Insight and Intelligence on the 2019 *Rendez-Vous de Septembre*

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MONTE CARLO

Lloyd's trade capital crunch threatens weaker syndicates

Weaker Lloyd's syndicates with a heavy reliance on trade capital face an uncertain future after a number of reinsurers indicated they would move to remediate their books for 2020.

Around £2bn ($2.5bn) of Lloyd's capacity – or roughly 6-7 percent of the market – is currently supported by a diverse range of trade capital providers.

Broking sources have speculated that as much as 20 percent of that capacity could be withdrawn from the market in the forthcoming renewal, with limited interest from new carriers and very little appetite from existing players to grow.

As previously reported, Scor and PartnerRe – the biggest and a top-five player respectively – have placed their books under review, and it is further understood that Arig is likely to discontinue its participation, with others such as Labuan Re also likely to pare back.

A year after a number of syndicates were discontinued amid pressure from Lloyd's and their capital backers, the squeeze on syndicates levered to this type of capital will at minimum worsen economics and at worst make it difficult for them to trade forward.

The Insurance Insider's key takeaways are:

1. **More expensive/pulled capacity** – Previously cheap and plentiful capital that has sustained primarily smaller Lloyd's syndicates is set to become either more expensive, or unavailable for 2020.
2. **Uneven impact** – Although the capital withdrawal is relatively small in the context of the overall market, its impact will be highly uneven due to the different approaches to capitalisation taken by different syndicates, with some likely to be acutely impacted.
3. **Unpredictable outcomes** – The outcome is difficult to predict at an individual syndicate level but there is scope for structured capital deals, team sales, de-emptions, distressed sales or even syndicate closures as a result of the change in dynamics.
4. **Rates** – It will be impossible to isolate, but the higher cost of capital should provide some additional tailwind to pricing in the market, which is trending up 5-6 percent on the renewal book.

Heavy losses

Upwards of 25 syndicates are believed to secure some of their Funds at Lloyd's via trade capital delivered through corporate members.

Most is arranged via the brokers, with Guy Carpenter having the biggest market share, and Aon and Willis Re also running meaningful books.

The biggest users of such capital have typically been smaller syndicates, and particularly ones with private ownership, or with parents that have relatively small balance sheets.

Traditional reinsurers have used the vehicles as another means of accessing Lloyd's business, while non-Anglo-Saxon players, including reinsurers with relatively low ratings, have used them as a means of gaining exposure to international specialty risk they would otherwise be unable to access.

And in recent years, ILS funds have started to use them to access insurance risk.

However, the sharp downturn in Lloyd's performance after years of compound rate reductions and mounting acquisition costs, which was exacerbated by heavy cat losses in 2017 and 2018, has prompted a rethink.

The market made an underwriting loss of

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Key points

- Significant capacity contraction in £2bn trade capital space that could be up to 20%
- Major players Scor and PartnerRe have placed their corporate member businesses under review, with Arig and Labuan Re also expected to do less
- Although relatively small overall, some syndicates are highly geared to this capital and could struggle to replace it
- This creates scope for structured deals, de-emptions, distressed sales or even closures

Make your own land

Realtors always have one bit of sales patter that never fails to get a buyer's blood racing:

"Land – they aren't making any more of it," they say, followed by a knowing sigh.

These people should come to Monaco.

This place ran out of land and so built upwards, embracing high-rise living like a little Manhattan on the Med. Now that it has constructed slightly higher than is tasteful, it has designs on the sea for new prime acreage.

Not content with inflicting three years of the closure of the Hôtel de Paris, the demolition of the Sporting d'Hiver, the barricading of the Avenue des Beaux Arts and the accompanying isolation of the fabulous Hôtel Hermitage on us all, it seems the latest project will rob us of much of the Fairmont's local view. We feign outrage in response.

Some wonder why the reinsurance industry comes here year after year. Surely the cost is prohibitive? And after 63 years of faithful and unquestioning marriage, perhaps our partner has let itself go and is taking us a little for granted? Maybe we should keep it honest by introducing at least the hint of competition once in a while?

I think not. We are a naturally conservative industry and the real reason why we come to Monte Carlo is to experience disruption, but in a controlled environment. Monaco is a place happily disrupting itself with very little outside assistance.

We visit to be reminded how to combine ancient tradition with the cutting edge and the ultra-fashionable.

And the cost is a rounding error. The Monaco hotels are hardly outliers when compared to the five-star lodgings of New York, London, Zurich, Munich, Hannover, Paris and Bermuda, from where so many of its visitors hail.

Let's also remember that such is the competitive nature of our business that even if we were to decamp somewhere much cheaper, no sooner would we arrive than reinsurance brokers would be merrily bidding up the prices of the best local eateries to secure the most advantageous positions for their client dinners, insisting on only the best of everything.

The maître d's would soon catch on.

If we liked it we would keep returning in subsequent years and before long we would be back at square one. We would only have ourselves to blame. We may be conservative but we have expensive tastes that not many other cities can cater for in a similarly conference-sized area.

No, let us cast such thoughts aside and look to Monaco for learnings. The principality has no spare land so what does it do? It takes more land from the sea.

It must be unsettling for the incumbents with the best sea views.

They are just like the billionaire who owns the biggest yacht in the harbour. They live in constant fear for the day the latest addition to the Abramovich fleet moors up alongside, suddenly making their pride and joy look like a child's bath toy in comparison.

All market leaders know that at any moment something better can come and put them in the shade. In response we must keep growing and challenging ourselves.

It is encouraging that despite market difficulties, the industry does still use Monte Carlo as a broad platform for its most expansive and progressive long-term ideas.

The annual Monaco lesson for all of us is that the only way to keep in prime position is to first create and then grow new markets. Like Monaco we must be eternally restless.

Let's feed off this enervating environment.

See you in *Septembre* 2020.

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FoTs for Cali Wildfire Fund reinsurance set at 9%

Firm order terms for the California Wildfire Fund (CWF) reinsurance programme have been set with a rate on line of around 9 percent, market sources have told *The Insurance Insider*.

The Guy Carpenter-brokered programme is being negotiated in the market now, with the cedant seeking up to $2bn of excess cover for Sempra and CalEdison from carriers in Bermuda, the US and Europe.

The $21bn fund will take funding commitments from the utilities and their clients through rate increases, which will be invested in infrastructure upgrades.

However, market sources said the California Earthquake Authority (CEA), the entity tasked with managing the CWF, is likely to be frustrated in its attempts to secure the entire $2bn, even with beleaguered utility Pacific Gas & Electric (PG&E) being excluded.

Instead, market sources explained Guy Carpenter will seek to obtain as much cover as it can at the terms agreed.

In July, California Governor Gavin Newsom signed off legislation to create a fund that would cover the state's utilities for future liabilities from wildfires caused by their equipment.

PG&E, which provides electricity to some 16 million people throughout northern and central California, has been hit hard by wildfire losses in recent years and is excluded from the CWF reinsurance, at least for the time being.

As sources explained, PG&E may be admitted to the programme should it exit Chapter 11 bankruptcy protection and secure $1bn of its own insurance.

But that may be difficult to achieve, certainly based on its recent experience.

As reported by *The Insurance Insider* earlier this week, PG&E only managed to bind limited capacity at its recent renewal despite offering rates on line in the 40s after handing (re)insurers two full-limit losses in consecutive years.

In May, the California Department of Forestry and Fire Protection (CalFire) ruled PG&E responsible for the devastating Camp Fire that struck Butte County in November 2018, causing $12bn in insured losses.

A jury is set to decide whether PG&E is also responsible for $18bn in legal claims related to the 2017 Tubbs Fire, despite CalFire clearing the utility of responsibility for the blaze.

PG&E's liabilities for the fires – the two most destructive in Californian history – are likely to total as much as $30bn.

Guy Carpenter declined to comment.

Lloyd's could see a dozen SIAB launches a year: Neal

Lloyd's could feasibly support as many as 12 syndicate in a box (SIAB) launches a year, CEO John Neal has said.

The SIAB framework, which enables a fast-track route to market, is one of the six ideas in the wide-ranging Future at Lloyd's strategy.

The Corporation has committed to getting SIABs up and running in 90 days.

In a press conference at the Monte Carlo *Rendez-Vous*, Neal said the Corporation was very much "managing the tide" of SIAB applications and proposals it had received in recent months.

"There's a limit to what we can actually process simultaneously. We will think realistically about how many opportunities are valid which are being presented and how we resource for it, but it's hard to estimate [how many launches a year]," Neal said. "I would have thought maybe eight to a dozen a year."

Lloyd's chairman Bruce Carnegie-Brown added: "As we look at who applies and how they perform and develop, I think there will be a scaling up of this over time. Frankly at the moment if we had two or three that is plenty to get going, so we can establish our way of working."

> "There's a limit to what we can actually process simultaneously. We will think realistically about how many opportunities are valid"
> *John Neal*

As this publication has previously reported, there was initially a lot of uncertainty around the definition of "accretive" to the market – one of the early requirements for an SIAB launch.

Neal said the term "accretive" had actually been dropped from the SIAB section of the prospectus, which is due to outline more concrete details of phase one of the strategy execution on 30 September.

"I think that word [accretive] became slightly misrepresentative of what we are trying to do," the CEO said.

Neal explained that the opportunity around SIAB sits in three different buckets. The first could be a single geography or product line where someone is demonstrating particular expertise but would struggle to set up independently, he said.

The second would be around "particularly successful" MGAs which want to demonstrate a commitment to their own business, Neal said. "They could come into Lloyd's set up a consortium and allow [their] business to fly."

The third is for companies being "genuinely innovative", which Neal said he would define as different types of product and services, or even different types of cost structures.

"We've had all sorts of approaches from virtual artificial intelligence syndicates to different product opportunities around reputational risk," he said. "Then we have to look at those as well to say: 'How can we be an incubator for what the next generation of products or syndicates looks like?'"

Faxai feared to hit lower reinsurance layers

Early reinsurance market expectations for the Typhoon Faxai insured loss put it around the $3bn mark, broadly in line with last year's storm Trami.

Provisional estimates ranged from $1.5bn up to $5bn, but sources were highly cautious over these figures given that 2018 Typhoon Jebi was initially put at around the same level, yet ultimately has risen to be a $15bn-$16bn insured loss.

Although Faxai hit a high-value area in Tokyo at Category 2 strength, those who believed its losses would be contained to the low single-digit billions suggested that the city's strong building standards would insulate the city from the kind of destruction that occurred amid Jebi.

But notes of caution were sounded over whether the loss-handling process and reconstruction costs would be impacted by construction for the Tokyo Olympics and exposures to marine cargo claims from the Yokohama port.

At a $3bn level, the storm will likely hit lower layers of occurrence typhoon cover for a second year running. This will put more pressure for additional rate increases come 1 April 2020, compounding loss creep from Jebi that has risen further into the occurrence structures since this year's renewal.

The typhoon struck Tokyo on Monday, knocking out power for more than 900,000 people with wind speeds recorded at 130 mph.

Japanese public broadcaster NHK reported that containers had been scattered and flooded, and part of a sea wall destroyed. More than 2,500 ships passed through the port in May, with a total trade value of 989.6bn yen ($9.2bn).

Elsewhere, firefighters were struggling to contain a blaze that broke out at Japan's largest floating solar power plant at the Yamakura Dam in the Chiba prefecture.

For now, however, Faxai remains an isolated instance this typhoon season of a major event impacting mature insurance markets, occurring as Typhoon Lingling hit North Korea.

Last year, as well as Jebi there were a large number of smaller weather events affecting the Pacific region, with 29 storms, 13 typhoons and seven super typhoons forming during the period.

Severe flooding in western Japan and earthquakes in Osaka and Hokkaido also contributed to the heavy cat load that year.

As a result, a number of the major Japanese insurers' aggregate covers were wiped out by October, contributing to the higher reinsured share of overall claims. Though Faxai will erode these aggregate deductibles, without other follow-up events it will not impact this side of the reinsurance market.

Ultimately, the main driver of caution around the early optimistic take on Faxai was the memory of loss creep from Jebi.

There have been a number of revisions to initial loss estimates of around $6bn since last autumn.

The loss creep on Jebi, which was a significant negative factor in many European and US reinsurers' H1 results, has made reinsurers wary of delivering further disappointment to investors by once again stretching credulity on their reserving skills.

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£3.4bn in 2017 on a combined ratio of 114 percent and a £1.1bn underwriting loss in 2018 on a combined ratio of 105 percent.

Although no figures are available, the syndicates that utilise a significant amount of trade capital skew towards the third and fourth quartiles.

As well as delivering weak results, corporate members have been asked to meet recent "cash calls" with cash rather than letters of credit, reducing the effective capital leverage and diminishing the attractiveness of the play.

Trade capital drawback

Scor has told brokers that it expects to trim its £200mn third-party corporate member business, while retaining the allocation to its own Lloyd's business Channel.

Sources said the carrier is likely to scale back eight to 10 relationships to just three to five for the 2020 year of account.

Meanwhile, PartnerRe's head of Lloyd's trade capital Michel Buker is to leave the firm later this year, and the reinsurer is expected to very heavily curtail its involvement.

It is further understood that Middle Eastern player Arig has told brokers it is unlikely to renew its portfolio. Malaysian carrier Labuan Re – a long-time player in the space – is also expected to retrench.

Sources added that they expected a draw-down of capacity from other Asian carriers, reflecting their access to Lloyd's business via other avenues.

Names cited with potentially reduced appetite included GIC Re and Sompo – both of which have Lloyd's platforms – and Samsung, a recent investor in Canopius.

Brokers have also questioned whether ILS funds Securis and Stone Ridge will look to renew all of their participations after suffering from high levels of trapped capital and investor redemptions.

Sources have said that established markets Everest Re, Axa XL and TransRe are expected to be shown substantial additional business.

There is said to be only very limited additional capital waiting on the sidelines to enter the market for 2020 despite improving market conditions and positive sentiment about the Future at Lloyd's strategy.

Unpredictable outcomes

Syndicates do not publicise their use of trade capital and the relationships are opaque.

However, *The Insurance Insider* understands that some of the syndicates that utilise trade capital include Ark, Aegis, Acappella, Agora, Apollo, Barbican, Brit, Canopius and Dale Underwriting Partners. Pioneer also relies on a capacity deal from Liberty for 100 percent of its capital, with Liberty signalling it is not minded to continue.

The impact on these businesses is likely to be highly differentiated, with stronger performers like Aegis and Ark much better placed, and others like Brit having access to additional capital from its parent company.

Sources have said deals are likely to be restructured to make them more palatable to trade capital providers. Some syndicates could be forced to move to stacked capital deals, while others may even be obliged to pay minimum and deposition premiums. Deficit carry-forwards are also likely to proliferate.

The renewal outcome remains uncertain ahead of the late November coming into line date. Some syndicates will replace the capital with their own capital, Names capital or with alternative third-party trade capital on a quota-share basis, but there is scope for problems.

In these cases, some could be forced to accept punitive capital structures, or to sell on teams as part of de-emption plans. And in the most extreme instances there is scope either for distressed sales, or even full business closures.

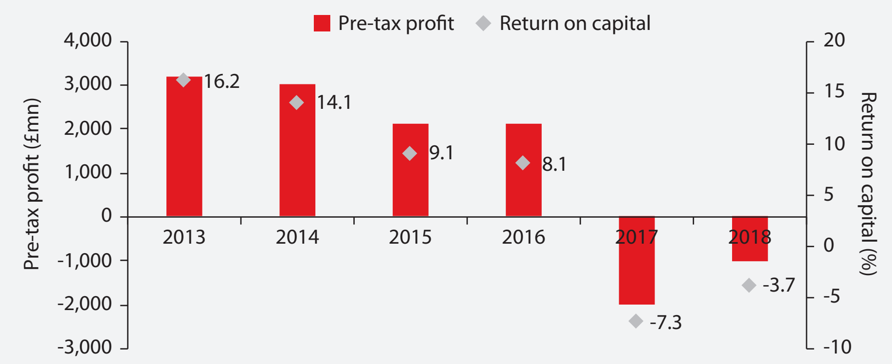
However, it is very hard to predict how the individual businesses will emerge from the challenge of the capacity crunch.

Select incumbent Lloyd's trade capital providers

Scor	Axa XL
Everest Re	Securis
PartnerRe	Arig
Sompo	Labuan Re
TransRe	Stone Ridge
Aioi Nissay Dowa	Korean Re
Toa Re	Milli Re
GIC Re	

Source: *The Insurance Insider*

Lloyd's pre-tax profit against return on capital



Source: Lloyd's, *The Insurance Insider*

Lloyd's capital levels remain 'healthy': Hancock

Performance management director Jon Hancock has said that despite some pull backs from trade capital providers, Lloyd's has no shortage of capacity.

"There's a lot of capital at Lloyd's and there is still a lot of capital coming to Lloyd's, but there are a relatively small number of corporate capital providers taking a different route and using their capital for other things," he told *The Insurance Insider*.

However, he shrugged off the moves. "It doesn't worry me because I do not see a flood of capital leaving the market. I see different types of capital with plenty of risks to attach themselves to at Lloyd's, and a healthy amount of capital wanting to attach to risk."

Hancock tied the moves in the trade capital space to a broader industry trend of capital taking a more discerning approach to risk.

The executive said it was his job to make it as attractive as possible for capital to come to the market.

"The starting point of that is if the returns are attractive and the capital believes in the returns, then lots of capital will come," he said.

Pool Re seeks to 'move the needle' on terror cover

Pool Re is considering overhauling its business model as it prepares for an internal restructuring in November.

The work comes ahead of a 2020 government review of the remit of the UK terrorism reinsurance backstop, which was established in 1993 after IRA bombings in London prompted a mass exodus from the market by property reinsurers.

CEO Julian Enoizi said the scheme wants to reshape in order to "fundamentally move the needle" on terror insurance take-up in the UK, where the penetration rate among small businesses is below 10 percent.

"Even in a market as developed as the UK there are an enormous amount of (insurance) customers who don't buy terrorism insurance. The reality is you are having to purchase two products," he said.

Enoizi declined to elaborate on the potential change to its business model, which will be discussed with its advisory board later this month. However, he described the fledgling plan as a "fundamental shift to modernise into a business model more reflective of how terrorism insurance is bought and sold today".

He added though that, before that happens, "we have to go through an enormous amount of analysis and shareholder engagement".

Pool Re in March became the first such scheme in the world to cover terrorism-related business interruption (BI) losses where there is no property damage. The move closed a protection gap brought vividly into focus by the 2017 suicide bombing in Manchester as well as attacks around Borough Market in London.

The scheme has been working with British Insurance Brokers' Association and others to boost take-up of terrorism cover among SMEs.

From 1 January next year, Pool Re will be offering its SME discount to more businesses by lifting the definition of an SME from £2mn ($2.4mn) in annual revenue to £5mn.

"It will open up our insurance to a much broader church," Enoizi said.

Pool Re's internal restructuring in November will put its analytics, threat assessment, modelling capability and underwriting into a new division: Pool Re Solutions. It will add a risk management arm to the division.

In the interview, the CEO highlighted cyber, drones and a resurgence in right-wing extremism as just some of the moving parts in a constantly changing threat landscape.

Pool Re will host an event in Brussels on 10 October where speakers will include European Insurance and Occupational Pensions Authority chairman Gabriel Bernardino. He recently argued that governments need to consider state cyber reinsurance back-stops.

"Governments tend to intervene if a market failure has occurred but on this occasion if a market failure has occurred it could have massive implications," Enoizi noted.

Enoizi also argued that the market needed to overhaul definitions of what constitutes a terrorist attack in a world where the line between hostile state actions and terrorist attacks is increasingly blurred.

"The physical world is hard enough but once you get into cyber insurance and reinsurance, the world is going to have to think very carefully as to whether the cyber insurance of the future is going to distinguish between actors," he said.

He noted that court interpretations of wordings in the case between Zurich and Mondelez and between Merck and its insurers over claims incurred from the NotPetya attacks will be closely watched as a guidepost to the market.

Pool Re's retro programme – £2.3bn this year – comes up for renewal on 1 March.

This year the scheme has also bought £40mn of cover for its non-damage BI cover, incepting as of 5 July. In February it closed the first cat bond of its kind with the £75mn Baltic Re issue.

Pool Re and GC Securities last week won the risk transfer of the year category at this publication's *Insider Honours* events for the cat bond. Pool Re also won underwriting initiative of the year for its non-damage BI cover and scooped the risk carrier of the year award.

Cyber market must be better equipped for systemic risk: GC's Davis

There is a "staggering disconnect" between where the cyber (re)insurance market is today and where it needs to be in order to sustain catastrophic events, Guy Carpenter's cyber risk strategy leader Erica Davis has said.

Last week Guy Carpenter and CyberCube released a report which gave US insured loss estimates for a range of hypothetical systemic cyber events.

The largest loss figure arose from the scenario of a widespread data loss from a leading operating system provider, which could cost the US cyber market $23.8bn.

The top five scenarios made up a hypothetical 75 percent of the average annual insured loss of $14.6bn, based on a 1-in-100-year return period.

That overall figure would rise to $16.1bn in the case of a 1-in-200-year event.

Davis told *The Insurance Insider* that if you compared the size of the cyber market today versus the loss estimates arising from the scenarios in the study, it was clear the market was still a long way from being suitably equipped to sustain these losses.

Munich Re recently predicted that global cyber (re)insurance premium will amount to almost $7bn come the end of 2019. That figure is set to rise to almost $9bn in 2020.

Davis added that there was "inconsistency" in what the cyber market viewed as cat risk, as no precedent has truly been set to date.

"The losses [in the cyber market] to date have largely been attritional in nature so that means that industry performance isn't representative of the true risk loss potential," she said.

"We hope the study stimulates discussion around appropriate cat loading, and challenges some of the prior assumptions that had been made."

The Guy Carpenter and CyberCube analysis was based on an assumed $2.6bn portfolio and analysed around 23 catastrophe loss scenarios.

Rebecca Bole, head of client engagement at CyberCube, said the analysis was able to create a probabilistic model which enables a view of the frequency and the severity of the attacks.

She challenged the perception that there was not enough data available to more accurately model cyber risk.

"We would say there is an awful lot of data out there – the difficulty is choosing the data sets which are applicable to insured losses and applying the right analytics and deriving the right conclusions from them," she said.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The power of data

Adam Podlaha, head of Aon's Impact Forecasting, gives the low-down on the latest developments in catastrophe modelling

Reports have indicated that an increased focus on data analytics could help insurers trim their loss ratios substantially. How is Aon using data analytics to serve its clients and create value?
There are a few aspects of this where Aon is getting involved. First, we have the technology to assess risk at a highly granular level, which can help clients to underwrite better. The second aspect is helping insurers to optimise and manage their portfolios – there are different tools we can use to help them manage the peaks, to make sure they are in control. And third, we help clients to see what is coming using our automated event response (AER) service.

Can you explain to me Aon's AER service, how it was developed and how it benefits insurers and insureds?
It enables insurers to quantify and forecast losses for events which are going to happen in the upcoming days up to five days ahead. It is a completely automated response forecasting system for US hurricanes and European windstorms. It uses available weather forecasting information from different meteorological institutions – in the US, it's the National Hurricane Center – and it uses the forecast combined with Impact Forecasting models to produce a loss forecast of an event prior to making landfall. What is important is that, rather than a market loss, this is a client-specific portfolio service producing portfolio specific loss estimates. In other words, we take a client's insured locations, put them inside the model with the weather forecast and then deliver automatic emails to the client every six hours forecasting their losses.

What are the benefits for your clients?
You provide them with information on potential losses which they can use to formulate the event response. The information can be used to hire an accurate number of loss adjusters, for instance. They can inform their clients that an event is happening and how they might minimise any damage. We have had some feedback and updated the product since last year, especially in terms of practical use, such as highlighting the development of the previous forecast so clients can see the progress.

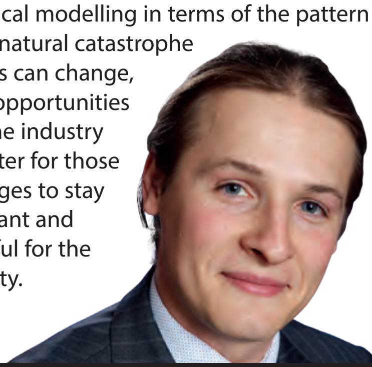
What methods do you use to forecast for more unpredictable losses arising from human decisions, like terrorism and workers' compensation?
Quantification of these hazards is evolving rapidly. I will give you one example where we are using computational fluid dynamics (CFD) to model blast events. We take a 3D model of an area, in this case Manhattan, and combined it with a CFD tool as well as engineering expertise to build a blast model, which can help insurance companies to manage their portfolio, as well as optimising reinsurance for this part of coverage.
For Manhattan, we have blast locations positioned at each street cross section as well as mid-block – think of a high-density scenario model. It takes the buildings into account, the shielding effect of the buildings, and the corridors. We are thinking of expanding into other US cities like Chicago and Los Angeles, as well as cities outside the US, such as London and Paris.

> "Data is getting more detailed and more accessible. That is important. If the data is too expensive or not accessible then people will simply not use it"

Are modellers doing enough to allow insurers to facilitate the use of a variety of modelling software and technology?
I think what is important is to make sure it is easy to integrate technology, so it is accessible and can be used in practice. New technology that is difficult to use is not going to be applied. The trick is to be able to package a sophisticated technology into an easy-to-use package. All our applications have something called an application programming interface, which allows clients to run the models and tools without launching the user interface. The AER is the perfect example of this. Everything runs in the background, completely automated, and the client has to do nothing other than read the email.

Can you explain the variety of data sources you use to create your models and what new data opportunities you see?
Data is getting more detailed and more accessible. That is important. If the data is too expensive or not accessible then people will simply not use it. If you want to insure your house, one way is you telling your insurer everything about the house so they have all the information. However, we are seeing more and more cases where various databases of buildings from different sources, such as local government databases, private databases and Google Street View, are being used to fill this information automatically. We see more automation. In other words, rather than asking people to fill out information at the point of underwriting, when you enter your address the system backfills all the information about the building and gives you a better quote, a precise quote. It may be more expensive or cheaper, but it will be more appropriate.

What effect, if any, does climate change have on modelling natural perils?
There is still a massive uncertainty about what the climate will be under different scenarios. So rather than giving one climate change scenario, it is about giving insurers the sense of the uncertainty. If you know that some things will be more susceptible to storm surge flooding you can modify the way you underwrite. You may not underwrite for the location, or you may charge larger premiums. I think climate change will bring both new challenges for physical modelling in terms of the pattern of how natural catastrophe losses can change, and opportunities for the industry to cater for those changes to stay relevant and helpful for the society.



Adam Podlaha
Head of Impact Forecasting

REINSURERS VER

Capital, Hurricane Dorian and technology-dominated discussions at this year's Monte

Reinsurers were collectively sighing with relief after Hurricane Dorian looked set to mirror 2016's Hurricane Matthew in terms of potential reinsurance losses.

Hannover Re's Sven Althoff, member of the executive board, P&C, declared the storm an insurance, rather than a reinsurance, event, given the significant deductibles on most programmes. He noted it would take serious levels of water damage to erode them, and that excess of loss structures would not be impacted.

On rates, Hannover Re noted there were improvements of more than 20 percent on loss-affected programmes in Florida this year, with single-digit increases achieved elsewhere.

Even without further losses, rates are expected to rise within the single-digit percentage range in the US, with Hannover Re aiming to write more US property risk as a result.

Japanese risks are also expected to continue on an upward trajectory, driven by poor Jebi run-off, according to Hannover Re board member Silke Sehm.

Munich Re's chairman of the reinsurance committee Torsten Jeworrek also predicted a single-digit billion-dollar insured loss for Dorian, despite it being "one of the most severe hurricanes we have ever seen in the world".

"These size events are a stretch, but very much expected within the annual hurricane season budget," he said.

Jeworrek also opined on the global cyber (re)insurance market at his firm's press conference, noting that premium would continue its "exponential" annual growth rate of 25 percent to 30 percent each year, with 2020 set to see close to $9bn generated.

Munich Re recorded $473mn of cyber premium in 2018 across both its insurance and reinsurance operations, with around $200mn of premium relating to reinsurance exposure.

Elsewhere, Scor expanded on its Quantum Leap strategy at this year's *Rendez-Vous*, and said it is considering setting up a separate balance sheet to write risk on behalf of third-party investors.

Increasing engagement with ILS investors is part of the new strategy, which runs until the end of 2021.

Scor Global P&C CEO Jean-Paul Conoscente told journalists: "We want to build long-term partnerships with long-term investors in the space."

The vehicle would be similar to Vermeer Re, which RenaissanceRe uses to write risk on behalf of Dutch pension fund PGGM.

Finally, Swiss Re reinsurance CEO Moses Ojeisekhoba used his platform to urge carriers to co-operate to ensure that certain insureds don't lose out from technological advancement.

However, he added that tailoring pricing to the individual needs of every client could jeopardise the "social good" provided by the insurance industry – the use of the premiums of the many to protect the few who experience losses.

Ojeisekhoba said the industry must work together "to ensure no-one is completely uninsurable".

More broadly, Ojeisekhoba said the reinsurance industry faced significant challenges in light of the ongoing glut of capital in the industry.

He said reinsurance capital had expanded from around $150bn to $400bn in the past 15 years.

Alternative capital had grown 50-fold over the period, he said, echoing commentary from Hannover Re CEO Jean-Jacques Henchoz that the barriers to entry "are not that high".

SUS BROKERS

Carlo *Rendez-Vous*, served with a slice of positivity around rate projections for 1 January

Members of the broking fraternity this year were keen to talk up their latest innovations, as the battle for reinsurers' business between the big three brokers intensified in the post-MMC-JLT deal era.

Guy Carpenter's newly crowned chairman David Priebe spoke optimistically about the new California Wildfire Fund – developed by the California Earthquake Authority, with Guy Carp sourcing the reinsurance protection.

Despite scepticism in some quarters over whether the broker will be able to find the $2bn of coverage the fund is seeking, Priebe pointed to the Federal Emergency Management Agency's flood reinsurance programme as a model for how government entities can transfer risk to the private market.

"It's an emerging peril with a wide degree of uncertainty and views. It's about working with capital providers and helping them to assess the peril," he said of the wildfire risk.

"It will take a while to fully build the capital but people aren't shying away from it. We've had very positive responses from capital providers to support this programme."

Aon, meanwhile, used the *Rendez-Vous* to launch its reinsurance auction platform, which enables blind bidding for both non-concurrent and concurrent placements.

Cost efficiencies from the auction platform will be generated in terms of time commitment and the amount of people needed to complete a transaction, said Aon Reinsurance Solutions CEO Andy Marcell.

He added the broker had "no expectation" of how much business would be transacted through the platform at 1 January, stressing that it would take time for Aon brokers to explain the proposition to its clients.

Elsewhere, head of market analysis at Aon Reinsurance Solutions Mike Van Slooten spoke of the lessons to be learned from loss creep from the likes of Typhoon Jebi.

"There needs to be recognition that when these big events happen they are hugely complicated – they tend to uncover changes in the global economy and supply chains, and one event is never like the previous one," he said.

"Most of the traditional reinsurers have learned from long experience and built in a lot of conservatism from the ground up, but there have been a couple of events that have caught out even the most experienced. You can model the situation as much as you like in terms of building codes and cat models, but the less tangible factors only come to light post-loss."

Willis Re global CEO James Kent had rates on his mind, noting that the lack of a significant reduction in capacity in the reinsurance market was the key factor in the dislocation in pricing between retrocession, reinsurance and primary cover.

Pricing in retro and insurance was moving "much faster" than in reinsurance, because capacity withdrawal from pillars one and three have been greater than withdrawals in pillar two.

Kent also emphasised the increasing differentiation in property cat pricing between regions, risk experience and company type, pointing to an environment where pricing contagion is a thing of the past.

Looking at the Florida renewals, Kent noted that this year, pricing was unprecedentedly differentiated, with some low single-digit, risk-adjusted rate increases while others paid 30 percent or 35 percent more.

"It was dependent upon losses, and particularly loss creep, but also on the quality of the management and the company. I find the differentiation of the better companies really quite healthy for the market."

Last year was all about diversification, with Axa expanding in specialty insurance with XL and AIG growing in reinsurance with Validus – how sensible does that strategy appear more than a year on?

Edouard Schmid, group CUO and chairman Swiss Re Institute: Diversification is at the core of Swiss Re's strategy, both on group level with our three business units reinsurance, Corporate Solutions and life capital, and on the business unit level itself. In reinsurance, we continue to build on our existing large and diversified book. We strongly believe that our diversification with the life and health business and our regional diversification into high growth markets are positioning us for further profitable growth.

In general, reducing cost across the value chain will be key for the insurance industry. Achieving efficiency via superior diversification and scale is an important factor in this, also usage of alternative capital where it adds value. Of course, the use of technology to enable automation will also be critical.

Peter Roeder, Munich Re board member: Over the last years, we have seen a significant amount of M&A activities in the insurance industry, both for diversification and consolidation reasons. These transactions are driven by some market fundamentals like the need for scale to justify necessary investments, e.g. in IT and digitisation. Generally, I believe these fundamentals and low interest rate environment will continue for the foreseeable future and we might see further transactions driven by these rationales although valuations remain challenging.

> "The traditional value chain of (re)insurance is transforming. The 'clear-cut' separation of the past between insurance and reinsurance is progressively blurring"
> *Jean-Paul Conoscente*

Jean-Paul Conoscente, CEO, Scor Global P&C: The worldwide insurance industry is becoming increasingly concentrated, with larger insurers not only buying local players and optimising purchases through global programmes, but also developing reinsurance activities to optimise their capital base. In parallel, the reinsurance industry is also becoming progressively concentrated, with the number of worldwide reinsurers truly able to act globally constantly decreasing. This requires those remaining to take on increasingly large shares of client programmes, across all lines of business.

As a result, the traditional value chain of (re)insurance is transforming. The "clear-cut" separation of the past between insurance and reinsurance is progressively blurring, as most concentration has been vertical rather than horizontal.

Dirk Lohmann, head of Schroder Secquaero: My view is that, while the diversification of revenue and earnings streams remains a key strategic goal of many insurance company managements, there is now also an increased focus on what I would call "back to basics" with an emphasis on improving the underlying profitability of core lines of business and managing expenses. The Lloyd's review of business plans last year as well as the attempts by major commercial lines insurers (not just AIG) to improve pricing on large property risks are symptomatic of this development.

Sven Althoff, member of the Hannover Re executive board: We have a clear strategic focus on being a pure-play reinsurer. In our opinion, the reinsurance market is giving us enough potential for growth and diversification. In order to be successful, we have to work continuously on our client orientation and competitive position to develop and maintain competitive advantages. Our clients give us positive feedback on this focused approach.

Luca Albertini, CEO and founding partner, Leadenhall Capital Partners: I do still believe in the benefits of "good" diversification, which are capital-efficient investments which are expected to deliver a return in line with the shareholder's target and with volatility within an acceptable range. In dealing with tail risk we need to assess returns over a long-term period, and observing them over a two-to-three-year period would make you either over or underestimate the risk-returns and it would be technically wrong.

The timing of the diversification has been unfortunate for some, but long-term strategic propositions cannot be measured by bad luck.

Shareholder activism seems to be gaining traction – what can listed companies in our sector learn from the skirmishes to date?

Conoscente: Listed companies need to listen to their shareholders; however, not all shareholders have the company's long-term best interests in mind. So-called activist shareholders tend to take a short-term view to maximise their returns and cash out. This is particularly a problem for reinsurers, who run their business to create value over the long term. Given the volatility that can be introduced by cat or other large losses, reinsurers need a stable shareholding base that understands how loss patterns and client relationships drive superior value creation over time. Activists who want to enter the (re)insurance sector need to reassess their investment timeframe and learn more about the business model. To date, we have not seen activists in the market who bring better ideas or more profitable underwriting approaches.

Lohmann: Complacency is something that will limit your lifetime as a CEO. I also think that the remuneration committees of several companies' boards will have to review whether the compensation packages are really aligned with creating long-term shareholder value.

> "It is crucial that companies are aware of their shareholders' expectations, particularly because our business model is quite capital intensive and in some respects very different from other sectors"
> *Peter Roeder*

Albertini: It is always wise to be able to anticipate investors' questions before they are asked, and for boards to be effectively run they need to challenge themselves on their own strategies. It is however possible that some external observer can come up with valid ideas and challenges and listening to them could enhance shareholders' value for all. At the same time, it is important to distinguish positive contributions from criticism, which can be validly challenged, and to make a choice between the benefit of short termism and long-term benefit for stakeholders.

Roeder: In general, activist investors tend to address what they perceive as financial underperformance, inadequate corporate governance or lack of a strategic direction. From my point of view it is crucial that companies are aware of their shareholders' expectations, particularly because our business model is quite capital intensive and in some respects very different from other sectors. It is important to make investors comfortable with the business and to explain its specific nature. Therefore, financial transparency is of the utmost importance for an insurance company. Additionally, companies need to be able to articulate a long-term vision for the business and to convince investors – no matter if activist or not – to support the transformation needed to respond to the changes the industry is currently experiencing.

Althoff: In my opinion, these are very company-specific situations and I do not think that you can draw any general conclusions out of them. With Talanx being the owner of 50.2 percent of Hannover Re shares, the structure of our shareholder base is very different to most listed companies on the reinsurance side and we have relatively little experience with shareholder activism to date.

How can the reinsurance industry best address its cost base?

Will Curran, departmental head of reinsurance, Tokio Marine Kiln: Reinsurance is a talent-intensive business, and many reinsurers already see themselves as being relatively lean and cost efficient. Reinsurers also recognise that underwriting performance, much more than cost, is the key underlying driver of success. Although we can often be regarded as dinosaurs by our insurance brethren, we are the ones who have been using electronic placement systems for several years now and somewhat successfully. The use of such systems has brought greater efficiency for its users and led to the market being more streamlined.

Althoff: We have a lot of duplication of work in our industry. As one example, just look at the placement of a reinsurance contract during which the ceding company, one or more brokers and many reinsurers will work on the same data in their own environments. The establishment of more data standards and more automatic and digital means of transferring data would certainly help to gain efficiencies in this area. Another example is the provision of services, for instance capital or exposure modelling, where very often brokers and reinsurers are competing to provide the same service to ceding companies. At Hannover Re we are working in most markets almost exclusively via brokers, and we would only provide those services on demand as the value proposition of a broking house has changed towards those advisory and consultancy services.

> "We have a lot of duplication of work in our industry. Just look at the placement of a reinsurance contract during which the ceding company, one or more brokers and many reinsurers will work on the same data in their own environments"
> *Sven Althoff*

Schmid: We can expect that digitisation, automation as well as offshoring and outsourcing will continue to be key drivers to improve the industry's cost base. We at Swiss Re are following a holistic approach, leveraging all these drivers to achieve our ambitious cost targets, which we have set across all business units and for the group itself. Using technology and process improvements allows us not only to improve margins and deliver a compelling offering to our clients, but also to drive our ambition to become a leaner, more agile and future-ready organisation. It is our philosophy at Swiss Re that we reinvest part of these productivity savings into our strategic priorities to accelerate growth in attractive risk pools.

Lohmann: One of the largest areas for potential improvement has to lie in greater automation of the accounting and settlement processes within the reinsurance value chain. Here the use of distributed ledger technology could really rationalise the back and middle office areas.

Albertini: There are many areas for improvement and efficiency. It is important not to be constrained by the legacy systems and processes, and make sure each stakeholder taking a slice of the pie does add value in line with what it absorbs. Management should also think: if I were setting up a new company today, would I

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CONTINUED FROM PAGE 13

manage it as I am managing this one today? Would I engage with the same stakeholders in the value chain and in the same way?

Conoscente: From a reinsurer point of view, costs come from three angles: distribution, commissions paid to insurers for accepting their business, and internal costs. In terms of internal costs, we think a lot can be done to improve efficiency. Many low value-added tasks are still done manually in insurance and reinsurance companies. Information is rekeyed several times. Processes and interfaces between market participants are sometimes archaic. Technology, with its recent and promising developments in AI and automation, will bring part of the solution required for this transformation.

This will facilitate better operations and provide our employees with growth and learning opportunities.

Roeder: The whole (re)insurance sector faces challenges along the value chain from digitalisation and new market players. For this reason, many companies are investing to shape the digital developments and to offer new services to clients. In the short term, this transformation requires substantial investments in IT and data capabilities. But ultimately, they will lead to efficiency increases in the future.

How challenging for the sector is the transition to a low-carbon economy?

Althoff: The models we use clearly give evidence of global warming and climate change. We are already experiencing more disasters such as floods, hailstorms and wildfires. The long-term impact of climate change on our society as a whole can be catastrophic. If you weigh the risks, a transition to a low-carbon economy totally makes sense.

In our view, that's a political decision really. Governments are best placed to set common rules that make sure we get there.

Albertini: The sector should support such transition with all its efforts, as it will ultimately help produce better underwriting results in the long run and would help maintain the confidence of ILS investors, most of which are looking at supporting the good actors in climate change management, such as insurers and reinsurers. The economy and progress are challenging our industry with new risks to understand and price, and I would be happy to see fewer challenges arising from a high-carbon economy.

> "Management should also think: if I were setting up a new company today, would I manage it as I am managing this one today? Would I engage with the same stakeholders in the value chain and in the same way?"
> *Luca Albertini*

Roeder: The insurance industry has – on both sides of the balance sheet – opportunities and risks with the low-carbon transition. On the insurance side, we strive for enabling new, low-carbon technologies via innovative risk transfer solutions. In asset management, we support the transition by investing into alternative technologies and relevant infrastructure projects and we have already divested from coal-intense assets. Munich Re actively develops new business models to drive down carbon emissions in line with the targets of the Paris Agreement.

Lohmann: As a service industry I would argue that the industry's carbon footprint (outside of the air travel) is relatively low and manageable. A key question is how the insurance and reinsurance sector can assist its end clients in managing their carbon footprint. Not insuring coal-fired power plants or mining as of a certain date can send a signal, but doesn't really solve the problem.

Here the industry also has to come up with risk financing solutions to assist its end clients in migrating to cleaner and more efficient processes. Also, as major investors, the (re)insurance industry can provide capital-supporting technologies that will reduce or compensate carbon emissions.

Conoscente: All the actors in the industry need to identify the risks and opportunities arising from climate change and figure out the best way to address them, in terms of both strategy and financial planning. The transition to a low-carbon economy will change the way we approach our investments, but it will also change our vision of the risks involved. It is highly likely that some lines of business (motor, energy, marine, aviation, etc.) will be profoundly transformed over the long-term because of the necessary transitions. The most prepared and forward-thinking actors will be in the best position to seize the various opportunities likely to arise from this transition.

Schmid: Overall, the transition to a low-carbon economy does not present a significant financial risk for the reinsurance sector. Mainly due to the annual renewal of contracts, the associated risks can be managed effectively.

On the opportunity side, the transition results in new and exciting business fields. New technologies come with new risks. As a leading risk-knowledge company, this presents a growth opportunity for us, as we are able to understand new risk, offer consultancy and risk-transfer solutions. We are working with our clients to find the best solutions that enable them to adapt to a low-carbon economy.

CONTRIBUTORS

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Edouard Schmid, group CUO and chairman Swiss Re Institute

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Former Hannover Re chief Wallin wins lifetime achievement award

Former Hannover Re CEO Ulrich Wallin expressed confidence in the leadership of successor Jean-Jacques Henchoz as he took home the lifetime achievement award at *The Insurance Insider Honours*.

Wallin stepped down as CEO earlier this year after a decade at the helm. Having shepherded the business through the aftermath of the financial crisis, he oversaw five-fold growth in the reinsurer's share price and established the carrier as a generator of market-leading returns.

Jon Hancock, who joined Lloyd's as performance management director in 2016, gained the prize for outstanding contributor of the year for risk for his work on reforming the Lloyd's market.

He said: "We all knew something needed doing, and we all know that Lloyd's is the best and most famous brand of insurance in the world for a reason. It was time for Lloyd's to stand up and give leadership."

Minova Insurance CEO Dane Douetil took home the outstanding contributor of the year award for distribution for his work turning around the independent wholesale and reinsurance intermediary.

Pool Re walked away with the award for (re)insurance transaction of the year for its Baltic Re catastrophe bond – a prize it shared with GC Securities. The UK government reinsurance backstop also won the underwriting initiative of the year category for its addition of non-damage business interruption cover. Pool Re's hat trick was completed when it scooped the title of risk carrier of the year.

M&A transaction of the year went to Marsh & McLennan Companies' £4.9bn ($6.0bn) takeover of JLT.

The InsurTech honour went to Charles Taylor InsureTech and the London Market Group, which has a three-year contract to deliver a delegated authority solution to Lloyd's and the company markets.

Other winners included THB Group, which won broker of the year, while Volante Global took home the MGA of the year award.

Omni:us won insurance innovation of the year award for its enterprise AI.

CFC Underwriting won campaign of the year for its cyber and beyond campaign, and AIG UK took the inclusion and diversity award.

The 2019 Honours Board

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Underwriting Initiative of the Year
Pool Re: Non-damage Business Interruption cover

Broking Initiative of the Year
Safeonline Cyber Team: Proprietary online platform

M&A Transaction of the Year
Marsh & McLennan Companies & JLT

(Re)insurance Transaction of the Year
GC Securities & Pool Re: Baltic Catastrophe Bond

MGA of the Year
Volante Global

Broker of the Year
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Outstanding Contributor – Distribution
Dane Douetil, Minova Insurance

Outstanding Contributor – Risk
Jon Hancock, Lloyd's of London

Lifetime Achiever
Ulrich Wallin

Blockchain hype a 'huge distraction': B3i's Carolin

The CEO says distributed ledger technology ultimately offers significant capital benefits as well as cost savings

The hype around blockchain is often unproductive and the technology should be seen as a "tool in the toolkit" for insurers and reinsurer, according to B3i CEO John Carolin.

He told this publication: "I find blockchain a huge distraction in a way", and noted that it was just one element in the digitisation of (re)insurance that the B3i industry body was working on.

The executive, who became permanent CEO of the (re)insurance industry entity in July, explained: "B3i's challenge is to make people understand that what we do is real.

"We have a real product in production. Part of the education challenge is to separate ourselves from the pack and educate people about why some of the typical concerns about blockchain are not relevant to us."

B3i was established in 2016 partly to explore the potential of distributed ledger technologies in insurance and reinsurance, but now has a broader remit to "deliver better solutions for end consumers through faster access to insurance with less administrative cost".

The initiative recently launched its first product, an excess of loss (XoL) product, which Carolin described as a "workflow tool" that takes the currently "unstructured process" of pre-placement negotiation that is "error prone", "time consuming" and gives "one version of the truth".

It brings brokers, cedants and reinsurers "all together to pool reinsurance contracts, so that starts by describing the risks you are looking to insure, the broker assisting you in finding the reinsurers to take up that risk and to choose which layers they individually want to participate in and to what extent, and then ultimately results in a signed reinsurance programme, so it facilitates a multi-party transaction where you have a contract that has been placed between you."

He added that the end goal was to have the entire contract life-cycle on the platform where the contract will "self-execute".

"Our vision is to build a functionally rich eco-system of our own products but primarily partner products. So we are building a platform, and we will operate a network and we will direct that network and monetise our IP [intellectual property]," he said.

"Our IP will obviously be in all our own products but we expect a lot of our IP to be in partner products, so many of the parts of the cat/nat cat XoL product are modular components that that we would license for people to use as they build out their own solution on top of ours."

Carolin added that by allowing users to use their "building blocks" to create their own products it would create a subscription model that could be monetised.

> "B3i's challenge is to make people understand that what we do is real"

B3i has about 20 insurance shareholders which include IRB Brasil Re, Allianz, Axa, Generali, Hannover Re, Liberty Mutual, Mapfre Re, Scor and Swiss Re.

"Our shareholders know our business plan and they know it will take significant amount of resources and it will be quite some time for us to break even".

"That could be four to five years away," he noted, or longer if B3i chooses to grow more aggressively.

"This is going to take a significant amount of time and money and they are very comfortable about the value we are going to create for the whole insurance industry", he said of B3i shareholders.

Carolin added that the consortium would have sufficient funding to continue until its next funding round, which would likely be next year.

China Pacific Insurance last month became B3i's newest shareholder, taking a seat on the initiative's board in the process.

Earlier this year, IRB Brasil Re bought a 9 percent stake in the business in a deal which implied a valuation for all of B3i's equity of EUR40mn ($44.4mn).

The executive pointed to "first-order benefits" around cost savings from reduced administrative expenses and improved operational efficiency.

There are also longer-term "second-order benefits" in the form of new products and capital efficiencies.

"There are parts of an insurer's capital that they need to hold because they don't have granular enough information to describe their risk. If you have better data, that enables you to make different decisions about what you retain and what you insure out so it gives you the ability to optimise your capital structure."

He argued that this could be very relevant for the ILS market.

When it comes to the downsides of blockchain, data privacy and security still remain high on the agenda, but other regulatory hurdles such as antitrust considerations will become more of an issue, Carolin predicted.

"Blockchain and distributed ledger technology lend themselves to the creation of networks, and networks have their own dynamic. They become very big and reach critical mass and can turn in to the Googles and Facebooks of the world and that brings them in to the sights of regulators from an antitrust perspective so governance for any blockchain business network is really key.

"We are a business network where we create standards and make choices that affect multiple parties we need to ensure we make those choices that are for the benefit of the whole and that we are not excluding any other parties or smaller players. Our mantra of 'by the market for the market' is not just a nice to have, it will become an imperative that we don't abuse our position as a network operator."


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To buy or not to buy: the flood reinsurance debate

The administrator of the NFIP tells *The Insurance Insider* that it took almost 50 years to get the programme to the point of buying the limited coverage it has today

The National Flood Insurance Program (NFIP) has the potential to be one of the biggest cedants in the US. The only problem? It doesn't buy much reinsurance.

But that could be set to change.

"Our hope is, in the future, that we're able to transfer more of the NFIP risk to the private sector," the programme's administrator, David Maurstad, tells *The Insurance Insider*.

However, he cautions that getting the go-ahead to buy more cover is a complex process that involves seeking permission from lawmakers in Washington, where Maurstad is based.

"The hope is that down the road, we'll be able to be in a position in working with Congress so that we can increase the amount of risk that we're transferring to the private sector."

He says the target is to put the programme on a footing to handle a 1-in-20-year event, while, in the meantime, the NFIP plans to double the number of homes it insures against flood damage.

"The reason why we want to double the number of properties is so we have less disaster suffering and more insured survivors post-flood events," Maurstad says.

The NFIP was established in 1968 to reduce the cost of disaster relief to the taxpayer. It sells government-backed insurance policies to cover households for up to $350,000 of flood risk, which is typically excluded from US homeowners' policies.

The programme itself covered 5.1 million homes at last count, generating premiums of $3.31bn.

To put that into context, America's largest insurer, State Farm, booked premiums of $21.6bn in its homeowners' division last year.

But since its launch, the programme has racked up a debt of more than $20bn, despite Congress cancelling a $16bn tab it had with the US federal government in 2017.

"[Congress] obviously, acknowledged that the programme can operate more effectively if it doesn't carry the debt and the consequence interest cost associated with that debt," Maurstad says.

A challenging vision

The reason for the deficit is the programme's somewhat conflicting brief: to provide affordable flood cover to some of the most exposed properties in the US.

That has left it charging premiums that are far from actuarially sound, plunging the programme further into debt each time another hurricane makes landfall in the US.

But, Maurstad says: "We don't really underwrite to the degree that the private sector underwrites."

And that's because the NFIP, which sits under the Federal Emergency Management Agency, is required to cover anyone with a home in one of the more than 20,000 communities where the scheme operates. Naturally, with rate hikes capped, that again affects the quality of underwriting.

"Concentration of risk is one of the challenges that a programme like this has," Maurstad says.

However, he stresses that the NFIP should not be held to the same standard as a private market carrier.

"We've set a bold vision to close the insurance gap across the nation," he explains.

"That goes to why it's so important that we do what we can so that the private sector – admitted companies – can start to write primary residential flood insurance across the country.

"That's why we want to encourage that because

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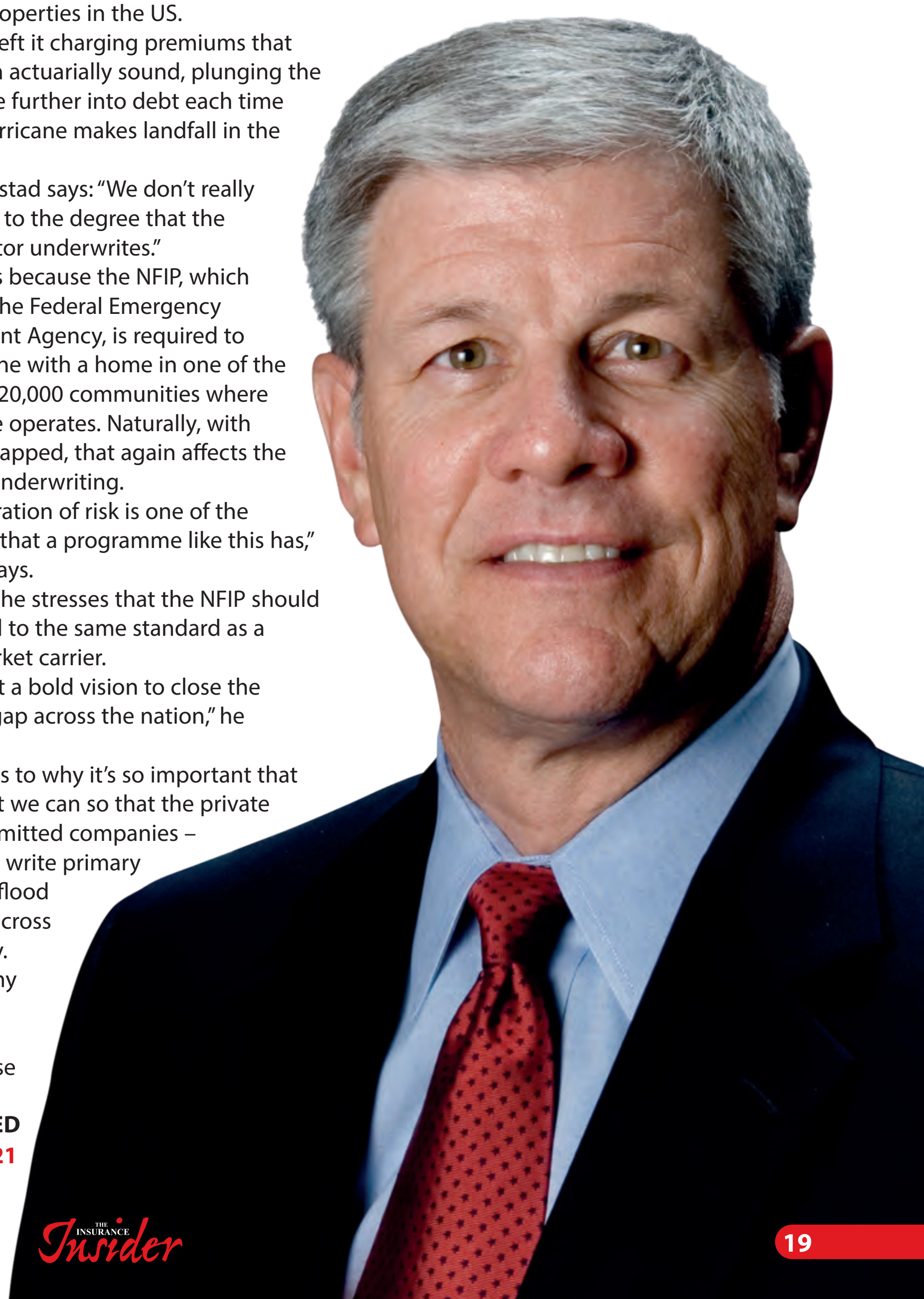
"The hope is that down the road, we'll be able to be in a position in working with Congress so that we can increase the amount of risk that we're transferring to the private sector"



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that helps close the insurance gap and improves our concentration of risk, for sure," he adds.

As a result, Maurstad insists, the debt itself is not a sign that the programme is not working.

"We're meeting our mission," he says.

"We're providing the 22,400 communities – and the property owners and citizens in those communities – with flood cover, as long as those communities enforce floodplain management requirements and regulations."

Buying protection

Part of the NFIP's mandate requires the body to support resilience measures in the areas in which it works by properly mapping the region and taking steps to reduce flood risks.

But in recent years, Maurstad has tried to make the programme more financially resilient, as well as improving the risk profile in the areas it insures.

To do that, he started to buy reinsurance for the first time in the programme's history.

That's not to say the scheme's previous administrators hadn't looked at buying reinsurance. Maurstad says it was first considered in the 1990s, although, then, they decided against it.

It was put back on the table in 2010 and the programme was authorised to buy coverage when the NFIP was renewed as part of the Biggert-Waters Flood Insurance Reform Act in 2012, and then the Flood Insurance Affordability Act of 2014, which delayed rate hikes under the earlier legislation.

Over the following two years, Maurstad and his team assessed the feasibility and benefits of putting a policy in place to cover the NFIP.

"After that study, we began to plan for the actual placement of the reinsurance because, clearly, if the study wouldn't have shown the benefit, we wouldn't have done it," Maurstad says.

"Since we didn't have a programme in place, we had to put the structure in place so that we could do it in an effective way that was transparent, and that had the necessary governance so that people would understand that the cost of the reinsurance was worth the benefit associated with that."

The reinsurance industry was not unfamiliar with the NFIP. Private market insurers have been administering the programme almost since its genesis, and through those partners, those charged with looking after the NFIP have been having conversations with reinsurers, on and off, for the best part of 50 years.

But after 2010, those discussions gained momentum.

"The reinsurance industry indicated to us – and indicated to decision makers [and] policy makers – that they believed there was an appetite for reinsurance companies to underwrite some of the flood risk of the programme," Maurstad explains.

> "If we continue on this path to try to build out a sound financial framework for the programme, I'm confident that the reinsurance industry – both traditional and in the ILS marketplace – will be there to continue to partner with us"

"We think that's very beneficial to strengthen those relationships," he says.

"[That's] because part of our wanting to double the number of properties relies on the private sector writing primary insurance protection along with the NFIP to provide consumers with options on how best they can insure their property for flood," he adds.

"For the reinsurance industry, what they've learned in underwriting our programme has been beneficial to them, as they work with their private sector insurance companies – their customers – in encouraging them to take a new look at where and when writing primary flood insurance coverage might make sense for them."

Easing the burden

Despite having flirted with the reinsurance market for almost three decades, the NFIP is still finding its feet as a buyer.

The programme's first meaningful placement incepted in 2017 after it agreed to buy $1.042bn of cover from 25 traditional carriers.

Guy Carpenter structured the programme, which covered 26 percent of all losses between $4bn and $8bn. It paid $150mn for the policy. But the NFIP exhausted the cover after Hurricane Harvey, which threw the programme further into debt after it received claims valued at $8.6bn. Nevertheless, reinsurance eased the burden on the taxpayer.

Despite hitting its policy limits in the first year of buying cover, Maurstad says he was well received when he returned to the market to renew the programme for 2018.

"If we continue on this path to try to build out a sound financial framework for the programme, I'm confident that the reinsurance industry – both traditional and in the ILS marketplace – will be there to continue to partner with us," he says.

In 2018, the NFIP upped its coverage, buying $1.46bn of limit from 28 carriers. The programme covered the NFIP for 18.6 percent of losses between $4bn and $6bn, as well as 54.3 percent of losses between $6bn and $8bn. It paid $235mn for the cover.

Then, in August last year, it added a $500mn three-year catastrophe bond that covered 3.5 percent of losses between $5bn and $10bn before absorbing 13 percent of losses between $7.5bn and $10bn. It paid $62mn for the cover, which took its aggregate protection to $1.96bn.

This year, the NFIP shrank its traditional cover, buying $1.32bn from 28 carriers. As would be expected, the cover was cheaper but it was also more complicated.

The programme covered 14 percent of losses between $4bn and $6bn, 25.6 percent of losses between $6bn and $8bn, and 26.6 percent of losses between $8bn and $10bn. The programme paid $186mn for the cover.

Offsetting the reduction in traditional capacity, the NFIP then bought a $300mn cat bond in April. The bond covers 2.5 percent of losses between $6bn and $8bn, before absorbing 12.5 percent of losses between $8bn and $10bn.

Going forward, Maurstad wouldn't say how the NFIP will divide its reinsurance spend between traditional cover and ILS capacity.

"We don't have a specific target for that," he says.

"We'll ... approach it the same way that the private sector approaches it on where the pricing and where the capacity is, and what's going to benefit the policyholder and taxpayer to the greatest extent."

As would probably be expected, Maurstad is ruthlessly focused on ensuring that the NFIP is structured to do as much good for its policyholders at the smallest cost to taxpayers.

After years of bailing out the ship, reinsurance may be the life raft he's been hoping for.

Eastern Promise

IGI Labuan CEO Nick Garrity sees niche expertise and the nimbleness that accompanies a relatively flat management structure as a recipe for successful Asian expansion

What are the most promising geographies and lines for IGI in Asia Pacific and how are you setting about capturing them?
The opportunity in the region is huge but one of the biggest risks for a wholesale carrier like IGI is taking an unfocused scatter-gun approach to expansion, because the region is so diverse across a number of dimensions.

In the first half of the year we worked on building distribution for first-party lines – property, downstream energy, engineering and construction. In the second half we want to add to this by exploring the opportunity for our third-party and other specialist lines in the region. Our financial institutions team has already established excellent relationships in the region. We want to help them build out their distribution and evaluate the opportunities for our value propositions for professional indemnity and legal expenses.

We also want to ensure that we make the most of the opportunity in our home market here in Malaysia. The Singapore wholesale market is the most efficient source of business coming from the region and we are spending a lot of time there working with reinsurance brokers and cedants, making sure they know who we are and what we can do to support them.

You have previously worked for some of the larger international brokers and carriers. What are the advantages of working for a smaller carrier?
The speed of decision-making and access to decision makers. IGI senior management have a very good grip on the business and that makes it very efficient – for colleagues and for clients.

What are the challenges and opportunities for (re)insurers from outside the region in competing against local stalwarts?
Their scale is the obvious challenge and the biggest risk is trying to take them head on at their own game. Where organisations like IGI can gain traction is to look at niches that aren't being served by existing players. That can lead to good business opportunities and also solve client problems that weren't previously being addressed.

IGI recently launched intellectual property (IP) cover – what plans for that line do you have in Asia Pacific?
The IP cover is a subset of our legal expenses offering and that overall area of business is one where we are very keen to expand in regions where that cover is not well established. As Asia shifts from being the workshop of the world to a major source of IP, those IP owners will need to protect their assets. We are looking to assess the opportunities and find distribution partners for IP and the wider legal expenses cover in the second half of the year. We'll be talking to major broker partners and cedants in areas with the most potential.

Five years from now how do you envisage the scale of your Asia Pacific operations?
IGI is fundamentally a bottom line driven organisation. While we are looking for growth, we will not do so at the expense of profitability. The region currently accounts for 15 percent of IGI's gross written premium, we hope to double that.

What impact do you predict climate change will have on (re)insurance opportunities in the region?
This is one of the most critical and under-addressed issues in this region.

For example, in North Asia there is demonstrably an increase in the frequency and severity of tropical typhoons and that is predicted to get worse. Potential shortages in capacity for these events are already visible and there are also capacity issues in offshore wind power. Cat cover is still being provided very cheaply and if there is going to be sustainable capacity to support economic growth, whether in offshore wind or more generally, the pricing levels are going to have to improve. If there are a number of big hits there just isn't the premium pool to support claims and there will be a horrible contraction in capacity.

At IGI we have a market-leading underwriter capable of leading all forms of renewable energy. We as a company are investing in and following the global shift from hydrocarbons to renewable energy assets.

How can (re)insurers help close the Asia Pacific protection gap?
When you are looking at the developing economies in the region with insurance markets that haven't yet matured, international reinsurance partners – be it carriers or brokers – can make the development of risk-financing options more efficient by providing solutions that have worked in other markets. This is something the reinsurance market is already doing incredibly well in the region.

What plans do you have to build your team in the region?
Over the next two to three years we're looking to replicate the operations we have in Casablanca and Dubai, where we have teams of 10 to 11, including seven or eight underwriters. We are in the process of hiring our first underwriter, a relatively senior hire, who can work with me to build the portfolio of those major first-party lines.

We will gradually build the team out across the different lines of business, working in close collaboration with underwriters in London and Dubai and head office in Amman. We'll be looking for experienced underwriters who are also entrepreneurial people – Lloyd's types, if you like.

You moved into (re)insurance from broking. What was the biggest surprise?
Being a good insurance or reinsurance broker is a very difficult thing, but the business model is relatively straightforward.

What really surprised me was the relative complexity of the behind the scenes support and infrastructure that goes into making a modern (re)insurer. (Re)insurance is much less binary than broking. There are always different ways of partnering with people and many more choices about how to provide a solution to a particular client or a particular market.

Nick Garrity
CEO, IGI Labuan

Cat bond issuance plummets in H1 2019

Cat bond issuance dropped dramatically in the first half of the 2019 after two years of losses resulted in a slight market hardening. First-half issuance dropped by 57 percent year on year to $3.5bn.

The 2017 and 2018 losses meant investors were being more selective with their capital, resulting in less upsizing and some instances where tranches did not place at all (a rarity for the cat bond market).

As well as the losses themselves, the market has battled with redemptions, though. sources suggested that the bulk of upcoming investor redemptions had worked through the market.

The hardening conditions meant that as well as deals struggling to place, there was a general lack of cat bonds being issued, with sources blaming pricing disparities between the cat bond market and the traditional market as the cause.

The conditions did not stop some deals upsizing in the latter half of H1, however.

Swiss Re returned to the cat bond market after a six-year absence and gained significant traction; its Matterhorn Re cat bond delivered the most impressive expansion of the quarter, ballooning by 150 percent to $250mn.

The bond covered the northeastern US and would have benefited from this regional focus compared with deals including Florida.

Axis Capital's Northshore Re cat bond was the second retro cat bond to upsize in June, expanding by 65 percent to settle at $165mn.

Both bonds had an industry-loss warranty (ILW) trigger, meaning they attach on market loss as opposed to individual loss to the cedant. ILW triggers are sometimes seen by cat bond investors as cleaner structures than indemnity equivalents.

Q2 upsizing falls

Overall, cat bond volumes for the second quarter fell 60 percent to $1.8bn due to the low number of issuances and fewer deals being upsized.

The number of tranches issued this year was just over half the number transacted in Q2 2018, at 15 compared with 29.

The rate of upsizing decreased from 33 percent to 10 percent as several Florida deals either failed to place or downsized.

UPC closed its new Armor Re II cat bond at $100mn, half its initial target, after withdrawing a riskier layer of the deal.

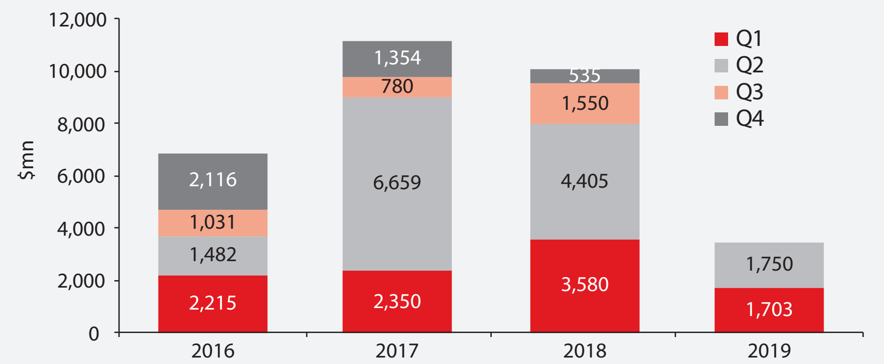
Meanwhile, Florida-based American Integrity Insurance and Safepoint also cut back their deals.

Pricing remains up

Cat bond pricing continued to rise slightly above initial guidance, increasing by an average of 0.1 percent from median targets over the quarter.

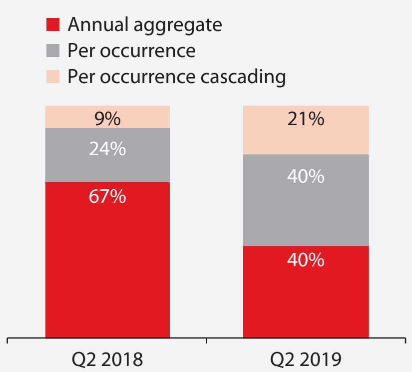
CONTINUED ON PAGE 26

2019 volumes fall back after bumper years



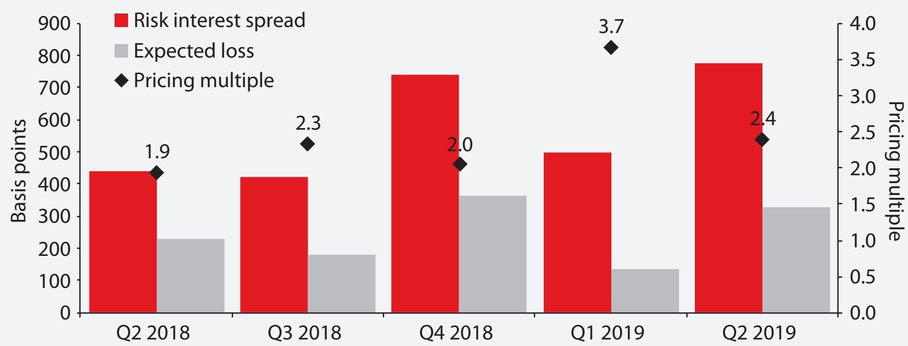
Source: *Trading Risk*

Aggregate deals fall



Source: *Trading Risk*

Multiples remain higher year on year



Source: *Trading Risk*

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This was significantly harder than Q2 2018, when spreads settled a weighted average of 7.3 percent below targets.

However, the pace slowed compared with preceding quarters – pricing settled 3.3 percent ahead of targets in Q1 2019 and 2.8 percent up in Q4 2018.

The overall level, however, reflected a mixed bag of results, with some Florida deals pricing at the top of or above targets and the retro deals concluded toward the end of the quarter coming in more competitively.

In contrast, Floridian cedants were forced to pay above their initial pricing ranges.

Floridian insurer Safepoint, which claimed on its Manatee Re 2016-1 cat bond following Hurricane Irma, ended up paying rates in line with those it paid in 2016.

Move to high risk

The proportion of risky deals in the market was significantly up year on year, with 56 percent of Q2 volumes having an expected loss of 4 percent or above. Just 11 percent of deals fell into this category last year.

This was mostly driven up by Scor's Atlas Capital UK 2019 cat bond, which grew over 43 percent during marketing and had an expected loss of 6 percent.

With this increased risk-taking, the average spread on Q2 2019 deals moved to 7.8 percent, well ahead of the 4.4 percent average seen a year earlier. The uplift reflected improved margins as well as higher risks, with market yields thought to be the highest since 2013/14.

The multiple of Q2 average insurance spreads to expected losses rose to 2.4x from 1.9x a year earlier.

This is down from the 3.7x multiple on Q1 2019 deals, but these were skewed by having a lower risk profile, and the multiple remains comfortably higher than the 2.0x achieved on Q4 2018 deals.

Shift away from indemnity aggregate triggers

There was a move away from cat bonds with aggregate triggers, with only 40 percent of deals having this trigger in Q2 2019 compared with 67 percent last year.

Aggregate deals have been the driver of many cat bond losses in the past two years.

There was also a growth in industry-loss trigger deals, following a shortage of capacity in the retro market.

The issuances from Swiss Re and Axis helped push the percentage of industry-loss deals up to 50 percent in the second quarter, compared with 31 percent for the same period last year.

Cat bond losses 2017-2018

Bond	Issuer	Deal size ($mn)	Projected loss	Trigger events
Full cat bond losses				
IBRD MultiCat Mexico class A	World Bank for Fonden	150		Mexican earthquake
Caelus Re 2017-1 class C	Nationwide Mutual	75		HIM, Californian wildfires, Riley
Caelus Re 2017-1 class D	Nationwide Mutual	75		HIM, Californian wildfires, Riley
Citrus Re 2016-1 E-50	Heritage Insurance	100		Irma
Citrus 2017-2	Heritage Insurance	35		Irma
Citrus Re 2015-1 class C	Heritage Insurance	30		Irma
Manatee Re 2016-1 class C	Safepoint	20		Irma
Res Re 2017-1 class 10	USAA	50		HIM, Californian wildfires, Riley
Res Re 2014-1 class 10	USAA	80		HIM, Californian wildfires, Riley
Res Re 2015-1 10*	USAA	50		
Res Re 2016-1 class 10*	USAA	65		
Cal Phoenix Re cat bond	PG&E	200		Camp Fire
Akibare Re 2016-1	MS&AD	200		Typhoon Jebi
Residential Re 2018-1 Class 11	USAA	50		Various storms, Hurricane Michael
Total		**1,180**		
Partial/pending losses				
Caelus Re V 2017-1 B	Nationwide Mutual	150	87	HIM, Californian wildfires, Riley
Citrus Re 2016-1 D-50	Heritage Insurance	150	105	Irma
Citrus Re 2015-1 class B	Heritage Insurance	98	74	Irma
Citrus Re 2017-1 class A	Heritage Insurance	125	113	Irma
Loma Re 2013-1 class C	Argo	65	29	HIM
Atlas IX 2015-1	Scor	150	83	HIM
Res Re 2013-2 class 1	USAA	20*	5	Wildfire (per-event) ($20mn extended)
Casablanca C	Avatar	7	6	HIM, Californian wildfires, Riley
Blue Halo 2016-1 B	Allianz/Nephila	55	47	HIM, Californian wildfires, Riley
Res Re 2015-1 class 11	USAA	100	90	2018 loss events
Res Re 2016-1 class 11	USAA	75	28	2018 loss events
Res Re 2017-1 class 11	USAA	225	101	2018 loss events
Total			**767**	

*Extended volume still on risk not original
Source: *Trading Risk*

Full 2017-2018 cat bond losses reach $1.2bn

Fourteen cat bonds with a combined value of $1.18bn are now expected to be a full loss as a result of the 2017 and 2018 loss years, *Trading Risk* understands.

As well as the full losses, a further 14 deals are expected to be partially eroded as a result of 2017 and 2018 events, with pricing sheets putting these combined losses at around $767mn – taking total possible claims to $1.95bn.

Projected total payouts have risen from $910mn as of February this year, when 11 cat bonds were expected to be a full loss. The increase is primarily the result of a $200mn anticipated payout of MS&AD's Akibare Re 2016-1 cat bond, as well as worsening losses from USAA, leading to two more Residential Re bonds being exhausted.

While four standalone bonds were triggered, most of the deals that suffered full losses were part of multi-series issuances from Nationwide Mutual, Heritage Insurance and USAA.

The Californian wildfires, via Pacific Gas & Electric's liability bond, also contributed $200mn to the loss.


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CEO pay in sector lacks alignment with short-term performance

The total compensation of CEOs in the P&C (re)insurance industry has moved independently of key short-term performance metrics in the last five years, analysis from *The Insurance Insider* shows.

Using the same panel of major global companies as in *The Insurance Insider*'s annual study of executive compensation, we found CEO compensation highly correlated with company size but yardsticks of annual performance including total shareholder return (TSR) and return on average equity (ROE) were uncorrelated.

The finding comes as the sector goes through an uptick in protest votes from shareholders in advisory remuneration votes. Argo, AIG, RenaissanceRe and Axis have all seen meaningful dissenting votes on recent executive pay.

Nevertheless, it remains difficult to definitively assert that remuneration in the sector is not effectively aligned with shareholder interests, as any analysis of this kind involves the choice of a small number of performance metrics to apply to all companies. The formulae used to determine executive compensation in the sector are highly varied and include total value creation, relative combined ratio performance and top-line growth, with different companies also applying different allocations to different metrics.

Regardless, the result of the regression analysis will make difficult reading for carrier executives at a time when shareholder activism has picked up, excessive sector costs are in focus and proxy firms have indicated a willingness to take a tougher line.

In contrast, company size – as measured by market capitalisation – has proved a robust predictor of total CEO compensation across different settings in our regression analysis, affirming the logical association between reward level and size of the firm being run.

Five-year pay league KPIs

		Average 2014-2018			
Company	**CEO in 2018**	**Total comp ($)**	**Market cap ($mn)**	**TSR**	**ROE**
AFG*	Carl H. Lindner III and S. Craig Lindner	8,982,751	7,391	14.6%	9.6%
AIG	Brian Duperreault	13,748,402	60,755	-1.7%	0.1%
Allstate	Thomas J. Wilson	16,154,634	28,939	13.4%	11.3%
AmTrust	Barry D. Zyskind	10,738,637	4,108	-	11.0%
Arch	Marc Grandisson	12,374,116	9,864	6.8%	8.9%
Argo	Mark Watson	5,494,751	1,837	17.5%	7.2%
Aspen	Christopher O'Kane	5,407,758	2,774	-	2.5%
Axis	Albert A. Benchimol	7,223,672	4,924	5.3%	5.5%
Beazley	D Andrew Horton	4,567,511	2,964	-	12.9%
CNA	Dino Robusto	10,966,734	11,510	9.7%	6.2%
Chubb	Evan G. Greenberg	20,790,538	52,869	7.5%	8.8%
Everest Re	Dominic J. Addesso	7,875,448	8,433	9.5%	9.9%
Hannover Re	Ulrich Wallin	2,083,491	12,181	20.3%	13.1%
Hiscox	BE Masojada	4,249,351	5,419	24.0%	5.5%
Lancashire	Alex Maloney	2,756,913	1,714	5.6%	7.8%
Maiden	Lawrence F. Metz	3,060,613	844	-13.8%	-9.2%
Markel *	Richard R. Whitt, III and Thomas S. Gayner	2,417,797	12,948	13.3%	4.2%
Munich Re	Joachim Wenning	5,565,616	28,274	-	7.8%
Navigators	Stan Galanski	4,001,169	1,501	19.4%	6.1%
RenaissanceRe	Kevin J. O'Donnell	8,266,228	4,993	8.2%	8.2%
RLI Corp	Jonathan E. Michael	3,962,212	2,668	12.9%	13.3%
Scor	Denis Kessler	7,517,858	6,147	14.6%	7.8%
Swiss Re	Christian Mumenthaler	6,358,907	30,065	10.0%	7.3%
The Hanover	John C. Roche	5,095,598	4,004	17.0%	9.3%
The Hartford	Christopher Swift	10,498,645	17,805	7.2%	2.7%
Travelers	Alan D. Schnitzer	17,622,526	34,022	8.7%	12.2%
Validus	-	4,690,029	3,849	-	7.0%
WR Berkley	W. Robert Berkley, Jr	13,261,779	7,806	14.1%	12.0%
XL Group	-	11,680,777	9,816	-	3.2%
Average		**8,186,705**	**13,118**	**10.6%**	**7.3%**

Source: S&P Global, *The Insurance Insider*
* Only half of the remuneration has been considered to account for its dual-CEO nature

Performance vs pay

The Insurance Insider chose to look at the relationship between CEO compensation and TSR, defined as the combined effect of share price appreciation and dividends paid, over a five-year period.

It also examined whether a correlation existed between CEO remuneration and ROE over the same period: 2014-18.

In both cases, the coefficient of determination in the regression analysis was below 10 percent – indicating that there was no correlation between performance on these metrics and pay.

The coefficient of determination – also known as R-squared – is a statistical measure of how close the data are to the fitted regression line and provides an estimate of the strength of the relationship between the chosen model and the response variable, in this case remuneration.

The coefficient of determination always stands between 0 percent and 100 percent – with a zero value meaning the model explains none of the variability of the response data around its mean and 100 percent indicating that the linear model predicts all response data perfectly, with all actual values sitting on the fitted line.

These results were found regardless of the configuration of the regression analysis (using five-year averages or individual years as a panel) and even when the result was controlled to take account of outliers. Interestingly, the fit between TSR (or ROE) and CEO remuneration remained weak and non-statistically significant across the group, even when the focus was placed on variable pay only – as opposed to total compensation.

Variable pay is defined as the sum of bonus, stock and option awards and non-equity incentive plan compensation – the main remuneration components that are directly subject to performance metrics.

Size matters

However, a linear regression analysis establishes a robust positive connection between market capitalisation and total CEO compensation.

This statistical significance was maintained across different settings, including the use of a panel data approach (as opposed to five-year averages), alternative functional forms and different treatment of outliers.

The analysis also showed the correlation increases significantly – with the coefficient of determination passing 80 percent – when non Securities and Exchange Commission-reporting entities are excluded from the analysis, which is a validation of material differences in terms of CEO compensation standards between Bermudians and US companies on one side, and London and global reinsurers on the other.

Methodology

The analysis focused solely on the carriers of our pay league panel, which included both SEC- reporting entities and European (re)insurers.

The study included all data points available for AmTrust and Aspen – both delisted on the last year of our 2014-2018 coverage period – as well as Validus Holdings and XL Group – which were acquired by AIG and Axa in the same year.

On the other hand, Berkshire Hathaway was treated as an outlier and removed from the analysis altogether as its executive compensation practices differ significantly from market standards.

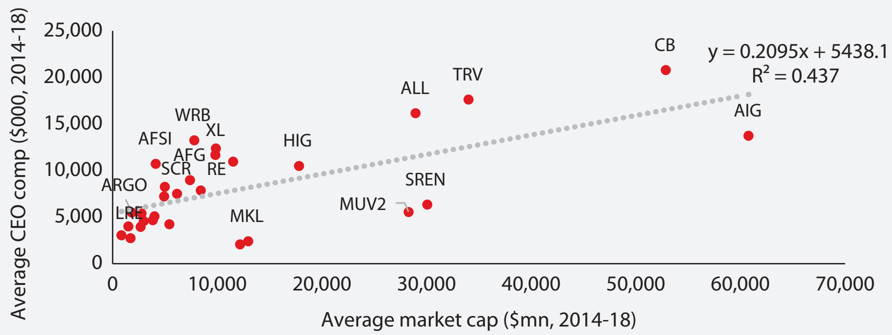
Other adjustments to the panel included a special treatment of data in years when there was an overlap between an incoming CEO and one departing, as in the case of Lancashire in 2014 and The Hanover in 2016.

Similarly, total CEO pay during the years of the handover between Thomas Motamed and Dino Robusto at CNA in 2016 and between Peter Hancock and Brian Duperreault in 2017 was treated as an outlier and disregarded.

Lastly, the analysis only recognised half of the total annual expenditure for the top job at American Financial Group (AFG) and Markel, as both companies have an unusual configuration of co-CEOs at the helm, with almost identical remuneration.

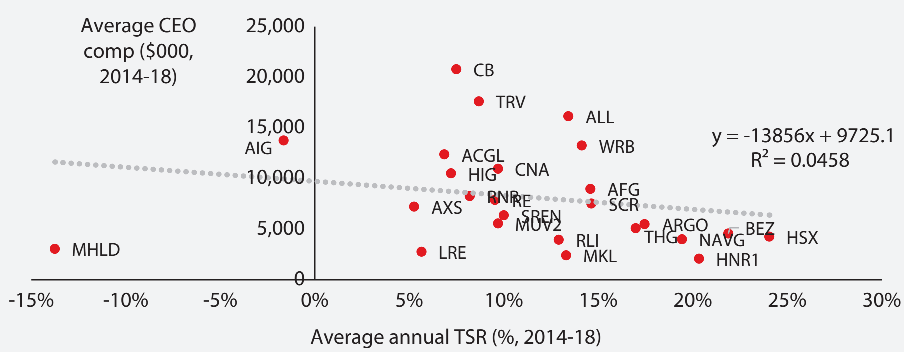
This last adjustment is particularly favourable for AFG in terms of its standing in the CEO pay chart as a whole, as otherwise the total bill for the top job at the Cincinnati-based company over the five-year period comes second only to Chubb in our panel of 29 companies. This is despite AFG's market capitalisation being almost half of the average for the whole panel.

CEO comp vs market cap



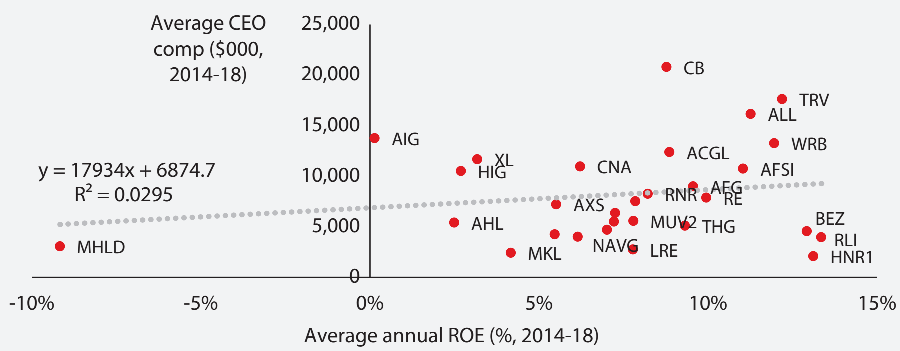
Source: S&P Global, *The Insurance Insider*

CEO comp vs TSR



Source: S&P Global, *The Insurance Insider*

CEO comp vs ROE



Source: S&P Global, *The Insurance Insider*

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18 September 2019 | 8:30 - 11:30
Clyde & Co, Beaufort House, 15 St Botolph Street, EC3A 7NJ
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(Webinar) *The Insurance Insider* | On Air: Keeping ahead of the hackers
19 September 2019 | 15:00 - 16:00
Watch live or on demand
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***The Insurance Insider* Cyber Rankings Awards**
20 September 2019 | 12:30 - 17:00
Banking Hall, 14 Cornhill, London, EC3V 3ND
#InsiderCyberAwards

(Webinar) *The Insurance Insider* | On Air: Foundations for our future
26 September 2019 | 11:00 - 12:00
Watch live or on demand
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***Trading Risk* New York**
3 October 2019 | 08:15 - 15:30
(followed by networking drinks)
Convene, 75 Rockefeller Plaza, New York, 10019
#TradingRiskNY

Guy Carpenter's Baden-Baden Reinsurance Symposium
20 October 2019 | 16:30 - 18:30
(followed by a cocktail reception)
Kongresshaus Baden-Baden, Augustaplatz 10, 76530 Baden-Baden, Germany
#BBRE19

The London Market Conference
7 November 2019 | 08:15 - 16:00
(followed by networking drinks)
etc venues 155 Bishopsgate, Liverpool Street, London, EC2M 3YD
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