The Willis Cause

We thoroughly understand our clients’ needs and their industries. We develop client solutions with the best markets, price and terms. We relentlessly deliver quality client service. We get claims paid quickly. …With Integrity.
Dear Clients/Buyers

Further to our Special Bulletin in February 2011, The Global Aerospace Practice of Willis Aerospace is pleased to present you with our 8th Aviation Products Market Review which remains the only review totally focused on the aerospace manufacturing industry.

Within this year’s review, we have tried to offer you not only aviation insurance market commentary but importantly, to highlight and debate some of the current (and future issues), you as Clients/Buyers do or will face.

In this respect, we are pleased to advise that we have special articles from:

— **Airbus (an EADS company)** – Explaining how leading edge technology can help reduce the No.1 source of claims for the aviation industry
— **Munich Re** – Providing an overview of the forthcoming Solvency II requirements and its possible implications for aviation risks
— **Barlow Lyde & Gilbert** – Giles Kavanagh and team highlighting some of the issues of “forum shopping” by plaintiffs and “forum non conveniens” trends in the USA

Coming back to 2010, we have seen the world economy continue to seek stronger foundations for economic growth.

Initial signs of an economic recovery in the year faded, especially as debt levels in several European economies sent tremors through the global markets.

The insurance marketplace remained static, despite an onslaught of catastrophe – from Haiti to Chile and from the Gulf of Mexico to Queensland, Australia – which brought not only significant losses but also human suffering on a staggering scale.

The plentiful supply of capital seeking a return combined with the stagnant demands of an uncertain economy is likely to prolong the long standing soft market and put pressure on global premium incomes.

**Surprisingly, 2010 saw some of our peers begin taking contingent commissions again in retail brokerage, Willis said “no”**.

Willis said “no” back in 2004, when the issue first rose to prominence, and we said “no” again in 2010 because contingents represent a fundamental conflict of interest and go against our promise to serve our clients above all else.

We even launched a campaign – **Clients Before Contingents** – to remind risk managers and others of the conflicts that cast a shadow on our industry. Willis stood up for what was right even though we stood – and still stand – **alone**.
For the aviation industry, 2010 was again a year of mixed fortunes.

As a positive for the airline sector, global airline passenger numbers rose by 7.63% to 2.72 billion whereas aircraft deliveries again reduced, by 13.24% (with helicopter deliveries being the worst affected). Passenger growth did not, however, occur unilaterally across the world and was most prominent in Asia.

Asia has long been associated with growth in aviation transportation and when we analyze the number of aircraft deliveries over the last 10 years, it is clear to see why:

**ANNUAL UNIT DELIVERIES BY OPERATOR AREA**

During 2010, we saw an increased number of aircraft total losses (46) and an unwelcome increase in passenger fatalities (648) although the underlying trend for passenger fatalities still remained lower than in previous decades.

Aviation Insurers also had mixed fortunes, although they did still manage to generate a profit/premium credit balance for 2010.

The airline sector achieved a slight increase in premium volume (4.5%) which unfortunately, due to claims activity, was not sufficient to show a positive return for Insurers (2010 being the 4th consecutive year of negative premium returns).

The aerospace sector, however, showed total premium reductions of 2.84% with the aerospace companies within the Willis Index receiving a total 2.10% decrease but still generating a healthy profit/premium credit balance.

It would therefore appear that those Insurers who participate on both aerospace and airline risks now have a balanced, but imbalanced, portfolio of business.

From 2010, we looked backwards to generate a market performance indicator.

This analysis showed that during the last 10 years, the combined aerospace/airline market has generated over USD 10 billion of profit/premium credit, however, there are some interesting dynamics to which we would like to draw your attention:

— the aerospace sector has generated 31% of aviation market premium (combined airline and aerospace sectors) in the last 10 years, **BUT**
— the aerospace sector produced only 20% of claims over the same period which could suggest there is still an **imbalance** between the airline and aerospace sectors
— it could be argued by some Insurers that the airline sector generated more income over the last 10 years which does go some way to justifying this ‘imbalance’, however
— understanding that Insurers are in the risk transfer business and need to generate a profit margin to their capital providers, we asked ourselves the question: **over the last 10 years, which sector has generated more profit/premium credit balance to Insurers, airline or aerospace?**

The aerospace sector has generated 31% of aviation market premium but only 20% of market claims, however, it contributed 54% of the aviation markets USD 10 billion profit/premium credit balance over 10 years.
Capacity for aviation risks, both aerospace and airline remained stable and at surplus levels, with further additional A-rated capacity joining the market in late 2010.

This leads us to an obvious question:

**If the aerospace sector is generating a more sustainable profit/premium credit balance to aviation Insurers (and their capital providers), why are we not seeing a corresponding level of capacity for aerospace risks as is available for the airline sector?**

Furthermore, looking specifically at the aerospace companies who make-up the Index review, the conclusive analysis of the Index shows a profit/premium credit balance of USD 3.38 billion to Insurers benefit as detailed below:

In view of the foregoing, we hope you agree (with our Special Bulletin of February 2011) in our firm belief that Clients/Buyers should be looking for ‘optimism’ in their 2011 insurance and risk financing renewals **BUT perhaps most importantly**, we should all be reminded of the importance of rating aerospace risks on their own merits without worrying about pressure from other sectors within the aviation insurance market.

Finally, we should spare a thought for the tragic loss of life and almost incomprehensible destruction caused by the March 2011 Japanese earthquake and tsunami, our thoughts are for our Japanese readers and their families during this difficult period.

We would like to take this opportunity to thank you, our dear Clients and Buyers from around the world, for continuing to read our review and also for providing the world with awe-inspiring products!

**THE GLOBAL AEROSPACE PRACTICE OF WILLIS AEROSPACE**
For this 2011 edition, we have maintained the core principles of providing a comprehensive 10 year review of the individual business sectors within the aviation manufacturers portfolio, again utilizing our market leading analysis tool, The Index.

In addition, we have further enhanced our review of the aviation products market and included some topics which we feel would be of mutual interest and benefit to you as aviation manufacturers. Consequently, Willis Aerospace is pleased to welcome articles from Airbus, Munch Re and Barlow Lyde & Gilbert – all markets leaders in their respected fields.

In summary, the subjects in our review are:

**AN AVIATION INDUSTRY REVIEW**
An analysis of aircraft deliveries, number of incidents/fatalities versus passenger/fleet growth and an overview of how the aircraft manufacturing industry is responding (or dealing with) the lingering effects of the global downturn.

**RUNWAY EXCURSION AT LANDING, THE NO. 1 SOURCE OF CLAIMS FOR THE AVIATION INDUSTRY**
Following on from the industry review, Airbus have kindly provided an article highlighting the largest cause of aircraft incidents and how innovative avionics can reduce this risk.

**AVIATION MARKET ANALYSIS/CAPACITY**
An appraisal of the overall aviation insurance market coupled with analysis of capacity availability levels for aviation products liability risks.

**SOLVENCY II AND AVIATION RISKS, AN OVERVIEW**
We are again pleased to have an article from Munich Re in respect of the forthcoming Solvency II requirements and its possible implications for aviation risks.

**MARKET SEGMENT ANALYSIS**
Our core 10 year review of the individual manufacturing sectors and their performance both in terms of premium movement and sales development patterns.

**INDEX PREMIUM AND LOSS DEVELOPMENT**
Assessment of manufacturer loss development including our Tracker and how the profit/premium credit balance continues to accumulate.

**FORUM SHOPPING AND FNC’S IN INTERNATIONAL AVIATION DISPUTES**
Barlow Lyde & Gilbert have kindly written an article regarding the topics “forum shopping” by plaintiffs and “forum non conveniens” trends in the USA – both of which have unfortunate consequences on the global industry.

**FORECAST FOR 2011**
Our outlook for 2011 of the aviation products insurance market and why clients/buyers of aviation products insurance should be optimistic.
It is evident that during 2010 aerospace manufacturers in all sectors have continued to suffer the impact of the economic downturn, particularly in North America and Europe. A total of 4,106 western built aircraft (excluding military type/military use) were delivered during 2010. This is a reduction of 13.34% when compared with the 2009 total deliveries of 4,738.

Despite the significant decline in the number of units delivered, 2010 generated sales of approximately USD 440 billion compared with USD 450 billion during 2009. This is a reduction of 2.2%.

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>% CHANGE</th>
<th>2010</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jets</td>
<td>2,280</td>
<td>2,056</td>
<td>-9.82%</td>
<td>1,850</td>
<td>-8.75%</td>
</tr>
<tr>
<td>Turboprops</td>
<td>658</td>
<td>562</td>
<td>-14.60%</td>
<td>468</td>
<td>-16.73%</td>
</tr>
<tr>
<td>Piston</td>
<td>2,120</td>
<td>965</td>
<td>-54.48%</td>
<td>841</td>
<td>-12.85%</td>
</tr>
<tr>
<td>Helicopters</td>
<td>1,566</td>
<td>1,155</td>
<td>-25.68%</td>
<td>947</td>
<td>-18.01%</td>
</tr>
<tr>
<td>Total</td>
<td>6,624</td>
<td>4,738</td>
<td>-28.47%</td>
<td>4,106</td>
<td>-13.34%</td>
</tr>
</tbody>
</table>

Even the most robust sector, Airline passenger jets, recorded a decline. Deliveries totaled 1,048 units, a fall of 6.09% or 68 fewer units compared with 2009. The business/executive/VIP jets sector suffered further decline, although not to the extent of 2009, with 2010 recording 14% fewer deliveries.

The turboprop sector managed one small positive note during 2010 by delivering virtually the same number of passenger variants to that delivered during 2009, however despite this, overall deliveries fell by almost 16%.

The helicopter sector sadly saw a repeat of 2009, in that it again suffered the largest percentage fall in the number of units delivered. Corporate and GA deliveries again experienced significant falls.

The general aviation, piston powered, aircraft sector remains depressed, reflecting the economic downturn more vividly than any other sector. GA manufacturers have suffered a staggering decline in unit deliveries. 2010 deliveries are 1,279 fewer compared with 2008.
Jet aircraft retirements during 2010 totaled 410 compared with 487 in 2009, the majority of which, 77%, were of passenger aircraft. This is a similar percentage to that of 2009 at 78%.

Considerably fewer turboprop aircraft retirements occurred during 2010, 91 compared to 164 recorded during 2009. Total stored aircraft jet and turboprop totaled 5,970. This is a small increase of 0.73% compared with 2009.

With slightly fewer commercial aircraft retirements and the fact that global passenger numbers increased during 2010, it is just possible to consider that 2011 may see the ‘bottoming out’ of the economic downturn with regard to manufacturers, however, recovery is very fragile and geographically uneven.

The general aviation sector, as mentioned, has experienced horrific decline in unit deliveries, however, recent acquisitions made by Chinese interests in this sector offer tremendous future prospects particularly in emerging markets.

The business/executive/VIP sector after two very tough years is increasingly upbeat based again on the positive prospects offered by emerging markets.

The increase in airline passenger and landing numbers during 2010 indicate that economic recovery is underway, however it is not geographically even. The Asia/Pacific, South American and Middle Eastern regions all recorded significant growth, Europe recorded growth but suffered the effects the volcanic ash cloud as well as a particularly severe winter. North America achieved modest growth but passenger numbers remain below pre-economic downturn levels.

ANNUAL UNIT DELIVERIES BY OPERATOR AREA

<table>
<thead>
<tr>
<th>GROWTH</th>
<th>2009</th>
<th>2010</th>
<th>% +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passengers</td>
<td>2.52b</td>
<td>2.72b</td>
<td>+7.63%</td>
</tr>
<tr>
<td>Aircraft units</td>
<td>24,690</td>
<td>25,254</td>
<td>+2.28%</td>
</tr>
<tr>
<td>Landings</td>
<td>33,915m</td>
<td>35,621m</td>
<td>+5.03%</td>
</tr>
</tbody>
</table>
During 2010 there were 46 recorded total losses of western built aircraft in airline service (operational and non-operational). This is a significant increase compared with 2009 (36).

This has caused the five year average total loss number to rise to 0.1914% up from 0.1902% last year. 2010 also saw an unwelcome rise in the number of passenger fatalities, 648 compared with 453 during 2009. However the five year average fatality per million passengers has fallen by 8.12% to 0.2128.

The results of 2010 do however demonstrate the continued excellent safety record of air travel and the continued underlying operational improvement achieved.
RUNWAY EXCURSION AT LANDING, THE No.1 SOURCE OF CLAIMS FOR AVIATION INDUSTRY

HOW TO REDUCE THIS RISK THROUGH INNOVATIVE AVIONICS?

Runway excursions are the most common aviation accidents. Since 1985, cumulative hull losses and liabilities represent respectively USD 5.4 billion and USD 1.1 billion. In other words, 33% of hull losses incurred in the last 25 years are linked to these accidents. In taking into account 2% rate of inflation and considering in average the same trend that the one observed since 1985, we believe that these cumulated hull losses will represent USD 9.2 billion by 2020. This figure does not include impact on airport infrastructures and airport/airline operational continuity.

USD(M) CUMULATIVE HULL LOSS VALUE - ADJUSTED AT 2% PER ANNUM

Airbus-Willis analysis based on ASCEND data

Clearly, the importance of developing effective mitigation for overruns cannot be overstated. Preventative risk controls become crucial to reduce their likelihood and consequences. These include safe approach techniques, pre-landing risk assessments, line-oriented flight training, clear policies on go-arounds, runway surface quality with safety features such as grooving and surface texturing, ICAO-recommended runway end safety area (RESA) and backing like Engineering Material Arresting System (EMAS) and runway lighting.
While these mitigations are potential lifesavers, there is an old saying however that “an ounce of prevention is worth a pound of cure”. The Runway Overrun Prevention System (ROPS) developed by Airbus provides that “ounce of prevention”. Following the start of preliminary research in 1998 as a Ph.D. thesis, ROPS has now been selected on more than 70% of ordered A380s and in operations on Air France, Lufthansa and Emirates. ROPS is standard in A350XWB definition. With a certification planned next year, ROPS is an option, easy-to-install within one night stop, on A320 family and A330/A340.

1. MAIN CONTRIBUTING FACTORS
There are many contributing factors to runway overruns during the landing phase. One of the major contributors has been, and remains unstable approach, to which the industry has responded by emphasizing training and procedures. Being in an unstable condition, but without having actual information on the risk of a consequent runway overrun, the crew may be tempted to continue an approach in the belief that they may recover the situation or that they have sufficient landing distance margins.

Other identified factors contributing to overruns at landing are:
— Wind shift at low altitude,
— Long flare,
— Long de-rotation,
— Late selection of engine thrust reversers,
— Inadequate cancellation of reversers,
— Runway friction coefficient lower than expected (Contaminated runway snow, ice or more slippery than reported),
— Late/weak manual braking,
— Technical failures affecting the landing distances during the landing (tyre burst, braking system failure, etc.).

Following certain events, the Airworthiness Authorities have recognized the need to create new regulations for the in-flight computation of the Landing Distances published in the Airplane Flight Manuals. This led to the creation of the Take-off and Landing Performance Assessment Aviation Rulemaking Committee (TALPA ARC), an industry group mandated by US FAA, in which regulators, airlines, airport operators, associations and manufacturers, including Airbus, were represented. The Committee has now finalized its proposal for new regulation for in-flight landing distance assessment. The ROPS computation algorithms are already consistent with these proposed regulation changes.

2. ROPS DESCRIPTION
ROPS assists the flight crew during the final approach and roll-out in preventing runway overruns. The system integrates two functions:
— A warning function, called Runway Overrun Warning (ROW), which applies in flight and is go-around oriented.
— An active protection function, referred to as Runway Overrun Protection (ROP), which applies on ground and is stop oriented.

In order to be effective, through a dedicated rule established by EASA in 2009 for all avionics systems pretending to prevent runway excursions, ROPS:
— Computes permanently in real time aircraft realistic landing distance and remaining landing/stopping distance,
— Compares it in real time with legal Landing Distance Available (LDA),
— Triggers, only when necessary, clear alerts with simple operating procedures,
— Guarantees both reliability and not excessive margins,
— Avoids any additional tuning by airline (no liability transfer).

This does not invalidate the need to fly stable approach, but goes well beyond the necessary Stable Approach concept widely deployed since 1998 by the Flight Safety Foundation.
3. A LONG DEVELOPMENT
In 2001, Airbus sanctioned the research phase initiated in 1998 by starting the translation of the theory into a workable test model. This work was completed in April of 2004 by a first flight using an A340-600 test bed. By March of the following year, the system had developed to a stage where it could begin operational testing (carried out at Paris – CDG). By September of 2006, the system tests had been completed and, following the Lufthansa decision to become ROPS launch customer on their A380 fleet, industrialization started. First flights on A380 and A320 happened respectively on May 2008 and December 2010. ROPS has been approved by EASA on October 2009 for the A380 fleet.

4. A RECOGNIZED SOLUTION
Airbus ROPS has been widely recognized within the industry and even shortlisted at the 2009 Flightglobal Achievement Awards with Virgin Galactic Spacecraft, Bombardier CSeries Programme and Pratt & Whitney PurePower engine. Among a series of positive feedbacks, IFALPA, in its July-August 2009 InterPilot journal, emphasizes that, “with ROPS, Airbus has created a system which will inevitably, become a life saving addition to the safety system.”

In early March 2011, during the Annual Willis Aerospace Conference in Asia bringing together airlines, industry service providers, global insurers, specialist lawyers and Adjusters, Airbus announced its decision to set-up a dedicated structure to ensure quick deployment of ROPS for all aircraft manufacturers. Through an alternative investment, active contribution from Insurance and Risk Management community should be a key success factor in reducing runway overrun costs while favoring ROPS deployment on fixed wing aircraft.
CONTACT
Fabrice Villaume
Business Development Director –
Strategy and Future Programmes
Tel: +33 (0)5 61 18 63 50
Email: fabrice.villaume@airbus.com
AVIATION MARKET ANALYSIS AND CAPACITY

Introduction

Aviation Industry Review

Special Article: Airbus

Aviation Market Analysis & Capacity

Special Article: Munich Re

Market Segment Analysis

Index Premium and Loss Development

Special Article: Barlow Lyde & Gilbert

Forecast for 2011

Clients Before Contingents
Despite another difficult 12 months, the combined aerospace/airline sectors of the aviation insurance market overall still managed to generate a profit/premium credit balance for 2010. It was however a year where each sector had differing results.

For the airline sector, 2010 was again a challenging year with significant levels of losses (including some out of the norm incidents such as the Dulles hangar collapse and Saudi spares fire) which, combined with continued high capacity placed pressure on premium levels. Growth in exposures indicated an improvement in the health of the airline industry and went some way to slightly increase premium levels toward the end of the year.

However, the ongoing impact of the economic challenges faced by the industry offset much of this with an erosion of premium volume for Insurers, through further consolidation and insolvency. In addition, a number of broker personnel changes led to increased ‘turbulence’ with a number of airline renewals and lead Insurer changes taking place.

In summary, estimated airline net premium for 2010 was USD 1.98 billion which represents an overall increase of 4.5% (with lead prices becoming less reflective of the overall price in some cases). This means the airline sector has not achieved a positive return for four years.

The aerospace sector also remained challenging but by contrast resulted in a cumulative profit/positive premium credit balance for the 8th year in succession. The aerospace sector recorded a net renewal premium of USD 944.09 million.

CUMULATIVE AEROSPACE/AIRLINE COMBINED PREMIUM/CLAIMS ANALYSIS

As a consequence of the above, it would appear that those Insurers who participate on both aerospace and airline risks (which is the majority of Insurers) now have a ‘balanced, but imbalanced’, portfolio of business!
Insurer appetite remained positive during 2010 for aviation manufacturers risks and was further enhanced by the commencement of aviation underwriting by Hiscox Syndicate (who employed a number of the former Faraday Lloyd’s syndicate aerospace team members) during the last quarter of 2010.

European Insurers continued to make their presence felt in North America in terms of market shares, with further European Insurers possibly opening offices during 2011.

As a result of more mature underwriting portfolios, a number of the ‘newer’ underwriting entities have been selectively pursuing manufacturers and other aerospace business particularly where liability limits purchased are less demanding on market capacity levels.

The amount of ‘A’ rated capacity remains positive for buyers of aviation manufacturers risks.

In addition, the forthcoming application of Solvency II regulation within the EU (and adoption of similar regimes elsewhere around the world) can only help reinforce the quality and liquidity of Insurer security in the long term, which of course is important for aviation manufacturers who themselves have long term risks.

**OUR CONcerns ARE:**

— What are your Insurers telling you about their plans to comply with Solvency II, and will there be an impact for Clients/Buyers in terms of available capacity and cost of this capacity?

— Will there be after effects on the availability/costs of global capacity as a result of the natural catastrophes in the Asia-Pacific region?
“Insurers who participate on both aerospace and airline risks (which is the majority of Insurers) now have a ‘balanced, but imbalanced’, portfolio of business!”
Solvency II and Aviation Risks – An Overview

Solvency II is an EU project which will introduce a risk-based and forward-looking solvency regime for all (re)insurers, including captives, in the European Economic Area (EEA). It will change the mechanics of insurance markets profoundly, not only in Europe, but worldwide.

Munich Re is committed to increasing clients' awareness of this important issue and helping them cope with the changes ahead. In this context, the following commentary will briefly explain Solvency II and its potential impact on aviation insurance and industry.

**WHAT ARE THE PillARS OF SOLVENCY II?**

Solvency II has three main areas (pillars):

**PILLAR 1**

- **Capital Requirements**
  - Quantitative Supervision
    - Minimum capital requirements (MCR)
    - Solvency capital requirements (SCR)
  - Non-quantifiable Risks

**PILLAR 2**

- **Governance**
  - Qualitative Supervision
    - Supervisory review process (SRP)
    - Internal control system
    - Risk management
  - Non-quantifiable Risks

**PILLAR 3**

- **Disclosure and Transparency**
  - Market Discipline
    - External Reporting
    - Supervisor
    - Public

*Diagram 1: Overview of the Solvency II structure*

Some details are still under discussion, but it is very likely that there will be increased capital requirements for a significant number of (re)insurance companies, especially those that do not have a well diversified portfolio. As Solvency II will force (re)insurers to overhaul their processes and structures in order to ensure an effective enterprise-wide risk management system, it triggers in most cases considerable investments in infrastructure and expertise.
IS SOLVENCY II ONLY RELEVANT FOR EEA-BASED (RE)INSURANCE COMPANIES?

Solvency II not only has a direct impact on companies based in the EEA but will also have world-wide ramifications, as all EEA (re)insurers have to assess the default risk on their counterparties (e.g. international reinsurance partners). In this context, the concept of “equivalence between regulatory regimes” has been introduced.

The article 172 of the Solvency II “Framework Directive” provides the European Commission with the option to evaluate whether a third country regulatory regime – as applicable to reinsurance – is equivalent to Solvency II or not.

If a third country’s regulatory regime is deemed to be equivalent, reinsurance contracts between an EEA cedant and a third-country reinsurance company, e.g. in Bermuda, will be treated in the same way as reinsurance contracts with reinsurers based in the EEA. The deemed non-equivalence of a specific (re)insurance supervision system will probably have significant repercussions for the cedant and reinsurer concerned, for example in the form of increased scrutiny from regulators when a reinsurance agreement is being assessed. This includes the power to require non-EEA reinsurers to provide collateral for any reinsurance of an EEA entity, making the reinsurance transaction more expensive. It is important to understand that the relationship between the companies involved (e.g., intragroup transactions) is of no relevance.

In the first round, the European Commission has proposed to include Switzerland, Japan and Bermuda for assessment of equivalence. The US will be a primary candidate for consideration as a “transitional regime for equivalence”. This means that equivalence is granted only for a limited amount of time. By the end of that transitional period the US would have to fully satisfy all the equivalence criteria in order to be granted the benefits of equivalence permanently.

It is interesting to see the rather different Solvency II equivalence strategies of some of the leading off-shore domiciles. On the one hand the Bermudians are aiming to be considered as Solvency II equivalent, whilst Guernsey has decided to be “non-equivalent” by intention.

The Bermudians communicated two main reasons for their strategy:
— Solvency II equivalence will allow Bermuda companies to conduct business in Europe on a much more efficient basis and
— it will avoid duplication of supervision.

By contrast, the Guernsey financial regulators have raised doubts as to the benefits of mutual recognition status for its captive industry. As Dominic Wheatley, managing director of Willis (Management) Guernsey Ltd. and chairman of the Guernsey International Insurance Association, put it, “the position the island (Guernsey) has adopted will enhance Guernsey’s attractiveness as a domicile to captive owners and other niche insurers looking for a regulatory environment that responds to the smaller scales of business and simpler business models typical of their businesses”.

HOW DO THE “MECHANICS” OF SOLVENCY II WORK?

Solvency II will establish that the capital requirement of a (re)insurance company is based on a total balance sheet approach and an economic valuation of all assets and liabilities.

A total balance sheet approach means that the determination of an insurer’s ability to cover its obligations with the required confidence level should be based upon its total financial position, meaning both the liabilities and the assets sides.

An economic valuation of assets and liabilities implies that assets should be valued at market value where this is both available and provides a reliable and appropriate valuation. In cases where a market-value is not available, a mark-to-model value will be used.
Liabilities on the other hand should be valued on a “best-estimate basis” (economic value of liabilities). A risk margin for non-hedgeable financial and non-financial risks is added to the best estimate of liabilities. This risk margin should be calculated using the cost-of-capital method. When it comes to the actual capital requirement calculation, (re)insurers can either choose to use the Solvency II “standard formula”, which is a more uniform and generic risk-modelling approach, or they can opt for an “internal model”, which should represent the individual risk profile of a (re)insurer more precisely.

However, the basic underlying mechanics, which are explained briefly below, are quite similar. With the standard formula the “Solvency Capital Requirement” (SCR) is derived as an aggregation of the risk capital figures for individual risk sub-modules, e.g. underwriting risk (broken down into life, property-casualty and health), market, counterparty default and operational risk (see diagram below).

According to the Solvency II Directive, insurers’ risk situations are to be evaluated on a value-at-risk basis with a confidence level of 99.5% over a twelve-month period and the amount of risk capital required is calculated accordingly.

Diagram 2: Structure of the standard formula

Included in the adjustment for the loss-absorbing capacity of technical provision under the modular approach.

Source: European Commission
HOW ARE AVIATION RISKS HANDLED IN THE SOLVENCY II CONTEXT?

In the Solvency II standard formula the capital requirement for the underwriting risk of specific lines of business (LoB) is made up of a premium and a reserve risk component. There is provision for twelve lines of business and primary insurance and proportional reinsurance are treated in the same way. For each individual LoB, the standard deviations and volume measures for both premium and reserve risk are determined. As a general principle, the higher the volume and the underlying risk, the higher the capital requirement will be.

Aviation will fall under “Marine Aviation Transport” (MAT). Out of the 12 LoBs recognised by Solvency II, MAT has the second highest standard deviations for premium and reserve risk (net of reinsurance) among the primary/proportional RI lines of business. Due to these high deviations, writing MAT consumes a comparatively large amount of risk capital. In the context of the standard formula, both proportional and non-proportional (re)insurance covers have a risk-mitigating, and hence a capital-reducing effect. However, proportional covers reduce only the volume measure and non-proportional ones reduce both the volume and the risk measure.

WHAT IS THE POTENTIAL IMPACT OF SOLVENCY II ON THE AVIATION INSURANCE MARKET?

It can be expected that Solvency II’s final introduction and even the process of adapting to it will force EEA-based aviation insurance market players to act even more rationally and economically efficiently.

Especially aviation manufacturers and airlines that own a captive in the EEA will increase their understanding of their risk profile as they are required to implement the Solvency II regulations more or less in the same way as genuine (re)insurers. The most advanced aviation manufacturers in the EU might see Solvency II as an opportunity rather than a threat. They are expected to transform their captives from “transactional vehicles” into strategic risk management assets, which help them to build an effective risk data base, increase the understanding of the mechanics of risk financing and therefore lower their total cost of risk. Some players might even consider a protected cell structure or move their captive to an off-shore domicile in order to minimise the operational challenges posed by Solvency II’s Pillar 2.

The impact on market capacity and prices is hard to assess, but the increased transparency regarding the total cost of risk is likely to lead to pricing and reserving being more commensurate with risk.

CONCLUSION

Solvency II will have a major impact on the (re)insurance markets, not just in the EEA, but worldwide. It will lead to more sophisticated business models and efficient markets, and is therefore a must-know for all (re)insurance market participants.

Munich Re is well positioned for Solvency II. We possess a highly diversified portfolio and a broad range of relevant expertise, which we intend to share with our clients. Our broad range of services spans from providing basic knowledge to supplying specialist actuarial and risk management expertise built up by Munich Re over many years. If you have any further questions, please contact us.
We have continued to utilize the aerospace manufacturers who are listed within Flight International magazine’s “Top 100 Aerospace Companies” that insure and have insured in the London marketplace for at least the past five consecutive years.

We have also included other manufacturers/aerospace companies to create an analysis tool that we consider reflects the London markets’ position regarding manufacturers liability insurance.

This analysis tool is referred to as the ‘**The Index**’.

For the 2010 review, The Index analyzes the renewal experience of 116 core Aerospace manufacturers and MRO Insured’s, (part of a total 197 Insured’s for whom we are able to review London market renewal experience information).

The Index is subdivided into six specific sectors, as detailed below, and we believe this provides a good indication of development patterns within the manufacturers’ arena.

— Prime Airframe Manufacturers
— Major Engine Manufacturers
— Sub-Airframe/Engine Manufacturers
— Component Manufacturers
— Electronic/Avionic
— Maintenance/Repair and Overhaul (MRO)

Premiums are all based on lead net terms (as far as known) and all premium and estimated sales figures shown are US dollars**.

Analysis and results based on The Index are subjective in that many Insured’s are able to fall into more than one sector due to the diverse nature of their aviation businesses.

---

** All currencies converted to US Dollars as at applicable ROE @ January 2010.
Even though we seek to review the renewal experience of a consistent group of Insured's, using Flight International magazine’s “Top 100 Aerospace Companies” as our base, mergers and acquisitions within the aerospace industry have resulted in new entrants to that list. Some of these new entrants have been introduced into The Index for the first time in 2010. We have, however, continued to maintain our requirement that those Insured’s contained within The Index have renewed in the London marketplace for the past five consecutive years.

Consequently, 2009 has been adjusted to reflect ‘new Insureds’ to The Index and this has allowed us to provide an accurate comparison with 2010.

The charts on this page identify the proportion of premium contributed by each of the main sectors within our review and also illustrates premium development history and annual quantum within each sector analyzed.

For the individual sector analysis, the charts shown focus on each of our sectors since 2001 (i.e. a 10 year analysis is being maintained and will continue to be rolled forward on a 10 year basis for future reviews).

The recorded total premium for this sector was USD 412.93 million which equated to a reduction of 2.66% against 2009.

Sales estimates of USD 231.75 billion showed a decline of 4%. This is the second consecutive year of reduced sales and is slightly greater than the 3.8% decline recorded in last year's review.

Actual unit deliveries by the prime manufacturers within our Index totaled 2,953* for 2010 which compared to the pre-economic downturn figure of 5,283, represents a significant reduction of 44%.

Despite a modest reduction in premium and the continued decline in projected sales/turnover, the derived rate on sales increased marginally by 1.40%.

Those Insured’s who previously utilized Self Insured Retentions (SIRs) continued this theme in 2010, where varying SIR amounts were employed in order to gain maximum benefit to the Insured (and Insurers).

The use of SIRs remains an attractive marketing strategy as they remove much of the sectors’ attritional losses, thus further contributing towards the increasing premium credit balance that is currently in Insurers favour.

It was also noted that a number of policies either renewed on a longer term basis or extended existing long term arrangements to 2012 and beyond.

* Ascend Air claims and GAMA excluding military/para-public deliveries.
Projected sales of the major engine manufacturers for 2010 were USD 83.39 billion which equates to a reduction of USD 2.975 billion or 3.45% when compared to 2009. This is the second consecutive year of decline.

Despite this fall in projected sales, the sector did record an increase in premium by 1.11% to USD 107.57 million.

This premium increase was mainly due to deterioration on back years claims and in some cases, related to non-engine business units within the major engine manufacturers risk profile.

The derived premium rate on sales has consequently recorded an increase of 4.71%, the second consecutive year that this sectors’ derived rate has risen and it is again the largest rise of any sector within the Index.

As with aircraft prime manufacturers, Insureds in this sector:
— Continued with the utilization of Self Insured Retentions (SIRs) which remained prevalent (around half of Insureds used them in 2010)
— Long term policy risk financing strategies were adopted or extended, by some Insureds
— Continued to show a healthy premium credit balance in Insurers favour
This sector recorded the highest projected sales growth within the Index, being 8.63%.

This is mainly the result of an acquisition by a manufacturer in this sector, of a manufacturer that was previously included in a different Index sector. Thus, the new entity is retained in this sector with greatly increased sales.

We did however see that sales forecasts were generally up in this sector in 2010.

Premium recorded a fall of 2.72% to a level of USD 20.32 million.

The acquisition mentioned above helped to achieve a new combined 2010 premium base that was significantly less than the combined sum of expiring premium, thus distorting the final result inside this sector.

The derived rate on sales reduced by 10.45% which is the combined impact of increased sales and premium reduction mentioned above.

The loss ratios in this sector remain low and therefore this sector continues to be attractive to Insurers.
COMPONENT MANUFACTURERS

Component manufacturers continues to be one of the most difficult and diverse sectors to be analyzed.

Overall, the sector recorded a net premium reduction of 3.5% in 2010 against 2009 figures.

This does however disguise a broad spectrum of renewal results, ranging from double digit reduction to double digit increase.

This is reflective of the risk profiles being presented to Insurers which ranged from; sales increases, claim history improvements to sale reductions and claims deteriorations.

2010 sales forecasts overall for this sector were at USD 37.13 billion which represents 4.85% reduction on 2009 information.

Historical loss ratios also continued to improve within this diverse aerospace sector.
Insureds within the Electronic/Avionic Manufacturers’ sector continued to generate one of the lowest premium volumes inside the Index but conversely, they generate the third highest sales revenues (only being surpassed by the prime airframe and major engine manufacturers).

Total premium for 2010 amounted to USD 22.142 million which is an increase of 1.5% compared against 2009 data.

From a sales point of view, forecasts for 2010 however reached USD 39.934 billion, or a 3.40% increase from 2009.

Even though a number of the world’s leading nations have reviewed/reduced their military and defence budgets, some of the major global systems providers/integrators contained within this sector have recorded sales growth for 2010.

This tends to suggest it is the military/defence ‘hardware’ manufacturers that are being hit hardest by governmental expense reviews.
Maintenance, Repair and Overhaul (MRO) companies provide specialist technical support services to aircraft operators but also in many cases, offer design and manufacturing capabilities thus presenting Insurers with diverse exposures which can be both short term and longer term liability risks.

This diversity is generally recognized by Insurers when assessing MRO Insureds.

Sales from MRO companies have continued the recent trend of further increases, being +4% in 2010 to a total of USD 21.584 billion.

This is partly because aircraft operators continue to outsource MRO services, particularly in areas of aviation industry growth (i.e. Asia where we have seen the most noticeable increase in productivity from MRO's in recent years).

The MRO sector has generated some short term (liability) losses in recent years, to which Insurers reacted by applying premium increases.

However, some of the historical claims have improved during the 2010 renewal season and consequently, Insurers readjusted their rates, reflecting the shorter term nature of the MRO sector.

For 2010, total premium was USD 52.186 million, a 3.6% reduction compared to 2009.
Our conclusion 12 months ago was that the market was generally taking a firm stance towards program renewals with some small reductions being achieved on the back of reduced sales.

Summarizing 2010, the prime airframe manufacturers within the Index seem to have suffered most in terms of aircraft delivery/sales downturn since a peak in aerospace sales in 2008.

This appears to have been partially recognized by Insurers with the prime airframe manufacturers achieving some single digit reductions.

Half of the major engine major manufacturers analyzed continued to utilise SIRs, thus removing attritional losses from the market, yet overall, this sector recorded a slight premium increase.

The total premium levels generated by Index programs were USD 676.54 million, being a small reduction of 2.10% compared with 2009.

In addition, the total net renewal premium for the aerospace liability market (including airports/ATC/service providers) was USD 944.09 million net during the course of 2010 based on 458 renewals that we were able to monitor, a reduction of 2.84% from 2009.

The foregoing leads us to conclude that Insurers still have a ‘conservative’ view of manufacturers/aerospace company business when, in reality, the stable and profitable income from manufacturers/aerospace business remains the ‘cornerstone’ of the aviation insurance market.
We have already shown (in the Aviation Industry Review) that notwithstanding increased passenger fatalities in 2010, overall, passenger fatalities rates still remain substantially lower than in previous decades.

When we consider that 2.72 billion airline passengers were carried in 2010 against 648 recorded fatalities, this leads to the conclusion that the aviation industry continues to be one of the safest forms of transport and is a testament to the quality of product and service support coming from the aviation manufacturing industry.

Considering passenger awards are one of the largest contributors towards aviation products liability claims, the improving passengers fatality rates have undoubtedly led towards the growing aviation products market profit/premium credit balance.

In last year’s review, we established the Index Eight Year Fluid Tracker (the Tracker) in order to have a better understanding of the aviation products market premium and loss patterns.

The Tracker is generated using a seven year claims basis (year seven being the point on ‘average’ that manufacturers losses peak in a 10 year cycle) including the most recently expired (green) year, reflecting an eight year loss profile.

Using the Tracker, we can advise that the year end figures (as presented during 2010 underwriting year) now generates a profit/premium credit balance of USD 3.38 billion to Insurers benefit as detailed below:

**PREMIUM CREDIT BALANCE USING THE TRACKER**

![Bar Chart]

Having established that the companies that constitute The Index have been profitable to Insurers, we should next review the Tracker from last year’s report to see how this has performed.
Recapping from 2010, the Tracker focused on years 2001 – 2008 inclusive. Updating the same eight years as presented in the 2010 Review, we can advise that incurred claims deteriorated by USD 272 million or just 9% overall from 12 months ago. This is demonstrated in the graph (top) to the right.

In addition, the 2000 year of account is again shown in the ‘mature’ years column. To verify if we have been accurate in using this approach, we assessed if there was any deterioration during the last 12 months and can advise that there was a 1% worsening.

This would seem to suggest that our ‘mature’ years philosophy is currently accurate.

Furthermore, we can also move the fluid Tracker forward to review a new eight year claims period, being 2002 – 2009 – the 2011 Review Tracker. The chart to the right (bottom) demonstrates that the accumulated loss ratio continues to improve and remains at its lowest point for over two decades.

TO SUMMARIZE THE FOREGOING:
— Aviation manufacturers liability business remains an attractive proposition to Insurers with continued growth in profitability/premium credit balance
— Deterioration on the ‘developing’ years of the Tracker remain minimal
— Loss ratios’ continue to show historically low levels
— The ‘mature’ years really do seem to be mature

With the improvement in passenger fatality rates (coupled with growing profit/premium credit balance), have your Insurers adequately adjusted their rating models to more accurately reflect this profile, in particular, with the re-evaluation process of historical claims?
“The Tracker now generates a profit/premium credit balance of USD 3.38 billion to Insurers benefit.”
Forum Shopping and FNC in International Aviation Disputes

Certain countries offer more favourable conditions to plaintiffs than others, whether because they offer greater prospects of success or because of the possibility of increased awards. This has led to the common practice of “forum shopping”, where plaintiffs attempt to “cherry pick” the best jurisdiction to maximise their recovery.

Nightmare Jurisdictions
Ask any international business where they would least like to face a claim, and the likely answer will be the USA. Such recognition is not undeserved – the USA remains the most litigious global jurisdiction by some distance and generally offers plaintiffs the best recovery prospects for a number of reasons, including the wide availability of punitive (non-compensatory) damages, the use of juries to assess damages and a large and experienced group of plaintiff lawyers.

Within the US, a select group of state jurisdictions stand out as particular favourites for “forum shopping”, of which Cook County, Illinois has become the venue of choice for plaintiffs in international aviation disputes. This is perhaps unsurprising given that Illinois is the home of a notable aerospace corporation and therefore is a convenient venue for almost any dispute involving their aircraft or components. Its judiciary is also widely regarded as being plaintiff-friendly and has earned a reputation for rejecting defendants’ attempts to remove litigation from Cook County to more appropriate jurisdictions on “forum non conveniens” (FNC) grounds.

FNC Trends in the USA
A product of the decrease in airline accidents in the USA in recent years (and the corresponding decrease in litigation) has been an increase in claims in the US arising from foreign aviation accidents. This, in turn, has led to an increase in the number of defendants seeking to deploy FNC arguments to remove litigation from the US to foreign jurisdictions.

In considering FNC arguments, US courts must balance a number of competing private and public interests, including the adequacy of an alternative forum, the convenience of basing the litigation in the USA and the public interest in such proceedings.

Unsurprisingly, US plaintiff attorneys have been ingenious in finding ways to weight this balancing act in their clients’ favour. They might, for example, attempt to name as many US-based defendants as possible in order to strengthen the ties between proceedings and the USA. There is also a clear trend of plaintiff lawyers specifically targeting those state jurisdictions where defendants have little chance of succeeding with FNC arguments (Cook County being a good example, where 90% of FNC motions in the last 10 years have been denied).
**RECENT FNC SUCCESSES**

Despite the tactics of plaintiff lawyers, defendants have had some success in running FNC arguments, particularly in the less plaintiff-friendly federal courts. The Air France 447 litigation is a notable example.

On 1 June 2009, Air France Flight 447 tragically crashed into the Atlantic Ocean whilst on route from Brazil to France. 228 passengers and crew perished, the majority being French citizens and residents. Two of the victims were US citizens.

72 plaintiffs, including the families of the two US victims, commenced over 30 separate lawsuits in multiple US jurisdictions, including Cook County, against numerous defendants including the airframe manufacturer, various US manufacturers and Air France. The proceedings were subsequently consolidated into one set of proceedings before a federal court in California.

Air France and the various manufacturers issued an FNC motion seeking to move the proceedings to France. In considering this motion, whilst the court recognised that the representatives of the two US victims were, in principle, entitled to US jurisdiction under the Montreal Convention and their choice of court ought to be accorded “considerable deference”, such factors were outweighed by the court’s findings (which are currently subject to appeal) that:

— the application of the Montreal Convention did not preclude FNC arguments
— France was an adequate alternative forum for the dispute and
— the private and public interest factors pointed heavily towards France being a more appropriate forum.

A similar decision was also reached in litigation arising out of the loss of TAM Flight 3054 in São Paulo in July 2007, with a federal court again ruling, on the FNC motion of the defendants, that US proceedings arising from this loss (which involved 199 fatalities, only one of which was a US citizen) should be moved to South America.

**REDUCING EXPOSURES**

Against this background, it is essential that businesses in the aviation sector have a clear understanding of the exposures they may face in the US courts and how such exposures might be reduced. The FNC arguments above are one (albeit very important) tool available to defendants wishing to avoid US litigation, but what else can businesses do to avoid such exposures?

**REDUCTION OF CONNECTIONS TO USA**

In order for US courts to accept jurisdiction over a dispute, it is typically necessary for a plaintiff to show some connection between the defendants and the USA. By reducing such connections through careful corporate/business structuring and planning, businesses can potentially reduce their exposures to US litigation. This is an area where legal advice can be helpful.

**CONTRACTUAL PROTECTION**

Contract terms may also provide opportunities to reduce exposures to US litigation. For example, contracting parties can often specify the court which shall have exclusive jurisdiction over disputes arising under the contract, as well as the choice of law which shall apply to such a dispute. In this way, parties can restrict the ability of those they contract with to bring proceedings in other jurisdictions, although it should always be borne in mind that such clauses may not necessarily be upheld in certain jurisdictions and, moreover, will not prevent claims being brought in the US by claimants who are not party to the contract.

Businesses may also be able to protect themselves through effective indemnity wording in their contracts with suppliers and customers. Such indemnities, where available, can potentially protect a contracting party against liabilities arising under the contract as well as liabilities to third parties.
CHOICE OF VENUE

US federal courts have demonstrated a greater willingness to accept FNC arguments in recent years than US state courts, as can be seen from the recent Air France and TAM decisions noted above. Indeed, over the past 10 years, whilst US state courts have rejected 80% of FNC motions, US Federal Courts have accepted 75%.

Defendants facing US state court proceedings should therefore attempt, where possible, to move such proceedings to a federal court. Federal court jurisdiction can be established on a number of grounds, including by applying “diversity rules” (which involves examining the citizenship of the parties) or where there is a question of law arising under federal (rather than state) law. Federal courts would, for example, generally have jurisdiction over claims arising under the Montreal Convention 1999.

THE HAGUE CONVENTION

Whilst a successful FNC motion will mean the end of the US Courts’ active involvement in a claim, there might remain a residual risk of US law applying to the dispute by virtue of the Hague Convention on the law applicable to products liability.

Where a product liability claim (e.g. a claim against the manufacturer or supplier of a product/component) is brought in a country which has ratified the Convention (which include France, Spain and the Netherlands), the provisions of the Convention determine the law which shall govern the dispute. A court in a Convention country may therefore be required to apply the law of another country (which need not necessarily be a Convention country) to such a dispute.

It is therefore possible that a product liability claim could be brought, for example, in a Spanish court which, as a result of the Convention, is in fact subject to US law. This might, in turn, potentially allow the claimants in the Spanish courts to seek US-level damages.

This very situation arose out of a mid-air collision between Bashkirian Airlines Flight 2937 and DHL Airways Flight 611 on 1 July 2002 in which 71 people died. Proceedings were brought in the US on behalf of a number of Russian victims against the manufacturers of the collision avoidance system.

For various reasons, the claims were dismissed on FNC grounds only to be re-filed in Spain. The Spanish court accepted that the Hague Convention required it to apply the law of the principal place of business of the defendants, including the relevant laws on damages. Unsurprisingly, the resultant awards made were considerably in excess of those which would ordinarily be expected under Spanish law.

The Bashkirian case is an example of a potential weakness in FNC arguments, namely that defendants who succeed in removing proceedings from the US may end up on less certain territory than they had expected.

SUMMARY

Whilst there have been some recent success stories, international aviation incidents will doubtless continue to be the subject of forum shopping in the USA and defendants will continue to call upon FNC arguments.

It is essential that businesses in the aviation sector fully understand their potential exposures to US claims and take all possible steps to minimise such exposures (including through careful corporate structuring or contractual protection). Where claims do materialise, steps should be taken to maximise FNC arguments, albeit always bearing in mind the potential pitfalls that may exist in other jurisdictions.
Article by Barlow Lyde & Gilbert Aerospace team, with thanks to Associate Mark Waters.

CONTACTS
London
Giles Kavanagh
Email: gkavanagh@blg.co.uk

Asia, including Singapore, Hong Kong and Shanghai
Mert Hifzi
Email: mhifzi@blg.co.uk

Latin America, including Sao Paulo
Jeremy Shebson
Email: jshebson@blg.co.uk
FORECAST FOR 2011
Twelve months ago, our forecast referred to a “stable and healthy” marketing environment, challenging conditions for airline Insurers and a growing aerospace profitability (notwithstanding incidents in 2009).

**Summarizing 2010, we can advise as follows:**
- 2010 saw a slight increase in aviation market capacity
- The airline sector had another difficult year, but
- The aerospace sector profit/premium credit balance grew again
- However, Clients/Buyers only appeared to receive modest reductions overall

Although our 2010 Forecast appears to have been correct, what can we do as an insurance and risk management service industry to continue to remind Insurers of the importance of the aerospace sector client base during 2011 and beyond?

In February 2011, we issued a Special Bulletin where we stated that Clients/Buyers should be looking for ‘optimism’ in their 2011 insurance and risk financing renewals and highlighted the level of profit/premium credit balance in Insurers’ favour that aerospace manufacturers had generated.

We are pleased to describe below the reasons why:
- Although we can not predict the future, passenger fatality rates seem to have shown a ‘sustained’ cumulative improvement over the last decade notwithstanding strong growth in global passenger numbers – aircraft technology and flight safety improvements being key contributors
- This improvement in passenger fatality rates has no doubt been a factor towards the level of products liability claims against manufacturers we have seen in the last 10 years and therefore has been a contributory factor towards the sustained growth of the profit/premium credit balance of Insurers participating on aviation products liability policies
- In the last 10 years, the aviation insurance market has generated over USD 10 billion of profit/premium credit, however, there are some underlying factors that we would like to highlight:
  - The aerospace sector have generated 31% of aviation market premium (combined airline and aerospace sectors) in the last 10 years, BUT
  - The aerospace sector has produced only 20% of claims (against 31% premium) over the same period which could suggest there is still an ‘imbalance’ between the airline and aerospace sectors
  - Some Insurers would argue that the airline sector has generated more income over the last 10 years which goes some way to justifying this ‘imbalance’, HOWEVER,
  - We all understand that Insurers are in the risk transfer business and they need to generate a profit margin to their capital providers, so we asked ourselves the question, over the last 10 years, which sector has generated more profit/premium credit balance to Insurers, airline or aerospace?

- Our analysis concluded that the Aerospace sector generated 54% of the last 10 years profit/premium credit balance to aviation Insurers

<table>
<thead>
<tr>
<th></th>
<th>Aerospace</th>
<th>Airline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium</td>
<td>54%</td>
<td>46%</td>
</tr>
</tbody>
</table>

WILLIS AEROSPACE AVIATION PRODUCTS MARKET REVIEW 2011
Aviation market capacity remains strong and the continued surplus of ‘A’ graded Insurers who write manufacturers aviation risks is a benefit to Clients/Buyers.

Competition amongst some of the core ‘following/co-Insurers’ should be utilized particularly with those who do not have the issue of ‘legacy’ claims and/or the protection afforded by Equitas/Lloyd’s.

We expect most Insurers to continue with individual risk analysis including actuarial reviews, however, Clients/Buyers will continue to evaluate the best use of Self Insured Retentions/Deductibles, and to review longer term risk financing strategies.

Clients/Buyers will review possible program/captive restructures as they look ahead to 2011 and importantly, 2012, when reinsurance protection for Insurers may be more costly/restricted due to Solvency II implementation and the potential effects of natural catastrophes in the Asia Pacific region.

We hope that Clients/Buyers share the same view as us and are able to utilize some of the foregoing information as strategic tools with your preferred insurance/risk management service providers to achieve the best results for your company.
“Our analysis concluded that the Aerospace sector generated 54% of the last 10 years profit/premium credit balance to aviation Insurers.”
CLIENTS BEFORE CONTINGENTS

BACKGROUND
On Tuesday, 16 February, 2010, the three global insurance brokers, Aon, Marsh and Willis, reached an agreement with regulators that ended costly compliance burdens imposed in 2005. However, the agreement also rolled back reforms that previously banned them from accepting additional payments from Insurers (contingent commissions) that are based on the growth or profitability of business placed with carriers.

Willis voluntarily stopped accepting contingent commissions in its retail insurance brokerage business in 2004. Today, in response to the regulatory changes, Willis is the only one of the global brokers to reaffirm its stand that contingent commissions represent a clear conflict of interest with clients and publicly refuse to accept them in its retail insurance brokerage business.

WHAT ARE CONTINGENT COMMISSIONS?
Contingent commissions are compensation arrangements between retail insurance brokers and insurance carriers in which payment is contingent upon such factors as the growth or profitability of a book of business over time, often paid sometime after the end of a calendar year.

UNDERSTANDING CONTINGENT COMMISSIONS
At the heart of today’s independent agent/broker model is the upfront commission, a percentage of the premium paid by the carrier to the agent or broker when business is placed. Since the rise of independent agents and brokers, carriers have devised ways to induce agents and brokers to place more business with them through incentives that go well beyond, and are in addition to, the standard upfront commission.

These incentives, historically not well disclosed to or quantified for clients, are paid by the carrier to the agent or broker based on two types of yearly calculations:

GROWTH CONTINGENTS
Growth in the total premium placed by the agent or broker with the carrier on a year-over-year basis.

Example:
If Broker/Agent X grows premiums with Insurance Company Y beyond a threshold set at the beginning of the year, Broker/Agent X can generate, for example, a 3% contingent payment in addition to the pre-agreed fee or upfront commission paid by the client or buyer.

So, by simply moving a portfolio of premium from one insurance company to another, Broker/Agent X can generate revenues equal to 3% of the total premium volume with Insurance Company Y, a 20% increase in compensation to the Broker/Agent on commission arrangements. On fee arrangements, these increases can readily generate a 50% increase in compensation to the Broker/Agent.
**PROFITABILITY CONTINGENTS:**

The size of the total annual underwriting profit earned by the carrier on aggregate premiums placed by the agent or broker with the carrier.

**Example:**

If Broker/Agent X places profitable premium with Insurance Company Y which produces a loss ratio below a predefined threshold at the beginning of the year, Broker/Agent X can generate, for example, a 5% contingent payment in addition to the pre-agreed fee or upfront commission paid by the client or buyer.

So, by simply leaving historically profitable business with the Insurance Company, Broker/Agent X can generate revenues equal to 5% of the total premium with Insurance Company Y, a 30% increase in compensation to the Broker/Agent on commission arrangements. On fee arrangements, these increases can readily generate a 60% increase in compensation to the Broker/Agent.

**A CONFLICT OF INTEREST**

Contingent commissions create an inherent conflict of interest in retail insurance brokerage industry. In placing risk and servicing policies in a retail insurance brokerage, you can’t have two masters. But that’s what happens when these brokers are beholden to insurance companies for big bonuses dependent on growth and profitability (read: higher premiums and lower claims costs).

In the retail insurance brokerage business, claims happen all the time, and when insurance matters most, clients and carriers often find themselves on opposing sides of a claim. Data from Willis's own claim records show that:

- 50% of non-statutory claims bring 'push-back' from the carrier. If the claim is large, the number spikes as high as 90%.
- ‘Push-back’ – disputes, denials and reservations of rights by carriers – is on the rise, with about 25% percent of all claims being litigated.
- Willis advocates over 50,000 claims per year, and are currently advocating over USD 1.5 billion in claims that exceed $10 million.

How can a broker truly advocate for a client’s claim to be paid if they are incentivised by the carrier to keep their book of business profitable? That sets up the conflict.

**THE COUNTER-ARGUMENTS**

Retail brokers who take contingent contingents will use a number of arguments to justify why they take them, including:

"**Even though we take contingent commissions, we are fully transparent about it.**"

Not really. Accepting growth and/or profit-based contingents from carriers and being truly transparent are mutually exclusive. At the time of placement, a broker’s contingent compensation – dependent on a carrier’s increased volumes, renewal volumes, profit or a mixture of factors over time – cannot be known.

Even months later, after the end of the year, the true cost of contingents to any one client can’t be quantified. That’s because the tally isn’t based on any single client or transaction. The contingent payment is dependent on how much larger or more profitable the broker’s entire book of business is with a carrier from one year to the next. The end result? The client may be stuck paying an unknown tab.

"**There is no conflict of interest if we fully disclose our compensation.**"

Not true: The mere fact that an agent or broker discloses to a client that they are accepting contingents does not eliminate the conflict. Simply saying you are taking contingents does not make it right and leaves unanswered the key question of exactly how much you are making from a client’s business.

In addition, the new regulations place the burden to request full disclosure about the nature, amount and source of the broker’s compensation on the shoulders of the insurance buyer. So if you don’t ask, you won’t know.

---

**THE PRACTICE OF PAYING CONTINGENT COMMISSIONS SETS UP A FUNDAMENTAL CONFLICT OF INTEREST**

Q: How do carriers make more profit?

A: Higher premiums and lower claims costs.

Q: What is in the best interests of clients?

A: Lower premiums and fair and fast claim payments.
“Clients can opt-out of contingent commission programs.”
If only it were that simple: Promising a client that its premium and/or losses will not be included in an Insurer’s contingent calculation doesn’t eliminate the conflict, either. And it’s impossible to verify without a forensic examination of the books. The accounting for these so-called ‘opt-outs’ is opaque at best and doesn’t unchain the broker from having two masters.

WHAT CAN YOU DO TO STOP CONTINGENTS?
ASK THE HARD QUESTIONS
Buyers of insurance, beware: Unless a broker tells you, upfront, who is paying them, how much they are being paid and in what form they are receiving payment, you’re not getting the whole story.

We urge CEOs, CFOs and general counsels of individual organizations to sit down with their risk managers and ask these hard questions:
— Is our broker squarely on our side?
— Are we getting the best coverage?
— Are we paying a fair premium for that coverage?
— When something goes wrong, will our broker be there for us to get the maximum payout for our claim and have it paid quickly?

VOTE WITH YOUR FEET
Willis has set up Clients Before Contingents to give you, the buyer of insurance, a voice and a platform to come together with other buyers and take a stand against contingent commissions.

When Willis stood up against contingents in 2004, we looked forward to the day when they would be erased from the global retail insurance brokerage industry. But now that they look set to make a come back, it falls to the buyers of insurance to vote with their feet and discourage their brokers from taking these payments.

Use ClientsBeforeContingents.com to have your say and lend your voice to an issue that calls out for change.

Willis has taken the lead in establishing itself as much more than a transactional broker, offering innovative products and value added services to our clients that are unique to Willis.

The group, together with its subsidiaries and associates, employs 17,000 people represented through a network of 400 offices in 120 countries.

Willis Aerospace is a division of Willis Group Limited, the global insurance broker and is a leading professional risk and insurance advisor to the global aerospace industry.

We employ over 290 aerospace associates based in 28 dedicated offices servicing the requirements of aerospace companies around the world, including aerospace risk management, leasing and financial consultants.

Willis Aerospace has achieved and sustained key market position over the past decade through an unswerving commitment to clients by investing heavily in new skills and resources to ensure that we meet and exceed our clients’ expectations.

Our goal is to help clients succeed by reducing and managing the risks they face.

Willis Aerospace develops and delivers professional insurance, reinsurance and risk management advice and solutions for clients in a diverse range of industries with operations across the world.

DATA SOURCES:
— Willis Aerospace Database
— Ascend/Airclaims
— GAMA
— ATI

DISCLAIMER
This market review has been produced for information purposes only. While the information contained has been prepared after consultation with insurance markets and participants, we accept no liability for its accuracy or reproduction.
For more information please contact the Leaders of the Global Aerospace Practice, of Willis Aerospace:

Nick Cox  
Tel: +44 (0)20 3124 7671  
Email: nick.cox@willis.com  

Craig R. Davie  
Tel: +44 (0)20 3124 7321  
Email: daviercr@willis.com  

Neil D. Getter  
Tel: +1 212 915 7879  
Email: neil.getter@willis.com  

Garrett Hanrahan  
Tel: +1 972 715 6390  
Email: hanrahang@willis.com  

Daniel Hubbard  
Tel: +44 (0)20 3124 8403  
Email: hubbarddd@willis.com  

John King  
Tel: +44 (0)20 3124 8676  
Email: kingjp@willis.com  

Stephen J. Kisor  
Tel: +1 213 607 6316  
Email: stephen.kisor@willis.com  

Stephen R. Lodge  
Tel: +44 (0)20 3124 7456  
Email: lodges@willis.com  

Martin E. McConnell, Jr  
Tel: +1 212 915 8224  
Email: marty.mcconnell@willis.com  

John Rooley  
Tel: +1 604 605 5616  
Email: rooleyyje@willis.com  

Charles Searle  
Tel: +44 (0)20 3124 8862  
Email: charles.searle@willis.com  

Michael Soltynski  
Tel: +1 604 605 5615  
Email: soltynskimi@willis.com  

Gary Standing  
Tel: +44 (0)20 3124 7690  
Email: standingggp@willis.com  

Andrew Weber  
Tel: +44 (0)20 3124 6018  
Email: webera@willis.com