179] A broker is the legal agent of the prospective insured and is engaged to arrange insurance coverage on the best possible terms.

[180] Although the probability of an aircraft accident is relatively small, in the event of an accident, high amounts of indemnification payments may have to be forwarded to the insured aircraft operator. This makes the aviation insurance market very cyclical; in periods of small claim activities the insurance industry earns money through collecting premiums, whereas during periods of high claim activities or in the event of a catastrophic loss, they lose money.

[181] Margo, *supra* note 165 at 422.

[182] Margo, *supra* note 165 at 491.

only of the natural hazard and other 'event' perils existing in civil aviation, but also an overview of the rating of hull, liability and third party insurance. Furthermore, the standard wording applied to insurance policies in aviation will be discussed. The third part of this chapter will examine the special war-related perils as well as the wording of the standard war exclusion clauses.

A Evaluation of typical aviation risks - natural hazards – facts and figures

The exposure to risk in international civil aviation depends, among other factors, on the size of the aircraft, the geographical areas of operation and the relevant legal regime, and may range from USD 250 million to USD 2 billon.[183] Moreover, with new technical developments in the manufacture of aircraft configured to take up to 800 passengers, the exposure for a single accident is even greater. An Airbus A380 aircraft[184], for instance, with full passenger load and exceeding a weight of 500 tonnes, crashing into a major city has a potential exposure of approximately USD 3.25 billion.[185] It is noteworthy that this amount represents more than the world's total airline income.[186]

In order to assess this enormous catastrophic risk, underwriters have to consider the nature of the risks inherent to air transportation.

1 Types of aircraft accidents

The nature of air transport is such that a catastrophe could occur within seconds. The figure below demonstrates the types of fatal accidents occurring in international air transportation, including some on-board accidents. Typical types of aircraft accidents are Controlled Flight into Terrain (CFIT) and loss of control in flight, which together amount to 50 percent of the accidents. CFIT occurs when an airworthy aircraft under the control of its flight crew is flown unintentionally into terrain, an obstacle or water, usually with no

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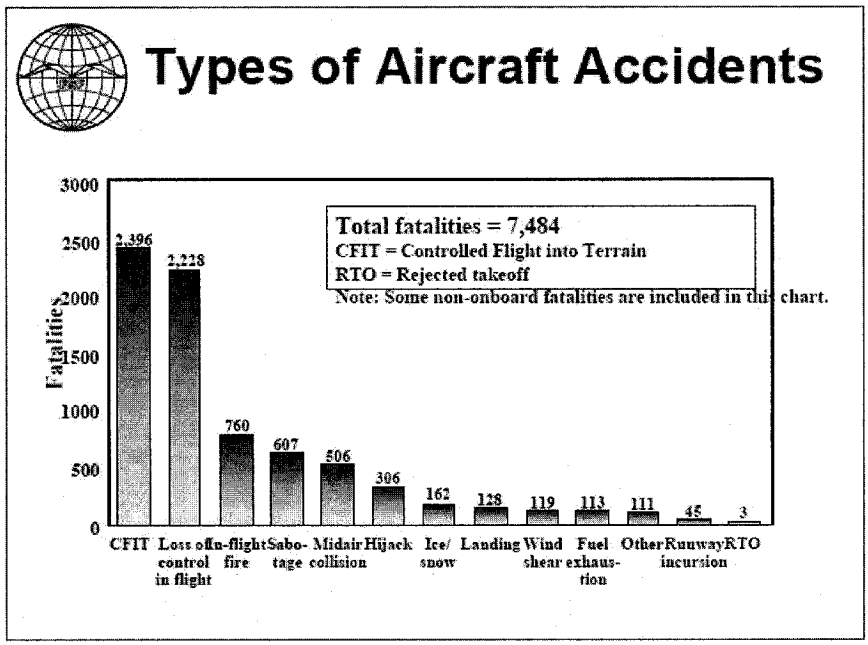
[183] Crystal et al., *supra* note 86 at 10.
[184] Scheduled to come into service in 2006. 154 orders for the A380 have been placed at AIRBUS (Information based on an interview of an Airbus employee, Le Bourget, France, 21 June 2005).
[185] In contrast, the worldwide premium level of 2004 represents approximately USD 2,7 billion.
[186] Martin Belcher, "The Cost Benefits of Captives" (Paper presented to the IATA Airline Insurance & Risk Management Conference, 12-13 April 2005) [unpublished].

prior awareness by the crew.[187] In 2004, 8 out of 28 accidents involved CFIT. Other factors contributing to a considerable number of accidents include sabotage, mid-air collisions, and hijacking of aircraft. On the other hand, accidents due to ice/snow, wind shear, fuel exhaustion and runway incursions are minor. In 2004, most of the accidents occurred in Asia or Africa.[188]

Frequently, accidents involve freighter airlines and cargo operations.[189] This is attributable to various factors: airlines and freight operators commonly use for their cargo operations older, fully depreciated airplanes. Furthermore, from accident statistics, it is apparent that aircraft manufactured in Eastern-Europe are frequently involved.



Source: [190]

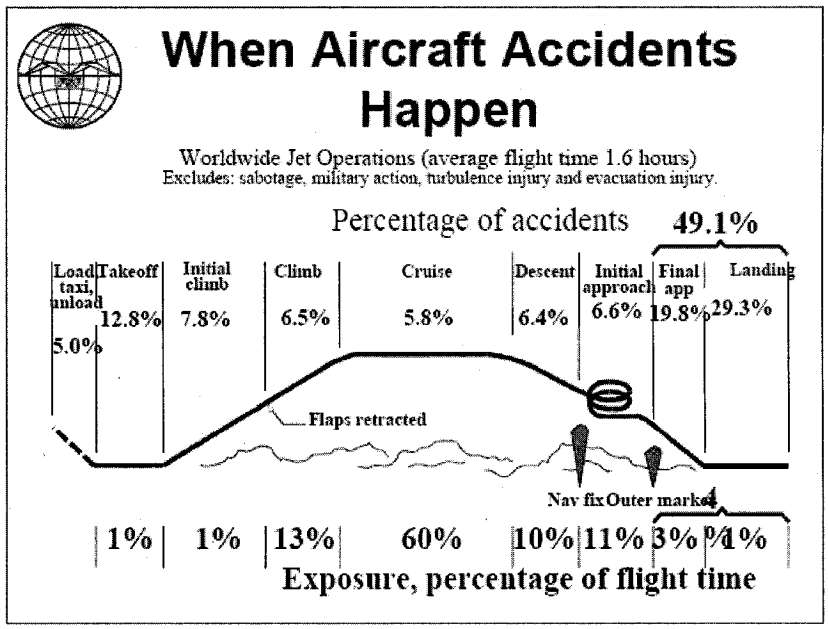
[187] News, Flight Safety Foundation, "2004 Data Show Decline in Airline-accident Fatalities" online: Flight Safety Foundation <flightsafety.org/news/nr05-07/pdf>.
[188] Harding, *supra* note 84 at 10.
[189] *Ibid.*
[190] Bob Vandel, "The bird strike problem in the view of Flight Safety Foundation" (May 2003) online: International Bird Strike Committee <http://www.int-birdstrike.com/Proceedingpdf%2026th/THE%20BIRD%20STRIKE%20PROBLEM%20IN%20THE%20VIEW%20OF%20FLIGHT%20SAFETY%20FOUNDATION.pdf> [Vandel].

2 Operational risks - natural perils

Operational risks are those risks to which an airline is exposed in its day-to-day operations. Operational risks encompass not only physical or natural hazards, but also necessary operations on the ground.

Hazardous risks differ in relation to the technical performance of the aircraft. An aircraft at cruising altitude represents a greater risk factor than when it is taking off, landing, taxiing or parked on the ground. From an insurance point of view, it is essential to identify and analyse both the physical (or natural) hazards and the stage of the flight operations to which the insured party may be exposed[191].

3 Evaluation of the risk as to the stage of flight operations



Source: [192]

The above chart illustrates the accident rate for stage of performance of worldwide jet operations. It clearly demonstrates that the majority of aviation accidents occur during take-off (12.8%) and during the period of the final approach and landing (almost 50% of the accidents). The high accident rates at these stages of technical flight performance cumulatively reach approximately 62%. It is remarkable that these phases account for only 16%

[191] Adel Salah El Din, *Aviation Insurance Practice, Law and Reinsurance* (London: William Clowes & Sons Ltd. 1973) at 37 [Salah El Din].
[192] Vandel, *supra* note 190 at 3.

of the flight time, while during 60% of the flight time (at cruising altitude) a considerably smaller number (5.8%) of accidents occurs. Elsewhere it has been reported that 71% of major jet losses occur during the take-off and landing-phase of a flight.[193]

From the above, it can be inferred that an air operator's fleet consisting predominantly of short-haul aircrafts performing a high number of cycles[194] represents a greater risk than those of an airline with aircraft mainly performing long-haul operations and thus spending more operating time at cruising altitude.

4 Flight risks - take-off and landing risks

The greatest risks to which aircrafts are exposed occur during the performance of a flight. An aircraft may suffer an engine failure, an ingestion of hailstones or a bird hit during flights. A sudden loss of pressure in the aircraft cabin, leading to the loss of consciousness of passengers or crew through the lack of oxygen, constitutes another peril.[195]

Well-equipped jet aircraft flown by highly trained and experienced crews must upfront natural hazards such as weather conditions, especially during take-off and landing. An example of serious risk is aquaplaning (hydroplaning); this may occur when a layer of water builds up during torrential rain on a runway. While three systems for the reduction of speed are normally applied (i.e. brakes, spoilers and thrust reversers), a thin film of water may massively reduce the braking systems' effect by lifting the aircraft's wheels slightly off the surface.

Other hazards include microbursts[196] that may hamper a safe landing. These are localized, violent winds that can destroy lift, sending the aircraft slamming into the ground.[197]

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[193] Willis, "Beaumont Garnault Sixth International Aviation Conference", [15 August 2002] 57 globalaviation bulletin 3 at 3, online: Willis Inc. <http://www.willis.comnewspublications%20archivegab+15_08_2002.PDF> [Willis].

[194] A 'cycle' is defined as "start-up, taxi, take-off, climb, cruise, possible combat, descent, landing, thrust-reverse, taxi, shutdown" (Jane's Aerospace Dictionary, (1986) 2nd ed. London, at 123).

[195] The crash of a Helio Airlines Boeing B373 aircraft in Greece on 14 August 2005 may have been a caused by a malfunction of the air conditioning system, resulting in a lack of oxygen in the cockpit and the aircraft cabin.

[196] "A downburst is a strong downdraft which includes an outburst of potentially damaging winds on or near the ground. If the diameter of the downburst is less than 2.5 miles, it is called a microburst. A microburst initially develops as the downdraft begins its descent from cloud base. The downdraft

Other natural risks include landing at airports located at very high altitudes, such as at Cuzco Airport, Peru (3,000 metres; 10,000 feet); La Paz Airport, Bolivia (3,444 metres; 11,480 feet); Lhasa Airport, Tibet (3,749 metres; 12,496 feet). Other risks include landing in conditions with restricted visibility (e.g. Ted Stevens Anchorage International Airport with its ill-famed fog)[198] or with constricted airspace in mountainous regions (e.g. Lugano-Agno Airport, Switzerland).

The location of airports is of significance as it has an impact on the necessary runway length. As the elevation of the airfield and/or the temperature at the runway increases, the necessary runway length also increases. An increase of 304.8 metres (1,000 feet) in elevation or 15° F. in temperature increases the required minimum runway length by 10 percent.[199] Thus, an aircraft landing at La Paz Airport, Bolivia, located at an elevation of 3,444 metres, requires a runway length that is more than twice as long as that needed at Lima Airport, Peru, whose altitude is almost at sea level.

The risk of bird hits constitutes another peril that may put lives of aircraft crew and passengers at risk and potentially cost millions of dollars. In the United States, bird hits annually cause USD 600 million damages to US civilian and military aircraft. Although some bird hits occur during approach, the majority happen during take-off. Thus, bird populations found in the vicinity of airports contribute significantly to the safety hazards of aircraft operations. The environment at airports (fields next to runways and aprons) attracts birds due to several factors: presence of food (micro mammals, insects, seeds, etc.), breeding on the site or in the vicinity and tranquillity (good visibility, low human pressure).[200] Ironically, garbage dumps are frequently located near

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accelerates and within minutes, reaches the ground (contact stage). It is during the contact stage that the highest winds are observed. During the outburst stage (above), the wind 'curls' as the cold air of the microburst moves away from the point of impact with the ground. During the cushion stage, winds about the curl continue to accelerate, posing a great threat to nearby aircraft. "World Weather Project 2010 tm" online: University of Illinois Urbana Champaign <http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/svr/comp/out/micro/home.rxml>.

[197] Paul Koring, "Wet runway, lightning are likely key factors" *The Globe and Mail* (3 August 2005) A6.

[198] Diederiks-Verschoor 2001, *supra* note 43 at 178.

[199] Alexander T. Wells & Bruce D. Chadbourne, *Introduction to aviation insurance and risk management*, 1st. ed. (Florida: Krieger Publishing Company, 1992) at. 204 [Wells 1992].

[200] "Bird Strike Prevention at Geneva Airport" online: Geneva International Airport <http://www.gva.ch/ppa/docs/ppaen.pdf>.

airports, and they attract birds seeking food. This has a significant safety impact on aircraft on approach and during take-off. [201]

Shock waves emanating from supersonic flights may cause damage to objects on the ground. However, with the abandonment of commercial supersonic aircrafts, namely the Concorde, this no longer poses a risk factor.

5 Risks on the ground

Although risks on the ground are fewer than in-flight risks, aircraft parked on the ground are exposed to different risks. The following hazards represent typical risks for aircrafts parked on the ground:[202]

1. Aircraft parked in the open may be exposed to strong winds that may easily cause damage to the hull, particularly if the aircraft is not properly anchored.
2. Objects moving in the vicinity of the airport can also pose a treat to the hull of the aircraft.
2. Fire may cause severe damage, particularly if it occurs in a hangar housing a number of aircraft.[203]
3. Bad weather conditions such as sandstorms, hailstorms[204] or lightning strikes[205] may contribute to a total or partial loss of an aircraft.[206]
4. Earthquakes constitute a high risk for aircrafts, especially, at busy international airports where hundreds of aircrafts are parked at the same time.[207]

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[201] Stuart Matthews, "The Changing Face of Aviation Safety and Security" The Insurance Institute of London, (Lecture, Lloyd's Old Library, 14 April 2005) [Matthews].
[202] Salah El Din, *supra* note 191 at 46.
[203] A fire destroyed an Air France A340-211 during maintenance on 20 January 1994 at Paris- Charles de Gaulle Airport.
[204] For example, when a hail storm struck at Kingsford Smith Airport in Sydney, Australia in mid 1999, damaging 45 aircraft and resulting in a loss of USD 61 million.
The crash of Air France 358 at Toronto's Pearson International Airport on August 2, 2005, may have been a result of aquaplaning; when on approach the A340 overshot the end of the runway, slid through barriers and tipped into a ravine during heavy rain and thunderstorms.
[205] In the 1960's a plane crashed after it was struck by lightning in mid-air and in the 1980's two planes crashed in South America after they were hit by lightning. (Katie Rook et al., "How often do pilots overshoot the runway", *The Globe and Mail* (3 August 2005) A4).
[206] Represent also typical risks during flight.
[207] For example, a concentration of more than one hundred aircraft on any one day at Haneda Tokyo International airport represents an insured hull value exceeding USD 700 million. However, up until now, no major damages have resulted from earthquakes (Crystal et al., *supra* note 170 at 10).

6 Taxiing risks - runway incursions

The increase in scheduled air traffic during the last 10 years, particularly in Europe and the United States, has resulted in an increase in runway incursions.[208] The term "runway incursion" is defined as "any occurrence in the airport environment involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in the loss of required separation with an aircraft intending to take-off, land, the actual process of done either."[209] For example, if an aircraft within one mile of landing is forced to abort the approach due to another aircraft, vehicle, or pedestrian on the runway, the event will be classified as a runway incursion. If the aircraft has been cleared for take-off and is rolling down the runway when the take-off clearance is cancelled, that too is deemed a runway incursion.[210]

In 2002, there were 350 runway incursions reported in the ECAC[211] region. This figure demonstrates that one incursion happened almost every day. Other statistics indicate that one serious incursion takes place every 14 days.[212] Although the FAA performed a study on runway incursions in the U.S. that revealed a decrease of runway incursions in recent years, the study only took towered airports[213] into consideration. Thus, the true scope of the danger may be grossly underestimated.[214] Hazards of runway incursions vary according to the geographical locations of airports. Alligators in Miami, Florida,

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[208] Crystal et al., *supra* note 86 at 14.

[209] FAA Runway Safety Report, Runway Incursion Trends and Initiatives at Towered Airport in the United States, August 2004, online: FAA <http://www.faa.gov/runwaysafety/pdf/report4.pdf>.

[210] AFS-600, Regulatory support division, Vol. 12, Nr. 4, October 2000, online: Federal Aviation Authorities, < http://av-info.faa.gov/data/designeeupdate/udoct00.pdf>.

[211] European Civil Aviation Conference, composed of 42 Member States for the time being, among them European States (Albania, Armenia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom).

[212] EUROCONTROL, Runway Incursion Data, online: EUROCONTROL <http://www.eurocontrol.int/runwaysafety/public/standard_page/Runway.html>. The main issues which hinder Europe in reducing the rate of runway incursion are the potential lack of data and the reluctance to share safety information, the absence of harmonized and consistence approach for analyzing the data and the difficulty of understanding causal and contributory factors.

[213] Which counts for solely 4% of all (towered and not towered) airports?

[214] Thomas M. Kenneth, "The increasing risk of runway incursions – the most dangerous part of the air travel may be the time spent on the ground" (2002) 67 JALC at 557.

or giraffes in Africa sitting on or crossing the runway while an aircraft is in the process of landing or take-off may be other factors in runway incursions.[215]

Any accident involving a taxiing aircraft may result in serious damage both to the aircraft in question and to third parties on the ground, such as other aircraft or airport facilities. Risks may also increase because of poor communication between the air traffic control tower and the pilot of the taxiing aircraft,[216] non-compliance with the signage at airports and unsatisfactory visibility.[217] Another risk arises if a pilot attempts to take a short-cut across an aerodrome.

B Methods of rating different types of aviation insurance

1 Passengers liability risks

In establishing premium rates for insurance for airlines, many different factors relating to the risk being insured are taken into account. While in the past[218], the primary basis for rating airlines' liability insurance was the Revenue Passenger Miles/Kilometres (RPM/RPK) flown during 12 months, it is now the number of passengers being carried and the number of take-offs and landings[219]. This represents a more accurate basis to measure actual risk exposure since – as has been illustrated earlier – most accidents occur during the period of take-off or landing.

The global factors in establishing premiums for airlines include:

1. Liability limit required;
2. Probable Maximum Loss (P.M.L.)[220];
3. Maximum seating capacity of the aircraft;
4. Passenger mix[221] (i.e. predominantly business or vacation or both);

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[215] Matthews, *supra* note 201.

[216] It happened on 27 March 1977 on Tenerife, Canary Islands when a KLM Boeing 747-200 started its take-off while a Pan Am Boeing 747-100 aircraft was still on the same runway.

[217] It happened on 8 October 2001 at Malpensa airport, Milan, Italy, when a SAS MD-87 hit during take-off a Cessna Citation that crossed its path on the runway. The SAS aircraft then crashed into a nearby hangar and caught fire. All six crew members and 104 passengers perished, as well as the 4 occupants of the business jet and four airport workers on the ground. WHERE DID THIS HAPPEN?

[218] Compare Salah El Din, *supra* note 19 at 65.

[219] Willis, *supra* note 193 at 3.

[220] Represents a reasoned assessment normally expressed in percentage terms of the likely financial outcome of a given loss situation, e.g. a fire in a factory complex, or exposure to elemental perils such as windstorm or earthquake "London market underwriting 2004, sample question paper, outline of key points for answers" online: The Chartered Insurance Institute <https://www.cii.co.uk/qualifications/examguides/guides/955_sample_question_paper.doc>.

5. Geographical regions of operation (including airport location);
6. Network and routes flown;
7. Code share agreements[222];
8. Safety culture (i.e. the qualification and experience of the mechanics and crew members and the available maintenance facilities and procedures);
9. Overall global claims experience (frequency and severity).

The Probable Maximum Loss by aircraft type is determined by sum of the value of the aircraft and the compensation level for passengers on the basis of an average seat load factor (for international flights this accounts currently for 74 percent)[223]. The maximum probable loss levels vary: for a Boeing B747 or a Boeing B777, at a compensation level for each passenger fixed at USD 3 million, the maximum notable loss would equal USD 1.35 billion (third party liability excluded); for an Airbus A340, maximum recoverable loss claims would be around the USD 1,050 million mark. If liabilities average USD 1.5 million per passenger, the loss of a Boeing B747 or Boeing B777 would equal USD 750 million, while for an Airbus A340, claim costs could be estimated at USD 600 million.[224] (For an overview of compensation awards of different geographical regions, see chapter II 1.7).

Other non-operational factors affecting the worldwide level of aviation insurance premium rates include: the availability and cost of reinsurance and the spare capacity of other markets.[225] Although the legal situation governing the insured flights elaborated in chapter I has a significant impact on the premium rates, it must be stressed that the "negotiated premium is driven by the extremely competitive nature of the aviation market"[226].

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[221] As has been earlier elaborated, business passengers attract higher risk than vacation travellers because of their high earning power.
[222] Code-share agreements may be critical in assessing risk with respect to passenger liability particularly for airlines which have several code-share partners and given that the Montreal Convention 1999 expands the scale of applicable jurisdiction to code shared partners as well.
[223] Provisional data for 2004, "Scheduled Traffic of Airlines of ICAO Contracting States, 1995-2004" ICAO, Montreal (Paper presented the Meeting of the Special Group of the Modernization of the Rome Convention, 4-8 July 2005) [unpublished].
[224] Harding, *supra* note 84 at 10.
[225] *Ibid*
[226] E-mail of David Gasson, International Union of Aviation Insurance (IUAI) from 30 September 2005.

It is not only the limits of legal liability required by the insured that must be considered, but also the actual exposure that the insured is likely to face with respect to his passengers. It should be noted that the insured may ask for limits of a purely theoretical nature, which are unlikely in practice to be encountered by him.

Generally, major airlines purchase insurance for a medium-sized aircraft (hull and liability) at around USD 500 million and for a wide-body aircraft in the order of USD 1 billion.[227]

Passenger legal liability claims may reach high amounts of compensation depending on the gravity of the accident, particularly when the accident results in loss of life. In the event of a fatal accident, claims for legal liability rise generally to USD 1 billion or beyond. The cost of claims for non-fatal accidents should, however, not be underestimated, for they may also reach millions of dollars. The passengers' legal liability claims from the Air France AF358 accident at Toronto Airport on 2 August 2005, with 309 passengers and crew members on board, without any major injuries, amounted to USD 396 million[228] (CAD 475 million).[229]

The average annual losses from 1990 to 1997 with respect to liability equalled USD 1.2 billion. 1998 was the second worst year, with the crash of Swissair flight 111, where losses reached USD 1.8 billion. In "general aviation", losses frequently exceed USD 1 million.[230]

2 New hazards on the horizon?

In the near future new risks may be encountered due to technical developments regarding the manufacture of new airplanes and with the establishment/restructuring of new and longer air routes. Many new aircraft types(such as the Boeing B777, Boeing B787 or Airbus A350) are designed to serve non-stop, long-haul, point-to-point destinations (such as New York-Singapore, Toronto-Bangalore or Los Angeles-Paris) with up to 18 hours or

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[227] Paul St. Dempsey & Michael Milde, *International Air carrier liability, the Montreal Convention 1999* (Montreal: Center for research on Air & Space law, 2005) Ch. X. [forthcoming].
[228] CAN = USD 0.8346 (15 August 2005), online: Yahoo <http://finance.yahoo.com/currency/convert?amt=475&from=CAD&to=USD&submit=Convert>..
[229] P.C. "Des passagers de l'Airbus réclament 475 M$", *24 heures* (11 August 2005) at 4.
[230] Alexander T. Wells & Bruce D. Chadbourne, *Introduction to aviation insurance and risk management* (Florida: Krieger Publishing Company, 2000) at 79 [Wells 2000].

longer. These flights will raise new passenger health risks, such as DVT, which affects passengers in particular during prolonged periods of sitting. Moreover, dry air environments commonly found in aircraft cabins may also be a threat to the passengers' health on long-haul flights. Furthermore, airplanes with a passenger capacity of 550 (such as the Airbus A340) or even more (800 for the Airbus A380) create new hazards, such as psychological problems for passengers as a result of prolonged sitting in cramped, fully occupied aircraft.

Introduction of pollutants into the cabin through the air conditioning system, for example, through vaporisation of hydraulic fluid, de-icing fluid and engine lubricating oils and radiation exposure to the aircrew, represent further risks.[231]

3 Passenger liability profile[232]

The table below demonstrates the passenger liability profile by domicile and nationality. First, 40% of the worldwide passenger movement is performed in the United States (in the United States the air transport system is very important in the absence of any other mode of long-distance transportation). The majority of the US air traffic arises from domestic service, rather than from international flights. Thus, the underlying liability regime for these domestic flights is outside the legal systems of the *Warsaw Convention* and *Montreal Convention 1999*, but is governed by US domestic laws that provide for unlimited liability for passenger movements. The second 40% of the air traffic is performed in Canada, Europe and Australia. The remaining 20% of air transport movement is shared by the CIS, the African, Middle and South American countries and the countries of the Middle and Far East. Interestingly, the highest compensation arises for incidents in Zone A, and the lowest in Zone D.

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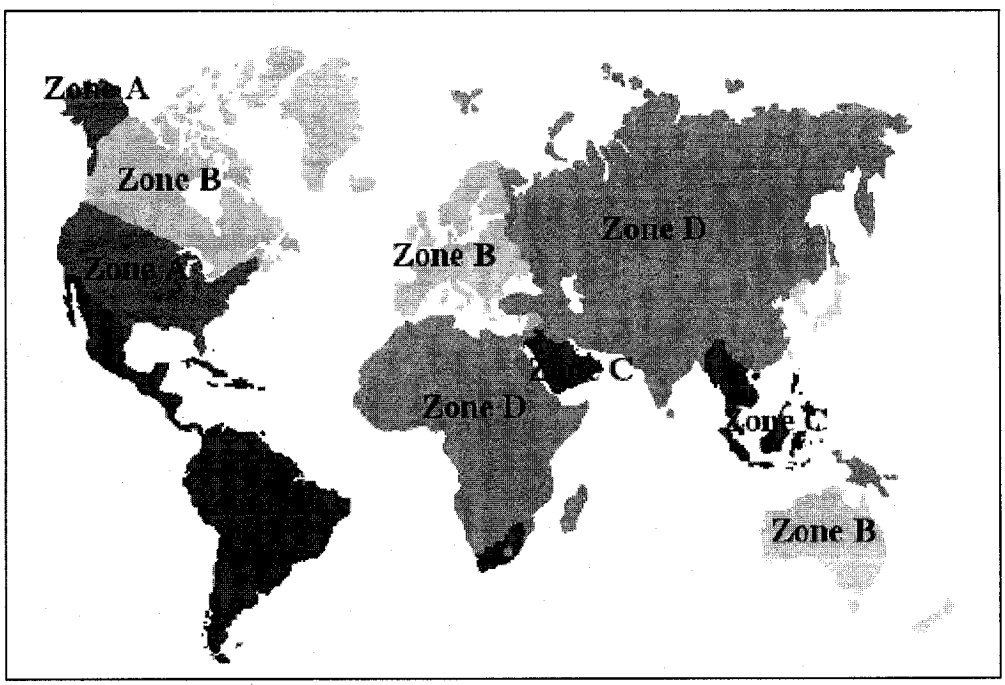
[231] This may be applicable in particular for flights performed at very high altitudes. (Harding, *supra* note 181 at 42.)
[232] Harding, *supra* note 84 at 15.



	2000 Passenger Movements	As % Split
	664,801,700	40.7%
	667,029,700	40.9%
	161,829,700	9.9%
	138,698,900	8.5%

Source: [233]

4 Third party liability

The premiums for third party liability insurance are rated on the basis of kilometres or miles flown by any one aircraft or of passenger kilometres/miles[234] flown.

With respect to liability vis-à-vis third parties, a flight performed over the territory of the United States (Zone A) is governed by unlimited liability. For the European territory (Zone B), the same rule does not apply due to the absence of a common legal framework with respect to third party liability within the

[233] Harding, *supra* note 84 at 8.
[234] Passenger kilometres/miles flown are the distance measured in terms of miles or kilometers flown per passenger on a particular aircraft.

European Union. The third party legal exposure depends rather on the State flown over.

Compensation payments are more predictable where the underlying liability regime relating to damages to third parties on the surface is limited. Thus, whereas in Belgium, Italy, Luxembourg, or Spain (all High Contracting States of the Rome Convention 1952) or in Austria and Germany (fault and capped liability), third party liability is capped, potential losses occurring in France, Sweden, Switzerland or the United Kingdom, countries that provide for strict and unlimited liability, make the exposure less predictable.

As a consequence of the above, the legal exposure and the premium charged for third party liability for flag-carriers operating out of their hub located in a State party to the Rome Convention 1952 are presumably smaller, given that 40% - 50% of take-offs and landings (both being high risk flight stages) of typical flag carriers are performed out of their hubs.[235]

In most parts of the world approaches and landings as well as take-offs are usually performed over less populated areas. In some parts of the world, however, cities have expanded very rapidly to the vicinity of airports. Consequently, start and landing manoeuvres are often performed over heavily populated areas.[236] These circumstances should be taken into account in the assessment of the exposure of aircraft operators. In addition, a shift in the exposure has to be considered in the event that well established air routes have been redesigned so that densely populated areas were to be over flown.[237]

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[235] Flag carriers in Europe commonly fly from their hub to their destination and back to their hub. Even typical 6 freedom operations involve a flight from another country via its hub to another country. However, in aviation insurance, the premium charged for third party liability is governed more by the amount of insurance than the law applicable to the place where an aircraft may be based. In addition, the portion of the total premium charged that relates to the third party exposure is relatively small compared to the whole premium. And furthermore, premiums are driven by the extremely competitive nature of the aviation insurance market. (E-mail from David Gasson, Secretary General, International Union of Aviation Insurers, 30 September 2005).

[236] Which has been the case at Hong Kong's former airport – Kai Tak.

[237] For instance, air routes have been redesigned for landing and take-offs at Zurich Airport where, for many years, these have been performed from the north over less populated territories. Since 2003, approaches and landings are performed over densely populated areas, including parts of the city of Zurich.

5 Hull insurance

The underlying risk factors for rating premiums for hull varies as to the condition and age of the equipment used by the airlines, the type and value of the aircraft/fleet, the historical losses of the insured, the experience of the pilots and crew, the number of aircrafts, the number of departures and arrivals, the safety equipment and the geographical locations of major hubs. The claims record of the insured is a crucial factor in assessing risks, as it demonstrates the airlines' performance and gives the premiums paid by the insured over a number of years.

The value of the aircraft will affect the hull rate: low valuation increases the rates since insurers will tend to pay all partial claims if a single pro-rata rate is applied to a low valuation.[238]

The following figures illustrate the purchase costs of some new, Western-built aircrafts as of the year 2004: an Airbus A340 equals USD 201 million, the cost of an Airbus A330 amounts to USD 161 million, an Airbus A320 equals USD 62 million, the price of a Boeing B777 is USD 232 million, a Boeing B767 is estimated to be worth USD 141 million, the Boeing B757 reaches USD 90 million and for a Boeing B747 a cost of USD 212 million is incurred. The Airbus A380 is estimated to be worth USD 250 million. Purchase costs are subject to an annual increase; between 2000 and 2004, the increase was 5% for a Boeing B747 and 20% for a Boeing B777.[239]

It is remarkable that approximately 50% of the worldwide Western-built aircraft are valued under USD 25 million and only 7% of aircraft are estimated at a value of over USD 100 million.[240]

Claims for hull commonly are quickly determined and settled. The total hull losses average 20 units per year. In 1985 there were 15 losses, 19 in 1990, 21 in 1995, and 24 in 1998. In 2003 and 2004, the losses averaged 15, with a significant number being cargo related.[241] Nevertheless, significant partial hull losses may far exceed the amount of total losses. As a result of the

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[238] Harding, *supra* note 84 at 10.

[239] Mark Hu Williams, "Aviation Insurance, a Market Update" (Paper presented the AAPA 48th Assembly of Presidents, Taipei, 2004), online: Association of Asia Pacific Airlines <http://www.aapairlines.org/content/events/48th/presentations/Willis_MarkHW.pdf>.

[240] Based on circa 13,800 aircraft (Harding, *supra* note 87,at 8 and 9).

[241] AON Risk Bulletin, "Aviation insurance, Risky business" 86, online: AON Inc. <http://www.aon.com/about/publications/pdf/aon_risk_bulletin/pu_2005_07_arb_aon_risk_bulletin_007.pdf> at 15.

increase in the hull value of aircraft, there is also a trend towards higher partial losses. Annual expected hull losses count for USD 900 million per year[242].

In August 2005, five major aircraft crashes resulted in total losses; this represents the worst month for civil aviation since May 2002, when an Air China aircraft Boeing B747 crashed into the sea off Taiwan, killing 206 people. On 2 August 2005, an Air France Airbus A340-300 crashed at Toronto with no fatalities. The 5-year-old Airbus 340-300 airliner was insured for approximately USD 136 million[243]. On 15 August of the same year, a Helios Airways Boeing B737-300 plane en-route from Lakarna, Cyprus, to Prague, Czech Republic, hit a mountain near Athens, killing all 121 passengers. On 14 August 2005, a West Caribbean Airways MD-82 airliner cashed in Venezuela near its border with Colombia, killing 160 passengers. On 16 August 2005, a Tuninter Airlines ATR-72 regional plane crashed off the coast of Sicily. These crashes caused a loss of a total insured hull value of over USD 170 million.[244] And, finally, on 24 August 2005, while attempting an emergency landing on a road, a TANS Peru Boeing B737-200 plane crashed during bad weather conditions near Pucallpa, Peru, killing 41 passengers.

6 Helicopter insurance

The nature of helicopters allows for the performance of operations that cannot be done by any other vehicle. The versatility of these operations, however, attracts higher risk rates (varying from 10% to 30%) than commercial airlines.[245] These apparently high rates are fixed to meet the partial losses to which these types of aircraft are exposed, as well as the risk of total or constructive losses. Several factors contribute to these higher risks. Landing and take-off areas may include international airports, race tracks, factory sites, hotels and hospital grounds. Furthermore, helicopters may be used for executive transportation, operating into city centres. They may also be used for pipeline patrols, offshore oil-rig supplies[246], sling cargo, wood transport, air

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[242] Crystal et al., *supra* note 86 at 10.
[243] Reuters News Agency "August aircraft losses are worst in more than three years" *The Globe and Mail* (20 August 2005) B7.
[244] *Ibid.*
[245] Salah El Din, *supra* note 191 at 64.
[246] Offshore operations incorporate specific hazards. Each offshore installation has a different configuration and each presents a unique operating environment for the pilot; no precision system

ambulance and rescue operations, and emergency cattle transportation. If a landing at its original destination is not practicable a helicopter can hover at a reduced height and transfer its load. The aerial applicators (both fixed and rotary wing) are at greater risk for wire strikes.[247] With respect to their technical equipment, helicopters present a different risk profile. They fly mostly on visibility flights without any or with less guidance from an air traffic controller and, unlike commercial airlines' aircrafts, are not equipped with highly sophisticated communications systems. Their operational versatility makes an accurate and predictable risk assessment difficult.

Other key elements in rating the annual premium for helicopters are the pilot's overall qualifications, such as flying hours, rotary-wing flight time, and experience with the brand and model.[248] In the event of an emergency, helicopter operations demand the highest degree of skill from a pilot.

As for war-related perils, helicopter operations represent a high risk factor. This is particularly attributable to the low flying altitude and the low speed, which make them an easy target in warfare.[249]

Depending on the geographical region of operation, helicopter operators may encounter difficulties in obtaining adequate cover from the insurance market.[250]

7 Safety improvements

Major total losses have gradually decreased over recent years, especially due to cockpit safety improvements and greater engine and system reliability. Aircrafts are furnished with highly sophisticated, state-of-the-art collision avoidance systems, such as TCAS (Traffic Collision Avoidance System), GPWS (Ground Proximity Warning System) and EGPWS (Enhanced

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similar to the Instrumental Landing System (ILS) is available to facilitate an approach to an offshore installation in bad weather.

[247] Helicoptersonly, "Just how dangerous are helicopters" online: Helicoptersonly <http://www.helicoptersonly.com/sayagain_Danger.html>.

[248] Wells 1992, *supra* note 199 at 206.

[249] Interview of Christine Dandridge, (12 April 2005), IATA' Aviation Insurance & Risk Management Conference, London [Christine Dandridge].

[250] For instance, in the prevailing topographical regions of Austria, Germany, Italy and Switzerland (Interview of Ms. Regula Dettling-Ott, Vice President Aeropolitical Affairs, SWISS International Airlines, (27 June 2005), Zurich-Airport).

Ground Proximity Warning System) in order to minimize the major widespread cause of accidents, namely Controlled Flight into Terrain.

New improvements to minimize the risk of accidents include Head-Up-Display (HUD), where the pilot reads the essential flight data from his Head-Up-Display rather than from the cockpit instruments. The Synthetic Visions Systems (SVS), which enhances the pilot's situational awareness during the approach and landing at night or during poor weather conditions, constitutes a further safety improvement. [251]

8 Facts and figures

The aviation insurance market is annually faced by total hull and partial operational losses amounting to USD 900 million. USD 300 million represents attritional losses.[252]

In the past, the following large losses have occurred. In 1998, the crash of Swissair SR111 near Halifax, Canada, resulted in the loss of over USD 800 million (of which USD 127 million was for hull claims). In 1999, an Egyptair loss amounted to USD 360 million. The total loss of a crash of a Boeing 747 with 520 victims was estimated to be around USD 350 million.[253] The crash of an Airbus A330 performing a test flight in Toulouse on 30 June 1994 cost the insurers approximately USD 105 million.[254]

The above figures clearly demonstrate that without insurance no air carrier would be in a position to retain such liability compensation payments without falling into bankruptcy. Thus, besides the legal requirements for aircraft operators to carry certain amounts of insurance coverage, aircraft operators and airlines purchase insurance to protect both their interests and their balance sheets. Nevertheless, aviation insurers and re-insurers must possess the financial ability to indemnify an aircraft operator in the event of a loss. In case of the insolvency of an insurer or re-insurer the aircraft operator will itself be forced to absorb the loss, in whole or in part. Therefore, a vital aviation insurance market is crucial because a major loss can easily wipe out

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[251] The SVS is a computerized display of the terrain, obstacles and of airports.
[252] Crystal, *supra* note 86 at 8.
[253] Schoenwerth/Mueller-Rostin, ZLW 36 (1987) 234 at 243.
[254] Andreas Katletz, *Haftung und Versicherung im Internationalen Lufttransportrecht*, (Studies in European and International Economic Law, No 5 Frankfurt/Main: Peter Lang, 1997) footnote 199 at 48.

an insurance company.[255] Therefore, the enormous risk exposures inherent in international aviation are absorbed by a chain of re-insurers and particularly trough pooling of risk. [256] Commonly, insurers write only small portion of aviation risks.

Insurance premiums for test flights and delivery flights are governed differently. As regards the insurance of a prototype aircraft or aircraft on a test flight, premium rates are usually quoted per flight or per flying hour.

With respect to delivery flights, quotations are generally given per flying hour or in some cases per day.[257]

While the cost of insurance premiums paid by major airlines seems to be a closely guarded secret, as a general rule, major Western airlines with a good safety record pay less insurance premiums for their fleet than small or a newly established air carriers without a prior accident record or than third-world air carriers, which may carry a higher level of aircraft losses.

Insurance premiums for general aviation are more visible. For instance, the annual premium for a Cessna Citation, registered in Switzerland and mainly operated in Europe, amounts to approximately USD 18,500 (cover for passenger and third party on a combined single limit of USD 50 million for hull and for personal accidents).[258]

Although losses of the hull are usually within certain limits, it is the passenger's mix (nationality and earning power of the passenger) and the jurisdiction where the claims are to be settled that cause the huge variations in claim costs. Business passengers usually have a higher earning capacity and, thus, represent higher potential claim costs than do vacation travellers. Furthermore, earning and living standards differ considerably from country to country. For example, claim costs for the crash of a China Airlines Boeing 747-200 near Penghu Islands, Taiwan on 25 May 2002, reached USD 120

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[255] Several insurance companies fell into bankruptcy because of major aircraft accidents. (Philip Crystal et at., Swiss Re Publications, "Flight to Quality – Financial Security in the Aviation Insurance Market" (Zurich), Swiss Reinsurance Company, 2002 at 17/18.

[256] For example, the Swiss Pool for Aviation Insurance (SPL), a society where four re-insurers and eighteen direct insurers associate. The 'Deutsche Luftpool', in which more than 50 direct and re-insurers associated, disintegrated by the end of 2003 due to a modification of the European competition and cartel law.

[257] Salah El Din, *supra* note 19 at 67.

[258] See Certificate 'Winterthur Aircraft Insurance' (annex 1).

million (of which around USD 20 million was for the hull), despite the loss of 206 lives.[259]

While negotiations between airlines and brokers have for a many years been commonly governed by informal talks, the aviation insurance market has in the last 10 years been professionalized and is today highly competitive. Generally, extensive annual negotiations between airlines and aviation insurance brokers take place in October and November when aircraft policies are also renewed.

In assessing the aviation risks of airlines, brokers commonly study the performance of the airlines and examine the airlines desiring insurance very thoroughly with respect to the accuracy in terms of liability of the collected data, which are later forwarded and presented to the insurers that accept a portion of the risk. The broker's judgment usually includes and is based upon the airline's safety audits performed[260], the organizational structure of the airline and even on articles about the airline published in newspapers and journals.[261]

C Standard Clauses – general principles in aviation insurance

In the aviation insurance market wide co-operation concerning policy wording and many standard policy forms are used internationally.[262] In the London Aviation market, Lloyd's Aviation Underwriters Association (LAUA)[263] publishes a manual with contains standard policy and proposal forms, as well as standard wording for clauses and endorsements.[264]

In aviation insurance, numerous categories of coverage may be incorporated in a single policy. The main classes of insurance are issued for the hull of the aircraft and for the liabilities of the aircraft operator.

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[259] Harding, *supra* note 84 at 17.
[260] Such as the IATA Operational Safety Audit (IOSA) which encompasses the audit of corporate organization & management, flight operations, operational control/flight dispatch, aircraft engineering & maintenance, cabin operations, aircraft ground handling, cargo operations and operational security ("IATA Operational Safety Audit, IOSA, commonly asked questions" loosleaf (2004) 3.
[261] Interview of Regula Dettling-Ott, Vice President, Aeropolitical Affairs, (27 June 2005), Swiss International Airlines, Zurich-Airport.
[262] M.J. Spurway, *Aviation Insurance, The Market and Underwriting Practice* 1st ed. (London: Witherby & Co. 1991) at 47 [Spurway].
[263] Lloyd's Aviation Underwriters Association (LAUA).
[264] Margo, *supra* note 165 at 181.

1 Aviation all risk hull and engine insurance

In the majority of the cases hull insurance is either a percentage of the total value of the aircraft hull, a percentage of the agreed value of the hull or a percentage of the sum insured for such an aircraft's hull.

It is remarkable that the hulls of aircrafts built in Eastern Europe (e.g. Antonov, Ilyushin, Tupolev, Yakovlev) are not generally insured, as opposed to Western-built aircrafts (e.g. Airbus, Boeing, Bombardier, Embrear).[265] This may be attributable to lack of credibility about aircraft manufacturers located in countries with less standardized rules with respect to safety and security that govern the process of manufacturing aircraft, or to a less reliable aircraft type certification process. Furthermore, accident statistics reveal that Eastern-built aircraft have a poorer loss history than their competitors from Western countries. Given that previous losses and claims records have a bearing on rating premiums, Eastern-built aircraft have relatively higher accident rates and would attract insurance premiums significantly higher than those of their Western counterparts.

An all risk hull[266] and engine insurance policy protects the interests of owner, operator (lessor, lessee), and other parties possessing a direct financial interest[267] against physical loss[268] or damage to the aircraft, including engines and other components while the aircraft is in flight, taxiing, on the ground or moored. The common all risk and engine policy encompasses losses of or damage to the aircraft caused by such risks as fire, theft, and collision.[269] The policy wording for insurance of an airline will usually be expressed in the form of a general undertaking to cover the insured against all

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[265] Harding, *supra* note 84 at 7.

[266] The term "hull" is derived from the marine term "hull" and means physical damage to the aircraft itself.

[267] For instance, a lien holder on an aircraft.

[268] There are many court cases as to whether the insured is entitled to recover from a loss of its aircraft. It has been established that the insured is not obliged to show uncertainty of recovery. Even in cases where the possession of the aircraft is suspended, which renders its recovery uncertain, but is subsequently recovered, the insured is entitled to indemnity under a hull policy (for further details see Margo, *supra* note 165 at 228).

[269] Margo, *supra* note 165 at 221. See also under Policy General Provisions 5.2.2.1 (Annex 4) which protects the insured for losses of or damages to the aircraft caused by elementary perils (landslide, falling rocks, flood, windstorm (40 knots and more), glass breakage and snow slide).

risks of loss, except those that are specifically excluded elsewhere in the policy.[270]

In an all risk hull insurance, the insured strictly, never gets fully indemnified for the loss, because no allowance is made in the settlement of a claim that would take into account the depreciation in the value of an aircraft caused by the accident, i.e. the value of an aircraft that has had an accident, although it may very well have been repaired by the manufacturer, does not have a resale value as high as it was before the accident occurred.[271] Coverage also includes losses or damage in the event that the aircraft is unreported for a certain period of time after the commencement of the flight.[272]

The all risk hull and engine insurance does not, however, (other than in the event of total loss) cover the cost of making good wear and tear, gradual deterioration, structural defects, electrical or mechanical breakage or breakdown. However, any subsequent damage caused to the aircraft as a consequence of any of the exclusions listed above is covered.

The policy is drafted so as to give the insurers the option of arranging for the aircraft to be repaired and to bear the cost or to make a cash payment to the insured in respect of the damage to the aircraft or to pay for repairs carried out by or to the order of the insured.[273]

2 Agreed values

One of the differences between aviation hull insurance and most other types of property insurance is that the value of the aircraft to be insured in the event of a total loss is frequently determined at the time of issuance of the policy rather than at the time of loss[274]; this is referred as to as the 'agreed value' policy.[275] It pretends any disagreements between insurers and the

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[270] Margo, *supra* note 165 at 221.
[271] Donald H. Bunker, *Bunker on international aircraft financing,* Vol. 1 Course material (Montreal: McGill University, Institute of Air and Space Law, 2004) Ch. 5 at 18 [Bunker].
[272] This period is 60 days under AVN 1C 1(a) but may be shorter in some policies as, for instance, in the attached policy which defines under accidents a 'protracted disappearance for over 30 days'. (See general provisions 5.2.3, annex 4).
[273] Margo, *supra* note 165 at 222.
[274] Bunker, *supra* note 271 at Ch. 5 at 18.
[275] Underwriters usually opt for an 'agree value' in the hull policy in cases where the aircraft is new and of a type that is in demand in order to ensure that during the period of insurance the underwriters are not at any financial advantage in case of a total loss (cited in Bunker *supra* note 271 Ch 5 at 20). See

insured as to the value of the aircraft in the case of an accident and precludes the insured from paying too many premiums for which the aircraft appears to be worth. The value of the aircraft stated in the policy usually represents the market value of the aircraft, and this is the maximum possible amount that the insured may recover even if the actual loss exceeds this figure.[276] For instance, if damage to the aircraft is deemed to be an actual total loss or a constructive loss,[277] the underwriters have the option to either pay the 'agreed value' stated in the policy or provide the insured with a replacement aircraft. Due to the development of newer and faster aircrafts, the value of existing types of aircraft falls drastically and may be materially less than the 'insured value' stated in the policy. In such a case, underwriters will usually opt to purchase a replacement aircraft. However, underwriters are obliged to purchase the same type of aircraft and in reasonably similar condition to the one being replaced. This may raise practical difficulties because only few aircrafts, even of the same type, are identical in their radio and navigational installations and in their seat configuration.[278] There may also be fundamental differences which cannot be easily modified.[279]In case of a replacement of the aircraft underwriters are obliged to pay additionally for the modification of the replaced aircraft.

3 Engine insurance

Aircraft engines are usually covered by the all risk and hull insurance policy. However, in commercial air transport, engines may be removed from the aircraft and installed on another aircraft. Therefore, it is possible to

art. 3.1, Special policy provisions (Annex 3), where the agreed value for a Cessna Citation is USD 1,300,000.

[276] Margo, *supra* note 165 at 222.

[277] A constructive loss occurs in the event that the cost for repair of the damage of the aircraft exceeds the insured or agreed value, so that it is not economical to effect repairs.

[278] Bunker, *supra* note 271 at Ch. 5 at 19.

[279] For instance, "Lockheed L-1011 aircraft vary in payload and range capabilities depending on their serial number. Aircraft being serial number 1 and 12 have 5'600lbs. of extra deadweight compared to those which higher numbers, and have a range of 2,380 nautical miles compared with 2,680 nautical miles. Conversion kits are available at a cost of between USD 2.8 million and USD 3.3 million on 18 month notice to Lockheed, which will increase the payload capability by approximately 40% and increase the maximum gross take-off weight from 430,000lbs. to 470,000 lbs." (Cited as footnote No 38 Ch. 5 at 19 in Bunker, *supra* note 271).

purchase separate insurance to cover an individual engine, or groups of engines.[280]

With regard to the frequency of engine failure, aviation policies are usually worded so as to exclude cover for engine failure, unless the failure occurred by the ingestion[281] of a foreign object.[282] However, subsequent damage to an aircraft or its components which results from an engine failure is covered by the policy. Furthermore, in order to restrict the policy's coverage for damages resulting[283] to the engines by mishandling of the controls by the pilot or crew, the use of contaminated fuel or tools left inside the engine after a service, underwriters usually include a clause in a policy limiting its scope to theft, lighting, flood, outbreak of fire external to the engine.[284]

3.1 Exclusions on engine insurance

As mentioned above, exclusions relative to the inevitable wear and tear and gradual deterioration which occur during the normal operation of the aircraft shall not be covered by the policy.

The exclusions with respect to a defect or failure in any unit encompassing the consequences of such defect or failure within that unit would exclude cover in the case of an explosion occurring in a jet engine as well as any subsequent damage occurring to that engine if such was the result of a defect or failure. Consequent damage caused to any other part of the aircraft as a result of an explosion would be covered as being accidental loss or damage to the aircraft, even though it occurs as a consequence of an excluded risk.

4 Aviation liability insurance

4. 1 Passenger liability insurance

Whereas aviation hull insurance is written primarily for the benefit of the owner and/or operator of the aircraft, aviation liability insurance is issued for

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[280] Margo, *supra* note 165 at 232.

[281] Ingestion damage can be defined as damage which occurs when foreign objects such as stones, grit from runways, parking apron and taxi-tracks are drawn into the air intake by the suction of the engines and whirled around inside the engine in contact with the compressor blades, which may be rotating very fast. Other objects such as bolts, tools, ice, hail and headgear of maintenance personnel can be found in engines (Bunker, *supra* note 271 at Ch. 5 at 24).

[282] Margo, *supra* note 165 at 232.

[283] I.e. low-pressure module, high-pressure module, combustion module and turbine module.

[284] See e.g. AVN 56, Engine Endorsement (Published in Margo, *supra* note 165 at 635).

the protection of an aircraft operator against the sums which he will become legally liable for the indemnification of the passengers[285] with respect to bodily injury or to death caused to them or property damage caused by any one occurrence. The term "legally liable" means, that the owner or operator of the aircraft should be liable to pay damages or compensation to a passenger. The insured (aircraft operator) only acquires a right to recover under a policy when his liability to the insured passenger has been established either by judgement of the court, by award in arbitration or by agreement.[286]

The liability insurance policy may also cover loss for damage to personal articles of passengers.[287] The scope of the liability policy may be worded so as to limit the insured's legal liability to passengers to the extent of embarking on, on board, or disembarking from the aircraft.[288] The aircraft operator may also obtain coverage for liabilities for activities which occur prior to boarding (e.g. check-in, waiting in the terminal, transfer between terminals) or activities occurring after disembarkation from the aircraft (while the passenger is walking in the airport terminal or riding on a bus between terminals).

Some policies may also include legal liability for delay to a passenger during carriage by air. Although air carriers attempt to exclude this liability in their conditions of carriage or tariffs, international and for a short time European legislation oblige the air carrier with a compensation systems for delays. In international scheduled air transportation the Warsaw Convention and the Montreal Convention, 1999, place an obligation on the air carrier to compensate passengers for any delay and denied boarding. Furthermore, EC Regulation 261/2004[289] imposes an obligation on the operating carrier to compensate passengers in the event of denied boarding or cancelled flights or long delays. The EC Regulation entered into force on 17 February 2005 and is applicable to passengers departing from an airport located in the territory of a

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[286] Margo, *supra* note 165 at 276.
[287] See AVN 1C III 1 (c) which covers loss of or damage to baggage and personal articles arisen out of an accident to the insured aircraft (Published in Margo, *supra* note 165 at 559).
[288] See art. 6.1 General Provisions (annex 4) where insurance cover encompasses accidents occurring during boarding and leaving the aircraft and during the operation of the aircraft on the ground.
[289] EU, *European Parliament and Council Regulation 261/2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, and repealing Regulation 295/91*, [2004] O.J.L. 138/1, [Regulation 261/2004].

EU Member States to which the Treaty applies and for passengers departing from an airport located in a third country to an airport situated in the territory of the EU Member State.

Therefore, airlines may more frequently wish to obtain cover for the risk for delay and denied boarding in the future, if offered by the insurance market and at reasonable premium levels. For denied boarding, however, insurance would only be available for operational denied boarding given the nature of insurance.

The underlying legal regime for air transportation depends upon the qualification of the carriage performed and may differ whether the flight involves he carriage of passengers by a scheduled, international or domestic flight or whether the flight is performed by 'general aviation'.

4. 2 Third party liability insurance

Third party legal liability protects the insured against liability claims of third parties, other than passengers, involving bodily injury or property damages, as a result of the operation of the aircraft.[290] Damage to third parties may occur while the aircraft is in flight or on the ground. In the latter case, damage or injury may be caused by an accident whereby the aircraft or parts thereof fall on the surface or by objects such as fuel, fertilizer, blue ice (human waste from the lavatory of the aircraft) or chemicals being dropped from the aircraft. Damage or injury could also result from noise emanating from the aircraft or sonic boom. Typical incidents which occur when the aircraft is on the ground encompass taxiing accidents, propeller strikes, and damage caused by blast, or fuel spillage.[291] Damage or injury could also be caused by the aircraft itself in a mid-air collision. The third party could be either in the air on another airplane or on the ground. Third party liability insurance indemnifies the insured for any damage which have been sustained by a third party for which the insured will be legally accountable.

The legal compensatory regime under which an aircraft operator may be held liable depends, in the absence of any international rules, upon the

[290] Wells 2000, *supra* note 230 at 121.
[291] For a detailed discussion of the various forms of third party liability arising out of the operation of aircraft see, David McClean et al., Commentary, Tables and Indexes, London (2005) Vol. 3 at V.

legal regime of the State where the accident/incident occurred and may significantly vary from country to country.

5 Insurance policy limits

Polices may also contain separate limits for passenger's liability and third party liability for any one accident. However, insurance cover for air carriers for risk of air transportation is commonly written on 'Combined Single Limit policies' (C.S.L.), as opposed to two separate insurance limits for passengers and third parties. The sum of each of the individual limits would be replaced by a combined single limit.[292] The purpose of the combined single limit increases the flexibility in the handling of catastrophic claims. In the event, that a passenger liability claim is not fully exhausted up to the policy limit, the remaining amount may be used particularly for third party bodily injury and property damage.

The limits of cover expressed in the policy are commonly applicable on an 'any one accident' or 'per occurrence/event' basis. This means that the policy triggers in and provides cover up to the incorporated limits as soon an occurrence has been established, regardless of the number of occurrences in a policy year. In contrast, the policy may be worded as to provide cover for certain types of cover on an 'aggregate basis'. This type of insurance provides cover up to the limit incorporated in the policy on an annual basis. Thus, in the event that this amount has been exhausted, any further losses have to be retained by the insured.

6 Exclusion clauses

Exclusion clauses incorporated in a policy, limit the risk taken by the insurer by excluding or accepting liability for certain types of claims or claims arising from certain types of risks.[293] One consequence of exclusions is that the insurers are exempt from the obligation to indemnify the insured of any

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292 "Combined single limits" annex A to IUAI/PP2/99, online: International Union of Aviation Insurers <http://www.iuai.co.uk/main_frame.html>. It was originally devised as a method of improving the traditional way of stating limits in the earlier days when accident rates were much higher and insurance was considerably more expensive.

293 Margo, *supra* note 165 at 185.

losses arising from a loss which falls within the scope of the exclusions.[294] The following exclusion clauses are usually incorporated in aviation policies:

- Noise and pollution;
- The use of illegal purposes (which means a use of the aircraft outside the scope provided by the schedule ('business and pleasure', 'industrial aid', 'limited commercial', 'private pleasure', 'business', 'commercial', 'rental', or for hunting, aerobatics, instruction, spraying, training etc.);
- Operating the aircraft outside the geographical limits provided in the schedule except in cases of *force majeure*;
- Nuclear risk;
- War, hijacking, and other perils.

However, for some of these exclusions it is possible – usually on payment of an additional premium - to purchase separate insurance coverage. An aircraft operator can do this either by a write-back endorsement inserted into the airline's existing All Risk Policy or, for war risk coverage, by way of a stand-alone War Risk Policy issued by the specialist war risk insurer.

6.1 Noise and pollution exclusion – AVN 46

With the development of the jet engine and supersonic airplanes the question of damage due to noise arose. Shock waves created by faster-than-sound aircraft can cause actual physical damage on the ground.[295] With the introduction of the Concorde[296] the London insurance market considered their position and introduced a noise exclusion clause applicable to all liability insurance written by them (AVN 46B[297]).

The policy does not cover damages for noise, vibration, sonic boom and associated phenomena, either by the standard policy wording, or by incorporating the (Noise and Pollution and Other Perils Exclusion) clause.[298]

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[294] *Ibid.* at 105.
[295] Spurway, *supra* note 262 at 59.
[296] However, the Concorde has completed its last schedule flight on 24 October 2003.
[297] Printed in Margo, *supra* note 165 at 624.
[298] *Ibid*, at 255.

However, it is possible to purchase insurance cover in the London insurance market against damage caused by noise and associated phenomena.[299]

As a consequence of congested airspace, particularly in Europe, the establishments of new air routes or re-routed air carriers approaching airports coupled with the increasing awareness of the population for damage for noise emitted from aircrafts, make encourage air carriers and aircraft operators to seek more frequently insurance cover for damage caused by noise pollution in the near future. Depending on the prevailing legal regime of state where damage occur, compensatory obligation for damage caused by noise may have a considerable impact on the air carriers' financial situation. They would, thus, be advised to seek adequate insurance, if provided by the insurance market.[300]

6.2 Geographical limit exclusion

Under this exclusion clause, the policy excludes cover for aircraft operations which are not within the geographical limits stipulated in the schedule of an aircraft insurance[301] except due to *force majeure*. Commonly, the following exclusion terms are applied in the policy: 'Worldwide'; 'Europe excluding Russian Federation'; 'United Kingdom and Europe (excluding the Russian Federation)'[302] or 'Worldwide with main operation in Europe but excluding certain countries'[303] In the United States, the geographical limits for

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[299] See AVN 47, Noise Coverage Policy (reprinted in Margo, *supra* 165 at 625).

[300] As an example, in connection with the debate over the newly established system for approaches and take-offs at Zurich-Airport, where highly populated areas in the vicinity of the airport are overflown at low levels for take-off and landing it is conceivable that air carriers serving Zurich airport become liable for causing noise. Under Swiss Law air carriers may be held liable for damages of noise. The compensation to be awarded to the population residing in the vicinity of the airport for depreciation of their properties would easily reach billons of dollars. However, up until now, no such judgment has been established.

[301] The policy schedule records such details as the identity of the insured, the period of insurance, particulars of the aircraft insured including the covered risks in respect of which they are covered, the use the aircraft will be put, the identity and/or experience and qualifications of the pilots, the geographical limits of operations, the limits of cover, applicable deductibles, the premium, and the identity of the person to whom notice is to be given of any claim. See, e.g. annex 2.

[302] Margo, *supra* note 165 at 197/198.

[303] See attached aircraft insurance of a Cessna Citation corporate aircraft which excludes cover for operation in the following countries: Afghanistan, Albania, Algeria, Angola, Bosnia, Burundi, Colombia, Congo, Democratic Republic of Congo (Zaire), East Timor, Ecuador, Eritrea, Ethiopia, Guinea Bissau, Iran, Iraq, Yemen, Kashmir, Kyrgyzstan, Kosovo, Lebanon, Liberia, Libya, Macedonia, Montenegro, Palestine, Pakistan, Peru, Rwanda, Sierra Leone, Somalia, Sri Lanka, Syria, Serbia, Sudan, Sumatra (Indonesia), Tajikistan, Uzbekistan and the following ex-USSR, Republics: Azerbaijan, Checheno /Ingushskaya. (See Geographical Limits, Schedule, annex 2.).

general aviation are commonly confined as to the 'Continental United States, Canada, or Mexico. Coverage for Mexico and Canada may be limited to within 100 miles of the border and many policies exclude Alaska.[304]

6.3 Exclusion for nuclear risk

Loss or damage to property and any associated liability are normally excluded from the cover of any aircraft insurance policy. This exclusion is attached to every aviation insurance policy, known as AVN 38B[305] and AVN 71[306]. However, it is possible to write back certain cover generally excluded from the policy such as nuclear matter meant for any scientific, medical, agricultural, educational and industrial purpose.[307]

7 Deductibles

Most aircraft hull insurance cover is written subject to a deductible.[308] Under a deductible, a certain amount has to be retained by the insured for which he cannot claim under the insurance policy. Commonly, different deductibles are applied in hull policies depending on the exposed risk of the aircraft. Thus, flight and taxiing risks are usually subject to a higher level of deductible than ground risks.[309] According to the prevailing market practice, a single level of deductible is applied for flight, taxiing, ingestion and ground risk.[310]

For single engine aircrafts, business and pleasure policy, deductibles are usually expressed in a straight deductible i.e. a deductible which is either expressed as a specific amount or a percentage of the insured value. In the United States the standard deductible for business and pleasure risks is USD 50 for the time the aircraft parked on the ground, thus, not in motion. When the aircraft is in motion i.e. in flight and taxiing, a deductible of USD 250 is

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[304] Wells 2000, *supra* note 230 at 116.
[305] Reprinted in Margo, *supra* note 165 at 619.
[306] *Ibid.* at 250.
[307] Margo, *supra* note 165 at 201.
[308] Wells 2000, *supra* note 230 at 115.
[309] Margo, *supra* note 165 at 121.
[310] The deductible for a partial loss of a Cessna Citation is USD 50,000 regardless as to the stage of the flight operation (See Aircraft Insurance Certificate, annex 1 and Special Provision, art. 3.2, annex 2).

applied.[311] Deductibles for small aircraft may be stipulated as a percentage of the value of the aircraft, subject to a specific minimum.[312]

For larger aircraft, a specific amount of deductible is usually applied.[313] Deductibles for commercial aircraft are usually USD 500,000 for narrow bodied, USD 750,000 for B737/A320 and USD 1 million for wide-bodied aircraft.[314]

Deductibles are usually not applied in the event of total or 'constructive total loss'.[315]

The rationale for deductibles is to prevent insurers from handling minor claims, where the administrative costs of handling such claims may easily exceed the amount of the claim itself.[316] Furthermore, the presence of a deductible induces the aircraft operator to ensure utmost care in the operation of the aircraft.

8 Insurance in aircraft finance

Financiers of aircraft are commonly leasing companies which possess a financial and legal interest in the aircraft. For the protection of these interests they require aircraft operators in their leasing and financing documentation to ensure that the aircraft is properly insured.

Under an all risk policy the financiers are usually identified as an 'additional insured' and frequently named as the beneficiary under a ('loss payee clause'). This means that in case of a loss, the indemnification payments from the insurer will be paid directly to the party nominated in the clause which, in this case, would be the party possessing a financial and legal interest in the aircraft.[317]

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[311] Wells 2000, *supra* note 230 at 115.

[312] I.e. 1% of the value, subject to USD 50,000 each and every claim.

[313] E.g. USD 1,000,000 for each and every claim and for each aircraft for wide-bodied aircraft, USD 750,000 each and every claim for hybrid aircraft and USD 500,000 each and every claim for narrow-body aircraft (cited as footnote 89, Margo, *supra* note 165 at 121).

[314] LPH Pitman Limited, "Aviation and airline insurance", online: LPH Pitman Limited <http://www.lphpitman.co.uk/aviation.htm#deductible>.

[315] Margo, *supra* note 165 at 121. (But see art. 3.2. Special Provision (annex 3) where the deductible is not applicable).

[316] Bunker, *supra* note 271 Ch. 5 at 22.

[317] Crystal, Philip, "Shooting across the Valley", 1999 Vol. I TAQ (London: LLP, 1999) at 79 [Crystal, 1999].

To ensure that financiers of aircraft are indemnified by the insurer even for cases where the insured may be in default under the policy by way of breach of warranty, led to the enactment of a warranty clause or endorsement referred to as the standard aviation clause AVN 67B[318].

AVN 67B is designed to protect the financiers insofar that they do not lose the benefits under the aircraft operator's policy if the actual operator has committed a breach under that policy[319]. Thus, the policy prevails over any conflicting provisions contained in it. AVN 67B is normally offered against an additional premium.[320]

Financiers have furthermore the option to purchase separate insurance to protect themselves with additional insurance cover, such as repossession insurance, residual value insurance, and contingent insurance.[321]

The three principal types of contingent insurance are contingent hull, contingent war and contingent liability insurance. The contingent hull insurance is triggered in case of failure[322] of the underlying operator's policy. In addition, contingent insurance could also be purchased to protect the financier from risks excluded under the insured airline's policy. A drawback of the contingent insurance is, however, that it does not provide coverage in the event of bankruptcy of the airline's insurers.[323]

To protect the financiers with additional security, a reinsurance 'cut-through' clause is inserted in the reinsurance policy issued to the hull insurers of the direct insured. Under the 'cut-through' clause, the re-insurers agree with the direct insurer that the re-insurer will make payment of the reinsurance proceeds to the insured party. In other words, under a 'cut-through' clause the re-insurer agree to indemnify the financiers by forwarding the policy proceeds directly to the insured i.e. airlines and financiers and not to the direct insurer.

It has to keep in mind that with view of the magnitude of exposures airlines create, the direct insurer commonly seeks to co-insure or re-insure the

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[318] Reprinted in Margo, *supra* note 165 at 356.
[319] Insurance policies are commonly worded so as to ensure that the policy ceases to provide cover in the event, that the insured commits a breach of warranty. The warranty is usually inserted into the policy and relates to the compliance with air navigation and airworthiness requirements. (See, art. 3.8 General Provisions (annex 4)).
[320] And has received widely acceptance of by the aircraft financiers.
[321] Margo, *supra* note 165 at 529.
[322] Such as restriction of the export of the policy proceeds or gaps in the coverage.
[323] Crystal 1999, *supra* note 317 at 80.

risk. Financiers are especially worried if the direct insurer retains only a very small percentage of the overall risk and leaves the rest to the co- or re-insurers.[324] In case of bankruptcy of the direct insurer all the policy proceeds would be channelled through the first insurer and distributed among all its creditors.[325]

Due to the fact that the 'cut-through' clause violates the concept of privity of contract, enforceability of this clause is not secured in all jurisdictions. Whereas the cut-through clauses are enforceable in the United States, they are not under tradition English law.[326]

9 Residual Value Insurance (RVI)

A Residual Value Insurance (RVI) policy insures a specific value of an aircraft at some specific time in the future. Under an operating lease the lessor as the owner of the aircraft is at risk that the aircraft's value is, upon termination of the lease, less than the actual market value. Commonly, the RVI is purchased for large commercial airlines whose aircraft generally keep their value over extended periods.[327] Other forms of RVI require the insurer to purchase the equipment from the insured on the settlement date for the insured termination value.[328]

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[324] As it is the case for large Asian airlines where local insurance companies only retain small portion of the risk.
[325] Crystal 1999, *supra* note 317 at 80.
[326] Margo, *supra* note 165 at 534.
[327] *Ibid.* at 543.
[328] Bunker, *supra* note 271 Ch. 4 at 78.

D Aviation war risk insurance

1 Typical aviation war risks? – Hazards retained by the war risk insurance market

Typical war-related perils in international aviation encompass the following:

1. Terrorist attack on parked aircraft: aircraft parked at gates of airports are vulnerable to terrorist attacks; a bomb, placed at a busy airport with a great number of aircraft on the ground could create enormous damage to passengers, ground personnel, the hulls of aircraft and ground facilities.[329]
2. Suicidal hijack: aircraft being deliberately flown into buildings or ground installations,[330]
3. Hijack of aircraft,
4. Attacks by ground-to-air missiles, such as MANPADS[331] or other heat seeking missiles,
5. Bombs employed with conventional explosives; the explosion of a bomb on an aircraft during flight creates a high risk which commonly would result in a major crash of the aircraft,
6. 'Dirty bombs'[332]: a dirty bomb employing biological or chemical explosives or electromagnetic pulse[333] devices placed on an aircraft would be an

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[329] Special security procedures with regard to possible terrorist attacks may be employed as to the location of the parking of aircraft at airports. Aircraft parked at gates within near distance to the terminals are more vulnerable to terrorist attacks than aircraft parked in mid-field, out of range of public and passengers access. For example, following the incident of February 1969, when four terrorists attempted to gain control of an EL-AL aircraft parked at Zurich-Airport, special procedures have been introduced as the check-in as well as to the location of the parking of such aircraft, flying to high risk countries.

[330] Such as the tragedy of 11 September 2001.

[331] Abbreviation for Man Portable Air Defense System. MANPADS can be classified as light weapons and as surface to air missile system designed to be man-portable and carried and fired by single individuals ("Big issue, Big problem? MANPADS", Ch. 4 (2004) online: Small Arms Survey <http://www.smallarmssurvey.org/Yearbook%202004/03%20MANPADS.pdf>).
In November 2002 an Israeli Arkia Boeing 757 flying out of Mombassa, Kenya, came under fire from two surface-to-air missiles and on 22 November 2003 a MANPADS hit one of the engines of a DHL cargo, shortly after take-off from Baghdad International Airport. There may be around 100,000 complete systems in existence (launchers completed with missiles).

[332] The term 'dirty bomb' is most often used to refer to a Radiological Dispersal Device (RDD), a radiological weapon which combines radioactive material with conventional explosives. Though an RDD is designed to disperse radioactive material over a large area, the conventional explosive would likely have more immediate lethal effect than the radioactive material. At levels created from most

enormous threat to the aircraft's occupants but also to areas over which the bomb explodes.

7. Bomb warnings: risk of stampede aboard an aircraft after a bomb warning; the evacuation of an airplane or an airport after a hoax bomb may be pernicious to passengers' health.[334]

2 Security measures

Any accident involving an aircraft attracts a high degree of public and media attention and therefore airlines invest a lot in their security and security programs. Various instruments and security measures are involved so as to provide utmost security. Preboarding security measures such as passenger and carry-on baggage screening, physical search for weapons and other security measures have been introduced. Newly invented security features have been installed in aircraft such as locked and reinforced cockpit doors. On particular flights, air marshals are on board so as to intervene if the need arises.

Technical enhancements have also been introduced for the protection of the aircraft hull from physical threats employed from outside, especially during flight. For instance, the Israeli flag-carrier, EL-AL Airlines has equipped some of its aircrafts with anti-heat seeking missiles defence systems to protect their aircraft from possible attacks by ground-to-air missiles.

It is worth to note that terrorist attacks are commonly not directed towards the airline company itself but rather against the state under whose flag the aircraft is operating (the nationality of the airline). The nationality of the aircraft (i.e. the state in which the aircraft is registered) codified with one to three characters on the tail of the aircraft does not play a crucial role for

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probable sources, not enough radiation would be present to cause severe illness or death. ("Dirty bomb" online: Wikipedia <http://en.wikipedia.org/wiki/Dirty_bomb>).

[333] An Electromagnetic Pulse (EMP) is an intensive energy field that can instantly overload or disrupt numerous electrical circuits at a distance. EMP can be produced at a large scale using a single nuclear explosion, and on a smaller, non nuclear scale using a device with batteries or chemical explosives. Several nations, including reported sponsors of terrorism, may currently have a capability to use EMP as a weapon for cyber warfare or cyber terrorism, to disrupt computers, communications systems, or parts of the U.S. critical infrastructure. "CRS Report for Congress, High Altitude Electromagnetic Pulse (HAEP) and High Power Microwave (HPM) Devices": (2004) Threat Assessments, online: Federation of American Scientists <http://www.fas.org/man/crs/RL32544.pdf>.

[334] The evacuation of a Saudi Arabian Airlines Boeing B747 aircraft after a bomb warning at Colombo International Airport on 8 September 2005 caused one death and 57 injuries.

terrorist attacks given that from the registration mark no conclusion can be drawn as to the state of registration.[335]

From a risk perspective, it might be concluded that air carriers solely operating domestically, without any international reputation and low cost carriers without a brand name representing a particular state attract less risk for war-related perils.

3 War risk and allied perils insurance

The special war insurance market offers war aviation risk insurance. 'Hull war risk insurance' protects the aircraft operator from physical damage arising out of acts of war and from terrorism perils. A distinction has to be made as to the political risk insurance which is commonly offered to the aircraft owner or lessor to cover financial loss arising from the peril insured.
As a consequence of the Israeli raid on Beirut Airport on 28 December 1968, the London insurance market introduced a policy wording that excludes the risk of war and other perils. The expression 'war risk' has to be understood in a broader sense as it includes other perils which would not normally be associated with the word 'war'.[336] As has been mentioned above, war risks are commonly excluded from the cover of the hull policy and liability all risk policy. The exclusion of war risks are inserted in every aviation hull and liability policy known as AVN 48B (War, Hi-jacking and other perils exclusion clause).[337] The wording of AVN 48B in its current from does not cover claims caused by:

"(a) War, invasion, acts of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, martial law, military or usurped power or attempts at usurpation of power.

(b) Any hostile detonation of any weapon of war employing atomic or nuclear fission and/or fusion or other like reaction or radioactive force or matter.

(c) Strikes, riots, civil commotion or labor disturbances.

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[335] For example, the registration mark 'N' stands for the United States (See "International Standards, Aircraft Nationality Marks, National Emblems and Common Marks" Supplement to Annex 7 (forth edition), at B 1 in Michael Milde & Paul Dempsey Public International Air Law: Cases and Materials Vol. II (Canada: McGill University, 2003) 420 425).
[336] Spurway, *supra* note 262 at 56.
[337] Margo, *supra* note 165 at 325. See also art. 4.4 Special Provisions, (Annex 3).

(d) Any act of one or more persons, whether or not agents of a sovereign power, for political or terrorist purposes and whether the loss or damage resulting there from is accidental or intentional.

(e) Any malicious act or act of sabotage.

(f) Confiscation, nationalization, seizure, restraint, detention, appropriation, requisition for title, or use by or under the order of any government (whether civil military or de facto) or public or local authority.

(g) Hijacking or any unlawful seizure or wrongful exercise of control of the aircraft or crew in flight (including any attempt at such seizure or control) made by any person or persons on board the aircraft acting without the consent of the insured."

The AVN 48B also makes the policy inoperative while the aircraft is out of the control of the insured as a result of these perils, but cover is restored on the safe return of the aircraft to the airfield within the geographic limits of the policy and when the aircraft has been parked, with its engine shut down and under duress.

Prior to September 2001, some of the excluded perils could be written back into a hull or liability all risk policy with the payment of an additional premium[338]. The written back perils are attached to the policy as an extended coverage endorsement in respect of aircraft hull (AVN 51) and aircraft liability (AVN 52C).

With respect to the hull the exclusions are confined to the risks excluded by paragraphs (c), (e), and (g) of AVN 48B, mentioned earlier. In the case of liabilities, all the risk excluded by AVN 48B may be written back into the liability all risk policy, except those pertaining to nuclear weapon detonation excluded in paragraph (b).

With respect to any of the other war or associated risks excluded by AVN 48B such as those referred to in paragraphs (a), (d), or (f) of AVN 48B,

[338] Prior to 11 September 2001 the additional premium charged was between 2.5% and 5% of the generated liability premium.

insurance cover has to be purchased in the specialist war risk insurance market issued as LSW 555B (London Special Writing).

4 Aviation 'Hull War and Allied Peril Policy' (LSW 555B)

As above, coverage for acts of war may be restored through a write back endorsement (AVN 52C) inserted into the carrier's all-risk policy, or via a stand-alone war risk policy issued by the specialized war risk insurers known as Aviation 'hull war and allied perils policy' referred as to LSW 555B[339] (London Special Writing).

The LSW 555B policy covers risk usually excluded from the hull all risk insurance policy except nuclear risk referred in paragraph (b) of the hull all risk policy (AVN 48B) and it also covers situations where the aircraft is out of the control of the insured aircraft operator as a result of these perils.

The aviation hull 'war and allied perils' policy (LSW 555B) covers loss of or damage to aircraft caused by the following situations:

(a) "War, invasion, acts of foreign enemies, hostilities (whether war be declared or not) civil war, rebellion, revolution, insurrection, martial law, military or usurped power or attempts at usurpation of power;

(b) Strikes, riots, civil commotion or labour disturbances;

(c) Any act of one or more persons, whether or not agents of a sovereign power, for political or terrorist purposes and whether the loss or damage resulting there from is accidental or intentional

(d) Any malicious act or act of sabotage;

(e) Confiscation, nationalisation, seizure, restraint, detention, appropriation, requisition for title or use by or under the order of any government (whether civil, military or defacto) or public or local authority; and

(f) Hijacking or any unlawful seizure or wrongful exercise of control of the aircraft or crew in flight (including any attempt at

[339] Reprinted in Margo, *supra* note 165 at 681.

such seizure or control) made by any person or persons on board the aircraft acting without the consent of the insured."

LSW 555B also covers extortion and expenses incurred as a result of hijacking under which the insurer agrees to indemnify the insured for 90% of any payment properly made in respect of:

a) Any threats against any aircraft described in the policy schedule or its passengers or crew made during the currency of the policy: and
b) Extra expenses necessary incurred following confiscation, etc (as in (e) above) or hijacking, etc. (as in (f) above) or any aircraft described in the policy schedule

The LSW 555B policy however excludes loss, damage or expense caused by one or any combination of any of the following:

"(1) (a) War (whether there be a declaration of war or not) between any of the following states: United Kingdom, USA, France, the Russian Federation, and the People's Republic of China, save that if any aircraft is in the air when an outbreak of such war occurs, coverage shall continue until the aircraft has completed its first landing thereafter;

(b) Confiscation, nationalization, seizure, restraint, detention, appropriation, requisition for title or use by or under the authority of the Government(s) named in the policy schedule, or any public or local authority under its jurisdiction (commonly the government of registration);[340]

(c) Any debt failure to provide bond or security or any other financial cause under court order or otherwise;

(d) The repossession or attempted repossession of the aircraft either by any title holder or arising out of any contractual

[340] Christine Dandridge, "War & Allied Perils Insurance" (Presentation at the IATA Aviation Insurance & Risk Management Conference, London, 12-13 April 2005 [Dandridge, unpublished]. See also 'Schedule' (Annex 2).

agreement to which any insured protected under the policy may be party;

(e) Delay, loss of use, or except as specifically provided in the policy any other consequential loss, whether following upon loss of or damage to the aircraft or otherwise,

(2) directly or indirectly arising out of any detonation of any weapon of war employing atomic or nuclear fission and/or fusion, or other like reaction or radioactive force or matter, whether hostile or otherwise.

War risk insurers usually reserve the right to give seven days notice of review of the rate of premium and/or geographical limits due to sudden changes in domestic or international political situations.[341]

5 Rating of aviation hull war insurance

The rating for hull war risk insurance involves mainly:

1. The fleet size of the airline;
2. The country of origin;
3. Destination flown;
4. The airlines' security measures;
5. The claims record;
6. The coverage required.

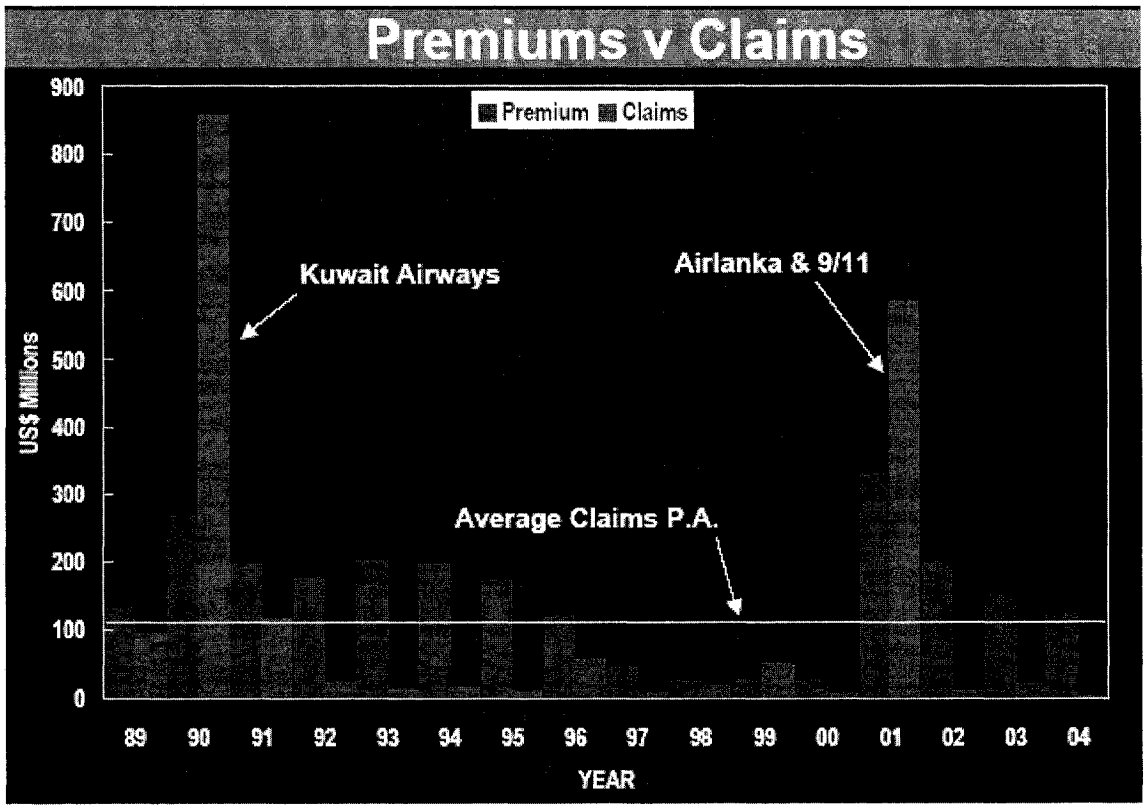
Rates are quoted as a percentage of the total fleet value and are generally the lowest for North America and the highest for Africa followed by the Middle East. Prior to 11 September 2001, deductibles were rarely applied in aircraft war-risk policies.[342]

6 Facts and figures

Over the last decade the most severe terrorist attack involving civil aviation were the terrorist attacks on 11 September 2001 against the World Trade Center in New York and the Pentagon by hijacked airlines. These incidents

[341] The right was exercised during the Gulf War in 1990 and on 11 September 2001.
[342] Harding, *supra* note 84 at 20.

resulted in very high compensation payments of about USD 19 billion. Also, the crash of a Pan Am Boeing 747 over Lockerbie, Scotland, resulted in a loss of USD 138 million by the insurance industry. Another major catastrophe occurred on 12 September 1970 in the desert of Jordan where a Swissair DC-8, a TWA Boeing 707 and a BOAC VC-10 were hijacked within some time of each other and all three were destroyed by terrorists.



Source: [343]

The above figure shows the amount of premiums in comparison to the amount of claims of the specialist war risk insurance market in the period of the last 15 years. As can be seen, the largest hull event losses occurred in 1990 and 2001. During the first Gulf War the hull war risk insurance market faced a loss of over USD 850 million when on 2 August 1990, 15 Aircrafts of Kuwait Airways[344] worth USD 692 million and USD 300 millions of spare parts belonging to Kuwait Airways were flown out of Kuwait city airport by the Iraqis.

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[343] Dandridge, *supra* note 341.

[344] Subsequent to the capture of the Kuwait City airport on 2 August 1990, 15 aircraft worth USD 692 millions and USD 300 millions of spare parts belonging to Kuwait Airways were flown out of Kuwait by the Iraqis over a period of days.

Another major loss of a war-related peril occurred on 24 July 2001 at the international airport in Colombo, Sri Lanka, where rebels destroyed three civil aircraft[345] and eight military aircraft causing a total loss of USD 500 million. In the same year, specialist hull war insurers faced in the wake of 11 September 2001 four additional hull losses amounting to USD 130 million.[346]

In the last 20 years, the hull war risk underwriters have paid an average annual claim of USD 105 million.[347] The low claims activity between 1992 and 2000, whereby the income for the premium collected exceeded the claims, demonstrate the extreme volatility of the aviation war risk insurance market.

Where a 'hull all risk policy' with the 'war and allied perils exclusions clause' and a separate 'hull war risk insurance' policy have been issued, the 'all risk' and 'war risk' insurers commonly agree upon a 50/50 provisional 'claims settlement clause' known as AVN 103. This clause was introduced to avoid delays in the settlement of claims in circumstances where the cause of a loss was unknown as a result of which a dispute may arise whether the loss was covered by the 'all risk' policy or the 'war risk' policy.

The purpose of this clause is that in the event of a loss of or damage to an aircraft covered under one or other policy, insurers will, after the settlement period of 21 days from the date of an occurrence, advance 50% of the mutually agreed amount of a valid claim.

7 The response of the insurance market after 11 September 2001

After the catastrophic events of 11th of September 2001, the London aviation insurance market cancelled cover with respect to war risks. Shortly thereafter, they reinstated war risk cover with respect to third party bodily injury and property damage subject to a significant limitation at USD 50 million for any occurrence and in the 'annual aggregate' for any of the named perils

[345] Two Airbus A340 and one Airbus A330.
[346] On 11 September 2001 an American Airlines B767 performing flight 11 from Boston to Los Angeles and a United Airlines B767 flight 175 en route from Boston to Los Angeles were deliberately flown into the World Trade Center killing 127 passenger on the flight, 20 members of the crew and 10 hijackers. Similarly, a B757 of American Airlines flight 77 en route from Dallas to Los Angeles crashed into the Pentagon killing 6 members of the crew, 57 passengers and 5 hijackers. At the same time a B757 aircraft of United Airlines flight 93 crashed near Pittsburgh, Pennsylvania flying from Newark to San Francisco and carrying 7 crew, 34 passengers and 4 hijackers.
[347] Dandridge, *supra* note 341.

excluded by AVN 48B.[348] This sub-limitation was incorporated by amending AVN 52C and the re-issuance of AVN 52D. However, the aviation war risks insurer continued to provide cover for war risk in respect of passenger liability coverage.

A separate endorsement, AVN 52E, was issued by the London insurance market for 'general aviation' operators which limits third party liability to USD 10 million.

The aviation insurance market discontinued writing back hull coverage. Consequently, the specialist war market responded under the material change clause of LSW 555B which imposed additional obligations on the aircraft operators, known as the 'material change clause'. Under this clause the insurer is exempt from paying indemnification should any material changes have occurred in the area of operation of the insured for which the insured failed to give immediate notification to the insurer. Material change is deemed to affect the risk with regard to the degree or frequency of a potential loss or which may reduce the possibilities of a recovery under a subrogation.

Under the 'material change clause' aircraft operators were obliged to complete a questionnaire detailing (1) changes in their security procedures subsequent to 11 September 2001, (2) the airline's current network, (3) details of any threats made against the insured's aircraft during the preceding 12 months, and (4) the location outside the insured airline's home country of domicile where two or more aircraft were exposed on the ground simultaneously. The material change clause permitted the war risks insurer to reassess new risks and a possibly adjust the premiums for airlines.

Passenger and third party cover is still subject to the War, Hijacking and Other Perils Exclusion Clause AVN 48B subject to the Extended Coverage Endorsement (Aviation Liabilities) AVN 52E, which writes back all the perils including Weapons of Mass Destruction (WMD) except any hostile nuclear detonation of any weapon of war.[349]

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[348] Rod D. Margo, "11 September 2001 - An Aviation Insurance Perspective" (December 2002) XXVII/6 Air & Sp. L. at 389 [Margo 2002].
[349] LMBC, *supra* note 178 at 2.

As a consequence of the aftermath of the 11th September 2001, the aviation insurance market, however, intents to exclude or limit cover for Weapons of Mass Destruction (WMD) in their policies.

The rationale for the exclusions respecting the limitation of cover for risks of Weapons of Mass Destruction is that a major WMD attack on a major airport would easily exceed the aviation hull war and liability war insurance market's ability to indemnify such claims.[350] In other words, there would not be enough 'market capacity' for these kinds of perils.

While insurance coverage for the passenger remains unexempted for the full policy limit for 'any one occurrence', third party coverage is available only on an 'aggregate'[351] basis.

Although the War, Hijacking and Other Perils Exclusions Clause AVN 48C remains, since its first draft in June 2003, the insurance market intends to exclude or limit the cover of WMD for passengers and third parties by the end of 2005. The Aviation Insurance Clauses Group (AICG)[352] has already issued a redrafted AVN 48C clause. The redrafted version of AVN 48C is designed and worded to absolutely exclude all WMD (dirty bombs, bio/chemical, electromagnetic pulse devices and nuclear weapons). The aviation hull war, terrorism and allied perils insurance market has already started to exclude WMD on renewal policies in May 2005[353].

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[350] Ken Coombes, (Paper presented to the IATA Aviation and Insurance & Risk Management Conference, London, 12-13 April 2005) [Unpublished].

[351] The maximum coverage under a liability policy during a specified period of time--usually one year or the policy period--regardless of the number of separate losses that may occur. Losses paid under coverage subject to aggregate limits reduce the amounts available for future losses. Aggregate limits may apply to a specific type of coverage, or they may apply to all losses under the policy, Rupp's Insurance & Risk Management Glossary, online: Wolter Kluwer CCH Insurance Services <http://insurance.cch.com/rupps/aggregate-limit.htm>.

[352] The AICG was established due to an agreement between the European Commission and the Lloyd's Market Association and the International Underwriting Association to introduce a series of measures designed to improve competition and transparency in the London aviation insurance market.

[353] For example the ACE Aviation Hull "War and Allied Perils" Policy excludes in paragraph (c) of Section Three loss, damage or expenses caused by

"the use of any chemical, biological or biochemical materials or the threat of same unless such materials are used or threatened to be used solely directly in (i) the Hi-jacking, unlawful seizure or wrongful exercise of control of an aircraft as insured under clause (f) Section one above; or (ii) any threat against an Aircraft stated in the schedule or its passengers or crew and then only in respect of payments as are insured under Section Two above" and furthermore under (g) of Section Three "any

(i) detonation, hostile or otherwise, of any device employing atomic or nuclear fission and/or fusion or other like reaction,

(ii) (ii) use of radioactive contamination or matter,

(iii) (iii) use of an electromagnetic pulse."

Furthermore, according to the London Market Insurance Broker Committee the new version of the AVN 48C will hardly be worded as to provide sufficient levels of insurance cover for WMD for passenger and third parties required to comply with the minimum insurance requirements of EU Regulation 785/2004.[354]

To this writer's knowledge, air carriers already have WMD cover excluded from their hull coverage on the renewal of their insurance policy for the year 2006. As a consequence, such air carriers would be forced to absorb the loss themselves for any damage resulting from a WMD. In light of the current financial health of the aviation industry, and particularly for small air carriers, a major catastrophe resulting from a WMD could easily push such an air carrier into bankruptcy.

[354] LMBC, *supra* note 178 at 2.

IV. Recent legal liability provisions and insurance requirements in international air transport: the approach of the European Community

1 Introduction

The European Union enacted a set of new regulations establishing provisions with regard to insurance requirements for passengers, baggage, cargo and with regard to third parties. In this part the following regulations will be examined:

1. EU Regulation 261/2004[355] on denied boarding Compensation;
2. EU Regulation No 2027/1997[356] on air carrier liability in respect of the carriage of passengers and their baggage by air as amended by Regulation EC No 889/2004;[357]
3. EU Regulation 785/2004[358] on insurance requirements for air carriers and aircraft operators.

As will be explained in this chapter, these Regulations impact the operation of air carriers from countries not only inside the European Union but also outside the European Union.

2 EU Regulation 261/2004

EC Regulation 261/2004 imposes an obligation on the operating carrier to compensate passengers in the event of denied boarding or for cancelled flights or long delays. This Regulation entered into force on 17 February 2005 and is applicable to passengers departing from an airport located in the territory of a Member State of the European Union irrespective of the air carrier to which the Treaty of the European Community applies and for passengers departing from an airport located in a third country to an airport situated in the territory of a Member State to which the Treaty applies, if the operating carrier of the flight concerned is a European Community air carrier[359] (unless the passenger received benefits or compensation and was given assistance in another country).

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[355] Regulation 261/2004, *supra* note 289.
[356] EU Regulation 2027/97, *supra* note 50.
[357] Regulation 889/2002, *supra* note 51.
[358] EU Regulation 785/2004, *supra* note 140.
[359] EU Regulation 261/2004, *supra* note 289 art. 1. The International Air Transport Association (IATA) filed a case in the High Court in the UK denying the validity of the Regulation and arguing the inconsistency of the Regulation with certain provisions of the Montreal Convention 1999 with regard to

This Regulation also imposes three types of compensation on the operating air carrier that must be afforded in varying degrees in each of the following situations: (1) financial compensation (article 7), (2) re-imbursement or re-routing (Article 8), and (3) care, provision of meals, hotels (Article 9).

(a) Right to reimbursement or rerouting

The compensation scheme is set according the length of a flight according the following levels. Euro 250 for a flight of 1,500 kilometres or less; Euro 400 for an intra-Community flight of more than 1,500 kilometres and for a non-community flight of between 1,500 and 3,500 kilometres; and Euro 600 for all other flights. In certain circumstances the level may be reduced by 50%.[360]

Reimbursement of the full cost of the ticket for (a) the part or parts of the journey not made and (b) the part or parts already made if the flight no longer serves any purpose in relation to the passenger's original plan, together with (the relevant) a return flight to the first point of departure at the earliest opportunity: or

(b) re-routing under comparable transport conditions, to their final destination at the earliest opportunity; or

(c) re-routing, under comparable transport conditions, to the passenger's final destination at a later date at the passenger's conventions, subject to the availability of seats.

(b) Right to care;

The air carrier is obliged to offer the passenger, free of charge, meals and refreshments, hotel accommodation in particular cases, transport between the airport and the accommodation so provided and two telephone calls, telex or fax messages, or e-mails.

If a passenger is denied boarding the operating air carrier is obliged to compensate the passenger in accordance with the above mentioned compensation scheme and gets re-routed or reimbursed according to Article 8 and particular care in accordance with Article 9 of the Regulation.

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delay and cancellation of flights. The High Court referred the case to the European Court of Justice (ECJ) for judicial review where it is, for the time being, pending. (Online: International Air Transport Association, <http://www.iata.org/whatwedo/government_industry/EU_regulation_261.htm>.

[360] EU Regulation 261/2004, *supra* note 289 art 6(1).

In cases of cancellation of a flight the air carrier is obliged to reimburse the passenger according the above mentioned system and reimbursement or re-routing in accordance with Article 8 and care in accordance with Article 9.

Article 5 of the Regulation, however, exonerates the operating carrier from paying compensation for the cancellation of a flight if 'it can prove the cancellation is caused by extraordinary circumstances which could not have been avoided even if all reasonable measures had been taken'.[361]

The Regulation defines denied boarding as 'a refusal to carry passengers on a flight, although they have presented themselves for boarding unless there are reasonable grounds to deny them from boarding, such for reasons of health, safety or security, or inadequate travel documentation'[362].

Denied boarding is a common practice of aircraft operators that has an operational and a marketing justification. Air carriers are sometimes not able to transfer passengers on the flight on which they were booked due to operational reasons such as late arrival or cancellation of connecting flights or the replacement of out-of-order aircraft by smaller ones. The transferred passengers, thus, create an unexpected demand for seats that may result in passengers on the later flight being denied boarding. 50% of denied boarding arises from operational reasons.

The second reason for denied boarding is a matter of marketing. In the majority of cases, passengers, who do not show up on their ticketed flight, so-called "no-shows", do not get reimbursed for the ticket not used. In order to ensure that every seat is sold on a particular flight, aircraft operators sell - according to the forecasted level of "no-shows" – over the seat capacity of a particular flight. However, unexpected events may upset their calculations of probability or they may aim for very high and profitable load factors. They then have to deny boarding in cases where the number of "no-shows" is less than that anticipated. In 1999, air carriers of the European Community dumped an estimated 250,000 passengers due to this practice.[363]

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[361] *Ibid, supra* note 289, art. 5(3)
[362] *Ibid.* art. 2(j).
[363] Proposal for a Regulation for the Parliament and the Council establishing common rules on compensation and assistance to air passengers in the event of denied boarding and of cancellation or long delays, online: European Parliament, the Legislative Observatory <http://www2.europarl.eu.int/oeil/file.jsp?id=217892>.

The above Regulation puts the financial responsibility for compensation for delay and denied boarding on the air carrier which, in turn, may more frequently wish to obtain insurance cover against this risk.

3 Council Regulation 2027/97 as amended by EU Regulation 889/2002

EU Regulation 2027/97 as amended by EU Regulation 889/2002 provides for the removal of the financial limits for death and personal injury of passengers in the course of carriage by air by an EU air carrier. Further, it implements the relevant provisions of the Montreal Convention, 1999, in respect of carriage of passengers and their baggage by air. It requires EU air carriers to have adequate insurance cover with regard to passengers and baggage up to the amount for which they are likely to become liable under the Regulation.[364] However, the Regulation does not provide for a specific minimum amount of the required insurance cover. In addition, it does only provide insurance requirements with regard to passengers and baggage without referring to any requirements with respect to cargo or to third parties on the ground. Advance payments of not less than SDR 16,000 per passengers in the event of death is required[365].

4 EU Regulation on insurance requirements for air carriers and aircraft operators (785/2004)

Council Regulation (EC) No 2407/1992 requires air carriers to be insured to cover liability in case of accidents with regard to passengers, baggage, cargo, mail and third parties without specifying the minimum amounts.[366] EU Regulation 785/2004 provides for air carriers and aircraft operators minimum insurance cover in respect of passengers, baggage, cargo, and to third parties to cover all aviation-specific liabilities including "acts of war, terrorism, hijacking, acts of sabotage, unlawful seizure of aircraft and civil commotion[367]. The Regulation entered into force on 1 May 2005[368]. The

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[364] EU Regulation 2027/97 as amended by EU Regulation 889/2002, *supra* note 50, art. 3.
[365] *Ibid.* art. 5.
[366] EC, *European Parliament and Council Regulation 2407/92 on licensing of air carriers*,[1992] O.J.L. 240, at, 0001-0007 art 7.
[367] EU Regulation 785/2004, *supra* note 140 art. 4(1).

Regulation does, however, not cover any mandatory insurance requirements with regard to the hull of the aircraft.

While EU Regulation 785/2004 sets the insurance requirements of air carriers flying into European airspace, the legal liability regime with regard to passenger, baggage, cargo and delay[369] is governed by international conventions, such as the Warsaw Convention/Montreal Convention 1999. Liability for third parties on the ground vests in the EU Member States. The European Commission took the position that liability for third parties on the ground has been sufficiently codified in the EU Member States.[370]

The liability regime with respect to third parties on the ground differs from one EU Member State to another. While in certain EU Member States, such as in Austria, Germany, the prevailing liability system with regard to third parties on the ground is based on a proven tort arising from negligence or any other wrongful act (wilful misconduct), in other Member States such as France, Sweden, the United Kingdom and the Non-Member State Switzerland, provide for strict third party liability. In Austria and Germany the liability for third parties on the ground is capped; but, in France, Switzerland[371] and the United Kingdom the liability is not limited.[372]

4.1. Scope of the Regulation

The Regulation is applicable to air carriers and aircraft operators (both commercial and private) flying within, into, out of, as well as over the territory of a Member State to which the Treaty applies (which includes 25 States

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[368] See Publication of the Official Journal of the European Union, (online: Official Journal of the European Union <http://europa.eu.int/eur-lex/en/archive/2004/l_13820040430en.html>) in connection with art. 8 of EU Regulation 785/2004, *supra* note 140, art. 8.

[369] But see art. 6 of EU Regulation 261/2004 on denied boarding compensation which places particular obligations on air carriers in the event of delay. This Regulation is, however, under judicial review by the European Court of Justice for an infringement with the relevant provision of the Warsaw Convention and Montreal Convention, 1999. See, "Order of the President of the Court, Court of Justice of the European Union", online: International Air Transport Association <http://www.iata.org/NR/ContentConnector/CS2000/Siteinterface/sites/whatwedo/file/order_of_the_court.pdf>.

[370] Proposal for a Regulation of the European Parliament and of the Council on insurance requirements for air carriers and aircraft operators, online: European Parliament <http://www2.europarl.eu.int/oeil/file.jsp?id=226252> at 6 and 15.

[371] Article 64 of the *Swiss Air Navigation Act*, 21 December 1948.

[372] Proposal for a Regulation of the European Parliament and of the Council on insurance requirements for air carriers and aircraft operators, *supra* note 370 at 5.

inclusive of their adjacent territorial water[373]). The requirements also extend to countries in the wider European Economic Area (EEA), which include countries such as Norway, Iceland and Lichtenstein.[374]

With respect to the carriage of mail, the insurance requirements are set out in Council Regulation (EEC) 2407/92[375] and in the national laws of the Member States.

The minimum insurance cover is categorized according to the amount of the certified Maximum Take-Off Mass (MTOM) specific to all aircraft types. The Categories of the Maximum Take-Off Mass[376] are based on the European Civil Aviation Conference (ECAC) Resolution on minimum insurance requirements (ECAC/25-1 as modified on 27 November 2002). The study performed by the ECAC presumes that the Maximum Take-Off Mass and the subsequent level of required insurance coverage correspond to a certain degree to the potential level of danger per type of aircraft.[377]

EU Regulation 785/2004 provides that air carriers and air operators are furnished with the minimum insurance cover in respect of 'each' and 'every' flight regardless of whether the aircraft operated is under a lease, joint-franchise or code-share.[378]

In practice the Regulation 785/2004 also affects other air carriers (and their insurers) registered in countries outside the territory of the European Union (EU)[379] or European Economic Area (EEA) given the international nature of aircraft operations. This is for instance true for aircraft operators registered in Switzerland[380], where, although their obligation is to comply with the insurance requirements provided by Swiss law, they also owe a duty of

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[373] The adjacent water extends 12 nautical miles (13.8 miles /22.2 kilometres) from the baselines. United Nations Convention on the Law of the Sea, singed at Montegno Bay on 10 December 1982, came into effect on 16 November 1994, online: <http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf> art. 3.

[374] New Insurance Requirements For Aircraft Operators" online: UK Civil Aviation Authorities <http://www.caa.co.uk/application.aspx?categoryid=14&pagetype=65&applicationid=7&mode=detail&nid=1036>.

[375] Council Regulation (EEC) No 2407/92, *supra* note 366.

[376] EU Regulation 785/2004, *supra* note 140 art. 3(f).

[377] Mauritz, *supra* note 99 at 145.

[378] EU Regulation 785/2004, *supra* note 140 art. 4(2).

[379] Austria, Belgium, Czech Republic, Denmark, Germany, Greece, Cyprus, Estonia, Finland, France, Hungary, Italy, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

[380] Switzerland forms neither part of the European Union (EU) nor of the European Economy Area (EEA).

compliance with EU Regulation 785/2004 as soon as they enter European airspace[381].

The Regulation is not applicable to: state aircraft as referred to in article 3(b) of the Chicago Convention on International Civil Aviation;[382] model aircrafts with a MTOM less than 20 kg; foot-launched flying machines (including powered paragliders and hang gliders); captive balloons; kites; parachutes (including parascending parachutes).[383]

Aircraft of less than 500 kilogramme (including gliders) and microlights used for non-commercial flights or local flight instruction not crossing international borders, are not required to hold insurance with respect to war and terrorist risks.[384]

EU Regulation is without prejudice to any rules of liability contained in relevant international conventions to which the EU Member States and/or the European Community are parties, and to community law and national law of the Member States. It has direct application in all EU Member States without the need for any further action by EU Member States. However, there is space for national variations, particularly as regards compliance and enforcement.

The requirements distinguish between liability in respect of passengers, baggage and cargo on the one hand, and third-party liability on the other. As regards passengers, baggage and cargo, the basic requirements for insurance are as follows:

Under the regulation the minimum passenger liability insurance is 250,000 SDR[385], equivalent to USD 360,492/EUR 302,835[386] per passenger. For non-commercial aircraft with a MTOM of 2,700 kilograms or less[387], each EU Member States has the discretion to impose a lower level of minimum insurance, provided that such cover is at least SDR 100,000 (USD

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[381] For example, on approach to Zurich-Airport, a great number of flights are performed from the north over German (and European airspace), therefore being subject to EU laws.
Since January 2005, the Swiss based "Winterthur Insurance" aliened the majority of its insurance policies for aircraft operators with the new provisions of EU Regulation 785/2004. It does not offer insurance cover for air carriers for solely Swiss territory (Interview of Mr. Bandle, (21 June 2005), Swiss Pool for Aviation Insurance, Zurich-Airport).

[382] *Convention on International Civil Aviation*, 7 December 1944, ICAO Doc. 7300/6.

[383] EU Regulation 785/2004, *supra* note 140 art. 2(2).

[384] *Ibid.* art. 2(g).

[385] Special Drawing Rights, *supra* note 55.

[386] *Ibid.*

[387] There under fall all Cessna single engine's Skyhawk, Skyhawk SP, Skylane, Turbo Skylane, Stationair, Turbo Sationair; see: Our aircraft online: Cessna aircraft Company, <http://se.cessna.com/>.

144,197/EUR 121,134) per passenger.[388] The insurance needs to cover the maximum number of passenger seats in an aircraft regardless of whether or not they are occupied for any given flight.

With respect to liability for baggage, the minimum insurance requirement is set at SDR 1,000 per passenger in commercial operations[389].

For liability with respect to cargo, the minimum insurance cover is set at SDR 17 per kilogram in commercial operations[390].

However, these minimum levels of insurance are not required in respect of flights over the airspace of the European Union by non-EU air carriers, or by aircraft operators using aircraft registered outside the European Union, provided that these flights do not involve a landing on, or a take-off from, EU territory.[391]

4.2 Minimum insurance requirements with respect to third parties

The minimum insurance requirement with respect to third parties are spelt out on a 'per accident' basis for 'each and every aircraft' and relates to the (MTOM)[392] stated in the certificate of airworthiness of the aircraft. The term 'third party' is defined as any legal or natural person excluding passengers and on-duty crew (flight crew and the cabin crew).[393] Thus, the minimum insurance cover which has to be purchased by the aircraft operator include only third parties damage caused on the surface of the earth but does not include mid-air collisions.

The insurance requirements for third parties encompass the 'use of an aircraft from the moment when power is applied to its engines for the purpose of taxiing or actual take-off until the moment when it is on the surface and its engines have completely stopped'. Further, manoeuvres of towing and pushing back of the aircraft or by powers which are typical for the drive and the lift of the aircraft are deemed to fall within the scope of the Regulation.[394]

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[388] EU Regulation 785/2004, *supra* note 140 art. 6(1).
[389] *Ibid.* art. 2(2).
[390] *Ibid.* art. 2(3).
[391] *Ibid.* art. 6(4).
[392] *Ibid.* art. 3(f).
[393] *Ibid.* art. 3(h).
[394] *Ibid.* art. 3(d).

The minimum insurance requirements with respect to third parties to be in place for each aircraft over-flying, landing on or taking off from the EU territory are listed in accordance with the following table. Section 4 of the table below refers to the relevant aircraft types falling within these categories.[395]

Category	MTOM (in kg)	Minimum insurance limits in SDR	in USD[396]	Aircraft types[397] (examples)
1	< 500	750 000	1 095 052.5	
2	< 1 000	1 500 000	2 190 105	
3	< 2 700	3 000 000	4 380 210	Single engine Cessna
4	< 6 000	7 000 000	10 220 490	Cessna C525
5	< 12 000	18 000 000	26 281 260	Aerospatiale CARV
			50 000 000[398]	
6	< 25 000	80 000 000	116 805 600	Antonov A140, Challengers, Hawker800/900, Cessna Citation X
7	< 50 000	150 000 000	219 010 500	Fokker 100, Golfstream, Globals, Canadair 700/900
8	< 200 000	300 000 000	438 021 000	B737, B767, A319CJ, A320, A321
9	< 500 000	500 000 000	730 035 000	B747, B777, B787[399], A330, A340
10	> 500 000	700 000 000	1 022 049 000	A380[400]

As an example, a Cessna Citation Encore (Business Jet) with a MTOM of 7,544 Kilogramme, operating non-commercially with a capacity of 2 crew

[395] *Ibid.* art. 7(1).
[396] For the exchange rate; see *supra* note 62.
[397] For a full list of the main aircraft types used in Civil Aviation; see AIRCLAIMS database (2002) published Annex to Explanatory Memorandum to the European Proposal.
[398] A sub-limit of USD 50 million for war risk was introduced after the events of 11 September 2001. This threshold envisages a scenario where after a similar cancellation or introduction of such a sub-limit for war-risk insurance for third parties, most airlines would - under EU Regulation 785/2004 – fail to meet the minimum insurance requirements. Supplementary cover would therefore need to be provided by governments and/or international funding schemes such as GLOBALTIME, EUROTIME, or EQUITIME.
[399] Scheduled to put in service in 2006.
[400] Scheduled to be put into operation in early 2006.

and 6 passengers is required to carry insurance cover of SDR 18 million (USD 26,327,880[401]) for third party insurance in addition to the per passenger liability cover of SDR 250,000 (6 passenger: 6 x SDR 250,000/USD 365,665 = SDR 1,500,000/USD 2,193,990) and in addition to the minimum cover of SDR 1,000 for baggage per passenger (6 x SDR 1,000/USD 1,462 = 6,000/USD 8,772). In this example, the total minimum insurance cover for this type of aircraft equals SDR 19,506,000 or USD 28,530,642.[402] Given the exposure for unlimited liability vis-à-vis third parties and passengers,[403] the sum payable for compensation may exceed the aforementioned minimum. Thus, a prudent aircraft operator would purchase higher insurance cover (as is the case in our example where the guaranteed sum for personal and property damage to third parties and passenger on a Combined Single limit equals USD 50 million[404]).

While EU Regulation 785/2004 exempts air carriers from third countries and carriers using aircraft registration outside the European Community of the minimal insurance requirements for passenger, baggage and cargo in the event of over-flying the territory of the European Union, the same is not applicable for third party insurance.[405]

With regard to insurance cover for damage to third parties of war and terrorism related perils ("acts of war, terrorism, hijacking, acts of sabotage, unlawful seizure of aircraft and civil commotion") EU Regulation 785/2004 makes reference to the market reality[406] by providing that an air carrier fulfils the requirements of this Regulation by purchasing insurance for these perils on an 'aggregate'[407] rather than on a 'per event' basis.[408]

It is significant to note, that EU Regulation 785/2004 sets minimum insurance requirements also for third parties on the ground, although there exist in this regard no other international Treaty - with the exception of the

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[401] For the exchange rate see, *supra* note 62.
[402] See Aircraft Insurance Certificate (Annex 1).
[403] This type of aircraft operates commonly no scheduled international services but rather on demand services; consequently, the underlying liability regime is outside the scope of the Warsaw Convention, its annexes and the Montreal Convention 1999.
[404] See Aircraft Insurance Certificate (Annex 1).
[405] EU Regulation 785/2004, *supra* note 140 art. 6(4).
[406] "New Minimum Insurance Cover for Air Carriers and Operators" online: International Law Office <http://www.internationallawoffice.com/ld.cfm?Newsletters__Ref=8806>.
[407] For an explanation of this term, see *supra* chapter III C 5. .
[408] EU Regulation 785/2004, *supra* note 140, art. 7(1) para 2.

Montreal Convention 1999 with respect to passengers, baggage and cargo and the Rome Convention 1952.

As examined above, the *Draft Convention* once ratified by the Member States of ICAO provides in its article 13 minimum insurance requirements, coupled with an international liability regime for the benefits of third Parties.

4.3 Compliance and enforcement – sanctions

European air carriers are obliged to deliver evidence (in the form of an insurance certificate) to the State of their registry. Non-community aircraft registered outside the European Union have to provide the necessary proof to the Member State to or from which their flights are operated.[409]

As has been stated, the nature of the EU Regulation 785/2004 is that no additional rules by Member States have to be effected and, thus, it took effect in all Member States on 1 May 2005. The enforcement of the Regulation, however, lies upon the Member States which have to ensure that air carriers comply with it. They are also required to establish appropriate sanctions for non-compliance. The Regulation obliges Member States with the implementation of an effective, proportional and dissuasive sanction system for any infringements of the Regulation.[410] In particular, the Regulation requires Member States to prevent the take-off of aircraft that are not adequately insured.[411]

The appropriate body to enforce the Regulation is commonly the national Civil Aviation Authority of the Member State concerned. For example, in the United Kingdom, this is the Civil Aviation Authorities (CAA) which established a statement of agreed practice for the enforcement of the EU Regulation 785/2004.[412] Different procedures will be applied to UK public transport operators, other UK aircraft operators, foreign air carriers under permit and EU-registered air carriers, and to other foreign aircraft. As UK commercial airlines are already required to be furnished with such insurance, mainly private aircraft operators are affected, as there have been no previous

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[409] *Ibid.* art. 5.
[410] *Ibid.* art. 8(4).
[411] EU Regulation 785/2004, *supra* note 140 art. 7.
[412] Statement of agreed practice – Regulation 785/2004 – Schedule,, online: Civil Aviation Authorities, <http://www.caa.co.uk/docs/148/DfT%20Statement%20of%20Agreed%20Practice%20Schedule1.pdf> at 3.

mandatory requirements in the United Kingdom for them to carry any type of insurance.

For UK public operators the insurance details need to be checked at the time of either on applying for an operating licence or for existing licence holders on renewal. Physical checks of aircraft will be undertaken when appropriate. The compliance by other UK aircraft operators will be checked on new registration, re-registration and in cases of change of ownership. When evidence is not supplied within two months, then action will be taken by the CAA to de-register the aircraft. The CAA will carry out physical checks of 100 aircraft and 50 gliders per year.[413]

Foreign air carriers operating under permit and EU-registered air carriers are subject to 100 physical checks per year while 100 physical checks will be performed for all other foreign aircraft. The CAA issues a direction not to fly in case of inadequate insurance cover of the aircraft operator.[414]

4.4 Implications for the General Aviation - Insurer[415]

Most established air carriers purchase higher levels of insurance cover than required by the Regulation given their unlimited liability for passengers and third party. In particular, general aviation aircraft operators have been affected by the Regulation requiring necessary insurance cover with respect to third parties, since national laws of the Member States, other European States[416] and States of third countries, commonly require lower levels of insurance. As a consequence, they have been obliged to purchase additional insurance cover as to comply with the Regulation which came into force on 1 May 2005. But not only aircraft operators were affected by the regulation but

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[413] *Ibid.*

[414] *Ibid.*

[415] Information based on an interview of Mr. Bandle (21 June 2005), Swiss Pool for Aviation Insurance (SPL), Zurich-Airport.

[416] Article 125 (1) of the *Swiss Air Navigation Degree,* 14 November 1973.
The Swiss Aviation Degree 14th November 1973 requires aircraft operator to be insured with respect to its liability for damages to third parties at a considerably low level. For example, a Cessna Citation Encore aircraft with a Maximum Take-off weight of 7544kg is under present Swiss Law solely obliged to carry insurance cover of approximately SDR 9,565,350. Under EU Regulation 785/2004 almost double amounts of insurance cover is required amounting SDR 18 million. The aforementioned limits are now under review and are to be brought into line with EU Regulation 785/2004 later in 2005. (Interview of Mr. Noël, (23 June 2005) Swiss Federal Office for Civil Aviation, Bern). The low level of insurance required by Swiss Law was an issue when a Cessna flown into the Pirelli tower in Milan, on 18 April 2002 (Interview of Ms. Regula Dettling-Ott, Aeropolital Affaires, (27 June 2005) SWISS International Airlines, Zurich-Airport).

also the insurance companies offering aircraft insurance were obliged to redraft their insurance policies to bring them in line with the minimum requirements set forth by the Regulation.

4.5 Criticism

The Regulation has been criticized by the aviation insurance industry for its vague drafting and its ignorance of some insurance practices. Indeed, EU Regulation 785/2004 disregards, to certain extent, insurance practices with regard to deductibles (self-insurance), that are frequently applied in aircaft insurance with respect to baggage and conventional exclusion clauses in aviation insurance policies. Terms such as 'deductible' or 'exclusion clauses' did not find their way into the Regulation. The relevant provisions with respect to insurance cover are solely worded as to oblige air carriers to *be insured in accordance with this Regulation*[417] or to *ensure that insurance cover exists for each and every flight.*[418] With respect *to liability of passengers, baggage and cargo* the Regulation only provides *for a minimum insurance cover.*[419] Member States of the European Union are free to increase their limits of mandatory insurance. Furthermore, the Regulation requires aircraft operators to purchase insurance cover for risks which are commonly excluded from the cover and which cannot be purchased separately, such as cover for nuclear risks.[420] The Regulation specifies that the *insured risk [for third parties] shall include acts of war, terrorism, hijacking, acts of sabotage, unlawful seizure or aircraft and civil commotion.*[421] Should these not be available on a 'per accident' basis an 'aggregate' based policy would be sufficient. The Regulation does, however, not take into consideration whether such cover is or will be available on the insurance market. As referred to above, after the event of 11 September 2001, the insurance market withdrew cover for war risks and subsequently introduced a sub-limit of USD 50 million.

Charges of inaccurate and ambiguous drafting have been levelled against the drafters of EU Regulation 785/2004. To defend this apparent

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[417] EU Regulation 785/2004, *supra* note 140 art. (4(1).
[418] *Ibid*, art. 4(2).
[419] *Ibid*. art. 6(1-3).
[420] Harold Caplan, "Post 9/11-Air Carrier Liability Towards Third Parties on Land or Water as a Consequence of War and Terrorism" (2005) XXX/1 Air & Sp. L. at. 24.
[421] EU Regulation 785/2004, *supra* note 140 art. 4(1).

drawback, or to provide a justification for the lacunae that exist, one must keep in mind the fact that the European Commission is obliged to ensure that, in enacting new Community Law, it does not extensively remove competencies normally inherent to the Member States of the European Union. The European Commission has, in its law making process obliging directly its Members States, to balance their interests and to ensure that competencies historically inherent to member States are not extensively withdrawn.[422]

Although the Regulation regards an insurance cover for war risks on an aggregate basis as sufficient, difficulties may arise if whole or parts of such cover has been exhausted during a policy year.[423] It is not clear whether an air carrier, when its cover has fallen under the required minimum, would be obliged to purchase additional insurance for the remainder of the policy year in order to meet the insurance requirements provided by the Regulation.

As referred to earlier, the new version of insurance policies will remove cover for Weapons of Mass Destruction and will not be worded as to provide sufficient levels of WMD passenger and third party cover regarding war risk insurance.

However, whether an insurance policy complies with the requirements of the Regulation will be a question of interpretation. This will be an issue on the level of the enforcement and may vary from one EU State to another.

Although the Regulation imposes an obligation on the aircraft operator to meet the minimum insurance cover, aviation insurers also are affected by it. They have to calculate and assess the new requirements imposed by the Regulation, issue these new insurance policies to the aircraft operator and incorporate the minimum cover in their insurance policies.

While the categorized insurance minima are spelled out in SDR in the Regulation, aircraft insurance policies are normally issued in the relevant national currency. Difficulties may arise particularly for 'general aviation' operators that purchase solely the minimum cover required by the Regulation.

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[422] Interview of Mr. Johansson, European Commission, (10 June 2005), Directorate-General for Energy and Transport, Brussels.
[423] Interview of Mr. Goh, (30 March 2005), International Air Transport Association, Montreal.

Given that the SDR is subject to a daily fluctuation as to the relevant national currency it has to be ensured that no lack in cover occurs.[424]

It is noteworthy that the Regulation only requires a minimum insurance cover while Member States may impose a higher minimum on aircraft operators.[425]

4.6 First impacts of the Regulation on the aviation industry – grounding

As stated in the Regulation, if a Member State is not satisfied that the conditions of this Regulation are met, it "shall not allow an aircraft to take off, before the aircraft operator concerned has produced evidence of adequate insurance cover in accordance with this Regulation."[426] The first effects of the Regulation have already been reported. The CAA prevented a B-17G[427] so-called 'Sally B', a historic and vintage aircraft from taking off due to non-compliance with the minimum insurance requirements provided by the Regulation.[428] In drafting the Regulation no consideration has been made of aircraft which fly very seldom. In another case, an aircraft in Germany was grounded because of the lack of minimum insurance as required by the EU Regulation.[429]

4.7 Regulation 785/2004 and the exclusion of Weapons of Mass Destruction (WMD)

After the worldwide aftermath of the terrorist attacks on the United States of 11 September 2001, the insurance market withdrew their insurance cover for war and terrorism at 7 days notice. The worldwide fleet of airlines would have been grounded if national governments in a very short period not established additional insurance coverage for these perils.

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[424] 'Winterthur Insurance' is one of the leaders of aircraft insurance in Switzerland. It accounts the Swiss Franc to the SDR as two fold, (1 SDR = CHF 1.844920, 11 August 2005) to smooth out any currency fluctuations, thus constantly ensures compliance with the Regulation.

[425] E-mail from Christopher Jones, Aviation Manager of the International Underwriting Association (IUA) (24 July 2005).

[426] EU Regulation 785/2004, *supra* note 140 art. 8(7).

[427] The maximum take-off weight equates to that aircraft is classified along with types such as the Boeing B737. The necessary insurance cover would represent an extreme financial burden for the operators of such aircraft.

[428] Dave Eade and Gary Parsons "A debt we owe" online: Air- scene UK <http://www.airsceneuk.org.uk/hangar/2002/sallyb/sallyb.htm>.

[429] Interview of Mr. Bandle, (21 June 2005), Swiss Pool for Aviation Insurance, Zurich-Airport.

To this writer's knowledge, there is already an air carrier that had WMD cover excluded from its hull coverage insurance policy renewal. Thus, in case of an accident, this air carrier would be obliged to compensate damage caused in the absence of insurance cover for WMD out of his own assets. In the light of the financial health of the aviation industry and particularly for small air carriers a major claims arisen out of this type of risk could easily wipe out an air carrier.

V Conclusion

The aviation industry is acutely affected by the vicissitudes of the world order, both political and economic. In addition, the element of risk to which the aviation industry is prone keeps evolving and menaces that once weren't worth much thought now need to be reflected upon and warrant careful planning. New hazards and perils seem to appear quite frequently now, and the situation is exacerbated by the ever increasing financial and legal burden and legal exposure imposed by new legislation and jurisprudence.

With the appearance of new perils (such as Weapons of Mass Destructions, dirty bombs or MANPADS), the only haven where airlines may ostensibly seek shelter is under the umbrella of insurance. In the current scenario, airlines are encouraged to purchase insurance to mitigate any losses they suffer. Thus, aviation insurance is a vital discipline that requires greater attention and study.

From an insurer's point of view, it is critical to not only keep abreast of the changes in the aviation industry so as to offer products that the aircraft operators need but also ensure the financial viability of any scheme or plan. "Harebrained" schemes must not be put in place such that a minor catastrophe leads to the insolvency of either the insurance company or the airline which suffers the setback. The intended introduction of new exclusions for certain perils from the insurance policy should also be closely examined. Airlines should not have t bear the financial burden for perils which are not directed against them but rather against the state under whose flag the airline is flying.

Governments, insurance companies and aircraft operators should cooperate closely in order to ensure the smooth functioning of the air transport industry, insurance and government activity – most of all, where all three realms seem to converge, coexist and operate.

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Annex 1

Aircraft Insurance Certificate of a Cessna Citation

Annex 2

Special Policy Provisions (SP)

SPECIAL POLICY PROVISIONS (SP) HB-

This supplement is to be regarded as a component of the policy no. of which the provisions shall apply insofar as they are not specifically altered by the following:

1. GENERAL

1.1. War risks and other perils

The policy does not cover claims caused by war, confiscation, hijacking or similar events, in accordance with the enclosed war risk exclusion clause AV 48 B.

2. LIABILITY INSURANCE

2.1. Noise, pollution and similar events

The policy does not cover loss or damage caused by noise, pollution and similar events in accordance with the enclosed exclusion clause AV 46 B.

Coverage pursuant to art. 2.3.3. of the General Policy provisions (GP), however, remains reserved.

2.2. Inclusion of war risks and other perils

All the risks, except those of subparagraph b), excluded by the clause AV 48 B are covered according to the clause AV 52 D

2.3. Damages due to radioactive contamination

The policy does not cover damages due to radioactive contamination or ionising radiation in accordance with the enclosed clause AV 38 B.

3. HULL INSURANCE

3.1. Agreed value

The sum of insurance (agreed value) of the aircraft is

USD 1'300'000.--

3.2. Deductible

In case of partial loss (FTIG):

USD 50'000.--

The deductible is not applicable in cases of total loss or constructive total loss.

3.3. Inclusion of war risks and other perils

War risks and other perils, excluded by the clause AV 48 B are covered according to the enclosed LSW 555 B clause.

4. SPECIAL

4.1. General agreement

In addition to that, the special provisions (SP) of the general agreement shall apply.

4.2. Territorial coverage

The insurance is valid worldwide, including overseas flights.

4.3. Policy period

The insurance begins on 16.01.2005 and ends automatically on 15.01.2006 unless it is renewed by a new written agreement.

4.4. Enclosures

AV 38 B
AV 46 B
AV 48 B
AV 52 D
LSW 555 B
Asbestos
AVN 2000
AVN 2001

Annex 3

The Schedule

winterthur

The Schedule

Policy Number:

Policyholder:

P.O. Box
8058 Zurich-Airport

Aircraft hereby insured:

Manufacturer/Model:	Cessna Citation
Registration:	HB-
Agreed Value:	USD 1'300'000.--

Geographical Limits: Worldwide with main operation in Europe but excluding the following countries:

Afghanistan, Albania, Algeria, Angola, Bosnia, Burundi, Colombia, Congo, Democratic Republic of Congo (Zaire), East Timor, Ecuador, Eritrea, Ethiopia, Guinea Bissau, Iran, Iraq, Yemen, Kashmir, Kyrgistan, Kosovo, Lebanon, Liberia, Libya, Macedonia, Montenegro, Palestine Pakistan, Peru, Rwanda, Sierra Leone, Somalia, Sri Lanka, Syria, Serbia, Sudan, Sumatra (Indonesia), Tadjikistan, Uzbecistan and the following ex-USSR States/Republics: Azerbaijan, Checheno/Ingushskaya.

Excluding Confiscation, etcetera by Government(s) of: Registration

Period of Policy:

From: 16.01.2005
To: 15.01.2006
Both days inclusive

Extortion and Hi-jack Expenses Limit of Policy:

90 % of agreed value — any one loss and in all (Warranted remaining 10 % uninsured)

Premium: as per agreement

Immediate notice of changes in risk or of circumstances likely to give rise to a loss hereunder to be communicated to:

"Winterthur"
Swiss Insurance Company
Head Office
General Guisan-Strasse 40
CH-8401 Winterthur/ Switzerland

Phone: 043/ 816 74 86
Telefax 043/ 816 74 90

Annex 4

Aircraft Insurance

General Provisions (GP)

Aircraft Insurance

General Provisions (GP)

The original German wordings (Luftfahzeugversicherung Vertragsbestimmungen AVB) governs the legal interpretation of your policy.

Edition 01.05

Contents

1 Provisions common to all insurances

1.1

Contents of the insurance policy

1.1.1 The policy will cover the following insurances individually or in combined form:

- insurance of liability claims of third parties outside the insured aircraft (third party liability insurance)
- insurance of liability claims of passengers (passenger liability insurance)
- combined single limit
- aircraft hull insurance
- occupant accident insurance.

1.1.2 The insurances proposed and the relevant premiums are stated in the policy.

1.2

Validity of insurances

1.2.1 If the insured aircraft is not declared to be a **club aircraft** in the policy, all insurances, except third party liability insurance, **are not applicable** if the insured aircraft is left to a club or used for **club activities.**

1.2.2 The insurances, except third party liability insurance, are valid only

- if the pilot of the insured aircraft is **one of the persons listed in the policy**
- on flights for the purpose of testing, demonstration, collection or delivery by pilots of a repair, maintenance or aircraft trade company
- on acceptance and test flights by pilots of the Federal Office for Civil Aviation.

1.2.3 **Territorial application:** The insurances apply all over the world.

1.2.4 **Time of validity:** The insurance covers any loss or damage occurring within the policy period.

1.3

Increase and reduction of risk

Any **change** of a fact relevant to the assessment of the **risk,** stated in the policy by both parties when signing the policy, must be immediately notified to the Company in writing. If the policyholder fails to give written notification of an aggravated risk, the Company shall no longer be bound by the policy.

In case of an **increase of risk,** the Company may increase the premium for the remaining policy period or cancel the policy within 14 days after having received the notification by giving 2 weeks notice. The policyholder has the same right of cancellation if agreement is not reached on the premium increase. In either case, the Company is entitled to receive the premium increased on the agreed scale as from the beginning of the aggravated risk until the policy lapses. In case of a reduction of risk, the Company reduces the premium correspondingly as from the date of notification by the policyholder.

1.4

Beginning of insurance cover and policy period

1.4.1 **Third party liability insurance** cover begins on the date entered in the insurance certificate; **insurance cover for other risks** begins on the date stated in the policy, respectively in the written cover note.

1.4.2 Until the policy is handed over, the Company may reject the insurance proposal in writing, even if an insurance certificate or a cover note has been provided. If the insurance is rejected, coverage will lapse 3 days after the notification has reached the policyholder (subject to special conditions in aviation legislation). The premium is due proportionally for the period of cover.

1.4.3 At the end of the period specified, the policy will be renewed annually, unless one of the parties has received a notice of cancellation at least 3 months prior to the end of the period. If the policy is written for less than one year or without tacit renewal, cover will end on the date stated in the policy.

1.4.4 The insurance end when the insured aircraft is deleted from the Swiss Aircraft Register.

1.5

Premium payment and refund

1.5.1 The premiums are due on the date stated in the policy or on the deposit ticket. If payment by instalments has been arranged, the instalments are due in the course of the insurance year are considered as deferred.

1.5.2 If the policyholder has paid the premium for a certain period of insurance in advance and the policy is cancelled for any reason before the end of this period, the Company refunds the premium for the term of insurance that has not lapsed **(subject to 1.8.2/1.8.3)** and does not claim any instalments still due.

This provision does not apply

- if the policyholder cancels the contract at the time of a claim;
- in the case of a change of aircraft, if the policyholder takes out the insurance for the new aircraft with another insurance company – even though the Company is prepared to effect the insurance –, or if the insurances are transferred to a new holder or owner;
- if the insured person has violated his obligations towards the Company with the aim of deception;
- if the contract has been in effect for less than a year at the time it lapses and is cancelled by the policyholder;
- in the case of total loss of the aircraft.

1.6

Suspension

1.6.1 If the policyholder wishes to limit the cover of flight risk to the ground risk, he must notify the Company in advance.

If the certificate of airworthiness is deposited at the Federal Office for Civil Aviation for not less than 30 days running, the following shall apply:

- the third party liability insurance **only applies on the ground,** including in the case of stationary operation of the engines. Claims for damage concerning events in connection with a flight (including preparatory and concluding works) as well as events on a runway in use are **not insured;**
- the hull risks insurance only applies within the scope of the ground risks hull insurance;
- the passenger liability and occupant accident insurances are no longer applicable.

1.6.2 In the case of full restoration of the insurance, 60 % of the annual premium for all insurances are refunded pro rata temporis for the term of suspension.

1.6.3 If the suspension is the consequence of an insured claim, the Company does not grant any premium credit entry.

1.6.4 **This provision of suspension** does not apply to helicopters, jets, turboprops, hang gliders (deltas/paragliders), ultralight aircraft, parachutes and model aircraft.

1.7

Change of premium rates

1.7.1 If the rates of premiums or deductibles change within the term of contract, the Company may ask for an adjustment of the contract as from the following insurance year. For that purpose, the Company has to inform the policyholder of the change no later than 25 days before the end of the insurance year.

1.7.2 The policyholder has the right to cancel the contract as a whole or those insurances affected by the change, effective as of the end of the insurance year. To be valid, such cancellation must reach the Company on the last day of the insurance year, at the latest.

1.7.3 If the policyholder fails to cancel the insurance, this will be understood as agreement to the adjustment of the contract.

1.8

Change of holder/owner

1.8.1 The Company shall be notified immediately of any change of holder or owner.

1.8.2 If the holder resp. owner of the insured aircraft changes, any right and obligation of hull insurance and third party liability insurance shall be transferred to the new holder resp. owner unless the latter rejects the transfer of the insurances in writing within 14 days after the transfer. The remaining insurances will lapse unless continuation has been expressly agreed upon. All insurances, however, will lapse automatically if the new certificate of airworthiness is issued on the basis of a different insurance policy.

1.8.3 If the new holder resp. owner has received notification of the existence of the insurance only after this period has expired, he may cancel the insurance within 14 days from the due date of notification, however no later than 14 days from the due date of the next annual premium or partial premium. The policy lapses when the notification reaches the Company. The premium is due proportionally up to this date.

1.8.4 If the new holder resp. owner rejects the insurance within the period of 14 days after the transfer, the insurances are not transferred to him (subject to special conditions in aviation legislation).

1.8.5 The Company is entitled to cancel the policy within 14 days from having received notification of the change of holder resp. owner. The insurances lapse 4 weeks after cancellation is received by the new holder resp. owner.

The instalment relating to the unexpired term of insurance will be refunded to the new holder resp. owner.

1.9

Loss or damage

1.9.1 **Duty to give notice**

The Company must be given notice **immediately** of any loss or damage that might affect this insurance policy.

1.9.2 **Liability insurance**

The Company will conduct negotiations with the injured party in its name or as a representative of the insured person.

The insured person may not acknowledge any claims nor make any payments by himself. If civil proceedings ensue, their conduct shall be left to the Company. Any settlement of claims agreed by the Company is binding upon the insured person.

1.9.3 **Aircraft hull insurance**

Orders for repair work may only be issued with the consent of the Company after previous presentation of an estimate of costs.

In urgent cases, repairs may be undertaken without previous consent of the Company, provided they are not expected to exceed the sum of CHF 1000.

1.9.4 **Occupant accident insurance**

In the event of an accident, medical treatment shall be obtained as soon as possible. The physician giving such treatment shall be relieved of his professional secrecy towards the Company.

On request, every insured person is obliged to undergo a medical examination by a physician designated by the Company.

In the event of death, the surviving beneficiaries shall agree to an autopsy, provided causes other than the insured accident could be responsible for death.

1.9.5 **Breach of contractual obligations**

If the insured person is guilty of breaching the contractual obligation to notify or if he acts improperly, the Company may reduce the indemnity correspondingly, unless the insured person can prove that such breach had no bearing on the extent or assessment of the loss.

1.10

Cancellation in cases of claim

1.10.1 After any event for which the Company pays compensation, the contract as a whole or that part of it affected may be cancelled, either

- by the policyholder no later than 14 days after having been informed of the payment;
- by the Company, on payment at the latest.

1.10.2 If the policyholder cancels the insurance, coverage lapses when the notice of cancellation is received by the Company.

1.10.3 If the Company cancels the insurance, coverage lapses 14 days after the policyholder has received the notice of cancellation.

1.11

Place of jurisdiction

The insured person or the party entitled to claim may file a suit against the Company at his Swiss domicile or at the domicile of the Company.

1.12

Applicable law

The Swiss Federal Law on the Insurance Contract (VVG) and the provisions on insurance and safeguarding in the Swiss aviation legislation are applicable in addition to these provisions.

1.13

Definitions

Occupants Crew and passengers.

Crew Those persons authorised to operate the aircraft or to render services on board authorised by those responsible, and who are in possession of the officially prescribed identification documents and licences, in pursuance of their function.

Passengers Occupants who are not members of the crew. Pilot trainees operating dual controls and parachutists are also considered to be passengers.

Third parties All persons with the exception of the holder and the occupants.

Clubs Associations and companies which, among other things, aim at placing aircraft at the disposal of members and/or non-members.

Carriers Carriers transporting persons, luggage or goods by air against payment.

Insured aircraft The aircraft (including its built-in components as well as equipment inside the aircraft when the damage occurred).

2 Insurance of liability claims from third parties outside the aircraft (third party liability insurance)

The following applies in addition to the General Provisions:

2.1

Insured claims

The insurance covers claims relating to civil law which are raised against an insured person on the basis of legal liability provisions as a consequence of

- death or injury to persons (damage to persons)
- damaging or destruction of property (damage to property)

caused by the insured aircraft.

In the following situations:

- when operating the insured aircraft;
- in accidents caused by the aircraft if it was not in operation.

The use of an emergency parachute shall be considered the same as the use of the aircraft.

2.2

Insured persons

The insurance covers

- **the holder, the owner,** and persons who are responsible on their behalf according to foreign law;
- **members of the crew;**
- the persons controlling model aircraft.

2.3

Insurance benefits

The Company pays justified claims and defends unjustified claims.

2.3.1 Payments made by the Company (including interest on claims, lawyer's fees, costs for an expert opinion, court fees as well as third party compensation and costs for the prevention of loss) are limited to the guarantee sum for each insured event stated in the policy (subject to 2.3.2), without prejudice to the rights of the claimants. The total of all losses or damage resulting from the same cause will count as one event, irrespective of the number of claimants.

If as a consequence of an unforeseen event the occurrence of an insured event is imminent, the insurance also covers the costs on the insured person's account which are caused by appropriate measures to avert this danger (costs for the prevention of loss).

2.3.2 In the countries of the EU and EFTA members, the guarantee sum officially prescribed by the country flown to is applicable, provided it is higher than the sum stated in the policy.

If, however, an unlimited, a lower, or no safeguarding at all are asked for, the guarantee sum stipulated in the policy is applicable.

2.3.3 For loss or damage caused by **noise, vibrations** and the like, payments are limited to the compulsory guarantee sums of the Swiss Federal Decree on Aviation, even if the guarantee sum stated in the policy is higher.

2.3.4 In Europe and all countries bordering the Mediterranean Sea, damages resulting from armed conflict, strike, unrest, uprising, terrorism, violence, sabotage, confiscation, hijacking, or requisition are co-insured up to the minimum guaranteed amount (in accordance with article 125 LFV). This expanded coverage is considered a one-time guarantee per annum for aircraft up to a maximum take-off weight of 2700 kg. Excluded are turboprops and jets as well as helicopters.

2.4

Deductible

2.4.1 In case of damage to crops, land and woods caused by power gliders, gliders, hang gliders (deltas/paragliders), parachutes, model aircraft or kites, the insured person shall bear CHF 200 per event.

2.4.2 In case of damage to third party property caused by balloons, the insured person shall bear CHF 1000 per event.

2.5

Claims not insured

The insurance does not cover claims (subject to special conditions in aviation legislation)

- of the holder;
- of the insured person liable in the individual case;
- of **occupants** for injuries suffered when using the insured aircraft;
- for damage to the insured aircraft;
- for damage to property inside or attached to, the insured aircraft (incl. slung cargo);
- as a consequence of using sprays and carrying along chemicals for this purpose;
- if the insured aircraft is used **without the officially prescribed identification documents or licences** for the members of the crew or the insured aircraft;
- if the aircraft is deliberately used for offences and crimes by the insured persons;
- for damage resulting from the aircraft being used in military operations;
- in case of events resulting from war or public disorder (provision is made for the expanded coverage in accordance with section 2.3.4);
- relating to effects of ionising radiation and earthquakes.

The following applies in addition to parachutes:

Claims are not insured

- for injuries suffered by the passengers of aircraft used for parachuting purposes (aircraft dropping off parachutists);
- for damage to property inside the aircraft dropping off parachutists;
- for damage to the aircraft dropping off parachutists as long as the parachutist is in or on the aircraft.

2.6

Harm to the environment

In case of damage caused by harm to the environment and the like (directly or indirectly caused by contamination or pollution of any kind, electric or electromagnetic, interference, impairment of the use of property), the payments are limited to the compulsory guarantee sums according to the Federal Decree on Aviation, even if the guarantee sum stated in the policy is higher.

However, this restriction does not apply if the harm to the environment is the cause or consequence of a crash, a fire, an explosion, a collision or a recorded emergency entailing extraordinary flying operations.

2.7

Special conditions in aviation legislation

The following applies up to the compulsory guarantee sums:

2.7.1 For the **injured third party on the ground,** the particulars contained in the insurance certificate are decisive, even if they do not coincide with the provisions of this insurance policy.

2.7.2 If the policy expires

- during the flight, insurance cover will extend up to the next landing at which the aircraft's papers can be checked officially, the maximum extension being, however, no longer than 24 hours.
- earlier than stated in the insurance certificate, insurance cover will continue until the certificate of airworthiness is withdrawn or proof of a new guarantee is produced, but shall not exceed 15 days after the Federal Office for Civil Aviation has been notified of the termination of the policy. The date of the withdrawal or the loss of the certificate of airworthiness is considered to be the date on which the corresponding decree becomes legally valid.

2.7.3 The **injured third party on the ground** will only be subject to those exclusions permitted by the Federal Decree on Aviation.

2.7.4 If the provisions for aviation oblige the Company to pay benefits which would not have to be paid according to the policy and the Swiss Federal Law on the Insurance Contract (VVG), such benefits may be reclaimed from the policyholder and/or the insured person.

3 Insurance of passenger liability claims (Passenger liability insurance)

The following applies in addition to the General Provisions:

3.1

Insured claims

The insurance covers claims relating to civil law which are raised against insured persons on the basis of legal liability provisions as a consequence of

- death or injury to passengers (damage to persons);
- damage, destruction or loss of property carried by passengers (damage to property);

caused when using the insured aircraft.

3.2

Insured persons

The insurance covers

- the **holder or carrier** as well as persons who are responsible on their behalf according to foreign law;
- **members of the crew.**

3.3

Insurance benefits

The company pays justified claims and defends unjustified claims.

3.4

Extent of benefits and number of seats insured

Payments made by the Company (including interests on claims, lawyer's fees, costs for an expert opinion, court fees as well as third party compensations) are limited to the guarantee sum for each insured **event and passenger** stated in the policy. The total of all losses or damage resulting from the same cause counts as one event.

For damage, destruction or loss of property carried by passengers, the guarantee sum **per passenger** is limited to CHF 5000.

Should there be **more passengers than insured seats** in the aircraft, benefits will be reduced accordingly (insured seats in proportion to the number of passengers). There is no reduction if no more than half the seats are occupied, each by a maximum of 2 children up to 12 years of age, or by an adult with a child under the age of 2.

3.5

Credits towards liability claims	Indemnity from an occupant accident insurance of the Company as well as benefits on the basis of rights of recourse as a result of compensation paid to the	claimants are credited against the judicial and extrajudicial liability claims of the entitled party.

3.6

Deductible	For each event of damage to property, the insured person shall bear **CHF 200** per occupied seat.	

3.7

Passenger tickets	The carrier and the other insured persons have the responsibility of ensuring that tickets officially prescribed by law and by international agreements are issued to the passengers for commercial flights or private flights for which a price is charged. In case of failure to do so, or	if the contents of such tickets are in any way inadequate, the Company is only obliged to pay benefits up to the amount equivalent to that which would have been paid had the correct tickets been issued.

3.8

Claims not insured	**The insurance does not cover claims** – of insured persons; – of the following persons living together with the insured person liable in the individual case: spouse, ascendants or descendants, brothers and sisters as well as step children; – for damage to property (exception: property carried along up to CHF 5000 per passenger); – in case of events resulting from war or public disorder; – relating to effects of ionising radiation and earthquakes;	– if the insured aircraft is used without the **officially prescribed identification documents and licences** for the members of the crew or the insured aircraft: this exclusion only applies to **passengers** if they knew of this or should have known under the given circumstances, before commencing the flight: – if the aircraft is used to commit offences or crimes; this exclusion only applies to **passengers** if they themselves were involved in the offence or crime.

3.9

Special conditions in aviation legislation	For Swiss air carriers, the following applies up to the mandatory guarantee sum: If the insurance contract ends before the date specified in the insurance certificate, claims on replacements remain insured either until removal of the concession or the loss of the permit or the proof of a new guarantee; for a maximum of fifteen days after the Federal Office for Civil Aviation was informed of the end of the contract. The date of the removal or the loss of the concession is considered to be the date on which the corresponding decree becomes legally valid.	If the insurance Company must pay benefits based on the regulations on civil aviation which it does not need to do, neither in accordance with this contract nor the law on insurance contracts, it may take regress against the policyholder and/or the insured persons.

4 Insurance of liability claims of third parties and passengers (combined single limit)

The following applies in addition to the General Provisions, the provisions to the third party liability insurance and the provisions to the passenger liability insurance:

4.1

Insured claims

By means of the combined single limit, claims up to the guarantee sum stated in the policy are insured (subject to 4.2 and 4.3) for each event. This applies to claims filed against the insured persons stated in the third party and passenger liability insurance on the basis of the legal liability provisions, due to

injury or death of

- third parties outside the aircraft
- passengers

damaging, destruction or loss of

- third party property outside the aircraft
- objects carried by or accompanying the passengers up to a limit of CHF 5000 per passenger, reduced by a deductible of CHF 200.

4.2

Settlement of third party claims

4.2.1 Claims of third parties outside the aircraft are settled with priority up to the compulsory guarantee sum laid down in the Federal Decree on Aviation.

4.2.2 If, however, a country in Europe or a border state of the Mediterranean prescribes a higher safeguarding sum (please compare 2.3.2), the indemnity will be paid up to this sum with priority.

If, however, an unlimited, a lower or no safeguarding at all are required, the indemnity will be paid according to 4.2.1.

4.3

Settlement of passenger claims

In all cases mentioned above, passenger claims may still be settled by using up at least the sum corresponding to the difference between the guarantee sum stated in the policy and the safeguarding sum according to the Federal Decree on Aviation.

5 Aircraft hull insurance

The following applies in addition to the General Provisions:

5.1

Insured loss or damage

5.1.1 The insurance covers loss or damage of the aircraft occurring against the will of the policyholder or any other rightful claimant. It also includes any parts fixed to the aircraft according to the equipment list approved by the competent supervisory aviation authorities as well as any accessories that exclusively serve the safety of the aircraft and its occupants.

5.2

Events insured and not insured

5.2.1 The policy indicates whether cover applies to the **hull all risks insurance** or to the **ground risks aircraft hull insurance.**

5.2.2 The following is covered by

5.2.2.1 **Hull all risks insurance**

Fire, elementary perils, theft, glass breakage, snowslide and accidents as well as damage caused by martens and small animals.

5.2.2.2 **Ground risks aircraft hull insurance**

The same events as covered by the hull all risks insurance, including stationary operation of the engines, but **on the ground only.** Events relating to a flight (including preparatory and concluding works) as well as events on a runway in use are not insured. Damage to balloons from the beginning of inflation up to complete deflation is equally excluded.

5.2.3 Definition of events:

Fire	Fire, explosion, lightning.
Elementary perils	Damage by the forces of nature such as landslide, falling rocks, flood, windstorm (40 knots and more), hail, avalanche, snow pressure.
Theft	Loss, damage or destruction caused by robbery or misappropriation (except embezzlement) and damage or destruction caused in the attempt.
Glass breakage	Breakage of window panes and other glazed parts (except light bulbs and neon lamps) or of other materials used instead of conventional glass.
Snowslide	Falling snow and ice.
Accident	Sudden event caused by an external force (including unforseeable overstrain to the cell structure during flight) or protracted disappearance for over 30 days, if none of the remaining events has occurred.
Stationary operation	Running of the engines for technical purposes without intention of flying.
Martens and small animals	Damage caused by martens and small animals.

5.2.4 **The insurance does not cover**

- loss or damage resulting from the use of the insured aircraft **without the officially prescribed identification documents or licences for the crew and the insured aircraft.** Benefits must be paid, however, if the aircraft is used without the officially prescribed identification documents and licences without knowledge and consent of the insured person and without his fault;
- operational damage, i.e. damage not caused by an external force (e.g. breakage, cracking, deformation or wear and tear);
- damage as a consequence of short circuits, if they are caused by operational damage;
- damage to the power unit caused by a manipulation error, by the power unit being overstrained or overheating;
- damage to the power unit caused by the entrance of foreign objects leading to a gradual decline in the condition or performance of the power unit. This does not apply to foreign-object damage leading to a suddenly occurring damage to the power unit or to its immediate standstill. Damage to the power unit caused by the entrance of objects left in the power unit or in the intake area which should have been noticed during the preflight check according to the Aircraft Flight Manual (AFM), however, remains excluded;
- loss or damage caused by the lack of safeguarding measures when parking the aircraft in the open;
- loss or damage caused by lack or freezing of liquids (except in case of theft);
- damage to the aircraft resulting from faults in material, design or other, as far as these faults were known to the policyholder or had to be known to him;
- dismounted parts, except main planes, horizontal tail units and rotor blades that have been removed for the purpose of transportation or safekeeping of the aircraft;
- loss or damage resulting from maintenance or repair works carried out by persons without the officially required licences or authorisations;
- loss or damage resulting from the deliberate use of the aircraft for an offence, a crime, or the attempt thereof;
- damage resulting from carrying along explosive or self-igniting objects, gases or liquids, with the exception of signalling ammunition as well as fuel carried along in the aircraft;
- loss or damage relating to military use;
- loss or damage as a consequence of war-like events, strike, insurrections, public disorder, acts of terrorism, violence or sabotage, seizure, hijacking or requisitioning;
- effects of ionising radiation;
- damage to balloons resulting from the loss of filling gas, unless this loss was caused by the occurrence of an insured accident;
- damage to balloons resulting from non-compliance with the required safety measures before and after the trip;
- damage to balloons resulting from transports outside Europe (the Russian Federation not being part of Europe);
- damage from heat and scorching to hot-air balloons (operational damage).

5.3

Insurance benefits

5.3.1 The Company pays the total loss resp. the costs for repair (without express and overtime surcharges), salvage and transport, the customs duties as well as the costs for test flights after repair. The **total amount of benefits (including** costs for repair, salvage and transport, customs duties as well as the costs for test flights) is limited to the following percentages for restoration costs and total loss:

in the 1st year from the beginning of the policy	100 %
in the 2nd year from the beginning of the policy	100 %
in the 3rd year from the beginning of the policy	100 %
in the 4th year from the beginning of the policy	90 %
in the 5th year after the beginning of the policy	80 %
in the following years	60 %

of the insurance sum entered in the policy.

Total loss is considered to apply if the restoration costs equal or exceed the percentages indicated above. If the insurance value, which served as the basis for calculation of the premium, has been declared to be below the trade value when this insurance policy was taken out, the Company will reduce its benefits proportionally in case of partial loss.

The Company shall have the right to deduct the aircraft's possible residual value, or portions thereof, from the insurance benefits or to take this into its possession.

5.3.1.1 In addition, in partial or total loss cases, the Company shall pay up to 20 % of the insured amount, with a maximum of CHF 100 000 per event for the documented search, recovery, transportation and customs costs as well as costs for an emergency landing foam cushion.

5.3.1.2 The costs for test flights after repairs are limited to 5 % of the repair costs.

5.3.2 If the condition of the aircraft is improved by repairs resulting in lower costs for service and maintenance for instance, such amount shall be borne by the policy-holder.

5.3.3 If a missing or disappeared aircraft cannot be found within 30 days, the Company will pay the percentage of the insurance sum listed in 5.3.1 for the corresponding year from the beginning of the policy. With this payment, the rights of ownership for the insured aircraft are transferred to the Company up to the extent of the indemnity paid.

5.4

Additional insurance benefits for powered aircraft

After an **emergency landing** without any awardable damage to the powered aircraft, the Company will pay the costs for a technical check of the aircraft by a licensed maintenance company to permit a take-off from the emergency landing ground and/or the transport costs to the nearest suitable take-off ground, the maximum payment being **CHF 2000.**

5.5

Deductible

5.5.1 The policyholder will bear the deductible stated in the policy for each event for which the Company is obliged to pay benefits.

5.5.2 The deductible does not have to be paid in cases of total loss, unless otherwise agreed.

5.5.3 If costs are reimbursed after an emergency landing without any awardable damage to the powered aircraft, the deductible does not have to be paid.

5.5.4 No deductible shall apply for damages resulting from fire, elemental damages on the ground and theft for balloons, gliders (including motor-powered gliders), as well as piston-engine aircraft up to a take-off weight of 2000 kg.

5.6

No claim bonus

If no aircraft hull damage entitled to compensation has occurred by the end of the insurance year, and if the hull insurance is extended for a further year, the Company grants the policyholder a refund as stated in the policy (excl. stamp duty and hull war premium).

The decisive time for the account has to be at least 8 months, otherwise the account together with that of the ensuing year is issued. Balances under CHF 50 are disregarded.

The refund shall be paid once the company has received the premium of the following insurance period.

5.7

Premium after total loss

In case of total loss, a **new premium** has to be paid in order to continue the aircraft hull insurance.

The following applies in addition to the General Provisions:

6.1

Insured accidents

6.1.1 Accidents are considered to be health impairments suffered by the insured person suddenly, involuntarily and violently by an event acting upon him from outside, such as

- involuntary inhalation of gases or vapours
- sudden strenuous efforts (dislocations, strains, torn muscles or tendons)
- effects of temperature or light resulting from an insured accident
- drowning, suffocation.

6.1.2 The insurance covers accidents occurring during the lawful use of the insured aircraft, including accidents

- when boarding or leaving the aircraft
- when operating the aircraft on the ground
- when parachuting to save one's life
- as the result of an emergency landing.

6.1.3 If such health impairments are caused only in part by the insured accident, payments will be reduced according to the expert discretion.

6.2

Accidents not insured

The following accidents are not insured

- those affecting **members of the crew** who use the insured aircraft although the **officially prescribed identification documents and licenses** for themselves or for the insured aircraft do **not** exist.
- those affecting **passengers** who knew or should have known under the circumstances that the officially prescribed identification documents and licences for crew and aircraft did not exist.
- those occurring on flights for the purpose of committing an offence or a crime; this exclusion, however, only applies to passengers who participated in the offence or crime.
- those occurring as a consequence of war or unrest (subject to the special events according to 6.3)
- those occurring as a consequence of the effects of ionising radiation and earthquakes.

6.3

Special events

6.3.1 The insurance covers accidents which occur during the **deprivation of liberty** after the insured aircraft has been **hijacked,** during involuntary stays of insured persons after parachuting to save their lives or after an emergency landing as well as during the subsequent direct journey home to their place of residence or during their continued journey to the original destination. In such cases, the insurance cover is extended beyond the original date of termination if the policy expires previously, however, for no longer than one year from the date of the hijacking, parachute jump or emergency landing.

6.3.2 Exclusions referring to war and unrest (6.2) do not apply to accidents suffered by the insured person

a) on board the insured aircraft, provided the accident was caused by persons who were also on board or by dangerous substances smuggled on board the aircraft;

b) during the deprivation of liberty after the insured aircraft has been hijacked, during involuntary stays of insured persons after parachuting to save their lives or after an emergency landing as well as during the subsequent direct journey home to their places of residence or during their continued journey to the original destination. The time limit applied to 6.3.1 shall also be applicable here.

6.3.3 If, however, war breaks out

- in which Switzerland or one of its neighbouring countries are involved
- between one or more of the following countries: Great Britain, the Russian Federation, the United States of America, the People's Republic of China, or between one of these countries and a European country,

6.3.2 will become ineffective 48 hours after the outbreak of hostilities. If, however, the deprivation of liberty, parachute jump or emergency landing have already taken place at that time, 6.3.2 b will be only expire a year after this event.

6.3.4 Extensions of coverage according to 6.3.1 and 6.3.2 only apply if the insured person can prove that he was not himself involved actively or by incitement in these events.

6.4

Insured persons

The insurance covers the number of passengers resp. crew members stated in the policy.

Should the number of passengers resp. crew members exceed the one stated in the policy, benefits will be reduced accordingly (number stated in the policy in proportion to the number of passengers resp. crew members present). There is no reduction if no more than half the seats are each occupied by a maximum of 2 children up to 12 years of age, or by an adult with a child under the age of 2.

6.5

Insurance benefits

The Company pays the benefits stated in the policy for each passenger resp. member of the crew. The benefits for an accident based on this policy as well as payments on the basis of rights of recourse due to indemnifications to the claimants will be credited to judicially determined or extrajudicially settled liability claims of the entitled parties.

6.5.1 **Death**

6.5.1.1 If an accident leads to death within 5 years after the date of the accident, the Company will pay the amount stated in the policy to those persons entitled to receive such payment in the order indicated. The following categories, however, are excluded:

a) The spouse on the one hand, children under age or dependent children of age on the other. If there are children, the spouse shall receive 60 % of the capital sum and his/her children 40 % in equal parts. Should there be no spouse, the relevant share is payable to the children, and vice versa.

b) The legal heirs.

If there are no persons entitled to receive the benefits, the Company will pay the funeral costs up to 10 % of the capital sum payable on death.

In the case of death of both parents, the capital sum payable to the children under age or to children of age in need of support will be doubled.

6.5.1.2 The capital sum payable on death for insured persons under 16 years of age shall not exceed **CHF 10 000.**

6.5.2 **Disablement**

6.5.2.1 If the accident leads to a presumably permanent, i.e. lifelong disablement, the Company pays

- the total sum stated in the policy **for complete disablement;**
- the following percentages of the sum stated in the policy for **partial disability:**
- If the loss or loss of use are complete:

for one arm or one hand	65 %
for a thumb	20 %
for an index finger	10 %
for any other finger	5 %
for a leg	55 %
for a foot	40 %
for both feet	100 %
for the sight of both eyes	100 %
for the sight of one eye	30 %
for the hearing in both ears	60 %
for the hearing in one ear	15 %

- if the loss or loss of use are only partial:

  a correspondingly lower percentage.

6.5.2.2 If several parts of the body are affected by the accident, percentages are added up, in which case **100 %** is considered to be the **maximum.**

6.5.2.3 If parts of the body were already lost or unusable before the accident occurred, the degree of such disablement will be deducted according to the principles stated above when determining the disability.

6.5.2.4 If the degree of disablement cannot be determined according to the principles stated above, it shall be established on the basis of the permanent physical or mental handicap, taking into account the inability to work of the insured person.

6.5.2.5 The degree of disablement shall be established only on the basis of the presumably permanent disability of the insured person, however, no later than 5 years after the accident.

- rescue operations that are not due to sickness;
- salvage and repatriation of the corpse if death is the result of an insured accident or of exhaustion;
- any searching operation undertaken to rescue or salvage the insured person, up to a maximum of **CHF 30 000 per insured person.**

6.5.5.2 If several insurances for medical costs have been taken out with licensed insurance companies, the insured benefits will only be paid out once. The benefits which the Company pays correspond to the ratio between the benefits which it covers to the total of the benefits stemming from all insurance carriers.

6.5.5.3 In the event of insurance cases which are covered in accordance with the UVG/LAA, the Swiss Federal Disability Insurance, the Swiss Federal Military Insurance, or from foreign social security schemes (including that of the Principality of Liechtenstein), the Company only covers the share of the documented costs within the framework of the contractual benefits which is not covered by the other carrier. The same applies for persons who are covered under a health insurance scheme in accordance with the Swiss Federal Law on Health Insurance (KVG/LAM) for the additional coverage of the risk of accident (supplementary insurance).

6.5.5.4 A payment in accordance with this contract lapses to the extent that the medical expenses are covered by a liable third party. If the Company is charged for benefits instead of the liable third party, the insured person must subrogate his/her claims on liability benefits up to the amount of the medical benefits paid.

6.5.5.5 Following an accident during lawful use of the insured aircraft, the Company pays for the loss or damage of property which the insured person carries up to CHF 2000 per person.

6.5.5.6 In the case of an emergency landing of a powered aircraft, the Company pays up to CHF 2000 per insured person for the continuation of the journey to the original destination or for the journey back to the point of departure.

6.5.2.6 **Type of benefit**

The proposal shows if the disablement is insured on a cumulative (according to version A or B) or non-cumulative basis.

a) Cumulative disability insurance:

The capital sum is determined by means of the following table on the basis of the sum stated in the policy.

Degree of disability %	Capital sum version A %	Capital sum version B %	Degree of disability %	Capital sum version A %	Capital sum version B %	Degree of disability %	Capital sum version A %	Capital sum version B %	Degree of disability %	Capital sum version A %	Capital sum version B %
1	1	1	26	27	28	51	78	105	76	153	230
2	2	2	27	29	31	52	81	110	77	156	235
3	3	3	28	31	34	53	84	115	78	159	240
4	4	4	29	33	37	54	87	120	79	162	245
5	5	5	30	35	40	55	90	125	80	165	250
6	6	6	31	37	43	56	93	130	81	168	255
7	7	7	32	39	46	57	96	135	82	171	260
8	8	8	33	41	49	58	99	140	83	174	265
9	9	9	34	43	52	59	102	145	84	177	270
10	10	10	35	45	55	60	105	150	85	180	275
11	11	11	36	47	58	61	108	155	86	183	280
12	12	12	37	49	61	62	111	160	87	186	285
13	13	13	38	51	64	63	114	165	88	189	290
14	14	14	39	53	67	64	117	170	89	192	295
15	15	15	40	55	70	65	120	175	90	195	300
16	16	16	41	57	73	66	123	180	91	198	305
17	17	17	42	59	76	67	126	185	92	201	310
18	18	18	43	61	79	68	129	190	93	204	315
19	19	19	44	63	82	69	132	195	94	207	320
20	20	20	45	65	85	70	135	200	95	210	325
21	21	21	46	67	88	71	138	205	96	213	330
22	22	22	47	69	91	72	141	210	97	216	335
23	23	23	48	71	94	73	144	215	98	219	340
24	24	24	49	73	97	74	147	220	99	222	345
25	25	25	50	75	100	75	150	225	100	225	350

b) Non-cumulative disability insurance:

The capital sum is determined on the basis of the sum stated in the policy.

6.5.3 **Daily allowance**

6.5.3.1 If the accident leads to inability to work, the Company pays the daily allowance mentioned in the policy for the period of inability to work stated in the medical certificate. Such payment begins on the day after the accident stipulated in the policy (waiting period) and is limited to **730 days within 5 years** from the date of the accident.

6.5.3.2 The Company pays the daily allowance in part or in full depending on the degree of inability to work.

6.5.3.3 Insured persons under 16 years of age will not be paid any daily allowance.

6.5.4 **Hospital daily allowance**

For each accident, the Company pays the hospital daily allowance stated in the policy during stays in a hospital or at a health resort. The benefits are, however, limited to **730 days within 5 years** as from the date of the accident.

6.5.5 **Medical expenses**

6.5.5.1 For each accident, the Company pays for **5 years** from the date of the accident:

a) any medically performed or prescribed
- medical treatment;
- stay in a hospital or at a health resort; cures only in specialised establishments and only with the approval of the Company;
- nursing by qualified staff holding a diploma or by nursing staff supplied by an institution for the period of medical treatment;
- invalid mobility equipment;
- the initial purchase of prosthesises, spectacles, hearing aides and orthopaedic aides as well as their repair or replacement (value when new) if they were damaged or destroyed during the accident leading to the insured medical treatment.

b) the necessary expenses for
- any transport of the insured person brought about by the accident; flight expenses, however, only if the flying is inevitable for medical or technical reasons;