Insight and Intelligence on the US and International (Re)insurance Markets

22 OCTOBER 2019
DAY 3
TUESDAY

THE INSURANCE Insider

APCIA

# Casualty treaty: Primary rates vs social inflation

**US casualty reinsurers look set to ride the coat-tails of insurers in a still-accelerating rate environment, but the increased momentum around pricing comes amid mounting fears around the deteriorating claims environment.**

Sources expect ceding commissions to improve by 1 or 2 points in many cases at 1 January, excluding workers' compensation, although recent renewals have been characterized by a high degree of differentiation by client, making generalizations challenging.

Some improvement is also expected within excess-of-loss covers, where rates in areas like general casualty and professional lines have been flat to up single digits, with sources predicting at least as much rate as 12 months ago.

However, with primary rates surging – including 10-20 percent rises on excess casualty and 20-30 percent increases on lower layer directors' and officers' (D&O) – the real change in economics will be driven by primary underwriting actions.

The US casualty insurance market is in a period of flux as re-underwriting exercises from a clutch of major players take place alongside a sharp deterioration in a range of recent accident years.

AIG has passed through the biggest re-underwriting exercise – and that will continue into 2020 – with others on the same path including Swiss Re Corporate Solutions.

Loss costs have been soaring as jury awards spike, medical costs rise and an increasing number of federal securities class actions are filed.

Among the classes of business that have seen the greatest increases in claims are general liability, commercial auto, medical malpractice and D&O.

Mounting fears over the impact of the opioid crisis and sexual molestation could have on the liability market have also caused (re)insurers to intensify their push for pricing improvements.

## Commission levels

At the start of 2019, commissions on some casualty quota shares dropped by 1 or 2 points, with isolated instances of loss-impacted treaties that moved significantly more. Sources said in some rare instances, ceding commissions dropped below the 30 percent mark.

Reinsurers will again push for a reduction in ceding commissions, although there is an acceptance that any nudging down is unlikely to be to the level that many underwriters feel is necessary.

Speaking to this publication, numerous underwriting executives expressed their frustration that ceding commissions are even at their current level, insisting that further reductions that would bring them down to the mid-20s would be more appropriate given the profitability of the underlying books.

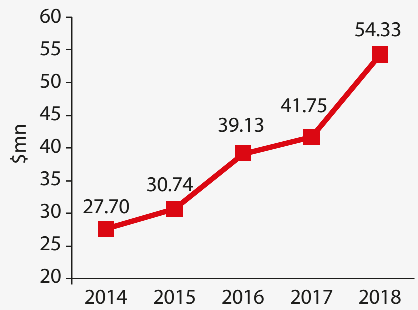
However, with the economics improving substantially for proportional reinsurers already owing to surging original rates,

CONTINUED ON PAGE 04

## Key points

- Improved economics for reinsurers will be driven by primary rates
- Some reduction in ceding commissions and rate rises on XoL still likely
- Rising losses fueled by increasing jury awards, medical costs and class actions
- General liability, commercial auto, medmal and D&O are major pain points
- Fears mounting that reserves for a string of 2010s accident years are inadequate
- Concern that social inflation will cause losses to continue on upwards trajectory

## Median average – top 50 US verdicts




Source: Shaub, Ahmuty, Citrin & Spratt

Lumen Re

**Rated A/Excellent by A.M. Best**

Lumen Re Ltd (Bermuda) is sponsored by LGT ILS Partners
info@lumenre.bm

**LGT ILS Partners**
lgt.ils@lgt.com

# Sticking it to the man – and casualty insurers

**Politics is dominating much of the news agenda on both sides of the Atlantic. In the UK, it is the continued issues arising out of Brexit, while in the US, we are now some 13 months from a presidential election, and the debates are heating up.**

For the (re)insurance industry, an important side note to the to-ing and fro-ing of politics in the US is what various market executives have described to me as the growing influence of socialism on the market.

Now this has nothing to do with healthcare. Nor is it to do with nationalizing various resources. Instead, it is the concern that there is now a rising sentiment of "sticking it to the man".

The man – in the case of this industry – is the carrier that has indemnified an insured for losses arising out of various mishaps, but is refusing to paying out. As has been highlighted recently, the awards relating to these claims are rising steeply.

Some of the awards involving companies such as Johnson & Johnson are astonishing. No one would have thought the recent $8bn award to an individual who had grown breast tissue after taking the medication Risperdal would have even been possible several years ago – carriers would have just dismissed it.

> "There is now a rising sentiment of 'sticking it to the man' – which in the case of this industry is the carrier that has indemnified an insured for losses arising out of various mishaps, but is refusing to paying out"

But here we are, in 2019, and it's an issue. It is fair to say that something has gone awry.

And this is just the latest in a series of potentially industry-rocking events.

The opioid crisis is arguably the most headline-grabbing of all the casualty exposures that are currently in the limelight. With millions of individuals in the US having become hooked on opioid painkillers through no fault of their own, there is understandably some frustration at the lack of remorse being shown by the pharmaceutical industry for prescribing these highly addictive painkillers.

That breeds resentment, which could in turn cause a groundswell that will ultimately push corporates to the wall.

Insurers and reinsurers are deeply concerned about the future impact of the opioid epidemic on the industry.

It is not only opioids that are on the agenda, though. Environmental liabilities and the exposures that have arisen through climate change, the #MeToo movement and poor workplace conditions are just three examples of areas that are attracting increasing public sympathy.

The question now is just how bad this will get, and based on past experience it will take a long time to get a good handle on that.

**Christopher Munro,**
**Associate Editor,**
***The Insurance Insider***
christopher.munro@insuranceinsider.com

# Swiss Re global partnerships North America head Kaplan leaves reinsurer

**Alex Kaplan, who heads up North America for Swiss Re's global partnerships team, has resigned from the company, *The Insurance Insider* can reveal.**

Sources said that Kaplan's next destination is not known, although it was suggested that he may move to a broking firm.

Kaplan was based in Washington DC, and is understood to be leaving the firm on 1 November.

He worked as part of a team that aims to drive increased use of risk transfer by governments and non-governmental organizations.

Sources said that Kaplan had played an important role in establishing Swiss Re's relationship with the National Flood Insurance Program.

Swiss Re's global partnerships business is headed by chairman Martyn Parker.

The products sold are geared towards addressing major challenges, including natural catastrophes, climate change and food security, as well as infrastructure, healthcare and longevity.

Kaplan has held a succession of roles at Swiss Re in its global partnerships unit. Prior to joining the company in 2008, he worked in the Department of the Treasury and at the Organization for International Investment.

Swiss Re has had a sustained focus on closing the insurance gap and forming partnerships with governments, and has been one of the industry's most vocal cheerleaders.

Examples of initiatives include work with the World Bank on cat bonds to cover pandemic outbreaks, and a $1.36bn bond to cover earthquake risk in Chile, Colombia, Peru and Mexico.

Swiss Re will report its third-quarter financial results on 30 October. In a note earlier this month, UBS analyst Jonny Urwin warned that European reinsurers were likely to report weak numbers as a result of a heavy quarter for major loss events.

Urwin said that Swiss Re had an estimated larger-than-typical market share in both the Bahamas and Japan, and would consequently take losses from Hurricane Dorian and Typhoon Faxai.

The firm has a 4-6 percent market share in the Bahamas and a circa 10 percent market share in Japan, he estimated.

**CONTINUED FROM PAGE 01**

sources expect it will be difficult to argue for a meaningful recalibration of cedes.

Another factor stymying the potential for a meaningful shift in rates is the amount of capital that continues to be at play within the global reinsurance market.

As figures from Willis Re's most recent Reinsurance Market Report show, total global reinsurance industry capital amounted to $559bn at the midway point of 2019 – an 8 percent increase from year-end 2018 and a new record level.

## Supply-demand dynamics

One of the topics of discussion at Monte Carlo was the presumption of additional casualty reinsurance demand, but to date this has not emerged, with no meaningful new deals being marketed.

As noted on Sunday, AIG is still expected to bring a number of new reinsurance deals to market in Q4 to secure cover for its $4bn financial and professional lines book.

Sources have speculated that other cedants may have held back due to the potential knock-on effects of AIG's presumed additional demand on supply for new deals.

Unlike in the primary space, there has been no wholesale drawback from a major lead casualty treaty market.

There have been some reductions in appetite to write casualty business from a small number of markets, one reinsurance executive said. Others, however, have offset this by committing more capacity to the sector.

That, as one source explained, is another reason why reinsurance pricing is expected to be more stable than primary pricing, paralleling the pricing disjuncture seen in the property market.

"Part of the problem is there's not been any withdrawals of capacity," the reinsurance source said.

Unlike the property market, the casualty sector makes only sparing use of retro, so there is no scope for pricing uplift from this quarter.

The low interest rate environment will, however, act as something of a spur to improved pricing as reinsurers focus on getting enough casualty rate and premium through the door to offset dwindling investment returns.

Although some way above the 12-month low, the 10-year Treasury rate has fallen from over 3 percent at the time of PCI last year to just 1.75 percent.

## Penalizing companies

The critical question right now for reinsurers – and for the casualty market as a whole – is to what extent the claims picture will continue to deteriorate.

Insurers including Travelers, AIG and Chubb have emphasized the impact of social inflation as an issue over a number of quarters, but the private commentary from sources is even more bearish than the public commentary from these firms.

"Juries are trying to get the most out of corporates as possible," one senior reinsurance executive stated.

Another source commented: "Juries want to penalize companies rather than indemnify the victims, and that falls on insurers."

A third source said that it is likely to take the industry a number of years of reserving pain to fully deal with the impact of soaring jury awards.

The increasingly prevalent role of litigation finance is also playing a part in the spike in casualty claims. More than ever before, potential plaintiffs have a wide variety of funding solutions to support them.

With private equity now increasingly making its presence felt in the world of litigation financing, the expectation is more claims will be filed, paving the way for further losses. But, as one executive noted, the (re)insurance industry has failed to take heed of this changing dynamic.

The median average of the top 50 US verdicts has doubled in the last five years, from $27.7mn in 2014 to more than $54.3mn last year, according to research undertaken for AIG by Shaub Ahmuty Citrin & Spratt (see chart page 1).

There have also been a growing number of mega awards against companies such as Monsanto and Johnson & Johnson, with the $11bn settlement struck with Pacific Gas & Electric following two years of devastating California wildfires another standout example. Other examples include MGM's $750mn settlement with victims of the mass shooting in Las Vegas in 2017, an agreement which looks set to total its AIG-led excess casualty tower.

The rise in jury awards is also evident in much less high-profile cases, with $500,000 awards becoming $2mn awards and $1mn awards becoming $5mn awards.

Fear is growing among insurers that the high-profile nature of some awards, as well as the publicity given to some injured parties, will spur copy-cat claims. Several executives cited the emergence of 24-hour rolling news coverage as another reason for the recent spike in the frequency and severity of claims.

At the same time, the emergence of social media has served to highlight the growing wealth gap, with one executive suggesting rising wealth inequality is fueling the drive to secure ever-higher awards against corporate America.

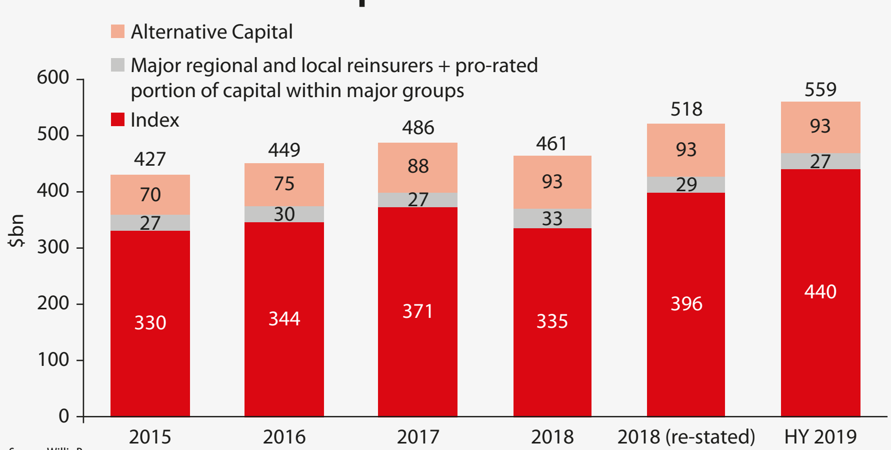
Amid this environment, insurers are dramatically cutting back the limits that they will put out in general casualty.

There are growing fears that these trends will continue and could intensify, necessitating reserve strengthening and pushing current-year loss picks higher.

Some are concerned that the rate increases being secured are still not enough to match the mounting claims.

This widespread anxiety is likely to be one of the key drivers of the continued building of momentum around primary rates, with both private commentary and early third-quarter disclosures suggesting that Q3 was sequentially better than Q2.

## Dedicated reinsurance capital




Source: Willis Re

# Third Point Re: Acquire, evolve, sell?

**Third Point Re's board has followed the carrier's total return peers in acknowledging that efforts to take the business forward may require an M&A transaction of one sort or another.**

As revealed on Friday, Third Point Re is working with JP Morgan to explore its potential options, and could look either for a merger partner or a transformative acquisition.

Sources suggested that an auction process with a view to a cash sale was not a likely option in the near term, but given its discount to book value the firm is clearly vulnerable to a takeout approach.

Like its peers, Third Point Re is currently caught in a four-sided squeeze, which this publication has previously described as the walls closing in.

1. **Investor squeeze** – The total return reinsurers have been heavily marked down by investors (Third Point Re was at 0.65x book on an undisturbed basis), reflecting weak operating results and questions around the model.
2. **Rating agency scrutiny** – AM Best has hardened its stance on these firms, insisting that they set themselves on a path to delivering underwriting profits to retain the critical A- rating, while also criticizing the level of volatility around the investment results.
3. **Regulatory pressure** – The draft Internal Revenue Service rules on Passive Foreign Investment Companies (PFICs) currently under consultation could compel firms to spend more money on underwriting staff than on fees to their investment managers.
4. **Access to business** – Total return reinsurers are suffering adverse selection around third-party business owing to their ratings and self-reinforcing fears about the sustainability of the business model.

Third Point Re's share price has significantly underperformed since the company went public in 2013, with a total return to shareholders of negative 22.8 percent versus a gain of 112.1 percent for a Bermuda composite.

The business has consistently recorded underwriting losses as it has struggled to compete with established reinsurers with higher ratings to source good business, running up a combined ratio of 108 percent in 2017 and 107 percent in 2018. This year's first-half combined ratio was 103 percent.

Its investment performance has been highly volatile and fallen well short of projected levels. Its 2018 investment return was -11.2 percent, with returns in the preceding four years of 11.1 percent (2017), 3.3 percent (2016), -1.1 percent (2015) and 3.8 percent (2014).

Third Point Re has also faced the additional challenge of management turnover, with CEO Rob Bredahl – a member of the founding executive management team – resigning to join TigerRisk in May.

Dan Malloy, previously CEO of Third Point's main operating subsidiary, was appointed interim group CEO before being confirmed permanently in the post.

Third Point Re has three obvious routes out of its current difficulties: acquire, evolve into a traditional reinsurer, or sell/merge.

The firm could look to emulate Hamilton Insurance Group's move on Pembroke by acquiring an underwriting business.

If it bought a quality franchise, this would improve its underwriting result, potentially getting it to profitability.

It would also add additional underwriting expense and improve premium and reserve leverage, easing PFIC pressure.

With the stock where it is, a deal with a paper component would be highly dilutive if the target had scale, perhaps pointing towards a cash deal, with Dan Loeb or Third Point LLC the obvious source of finance if in excess of the firm's resources.

Third Point Re had already seemed to indicate through actions and in some of the language employed by Malloy that it was following the path taken by Fidelis in evolving towards a traditional model with lower asset risk.

With an additional $400mn withdrawn from the hedge fund at the time of the second-quarter results, only $825mn of the $2.5bn asset base is allocated to Third Point LLC.

Third Point Re could also look to a sale or merger – following the path of peer Greenlight Re, which is currently pursuing a bid process.

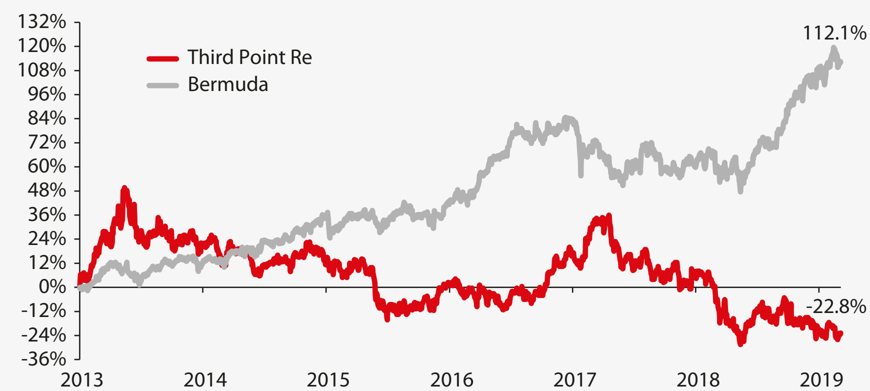
Such a deal could either deliver short-term shareholder value in the form of cash, or the defensive measure of the dilution of the hedge fund component. It would also offer Dan Loeb – who has a 7.3 percent stake – and Third Point LLC the potential opportunity to continue managing part of the asset base.

Whichever way Third Point Re goes there is an additional risk to the firm, as identified by sister title *Inside P&C* in a piece earlier this year entitled "The irony factories".

The piece points out that Third Point Re – like Greenlight Re – has paid out huge fees ($409mn) to an underperforming fund manager over the past six years.

The perception, right or wrong, that corporate assets were being used in the service of a minority founding shareholder at the expense of other shareholders opens up these companies to shareholder activism – activism of the kind that these hedge funds have themselves practiced.

## Third Point Re total return against Bermuda




Source: S&P Global


Partnership
A distinctive approach to capital management.
For us, capital management isn't a solo endeavor. It's about building partnerships that make our capital work harder for clients and investors, shaping a unique franchise that is consistent through market cycles.
As we see it, the future is full of opportunity.
RenaissanceRe
renre.com

# Bridging the divide

Aon's Joe Monaghan explains why budget-conscious public entities are recognising the value of risk transfer

**Where do you see the main opportunities in public-to-private partnerships?**
Governments historically have borne the cost of helping society recover from disasters, both natural and economic. They bear this risk operationally and on the public sector balance sheet.

Extreme weather and economic volatility have increased for the public sector and in doing so, created stress on the budgets of cities, states and nations. Governments can no longer "go it alone" when it comes to mitigating climate and systemic risk.

There is a need to transfer the risk, but the ability to do so has been limited, either because solutions have not been readily available or because that risk was not observable in recent experience. For example, the US government was exposed to hundreds of billions of dollars of mortgage credit losses during the financial crisis coming from multiple agencies, like Fannie Mae and Freddie Mac, that were ultimately backstopped by the US Treasury. With the exception of mortgage insurance covering a portion of loss on a small segment of their portfolios, those agencies, and the US taxpayer, were retaining all of the default risk. Despite strong data and knowledge of regional housing downturns, the models underestimated a nationwide decline in home prices, largely because it had never occurred. In retrospect, there was a confluence of factors, including inadequate mortgage underwriting standards, that came together with predictably disastrous results. But that's the nature of systemic risk. It is often difficult to understand risk as it's building, which is why hedging the unlikely but severe outcomes is valuable.

This is true for natural disasters too. The National Flood Insurance Program (NFIP) in the US was stable, until hurricanes Katrina and Sandy resulted in losses that were multiples of the program's resources. This required Congress to step in with tens of billions of dollars of support. Congress demanded that the NFIP find ways to hedge its volatility and the program just happened to get a full recovery the first year it bought reinsurance in the wake of Hurricane Harvey.

These are just two examples – systemic economic risk and extreme weather – of the types of risk that governments, at all levels (national, provincial, and municipal) are exposed to across the world. Our industry has the opportunity to take those lessons learned and scale them into new solutions that meet the needs of government and society.

**What are the barriers to growth in public-sector insurance?**
Governments have distinct considerations when they evaluate (re)insurance as a tool. Typically, government budgets focus on annual expected expenditures and often revenues are inadequate to cover spending, so many governments are debt financing large portions of their annual expenditures. They must therefore be able to justify purchasing a risk transfer solution over immediately impactful investments in education, infrastructure or healthcare. Because public money is being deployed, the highest level of discipline and analytical rigor must be used to understand the costs and benefits of any purchase. Policymakers must have confidence that any (re)insurance solution can be justified to the public. The private sector can do a better job of understanding the unique challenges agency heads, public officials and policymakers work through in making this assessment.

**Has the urgency of closing the protection gap hit home among public entities?**
Absolutely, because they continue to see the impact that natural disasters and economic volatility have within the constraints of a budget that must meet many needs – health, education, economic development. Just look at the most recent example of Hurricane Dorian and its impact in the Caribbean and parts of the US. Further, we hear increasing conversations about the potential of an economic slowdown in the near future that has implications across government budgets globally.

The protection gap that we often talk about in the (re)insurance industry reflects the un- or under-insured individuals and businesses exposed to extreme events – for example the low take-up rate for earthquake coverage among homeowners in California. Governments are increasingly focused on understanding the probability and magnitude of those events and the economic loss implications on their constituents. But there is also a gap in the resources that governments have at their direct disposal in the wake of these severe events. The concept of using insurance, reinsurance and capital markets as an amplifier of direct government resources is a conversation you hear more and more within the public sector.

**How are you faring in the US mortgage and wider credit space?**
That marketplace continues to grow. It's been a phenomenal success for Freddie Mac and Fannie Mae but also for the (re)insurance sector. We are approaching the sixth anniversary of the inaugural mortgage reinsurance risk transfer pilot, which incepted in November 2013, and by year-end 2019 we expect about $25bn of limit will have been transferred on roughly $800bn of mortgages. These deals are expected to generate about $3bn of income to reinsurers over their lifetime. We are expanding now from single family risk to multi-family risks and have done a series of transactions there. We did a pilot for the Export-Import Bank of the United States that was very successful, and upon which we are looking to build. Various international aid and development agencies are seeking innovative public/private partnerships as well. There is a tremendous opportunity for growth, but the (re)insurance community needs to approach this sector focused on its unique constraints and considerations. It must be a partnership that brings the best of both sides to enhance the ability of governments to achieve their missions on behalf of their citizens.

**Joe Monaghan**
CEO of Aon's Public Sector Partnership

# Rate rises after 2017/18 losses have been anemic: OdysseyRe's Young

**The "disappointing" reinsurance market "can and will get better" in the near future, OdysseyRe's chief executive Brian Young believes.**

After years of downwards pricing pressure, the reinsurance market has started to see some signs of improvement, with rates on the rise and, in the case of quota share contracts, ceding commissions reducing slightly.

But despite these green shoots, Young told this publication that "the reinsurance market is disappointing".

"We haven't really seen the movement that we were anticipating either in terms of an uplift in rate or a decrease in commissions following the bad results in 2017 and 2018 for the industry," he said.

The heavy catastrophe losses of 2017 and 2018 have helped to nudge pricing upwards. However, Young feels the level of rate increase in the property catastrophe portfolio has not been anywhere near what it should have been.

"From a cat pricing point of view, I think the reinsurance response in the US has been anemic," he said.

Young noted that the market has been hit with losses from non-heavily modeled perils such as wildfire, which has fueled the need for a stronger response from carriers.

"We've given so much rate on cat in the last 10 years, and we've taken losses for perils that we haven't modeled and we've seen a dramatic weakening in the wording, especially in the hours clauses," he explained.

It is not only amendments to hours clauses that have broadened the coverage being offered to cedants. As Young outlined, multi-year policies have also increased in prevalence, locking in rates, terms and conditions on programs for several years despite the potential impact of losses and other factors.

"The list of concessions that the cat market has given is long," said Young, adding: "In the US reinsurance market, there have been significant coverage changes introduced during the soft market."

As Young explained, there is no single reason why the coverage that is being offered to insurers has expanded to such a degree. Instead, the OdysseyRe CEO said: "The coverage got so much broader for a number of reasons.

"The introduction of multi-year programs, multi-line aggregate covers, gimmicky features like top and drops and cascading layers, in my view, was an attempt by the traditional market to keep the ILS market at bay and put a floor under pricing."

And while it may not appear reinsurers have given much away when considering each annual renewal, over time the repeated concessions mean coverage has moved further away from its original form.

"Inch by inch, coverage has been expanding," said Young.

> "We haven't really seen the movement that we were anticipating either in terms of an uplift in rate or a decrease in commissions following the bad results in 2017 and 2018 for the industry"

"Year to year it may not seem that different, but over time it adds up."

Another factor that has caused risk-adjusted rates for US cat reinsurance business to drop is the increased prominence of global programs. These, as Young explained, are more commonly associated with the largest and most sophisticated reinsurance buyers.

"As reinsurers, we want to diversify our capacity as much as possible to maximize returns. When we're presented with programs which are now not just US, but international in scope and all under one umbrella, it's a sub-optimal way for us to deploy that capacity," stated Young.

Sitting opposite to the property segment is the casualty market, and Young is under no illusion that this area of the industry is also undergoing some significant shifts at present. The primary casualty market has seen some major increases in pricing this year amid rising loss costs. But despite that, Young said the reinsurance sector's response has not been as significant as he would have thought.

"Given the upward pressure that we're seeing on casualty loss trends, we would have expected greater upward movement than we've seen," he said.

"It's positive that the insurance markets are rising, and as a reinsurer writing quota shares we benefit from that, but original rates still have a long way to go to get back to adequate levels."

Young predicted change was afoot, although it will not be to the extent that he, and many others in the industry, are necessarily hoping for, especially when it comes to ceding commissions.

"Commissions remain stubbornly high. Commission levels in the US, whether it's property or casualty, are probably on average 7.5 points higher than they were a decade ago. They've gone from the mid-20s to the mid-30s. There might be a point or two of movement here or there, but overall, commission levels have held firm.

"Reinsurers have accepted that while they'd like commissions to come down, at least the original rates are increasing and that's a good thing," said Young.

# Berkley-backed Tremor has 85% of reinsurance capital signed up

**WR Berkley-backed reinsurance exchange Tremor has signed up 89 of the world's largest reinsurers to its platform, with both its parent and Markel having now ceded business via its offering, chief executive Sean Bourgeois has revealed to *The Insurance Insider*.**

Those 89 carriers represent more than 80 percent of global reinsurance capital, Bourgeois explained.

In addition to WR Berkley and Markel, Nephila – which is a subsidiary of Markel – is also active on Tremor as a provider of both reinsurance and retrocession.

Boston-based start-up Tremor launched the reinsurance exchange two years ago. Bourgeois said that his company has now placed $500mn of reinsurance limit across six deals.

So far, $1bn of reinsurance quotes have gone through the platform, he added.

"We had a really healthy 1 June and 1 July renewal," he said, adding: "But it's not all about the big renewal dates. We are starting to see off-cycle requests."

Tremor allows reinsurance brokers to run auctions for reinsurance placements. The auctions are done on what Bourgeois calls a "blind field bid" basis, so participants cannot see bids from other companies.

"It's not like Ebay where people are competing in plain sight with each other to drive the price," he explained.

Instead, Tremor computes the various bids, along with conditions each reinsurer attaches to each quote. For example, a reinsurance underwriter might tell Tremor that it will supply 10 percent of the lead layer, as long as it gets a 6 percent slice of the second layer.

Interested parties have several weeks to submit bids on a treaty or facultative placement that is sitting on the platform, but the actual auction takes a couple of hours – the length of time it takes the system to compute all different conditions that go into building a reinsurance placement.

Unlike more traditional placing systems like the Placing Platform Limited (PPL) which is being used in the London market and where price discovery is a manual process, the Tremor system itself works out the price, based on the "perfect equilibrium" for each layer of a placement.

The key considerations for platforms such as Tremor is how liquid they are – how many buyers and sellers of reinsurance are participating and how easy is it to get business done on the system.

"Most of our transactions have had two to three times the limit required, which validates the liquidity question and our model of bringing episodic liquidity," said Bourgeois.

Tremor is one of a number of organisations trying to bring insurance into the digital age.

The London market has become heavily digitised over the past two years.

PPL has been operating successfully in Lloyd's and the London company market for reinsurance risks since 2018. But it took Lloyd's to deploy all its power as a quasi-regulator to make managing agents turn to electronic placement.

> "PPL has been operating successfully in Lloyd's and the London company market for reinsurance risks since 2018"

In February 2018, then-Lloyd's CEO Inga Beale declared PPL adoption was "not happening fast enough", and introduced rules forcing companies to place business digitally.

The difference between auction platform Tremor and systems like PPL or its rival Whitespace is that the older platforms simply digitize an existing, archaic process, Bourgeois argues.

A further boost to Tremor and its peers is that auction software is now in vogue in the reinsurance world.

During the Monte Carlo *Rendez-Vous* earlier this year, Aon's Reinsurance Solutions division lifted the lid on its own auction platform that it is now readying ahead of the 1 January renewal.

Aon's reinsurance CEO Andy Marcell said last month that transactional cost efficiencies would be generated by using the auction software.

Like Tremor, the Aon system has blind bidding for both non-concurrent placements, where reinsurers receive different pricing based on the quotes provided, and concurrent placements, where the technology identifies a consensus bid.

Thus, each reinsurer receives the same price for the layer.

Then there is B3i, the blockchain-based placing system developed by a consortium of the world's largest reinsurers.

Last week, B3i announced it had released the latest version of its property catastrophe excess-of-loss product.

The advantage of using blockchain is that it provides information that is easy to pool, such as the details of a property treaty with multiple parties. A disadvantage is that blockchain based systems can be slow and clunky.

B3i CEO John Carolin said: "The value to the market of being part of the [B3i] network and accessing its applications lies in the material reduction in administration costs, improvements in service levels, and greater contract certainty that this will enable."

Another blockchain system that has gained traction in the Bermuda market is InsurTech ChainThat, which opened a trading exchange in the island's capital Hamilton in March. ChainThat's expertise is in integrating the front-end placing system with the back office.

Carolin has described the emphasis on blockchain as a "huge distraction" from the company's core product.

B3i has about 20 insurance shareholders which include Allianz, Axa, Generali, Hannover Re, Liberty Mutual, Mapfre Re, Scor and Swiss Re. Although originally founded as a consortium of carriers in 2016, B3i became a Zurich-headquartered company in 2018. B3i raised $16mn in March.

Akinova is another example. Backed by Californian venture fund and incubator Plug and Play, Akinova is focused on the growing cyber reinsurance market and has become the first alternative insurance marketplace to be licensed by the Bermuda Market Authority.

This publication understands that a pair of former London market reinsurance brokers, ex-Aon broker Ben Rose and former TigerRisk innovation head Jerad Leigh, have now launched their own reinsurance platform called Risk Book.

On 16 October, Risk Book ran a transatlantic beta-testing event, bringing together members of the London market reinsurance Under 35s and the New York Reinsurance Under 40s, to test out the platform.

# California among states to buck trend of slowing homeowners' rate growth

**Washington, Hawaii, Georgia and wildfire-struck California are the states where homeowners' insurance rates have risen most significantly over the past 18 months, new data from Aon shows.**

According to the broker's latest 2019 Homeowners ROE Outlook study, rates in California, Washington and Georgia went up by 7 percent. In all other states, rate growth for homeowners' insurance has slowed, Aon's research shows. In West Virginia, Michigan, Ohio and Pennsylvania, pricing has remained flat over the last year and a half.

Despite suffering from a series of severe natural disaster events in 2017 and 2018, the homeowners' market in catastrophe-exposed regions of the Southern and Eastern US were hit with only minimal rate rises of between 2 percent and 3 percent.

Homeowners' rates in South Carolina and Alabama remained flat over the 18 months to September 2019.

"Much of the Gulf and Atlantic coasts show low single-digit increases or even decreases," Aon said.

The broking giant linked the slowing of rate growth to the intense competition at play between carriers.

"We presume this reflects heated competition for business as companies expand risk appetite seeking growth."

The data on rates came from rate filing information by the top 20 home insurers in each state.

"Rate changes in California show continued positive momentum from last year," noted Aon.

Hawaii, where the eruption of Mount Kilauea earlier this year led to homeowners' insurance losses, had rate increases of 8 percent over the 18-month period.

On an aggregate level for 2019 to date, homeowners' rates offered by national multiline carriers have risen by around 1 percent, compared with increases of 3 percent in 2018. Rate increases by single-state monoline insurers were healthier, with pricing rising by 3 percent in 2019, compared with 4 percent last year.

Explaining the difference in pricing trends between national and local insurers, the Aon report noted: "Current trends suggest that the national carriers are facing rate pressure from competition and market forces, while the single-state specialists, with more expertise within their single state, are maintaining rate increases."

> "On an aggregate level for 2019 to date, homeowners' rates offered by national multiline carriers have risen by around 1 percent. Rate increases by single-state monoline insurers were healthier, with pricing rising by 3 percent"

Rate increases in homeowners' insurance have slowed since 2013, when prices grew by 7 percent.

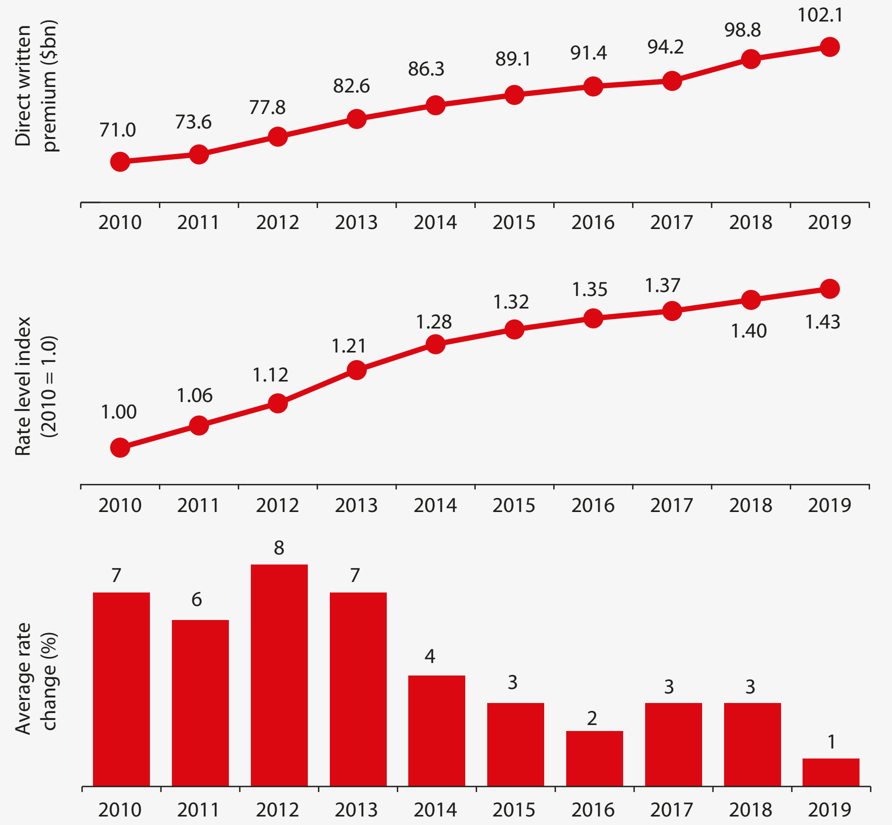
Homeowners' direct written premiums increased from $71bn in 2010 to $98bn in 2018. Aon expects premiums to grow by an additional $4bn to $102bn by the end of 2019, driven by the modest rate rises.

Aon said cat losses cost carriers around $95bn in 2017, with events in 2018 such as the California wildfires leading to a further $59bn in losses. The last time the industry faced loss levels of that magnitude was in the back-to-back hurricane-hit years of 2004 and 2005, the latter of which included the devastating trio of Katrina, Rita and Wilma.

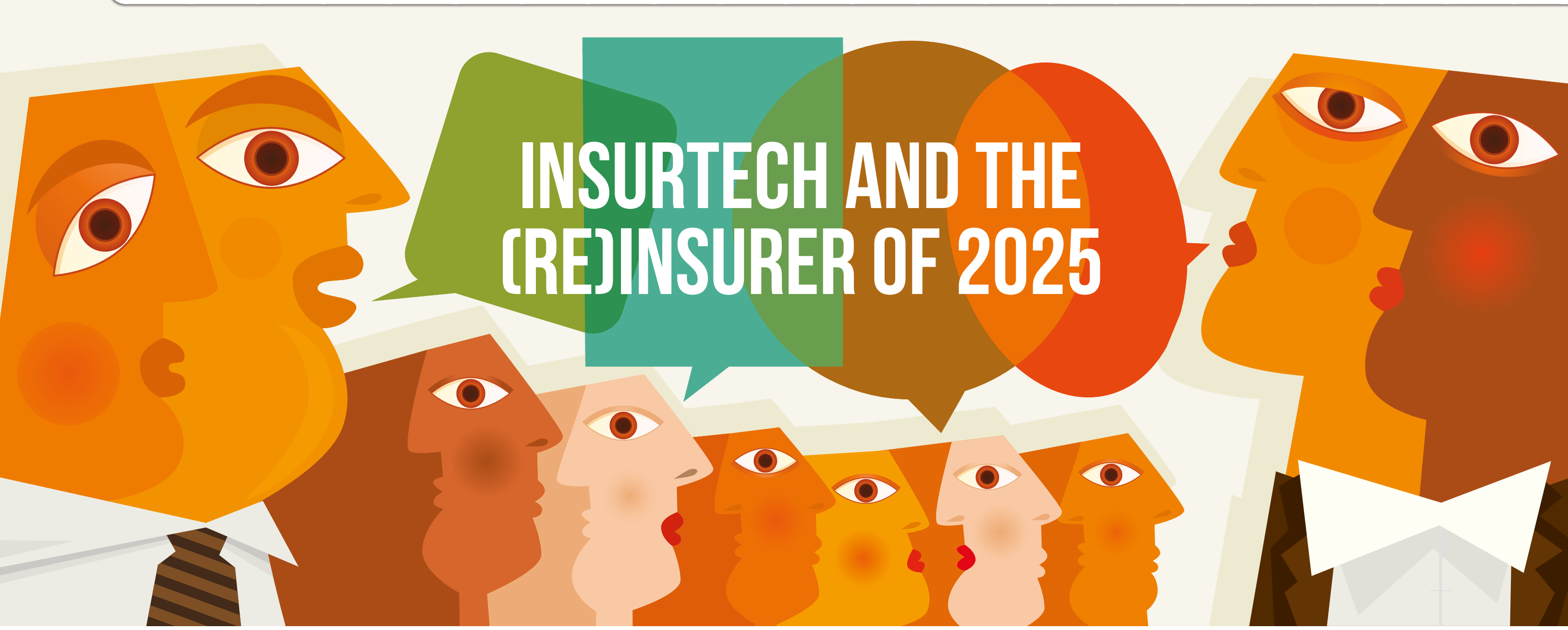
Based on analysis undertaken by the broker, the most profitable regions on a return-on-equity (RoE) basis to write homeowners' business as a national carrier were New York, New England and parts of the Southwest and Northwest. These areas yielded a prospective RoE of more than 10 percent.

The worst states, which have been yielding prospective RoEs of below zero, were California, Nevada, Illinois, Arkansas, Mississippi and Alabama.

## Premium growth and rate change – 2010 to 2019




Source: Aon



# INSURTECH AND THE (RE)INSURER OF 2025

**To what extent do you think InsurTech will have an impact on the reinsurance industry? What forms of InsurTech are catching your eye?**

**Jobay Cooney, Aon:** As well as offering innovative and effective solutions, a key consideration for InsurTech firms is they need to provide products that can co-exist with (re)insurers' legacy systems and are easy to implement. In this regard, we have seen momentum behind technologies such as artificial intelligence (AI)-enabled chatbots, for example, where the functionality is truly complementary to the existing technology stack, and the return on investment is realised in very short timeframes. At Aon, we track more than 1,200 InsurTech firms and so we are able to see the range of solutions on offer and which are proving to be most attractive to our clients. To date, systems that automate pricing and underwriting have shown promise and are beginning to be seen in more complex lines such as commercial auto and workers' compensation. Also, digital distribution, both agent-enabled and direct-to-consumer, continues to be an area of high interest for insurance company clients with the potential for transformative impacts.

**John Trace, Guy Carpenter:** The digital technological revolution, which includes InsurTech, will over time have an increasing impact on many aspects of the reinsurance industry. Intense competition will transform the institutions, networks and tools used to understand, price and manage commercial, private and public risk. These new digital technologies may reduce the barriers to entry for new entrants into the reinsurance industry such as banks and InsurTechs, as well as global platform giants such as Amazon, Google and Facebook. Learning from these platform business models, the reinsurance industry will capitalize on the development of massive computing power, and increasingly cheap data storage, to take full advantage of ubiquitous sensor technology, big data, drones, image recognition, increasingly robust and sophisticated statistics (predictive analytics), and continuing advances in machine learning, deep learning and AI. These digital technologies will transform how the reinsurance industry understands, manages, underwrites and prices risk. Over time, the industry will likely play a bigger role in providing services to curate scientific and engineering advances into useful and effective tools to manage risk.

With these new scientific advances and the explosion of actionable data, the reinsurance industry will have the ability to pre-underwrite local, regional and national risks on a global basis. The industry will be able to quickly create and price bespoke products for specific customer groups. The strategic and tactical possibilities of these new technologies for the reinsurance industry are vast.

> "It's good to see the industry recognizing that new data, analytics and digital capabilities present opportunities not only to become more efficient with business processes, but also to gain accuracy in underwriting and inspections"
> *Tim Brockett*

**Andrew Johnston, Willis Re:** InsurTech has not lived up to its early hype, but this depends, of course, on what your expectations were and are, and how relative success is measured. If improved investment returns, falling loss ratios and reduced operating costs were the goals of InsurTech, then no huge, across-the-board success has been achieved. If, however, the goals were to expand the industry's view and understanding of the longer-term role of technology in the insurance and reinsurance sector, and to set a course to implement change, the initial steps are critical. Plenty of companies are making first steps, and InsurTech has been a very good avenue for companies around the world to dip their toe into the technology pool.

**Tim Brockett, Munich Re America:** InsurTech is creating new opportunities for the industry. It's taken a few years, but it's good to see the industry recognizing that new data, analytics and digital capabilities present opportunities not only to become more efficient with business processes, but also to gain accuracy in underwriting and inspections. We see this particularly on the personal lines side where companies are pre-filling data to quote business and leveraging aerial imagery to assess the roof condition of homes. For Munich Reinsurance America, InsurTech has been a way to help the industry adapt to our changing risk environment. The frequency of extreme hurricanes has increased, so we're using both aerial imagery and machine learning to detect damages after an event remotely. This technology can help clients respond to the high volume of claims and manage loss-adjustment expenses when there is widespread damage. We've also used data on environmental conditions and the California wildfire experience of the past couple of years to develop high-resolution hazard maps. This can help clients visualize areas of high wildfire risk and develop strategies for underwriting and managing those risks in their portfolios.

**What InsurTech solutions would help your business and/or the industry?**

**Johnston:** The most effective InsurTech-reinsurance alliances that we are seeing are MGA-type businesses that allow reinsurance capacity to be deployed in new markets by supporting innovative, well-priced products. The alliances are typically best when everyone's objectives are completely aligned, and all the members of the alliance truly understand their roles.

**Trace:** Guy Carpenter, for various reasons, is interested in every aspect of the digital technological revolution. It is very hard to single out any one technology, but as a general rule we are interested in four items as respects science, engineering or new technologies. First, we are interested in anything that will help us serve our clients better. Second, technologies that enable us to expand our business, drive down costs and improve efficiency are always welcome. Third, there is a constant search for technologies that will help our clients as they work to improve their operations and in turn better serve their clients.

Outside of the theme of operational improvements, the fourth item of interest relates to risk. We have worked with insurers for almost 100 years, helping them manage the risks that are the byproducts of industrial and technological revolutions. The digital technological revolution will be no different. A number of emerging technologies are currently over-hyped, and in some cases, being rushed to market and may cause injury, damage, personal injury or catastrophic loss. But nevertheless, these emerging technologies are showing up in an increasing number of products and insurers will have to underwrite, price, and on occasion, reinsure these technological risk elements.

Guy Carpenter is working with scientists and engineers to understand all emerging digital technologies to help our clients better underwrite these risks. As an example, our GC Genesis unit has recently commissioned a number of studies in conjunction with the scientists and engineers with whom we work. These confidential and proprietary studies include looking at virtual agents, machine learning and analytics, commercial drones, automotive telematics, Internet of Things connectivity and sensors, data warehousing, distributed warehousing and automated workflow, cyber security, anomaly detection for fraud, text recognition and conversational natural language processing, data reconciliation and information retrieval, and wearable technology.

**Cooney:** There is always a drive and a need to take expense out of our industry, which means that InsurTech companies that can provide innovative and effective ways to reduce the overall friction of the insurance process will likely enjoy a degree of success. By helping (re)insurers to transact business at a lower cost, they are providing them with a competitive edge that will allow them to grow their own business. Also, those InsurTech firms that manage to bring about new business models in an accelerated way will endure and will make attractive partners for (re)insurers.

Consumers' basic needs share similarities across industries, so we can draw parallels with other disrupted sectors and say that the future insurance consumer will demand a process that is modern, easy, transparent and customisable. InsurTechs that deliver this will again be attractive to (re)insurers.

**What do you think the reinsurance company of 2025 will look like? A standalone reinsurance entity? A hybrid? One that utilizes InsurTech? One that has an InsurTech investment platform?**

**Steve Levy, Munich Re America:** We believe that the trend of reinsurers expanding into primary insurance and, in some cases, primary insurers diversifying into reinsurance will continue for the foreseeable future. As a result, it's highly likely that there will be fewer, if any, "pure plays" in the reinsurance industry, but rather that reinsurance will be mostly provided by larger insurance enterprises offering a wide array of risk management solutions to many different customers. It's also very likely that these firms will have even greater access to multiple sources of capital, including their usage of ILS capacity to support a growing array of perils.

> "There is always a drive and a need to take expense out of our industry, which means that InsurTech companies that can provide innovative and effective ways to reduce the overall friction of the insurance process will likely enjoy a degree of success"
> *Jobay Cooney*

Technology, including big data, machine learning and predictive analytics – really everything falling under the umbrella of AI – will become even more important to successful reinsurers through 2025. By definition, therefore, these companies will utilize and invest in InsurTech, although the levels of investment will certainly vary depending on the specific objectives of reinsurers.

## CONTRIBUTORS

**Tim Brockett, head of specialty lines and strategic products, reinsurance division, Munich Re America**

**Jobay Cooney, senior managing director, Aon**

**Andrew Johnston, global head, Willis Re InsurTech**

**Steve Levy, chief executive officer, reinsurance division, Munich Re America**

**John Trace, chief executive officer – North America, Guy Carpenter**

# Tokio Marine makes a Pure bet on HNW

**Earlier this month, Tokio Marine announced it would be acquiring high-net-worth (HNW) insurer Pure for $3.1bn. At 33x forward earnings, the deal screens as expensive.**

However, the combination of a long-term strategic owner with a low cost of capital, potential growth opportunities, and a scarce and high-quality business model contribute to the valuation. Fundamentally, the deal involves four big bets.

1. In some ways, in line with prior transactions by Tokio, this is a simple bet on business quality. Pure has scarcity value and a higher-quality earnings stream from its fee-based business.
2. Second, this partly a bet on HNW as a market niche. Pure is positioned in a market segment with an oligopoly-like structure that appears defensible from new entrants and is hard to commoditise or disintermediate with technology. Additionally, the HNW segment of the market has outpaced the growth of other segments, and is widely expected to grow faster than other areas of insurance.
3. Third, given the growth estimates outlined by the company, Tokio appears to be betting that Pure's outsized growth can continue. For context, the firm has grown premiums at a compound annual growth rate of 29 percent since 2014 but in recent years this has slowed to ~20 percent. With the company forecasting ~9 percent growth for the HNW industry but ~20 percent for Pure, this will require some combination of market share growth, deeper penetration of the HNW market into underserved mass-affluent customers (~$1mn-$3mn-range policies), or pricing. Part of this bet is likely an explicit expectation that Tokio can turbo charge growth with financial support. That would mean a better financial rating, cheaper and more flexible reinsurance to allow more concentrations and aggregations that might have been harder in a tighter reinsurance market.
4. Finally, although this is largely an additive and strategic transaction rather than a cost-driven consolidation, there does appear to be some available financial synergies, largely through reinsurance. At a high level, the company is projecting expanding dollars of after-tax profit per dollar of premium under management from 7.6 percent to 11.3 percent.

   There could also be some available tax synergies available by offshoring earnings through reinsurance, and this does seem to be marginally implied in the firm's earnings projections (implied marginal tax rate appears to be declining).

However, whatever the strategic rationale, ultimately this deal is premised on growth. Simply put, living up to the announced lofty growth goals is what will make or break the success of the transaction from a financial perspective, even with a long-term and patient owner.

Aside from the equity holders among the Pure management team, the deal's clear winners are early private-equity backer Stone Point Capital, along with shareholders KKR and Axa XL, with obvious losers being Pure's reinsurance partners and brokers.

## Deal winners and losers

**Winners:** Aside from the equity holders among the Pure management team, the deal's clear winners are early private-equity backer Stone Point Capital.

Stone Point was among the seed investors to Pure, first investing in 2006 and leading a secondary offering in 2015. Stone Point played a key role in the company's early days and development, facilitating introductions with rating agencies, regulators and capital providers that were instrumental to Pure's launch.

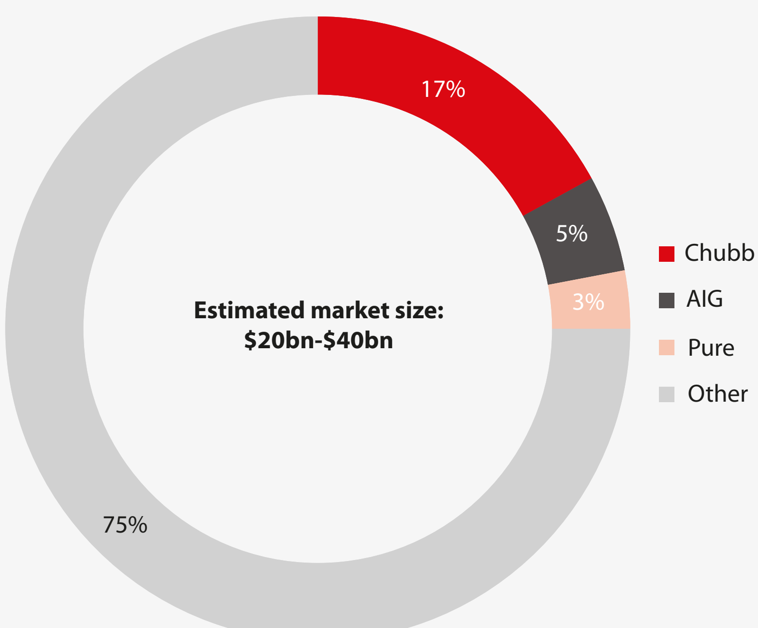
In addition to being closely intertwined with the launch of the business, Stone Point led several debt recapitalisations and surplus note capital raises for the reciprocal exchange. Stone Point introduced the Company to XL Catlin, as a minority investor and partner, another one of the deal's winners.

The selling shareholders are Stone Point, which holds 51 percent of the stock, KKR, which owns 34 percent, Axa XL, which holds 10 percent, and management and others, which hold the remaining 5 percent.

**Losers:** Among the losers of the transaction include Pure's reinsurance partners and reinsurance brokers. With a $200bn balance sheet, Tokio is likely to retain a significant portion of Pure's $666mn of 2018 ceded premium net. Pure's biggest reinsurance backers include Munich Re, Everest Re, Partner Re, and Axa XL, among others.

*This is an executive summary of a longer form article published on 3 October. For more details see www.insidepandc.com*

## HNW market broken down by market share




Source: Tokio Marine, *Inside P&C*


ASPEN
INNOVATIVE RISK MANAGEMENT
We specialize in providing customized re/insurance solutions to our clients across an array of geographies and products. Our network of offices gives us access to expertise around the world. Our relationships are far reaching.
360° THINKING
Find out more at aspen.co

# The next unexpected event – killer drones, hacked cars or solar flares?

**If we have learned anything from catastrophe modeling, it is that there is plenty we don't know. But we can and should make some sound generalized presumptions.**

At TigerRisk Partners, we surveyed our team of industry professionals to get their opinion on the most under-represented risks. Of greatest concern was a widespread infrastructure failure due to natural or malicious acts, with business interruption and damage to regional, even global economies. For example: what if London was flooded? How long might it take to restore electricity, water and transportation and return life to normal?

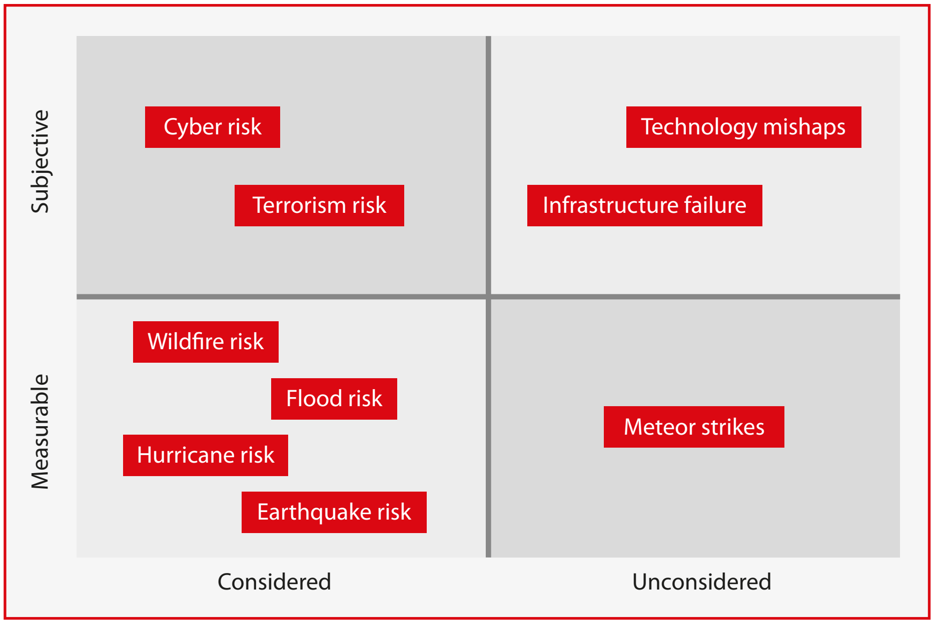
Also high on our list of left-field events was technology gone awry – killer drones, hacked cars or satellite navigation bugs. Could new health-risk litigation produce losses like those incurred by big tobacco (north of $200bn) in the late 1990s and early 2000s? All these unlikely events could send shockwaves throughout the (re)insurance industry.

In 2017 and 2018, California wildfires caused more damage than all other wildfires since 2000. In fact, the insured losses from those two years make up 80 percent of total US wildfire losses incurred since 2000. While we knew wildfire risk existed, the magnitude of the damage took the reinsurance industry by surprise.

In 2001, when Al-Qaeda terrorists flew hijacked planes into the World Trade Center and the Pentagon, there was tremendous loss of life and property. In the wake of these attacks, it was virtually impossible to find terrorism coverage, thereby forcing passage of the Terrorism Risk Insurance Act and creation of the federally backed Terrorism Risk Insurance Program.

While the sophistication of modeling for "core" catastrophe risks like hurricane and earthquake continues to improve, man-made perils like terrorism and cyber – and the more random left-field tail catastrophe risks – are either poorly modeled or not modeled at all. Above are examples on a four-square diagram inspired by the Johari Window, delineated by whether a risk can be measured and whether it is a considered risk.

Cyber and terrorism share the top spot when it comes to difficult-to-quantify risks.




More than just likelihood, a large degree of uncertainty surrounds these perils. They are difficult to define and therefore difficult to thoroughly nail down in contract language. Furthermore, they are driven by an ever-changing landscape of vulnerabilities and motivations. Some understanding of these risks is beginning to emerge in the form of scenario-based and even probabilistic models. However, these models present steep challenges in terms of validating, avoiding recency bias and balancing model update frequency with usability. With each new event, we learn and are forced to reevaluate our understanding of these risks.

We don't know what the next surprising event will be, but we can be sure that something unexpected and monumental will happen. There is work underway to measure many of the risks we have mentioned here, but those nascent efforts have yet to provide a reliable currency on which to trade risk.

We can start by quantifying the risks we are aware of while acknowledging that these estimates are not the whole story. At TigerRisk Partners, we work with (re)insurers on integrating the full range of history, judgement and expert opinion to develop views of risk and expected losses. We help evaluate the available data and find information to fill in the gaps where data is either not available or unknown. Lastly, we help our clients create flexible and robust business plans that can handle the next unknown, unmodeled or under-appreciated risk.

When (re)insurers consider their risks, they should pay attention to the knowns and unknowns. The full value of risk transfer via reinsurance includes risks that continue to move towards the measurable and considered quadrant of the Johari Window. These events are not necessarily quantifiable, but the job of the insurance industry for the past 400 years has been to cover both known and unknown risks.

*Research Contributions from Anna Neely*

**Nathan Schwartz**
Partner,
TigerRisk Partners

# Cat bond market to rebound in 2020

**The cat bond market is expected to rebound in 2020 following a noticeably quiet 2019, market participants have told ILS-focused sister title *Trading Risk*.**

Some 18 of the 28 cat bonds set to mature in the first half of next year originate from the US. The largest transaction is a $925mn deal from the California Earthquake Authority (CEA), although there is also a particular focus on Florida.

Cat bond issuance dropped by 57 percent in first half of 2019 to $3.5bn, as rising rates and tight capacity led to less activity in the run-up to hurricane season.

At the time of writing, the EUR100mn ($110.2mn) Hexagon II transaction from Covea Group was the only cat bond to be issued in the second half of the year.

Despite the subdued issuance levels this year, the market is expected to pick up in 2020 due to the sheer volume of cat bonds set to mature in the remainder of 2019 and first half of 2020. Up to $3.1bn of cat bonds are scheduled to mature in the second half of this year.

Brokers say upcoming renewals could help pick up the pace of cat bond issuance.

Cory Anger, GC Securities' head of ILS origination, said the large volumes of cat bonds that are due to mature in early 2020 could be a major catalyst to shift the ILS rate equilibrium.

Willis Re's head of ILS, Bill Dubinsky, told *Trading Risk* that the low 2019 issuance was due to price fluctuation in the early part of the year. "And for 2020 we think it will go back to relatively more cat bond issuance but that will take a while to happen – it took a while to move the other way," he said.

A diverse range of ILS structures are set to mature next year.

Analysis by *Trading Risk* shows that 22 percent, or $7.1bn, of current cat bond coverage is due to mature in the first half of 2020. However, a quarter of the 28 bonds tracked are partial or full losses, with loss-free renewal volumes dropping back to $6.1bn.

There is a strong weighting towards the first six months for next year's renewals, with three-quarters of the year's maturities falling due before June. Total maturities for full-year 2020 only rise to $9.1bn.

The maturing bonds represent a diverse set of perils, including coverage for US health, extreme mortality events in the US, France and Japan and a Latin American quake bond.

As would be expected, US wind risks comprise a high proportion at 18 out of the 28 maturing bonds, including multi-peril deals, with a particular focus on Florida.

However, there are also three bonds supplying reinsurance for risks in Japan – two of which cover typhoons. As Typhoon Jebi creep continues and with concerns still live about Typhoon Faxai and calculations beginning on the impact of Typhoon Hagibis, there will be particular attention on renewals in this space.

But with no new Japanese deals brought to the cat bond market in 2019, the regional diversity will likely be greeted by investors.

Eyes will be fixed on the largest maturities, led by the CEA, which has $925mn across two classes of its Ursa Re 2017-1 bond rolling off risk.

Second up is the $750mn Galilei Re 2016, ceded by XL, with the firm's subsequent takeover by Axa and the departure of the former XL retro-buying team for Convex likely to raise questions over how the firm will approach the ILS market in the future.

The issuance pipeline has been notably quiet, with sources blaming the lack of deals on pricing disparities between the cat bond sector and the traditional market, as well as a reaction to capacity shortages.

Several cat bonds struggled to reach their target capacity this year, while pricing was increasingly pushed to the higher end of forecasts.

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

Pricing in the second quarter of 2019 was significantly harder than in 2018, with spreads increasing by an average of 0.1 percent from median targets, compared an average retraction of 7.3 percent last year.

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.

## US cat bond maturities

| Transaction | Sponsor / Ceding insurer | Size ($mn) | Peril and territory | Scheduled maturity | Final spread (bps) |
|---|---|---|---|---|---|
| Atlas IX Capital 2016-1 A | Scor Global P&C | 300.0 | US and Canada wind and quake | 08-Jan-20 | 750 |
| Galilei Re 2016-1 class A-E | XL Insurance | 750.0 | US named storm, North America quake, Europe windstorm, Australia cyclone and quake | 08-Jan-20 | 1325; 800; 625; 525; 450 |
| Citrus Re 2017-1 | Heritage | 160.0 | US named storm (FL, GA, SC, NC) | 01-Mar-20 | 600 |
| Caelus Re IV 2016-1 | Nationwide Mutual | 300.0 | US multi-peril | 06-Mar-20 | 550 |
| East Lane Re VI 2015-1 A | Chubb | 250.0 | US (northeast) multi-peril | 13-Mar-20 | 375 |
| Citrus Re 2017-2 | Heritage | 35.0 | US named storms | 18-Mar-20 | |
| Buffalo Re 2017-1 class A;B | Icat Syndicate 4242 | 164.5 | US named storm and quake | 07-Apr-20 | 325; 675 |
| Merna Re 2017-1 | State Farm | 300.0 | New Madrid quake | 08-Apr-20 | 200 |
| Pelican IV Re 2017-1 | Louisiana Citizens | 100.0 | US named storm (LA) | 05-May-20 | 225 |
| Everglades Re II 2017-1 class A | Florida Citizens | 300.0 | Named storm (FL) | 08-May-20 | 500 |
| Metrocat 2017-1 Class A | California Earthquake Authority | 125.0 | Storm surge/earthquake (NY) | 08-May-20 | 370 |
| Ursa Re 2017-1 Class B;E | California Earthquake Authority | 925.0 | Earthquake (CA) | 27-May-20 | 350; 600 |
| Casablanca Re 2017-1 A | Avatar P&C | 100.0 | Named storm (FL) | 04-Jun-20 | 375; 525; 1600 |
| Caelus Re V 2017-1 class A-D | Nationwide Mutual | 375.0 | US multi-peril | 05-Jun-20 | 325; 450; 650; 925 |
| Sanders Re 2017-2 class A | Allstate (Castle Key) | 200.0 | US multi-peril | 05-Jun-20 | 325 |
| Espada Re 2016-1 | USAA | 50.0 | US multi-peril | 06-Jun-20 | 575 |
| Residential Re 2016-1 class 10;11;13 | USAA | 250.0 | US multi-peril | 06-Jun-20 | 1150; 475; 325 |
| Alamo Re 2017-1 | Texas Windstorm Insurance Association | 400.0 | Named storm and thunderstorm (TX) | 08-Jun-20 | 375 |
| Armor Re II 2018-1 Class A | United P&C | 100.0 | US multi-peril | 08-Jun-20 | 350 |
| Torrey Pines Re 2017-1 Class A-C | Palomar Specialty | 166.0 | Earthquakes (selected states) | 09-Jun-20 | 300; 375; 625 |
| Integrity Re 2017-1 Class A-D | American Integrity | 210.0 | Named storm (FL) (2nd event) | 10-Jun-20 | 325; 1450; 400; 425 |

Source: *Trading Risk*