Reinsurance Market Outlook

Record Capacity Sufficient to Meet Current Demand Increase and Future Innovations

January 2017
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Executive Summary: Record Capacity Sufficient to Meet Current Demand Increase and Future Innovations

Reflecting a new peak in supply, capacity continues to outpace the growth of reinsurance demand despite insurers continued efforts to optimize their view of reinsurance as capital and expand into growing lines of business and new innovation.

Reinsurance capital continued to climb, increasing 5.3 percent to USD 595 billion through nine months at September 30, 2016. While traditional reinsurance capital increased 4.7 percent during the period, alternative capital increased by only 9.6 percent, the smallest growth it has reported in 5 years. This result further suggest that traditional capacity is using all the tools at its disposal in order to stave off market share growth from alternative capital.

Overall demand increased for the industry, but growth has been isolated to few regions and lines of business. For January 2017 renewals, some insurers in the US and Europe looked to secure additional property catastrophe capacity as terms and conditions continued to move in their favor and/or they looked to meet new regulatory requirements and evolving rating agency thresholds. While growth in new lines such as mortgage and cyber also continues, slow insurance growth in many regions with low primary insurance penetration saw stable reinsurance demand. Importantly, further evidence of insurer appetite for growth is surfacing in the form of investments in innovative insurer technologies in both organic and inorganic forms.

Beyond demand increases, insurers in a number of global regions also looked to increase the proportion of protection provided on a multi-year basis as reinsurers in turn looked to lock in participations.

Insured catastrophe losses ended 2016 at USD 53 billion, slightly above the 10 year average for the first time since 2012 and sixth in insured catastrophe loss activity over the last 25 years. Despite this, uninsured losses continue to highlight the protection gap in coverage for emerging markets. In addition, macro catastrophe loss impacts on the reinsurance market were mitigated by the higher contribution in loss activity from perils like severe convective storm, flood, and fire that typically result in lower ceded losses.

As we look to future 2017 renewals, the pick-up of M&A activity in Q4 2016 and potential interest rate increases could signal potential capacity restrictions. Our expectation is that these impacts will be slow to manifest and enough excess capital remains in the market to continue the trend for better terms and conditions for insurers seen at January 2017.

Note: This reinsurance market outlook report should be read in conjunction with our firm’s views on rate on line, demand and retention changes for each cedent’s market. Our professionals are prepared to discuss variations from our market sector outlook that apply to individual programs due to established trading relationships, capacity needs, loss experience, exposure management, data quality, model fitness, expiring margins and other factors that may cause variations from our reinsurance market outlook.
Reinsurance Supply Advances to New Peak

Aon Benfield estimates that global reinsurer capital rose by 5.3 percent to a new high of USD595 billion over the nine months to September 30, 2016. This calculation is a broad measure of the capital available for insurers to trade risk with and includes both traditional and alternative forms of reinsurer capital.

Equity capital available to support reinsurance underwriting is at peak levels and debt continues to be available on very favorable terms. As a result, ample capacity currently exists to meet expected reinsurance demand.

Exhibit 1: Change in global reinsurer capital

Source: Aon Benfield Analytics
Unrealized gains drive traditional capital

Traditional capital rose by 4.7 percent to USD517 billion over the nine months to September 30, 2016, driven by solid reinsurer earnings and unrealized gains on bond portfolios resulting from declines in interest rates. All but one of the major reinsurers monitored in the Aon Benfield Aggregate peer study reported growth in equity during the period.

The average combined ratio among the twenty Aon Benfield Aggregate companies reporting nine month results was 90.9 percent, up from 88.4 percent in the same period of the prior year. Return on equity stood at 9.1 percent, down from 10.2 percent previously, despite material support from unrealized gains. This remained an attractive return relative to risk-free rates. Active capital management in the form of dividend payments and share buyback programs meant that retained earnings made only a limited contribution to capital growth.

Exhibit 2: Reinsurance sector performance

Source: Individual company records, Aon Benfield Analytics
Alternative capital focuses on collateralized reinsurance

Insurance risk continues to attract capital market investors. Expected returns have declined, but remain attractive relative to other available opportunities, and low correlation with other asset classes (except in the most extreme scenarios) remains a key consideration.

Alternative capital rose by 9.6 percent to USD78 billion over the nine months to September 30, 2016, principally reflecting additional deployment into collateralized reinsurance structures. Certain maturing catastrophe bonds did not renew during 2016 and, as a result, new issuance fell to USD6.0 billion, from USD6.9 billion in 2015.

Exhibit 3: Alternative capital deployment

Source: Aon Securities, Inc.
New capacity

Regulatory change and capital availability is resulting in new reinsurance company formations in rapidly developing markets such as China and India. New carriers in the final stages of launching include Qianhai Re, Nine Merchants Re and ITI Re. At Lloyd’s, four new syndicates have been launched for 2017, three of which can be regarded as truly innovative. All four are backed to some extent by traditional Lloyd’s Names.

The overall underwriting capacity of the Lloyd’s market exceeds GBP30 billion for the first time in 2017. The increase of 10 percent relative to 2016 largely reflects the impact of Sterling devaluation since the Brexit vote—more than 50 percent of Lloyd’s business is underwritten in US Dollars.

Exhibit 4: New Lloyd’s Syndicates for 2017

<table>
<thead>
<tr>
<th>Syndicate Number</th>
<th>Managing Agent</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1438</td>
<td>Capita</td>
<td>Shariah-compliant ‘Cobalt’ Syndicate led by Chairman Max Taylor, CEO Richard Bishop and Active Underwriter Anne Plumb (ex-Novae). Investors include Capita, Armour Group, Bank of London and the Middle East and staff. Stamp capacity GBP75mn, part supported by reinsurance capital and Names.</td>
</tr>
<tr>
<td>2689</td>
<td>Asta</td>
<td>‘Verto’ Syndicate led by Active Underwriter Peter Mills (ex-Endurance Re) and backed by Names advised by Hampden. Will provide capital-backed quota share capacity to other syndicates. Initial stamp capacity GBP50mn.</td>
</tr>
<tr>
<td>2988</td>
<td>Brit</td>
<td>Third party capital backed Syndicate 2988 will write companion or ‘top-up’ lines alongside Brit Syndicate 2987 across a broad range of specialty insurance and reinsurance classes. The business will be underwritten by Brit’s existing teams. Initial stamp capacity GBP55mn.</td>
</tr>
<tr>
<td>5886</td>
<td>Asta</td>
<td>‘Blenheim’ Syndicate operated by senior managers formally at Cathedral (CEO Peter Scales, CFO John Lynch, Active Underwriter Nick Destro). Will underwrite US and international treaty, D&amp;F business and some speciality lines. Capacity GBP150mn, supplied by Nephila (~33%), trade capital and Names.</td>
</tr>
</tbody>
</table>

Source: Aon Benfield Analytics
Mergers and acquisitions (M&A)

After a relatively subdued first nine months, corporate M&A activity in the specialty insurance and reinsurance markets picked-up strongly in the final quarter of 2016. Further sector consolidation is considered likely in 2017, given current market dynamics.

Exhibit 5: Specialty M&A transactions announced in 2016

<table>
<thead>
<tr>
<th>Acquirer</th>
<th>Target</th>
<th>Target GPW (USDmn)</th>
<th>Value (USDmn)</th>
<th>Date Announced</th>
<th>P/BV Multiple</th>
<th>Notes/Rationale</th>
</tr>
</thead>
</table>
| AmTrust Financial | ANV Holdings | 710 | 203 | Apr 2016 | 1.1x | • AmTrust Financial backs Lloyd’s Syndicates 0044, 1206 and 2526  
• ANV Holdings backs Syndicates 0779, 1861 and 5820  
• The deal completed in November 2016, the rationale being to achieve economies of scale and an enhanced presence at Lloyd’s |
| Canada Pension Plan Investment Board (CPPIB) | Ascot at Lloyd’s | 1,100 | 846 | Sep 2016 | ~1.6x | • AIG sold its 20 percent interest in the Ascot managing agency and 100 percent interest in Ascot Corporate Name Ltd to Canada Pension Plan Investment Board  
• Completed in November 2016 for net cash proceeds of USD240mn, with USD625mn of supporting capital also released |
| Sompo Holdings | Endurance | 1,950 | 6,300 | Oct 2016 | 1.36x | • Growth in overseas business and earnings  
• Improvement of capital efficiency and adjusted consolidated ROE  
• Assists towards becoming a top 10 publicly-listed insurer  
• Closure expected before the end of March 2017 |
| Shenzhen Qianhai Financial Holdings and Shenzhen Investment Holdings | Asia Capital Re | ~800 | 1,000 | Oct 2016 | 1.25x | • The investors are owned by the Chinese state  
• Asia Capital Re represents their first overseas reinsurance investment; the aim is to accelerate their growth ambitions outside China  
• Closure expected by the end of January 2017 |
| Argo Group | Ariel Re | 420 | 235 | Nov 2016 | 1.25x | • Adds diversification and new capabilities  
• Builds critical mass in London and Bermuda  
• Creates 15th largest Lloyd’s business  
• Completion expected in the first quarter of 2017 |
| Liberty Mutual | Ironshore | ~2,200 | 3,000 | Dec 2016 | 1.45x | • Provides additional scale, expertise, innovation and market relationships to Liberty Mutual’s USD5bn Global Specialty business  
• Closure expected in the first half of 2017 |
| Fairfax | Allied World | ~3,000 | 4,900 | Dec 2016 | 1.35x | • Brings a world-class specialty insurance and reinsurance franchise  
• Enhances Fairfax’s global insurance franchise and significantly deepens its presence in the US market  
• Allied World to operate as a separate decentralized company within Fairfax  
• Closure expected in the first half of 2017 |

Source: Aon Benfield Analytics
Reinsurance capacity outlook

The ultra-low interest rate environment that has persisted in the developed world since the financial crisis has had a significant impact on the global reinsurance market. Notably:

- Reported capital positions have been inflated by unrealized gains on bonds
- Ordinary investment yields have declined by around 40 percent
- Insurance risk has become relatively more attractive as an asset class
- New business models based on total return strategies have emerged

Long-term rates in the US and the UK have risen by almost 100 basis points since their summer lows, as political developments have resulted in higher inflation expectations. Rates in the Eurozone, Japan and Switzerland also show modest increases, but remain close to zero. Reinsurers will incur unrealized losses on bond portfolios in the fourth quarter, impacting both full-year earnings and reported capital positions.

On December 14, 2016, the US Federal Reserve raised its benchmark interest rate by 0.25 percent, to a range of 0.50 percent to 0.75 percent, reflecting the strengthening US economy. A quarter-point increase a year earlier ended a seven year period during which the target range was held at zero to 0.25 percent. If this finally marks a move towards a more normalized policy rate environment, it will have significant implications for the reinsurance sector globally.

Rising interest rates will result in unrealized losses on bonds, negatively impacting earnings and reported capital positions. In addition, other investment opportunities will begin to look relatively more attractive to investors. On the plus side, the downward march of new money yields should gradually be reduced over time, which in turn may reduce some of the impetus for M&A activity.

The Federal Reserve forecasts only gradual increases of its benchmark interest rate to 1.4 percent in 2017, 2.1 percent in 2018 and 2.9 percent in 2019, taking into account the highly uncertain economic outlook and an expected increase in spending under the incoming Trump administration. Gross domestic product (GDP) and inflation are currently forecasted to remain stable at around 2.1 percent and 1.9 percent respectively over this period.

Exhibit 6: Ten year government bond yields

![Exhibit 6: Ten year government bond yields](source: Aon Benfield Analytics)
Rating Agency Criteria Changes are Becoming a Reality; Impact = Slight Increase in Demand; Cost of Reinsurance Capital Lowers

A.M. Best released a second draft of the US Property & Casualty stochastic-based BCAR and Best’s Credit Rating Methodology (BCRM) criteria papers on November 14th. Also released on this date were draft criteria methodology for the stochastic-based US Life & Health and Universal BCAR models.

A.M. Best makes major changes from initial draft criteria release in March

As had been informally communicated by A.M. Best since the first draft release, the 99.6 confidence interval (CI) (250 year return period) was added to the model and the 99.9 CI (1,000 year return period) was removed. The 99.8 CI (500 year return period) will be calculated but unpublished and will be used in discussions regarding how companies manage tail risk as part of enterprise risk management evaluations. A.M. Best cited issues of consistency and availability of data globally as reasons for removing the 99.8 and 99.9 CIs from the balance sheet assessment.

The 99.6 confidence interval is now the highest published return period and the basis for obtaining a BCAR assessment of ‘Very Strong’ or ‘Strongest’. To receive the ‘Strongest’ BCAR assessment, companies need to have a score greater than 25 percent at the 99.6 CI. For ‘Very Strong’ the BCAR threshold is 10 percent at the 99.6 CI. Given we estimate 97 percent of companies in our sample to have a BCAR descriptor of ‘Strong’ or higher, we expect the 200 and 250 year return periods will become greater considerations for reinsurance purchasing decisions.

Under the original criteria draft in March, A.M. Best moved the location of the catastrophe risk charge within the net required capital formula as ‘B8’ risk instead of as a deduction to surplus. This was done to be consistent with the other risk areas and to keep adjusted surplus the same across all confidence intervals. The B8 risk charge was originally outside of the covariance adjustment so the full amount was added to net required capital. A.M. Best revisited the covariance formula and noted that making the catastrophe charge separate implies that catastrophe risk is not diversifying to the other risks (investment, credit, premium, reserves). Under the updated BCAR criteria, the B8 catastrophe risk charge is now part of the covariance.

Exhibit 7: Stochastic-Based BCAR: How to Interpret the New Model

<table>
<thead>
<tr>
<th>BCAR Assessment</th>
<th>Original Draft BCAR</th>
<th>Amended Draft BCAR</th>
<th>ICR (Issuer Credit Rating)</th>
<th>FSR (Financial Strength Rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongest</td>
<td>&gt;0 at 99.8</td>
<td>&gt;25 at 99.6</td>
<td>a+ / a</td>
<td>A</td>
</tr>
<tr>
<td>Very Strong</td>
<td>&gt;0 at 99.9</td>
<td>&gt;10 at 99.6</td>
<td>a / a-</td>
<td>A / A-</td>
</tr>
<tr>
<td>Strong</td>
<td>&gt;0 at 99.5</td>
<td>&gt;0 at 99.5</td>
<td>a- / bbb+</td>
<td>A- / B++</td>
</tr>
<tr>
<td>Adequate</td>
<td>&gt;0 at 99</td>
<td>&gt;0 at 99</td>
<td>bbb+ / bbb / bbb+</td>
<td>B++ / B+</td>
</tr>
<tr>
<td>Weak</td>
<td>&gt;0 at 95</td>
<td>&gt;0 at 95</td>
<td>bb+ / bb / bb-</td>
<td>B / B-</td>
</tr>
<tr>
<td>Very Weak</td>
<td>&lt;0 at 95</td>
<td>&lt;0 at 95</td>
<td>b+ and below</td>
<td>C++ and below</td>
</tr>
</tbody>
</table>

Original Draft released March 10, 2016
Amended Draft released November 14, 2016
formula that reduces the net impact on required capital all else equal. However, this benefit to companies is lessened as the risk charge will now be on a pre-tax basis (whereas it was previously net of a 35 percent tax benefit for US tax paying entities).

A.M. Best cited consistency with other components of the net required capital calculation for removing the tax benefit, since the other risk components are not tax-effected.

Aon Benfield calculated the impact of this change based on more than 125 clients’ 2015 results and created the below charts to highlight the impact on median scores. The change is around 3-7 points for each median level. However, the medians are for all P&C companies and include casualty companies who were not affected.

Key observations from Aon Benfield’s sample group are:

- Companies with significant catastrophe exposure saw greater increases in BCAR at the 99.6 CI; the largest increase from our sample was 20 points at the 99.6 CI
- Companies that were not receiving a tax benefit reduction to the catastrophe charge under the current model saw higher increases in their scores after the B8 risk was moved within the covariance formula
- Less than 10 percent of companies in our sample experienced a drop in their score at the 99.6 CI as the removal of the tax benefit was more significant than the inclusion into covariance; this affected companies whose catastrophe charge was significantly higher than other risk areas

A.M. Best will continue to apply a catastrophe stress test by deducting a 100 year All-Perils net loss (including any reinstatement premiums) from surplus along with making adjustments for additional credit and reserve risk. This is in addition to the B8 catastrophe risk charge that varies by confidence interval. Under the updated draft criteria, the catastrophe stress event will be on a pre-tax basis, consistent with the B8 risk charge. Aon Benfield views this treatment as inconsistent with other surplus adjustments, such as UPR equity, reserve equity and fixed income equity, which are calculated on a post-tax basis. We expect using a pre-tax net PML loss instead of a post-tax reduction to surplus for the catastrophe stress test will be challenged by the industry.

A.M. Best noted that BCAR will remain only one component of the overall rating assessment; although as their key measure for balance sheet strength, it is a very important measure companies use to set capital management strategies. The changes from the second release are generally favorable for property companies, especially for companies that have substantial PML increases at the 500 and 1,000 year return periods. See our Evolving Criteria Bulletin – Update on US Stochastic-Based BCAR and Best’s Credit Rating Methodology (BCRM) for a more detailed review.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Current</th>
<th>95%</th>
<th>99%</th>
<th>99.5%</th>
<th>99.6%</th>
<th>99.8%</th>
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<tbody>
<tr>
<td>A++ / A+</td>
<td>219</td>
<td>64</td>
<td>43</td>
<td>31</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>A</td>
<td>276</td>
<td>73</td>
<td>61</td>
<td>56</td>
<td>54</td>
<td>43</td>
</tr>
<tr>
<td>A-</td>
<td>241</td>
<td>69</td>
<td>55</td>
<td>43</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>B++</td>
<td>189</td>
<td>60</td>
<td>44</td>
<td>38</td>
<td>36</td>
<td>17</td>
</tr>
<tr>
<td>B+</td>
<td>171</td>
<td>66</td>
<td>49</td>
<td>37</td>
<td>18</td>
<td>(64)</td>
</tr>
<tr>
<td>All</td>
<td>248</td>
<td>69</td>
<td>55</td>
<td>46</td>
<td>39</td>
<td>32</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Rating</th>
<th>Current</th>
<th>95%</th>
<th>99%</th>
<th>99.5%</th>
<th>99.6%</th>
<th>99.8%</th>
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</thead>
<tbody>
<tr>
<td>A++ / A+</td>
<td>219</td>
<td>67</td>
<td>51</td>
<td>37</td>
<td>31</td>
<td>23</td>
</tr>
<tr>
<td>A</td>
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<td>75</td>
<td>64</td>
<td>59</td>
<td>56</td>
<td>49</td>
</tr>
<tr>
<td>A-</td>
<td>241</td>
<td>72</td>
<td>59</td>
<td>48</td>
<td>43</td>
<td>35</td>
</tr>
<tr>
<td>B++</td>
<td>189</td>
<td>64</td>
<td>49</td>
<td>43</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>B+</td>
<td>171</td>
<td>67</td>
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<td>37</td>
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<td>(42)</td>
</tr>
<tr>
<td>All</td>
<td>248</td>
<td>72</td>
<td>59</td>
<td>49</td>
<td>45</td>
<td>35</td>
</tr>
</tbody>
</table>
Cost of reinsurance capital for catastrophe risk is lower for most companies

Under the amended stochastic-based BCAR model, catastrophe reinsurance is more accretive for 80 percent of companies as compared to the current BCAR model framework. One main reason is that companies will now receive quantitative benefit from buying reinsurance above the 100 year wind return period up to the 200 or 250 year all perils return period. We estimate ceded ROEs, or the cost of reinsurance capital, for catastrophe reinsurance programs will be 50 to 100 basis points lower under the amended draft BCAR for most companies. Additionally, as A.M. Best is calculating and considering the 99.8 CI, catastrophe reinsurance purchased up to the 500 year return period will receive qualitative credit in enterprise risk management assessments.

A.M. Best issues draft criteria for US Life & Health BCAR model

In the life & health stochastic-based draft criteria, companies saw capital factors for most asset classes double. Additionally, there are significantly higher factors for interest rate risk on annuities and premium and reserve factors for health business. Life and health companies have the same BCAR thresholds to achieve the highest BCAR assessments (25 percent or 10 percent at the 99.6 CI). Companies we believe could be exposed to negative ratings pressure from these proposed changes to the BCAR model are those with a large concentration of riskier asset classes, high asset leverage and those that currently have low BCAR scores relative to their rating level. Health companies that are thinly capitalized under the current model may be concerned about the increase in morbidity premium factors. See our Evolving Criteria Bulletin – Update on US and Canadian Life & Health Stochastic-Based BCAR Model for a more detailed review.

A.M. Best issues draft criteria for Universal BCAR model

The Universal BCAR model is used for all companies that do not file either US or Canadian statutory financial statements. This model can accommodate both P&C and life & health business into one combined model. The foundation of this model is consistent with the format and factors from the US models. Companies outside the US are beginning to receive their output under the draft universal model and will continue to do so over the next several months. See our Evolving Criteria Bulletin – Update on Universal Stochastic-Based BCAR Model for a more detailed review.

Timeline—what comes next?

The public comment period for the new BCAR models referenced above and for Best’s Credit Rating Methodology (BCRM) is open until March 1, 2017. During 2017, all remaining criteria papers will be updated and released for comment. All new criteria procedures and methodologies are expected to be implemented concurrently by late 2017. However, the timing will depend on the comments received by the industry. Aon Benfield will continue to discuss the proposed criteria with clients and provide feedback to A.M. Best.
Regulatory Developments on the Horizon; Impact = Slight Increase in Demand

Regulatory developments remain an important topic for all companies. Many companies faced new regulatory requirements in 2016 such as Solvency II, C-ROSS and US Own Risk Solvency Assessment (ORSA). Across all regions, regulators continue to increase the capital requirements by raising minimum capital standards, refining capital models, reevaluating catastrophe risk exposure and expanding their reviews to assess risk management processes. The impact of these actions is closing the gap between rating agency and regulatory capital requirements. As such, Aon Benfield sees pockets of the market where increasing regulatory requirements will push up demand for reinsurance in the near future.

North America—ORSA development

In 2016, five additional states joined the list of states with Own Risk Solvency Assessment (ORSA) legislations. As of the publication release date, 40 states adopted the ORSA requirements, while one additional state has pending legislations for adoption. The US National Association of Insurance Commissioners (NAIC) is anticipating all states will adopt the model act into law by end of next year. Approximately 200 reports were filed during 2015 and it is estimated 300 reports will be filed on an annual basis once the model act is adopted by all states. For companies that filed their reports during 2015, state regulators are in process of providing feedback prior to the 2016 submissions. Among the key comments provided on 2015 reports are quantifying critical risk exposures and stress testing. Companies were asked to demonstrate sufficient capital in stress scenarios and articulate rationales for selecting particular stress events.

US risk based capital (RBC)—catastrophe risk charge

The NAIC is fairly close on adopting the final implementation date for the RBC catastrophe risk charge. The targeted effective timeframe is year-end 2017 reporting year, which will be filed in March 2018. Thus far, key approaches for calculating the RBC risk charge agreed upon by the NAIC include:

- Separate charge applied to 1-in-100 year modeled hurricane and earthquake loss net of reinsurance
- CAT charges subject to the covariance adjustment
- Contingent credit risk charge applied at 4.8 percent on reinsurance recoverables
- Allow companies to report both Aggregate Exceedance Probability (AEP) and Occurrence Exceedance Probability (OEP) modeled results

Prior to the catastrophe risk charge being officially included in the RBC formula, a few more aspects need to be finalized:

- Finalize models (internal and external) that can be used for filing purposes
- If additional perils should be in the catastrophe risk charge
- Whether to add a factor to artificially increase OEP results to approximate AEP results

While the inclusion of a catastrophe charge lowers RBC results across the board, we estimate this only has a meaningful impact on a small portion of US companies. Many Florida homeowners companies will experience a material drop in RBC once the catastrophe risk charge is adopted and may likely consider increased use of reinsurance to manage regulatory capital requirements.

States Adopted ORSA Model

| AL, AK, AR, AZ, CA, CO, CT, DE, FL, GA, HI, IA, IL, IN, KS, KY, LA, ME, MI, MN, MO, MT, ND, NE, NH, NJ, NY, NV, OH, OK, OR, PA, RI, TN, TX, VA, VT, WA, WI, WY |

States with Actions Pending

| MA |
Europe — Solvency II

After a long development period the introduction of the new solvency regime has proceeded relatively smoothly, albeit with the aid of certain ‘transitional measures’, designed mainly to help life insurers address the challenges of the low interest rate environment. The change was easiest for larger, more sophisticated (re)insurers that were already managing their businesses in accordance with S2 principles and with regard to significantly higher capital thresholds required by the rating agencies. Many have achieved internal model approval, allowing them to benefit from diversification in their SCR calculations. Smaller companies have found converting to the new regime more difficult, with greater pressure on unrated mutuals, monoline insurers and captives that lack diversification and do not have easy access to new funds.

The introduction of S2 has potentially important impacts on reinsurance supply and demand across the EU, as outlined below:

- S2 has been a catalyst for improved risk management across the EU (re)insurance industry, driven by the requirement for all firms to conduct an ORSA
- The mark-to-market nature of the regime has increased the volatility of capital positions
- EU firms underwriting capital-intensive products will increasingly use hedging strategies to mitigate their exposures
- High levels of uncertainty within legacy reserves drive higher regulatory capital requirements
- Capital loadings will discourage EU (re)insurers from buying cover from reinsurers based in a territory that is neither subject to S2 nor deemed S2 equivalent
- For reinsurance purposes, currently only Bermuda, Japan and Switzerland are deemed equivalent (negotiations between the EU and the US are in progress)
- EU cedents will need to carefully consider the extent to which any collateral posted by the reinsurer will enable it to take credit for the reinsurance
- Reinsurance will need to demonstrate genuine risk transfer, limiting some forms of financial reinsurance that have been used in the past
- S2 will recognize securitization and derivatives as effective risk mitigation techniques, which could help to stimulate further interest from EU sponsors
- S2 formalizes the advantages of large diversified groups, which may act as a catalyst for M&A
Asia Pacific

Throughout 2016 and continuing into 2017, the main theme of regulatory change in Asia Pacific was enhanced requirements on regulatory capital and risk management.

Effective January 1, 2016, the China Risk Oriented Solvency System (C-ROSS) was formally implemented and applies to all three pillars of C-ROSS: quantitative capital requirements, qualitative supervisory requirements and market discipline mechanisms. In Hong Kong, a 3-pillar RBC regime is being built, although implementation dates have not yet been determined. In India, the Insurance Regulatory and Development Authority (IRDA) set up a committee in June 2016 to study the approach to move towards RBC and liability valuation.

In countries where RBC has already been in place, the regulators are reviewing the system and making enhancements. In Japan, the Financial Service Agency (FSA) decided to conduct field tests covering all insurance companies with the aim of considering the economic value-based evaluation and supervisory method. This is the third field test following prior tests conducted in June 2010 and June 2012. In Singapore, the Monetary Authority of Singapore (MAS) issued the third RBC 2 consultation paper on proposed revisions to the RBC framework for insurers, taking into account feedback from the industry. In Thailand, the Office of the Insurance Commission (OIC) is building the RBC 2 regime. In Philippines, the Insurance Commission (IC) is introducing new RBC framework, although the implementation is expected to be behind schedule (originally planned to be adopted on June 30, 2016).

Regulatory requirements on risk management have also been upgraded. As the industry became accustomed to the new regulatory capital requirements in China, the regulator began enforcing qualitative supervisory requirements thus motivating insurers to improve their risk management practices. In Japan and Singapore, the regulators have implemented the ORSA requirement. In September 2016, Japan FSA published results of ERM assessments based on ORSA reports and ERM hearings, with the results classified into Assessment Levels 1 – 5. Less than 20 percent of insurers assessed are in the best two levels, i.e. Level 5 and 4.

Other notable regulatory trends in Asia Pacific include favorable treatment on domestic reinsurers and enhanced catastrophe risk management.
Latin America

In Argentina, a new administration in the Superintendencia de Seguros has led to increasing the minimum capital requirements for insurers and local reinsurers. Additionally, the local reinsurance market will likely return to a partial or totally open reinsurance market, as it was in the past. These will lead to an increase in both reinsurance demand and supply to the market.

In Brazil, 2017 sees the introduction of resolution CSN 322/2015, which increases the intragroup limitation from 20 percent to 30 percent and reduces the obligatory local reinsurer cession from 40 percent to 30 percent. This is just the start of progressive changes that will continue until 2020. Separately, A.M. Best lowered Brazil’s country risk tier assessment from ‘3’ to ‘4’. While this is not expected to affect many ratings, it will lead to higher asset capital charges for local companies.

Chile is about to release new regulations making it mandatory for all insurers to have a written reinsurance policy, which is properly supervised and approved by their boards. The adequacy of earthquake catastrophe reserve requirements based upon CRESTA zone exposures is also being reviewed. Any change in approach could impact reinsurance demand going forward.

There were no large changes for the Mexican market during 2016. Reinsurance continues being governed under LISF (Insurance and Surety Law) and the Unified Insurance and Surety Regulations (CUSF) established in April 2015 that incorporated Solvency II.
For the first time since 2012, insured global catastrophe losses in 2016 were higher than the most recent short-term 10-year average. The insurable losses were driven by the severe convective storm, earthquake and flood perils, which were each well above both their recent 10-year averages (2006-2015) and median. After four consecutive years of declining losses following the record year in 2011, the private insurance industry and government-sponsored programs saw an uptick in overall claims payments.

Global insured losses in 2016 were tentatively listed at USD53 billion (subject to change), which is slightly higher than the 10-year average of USD52 billion. The losses were up 46 percent from those sustained in 2015 (USD36 billion) and up 25 percent from 2014 (USD42 billion). When analyzing the annual loss in relation to the short-term median, the 2016 value was 45 percent higher (median value of USD37 billion). Given an extreme outlier year of losses during 2011, conducting median analysis provides a different and more accurate depiction of disaster losses in recent years.

From a longer-term perspective dating to 1980, the USD53 billion global cost places it as the sixth most expensive year on record. Losses incurred in 2011 (USD134 billion) and 2005 (USD126 billion) remain at the top. For specific regions, 2016 will rank as the eighth-costliest year for the US, second-costliest for the Americas, fourth-costliest for APAC and twelfth-costliest for EMEA.

Severe weather (convective storm) events comprised 35 percent of the global losses in 2015, primarily driven by several billion-dollar events in the United States. The US severe weather season was highlighted by a violent stretch of large April hail events that tracked over the Dallas and San Antonio metro regions. The April 10-15 period minimally resulted in USD3.0 billion in claims payouts.

Exhibit 8: Insured losses by year by type
The other major perils which had payouts equaling more than 10 percent of the overall aggregated total included: flood (22 percent), earthquake (16 percent) and tropical cyclone (12 percent). Each of these perils had major events beyond the United States which further emphasized the significant gap in coverage by region and peril. Despite events in parts of Asia and Europe having a multi-billion-dollar overall economic cost, only a single-digit percentage of those losses were insurable.

Despite overall losses being elevated in 2016, nearly every major region of the world sustained below average annual insured losses. The lone exceptions were the United States (slightly above) and the Americas (including North America (Non-US) and South America) which was well above its 10-year average. However, when analyzing the data in comparison to the median, all regions were either higher or nearly equal. The United States continued to dominate the global market for insured losses with an estimated USD29 billion of the USD53 billion global total registered.

The most significant insured loss event in the US was Hurricane Matthew, which was expected to cost the domestic industry upwards of USD4.0 billion. This was the costliest US hurricane since Sandy in 2012. Another major US event was a catastrophic inland flood event that inundated more than 180,000 properties in Louisiana during the month of August. That event resulted in well beyond USD1.0 billion in claims payouts by the National Flood Insurance Program (NFIP), plus another USD1.0 billion by the private industry. It became the first non-tropical cyclone-based NFIP event to ever surpass the USD1.0 billion claims payout threshold on a nominal basis since 1978. This was in addition to the previously mentioned SCS losses that were heavily driven by a record year in the state of Texas that saw upwards of USD8.5 billion in payouts. Most of the payouts were due to hail damage.

Despite the highest aggregated costs occurring in the United States, the costliest event was recorded in Japan. A one-two punch of powerful earthquakes in Kumamoto prefecture on April 14 and April 16 led to insurers paying an estimated USD5.5 billion in claims payouts. The General Insurance Association of Japan cited more than 260,000 approved individual residential claims alone. However, with an overall economic cost of USD38 billion, the USD5.5 billion insured portion represented only 14.5 percent.

Exhibit 9: Insured losses by region
Other multi-billion-dollar insured loss events included the storm systems named Elvira and Friederike in May that resulted in USD3.4 billion in payouts across Central and Western Europe. Most of the damage was noted in France and Germany. In Canada, a historic wildfire in Alberta province caused the industry an estimated USD2.8 billion after roughly 10 percent of the city of Fort McMurray was destroyed. This was the costliest natural disaster event in the country’s history. A powerful magnitude-7.8 earthquake on New Zealand’s South Island in November was poised to cost regional insurers more than USD2.0 billion.

It is worth noting that while insurance penetration and take-up rates continue to improve in areas around the world, the United States remains the most expensive region for the industry. The exhibit below shows that 2016 losses in the US equaled 56 percent of the global total. In the past 10 years alone, the United States has recorded the majority of losses in seven of those years. This includes the years 2008 and 2012, when the country represented an astounding 86 percent and 88 percent of the annual totals, respectively. When taking a longer-term view back to 1980, the United States has accounted for 62 percent—or USD764 billion—of the aggregated (and inflated) total of USD1.23 trillion.

Despite this information, there remains an expectation that countries outside of the US will continue to see acceleration in insurance coverage throughout most of the emerging markets. This includes countries with the greatest recent GDP growth: China and India. As the costs and risks associated with natural disasters continue to increase due to a multitude of weather, climate and socioeconomic-related factors, it will be imperative for the insurance industry and federal governments to work together to ensure its citizens are best prepared to handle the next big event.

Exhibit 10: Insured loss comparison: United States vs. Rest of World

To find the most up-to-date global catastrophe loss data for 2016, and other historical loss information, please visit Aon Benfield’s Catastrophe Insight website: www.aonbenfield.com/catastropheinsight

The 2016 Annual Global Climate and Catastrophe Report will also have a complete and comprehensive overview of the year’s events.
Major Events Lead to Costliest Year on Record for Insured Wildfire Losses

Despite wildfire being one of the primary natural disaster risks on a global scale, much of the focus for the insurance industry has historically been in parts of North America, Europe and Asia-Pacific. This is due to these areas having locations that are often prone to significant available brush or flammable vegetation—known as “fuel”—that tends to grow and then dry out given major swings in seasonal precipitation rates. This is often accentuated by the various phases of ENSO as global atmospheric weather patterns shift.

In 2016, this was particularly true as the year started out with one of the strongest El Niño events on record before a quick transition towards ENSO-neutral and then a weak La Niña occurred. With many fire-prone areas registering an extended drought and record temperatures, conditions were ripe for the potential for explosive wildfire growth. What resulted were major wildfire events in the United States, Canada and Australia that cost the insurance industry a record USD3.8 billion in payouts. Nearly USD3.0 billion of that total came in Canada alone after a series of very intense wildfires occurred in the province of Alberta’s Fort McMurray. At least 10 percent of the city was destroyed after more than 2,400 buildings were impacted.

With an overall economic cost above USD4.0 billion, it was the costliest natural disaster in Canadian history.

Wildfire insurance coverage varies by country, but in most instances, fire damage is covered by homeowners’ policies. This also includes any impacts to indoor contents. In other cases, wildfire coverage is bundled with another peril—such as earthquake.

Wildfire seasons vary by hemisphere and individual region as different types of vegetation have unique recurrence rates. Studies have shown that the vast majority—more than 80 percent—of global lands charred by fires occur in rural grasslands and savannahs that do not have a large impact in terms of financial loss or human casualties. The most damaging wildfire events tend to be in forests or areas dominated by shrubs that are usually much more densely populated. These fires are even more dangerous in locations that have steep slopes and ample amounts of shrub vegetation, such as southern California. It is due to this reason that these types of fires are often the most significant in terms of damage and fatalities.

Exhibit 11: Global wildfire losses

![Global wildfire losses chart](chart.png)

Source: Aon Benfield Analytics
Increased risk in North America as fires grow larger

The costliest wildfire events for the insurance industry have all historically occurred in the United States; notably in the state of California. As mentioned earlier in this section, California has a unique topography and climate that lends itself to be at particular risk for significant wildfire events. However, the state is only one of many parts across North America that is prone to large wildfires. Since most large wildfires tend to be in rural locations that pose no imminent threat to life or property, they do not tend to generate a significant amount of attention. When a large fire does threaten a densely populated region then the losses can often be catastrophic.

There have been eight years in which the global insurance industry has paid out more than USD1.0 billion in wildfire damage claims. Of those eight years, six have occurred since 2000 (2003, 2007, 2009, 2011, 2015, 2016) and all of those years have been driven by substantial events in North America. It is worth asking the question as to what may be causing these greater losses in the continent.

When conducting a wildfire analysis for the United States and Canada using data from the National Interagency Fire Center (US) and the Canadian Interagency Forest Fire Center (Canada), it is determined that on average, the aggregated number of acres burned by annual wildfires continues to increase. However, a better metric is the average acres burned per fire. This reveals that since 1970, individual wildfires have annually increased in size on average by 4.0 percent in the United States and 2.6 percent in Canada. The level of growth is consistent with the regional rates of warming temperatures based on historical anomalies during the same timeframe.

As wildfires continue to increase in size there are concerns that losses will further accelerate as some of the most fire-prone locations are home to fast-growing population areas and amplified exposure. This was true with the largest 2016 fires in Fort McMurray (Canada), Gatlinburg, TN (US) and Southern California (US). The combination of more properties being built in high-risk areas, larger and more intense fires, extended fire seasons and an expanding wildfire potential map will only make this a riskier peril for the insurance industry in the years to come.

Exhibit 12: Wildfire acres burned: United States & Canada

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