

Reinsurance Market Outlook

Reinsurance Proves Its Worth

January 2018



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Executive Summary: Reinsurance Proves Its Worth

Based on current Impact Forecasting estimates, natural catastrophe events caused economic losses of around USD320 billion globally in 2017. Insured losses, covered in both the private market and by government-sponsored programs, are estimated at USD128 billion, making it the third most costly year behind 2011 and 2005. The insurance recovery ratio of 40 percent once again highlights the protection gap evident in even the most developed markets.

As in 2005, the main driver of losses in 2017 was three Atlantic hurricanes in the third quarter – Harvey, Irma and Maria – which are estimated to have caused economic losses of USD200 billion and insured losses of USD80 billion. Record-breaking wildfires in California rounded-out the year. The ultimate size and distribution of claims from these recent events remains uncertain, but it is already apparent that they are manageable and well-spread. The continuity and responsiveness demonstrated by the industry has clearly benefitted policyholders.

The scale of the reinsured portion of these losses is difficult to determine, partly because most providers of reinsurance capacity also write insurance business. However, it is clear that traditional reinsurers were well-capitalized going into these events and that, relative to 2005, more risk was being retained by primary insurers and more catastrophe exposure had been laid-off into the capital markets. As a result, the losses in 2017 have been absorbed without compromising the availability of reinsurance capacity.

Recent events provide the first real test of an alternative capital sector that supplied almost USD90 billion of capacity in 2017, up from only USD10 billion in 2005. Significant funds backing fully collateralized reinsurance and retrocession contracts have been lost or trapped, but investors have responded by showing strong appetite for an asset class that is now viewed as being relatively more attractive. The sector has therefore proved its worth and come of age as a committed source of reinsurance capacity.

Against this backdrop, the January renewals were late, but orderly, with strong competition evident in many sectors. Reinsurance pricing has moved up in lines and territories most affected by recent losses, but we expect this trend to be relatively short-lived, given the amount of new capital entering the sector. This may have long-term consequences for the structure of the reinsurance market.

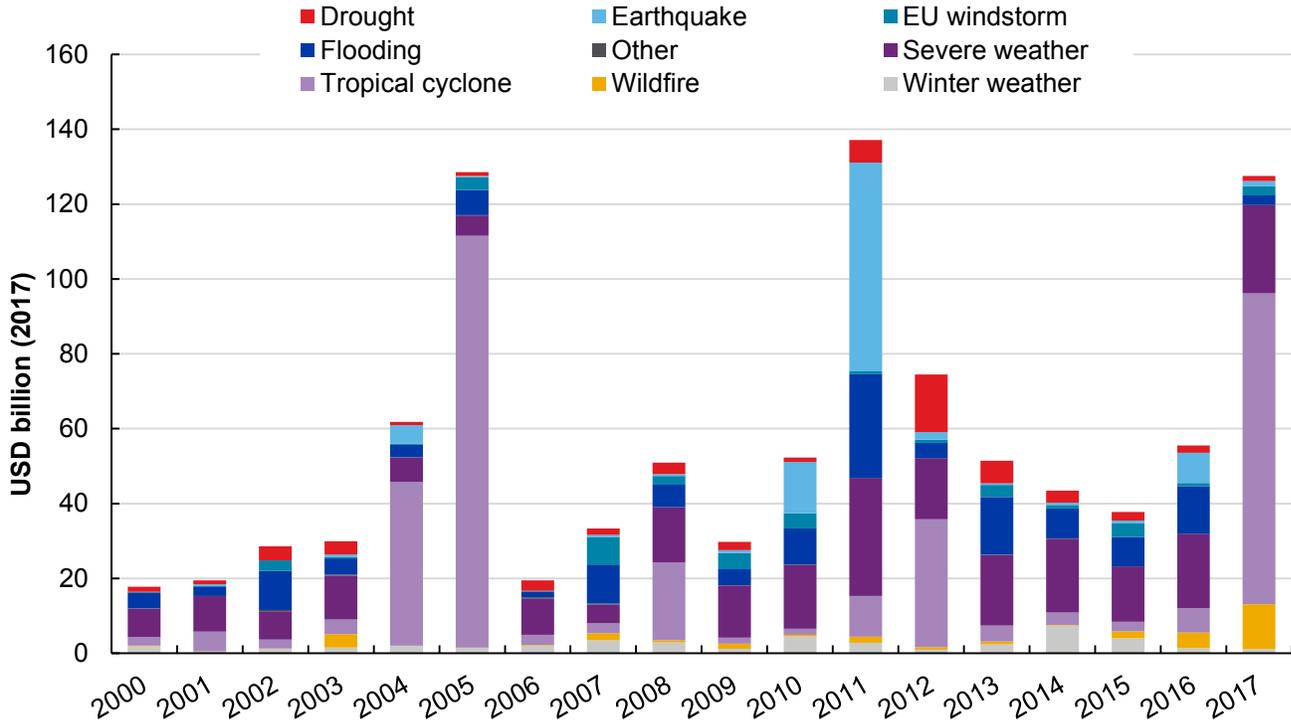
Industry Well Positioned to Handle High Losses in 2017

Global natural disasters are estimated to have generated insured losses to the private sector and government-sponsored programs of USD128 billion in 2017, the third highest total after 2011 and 2005. This is 129 percent higher than the USD56 billion sustained in 2016 and 151 percent higher than the 2000-2016 average of USD51 billion. The main drivers were a very active Atlantic hurricane season, severe weather events (convective storms) and wildfires.

It is estimated that less than a third of these losses fell to the private reinsurance market, representing a very manageable burden relative to a capital base of around USD600 billion.

Given limited elapsed time and ongoing uncertainty surrounding some of 2017's biggest events, loss totals are to be considered preliminary and subject to change.

Exhibit 1: Insured losses by year by type



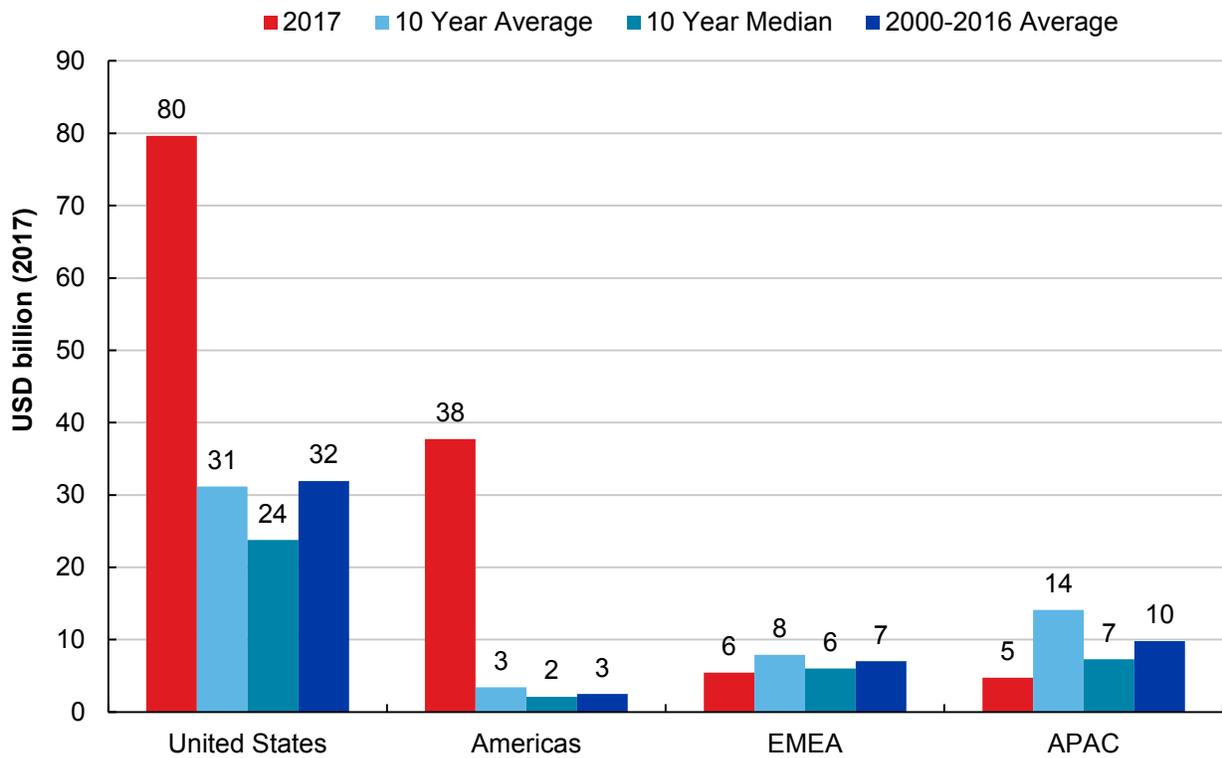
Source: Aon Benfield Analytics

The most significant peril in 2017 was tropical cyclone, which generated USD83 billion of losses, second only to the USD110 billion recorded in 2005. The cost of Hurricanes Harvey, Irma and Maria, which affected the US and numerous Caribbean islands, is currently estimated at USD80 billion. These events were the main driver of reinsured losses in 2017. The ultimate claims tally remains uncertain due to ongoing business interruption in certain sectors.

Severe weather generated USD23 billion of insured losses in 2017, second only to 2011 at USD32 billion. Around 90% of these losses occurred in the US, the main driver being hailstorms. These events tend to be fairly localized, resulting in relatively little exposure being passed to the reinsurance market.

The third notable peril of the year was wildfire. The October outbreak in Northern California's Napa Valley region resulted in more than USD10 billion of insured losses, impacting some sizeable reinsurance programs. Other significant wildfires occurred in Portugal and South Africa.

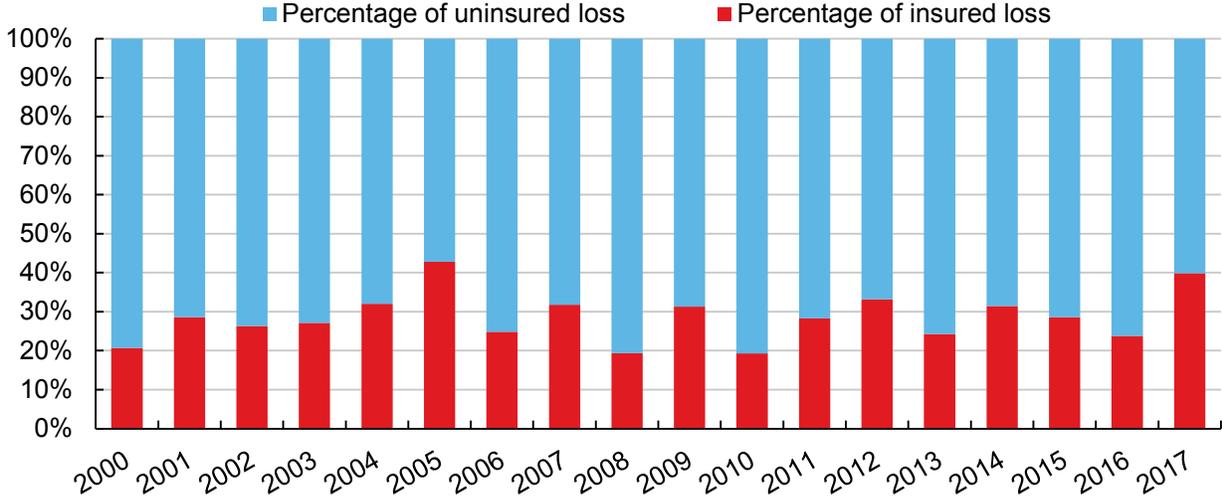
Exhibit 2: Insured losses by region



Source: Aon Benfield Analytics

For specific regions, 2017 will rank as the second-costliest year for the US (mainland) and the costliest ever for the Americas (including the Caribbean islands). The US was impacted by an estimated USD80 billion of insured losses, or 63 percent of the global total.

Exhibit 3: The protection gap



Source: Aon Benfield Analytics

Natural catastrophe events continue to highlight the protection gap existing even in developed markets. The proportion of total losses covered by insurance is estimated at only 40 percent in 2017, despite the relatively high insurance penetration rate prevailing in the US. The insurance recovery ratio in the US is estimated at 47 percent. This is below the 17-year average of 54 percent, due to the relatively high proportion of losses caused by flooding.

To find the most up-to-date global catastrophe loss data for 2017, and other historical loss information, please visit Aon Benfield’s Catastrophe Insight website: www.aonbenfield.com/catastropheinsight.

Impact Forecasting’s Weather, Climate and Catastrophe Insight: 2017 Annual Report will be released in late January 2018 and will include a complete and comprehensive overview of the year’s events.

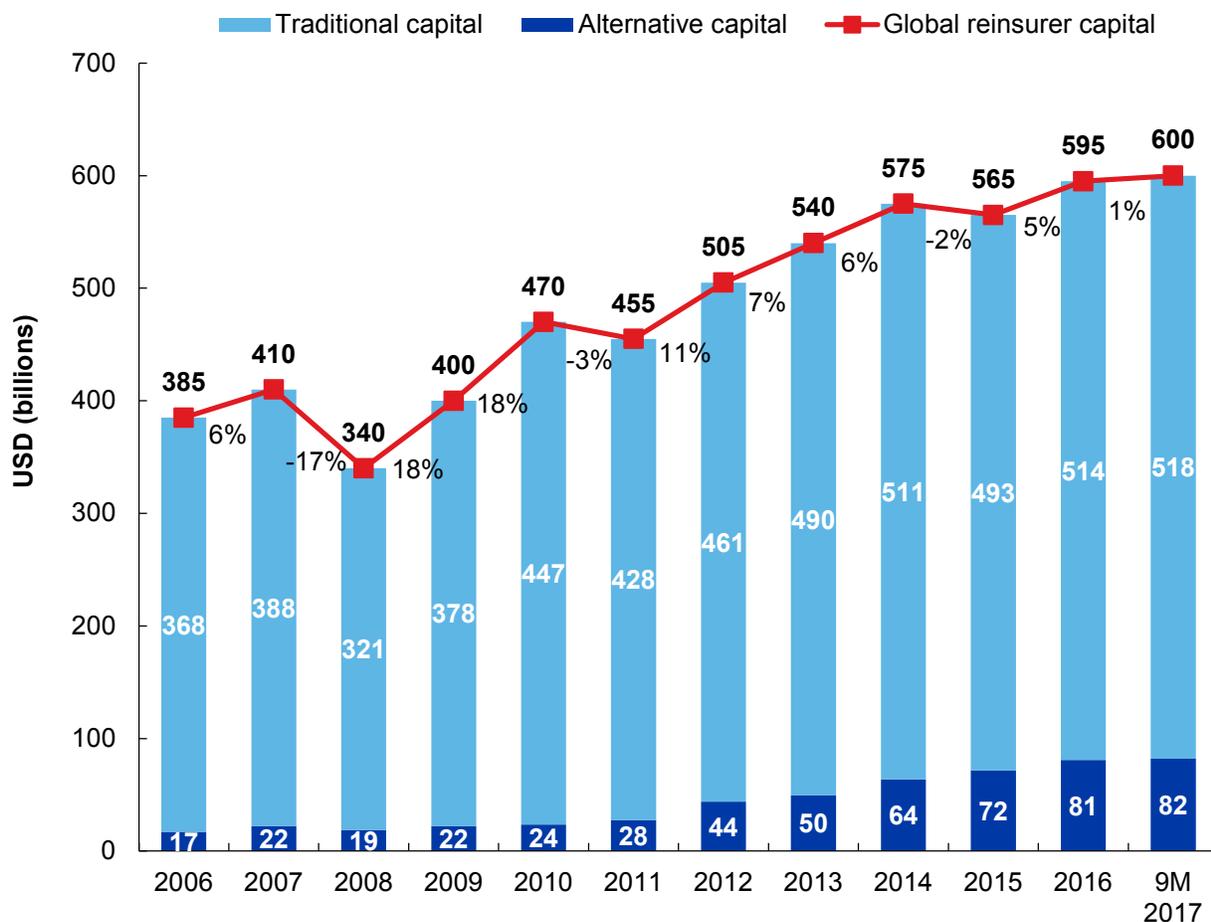
Reinsurance Supply

Global reinsurer capital

Aon Benfield estimates that global reinsurer capital stood at USD600 billion at September 30, 2017, an increase of 1 percent relative to the end of 2016. This calculation is a broad measure of the capital available for insurers to trade risk with.

Over the nine months to September 30, 2017, traditional capital rose by USD4 billion to USD518 billion, while alternative capital rose by USD1 billion to USD82 billion.

Exhibit 4: Change in global reinsurer capital



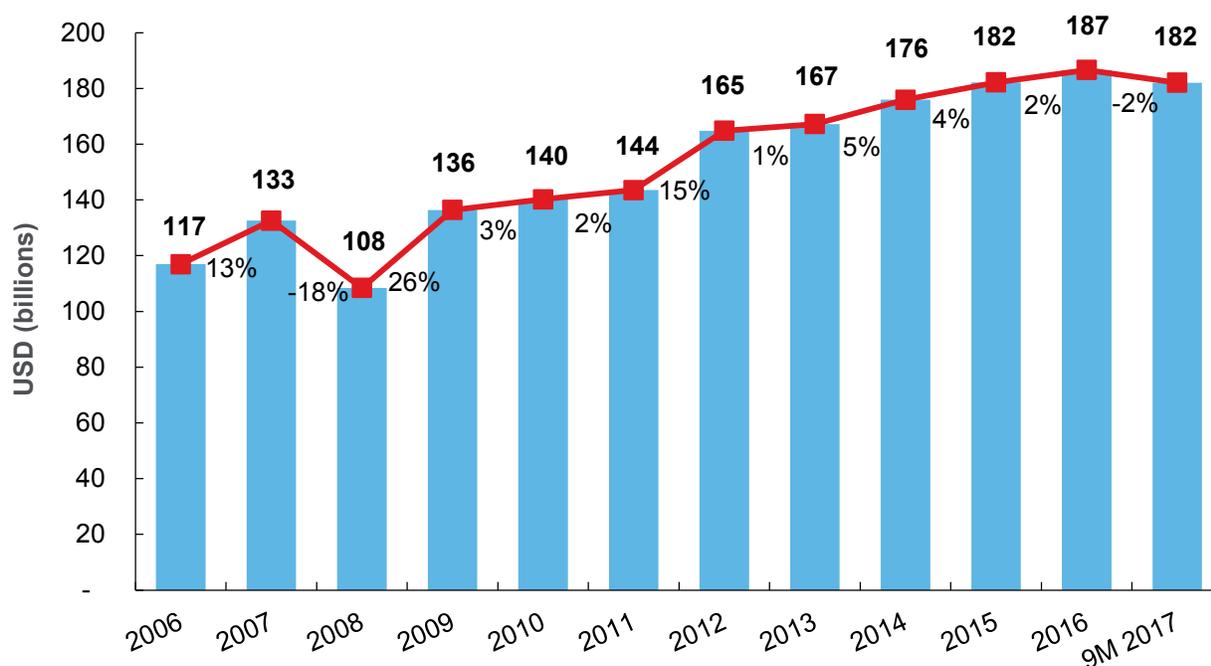
Sources: Company financial statements and Aon Benfield Analytics / Aon Securities Inc.

Traditional capital

On a global basis, traditional equity capital has remained broadly stable, despite the impact of elevated catastrophe losses in the period. Some of the reinsurers most affected by the Atlantic hurricanes in the third quarter experienced modest erosion of capital, often because depleted earnings were insufficient to cover capital management activities. Companies with relatively low levels of exposure in the U.S. and Caribbean generally experienced continued capital growth. The overall picture benefitted from weakening of the U.S. dollar against most major currencies.

Across the 18 Aon Benfield Aggregate (ABA) companies reporting nine month results, capital fell by USD5 billion, or 2 percent, to USD182 billion. The impact of catastrophe losses was largely offset by underwriting profit in other areas, continued favorable development of prior year reserves and stronger than expected investment returns.

Exhibit 5: Change in ABA* total equity



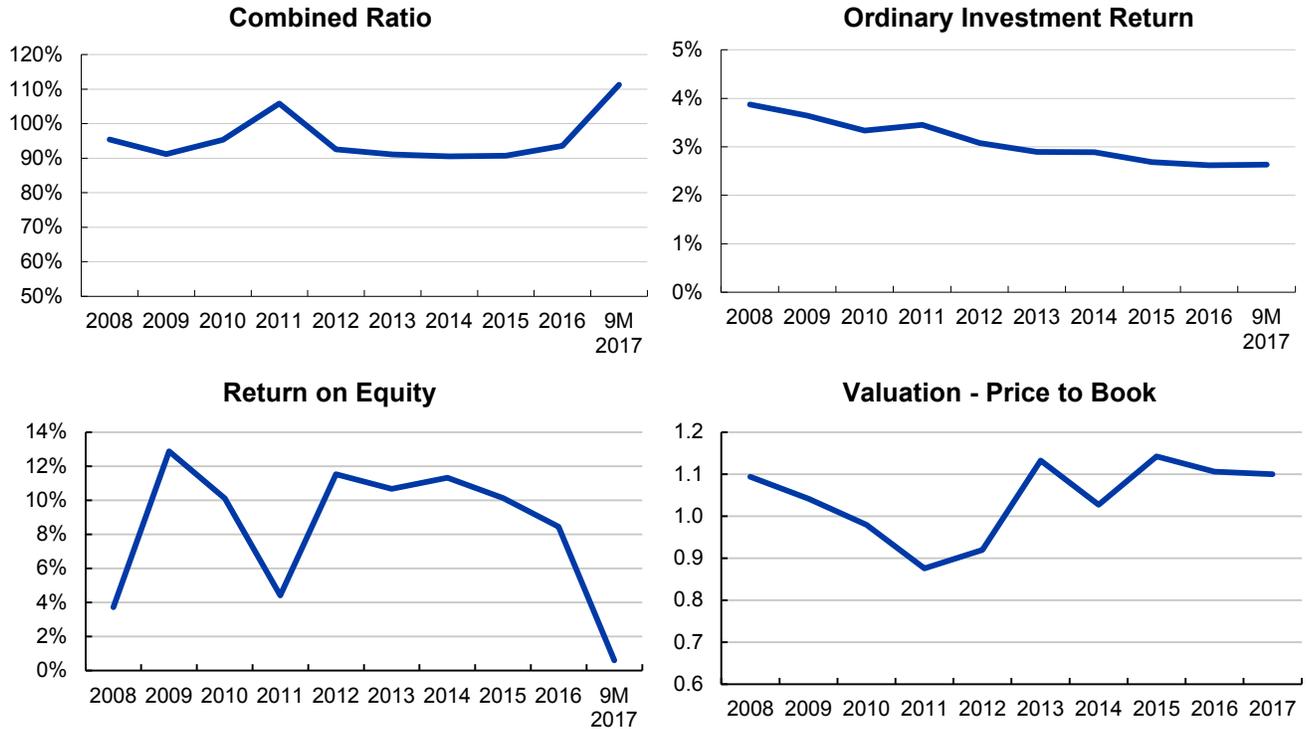
Source: Company financial statements and Aon Benfield Analytics

*Companies included: Alleghany, Arch, Argo, Aspen, AXIS, Everest Re, Fairfax, Hannover Re, Lancashire, MAPFRE, Markel, Munich Re, Partner Re, Ren Re, SCOR, Swiss Re, Validus and XL Catlin.

The average combined ratio among the 18 ABA companies for the first nine months of 2017 was 111.3 percent, reflecting the impact of catastrophe losses in the third quarter. The ordinary investment yield was flat at 2.6 percent, with capital gains boosting the overall return to 3.6 percent. Return on equity averaged 0.6 percent. The price-to-book ratio finished the year unchanged at 1.1x.

It is worth noting that pre-tax profit reported by the ABA companies since the last major Atlantic hurricane losses in 2005 aggregated to close to USD250 billion in the period to June 30, 2017.

Exhibit 6: Reinsurance sector performance

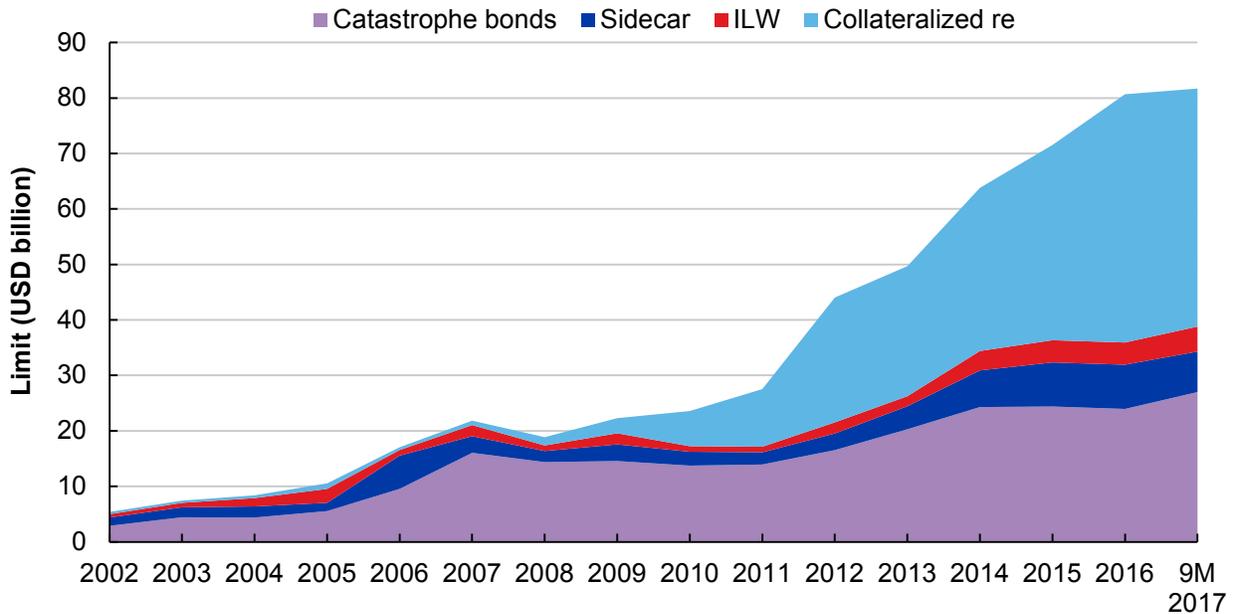


Source: Company financials statements and Aon Benfield Analytics

Alternative capital

Strong growth of alternative capital in the first half of the year coincided with record levels of catastrophe bond issuance. Total alternative capital had increased to USD89 billion prior to the impact of the 2017 hurricanes, up from less than USD10 billion in 2005. This sector now plays a much more significant role in the global retrocession and US property catastrophe reinsurance markets and therefore incurred sizeable losses as a result of recent events. While assets under management dipped to USD82 billion at September 30, 2017, this total still represented a small increase relative to the beginning of the year. The extent of the losses may not yet be fully reflected in this figure, as recognition is dependent on product type and calculation methodology.

Exhibit 7: Alternative capital deployment



Source: Aon Securities Inc.

Reinsurance Demand

A modest upturn

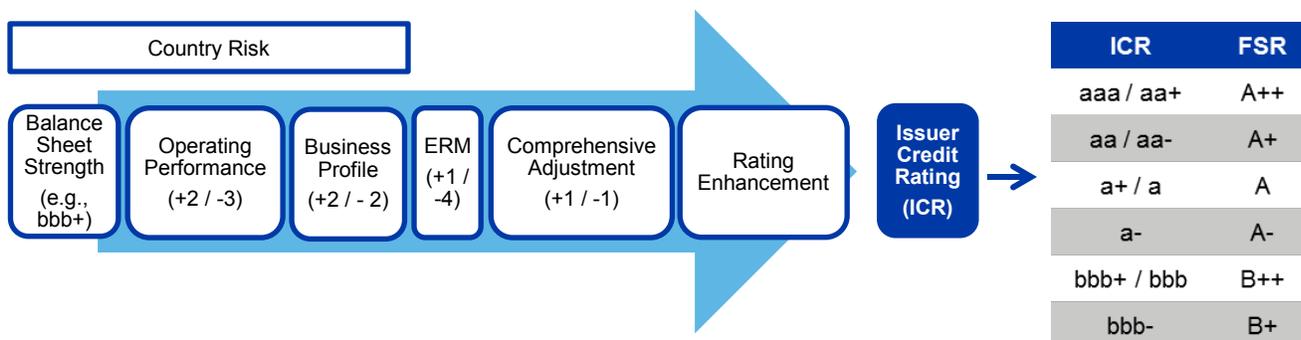
Global demand for reinsurance protection increased modestly during 2017. The principal drivers were improved economics, the growing prevalence of risk-based capital regimes and emerging areas of risk transfer. The latter two at least will continue to apply in 2018, alongside heightened risk awareness following recent major catastrophe losses.

Two additional factors expected to stimulate additional demand for property reinsurance going forward are covered in more detail below.

A.M. Best criteria changes finalized

On October 13, 2017, A.M. Best released their final rating methodology updates for all rated companies globally. This included the stochastic-based Best Capital Adequacy Ratio (BCAR) revisions, Best's Credit Rating Methodology (BCRM) and many supplemental criteria, such as terrorism, catastrophe risk and new company formations.

The final BCRM gives additional transparency to the rating process. The criteria outlines A.M. Best's process for assigning Issuer Credit Ratings (ICR), which begins with a balance sheet strength assessment and is adjusted based on the components below. The final ICR is the foundation for the Financial Strength Ratings (FSR). As A.M. Best updates company reports throughout the year, they will provide the assessment for each of these components for each rating unit.



Source: Best's Credit Rating Methodology (BCRM)

The catastrophe risk charge is now part of the covariance formula, which reduces the net impact on required capital, all else equal. However, this benefit was 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). Most companies with significant catastrophe exposure saw an increase of 3 to 8 points in BCAR as a result of this change.

Companies most heavily impacted by the transition include those with low current BCAR scores relative to their rating level, higher-rated companies whose current catastrophe reinsurance program exhausts near the 100-year return period, companies with aggressive investment strategies or high asset leverage, thinly-capitalized health companies and annuity writers.

Catastrophe charge adopted in US risk based capital model

After many years of discussion, the National Association of Insurance Commissioners (NAIC) has adopted a specific catastrophe risk charge in the US Risk Based Capital (RBC) model, which will apply from 2017 year-end financial reporting (March 2018). Many companies are now adjusting to this new framework and are having discussions with regulators and rating agencies about the implications.

While the inclusion of a catastrophe risk charge lowers RBC for most catastrophe-exposed companies, Aon Benfield expects that this will only have a meaningful impact on a small proportion of US insurers. Many Florida and Texas homeowners companies will experience a material drop in RBC once the catastrophe risk charge is adopted and are likely to consider increased use of reinsurance to manage regulatory and rating agency capital requirements.

Outlook for Mid-Year Renewals

No change in the fundamental dynamic

The insurance and reinsurance industry was well-capitalized ahead of the 2017 hurricanes and resultant losses appear well-spread. The California wildfires added to the bill in the fourth quarter, but the sense remains that these were earnings events for the industry. Underwriting capacity remains intact for all lines of reinsurance, adverse rating actions have been few and far between and the capital management activities of most large reinsurers continue as planned.

The hurricanes represented the first real test of the alternative capital sector and the market has responded with a show of strength. New funds have been committed to replace collateral that has been lost or trapped and the catastrophe bond market continues to exhibit high levels of activity. Insurance risk remains attractive relative to other available asset strategies and low correlation with other asset classes (except in the most extreme scenarios) remains a key consideration.

After a long hiatus, economic growth is strengthening globally, which is positive for underlying exposure growth. The main sensitivities going forward are further large losses, unexpected movements in interest rates and developments that drive changes in market structure. Issues to watch include the unwinding of quantitative easing, the progress of 'Brexit' negotiations, the impacts of US tax reform, the prospect of further sector consolidation and the creep of protectionism.

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