



Willis Re 1st View

The Perils of Unmodeled

April 1, 2021

Table of contents

The Perils of Unmodeled.....	1
Property	3
Commentary by territory	3
Property catastrophe pricing trends	6
Casualty	7
Commentary by territory	7
Specialty.....	9
Commentary by line of business	9
ILS Update	11

1st View

This thrice yearly publication delivers the very first view on current market conditions at the key reinsurance renewal seasons: January 1, April 1 and July 1.

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The Perils of Unmodeled

Despite some challenges emerging in Q1 2021 from unexpected Natural Catastrophe losses, particularly Winter Storm Uri in the US Southern States and full year 2020 results being impacted by COVID-19 loss reserving, the renewal at 1.4.2021 followed the trends set at 1.1.2021.

The 2020 results have reinforced the challenges of reducing investment income, diminishing prior year reserve releases driven by social inflation, increases in COVID-19 loss reserving and the cumulative volatility in frequency and severity of natural catastrophe and man-made losses. Insured natural catastrophe losses in 2020 totaled USD78b, a significant increase over the 2019 figure of USD53b and 17% above the average annual loss over the last 10 years. The headline combined loss ratios for many reinsurers have shown a deterioration for 2020 over 2019 but these results are actually masking underlying improvements once the impact of COVID-19 reserving is discounted. However, despite this steady underlying improvement most reinsurers are still not yet achieving their goal of low 90's combined ratios needed in the current low interest rate environment to achieve targeted returns on equity.

The 1.1.2021 renewal clearly did much of the scene setting for the 1.4.2021 renewal season

Against this background, market pricing remains firm in virtually all classes and territories. Although rate increases in some areas were lower than reinsurers were targeting, the upward direction in rate has led to solid improvements across reinsurers' portfolios, building on what was achieved at 1.1.2021. Further assistance for reinsurers has come from the robust underlying growth of ceding companies' premium incomes driven by a combination of increased demand and rate increases on several primary classes of business.

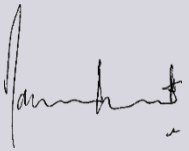
The bulk of the property catastrophe excess of loss programs renewing at 1.4.2021 were able to show better ceded results than previous years after a largely loss free year. Further helping negotiations was the stabilization of some of the earlier years Natural Catastrophe losses. Property per risk programs, however, remained more demanding as the global trend of worsening frequency and severity of non-catastrophe losses impacted many programs. Some restructuring of per risk protections along with improvements in primary terms and conditions allowed reinsurers to continue their support. Aggregate covers again proved challenging with remedial action on structure and attachment levels, as opposed to pure price, being needed to achieve acceptable placement terms as reinsurers sought to move away from attritional losses. Long tail lines, particularly on an excess of loss basis, faced increased pricing pressure from reinsurers reflecting their low investment outlooks.

Pandemic and silent cyber exclusionary language followed the approach set at 1.1.2021 with a combination of market standard clauses being adopted in some cases and reinsurers being prepared to agree more customized language to align with original policy wordings in other cases.



Capacity from existing reinsurers including both traditional and some new entrants remained adequate for buyers' needs leaving negotiations focused on price and COVID-19 exclusionary language versus any concern of capacity shortfall. There were some signs that a few smaller reinsurers' capacity was impacted by diminution in retrocession coverages and/or increase in cost, though with Japanese Natural Catastrophe Perils being one of the larger global peak perils, this reduction in appetite was to some degree unsurprising. For those buyers seeking to renew or source new capacity from ILS markets, there was strong investor demand particularly for publicly traded 144a bonds which helped to dampen overall program price increases.

The 1.1.2021 renewal clearly did much of the scene setting for the 1.4.2021 renewal season not just in terms of setting pricing and coverage expectations but just as importantly in ensuring the operational processes of a global market worked seamlessly while the vast majority of participants are still working from home under lockdown conditions. The global reinsurance market prides and promotes itself as being a provider of sustainable capacity and protection to primary insurance companies and their policyholders. On the evidence of the 1.4.2021 renewal season this goal has been comfortably achieved.



James Kent, Global CEO, Willis Re
April 1, 2021



Property

Commentary by territory

Asia

- Non-loss affected XL programs saw an average FOT risk adjusted increase of 2%.
- More broadly, the FOTs ranged from -10% to +10% for non-loss affected.
- Plenty of capacity was deployed in the Regional / Multi-territory Retro market. This stifled previously anticipated price increases.
- Pro Rata capacity remained tight but was unlocked in most cases, only after further tightening of terms.
- As expected, ICD and Cyber exclusions remained the focus. Buyers were more receptive given the experience gained at the 1.1.2021 renewals.
- On the whole, similar levels of limit were purchased compared to 12 months ago.
- Buyers remained focused on earnings stability with more appetite seen for structuring options at the high rate on line lower layers.

India

- The Indian market once again witnessed lower catastrophe activity this year but super cyclonic Storm Amphan didn't spare the eastern part of India. Treaties of the public insurers suffered losses due to Amphan, and the other two cyclones which hit either side of the Indian peninsula, Nisarga and Nivar, were relatively benign. Flooding events also occurred but didn't cause much damage to property portfolios.
- Reinsurance rate improvements on the non-proportional treaties were moderate and buyers took the opportunity to increase limits, particularly for the top EQ only

layers. Increases in deductibles were also seen.

- Rate improvements on the underlying primary business ensured continued interest in pro rata treaties. Despite GIC Re's leading position, foreign reinsurers were able to garner more shares and some lead positions.
- On Surplus Treaties, ceding companies increased retentions, sought increases in capacity and managed to secure higher event limits.
- Pro rata commissions significantly differentiated public and private companies. Owing to prior years' performance and better risk selection, the private companies enjoyed higher commissions and achieved better terms over last year. Loss participation corridors were removed for many of the private insurers.

Japan — Earthquake

- Overall, capacity remained plentiful for both Pro Rata and Excess of Loss placements.
- Reinsurance pricing was to some extent impacted by the overall catastrophe market movement in the region, resulting in low single digit rate increases for standalone Earthquake Excess of Loss Treaties.
- Earthquake Quota Share (EQQS) commission levels continued to be stable with primary market pricing holding firm a decade on from significant corrections made after the Tohoku Earthquake.
- Very modest impact to EQQS Treaties from Earthquake activity during 2020.

Japan — Property Risk

- Recognition from many reinsurers that the primary fire market in Japan is seeing favorable rate development.
- However, performance of some per risk and pro rata programs has been challenging following fire and catastrophe losses in recent years.
- Movement in per risk pricing on Excess of Loss and commissions on Pro Rata treaties varied significantly by program, reflecting individual loss activity.
- Some reinsurers withdrew or reshaped their participations, but a number of reinsurers saw improvements in the primary market and reinsurance pricing as an opportunity to increase appetite.
- Reinsurers took a similar position to Japan Wind Flood in respect of exclusions for Communicable Disease and Silent Cyber.

Japan — Wind and Flood

- Continued reinsurer pricing pressure on programs affected by losses during 2018 and 2019 with larger rate increases on mid to top layers.
- The level of rate increase differed by buyer with loss development (for some favorable and for some adverse) playing a part.
- In some cases, increases in program spend due to exposure growth helped mitigate risk adjusted increases.
- Some buyers bought increased capacity driven by underlying exposure growth.
- Ample capacity was available due to (a) new players offering additional reinsurance capacity and (b) increased appetite from some existing reinsurers as a result of the compound rate increases in recent years.
- Aggregate excess of loss renewals, which are primarily driven by Wind & Flood, were again more challenging than the Occurrence programs. Where recent loss activity was present, firmer price movement as well as some restructuring was seen.

- Most reinsurers demanded Communicable Disease and Silent Cyber exclusion clauses.
- Both Lloyd's Market Association (LMA) amended and unamended Communicable Disease and Cyber exclusions were accepted. Amended clauses were created to writeback perils to match physical damage cover given in original policy wordings or reinsurance contracts.

Korea

- Risk and Event losses in the Korean market drove risk adjusted pricing upwards with an average increase of +17.5%.
- For the limited number of Korean buyers not experiencing losses, the average increase reduced to mid-single digit.
- Communicable Disease and Cyber exclusions remained the focus from a coverage perspective. Buyers were more receptive given experience gained at the 1.1.2021 renewals.
- A significant reduction in capacity was observed for Per Risk and Proportional programs if price, terms and conditions fell short of expectations.

United States — Nationwide

- Similar to the 1.1.2021 renewal cycle, reinsurers continued to push for rate increases but there was a dampening of the degree of increase due to supply remaining strong.
- New market capacity became more evident on programs, though new reinsurers were selective reflecting that they are still building and balancing their portfolios.
- Quota shares saw increased capacity as reinsurers sought to capitalize on the improvement in the underlying rate environment, especially on Excess and Surplus Lines risks.
- Given recent losses, Per Risk Excess of Loss reinsurers were putting extra

scrutiny on price as well as other terms and conditions, such as event limits and/or risks attaching coverage.

- Following Winter Storm Uri, reinsurers more carefully scrutinized non-peak perils, such as wildfire, winter storm and severe storm especially on lower attaching layers.
- Communicable Disease exclusions were still very much a part of the discussions with many key lead Lloyd's syndicates pushing for LMA5503 unamended, but other markets were seen as more flexible with the exception of Judicial Invalidation.

+15%. New reinsurers were willing to follow flat risk-adjusted pricing in exchange for shares on more attractive programs.

- Reinsurers placed significant emphasis on contract terms, Cyber and Communicable Disease being their main topics of attention. Although the majority were reluctant to accept amended LMA wordings, certain programs experienced flexibility on reinsurers' positions.

Latin America

- Although reinsurers are taking advantage of the current market situation to push for increased pricing, a lot of attention was given to qualitative terms.
- Loss-free Per Risk Excess of Loss contracts renewed mostly flat or with slight increases on a risk adjusted basis.
- Loss free proportional contracts were renewed at expiring terms and conditions, although loss affected contracts renewed with some commission reduction.
- Loss-affected Per Risk and Cat Excess of Loss contracts saw increases from +5% to

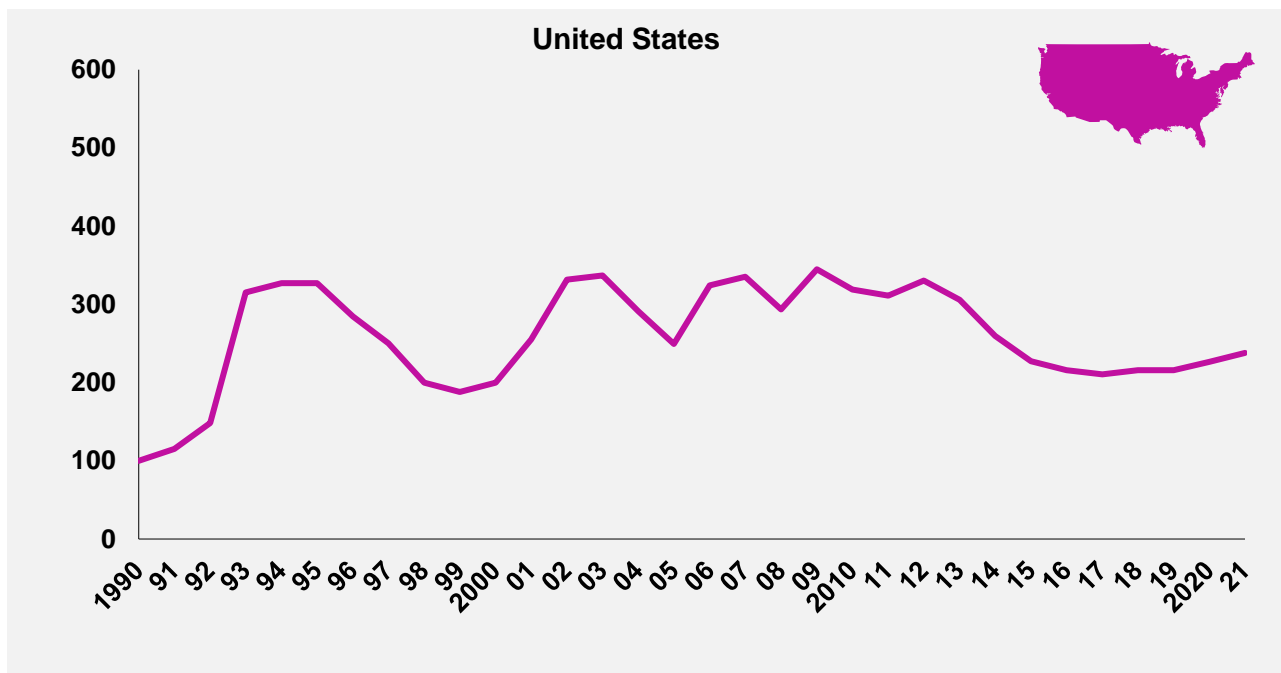
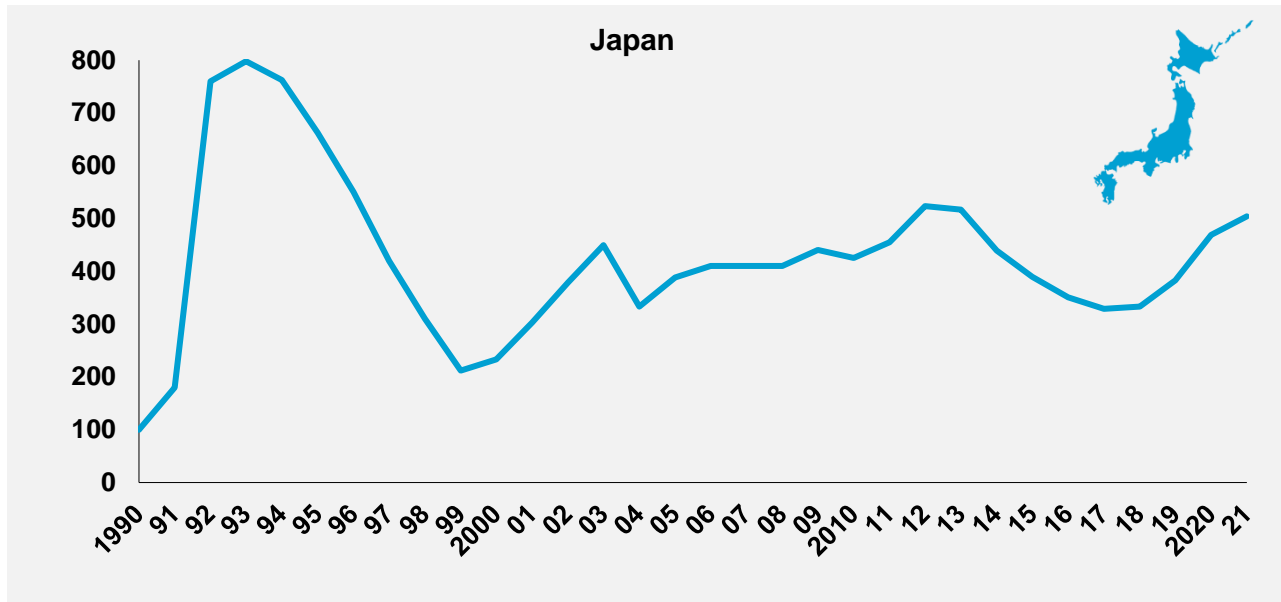
Property rate movements

Territory	Pro rata commission	Risk loss free % change	Risk loss hit % change	Catastrophe loss free % change	Catastrophe loss hit % change
India	0% to +5%	-2.5% to 0%	0% to +7.5%	-10% to -2.5%	-2.5% to +7.5%
Japan EQ	0%	N/A	N/A	+2.5% to +5%	N/A
Japan Property Risk	-3.5% to 0%	+5% to +10%	+25% to +40%	N/A	N/A
Japan Wind and Flood	N/A	N/A	N/A	+5% to +10%	+15% to +20%
Korea	N/A	0% to +10%	+10% to +35%	0% to +10%	+10% to +35%
Latin America	-2% to 0%	0% to +5%	+5% to +15%	0% to +5%	+5% to +15%
United States - Nationwide	-1% to +1%	+2.5% to +15%	+5% to +20%	0% to +10%	+10% to +25%

Note: Movements are risk adjusted.

Property catastrophe pricing trends

The charts on these pages display estimated year-over-year property catastrophe rate movement, using 100 in 1990 as a baseline.



Casualty

Commentary grouped by territory

Global — Cyber

- The cyber market continues to harden across the board from primary insurance to all levels of reinsurance. Despite the large pricing/rate increases being achieved in both segments (+25% to +40%), demand remains high with a noticeable reduction of available capacity.
- Increased demand is a major factor driving pricing despite loss experience. Pricing is also being leveraged against potential changes in terms and conditions (limitations).

Japan — Motor Liability/General Third-Party Liability/Employers' Liability/Professional Liability

- Pricing was up around +2.5% to +5% risk adjusted.
- Some buyers looked to secure more capacity whether as additional clash cover or stretching the current structures.
- Communicable Disease remained a key topic for many renewal discussions with reinsurers looking to understand the underlying exposure. Loss of profit / business interruption cover provided under GL policies and pharmaceutical trials were of particular interest as well as Employers Liability, where covered.
- Some buyers were able to avoid Communicable Disease exclusions by providing detailed information and proving that exposure is remote. Attachment points of treaties played a key role in this as Japanese treaties attach at reasonably high levels.

- Silent cyber was raised by some reinsurers but was not a key discussion topic.
- There was a small movement in reinsurer capacity with some reinsurers looking to scale back their participations and others looking to increase/come on new.
- Professional Lines pricing was up +2.5% to +10% risk adjusted.
- Some extra limit was sought by buyers in order to meet original client demands/pre-emptive requests.
- Communicable Disease was less of a concern compared to GL although information was still sought by reinsurers.
- Japanese treaties continue to attract reinsurers' capacity thanks to the continuous growth and excellent results of the original D&O business in Japan.

Japan — Personal Accident

- Pricing was up risk adjusted +2.5% to +5%.
- There were no significant changes in structure or coverage.
- Reinsurers were interested in any Communicable Disease loss experience, but due to the attachment point of the majority of Japanese PA programs this was not concerning.
- Reinsurance panels remained relatively stable with new interest from some reinsurers.

Casualty rate movements

Territory	Pro rata commission	XL - no loss emergence % change	XL - with loss emergence % change
Global - Cyber	-4% to -2%	+20 to +30%	+30% to +40%
Japan	N/A	+2.5% to +5%	N/A
Japan - Professional Lines	N/A	+2.5% to +10%	N/A
Japan - Personal Accident	N/A	+2.5% to +5%	N/A

Note: Movements are risk adjusted.

Specialty

Commentary by line of business

Capital Markets

- The Cat Bond market has built on the momentum it established in Q4 2020 – with over USD2.5b of Cat Bond issuance observed this quarter.
- Significant demand persists for the Cat Bond product, exemplified by the vast majority of issuances both upsizing in terms of capacity issued and pricing at the bottom or below the initial pricing guidance.
- Investors continue to value the transparency and clear peril definition offered by the Cat Bond product, as well as the liquidity available on the secondary market.
- This trend has allowed many primary US and Japanese sponsors to secure competitively priced protection in Cat Bond form ahead of the 1.4.2021 and 1.7.2021 renewal dates, simultaneously guaranteeing these prices for a multi-year period, protecting against a hardening market.
- The sidecar market has seen the number of end investors participating on a bilateral basis with sponsors growing notably. Bypassing the traditional ILS investors has allowed the end investor direct access to the risk, securing a mutually beneficial long-term partnership with sponsors on a more direct basis.

Global — Marine

- The market trend continues to be in a hardening phase but restrained by ample capacity for vanilla marine programs.
- Where loss record justifies there were significant rate increases but more

commonly high single digit increases with the usual level of discussion around what constituted 'risk adjusted'.

- Although there is more consensus around exclusionary language for Communicable Disease and Cyber than at 1.1.2021 it continued to be a hot topic for most renewals.

United States – Marine

- The domestic reinsurance market is not sensitive to retro pricing and pricing volatility across years continues to be more muted than in other territories.
- Reinsurers were looking for margin expansion of circa +7 to +10% on clean renewals, typically achieved with flat adjustable rates against improved underlying insurance rates.
- There was continued pressure from proportional treaty reinsurers to achieve reductions in ceding commissions.
- Container losses from rough seas are still to be determined but drawing focus on ship accumulations.
- Winter Storm Uri will be a significant personal lines event but might lead to Inland marine losses from Builder's Risk.

Global — Non-Marine Retrocession

- The 1.4.2021 renewal season is quieter than the 1.1.2021 renewal date when the majority of retro programs renew.
- Reinsurers' positioning did not materially change from what was identified at 1.1.2021 with the core themes being consistency on coverage, capacity and pricing.
- Given some of the helpful tailwinds, namely positive underlying rate momentum and the arrival of new

capacity that occurred in Q4 2020, there was sufficient capacity to address buyers' requirements.

- Supply remained adequate with year on year rate increases finalizing broadly in line with what was seen at 1.1.2021.
- Reinsurers continued to adopt a uniform view on coverage with a focus on Communicable Disease and Cyber exclusions.
- Winter Storm Uri and the recent Australian floods highlight the loss potential for non-critical Cat perils but ultimate quantum and impact on retrocessional programs remains unclear at this early stage.

- The 1.4.2021 ILW market has seen pricing in line with the pre mid-year 2020 spike with capacity mostly being sought at the more remote end of the curve including State and County weighted solutions. Attentions are starting to shift to mid-year hedges and Florida exposures.

Global — Aerospace

- Ample capacity for both proportional and non-proportional placements with new markets attracted to the class.
- Pricing continues to rise with focus on middle and catastrophe layers.

Specialty rate movements

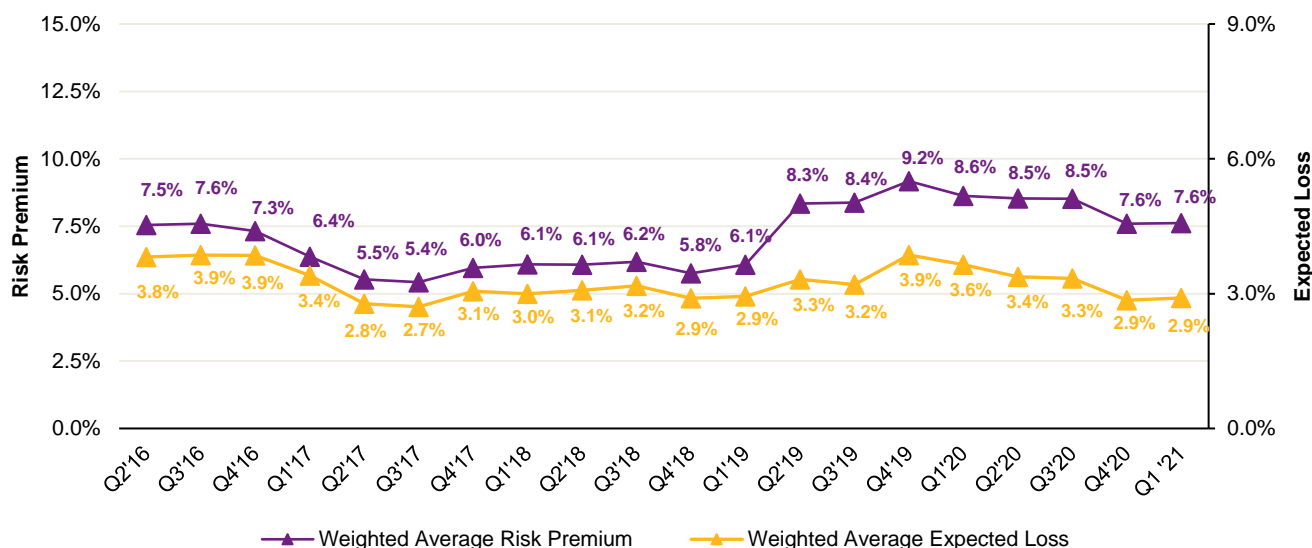
Territory	Pro rata commission	Risk loss free % change	Risk loss hit % change	Catastrophe loss free % change	Catastrophe loss hit % change
Non-Marine Retrocession	-0.5% to 0%	+5% to +12.5%	+12.5% to +20%	+5% to +10%	+10% to +15%
Global - Aerospace	0% to +1%	+20% to +30%	+20% to +50%	+30% to +60%	+50% to +100%

Note: Movements are risk adjusted.

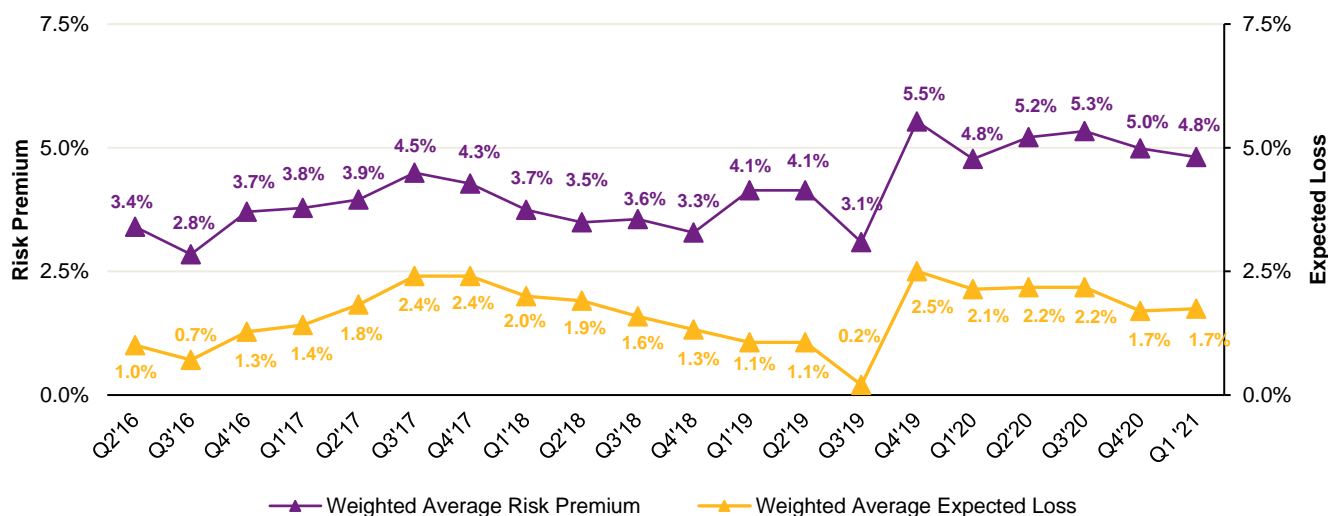
ILS Update

The charts below show the changes in the average risk premium and expected loss for both U.S. wind and non-U.S. wind publicly traded cat bonds, along with the capacity development of the cat bond market, and a comparison of the yield on cat bonds as against two other comparable investment classes.

Quarterly long-term U.S. wind exposed weighted average risk premium and expected loss



Quarterly long-term non-U.S. wind exposed weighted average risk premium and expected loss¹

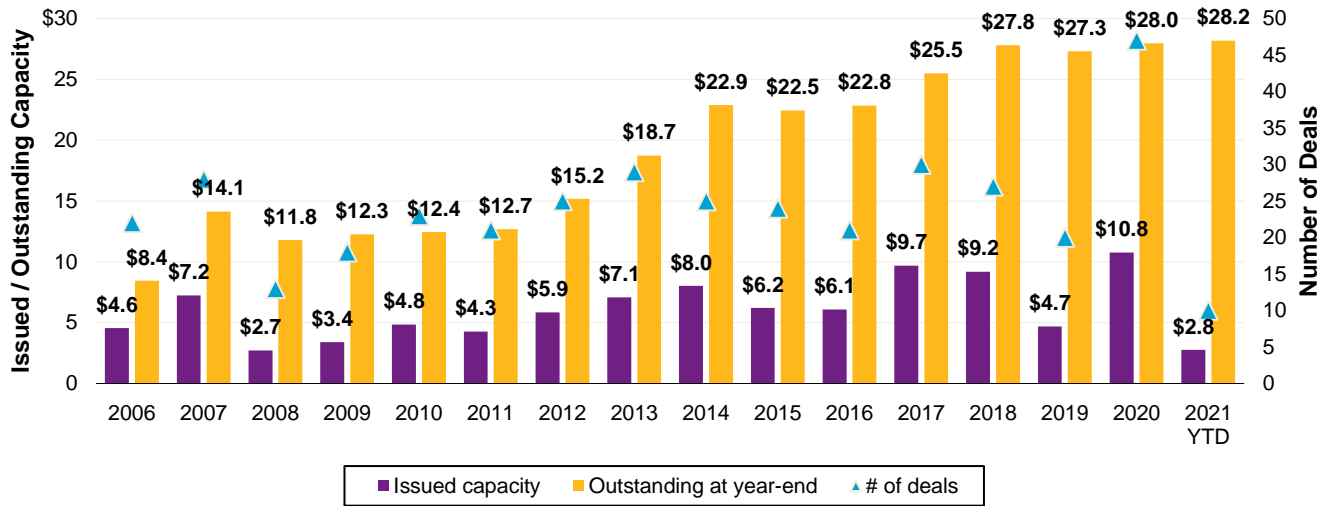


Source: Willis Re Securities Transaction Database as of 3/31/2021. Aggregate data exclude private ILS deals.

LTM = Last 12 months. Aggregate data are for primary issuance and do not reflect secondary trading.

¹ Note that the sharp decline in Q3 2019 expected loss and risk premium is caused by a lack of non-U.S. wind issuances since Q4 2018. Of those that were issued, size, expected loss and spread were relatively low, causing the drop-off in measurement.

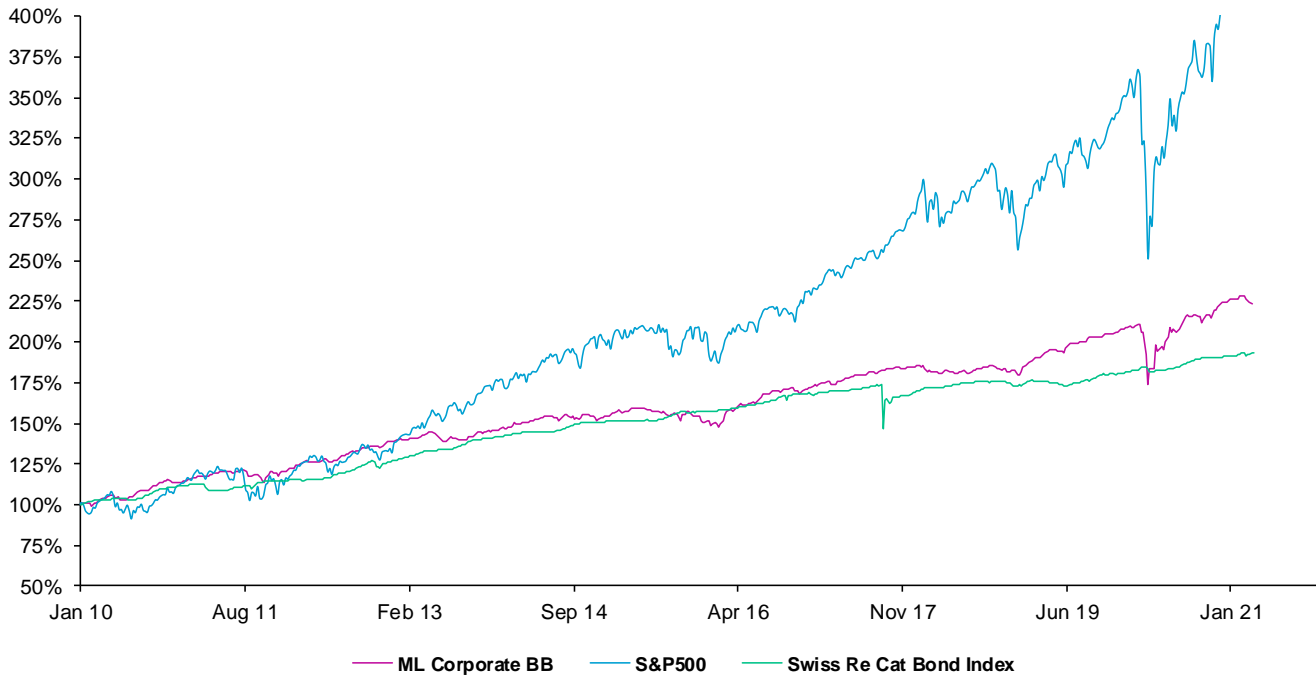
Non-life catastrophe bond capacity issued and outstanding by year²



Source: Willis Re Securities Transaction Database as of 3/31/2021. Aggregate data exclude private ILS deals.

² All issuance amounts reported in or converted to USD on date of issuance. Outstanding amounts adjusted for actual principal losses.

Historic yield



Global and local reinsurance

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