Reinsurance Market Outlook

January 2019
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary: Value Proposition to Buyers Remains High Despite Interesting Market Dynamics</td>
<td>2</td>
</tr>
<tr>
<td>Global Reinsurer Capital</td>
<td>3</td>
</tr>
<tr>
<td>Resilience in the face of adversity</td>
<td>3</td>
</tr>
<tr>
<td>Traditional capital</td>
<td>4</td>
</tr>
<tr>
<td>Alternative capital</td>
<td>6</td>
</tr>
<tr>
<td>Slight Increase in Demand and More Focus on Emerging Risks</td>
<td>7</td>
</tr>
<tr>
<td>US Flood Risk</td>
<td>7</td>
</tr>
<tr>
<td>2018 Catastrophe Losses Higher Than Average; Industry Prepared to Handle</td>
<td>9</td>
</tr>
<tr>
<td>Second Year of Major California Wildfire Losses Lead to Great Peril Focus</td>
<td>11</td>
</tr>
<tr>
<td>Camp Fire</td>
<td>13</td>
</tr>
<tr>
<td>Rating Agency and Regulatory Updates</td>
<td>14</td>
</tr>
<tr>
<td>S&amp;P criteria proposals may impact capital management strategies</td>
<td>14</td>
</tr>
<tr>
<td>Moody’s cyber exposure incorporated into rating analysis</td>
<td>14</td>
</tr>
<tr>
<td>Recent rating activity using A.M. Best building block approach</td>
<td>15</td>
</tr>
<tr>
<td>Contact Information</td>
<td>16</td>
</tr>
</tbody>
</table>
Executive Summary: Value Proposition to Buyers Remains High Despite Interesting Market Dynamics

Reinsurance buyers continue to secure protection at accretive cost of capital terms despite a reduction in global reinsurer capital through 9M 2018. Global reinsurance capital fell 2 percent since year end 2017 from USD605 billion to USD595 billion. While traditional capital saw a decrease of 4 percent in part driven by rising interest rates and the strengthening US dollar, total alternative capital rose 11 percent to USD99 billion, an increase of USD10 billion since the prior year end. Although this market continues to digest recent loss activity, longer-term investors are expected to remain committed to the segment.

Reinsurance demand showed slight increases in traditional products and lines driven by regulatory requirements, continued attractive market dynamics for buying and recent losses in non-peak territories that have advocated for more robust coverage for these perils. Yet, even with this increase, supply continues to outstrip demand. Data quality in all markets continues to improve and has meant continued refinement in pricing and rate change with both being driven even more by individual client, line, and territory experience. As the market continuously looks for new ways to deploy capital, further analysis continues on a number of evolving risks including familiar ones to the market (flood, cyber, and government de-risking) as well as those that are earlier in development cycles (sharing economy, food borne illness, and longevity and pension shortfalls).

Insured catastrophe losses over the past two years aggregate to approximately USD 230 billion. While 2017 created a new peak at approximately USD147 billion, 2018 losses alone are currently estimated at USD85 billion, 47 percent higher than the 2000-2017 average of USD56 billion. While these losses have been well-spread, this is still a substantial burden for the (re)insurance industry to absorb.

Looking forward to April renewals, we expect similar market dynamics to January 1 given the composition of the renewing business.
Global Reinsurer Capital

Resilience in the face of adversity

Aon estimates that global reinsurer capital stood at USD595 billion at September 30, 2018, down 2 percent relative to the end of 2017. This calculation is a broad measure of the capital available for insurers to trade risk with. Traditional capital fell by USD20 billion to USD496 billion (-4 percent), while alternative capital rose by USD10 billion to USD99 billion (+11 percent).

Exhibit 1: Change in global reinsurer capital

Global reinsurer capital remained resilient in the face of insured natural catastrophe losses aggregating to around USD230 billion over the last two years. Excess reinsurance capacity continues to exist, despite an increase in demand for reinsurance solutions on a global basis.

The proportion of the losses accruing to reinsurers has been relatively low, perhaps no more than 25 percent, given the profile of the underlying events and the high retentions carried by large primary insurers. Furthermore, the reinsured portion has been spread around a much broader pool of investors than has historically been the case.

Traditional reinsurers continue to display strong risk-adjusted capitalization, as confirmed by rating agency and regulatory capital models. They utilize the capital markets to manage their gross exposures, carry significant budgets for net natural catastrophe losses and rely on investment returns to underpin their earnings. As a result, they have generally been able to trade through recent events without capital impairment.

The impact has been more significant in the alternative capital sector. Many investors in the final quarter of 2017 have experienced some combination of lower than expected pricing, ‘creep’ on 2017 events and further losses in 2018. Significant amounts of collateral have become trapped and the ongoing commitment of newer participants is being tested. This is affecting areas most dependent on this form of capacity, notably the retrocession market.
Traditional capital

Only 16 of the 21 constituents of Aon’s Reinsurance Aggregate (ARA^) reported results for the nine months to September 30, 2018. Total equity fell by USD9 billion to USD167 billion (-5 percent), partly due to strengthening of the US dollar. Net income of USD10.4 billion was out-weighed by dividends and share buybacks of USD7.4 billion, foreign exchange losses of USD2.1 billion, and unrealized investment losses of USD4.3 billion.

Exhibit 2: Change in ARA^ total equity

The ARA constituents that reported generally experienced strong premium growth in the first nine months of 2018, partly influenced by past M&A activity. Reinsurance premiums were up by around 18 percent, with several companies seeing evidence of heightened demand. Property & Casualty (P&C) net premiums earned increased by 14 percent, one of the contributory factors being higher retrocessional purchases.

The net combined ratio stood at 96.7 percent, down from 111.3 percent in the first nine months of 2017. The contribution from natural catastrophe losses was 4.9 percentage points (pp), down from 18.9pp previously. The benefit from favorable prior year reserve development showed a continued decline from 2.0pp to 1.4pp.

The ordinary investment yield appears to have bottomed-out and showed a small uptick to 2.7 percent in the first nine months of 2018, while unrealized losses on bonds restricted the overall return to 3.0 percent.

Net income stood at USD10.4 billion, up from USD2.2 billion in the first nine months of 2017, representing an annualized return on equity of 7.8 percent, up from 1.5 percent previously.

Source: Company financial statements and Aon Business Intelligence

^The ARA constituents are Alleghany, Arch, Argo, Aspen, AXIS, Beazley, Everest Re, Fairfax, Hannover Re, Hiscox, Lancashire, MAPFRE, Markel, Munich Re, Partner Re, QBE Ren Re, SCOR, Swiss Re, Validus and XL Catlin.
*Excluding Beazley, Hiscox, QBE, Validus and AXA, which did not report 9M 2018 results.
Exhibit 3: Reinsurance sector performance

- **Combined ratio**

- **Ordinary investment return**

- **Return on equity**

- **Valuation – price to book**

Source: Aon Business Intelligence

*Based on Aon's Reinsurance Aggregate*
Alternative capital

Headline growth in alternative capital is slowing, as the continuing entry of new funds is being offset by loss development on past events and redemption requests from a relatively small number of investors looking to exit.

Aon expects the previous rate of growth to resume once this area of the market has fully digested the losses incurred over the last two years. Many long-term investors have made good returns over time and the strategy of investing in insurance risk for diversification purposes remains valid. It is notable for example that Dutch pension fund manager PGGM, one of the largest investors in the space, has just committed USD600 million to a new joint venture with RenaissanceRe, focusing on risk-remote layers in the US property catastrophe market (Vermeer Re).

Exhibit 4: Alternative capital deployment

Source: Aon Securities Inc.

Catastrophe bond issuance totaled USD9.7 billion in 2018, making it the second most active year on record. Total limit outstanding is at a record high of more than USD30 billion.

Exhibit 5: Catastrophe bond issuance by quarter

Source: Aon Securities, Inc.
Slight Increase in Demand and More Focus on Emerging Risks

Despite large reductions in some individual placements, the industry saw a slight uptick in demand for January renewals. Regulatory and rating agency requirements, catastrophe losses emanating from non-peak perils and territories, and a continued positive buying proposition for insurers have been just a few of the factors to contribute to this dynamic.

In addition to the traditional reinsurance market, a number of emerging or evolving risks have seen growth in buying and increased analytics investment, which we expect will translate to increases in risk transfer. A few of these risks include the following:

US flood risk

With respect to US flood exposure, the global reinsurance community demonstrated the continued and expanded commitment for supporting such exposure through the recently completed landmark reinsurance transactions for Federal Emergency Management Agency (FEMA), including the first catastrophe bond covering US flood risk. As the largest insurer of US residential flood risk, FEMA is assisting counterparties to better understand the nature of the flood peril. By engaging with traditional and capital markets to transfer risk from the National Flood Insurance Program (NFIP), FEMA is helping to position these capital providers to better serve the emergent US residential private flood market.
Thus far, the reinsurance community has also displayed a patient willingness towards taking a long-term view of the opportunity to reinsure US flood risk. Immediately after Hurricane Harvey, which resulted in a USD1 billion loss to the NFIP reinsurance program, FEMA successfully placed the 2018 traditional reinsurance program, including an alignment with an additional USD400 million in program capacity. Moreover, FEMA recently completed the 2019 traditional placement at comparable terms, similar capacity, and with a consistent reinsurer panel to the 2018 placement, further demonstrating a stable reinsurance market for flood exposure.

These successful NFIP placements serve to benefit private flood carriers both directly and indirectly. Reinsurers and ILS investors currently have limited options to deploy flood capacity, with many of such capacity sources seeking diversification by way of supporting other flood opportunities. To elaborate, the NFIP portfolio is largely concentrated within high risk flood zones. Thus, reinsurers active in the flood segment are eager to identify private flood portfolios that are uncorrelated with the NFIP.

Moreover, recent catastrophe events involving flood damage have served to highlight where gaps still exist in available flood models. While some of these gaps are being solved through newer models that are becoming publicly available, the level of model maturity and breadth of geographic scope still lags more evolved modeling for perils such as hurricane or severe convective storm. Still, events such as Harvey, Irma, Florence and Michael provide opportunities for learning, with such lessons each emboldening the confidence level for model users in terms of credibility and the relative strengths and weaknesses of each model.

Carriers wanting to develop private flood products and bring such tools to market, especially those that can demonstrate proficiency in risk selection and pricing, will generally find reinsurers and ILS investors receptive. Where there has been some challenge of late are with programs that rely on Lloyd’s of London for Binding Authority capacity.
Global catastrophe losses from natural disasters in 2018 were significantly reduced from the near-record tally incurred in 2017. However, payouts by the private insurance industry and government-sponsored programs were still the fourth-highest on record when comparing historical annual losses on an inflation-adjusted basis. The insured losses were driven by an active year for tropical cyclone landfalls in the Atlantic and Pacific Ocean basins, major US wildfires, and severe convective storm (thunderstorm) events. Given the late-year occurrence and uncertainty surrounding some of 2018’s biggest events, loss totals at this time are to be considered preliminary and subject to change.

Exhibit 6: Insured losses by year by type

Global insured losses in 2018 were tentatively listed at USD85 billion, which is 47 percent higher than the 2000-2017 average of USD56 billion. The losses were 42 percent lower than those sustained in 2017 (USD147 billion). When analyzing the annual loss in relation to the 17-year median, the 2018 value was 64 percent higher (USD52 billion). Median analysis provides a different and more accurate depiction of disaster losses and helps to minimize any skew from outlier data.

From a longer-term perspective dating to 1980, the USD85 billion global insured losses places it as the fourth-most expensive year on record. Losses incurred in 2011 (USD148 billion), 2017 (USD147 billion), and 2005 (USD136 billion) remain higher on an inflation-adjusted basis. For the second consecutive year, the US was the predominant driver of industry losses. It accounted for 65 percent of global industry payouts. APAC was second at 23 percent, EMEA third at 10 percent, and the rest of the Americas at 2 percent.
The costliest peril in 2018 was again tropical cyclone following landfalls by a number of substantial storms in the Atlantic and Western Pacific Ocean basins: Michael (United States), Jebi (Japan), Florence (United States), Trami (Japan), and Mangkhut (Hong Kong, China, and the Philippines). In total, tropical cyclones combined to prompt nearly USD29 billion industry payouts. These totals, however, were substantially reduced from the USD94 billion incurred in 2017 that were primarily driven by hurricanes Harvey, Irma, and Maria. Typhoons Jebi and Trami combined to spawn more than USD10 billion in claims payouts by Japanese insurers, which made 2018 the costliest year on record for the peril with the local industry.

Another significant loss driver was the wildfire peril. The state of California again endured a catastrophic year of fire events, which included three major conflagrations: Camp Fire (November), Woolsey Fire (November), and Carr Fire (July and August). The Camp Fire alone is tentatively expected to produce claims payouts nearing or exceeding USD11 billion; the costliest individual industry event of 2018. Overall insured wildfire payouts globally topped USD17 billion. This is even higher than the USD16.5 billion in payouts during 2017.

The severe weather (convective storm) peril also cited elevated losses around the globe, though it was the lowest since 2015. More than USD18 billion in global payouts were made due to tornadoes, large hail, and damaging straight-line winds. Nearly USD15 billion of those payouts were made in the United States which was again largely driven by large hail and damaging straight-line wind impacts. Other significant thunderstorm events included a multi-day late-season storm event in Italy and a major hailstorm which swept across the greater Sydney, Australia metro region in late December.

Exhibit 7: Insured losses by region

![Graph showing insured losses by region](image_url)

Source: Aon’s Analytics Division in Reinsurance Solutions

To find the most up-to-date global catastrophe loss data for 2018, and other historical loss information, please visit Aon’s Catastrophe Insight website: [http://catastropheinsight.aon.com/](http://catastropheinsight.aon.com/).

Impact Forecasting’s Weather, Climate and Catastrophe Insight: 2018 Annual Report will be released in mid-to late-January 2019 and include a complete and comprehensive overview of the year’s events.
Second Year of Major California Wildfire Losses Lead to Great Peril Focus

For two consecutive years in 2017 and 2018, the state of California has been ravaged by catastrophic wildfires. Six of the ten most destructive fires on record in the state were registered during a 16-month stretch from July 2017 to November 2018; see exhibit below. These six fires alone are estimated to have cost the insurance industry nearly USD32 billion in claims payouts. That combined loss total would rank as one of the top five insured loss events ever recorded for any peril. Given these high levels of losses, it is causing further conversation within the reinsurance industry regarding the wildfire peril.

Exhibit 8: Ten most destructive wildfires

<table>
<thead>
<tr>
<th>Ran</th>
<th>Fire Name</th>
<th>Start Month</th>
<th>Affected Counties</th>
<th>Acres</th>
<th>Structures</th>
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</thead>
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<tr>
<td>1</td>
<td>Camp</td>
<td>November 2018</td>
<td>Butte</td>
<td>153,336</td>
<td>18,804</td>
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<tr>
<td>2</td>
<td>Tubbs</td>
<td>October 2017</td>
<td>Sonoma</td>
<td>36,807</td>
<td>5,636</td>
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<td>3</td>
<td>Tunnel (Oakland)</td>
<td>October 1991</td>
<td>Alameda</td>
<td>1,600</td>
<td>2,900</td>
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<tr>
<td>4</td>
<td>Cedar</td>
<td>October 2003</td>
<td>San Diego</td>
<td>273,246</td>
<td>2,820</td>
</tr>
<tr>
<td>5</td>
<td>Valley</td>
<td>September 2015</td>
<td>Lake, Napa &amp;</td>
<td>76,067</td>
<td>1,955</td>
</tr>
<tr>
<td>6</td>
<td>Witch</td>
<td>October 2007</td>
<td>San Diego</td>
<td>197,990</td>
<td>1,650</td>
</tr>
<tr>
<td>7</td>
<td>Woolsey</td>
<td>November 2018</td>
<td>Ventura</td>
<td>96,949</td>
<td>1,643</td>
</tr>
<tr>
<td>8</td>
<td>Carr</td>
<td>July 2018</td>
<td>Shasta &amp; Trinity</td>
<td>229,651</td>
<td>1,604</td>
</tr>
<tr>
<td>9</td>
<td>Nuns</td>
<td>October 2017</td>
<td>Sonoma</td>
<td>54,382</td>
<td>1,355</td>
</tr>
<tr>
<td>10</td>
<td>Thomas</td>
<td>December 2017</td>
<td>Ventura &amp; Santa</td>
<td>281,893</td>
<td>1,063</td>
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</table>

Source: Cal Fire

Perhaps the most frequent question being asked is: What has happened in 2017 and 2018 to justify the spike in losses? The answer, unfortunately, is not easily defined. There are several combining factors that have prompted an increased risk in California. However, these increased wildfire risks are not entirely delegated to California, but to many areas with similar topography and weather phenomena around the world. For California specifically, the state has endured rather notable stretches of extended drought following rainy seasons that have produced enough precipitation to spawn vegetative growth. This pattern of rain and drought has led to abundant fuels—or dead vegetation—to exist and accumulate throughout Northern and Southern California.

However, California fire officials and state climatologists have noted an evolving shift in precipitation patterns. The state’s water year officially begins on October 1 and rains have historically begun around this time; however, in recent years, the rainy season has been delayed by several weeks. This has allowed summer-like drying to persist much deeper into the year and that only enhances the potential of fire conditions as seasonal “Santa Ana” or “Diablo” winds arrive during the autumn months.

Both “Santa Ana” winds and “Diablo” winds are caused by nearly identical meteorological conditions. The only difference is that the wind pattern is known as “Santa Ana” in Southern California and “Diablo” in Northern California. Northern California high wind and fire events are also highly susceptible to strong downsloping winds from the Coast Range and Sierra Nevada mountains. Santa Ana wind events are typically most common between September and April with an average duration of roughly two days. The continuation of Santa Ana conditions in Southern California lasting for nearly a week is anomalous.
Separately, Diablo wind events are most common during the Spring and Fall months, though these events are most dangerous during the Fall months due to much drier vegetation.

Beyond changes in fire behavior, insufficient fire suppression tactics, reduced soil moisture, growing climate change enhancements to weather phenomena, changing fire behavior, and a nearly year-round fire season are all leading to greater wildfire risk in California, there has been increasing population and exposure growth into counties and areas known to be at risk to wildfires. These areas are known as the Wildland Urban Interface (WUI) and the Intermix WUI.

In a 2010 report by the California Department of Insurance, it was determined that an estimated 4.46 million homes – or 32.6 percent – of all homes in California were living in WUI areas. WUI areas are defined as those where structures are in or near wildland vegetation and poses the greatest risk of fire potential. Given the continued increase in annual population since that time, it is likely that this figure has continued to grow. The continued growth in exposure and population in these known areas means that there is greater opportunity for costly events to occur. This is especially true if larger and more intense fire events are realized.

The Intermix WUI zone includes areas in which structures and wildland vegetation directly intermingle. Studies have shown that there continues to be greater exposure growth in interface WUI areas than intermix WUI – which further enforces the fire damage risk.

Exhibit 9: Map of WUI zones in California

Source: California Department of Insurance
Camp Fire

In December 2018, a team of scientists, brokers, and other Aon colleagues visited Northern California to assess damage caused by the Camp Fire. The survey helped provide greater clarity regarding the behavior of the fire and studying which structures had success in surviving versus those which did not. It was determined that the rapid speed and directionality shifts of the fire left most structures in Paradise at substantial risk of impact regardless of building construction or mitigation tactics in place. In instances where singular structures were left unaffected amid near complete loss within a densely populated area, firefighters listed the reason as almost entirely due to good luck.

Another significant component to non-structural loss is the smoke damage component. Many structures which survived within the Camp Fire perimeter sustained a near total loss of indoor contents due to heavy smoke. This, in addition to net loss business interruption, will lead to further heightened industry payouts from the event.

Similar to the aftermath of the 2017 Atlantic hurricanes and California wildfires, it will be many months for before the industry losses fully settle. This extended process of loss development – which is also referred to as “loss creep” – is defined by the prospect of pending litigation, prolonged business interruption, and other reasons which may lead a delay in claims closure.

Exhibit 10: Camp Fire progression

Source: Aon’s Analytics Division in Reinsurance Solutions
Rating Agency and Regulatory Updates

S&P criteria proposals may impact capital management strategies

On November 26, 2018, Standard and Poor’s (S&P) issued a Request for Comment (RFC) for the “Hybrid Capital: Methodology and Assumptions” criteria, with comments due back on January 18, 2019. A key change S&P is proposing results in no equity content being granted for hybrid capital issued before 2008, as these hybrids will no longer meet the guidelines for residual maturity of at least 20 years. This change is anticipated to impact up to 6 percent of hybrids issued by insurance companies. While there is no change to S&P’s Insurance Capital model, capital adequacy will be negatively impacted for these companies. A change in equity credit for issuances will impact capital management strategies, which may include refinancing or retiring securities and/or utilizing tactical reinsurance to manage capital requirements.

S&P also recently released two other RFCs on criteria papers related to the insurance industry:

- “Insurers Rating Methodology” – comments are due by February 1, 2019
- “Group Rating Methodology” – comments are due by January 31, 2019

The main purpose of these proposed changes is to simplify and consolidate existing criteria papers, as well as to allow more room for analytical judgment. There are features in each proposal that may influence a company’s capital management strategy going forward. For example, there will no longer be credit for “strong” Financial Flexibility (renamed Funding Structure) when determining the Financial Risk Profile assessment.

Once S&P receives feedback from the industry, they will review and publish all comments before issuing the final criteria updates that will be effective immediately once posted. For more information, please see our summary of each RFC in our latest Evolving Criteria Bulletin.

Moody’s cyber exposure incorporated into rating analysis

In the fourth quarter of 2018, Moody’s created a Cyber Risk Group and announced plans to begin incorporating cyber exposure into their credit ratings of (re)insurer and corporate companies. During their annual Insurance Conference on November 15, 2018, Moody’s expressed that they will begin to evaluate companies’ risk to a major impact from a cyberattack. Increased focus on how companies manage cyber exposure may provide an opportunity for the cyber market to continue to grow further for both primary and reinsurance companies.
Recent rating activity using A.M. Best building block approach

A.M. Best finalized their new Best’s Credit Rating Methodology (BCRM) on October 13, 2017. Since the criteria was finalized, Aon has been tracking the building block assessments given to each rating unit. Currently 96 percent of global rating units have been rated under the new criteria. Of those, 174 companies have gone through this process more than once. Below is a full breakdown of which building block assessment changed for companies that were upgraded or downgraded from their initial rating under the new criteria.

Exhibit 11: Breakdown of building block assessment changes

Source: A.M. Best company reports

Almost half of the recent upgrades have resulted from a higher Balance Sheet Strength assessment. Many of these assessments were a result of stronger BCAR scores. Fourteen percent of upgrades were due to an improvement in the ERM assessment from “Marginal” to “Appropriate.”

The ERM assessment was the contributing factor for nearly half of the downgraded rating units, with most of the impacted companies now receiving a "Marginal" assessment for ERM. Many of these companies were impacted by loss events in 2017 and 2018 directly or through an affiliated rating unit. Risk tolerance and ability to absorb stress events remain key topics for A.M. Best’s ERM discussions.