

# Special Report

JLT AEROSPACE

JANUARY 2010

## End of Year Review

### Executive Summary 2009

- The airline industry suffered an overall loss of USD11Bn in 2009
- Few start-up airlines commenced operations and this number was exceeded by closures
- The order book also shows a lack of confidence in the market as there has been a decline in the backlog and net orders were down for the year
- Fleet values have remained largely stagnant through the year with only low level growth in small areas with the exception of China and the Middle East
- Premiums have grown 16% over the year which still falls short of matching the losses which have been the costliest since 2001
- Rates threatened to harden after the major losses in June but overcapacity prevented any real momentum
- Overcapacity remains in all the main aviation classes of business and overall airline capacity is slightly up compared with 12 months ago, not taking the growing latent capacity into account.
- Very few markets have fully withdrawn from writing aviation and a couple of new entrants started underwriting the class during the year
- Significant movement of personnel has been witnessed between all the broking houses

### Outlook 2010

- Subject to losses, the market will continue to seek premium growth
- Solvency II will shine a spotlight on the major risks business throughout Europe, perhaps accelerating the withdrawal of capacity. Whilst there is anticipation of change, a steady course is most likely from the lead markets, shocks seem the only alternative driver

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# 2009 Airline News Review

## 2009 in Brief

**January** began with the largest American carriers all reporting losses setting the theme for the year.

Unsurprisingly, in **February**, IATA called on the newly appointed Obama Administration to prioritise aviation as a catalyst for the economy.

By **March**, the relief of lower fuel prices was overshadowed by falling demand and plummeting revenues.

And in **April**, the number of aircraft parked and available for sale was increasing but their values decreasing.

After the many airline financial reports published in April, by **May** it was thought that none would make a profit this year.

Through **June**, pay cuts and lay-offs were becoming the norm but sadly the month was most widely remembered for the two major losses resulting in over 380 fatalities.

In **July** the CEO of American Airlines commented "despite oil prices being half what they were in July 2008 the industry finds itself in worse shape than a year ago."

By **August**, the H1N1 virus was the latest addition to the list of factors adversely affecting the industry.

And in **September**, the CEO of IATA said the industry "is in intensive care" the worst is not over yet.

Manufacturers, in **October**, were hoping that airlines would re-equip with new fuel efficient aircraft as a hedge against rising fuel costs.

BA and Iberia announced their merger plans in **November** and some large orders were deferred by other carriers.

In **December** even the ebullient low-cost carriers were reining in their rapid growth rates.

## Comment

Not only was 2009 a very poor year financially for the airline industry with an overall loss of USD11 billion but a cautious outlook also abounds for 2010. A loss is predicted of about USD5.5 billion, a significant improvement not only over 2009 but over the last decade.

In fact the last ten years have been the worst in financial terms in the history of the industry, raking up collective net losses of USD68 billion. Only three times during the decade has the industry been collectively profitable. It all started with a downturn in global economies following the turn of the millennium, followed by the shock of 9/11. The traffic slump and cash crisis which followed caused the demise of Sabena and Swissair and over the next few years this was the trigger for bankruptcy protection stints at Air Canada, Delta, Frontier, Northwest, United and US Airways.

Defying the mood of the airlines, the two major aircraft manufacturers, Airbus and Boeing, delivered between them 979 aircraft - a 14% increase over 2008 and 7% above the previous record of 914 shipments of exactly ten years ago.

Airbus's strength lies mainly in the A320 family of aircraft where it delivered over 400 for the first time. However, Boeing led the way in widebody production by shipping 109 747s, 767s and 777s against Airbus's 96 A330/A340s and A380s.

Overall orders are better than predicted with Airbus selling 310 aircraft and Boeing at 263.

## Outlook 2010

Forecasters remain optimistic (in relative terms) that although 2010 will still show a deficit for airline accounts, it should be a lot better than 2009. Although much

will depend on stability in oil prices and airlines ability to increase yields.

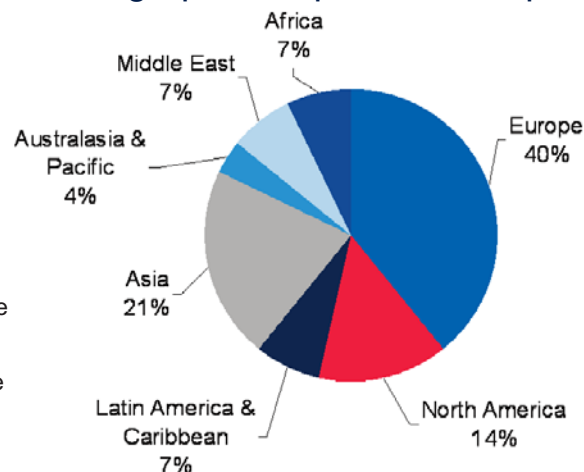
Projections of passenger traffic increases of 4.5% and air cargo of 7% will still leave yields very marginal. So much will depend on the handling of consumer and national debt to shape any sort of recovery.

## Start-ups

With the financial pressure in the airline industry, it is not surprising that there were so few start-up airlines in 2009.

We recorded only 28 new entrants which were fairly broadly scattered across the globe. Most of the new carriers are regional operators. Economies such as China are well represented and countries in areas previously underserved such as Eastern Europe and Iraq have all featured amongst the newcomers. However, there are some regions which are conspicuous by their absence for example there is very little reported in Latin America and nothing for India where growth might have been expected. Perhaps the most unlikely addition was Pet Airways, USA who are providing a service exclusively carrying pet animals.

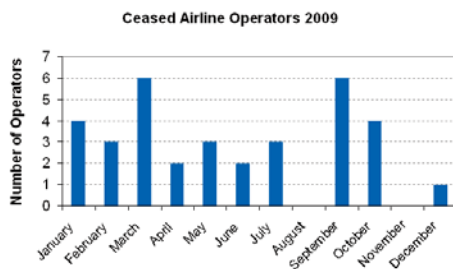
## Geographical Split of Start-ups



# 2009 Airline News Review

## Closures

34 airlines ceased operations during 2009. Others narrowly avoided closing by employing all manner of strategies. According to Innovata, 7 operators merged in with other companies and a further 10 carriers suspended their operations rather than ceasing entirely.



## Orders

Twelve months ago we were looking at another record backlog of commercial aircraft orders. This despite high oil prices during the year and a tightening of credit. 2008, in fact, showed the 4th consecutive increase in manufacturer's order backlog.

2009 has seen a real decline in new orders. The chart alongside shows net orders in 2009 were just over one third of those the previous year which itself was a little over one half of the record

breaking preceding year of 2007. A dramatic decline, not surprising given the underlying economy, yet production levels of new aircraft have remained fairly constant giving us a first decline in orders backlog for 5 years.

The key competition between the major manufacturers shows Airbus ahead in 2009 with 271 net orders against Boeing's 142. Airbus delivered 498 commercial aircraft with Boeing slightly behind at 481. The net effect of that was Airbus finished the year with 3,488 aircraft on backlog and Boeing on 3,375.

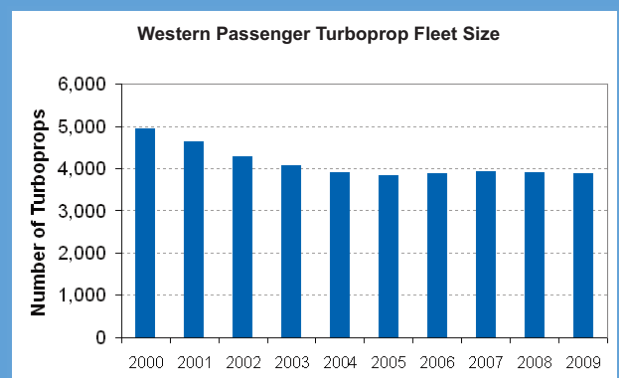
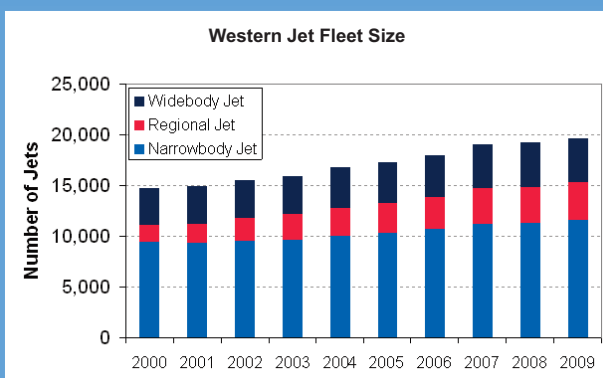
Turning attention, briefly, to individual aircraft types, with the A318 and A340 only attracting 1 new order each during the year and backlog being low, will we see these being chopped from regular production? As these types are produced on the same lines as the other Airbus models they may just quietly slip away this year. Whilst Embraer's E series is doing well the older 135/145 models seem to have gone into decline in the commercial market though they are still finding customers for the corporate role.

The next 12 months will be interesting.

The economy appears to be improving in many regions though credit is still tight and will probably remain so for a time. Most airlines probably have their desired fleets in service or on order to see them through any moderate growth in passenger numbers. With oil prices showing no dramatic increase we expect new aircraft orders to remain at a low level. To tease the buyers though, Boeing's much delayed 787 may no longer be just a dream liner and the new regional jets from Mitsubishi, AVIC/COMAC and Sukhoi are likely to come to market.



## 2009 Fleet Size Change



# 2009 Insurance Industry

## Airlines Market

Perhaps the biggest change in the airline insurance market in 2009 has been the movement of personnel. There have been arrivals and departures at all the major broking houses throughout the year. As this has come at a time when many airlines are in financial distress, it means that now more than ever old traditional relationships get re-examined because they need to be sure they are getting value.

## Capacity

Conversely, the capacity in the market has remained very stable. Indeed, over-capacity remains a theme throughout the different classes of aviation business with the typical available participation pushing towards 200% for airlines, showing a slight increase since 12 months ago. 2009 has seen very little in the way of withdrawals from the market or even reduction in expected line size. Indeed there have been a few new arrivals into the market. Standard and

Poor's and AM Best's have maintained their confidence in the market with scarce changes to ratings. Where financial strength rating changes have occurred they have tended to be positive rather than negative. With further new entrants rumoured to be joining the market we can only wonder at what point capacity will stop growing and start shrinking.

## Airports and Products Liability

Aerospace capacity remained plentiful in 2009 with no significant withdrawals from the market, both Talbot and Max Re commenced underwriting of the class from Lloyds.

On Products Liability, underwriters resolve to carry higher premiums on risks seen as more critical in nature was quickly weakened and flat renewals or small reductions were the order of the day. Non critical products risks remained in demand and reductions of 5% or more were not uncommon.

Airports have been a very profitable class of business for underwriters in recent years and we saw a lot of downward pressure on premiums as underwriters fought for their share of the cake.

In 2010 there is currently no sign of diminishing capacity and certainly for the first 2 quarters we expect no premium increases in the products or airport sector and the more desirable accounts will continue to see reductions albeit at a more modest level than 2009. In the third and fourth quarters we would expect reductions to be more difficult to come by.

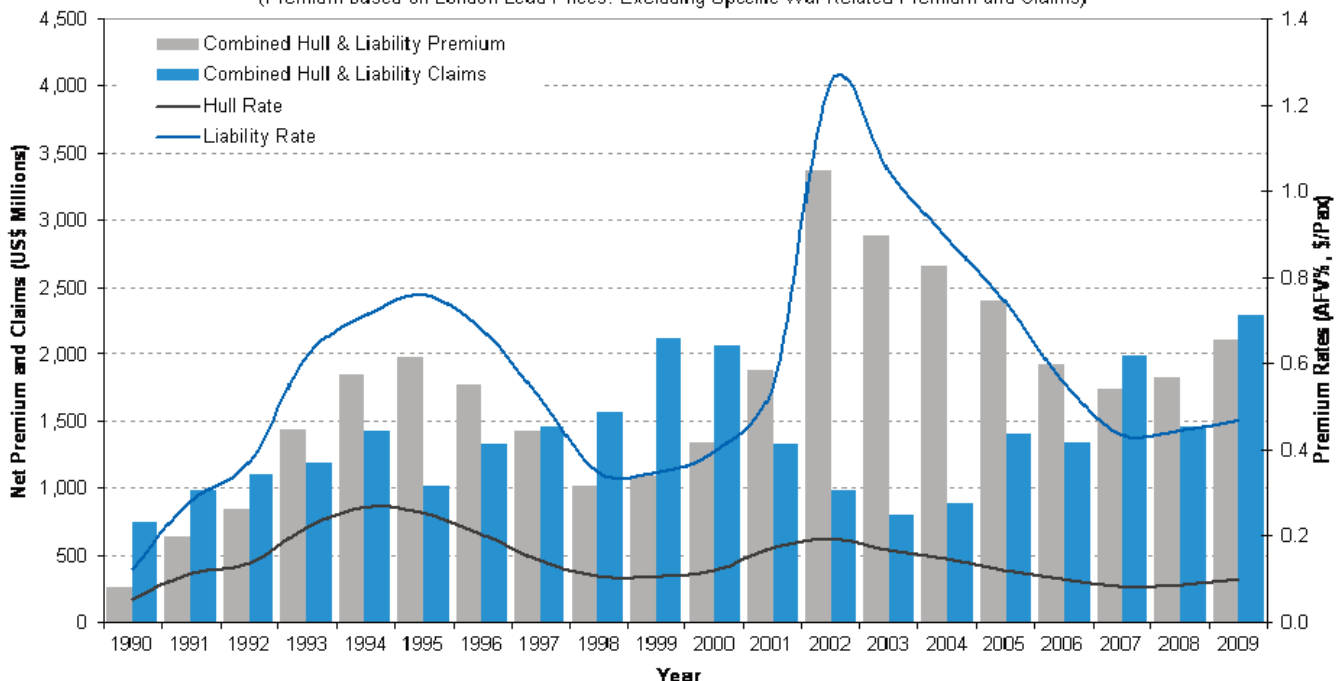
## Excess AVN52

The Excess AVN52 market has been claims free since 9/11 which reinforces the view that the sector has a relatively low probability of claims. The price is therefore very much capacity driven. The only pressure on capacity has been the advent of the A380 and the increase in limits required. In general there is over-capacity in the sector and

## Premium and Claims History

### Global Airline Hull and Liability Premium Rates and Claims

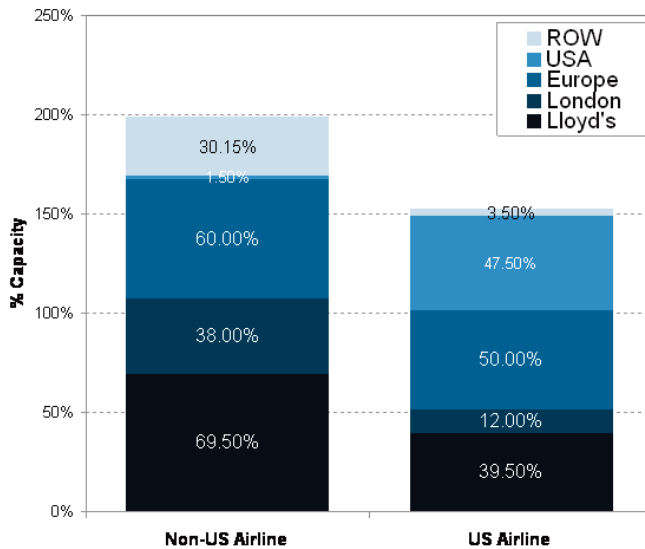
(Premium based on London Lead Prices. Excluding Specific War Related Premium and Claims)



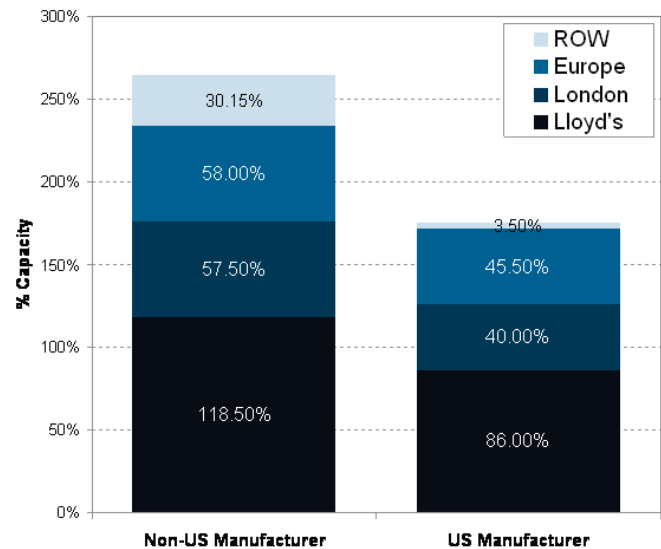
Claims figures based on reported losses and reserves, with an attritional estimate.

# 2009 Insurance Industry

Typical Airline  
Insurance Capacity, January 2010  
(Combined Single Limit US\$1.5bn)



Typical Products Liability  
Insurance Capacity, January 2010  
(Combined Single Limit US\$1bn)



premiums are low - a scenario which looks unlikely to change in the near future.

## Hull War

The Hull War market in many respects has mirrored the airline market with sliding rates in recent years, reaching a marginal position. The current view from leaders is to charge rates "as expiring" unless there are mitigating circumstances. For example, the hull war market in particular is always quick to react to both localised and global hotspots e.g. all airlines were subject to a surcharge after 9/11. Also, there have been various new entrants and existing players who have increased their participations. Consequently, it looks as though the status quo will be maintained in 2010, except perhaps in respect of General Aviation where the larger, even 100%, participations allows for more flexibility and competition which may suppress rates.

## Reinsurance

2009, will have cost insurers over USD2bn, making it the 2nd highest amount in the history of commercial aviation. The Colgan and Air France

losses triggered the first move towards a hardening of the reinsurance market for many years. Many insurers retained large shares of each of these losses. The reinsurance renewal season in January for Airline excess of loss was essentially flat. Increases of 0% - 5% were incurred on some accounts dependent on their loss record and exposures. The catastrophe layers that were loss free in 2009 and were generally unchanged in their pricing at renewal. General Aviation portfolios which remained unchanged could expect their excess of loss contracts to be renewed at the expiring terms. Elsewhere, retrocessional excess of loss programmes also remained very flat with increases in the range 0% - 5% experienced, subject to the aggregates and loss record on each particular account of damaging strike action.

## Space

The Space market continued to enjoy stability and good underwriting results during 2009. Market premium amounted to approximately USD700 million against claims of USD400M. Capacity again expanded, notably with Lloyd's syndicate Kiln entering the

market and some existing players acquiring additional investment. This resulted in approximately USD575M being available for a single launch, up by USD30M from 2008. Following its separation from Liberty, the risk consulting group Sciemus has linked up with Montpelier Re to continue its influential presence in the in-orbit market. Whilst underwriters remain wary of declining premium rates for launch and in-orbit programmes, the rate of decline has been measured. Good market profitability in four out of the past five years provides comfort that, at least for the immediate future, this pricing trend is sustainable. The underlying reliability of launch vehicle and satellite hardware has been encouraging, fostered by the mature heritage of most of the commercial systems. As new launch vehicles come to market in the next few years, along with less proven satellite platforms from countries such as China and India, and the hazard of orbital debris escalates, the combined impact on industry risk is likely to raise scrutiny of market pricing levels and differentiation between buyers.

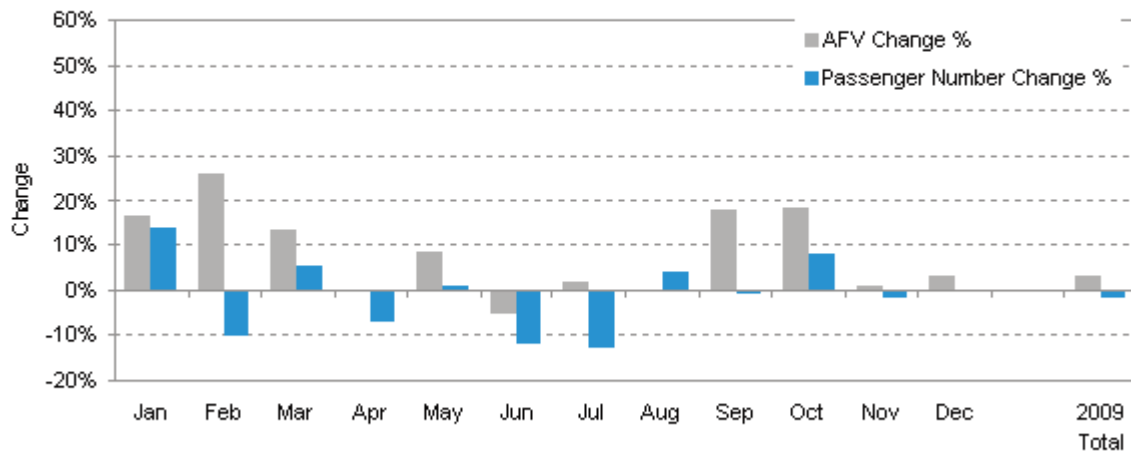
# 2009 Airline Renewal Analysis

## Exposures

With airlines suffering another poor year financially it is obvious that exposure movements would be minimal. Fleet values have grown in low single figures overall with the US market remaining stagnant. China saw a significant increase as did the airlines in the Middle East.

Passenger enplanements were down on 2008, which was a reflection on the state of world economies, but again the average change was minimal thanks to the growth seen in China and the Middle East.

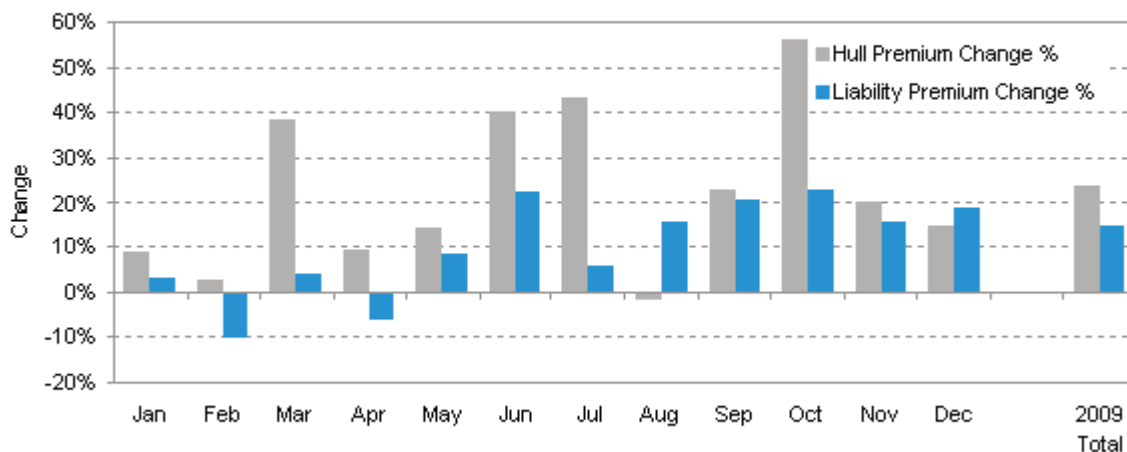
**Exposure Change Over Prior Year**



## Premiums

Underwriters have seen their gross premium grow in the region of 16% over 2008 but, looking at it on a simple calendar year basis, this is not enough to provide the market as a whole with any underwriting profit after claims.

**Premium Change Over Prior Year**

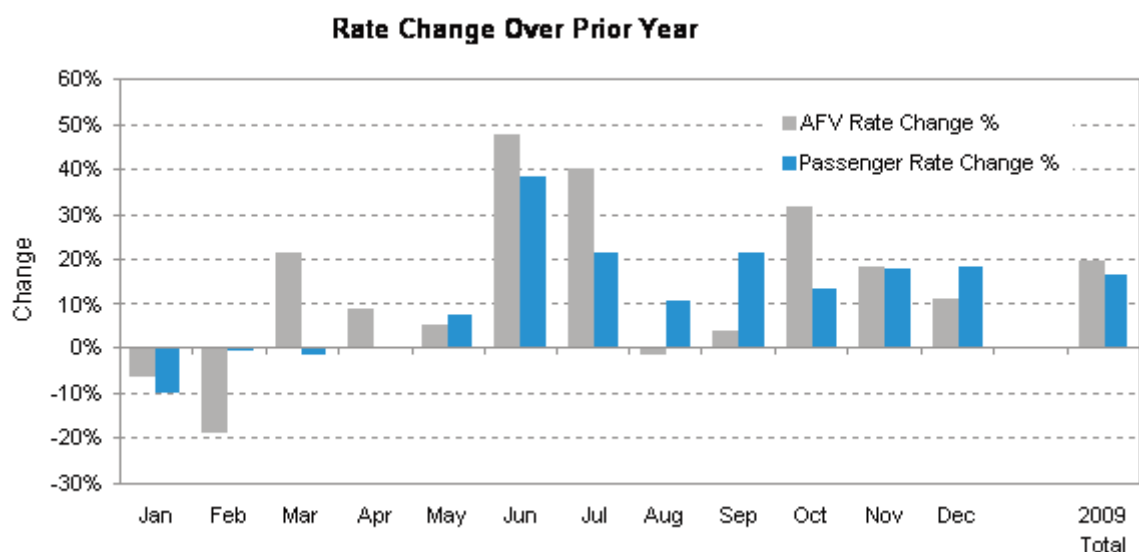


# 2009 Renewal Analysis

## Rates

2009 was going to be the year when underwriters finally decided to apply a firm hand to their airline book of business. Following a number of serious, and potentially serious, accidents in the first half of the year the market seemed set for significant rate increases. But as has been seen in years gone by, the reality proved deceptive.

Following the large losses experienced in June rates reacted quickly with the average rating in both June and July jumping up dramatically. However by the time the main renewal season arrived in November and December, no new major losses had occurred and more than ample capacity brought the market back down to a lower rating level.



## Outlook 2010

The conflicting factors that have controlled the market in 2009 look set to continue

**Calendar year losses** - Depending on how the reserves develop and allowing for attritionals, the estimated total claims in 2009 will exceed USD2bn, the highest level of claims on record excluding 9/11. This has surprisingly failed to add much momentum to the rate increases through the year and it seems that 2010 will follow in the same way, where the impetus expected from the injection of a couple of recent major losses will be mitigated by other factors.

**Industry exposure** - The global economy seems to be hanging in the balance as analysts try to predict whether the current rebound is real and sustainable or if there will be another downturn. Each turn in the economy seems to be mirrored in the airline industry and therefore affects the level of organic premium change. A downturn will increase pressure on rating whereas a recovery will allow underwriters to satisfy the need for premium growth without having to fight so much for larger rate increases.

**Market capacity** - We enter 2010 with more than adequate capacity. This surplus has controlled the temperature of the market despite the balance between premium and losses in the market being almost neutral across the last few years. It is perhaps no wonder that new capacity is still being attracted to the market when looking at the level of premium available and prospects for rate hardening. There is certainly room for individual companies, and the possibility of making a profit as indeed a few of the existing markets have just achieved.

# Losses 2009

## Losses Comparison

### 2009

- 22 fatal losses
- 128 non-fatal losses
- 41 total losses
- USD757.8M hull losses
- 530 fatalities
- USD1,128.7M estimated liability losses

### 2008

- 28 fatal losses
- 189 non-fatal losses
- 67 total losses
- USD764.6M hull losses
- 539 fatalities
- USD339.9M estimated liability losses

Notes: The comparison is for Western Aircraft only

The JLT liability estimates are provided merely as a guide.

## 10 Largest Incurred Losses

Date of Loss	Operator	Aircraft	Location
15th January	US Airways	A320	Hudson River, NY
12th February	Colgan Air	DHC8	Buffalo, NY
25th February	THY Turkish Airlines	B737	Near Amsterdam
9th March	Lion Air	MD-90	Jakarta
23rd March	Federal Express	MD-11	Tokyo
26th May	KLM et al	Various	Amsterdam
1st June	Air France	A330	South Atlantic
30th June	Yemenia	A310	Near Moroni
28th November	Avient Aviation	MD-11	Shanghai
22nd December	American Airlines	B737	Kingston

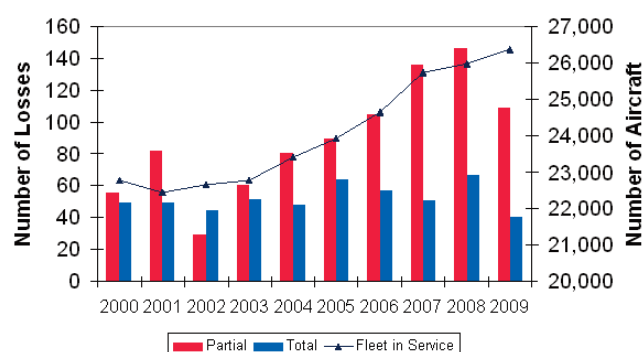
## Losses Analysis

2009 started and ended in the same vein as 2008 with total losses of a major airliner yet mercifully no fatalities. The successful ditching on water, of an airliner full of passengers, with no major injuries is an image that will remain with those in the industry for a long time. Bird strikes, in this case numerous geese, are an ongoing problem for aviators and one that perhaps cannot ultimately be avoided.

Unfortunately, the trend of three consecutive months without airline passenger fatalities came to an end in February with the Colgan DHC8 loss in Buffalo, NY with 49 people losing their lives. This of course was surpassed, in June with the disappearance of the Air France A330 and the crash of the Yemenia A310 resulting in a total of 379 fatalities, the worst single month for fatalities since May 2002. Unusually in

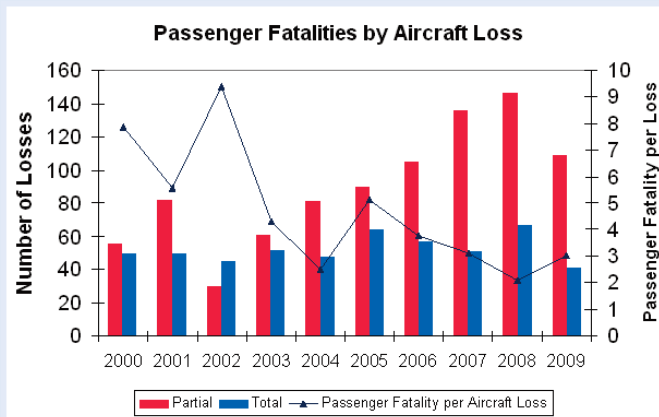
aviation, there are still no clear reasons for the Air France Airbus A330 loss. The weather appears a causal factor.

Western Airliner Losses against Fleet in Service



# Losses 2009

## Losses Analysis Continued



The weather was to blame for a major loss in May when a severe hailstorm struck several airports in the Netherlands with Schiphol coming off worst with damage to over 50 aircraft.

Schiphol was the location for Europe's first loss of the year in February when THY Turkish Airlines had a 737 land short of the airport, destroying the aircraft and killing four passengers.

March was the turn of the eastern regions, with a very lucky escape for Emirates, as one of their A340s only just got airborne at Melbourne, resulting in the aircraft taking out airport equipment at the end of the runway, and scrapping its tail in the process. Lion Air lost a MD-90 at Jakarta and Fed Ex an MD-11 at Tokyo.

April's losses were relatively minor, but probably accumulated a greater value than most months with a BAe146 total loss in Indonesia, another BAe146 overrun in South Africa (the first of four 'incidents' in 2009 involving South African Airlink), an A321 tail strike at Beijing, a 747 off the runway at Seoul and a heavy landing in a 767 at New York JFK.

Apart from the hailstorm in Amsterdam, mentioned earlier, May also saw a Saudi MD90 lose an undercarriage leg in a skid off the runway, Northwest and NAS Air suffer tail strikes in A320s, Asiana, expensively, lose a bit of flap from a 747 and World Airways seriously damage a DC-10 in a heavy landing.

As well as June's major losses there were also expensive abnormal landings for Saudi Arabian and China Cargo both with MD11s and a partial loss with Express Air, Indonesia, who nearly destroyed a Dornier 328 because of a dog on the runway,

July was notable for 168 fatalities when a Caspian Airlines Tu-154M crashed shortly after departure from Tehran. Another 16 were killed when an Il-62 of Aria Air landed too fast at Mashhad and went through a wall. Iran has had more than its

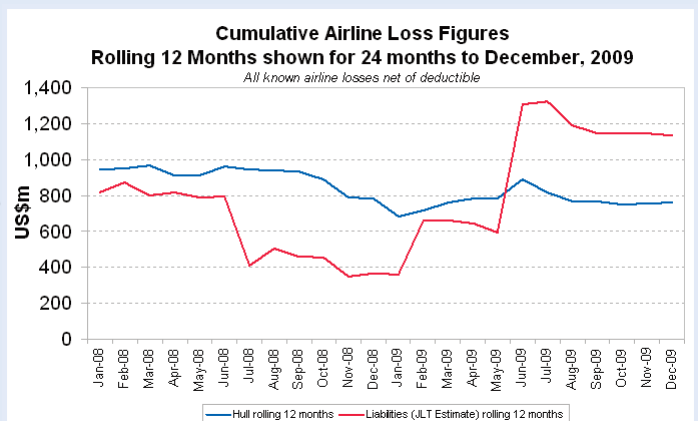
fair share of losses this year.

Birds, again, got the better of an Airbus. This time Wind Jet at Parma in August, though the crew were able to retain control of the aircraft to a safe conclusion. The major fatalities of the month were in two separate DHC-6 Twin Otter crashes, one in Papua New Guinea and the other in Indonesia resulting in a total of 24 passenger fatalities. Another total loss was a Bangkok Air ATR skidding off the runway in wet weather.

No passenger losses were recorded in September though Air India suffered an expensive engine fire on a 747. Only one passenger fatality was recorded in October but largish claims came from Wind Jet with hail damage on an A319, Malaysian with a 737 undercarriage collapse, Centurion Air Cargo with a heavy landing in an MD11 and Pegasus striking a pole whilst taxiing a 737.

November and December showed no further passenger losses, though notable occurrences were the striking of an Air Zimbabwe aircraft, by a group of warthogs and total losses for Blue Bird Aviation Beech 1900; Kingfisher Airlines ATR72; Jet-Link Express/Rwandair CRJ; Compagnie Africaine d'Aviation MD80; Avient Aviation MD11 and finally American Airlines running a 737 off the runway and onto the beach at Kingston.

There have been many months of the year without fatalities and anyone outside the aviation industry will think it's been a good year for safety, as there are very few accidents that have made the headlines outside of the industry press. However, with the exceptional losses in February and June with major loss of life and the continued, regular incidents, the total of known major claims for the year has surpassed USD1.9 billion to which needs adding a currently unknown figure for minor bangs, scrapes and passenger claims. We expect total claims for the year to be higher than any year since 2001.



\* The JLT liability estimates are provided merely as a guide.

# Special Report

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