

Executive Foreword

Welcome to the third quarter (Q3) 2022 edition of Plane Talking brought to you by Gallagher's Aerospace team.

In this edition, we cover a broad range of topics from commentary on current aviation market conditions and losses, to a summary of the latest market moves and Gallagher news. Additionally, we are very pleased to present a report from our Cyber colleagues as well as feature articles from Andrew Nicholson, CEO at Osprey Flight Solutions and Paul McLean, Managing Director at IPP. We are deeply grateful to each of these excellent contributors for their participation and expert insights.

In our last edition we reported that the Russia/Ukraine conflict had brought uncertainty to the market outlook, in particular over its potential impact on future conditions and pricing. As the third quarter concluded, uncertainty continues to prevail as the repercussions of the war play out, and at this juncture play out slowly. Against this backdrop, insurance buyers should nevertheless be

encouraged by core rating trends that in most aviation segments remain, for the time-being, relatively stable. Despite heightened complexity and pressure on certain coverage, healthy competition and appetite can be accessed for most risks, provided clients are able to rely on their broker to deploy smarter strategy, increased focus and energy.

Looking ahead, the potential for upwards rating pressure should not be ignored but based on early indications for fourth quarter renewals currently in negotiation, for now we see little to suggest a drastic shift in market conditions during the final months of 2022. That said, conditions are very delicately balanced.

Being able to adapt to the market environment, navigate challenges and deliver innovative solutions is critical. On this note, I am delighted to announce that Gallagher has made several new appointments to our global aerospace practice since our last edition. Each of our new colleagues (detailed later in this edition) is a valuable addition to our team and their recruitment is further demonstration of Gallagher's long-term commitment to aerospace and our strategy of investing in talent to deliver the highest quality service and value proposition available anywhere in the sector.

We hope you enjoy this edition. Please don't hesitate to get in touch.



PETER ELSON

Chief Executive Officer (CEO), Gallagher Aerospace +44 (0)204 511 4588 Peter Elson@ajg.com

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The Problem with Prohibitions Introducing Osprey:Sentinel

Author: Andrew Nicholson, CEO, Osprey Flight Solutions

We are pleased to introduce Osprey Flight Solutions' new tool to support airlines managing an ongoing operational governance and compliance challenge as explained in the following article.

On the face of it, it is an anomaly that national aviation authorities and other regulators take such an active role in providing 'intelligence-led' direction and advice on aviation operations over or near conflict zones. Effectively stating 'the risk to your operation is so great that I am going to dictate that you cannot operate in this particular area' is a significant outlier in the way they conduct their business across other functions. However, the perception (however close to reality it is) that airlines do not have the capability to do this themselves, as well as the operators themselves making very loud demands for support from the state intelligence capability, have driven the requirement for this. Unfortunately, but

unsurprisingly, government organisations, due to their inherent political agenda, are simply unable to provide objective support to the industry; the politicisation of the NOTAM system is obvious across the board, clearly demonstrated by incidents such as the international regulatory response to the forced diversion of a Ryanair flight in May 2021.

However, this does not change the fact that prohibitions exist and that the regulatory bodies that implement them may have the right to impose significant fines or other regulatory consequences for any breach. So, the challenge then becomes interpreting and implementing these NOTAMs and other notices operationally. Anyone who has dealt with any regulation at all will know that the norm is for reality to be ignored, clarity to be sacrificed for obfuscation through attempted diplomacy and practicality to disappear into the abyss of convoluted publishing mechanisms. Where this really becomes difficult is when all these issues

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are compounded with the complexity cross-regulatory compliance requirements through codeshares and it is difficult to see how compliance exists at all, let alone is widespread. It is often, although certainly not exclusively, when operating codeshare flights that breaches occur.

The good news is that this kind of requirement is where AI capabilities can excel and bring enormous benefits to users. The ability to actively monitor websites for change, identify the details of that change and translate it into a data and visual output is bread and butter for machine learning algorithms, with neural networks bringing extremely high levels of accuracy. Finding solutions to aviation

risk problems like this is core business for Osprey, and this particular problem is why Osprey:Sentinel has been developed.

Sentinel is a simple to use, web-based platform, part of the Osprey suite of capabilities that consists of two main functions. Firstly, the automatic and almost instant monitoring, gathering and visualisation of any changes to notices published by regulatory authorities. Secondly, every flight that an operator conducts can be checked for compliance against all extant or newly published notices. The operator can then be immediately notified of any breach, the second either the flight plan is filed, or a new notice is published.

Sentinel is therefore an automated compliance tool, ensuring that operators do not miss changes in regulatory notices and that they are immediately notified of any potential breach, allowing them to make timely and accurate decisions to avoid the breach if needed. This reduces risk, saves time, and increases efficiency. Sentinel is another example of Osprey developing a specific platform to answer a clear need from the industry and deliver an industry first. It is an integral part of the broader suite of Osprey's risk platform, giving the most accurate regulatory picture available in the industry today.

There is the additional benefit that Sentinel is a single interface through









which the notices from the most prominent authorities can be viewed and compared. Unfortunately, this clearly shows that inconsistency is far more usual than agreement amongst these organisations. This inconsistency is another symptom of the underlying problem with the current application of the notices system. Applying sanctions through overflight prohibitions is a valid tool to use in a geopolitical context, but when it is conflated and confused with a mechanism specifically created, understood, and described as being for the safety of flight operations, it forces airlines to make operational decisions that put their aircraft at greater risk. To solve this, the industry and governments, and regulatory bodies need to be honest about the utility of overflight advisories and prohibitions, what they are actually used for and the accuracy of the picture of the risk environment that they portray. Until that happens, operators need a system to accurately monitor compliance with these notices, enabling them to focus their resources and efforts on understanding the actual risk to their operations. Sentinel does just that.

For further information on Osprey:Sentinel, or any of the other Osprey products, or to discuss a specific challenge or problem that Osprey may be able to solve, please get in touch.

Gallagher's Aerospace division act in collaboration with Osprey Flight Solutions to seek to bring state of the art of aviation security threat intelligence solutions to clients, and as with the newly developed Osprey:Sentinel module, other tools that address governance and compliance issues which may expose airlines to fines and prohibitions from aviation regulators.

Would you like to talk?

MARTIN ROSSITER

Partner, Gallagher Aerospace +44 (0) 7801 966 494 Martin Rossiter@ajg.com

RICHARD ADAMS

Partner, Gallagher Aerospace +44 (0)7980 532 665 Richard Adams@ajg.com

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In focus: **Airlines**

Looking ahead, the fourth quarter is undoubtedly the most significant transactional period for the aviation insurance market with an estimated 70% of the world's airlines renewing.

As the third quarter concluded, we entered a decisive period for aviation insurers and the market alike, as renewal activity gathers pace and focus turns to the renewals of the fourth quarter.

Despite ongoing uncertainty around losses and other challenges, airline insurance conditions remain relatively stable and there are no immediate indications that we will see a drastic change in the market trend, at least in the remaining months of 2022.

All Risks premium and rating trends

As we reach this point in the year, many of us expected to have greater clarity around aviation losses from Russia following the announcements of the H1 and Q2 results from insurers. However, the actual combined results were considerably below industry estimates, as insurers either postponed predicting Russian aviation claims or posted somewhat conservative or highly caveated loss reserves. Consequently, we do not have any additional clarity over prior months and uncertainty around market reaction and its impact on future pricing continues. With many insurers seemingly still hesitant to commit at this juncture and complex legal discussions taking place, it now looks likely that it will be some time before a clearer picture emerges.

Against this backdrop, change has been far slower to emerge than perhaps expected, with rating so far largely holding off from the underlying forces of sector volatility. All Risks premium levels still vary significantly and ultimately each airlines individual exposure movements and 5/10 year loss record will be key to what is achievable in terms of rating and overall renewal result.

Looking ahead, the fourth quarter is undoubtedly the most significant transactional period for the aviation insurance market with an estimated 70% of the world's airlines renewing. With such a substantial level of airline premium up for grabs and mindful of meeting year-end income targets, there is currently strong competition amongst insurers and we would anticipate this should help temper any potential market hardening, at least for the time being. Many feel that we are experiencing the 'calm before the storm', so most fourth quarter renewal negotiations are well underway, and in some cases already complete, with prudent buyers seeking to 'lock in' renewal terms early.

Capacity

Overall All Risks capacity remains adequate and all but the largest limit buying and/or loss active placements should find excess levels and options available to them at renewal. With a high volume of renewals now taking place, including some of the largest airline placements, several markets are showing increased appetite and willingness to deploy extra capacity, particularly where there is growth in premiums. Sanctions and coverage challenges remain, and insurers are seeking to apply exclusions and subjectivity language in respect of certain elements, flights, and territories. Unfortunately, there is a lack of consistency around this, with no market wide position and this is creating increased workload for brokers and clients, making early preparation and renewal strategy even more critical.

Looking ahead, there remains the ongoing threat that the Russia/Ukraine conflict could lead to a reduction in future market capacity due to the severity of claims, but as mentioned, whether this would transpire is still very much unclear. What happens at the 1/1 and 1/4 reinsurance renewals in 2023, will be something to watch as increased pricing and programme restrictions could influence future underwriting decisions, particularly if insurers cannot secure a sufficient level of reinsurance cover.

On a side note, we have witnessed a deluge of senior underwriting moves within the aviation insurance sector of late, with some significant reshuffling of teams taking place. As yet, we have seen little impact, but as these individuals complete their notice periods and settle in, we are likely to see some element of change with regards to future underwriting strategy and appetite.

Sanctions and coverage challenges remain, and insurers are seeking to apply exclusions and subjectivity language in respect of certain elements, flights, and territories.





Airline losses

The overall airline loss experience in 2022 remains relatively good and fortunately, we have recorded few major losses and fatalities. Loss activity during the third quarter was generally unremarkable, but we did record several runway excursions and ground incidents resulting in significant damage which could produce some expensive hull claims and repair bills.

Airlines aside, we also saw a handful of incidents involving smaller GA aircraft, with some high-profile fatal losses recorded. Additionally, Hurricane lan, which has caused widespread devastation and loss of life across the Florida coast, brought damage to several airports, with multiple terminal buildings, hangars and aircraft reported as having been damaged or destroyed. It will be some time before claims reserves from these losses are known, but many airline insurers also underwrite GA and Aerospace business so these losses will contribute to their overall loss experiences.

Future outlook

- Continued uncertainty, renewal challenges and added complexities
- We anticipate a continuation of the current trend until there is greater clarity around losses from the Russia/Ukraine conflict and the market reacts
- Heightened risk selectivity and underwriter scrutiny expected to continue
- Conditions are delicately balanced.

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In focus: Hull War & War Third Party Liability

Author: Thomas Hiller,
Partner. Gallagher Aerospace

As we enter the last quarter, the landscape is now somewhat different due largely to the uncertainty in the market.

As we enter the final quarter of 2022, Hull War and War Third Party Liability coverages continue to experience the greatest upwards pricing pressure following the Russia/Ukraine conflict and heightened global volatility. In this article we explore current trends and look ahead to the future outlook.

Around 70% of the aviation market's airline premium is placed in the last quarter of the year, representing a staggering amount of renewals in such a short space of time. This period is decisive in determining year-end underwriting results, in turn typically setting the tone for future market direction

Looking back, major losses in 2014/15 and a continuous flow of loss activity since had kept pressure on war rates. The most recent high profile loss being Ukraine International Airlines flight 752, which was shot down on 8 January 2020. However, as we look back to the last quarter of 2021, market conditions had become softer and many insurers were striving for market share. There was excess capacity available, over USD500m,

which played a key role in this softening. Insurers typically base their lines on the maximum hull value or spares limit, whichever is greater.

This trend looked set to continue throughout 2022, but as we enter the last quarter, the landscape is now somewhat different due largely to the uncertainty in the market derived from the Russia/Ukraine conflict. One of the consequences born from this conflict is that insurers are facing increased reinsurance costs as reinsurers react. In light of recent events, the hull war market has typically reacted in prompt fashion and insurers are seeking 100% rate increases on hull war policies, aggregates are being reviewed and in particular aggregates for confiscation exposures are being reduced further.

We have already seen and previously reported that several major insurers withdrew from offering hull war insurance and/or 'paused' underwriting earlier this year, which has caused some challenges. But, in contrast, we have seen two new insurers (Fidelis & Elseco) enter the class and offer capacity, and several markets are known to be reviewing hull war renewals, hoping to submit plans and obtain management approval to start writing in the coming months.

The global annual hull war premium income was estimated to be around USD180m in 2021, a marked increase over prior years. Insurer sentiment is that this figure is still too low, however, opinions vary as to what the annual premium "needs to be" in order to have a market that is "sustainable", with premium income targets ranging from USD400m to excess of USD500m. There is the thought that the market would like to eventually get to the size where it could be in a position to sustain two wide body aircraft losses, but we are still some way off from insurers achieving this.

Global Airline War Premium and Claims (commercially operated jet and turboprop aircraft) Net Premium & Claims (USD Millions) \$700 \$600 \$500 \$400 \$300 \$200 \$100 2012 2103 2014 2015 2017 2019 2020 2021 Premium Claims 10 yr Average Premium 10 yr Average Claims

Source: Gallagher, figures are estimates based on a calendar year basis and are shown only for illustration purposes.





War Third Party Liability (AVN52)

Moving on, by association, War Third Party Liability (AVN52) pricing is now also under pressure, as the insurers which write this business are largely the same as those who write Hull War, and coverage is typically placed in parallel. This cover has experienced sizable increases of late, despite being loss free, as insurers argued that pricing had hit "rock bottom" after a protracted period of soft market pricing and as such, the returns for the level of capacity that they were deploying were simply "inadequate".

At the start of this year the total AVN52 capacity (i.e. before the Russia/Ukraine conflict/recent market withdrawals) was around the USD 1.75bn mark. Whilst capacity remains stable, at present, we could well see it further impacted in Q1 2023 post insurers renewing their reinsurance programmes at 1/1 and 1/4.

Looking ahead, expectation is that we will have a

better understanding of available capacity and future

trending after insurers have renewed their reinsurance

Insurers could be faced with having to potentially choose between reducing their offered USD lines, if they cannot secure a sufficient level of reinsurance cover or face the prospect of deciding whether to increase their net retentions, or not, as the case may be.

Post the Russia/Ukraine conflict insurers are now seeking circa 50% increases on AVN52 cover. The 2021 AVN52 annual premium income is estimated at somewhere around the USD125m mark, and the consensus amongst insurers is that they are hoping to surpass USD200m in premium income for 2022.

With regards to coverage changes, both hull war and AVN52 insurers are no longer offering non-cancellable policies, not even for the more "benign" operators. Insurers are also looking at airlines routes and destinations much closer.

Whilst the soundbites of new war capacity will most certainly be welcomed by clients, it remains to be seen just how much more may be needed in the years to come to allow this sub-sector to continue to offer the significant limits and values that airlines require.

Looking ahead, expectation is that we will have a better understanding of available capacity and future trending after insurers have renewed their reinsurance programmes in 2023. The reaction that follows these renewals will ultimately be key in telling us just how long the insurers desired premium income expectations might take to come to fruition.

Future outlook

- Continued uncertainty, renewal challenges and added complexities
- Potential further upwards pressure on pricing
- Heightened risk selectivity and underwriter scrutiny
- Heightened focus around coverage, aggregates, limits, geographic exposures and routes
- Conditions are delicately balanced.



programmes in 2023.



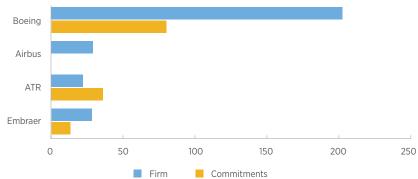
The Farnborough International Airshow (FIA) made a welcome return in July after a four-year hiatus due to the global pandemic.

As record-breaking temperatures soared to a high of 40.2°C on day two, climate change and safeguarding the planet's future were firmly at the top of the agenda, and key players were keen to promote their progress on the path to net zero.

Following a subdued Dubai Airshow last year, FIA 2022 was one of the first major airshows since the 2019 Paris Airshow, and anticipation was high.

This year's airshow witnessed 511 orders and commitments, down from almost 1,500 compared to the 2018 airshow. However, it is worth noting that the actual number of 'firm orders' this year is not as drastically different compared to previous airshows, with 2018 being a record year. Boeing came out on top in the annual battle of the major commercial manufacturers, and the 263 737 Max orders represent a comeback for the once grounded single-aisle iet.

Breakdown of orders:



Source: https://www.aerotime.aero/articles/31694-farnborough-orders-was-the-show-a-disappointment-data

Boeing 737 Max Boeing 737 NG Boeing 777 Boeing 787 Airbus A321 neo Airbus A220 ATR ATR 42 ATR ATR 72 ATR N/A Embraer E175 Embraer E195-E2

100

150

Source: https://www.aerotime.aero/articles/31694-farnborough-orders-was-the-show-a-disappointment-data

50

Climate Change remains a key focus

While this year's FIA may have been light on order activity, everyone in attendance seized the opportunity to set out their sustainability stalls. Aviation accounts for 2.6% of current global emissions and 12% of transportation-related emissions¹. By 2050, Boeing predicts air travel will

carry over 10 billion passengers per year, support 180 million jobs and generate nearly USD 9 trillion in economic activity².

200

250

300

The UK government used the show to launch its Jet Zero Strategy – a framework and plan for achieving net zero aviation by 2050 – and pledged that 2019 would be the peak year for aviation emissions.

Key policies include the mandate that at least 10% of sustainable aviation fuels (SAF) be blended into traditional aviation fuels by 2030, an ambition to have a minimum of five commercial-scale SAF plants under construction in the UK by 2025, and the aim to make domestic aviation and airports net zero by 2040.

The government recognised that these measures require investing in pioneering projects and introduced the Advanced Fuels Fund, with a GBP165m competition to stimulate commercial SAF production facilities in the UK. Alongside this, it also announced it was progressing to the next phase of its GBP1m competition to deliver the first ever net zero transatlantic flight powered by 100% SAF.

While climate campaigners were quick to criticise the government's strategy, many in attendance warmly welcomed it; Manchester Airports Group Chief Executive Charlie Cornish called it "an important recognition by government of the commitments made by our industry for a more sustainable future".

On the topic of sustainability, Boeing argued that it requires a "multi-faceted approach" and offers an opportunity for the aerospace industry to reduce

carbon emissions while enabling people everywhere to travel and fly responsibly. The aerospace giant unveiled its Cascade data modelling tool, which it believes outlines the most effective paths to net zero by 2050. Cascade models the different routes to decarbonisation and considers four strategies:

- Airplane fleet renewal
- Renewable energy sources such as sustainable fuel, hydrogen, electric propulsion
- Operational efficiency improvements
- Advanced technologies.

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- 1 https://www.ainonline.com/aviation-news/aerospace/2022-07-19/boeing-data-modeling-tool-improve-sustainability-efforts
- 2 https://www.boeing.com/principles/sustainability/annual-report/index.page





(DACCS) technology to the aviation industry. According to Airbus, "a direct air capture facility acts like a large-scale, highly efficient tree: it sucks air out of the atmosphere and extracts the CO2 present there". It has pre-purchased 100,000 tonnes of carbon removals per year over four years – or 400,000 tonnes in total – from 1PointFive as part of an initial offtake. Air Canada, Air France-KLM, the International Airline Group (IAG), the Lufthansa Group, LATAM Airlines Group, easyJet, and Virgin Atlantic have all signed a letter of intent to partner with Airbus on the initiative.

Another key theme for the show was innovation, and one sector at the forefront was advanced air mobility (AAM). Vertical Aerospace's full-scale model of its electric Vertical Take Off and Landing (eVTOL) aircraft, the VX4, garnered much industry interest and is a firm indication that AAM's 'flying taxi' is fast becoming a reality.

Collins Aerospace has produced a working prototype electric motor for Hybrid Air Vehicles' Airlander 10 airship, which will be fully electric by 2030. Collins confirmed it is working closely with Hybrid Air Vehicles and the University of Nottingham to develop new technologies that will advance the aviation industry's efforts to reach net-zero carbon emissions by 2050.

This year's FIA marked a significant turning point for the aviation industry as it continues to recover from the pandemic's damage. With the Russia/Ukraine conflict, rising inflation and continued insecurity over COVID-19, the future commercial landscape for aviation is still far from certain. Nevertheless, this year's airshow served as an opportunity for the industry to promote a united front on sustainability and for manufacturers to meet with suppliers and alleviate current and potential supply chain issues.

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Gallagher's Aerospace division appreciates the importance to the air transport community of complying with applicable laws and regulations governing their global business activities in different jurisdictions around the world.

We are very aware that any airline selling a packaged holiday or Linked Travel Arrangement into EU member countries or the UK must provide its passengers with protection for monies being held in the event of the Airline's insolvency.

With this in mind, Gallagher's Aerospace division are pleased to advise their collaboration with International Passenger Protection Limited (IPP), the leading international provider of insurance cover to meet these obligations and requirements. The collaboration is geared to enabling client access to their solution and to deliver insurance cover that not only meets any national regulatory requirements but also ensures airlines' customers are suitably protected. The response from such a type of cover has been evidenced by a number of recent airline failures where the operators have carried the insurance provided by IPP e.g. Thomas Cook.

To mark the opening of this new collaboration we are now delighted to share the following background and overview on the subject from IPP Managing Director, Paul McLean.

International Passenger Protection Limited (IPP)

Formed over 32 years ago by its founder and CEO Brian Mclean, IPP has pioneered all of its insurance and reinsurance solutions specialising in credit/ insolvency/ financial guarantee for the travel trade including the air transport community.

IPP is now headed by Paul McLean and as referenced the company is today the largest provider of insolvency solutions to the travel related sector delivering cover to a number of Airlines and many of the largest Tour Operators, Cruise Lines, Travel Agents, Insurance Companies and Banks around the world.

Travel Evolution

Travel like other major industries has evolved in many ways since it began.

The way we all buy travel has changed and we have embraced the internet which we use as part of our daily life. The days of walking into a travel agency to book a flight or a package holiday have almost disappeared with the ease of booking such arrangements from your own device. However, this booking flexibility now brings certain legal requirements for the airline and travel sector.

Package & Linked Travel Arrangements

The EU Package Travel Directive (PTD) was established in 1992, IPP were the first company to provide an 'insurance' solution to the Directives financial security options of Bonds, Trust Accounts or Insurance. The PTD originally was based on pre-arranged package holidays combining 2 or more travel services that includes an overnight stay.

With the way in which package holidays were being sold with increasing online sales, this highlighted a gap in the

consumer protection regime, where for example, a flight was purchased and the consumer then came back to the same company / website to book a third-party service e.g. hotel.

To address this issue the EU announced an amendment to the law in 2015 known as 'Linked Travel Arrangements'.

Potential implications on the Airline and travel industry

If a travel company offers a packaged holiday to an EU, UK or Swiss resident they

What is a Package or Linked Travel Arrangement (LTA)?

A pre-arranged combination of two or more of the following four elements organised within 24 hours of booking the first service:

(1) Carriage of passengers



(2) Accommodation

OR

(3) Car rental

OR

(4) any other tourist services not ancillary to transport or accommodation and accounting for a significant proportion of the package.





Risk of not complying with these laws

Under these laws there is no difference between a traditional tour operator and an Airline that does not comply with the legal requirements for Package & Linked Travel Arrangements. This is a national government issue in each country and what is key here, is consumers losing their money, something the authorities are taking more seriously.

There has been a stronger focus from national governments around this since the 2018 review of these laws, with a growing trend towards checking companies' compliance with any requirements. This applies to sales made to any of the country's consumers no matter the place of domicile of the airline or travel company. In the event that a penalty were applied there is nothing to say a government would not potentially look to back date this for years of not meeting a law.

The Solution

Gallagher's Aerospace division in conjunction with IPP have arranged a specific insurance policy to meet both the Package Travel and Linked Arrangements law for Airlines. Whilst it's the legal obligation of the Airline to ensure the financial security option they choose

meets the requirements of locally enacted laws, we have a tested solution to meet the full requirements of the EU Travel Directive and UK equivalent. Effectively 'one' policy covering the package and or linked travel arrangement sales of an airline into any country they are obligated to maintain such consumer protection.

IPP offers many other insolvency type products which can support airlines ancillary revenue and the risks for passengers of other suppliers' insolvency. Such products have proved beneficial to the air travel community and are readily available to explore.

Gallagher's Aerospace division sees the collaboration with IPP as another important investment in supporting our clients to meet their regulatory obligations with a simple and efficient solution and we will be delighted to help you with this.

To find out more:

MARTIN ROSSITER

Partner, Gallagher Aerospace +44 (0) 7801 966 494 Martin Rossiter@ajg.com

HARRY LAWSON

Associate, Gallagher Aerospace +44 (0)7462 889 990 Harry_Lawson@ajg.com



In focus: Aerospace Infrastructure

Author: Claire Vincent, Senior Partner, Gallagher Aerospace

Whilst we would not say that we are back to soft market conditions across the entire sector, we are certainly seeing a greater drive from insurers for increasing their premium income at the top level.

We are delighted to be able to report that the dark cloud that we saw heading in our direction back in Q2 hasn't got any closer, with the Aerospace Infrastructure insurance market actually in a more positive position than it was only a couple of months ago.

We cannot ignore the potential for changes as lessor loss reserves from Russia are recognised by insurers/ reinsurers, but as of today, we have seen no direct impact on this sector of the aviation insurance market and do not anticipate any adverse changes in this position as we move in to Q4.

It was clear throughout the height of the pandemic that we had seen the end of the soft market cycle of the prior 10 plus years. Insurers were not just demanding significant premium increases across the entire Infrastructure sector but were also ignoring the fact that the Insureds' exposures were a fraction of their 2018 and 2019 levels. Seemingly, for the first time in a number of years, insurers had a clear focus on bottom line profitability which they could only address by applying premium increases across the

board, but they were also being very cautious with regards to the deployment of their capacity, often offering less than 50% of their maximum lines.

Whilst we would not say that we are back to soft market conditions across the entire sector, we are certainly seeing a greater drive from insurers for increasing their premium income at the top level. In order to do this they are once again competing for market share, which in turn is putting pressure on pricing levels. meaning good news for our Insureds. The aim of insurers may still be to achieve both premium and rate increases but the reality is that due to the renewed competition for market share, and the exposure growth across the aviation industry as whole, as we recover from the effects of COVID, we are in fact seeing rate reductions.

Capacity

Once again, there is still a clear distinction between the risk appetites of insurers for the claims free and/or lower exposed risks such as small airports and service providers compared to the larger or loss active risks in this sector. For a loss free risk buying USD1,000M or below, there could be 350% competitive capacity available, whereas for an account with a historical loss ratio over 65%. it is likely to be far closer to just 100%. That said, the drive for premium income will make it more difficult for insurers to walk away from risks and force them to offer more competitive terms. In addition to the increased risk appetite from a number of insurers we do also have Everest Re looking to provide new capacity from 1 October, thus adding more pressure on those market shares/premium income levels.

Losses

People are flying again and using airports more and more and it is recognised that on average the industry is back to around 80% of their pre-COVID revenues/exposures but the good news is that we haven't yet seen an uptick in the attritional losses in this sector. Some would argue that the low level of losses over the last three years is purely down to inactivity but as we are now three quarters of the

way through 2022, we are not aware of any new major losses and the attritional losses do not appear to have increased dramatically. There is likely to be some deterioration in the older years in the manufacturing sector but nothing that has yet been formally reserved.

Future outlook

- Continuation of the current trend and pricing moderation, in the short-term
- Stable capacity levels and increased options/competition
- Continued focus on key risk exposures and covers
- Potential for negative impact in the longer-term trend as lessor loss reserves from Russia are recognised.

Would you like to talk?

CLAIRE VINCENT

Senior Partner, Gallagher Aerospace +44 (0) 7734 662769 claire_vincent@ajg.com The industry is back to around 80% of their pre-COVID revenues/ exposures but the good news is that we haven't yet seen an uptick in the attritional losses.



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Cyber **Insurance**

Author: Joe Stubbings,
Account Executive & Broker,
Technology & Cyber Practice –
Gallagher Financial and Professional Risks

The last cyber article we featured in Plane Talking back in Q1 2021, looked at the increased cyber risk in aviation as a result of the pandemic, why large carriers were an attractive target to threat actors and how there was an increasing internet of things.

All of these themes remain relevant 18 months on, moreover there have been developments in the cyber insurance market and on a geopolitical scale that are set to effect the cyber insurance environment. These include continued ransomware activity, potential market correction around systemic cyber, and the Russia/Ukraine conflict, all of which is overlaid to the fundamentals of cyber risk in the aviation industry.

These continuing circumstances make Gallagher's Aerospace division risk management led CybAir solution more relevant than ever. Over the past 18 months we have had growing success in supporting clients manage and transfer cyber risk. Cyber risk and insurance should by now be a board level discussion in the same way as Directors & Officers cover.

Below we examine some of the key elements impacting cyber risk and insurance.

Ransomware epidemic

Ransomware claims have been the primary force behind the severe market correction experienced around cyber insurance over the past 18 months. The cyber market has dubbed the increased claims activity in this space a 'ransomware epidemic' and it has affected all industry types, including the aerospace industry and has showed no signs of slowing down. According to a recent Eurocontrol report, aviation faces a ransomware attack every week, and these attacks cause significant levels of first and third party costs to clients and insurers. Whilst airlines are at the top of the hit list for threat actors, all industries have experienced losses and have contributed to the market wide correction.

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Given the frequency of these complex and highly costly claims, insurers have moved to increase premiums and reduce capacity even restricting limits in order to manage their books and ultimately improve underwriting performance.

We have also seen insurers enforce higher retentions on policyholders, this has been a contributory factor in some clients taking a more holistic approach to risk management and shining a brighter light on their own information security policies and procedures.

As a result of increased claims activity there are certain minimum requirements that insurers now demand in order to obtain cyber insurance. These include but are not limited to, Multi Factor Authentication, adequate backup procedures, privileged access management tools, frequent patching, employee training and active detection tools are just some of the minimum standards. It is too early to see the effects of these minimum standards on the insurance claims landscape, but this step has given more confidence to insurers to stay in the insurance class.

It is important that organisations are able to show they continue to bolster defences to maintain access to the Cyber insurance product.

Systemic cyber

The world has become more connected. and as a result the risk of a large scale disruption impacting global business has increased e.g. the Microsoft Exchange Server and the Kaseya events. These highlighted how dependent the modern world is on a small number of service providers. Many in the insurance industry viewed these events as a warning sign of what lies ahead, and fuelled growing concerns that future disruptions could be more severe and systemic. Whilst not cyber focused, many insurers have been alerted to the nature of extreme risk by Covid-19 related business interruption losses which many argue they never contemplated covering, so systemic risk as a general topic is a key area of focus for the insurance industry.

As a result of increased claims activity there are certain minimum requirements that insurers now demand in order to obtain cyber insurance.





Historically, if a key service provider, such as AWS or Microsoft suffer an incident and their customers (policyholders) are affected, or a common hardware or software vulnerability is discovered which hackers exploit on a large scale, typically the cyber market has to date covered events of this nature.

Systemic cyber risk has been acknowledged as a concern for Aviation being a highly interconnected industry. Reliance from an infrastructure perspective is placed on a few core third parties from both an IT and Non IT standpoint e.g.SITA, Amadeus and Galileo as key service providers and therefore critical dependencies. This has been reflected in the scope of Cyber Business Interruption cover for key suppliers being restricted.

With increased underwriting concerns around the wider impact of systemic risks it is more than likely that this scrutiny will have an impact to how Cyber cover is delivered to the Aviation industry.

Some insurers are looking to introduce measures to manage their overall exposure to extreme cyber catastrophe events. This could take shape in the form of new sub-limits for single or widespread events and the perimeter of policy extensions e.g. outsourced providers.

Russia/Ukraine Conflict

We have seen modern warfare no longer just means 'kinetic warfare' but also takes place online via cyber warfare. Historic War exclusions have been amended to reflect this modern world. Four new Cyber War exclusion clauses have been created to provide Lloyd's syndicates and brokers, with options in respect of the level of cover provided for cyber operations between states, which are not excluded by the definition of war, cyber war or cyber operations.

The impacts of the Ukraine situation have not triggered any increase in frequency or severity of cyber claims. Though, in expectation it has become mandatory for Cyber insurers to include affirmative War and Terrorism exclusions on all renewals and new business placements. It is important to recognise that the application of war exclusions are intended to better define when cover does not apply e.g. state on state warfare/acts of war perpetrated on behalf of a state. Some exclusions even reference consequential cover to untargeted assets which are impacted in a cyber-attack but not those which are targeted. It's important to note that the onus is on the insurer to prove that ultimately the exclusion applies.

Cyber exposure in the aviation industry

Aviation has typically been a low appetite class for cyber insurers given its international nature, reliance on technology and significant volumes of customer information held putting it at an appreciable risk from a cyber-incident.

Aviation risks with an international footprint involve multiple jurisdictions and regulations which make the risks guite complex to underwrite and any claims can be challenging to administer. Reliance on IT systems means that downtime, either malicious or simply operator error, can lead to significant disruption and a loss of revenue, along with the potential loss of business through reputational damage. Malicious actors can target both a company's OT - operational technology and IT - information technology environments: this kind of malware can impact the capacity of security teams to respond. Ransomware attacks can interdict an airline's entire IT network for days, even weeks. Given the volume of airlines operations, sometimes performing 100's of flights each day, the cost associated with a business interruption element of cyber cover can therefore quickly increase.

With the high-profile nature of airlines any cyber attacks involving customer data make headline news. In the last few years two global airlines lost a combined total of around 600,000 customer/ staff records, with another suffering an attack affecting a colossal 9.4 million passenger records. Only last month two international airlines in different parts of the world have acknowledged data breaches involving personally identifiable information which ultimately carries likely fines, penalties and compensation for appreciable sums. The failure to protect personally identifiable information can cause adverse publicity for the brand and costly regulatory investigations e.g. GDPR breaches in the EU/UK can be very costly and for severe violations fines as much as 4% of global revenue.

Gallagher solution

The cyber insurance market requirements and coverage sensitivities therefore make it a complex arena for aviation businesses to navigate.

Gallagher's Cyber practice in addition to its broking and claims management team has the added value of a specialist consultancy arm. This assists in board level appreciation of the maturity of security posture and has helped clients better engage their profile to place cyber insurance. Through this dual approach Gallagher are helping to address the challenges of a tough insurance market with limited appetite for aviation businesses. The risk reports can be an invaluable tool in supporting clients' longer term planning on improvement to their security controls and helping with the ongoing benefits to placing Cyber insurance.

We would be delighted to explore this with you and be a partner on your journey.

Would you like to talk or find out more?

JOE STUBBINGS

Account Executive & Broker, Gallagher Technology & Cyber Practice +44 (0) 207 204 1834 Joe_Stubbings@ajg.com

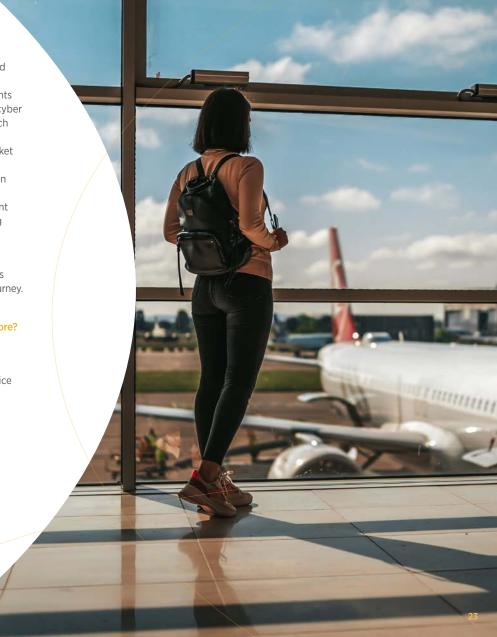
HARRY LAWSON

Associate, Gallagher Aerospace +44 (0) 7462 889990 Harry_Lawson@ajg.com

MARTIN ROSSITER

Partner, Gallagher Aerospace +44 (0) 7801 966 494 Martin Rossiter@ajg.com

Ransomware attacks can interdict an airlines entire IT network for days, even weeks.





In recent years, the primary vehicles available for commercial launch services to the space industry have been limited to a small number of rockets. While these have become stalwarts of the industry, the landscape looks set to change significantly as we look forward to 2023 and 2024.

A review of the scheduled launches for the balance of the year illustrates that just two vehicles; the Arianespace Ariane 5 and the SpaceX Falcon 9 will perform the vast majority of commercial heavylift launches.

Narrow choice has resulted in operators buying well in advance to secure their place in a growing queue to loft future satellites into space. It has also brought significant risk of costly delays and lack of alternatives in the event of a failure.

Options such as the Atlas 5, H2A and Delta 4 launch vehicles are not used widely by commercial buyers because of their

The future market outlook for launch vehicle providers looks positive with a strong pipeline of potential buyers available. pricing and/or availability. Furthermore, the launch vehicles operated and/or manufactured by Russian domiciled entities such as Proton and Soyuz are no longer viable alternatives to the majority of international customers in light of current sanction regimes.

Despite a reduced number of large GEO satellite orders in recent years, demand for heavy-lift launches continues, helped by the recent uptick in procurement due to the C-Band clearing in the US. In addition, constellation clients launching a large number of satellites such as OneWeb and Telesat Lightspeed will be looking to minimise the "per spacecraft" launch cost, by potentially utilising heavy lift vehicles. As such, the future market outlook for launch vehicle providers looks positive with a strong pipeline of potential buyers available.

Over the next twelve to twenty-four months we foresee a changing picture. Arianespace will be replacing the Ariane 5 with the Ariane 6 and several new launch vehicles such as Blue Origin's New Glenn, ULA's Vulcan, Mitsubishi Heavy Industries' H3 and the Space Super Heavy Booster will be introduced. Launch vehicle buyers are already considering these new options for their upcoming projects.

The introduction of these new and as yet untested launch vehicles into the commercial marketplace brings both increased opportunity alongside the need for additional scrutiny and analysis by both buyers and insurers.

Much consideration will be given to the technical profile of the rocket itself with satellite operators naturally demanding pre-launch operations and launch procedures ensure that throughout the launch vehicle campaign their assets have the highest possible chance of being injected into the intended orbit.

In contrast to the full order books of Ariane and SpaceX, the new launch service providers may be keen to quickly build-out their manifests of commercial customers and may be prepared to offer highly competitive terms to those who are willing to commit early. As such, satellite owner/ operators will be weighing commercial incentives against any perceived increased risks with early stage launches and the level of technical comfort they are able to receive from the launch vehicle company.

From an insurance viewpoint, underwriters will point to historical trends that show early launch failures have been more common than failures later in the life cycles of launch vehicles. However, looking at recent entrants into the market such as Falcon 9 and Falcon Heavy, these have shown that new launch vehicles can achieve reliable very quickly, even early in their operational lifetimes. Consequently, underwriters should review how much their reliance on historical data based on rockets developed decades ago relates to this new breed of launch vehicles and the development and testing methodologies utilised today.

Looking ahead, Gallagher hopes to see a wider range of launch vehicles becoming routinely available to commercial operators, establishing high levels of reliability and allowing satellites to get to orbit both in a timely manner and at commercially advantageous terms.

Small sat focus

Shifting into the New Space sector, there have been noticeable developments of lighter launch vehicles that mainly cater to the small sat clients. Companies such as Skyrora, Firefly and Rocket Lab are at the forefront of the "on demand" small sat launch vehicles with the Skylark L, Alpha and Electron respectively. Coupled with the continued progress of technologies such as 3D printing this has allowed for rapid prototyping and increased production rate of components necessary to construct these entrepreneurial rockets.

Alongside the evolution of smaller, lighter launch vehicles, the UK's spaceports are continuing to see increased support from both the UK government and the public alike. The first launch of a rocket from UK soil is set to take place before the end of 2022 at Spaceport Cornwall in Newquay and at Saxavord in the Shetlands. Out of the seven initially announced UK spaceports, only two have not shown tangible progress in recent months.

Looking into the near future, Gallagher hopes to see the continued investment

and development into New Space. This will allow more launch vehicles and launch sites to become available to commercial operators and will facilitate growth in the already significant space economy.

With every technological advancement comes risk and although the levels of new launcher reliability have yet to be demonstrated, we hope that with the fast-approaching launch at Spaceport Cornwall can be the first step in the right direction.

Market News

Allianz Global Corporate & Specialty (AGCS) ceased underwriting Space risks with effect from 20 September 2022. Allianz had significantly scaled back in deploying its capacity in recent years but remained a key insurer with a strong technical focus. As a consequence of Allianz's modest appetite in recent times we are not expecting this to significantly shift current market dynamics.

To find out more:

PETER ELSON

Chief Executive Officer (CEO), Gallagher Aerospace +44 (0)204 511 4588 Peter_Elson@ajg.com

Despite a reduced number of large GEO satellite orders in recent years, demand for heavy-lift launches continues, helped by the recent uptick in procurement due to the C-Band clearing in the US.





Gallagher **update**

Gallagher expands its Aerospace team

We are pleased to announce the following new appointments to our global Aerospace practice:

- Jonathan Barclay has joined as a Market Placing Broker
- Nicholas Bennett has joined as a Senior Account Manager
- Anisul Islam has joined as an Aviation Data Support Analyst
- Sinclair Seeligson has joined as a Junior Market Placing Broker
- Nicole Satschdeva has joined as a Service Technician
- Sammy Wright has joined as a Broking Account Handler
- Lauren Gallagher has joined as an Account Handler
- Daniel Roomes has joined as a Space Account Handler
- Henrietta Barry has joined as a Claims Account Handler

Gallagher Aerospace Training Seminar 2022

Gallagher held its annual Aerospace Insurance Training Seminar in London from 13 to 16 June 2022, the first in-person event to take place since the start of the pandemic.

This year's seminar was attended by over 50 delegates from 30 different countries around the world, representing a wide variety of backgrounds including airlines, general aviation, service providers, insurance and broking.

We would like to take this opportunity to thank all of the delegates that attended and each of our instructors and guest speakers that contributed and helped to make this year's event such a great success. We look forward to next year's event.

IATA Safety Conference 2022

As an IATA Strategic Partner, Gallagher is pleased to announce our attendance at the 2022 IATA Safety Conference taking place in Dubai 25-27 October.

The conference is a forum to discuss and debate the industry's safety and security agenda and brings together key leaders in the aviation industry.

We look forward to seeing you there but should you wish to get in touch beforehand please **contact us**.

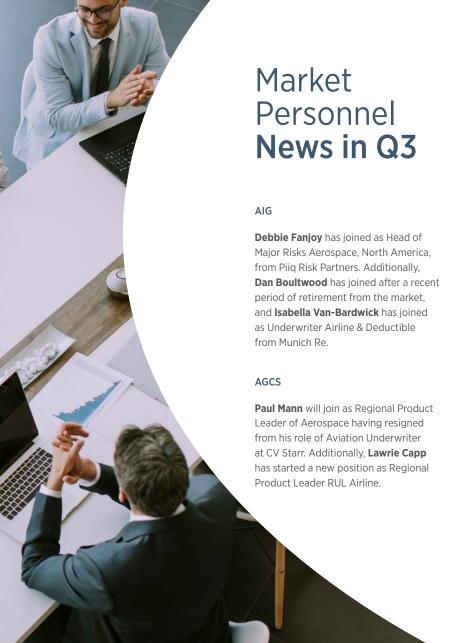
Gallagher launches new office in Hong Kong

In a further exciting development in our global expansion journey we have now launched a new brokerage business in Hong Kong to support businesses in the region with their risk management and insurance needs. Initially focused on Hong Kong, the team will also support clients in Macau when the appropriate licensing is agreed.

We already have a significant client base in the region and the creation of a local hub enables us to further expand our offering and maximise growth opportunities.

Initial areas of focus include aviation, marine, energy, financial lines and terrorism, and as we grow the team this will widen. This is an exciting development in our Asian broking expansion and complements our existing operations throughout the region.





Atrium

Duc Tu has joined as an Aviation Underwriter. Tu was previously General Aviation Underwriter at AIG.

Chubb Global Markets

Martin Audis has joined as Senior Underwriter, General Aviation. Additionally, Elena Ferrante has been promoted to Underwriter, Airline and Padraig Burbage promoted to Senior Underwriter, Aerospace.

Everest Re

Ben Amphlett has joined as Head of Aerospace from Tokio Marine Kiln. Additionally, **Debra Johnson** joins as Head of Aviation Claims from Sompo International and **Jake Wagner** has joined as a Senior Aviation Underwriter from AGCS.

Global Aerospace

Ryan Burdon has joined as Underwriter, Aerospace, from Price Forbes Aviation. Additionally, **Carolann Cook** has joined as a Senior Claims Representative and **Alicia Anderson** as a Claims Administrator, both based in Kansas City.

HDI Global Specialty

Jamie Bowes is starting a new position within the company as Head of General Aviation, and will relocate to Stockholm.

Hive Aero

Jay Wigmore will join as Class Underwriter, as part of the company's expansion into the General Aviation (GA) class. Wigmore will join Hive in March after serving out his notice period.

Lancashire

Angus Roberts has joined as Head of Airlines. Roberts was previously a Senior Aviation Underwriter at Chubb.

Rokstone Underwriting

Darren Shearwood has joined as a General Aviation Underwriter from Elseco.

Swiss Re

Araceli Vallés has joined as Senior Underwriter Aviation. Based in Zurich, Vallés was previously Underwriter Aviation, Marine & Residual Value Insurance at Qatar Re. Additionally, Jennifer Kopf will join as Underwriter Aviation from 1 January 2023, also based in Zurich.

Tokio Marine Kiln (TMK)

Robert Lilley has joined as Underwriter Aerospace, following a period of retirement. Additionally, Matthew Farrar has joined as General Aviation Underwriter, and Graham Oddie has transferred to London from TMK's office in Singapore to head up the carrier's GA team

USAIG

Owen Woodland has joined as a General Aviation Underwriter.

Source: Market knowledge and publicly available information.



For more information, please get in touch with us:

PETER ELSON

CEO. Gallagher Aerospace +44 (0)204 511 4588 Peter Elson@ajg.com

NIGEL WEYMAN

Global Executive. Gallagher Aerospace +44 (0)204 511 4583 Nigel Weyman@ajg.com

WILLIAM SMITH

Global Executive, Gallagher Aerospace +44 (0)204 511 4620 William Smith@ajg.com

STEVE LLOYD

CEO, Aerospace USA - Gallagher +1 312 315 1944 Steve Lloyd@ajg.com

GRANT S. ROBINSON

Managing Director - Gallagher +1 403 298 4314 Grant_S_Robinson@ajg.com

Australia, New Zealand and Pacific

JOANNE GREEN

Divisional Manager, Aerospace Australia, NZ and Pacific +61 (07) 3002 2293 / Ext: 72293 Joanne.Green@ajg.com.au

ADAM SULLIVAN

Managing Director, Aerospace Asia Pacific - Gallagher +65 6411 9394 Adam Sullivan@ajg.com

EDUARDO DUERI

Managing Director, Aerospace LATAM - Gallagher +44 (0)7827 937 386 Eduardo Dueri@ajg.com

Middle East & Africa

MATTHEW TRUNDLE

Partner & Divisional Director. Gallagher Aerospace +971 56 515 5500 Matthew trundle@ajg.com

Editorial Team

Interested in featuring in Plane Talking or have any feedback?

If so, then please get in touch:

BRAD HILLS

Partner, Gallagher Aerospace +44 (0)204 511 4642 Brad Hills@ajg.com

RICHARD ADAMS

Partner, Gallagher Aerospace +44 (0)204 511 4625 Richard Adams@ajg.com

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It reflects our understanding as at 10.10.22, but you will recognise that matters concerning COVID-19 are fast changing across the world. You should not act upon information in this bulletin nor determine not to act, without first seeking specific legal and/or specialist advice. Our advice to our clients is as an insurance broker and is provided subject to specific terms and conditions, the terms of which take precedence over any representations in this document. No third party to whom this is passed can rely on it. We and our officers, employees or agents shall not be responsible for any loss whatsoever arising from the recipient's reliance upon any information we provide herein and exclude liability for the content to fullest extent permitted by law. Should you require advice about your specific insurance arrangements or specific claim circumstances, please get in touch with your usual contact at Gallagher.

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