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Are Global Reinsurers Ready For Another Year Of Active Natural Catastrophes?

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Insured natural catastrophe (nat cat) losses hit a record high in 2017, at $138 billion globally according to Swiss Re Sigma. Three major hurricanes in the Caribbean Islands, Texas, and Florida resulted in $92 billion of insured losses. The top-20 global reinsurers picked up about 20% of the total insured industry losses, which we estimate at close to a 1-in-25-year aggregate loss for the peer group. The loss magnitude, roughly 3x what reinsurers would expect in an average nat cat year, hurt the industry's earnings, and a few players' capital adequacy, but failed to materially push up global reinsurance prices. As a result, a number of reinsurers have taken defensive actions to reduce their exposure to catastrophe risk. Nevertheless, for players who decided to maintain or increase their exposure, we expect higher sensitivity of earnings and capital toward catastrophe risk.

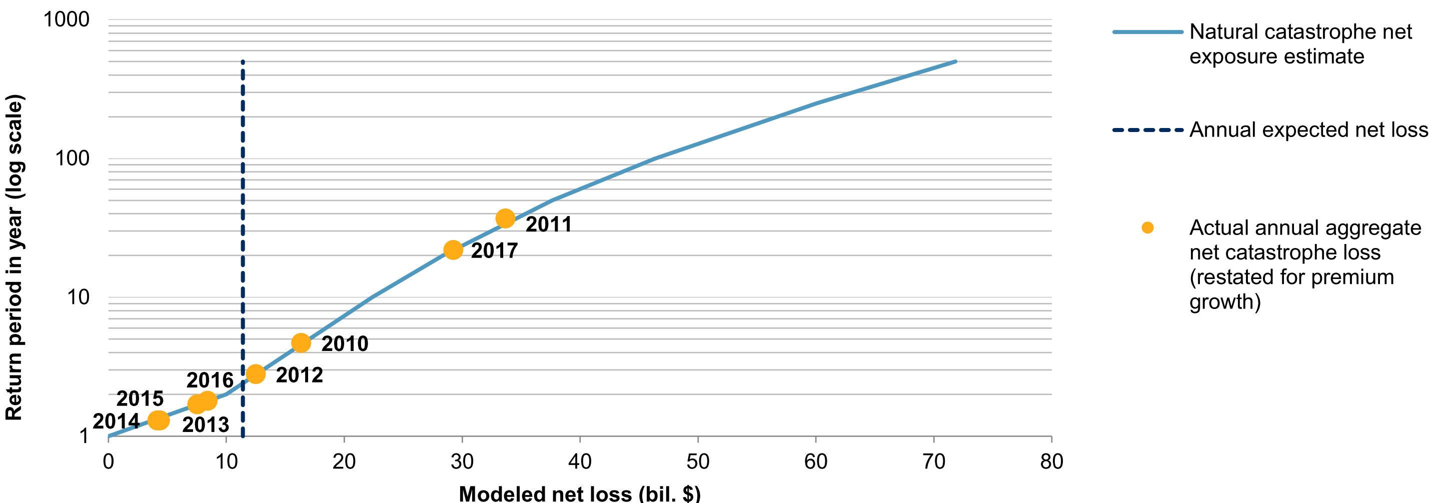
Half of the top-20 reinsurers are more exposed to nat cat risk in 2018 than in 2017. Last year, the sector proved to be resilient and the majority of our ratings remained unchanged. Although we assume reinsurers have entered the 2018 North Atlantic hurricane season with robust earnings and capital buffers, a repeat of 2017 nat cat losses could test earnings and capital adequacy levels. In such a scenario, negative rating actions could result for overexposed reinsurers.

KEY TAKEAWAYS

- Our relative nat cat benchmark, a ranking of reinsurers' risk profiles, has performed well against 2017 experience, with losses relatively in line with our expectations.
- Events in 2017 highlighted disparities in reinsurers' exposure and modeling. Reinsurers' return periods--the estimate of the likelihood of a nat cat event--ranged from below 1-in-10 years to 1-in-60 years for the annual aggregate loss.
- On average, reinsurers' property-catastrophe risk appetite at a 1-in-250-year return period rose only slightly, to 31% of shareholder equity, but we have seen increases or reductions by up to 10 percentage points for some reinsurers.
- The top-20 reinsurers in aggregate expect a catastrophe budget of about $11 billion or 8% of the combined ratio for 2018. If not exceeded, this should enable the sector to report pretax profits of about $21 billion in 2018, reflecting a consolidated buffer of about $32 billion before capital would be hit in a severe nat cat stress scenario.
- Despite some capital depletion, the sector remains resilient to extreme events. Albeit fewer than last year, 12 out of 20 global reinsurers are likely to maintain at least 'AA' capital adequacy following a 1-in-250-year event.

Chart 1

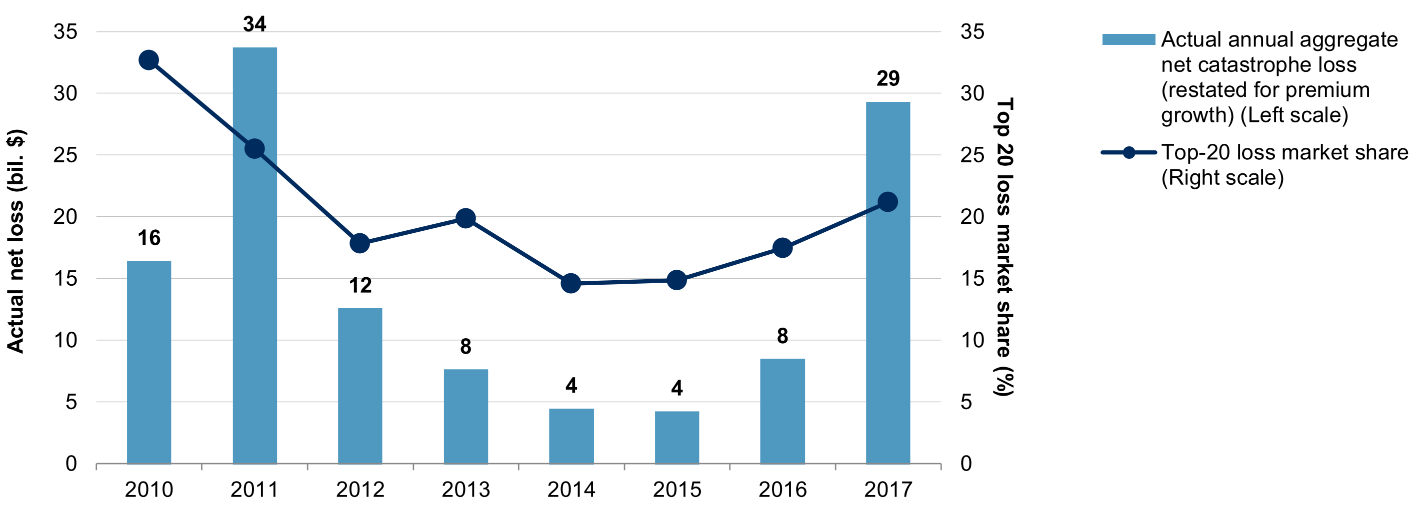
Net Aggregate Catastrophe Loss In 2017 Is A 1-In-25-Year Loss For The Top-20 Global Reinsurers



Source: S&P Global Ratings' estimates.

Chart 2

Historical Annual Catastrophe Losses Show An Average Loss Market Share Of 20% For The Top-20 Global Reinsurers



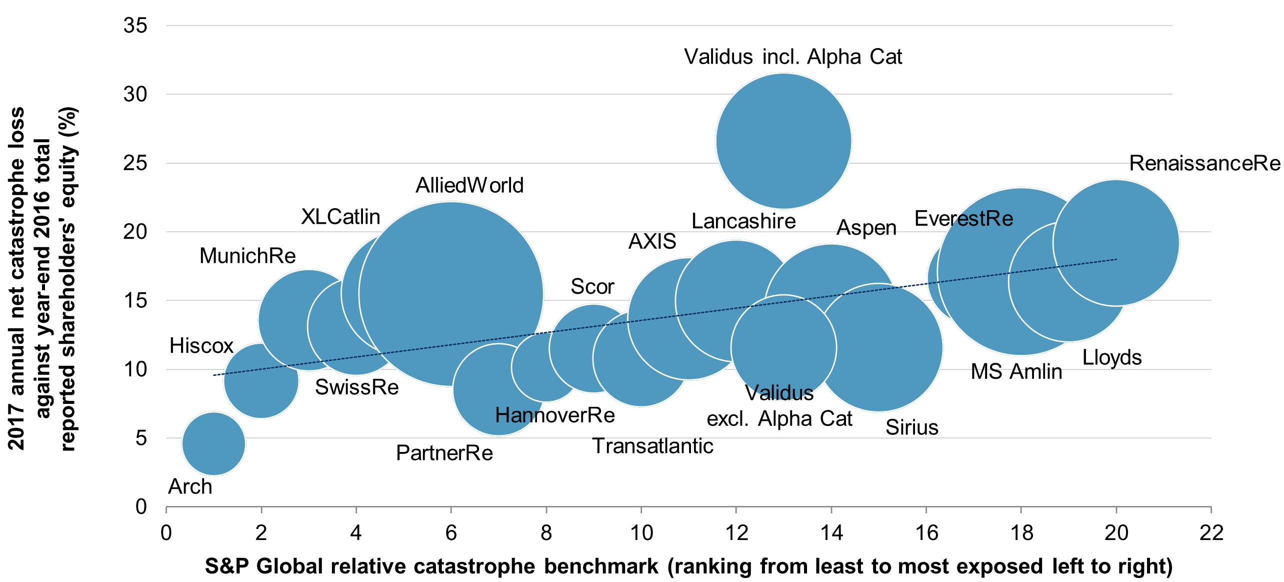
Sources: S&P Global Ratings, Swiss Re Sigma.

2017 Nat Cat Losses Were In Line With The Sector's Expected Volatility

Nat cat losses in 2017 wiped out earnings for nine of the top 20 reinsurers (see table 1 for the companies that comprise our top 20). Losses averaged about 1.3x their annual "normalized" earnings and affected about 12% of their shareholders' equity at year end 2016. In general, in our credit analysis, we capture the volatility of earnings and capital stemming from catastrophe risk through our "high risk" assessment of the reinsurance sector's risk profile. We update annually our set of catastrophe exposure metrics in order to inform our view of the relative risk position of global reinsurers. We think that our relative catastrophe benchmark performed well in 2017. Actual nat cat losses in 2017 broadly correlate with our relative riskiness ranking (chart 3). Reinsurers whose earnings and capital were most exposed are more likely to be positioned on the right hand of our scale.

Chart 3

S&P Global Ratings' Relative Catastrophe Benchmark Performed Well In 2017



Bubble size shows 2017 annual net catastrophe loss against two-year average profit before tax (excluding cat). Source: S&P Global Ratings.

But 2017 Highlights Modeling And Exposure Disparities

The nat cat losses in 2017 highlight material disparities in reinsurers' exposures. Estimated return periods ranged from below 1-in-10 year to up to 1-in-60 year for the 2017 annual aggregate loss among our peer group (chart 4). (We estimate hurricanes Harvey, Irma, Maria (HIM) to be close to a 1-in-40 year North Atlantic wind annual aggregate loss.) We believe that differences in return periods arise depending on portfolio specificities, for example location, type of exposure, concentration/diversification, reinsurance/retrocession, gross/net limits, and attachment points.

Nevertheless, the wide range of estimated return periods comes as a surprise. Indeed, as highlighted by the low level of correlation between U.S. wind exposure and experienced return periods (chart 4), our view is that the distribution dispersion is not only explained by exposure variations.

As most reinsurers rely on third-party vendors or internally developed catastrophe models to form their own view of risk, we see significant uncertainty and disparities in modeling assumptions and adjustments in the industry. To an extent, return period estimates reflect the level of conservatism embedded in the probabilistic modeling of a reinsurer's exposure. In our rating analysis, we would typically assess the extent a reinsurer has the capacity to adequately model these complex risks as part of our enterprise risk management (ERM) assessment (see "How We Capture Catastrophe Modeling Uncertainty In (Re)insurance Ratings," published April 26, 2016, on RatingsDirect). We will use the experience from events as those suffered in 2017 to review the effectiveness of reinsurers' risk modeling and processes as well as ERM scores and risk position assessments.

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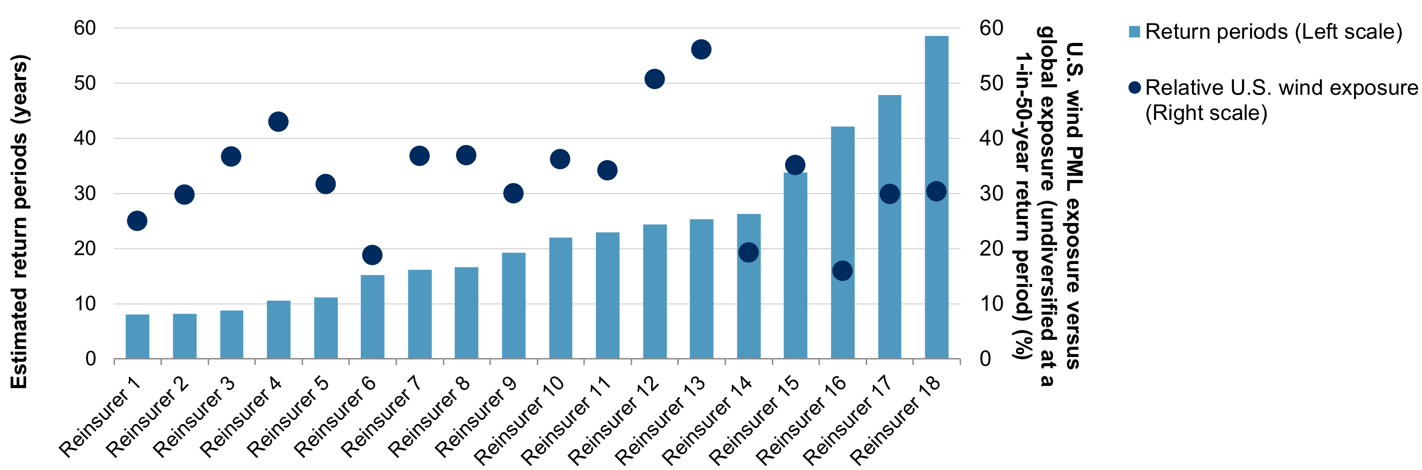
Secondly, the level of prudency in loss estimates affects the estimate of return periods that might be revised as loss reserves develop and claims are paid. The actual loss estimates might vary across reinsurers because the uncertainty is high on losses incurred but not yet reported (IBNR) that are being provisioned on HIM events. On average we assess that IBNR represent 50% of loss estimates based on information provided by reinsurers at year-end 2017. As an example, the loss estimate from Hurricane Maria that hit Puerto Rico is believed to be relatively uncertain as we understand that the claims are being reported slowly and information is lacking on the island. Including first-quarter 2018 results, so far we have not monitored any significant negative development on claims reported in particular on the HIM losses. We will monitor how claims develop over time to inform our view on the relative strengths of reinsurers' reserving practices.

Chart 4

Distribution Of 2017 Actual Losses' Return Periods Shows Disparity



PML--Possible maximum loss. Source: S&P Global Ratings.

To Increase, Or Decrease Nat Cat Exposures: That Is The Question

Based on the Jan. 1, 2018, property catastrophe in-force book of business, we assess that the top-20 global reinsurers are only marginally more exposed relative to the same period in 2017. We estimate that capital at risk rose slightly to 31% of total shareholders' equity exposed in January 2018 renewals, compared with 30% in the same period in 2017. But on an individual basis we found material exposure changes. Half of the reinsurers are more exposed than last year, through a combination of exposure growth and capital deterioration (chart 5). Earnings at risk also rose to 0.89x profit before tax in 2018 versus 0.85x in 2017. Following a 1-in-10-year aggregate loss (global insured losses of roughly $100 billion), reinsurers are still likely to show profitable results, on average. Nevertheless, an aggregate loss of this magnitude could become a capital event for a third of global reinsurers.

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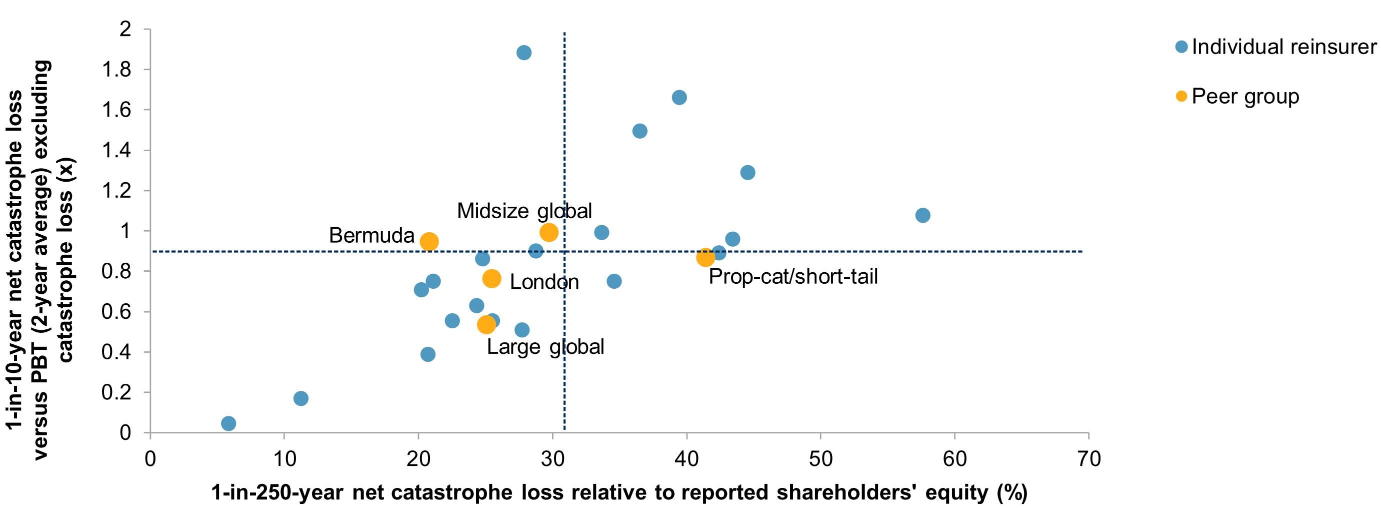
Definitions Used

- Earnings-at-risk exposure is defined as a 1-in-10-year modeled annual aggregate net loss versus the last two years' average profits before taxes and catastrophe claims.
- Capital-at-risk exposure is defined as a 1-in-250-year modeled annual aggregate net loss against shareholders' equity as reported (including preference shares).

Chart 5

Earnings At Risk Versus Capital At Risk Positions As Of Jan. 1, 2018



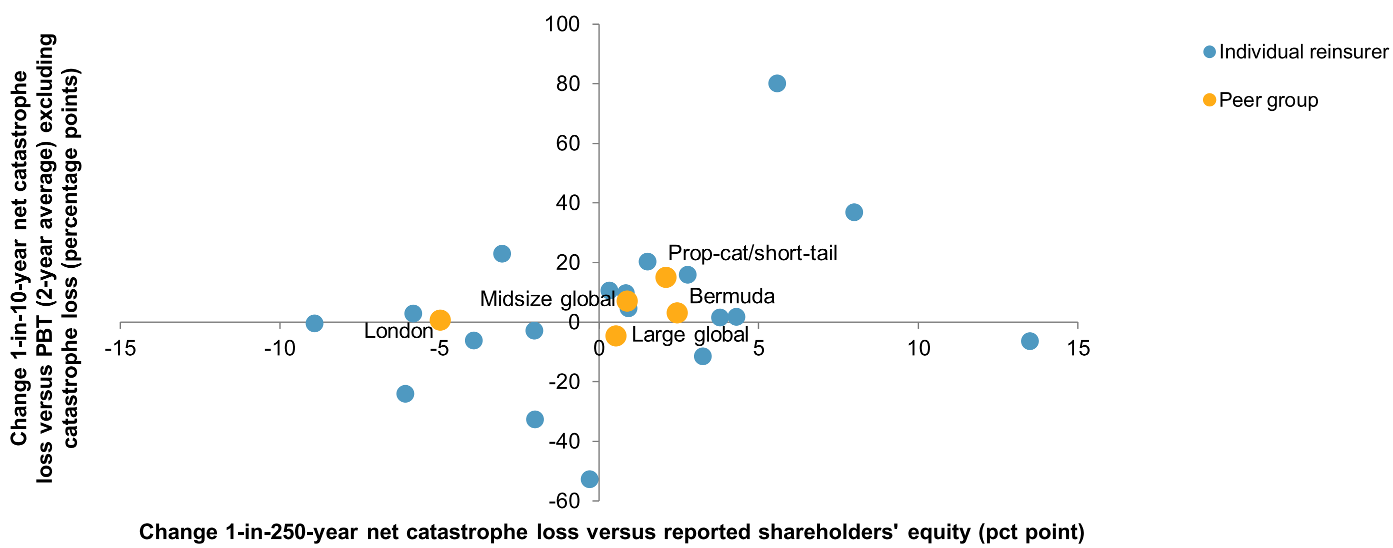
PBT--Profit before tax. Source: S&P Global Ratings.

We have seen a number of reinsurers taking defensive actions to reduce their exposure to extreme events. For more than a third of reinsurers, absolute net exposure to a 1-in-250-year aggregate loss has reduced by more than 10%. Exposure shift would typically be informed by internal risk tolerances and could be acted upon relatively rapidly by increasing retrocession purchases for instance, as some primary insurers did by buying reinsurance cover in the midst of the 2017 catastrophe season. However, as reinsurers balance the need to improve their risk return profile against the need to protect their balance sheet, it is not surprising that some reinsurers increased their risk exposure this year as a result of price increases (after the January 2018 renewals for the U.S. property catastrophe business, rates on loss-affected lines were up 10%-25%, non-loss-affected layers of loss-affected lines were flat to up 10%, and non-loss-affected lines were flat to up 5%).

We also note that for some European players, the weakening of the U.S. dollar against the euro and British pound sterling over the course of 2017 noticeably reduced their relative exposure. This is because most surplus capital tends to be held in local currency while aggregate exposure at a high return period is largely U.S. driven (we assess that, on undiversified basis, more than 50% of the risk from nat cat would come from North America).

Chart 6

Earnings At Risk Versus Capital At Risk Positions Evolution From Jan. 1, 2017



PBT--Profit before tax. Source: S&P Global Ratings.

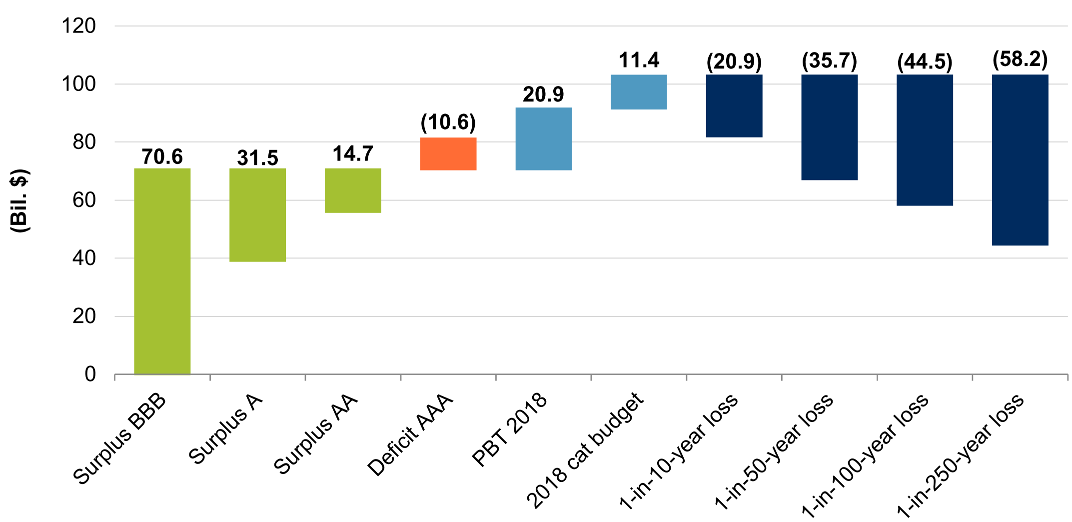
How Resilient Is The Reinsurance Sector?

In 2017, the top-20 reinsurers' share of insured losses was sizable, at 20% (chart 2). When assessing the sector's earnings and capital resilience, we take into account the nat cat budget the sector incorporates in a normalized year, the projected earnings that may be achieved in a normalized year, potential dividend and other shareholder returns, and the capital buffer the sector carries according to our risk-adjusted capital model. Based on data we received from the top-20 reinsurers, we estimate a nat cat budget of about $11 billion or 8% of the combined ratio in 2018, which if not exceeded should enable the sector to post profits before tax of about $21 billion in 2018. This results in a consolidated buffer of about $32 billion ($21 billion plus $11 billion)

We estimate a natural catastrophe budget of about $11 billion, or 8% of the combined ratio in 2018 before capital would be depleted in a severe stress scenario, assuming no dividends or other shareholder returns. For reference, dividends and share buybacks paid out by the top-20 companies in 2017 was about $9 billion. That means that an aggregated 1-in-10-year loss experience, which we assume to be about $21 billion, would exceed the annual nat cat budget and hit the sector's earnings, but would not hit its capital on aggregate. In the case of a 1-in-50-year aggregate catastrophe loss event, the sector would take losses beyond $35 billion, which would exceed the annual catastrophe budget and the assumed earnings for 2018 (chart 7). However, an earnings or capital event at an individual company could be triggered earlier, depending on its exposures.

Chart 7

Top-20 Reinsurers' Aggregate Capital Surplus Resilience To Stress At Year-End 2017

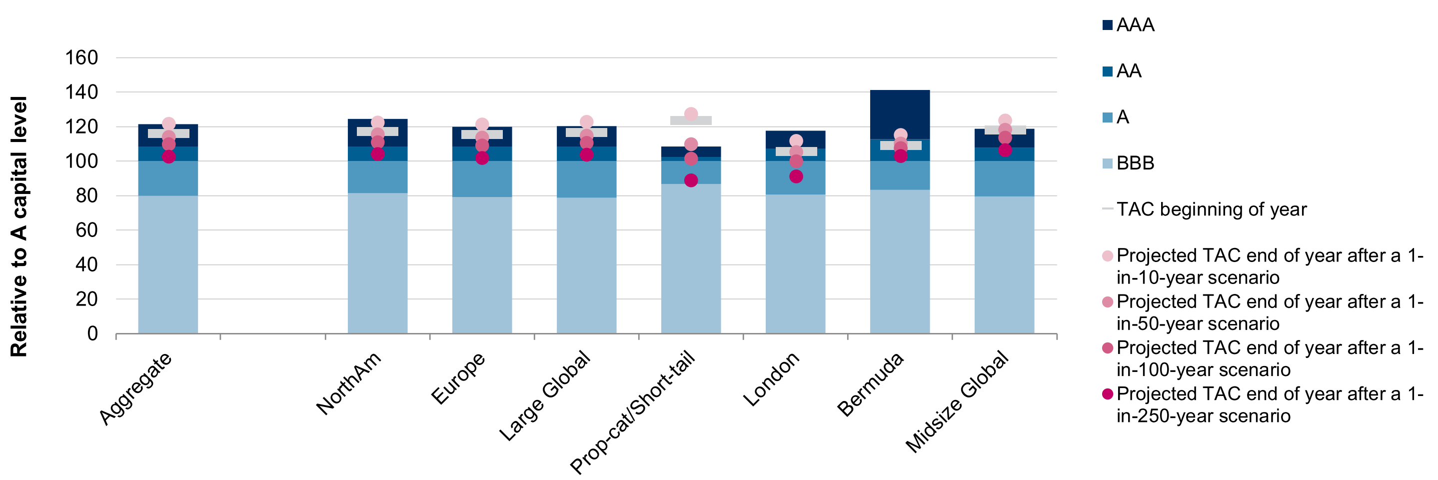


PBT--Profit before tax. Source: S&P Global Ratings' estimates.

Our analysis highlights that the Bermuda property catastrophe specialists and London reinsurers are likely to be the least resilient as a result of their higher-than-average appetite for catastrophe risk (chart 8). We found that eight of the top-20 global reinsurers are unlikely to maintain capital adequacy of at least 'AA' confidence level following a 1-in-250-year aggregate loss, including normalized earnings and the annual nat cat budget (chart 9).

Chart 8

S&P Global Ratings' Total Adjusted Capital Projected At Different Return Periods

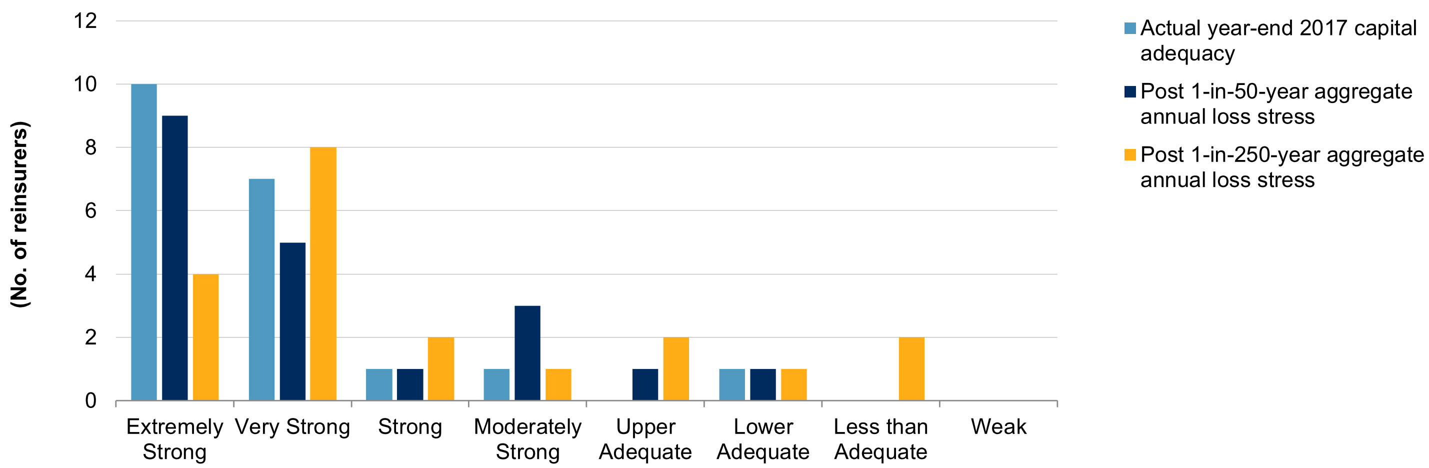


Data as of Jan. 1, 2018. Source: S&P Global Ratings.

In the first half of 2018, worldwide nat cat losses were lower than in the same period of 2017. Insured catastrophe losses according to Munich Re's statistics declined to about $17 billion from about $25.5 billion in first-half 2017, but remained at the average of the last 30 years. However, in general, the first quarter is not the most representative part of the year since the North Atlantic hurricane season starts June 1 and finishes Nov. 30. In the course of our surveillance process, we monitor a reinsurer's performance against our base-case scenario. In a severe nat cat event, we may take negative rating actions depending on the impact on nat cat budgets for the remainder of the year, as well as the impact on earnings and capital, and the potential to restore capital within the following 12 to 24 months.

Chart 9

Global Reinsurance Sector Capitalization After A 1-In-250-Year Aggregate Loss (Including One Year's Profit Before Tax)



Source: S&P Global Ratings.

Is The Sector Ready For Another Active Nat Cat Year?

In 2017, the reinsurance industry recorded an aggregate loss that was assessed as likely to be incurred less than once in 20 years. After 2005 and 2011, this was the third time this had happened in less than 20 years. Based on this recent history, it is not unlikely that we could experience insured losses in excess of $100 billion more often than the industry currently expects.

Nevertheless, last year's experience demonstrated global reinsurers' ability to adjust their exposure relatively quickly after large events. We generally observed disciplined management of catastrophe risk appetites because of only modest price increases. In this environment, reinsurers weren't tempted to excessively expand their exposures.

Although the sector is entering the 2018 cat season with robust capital and earnings, a repeat of 2017 nat cat losses would likely wash away full-year earnings and cat budgets and further test reinsurers' capital resilience. In such a scenario, the picture might be quite different from what we have observed so far in 2018, since we think price hikes would be likely after the events and more players could take more risk on balance sheet, leaving the sector more exposed.

Table 1

Top-20 Global Reinsurers

Large global reinsurers
Hannover Rueck SE
Lloyd's
Munich Reinsurance Co.
SCOR SE

Table 1

Top-20 Global Reinsurers (cont.)

Swiss Reinsurance Co. Ltd.
Midsize global reinsurers
Everest Re Group Ltd.
PartnerRe Ltd.
Transatlantic Holdings Inc.
XL Group Ltd.
London market
MS Amlin PLC
Aspen Insurance Holdings Ltd.
Hiscox Insurance Co. Ltd.
Qatar Insurance Co. S.A.Q.
Bermuda
Allied World Assurance Company Holdings GmbH
Arch Capital Group Ltd.
AXIS Capital Holdings Ltd.
Sirius International Group Ltd.
Property-catastrophe/short-tail specialists
Lancashire Holdings Ltd.
RenaissanceRe Holdings Ltd.
Validus Holdings Ltd.

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