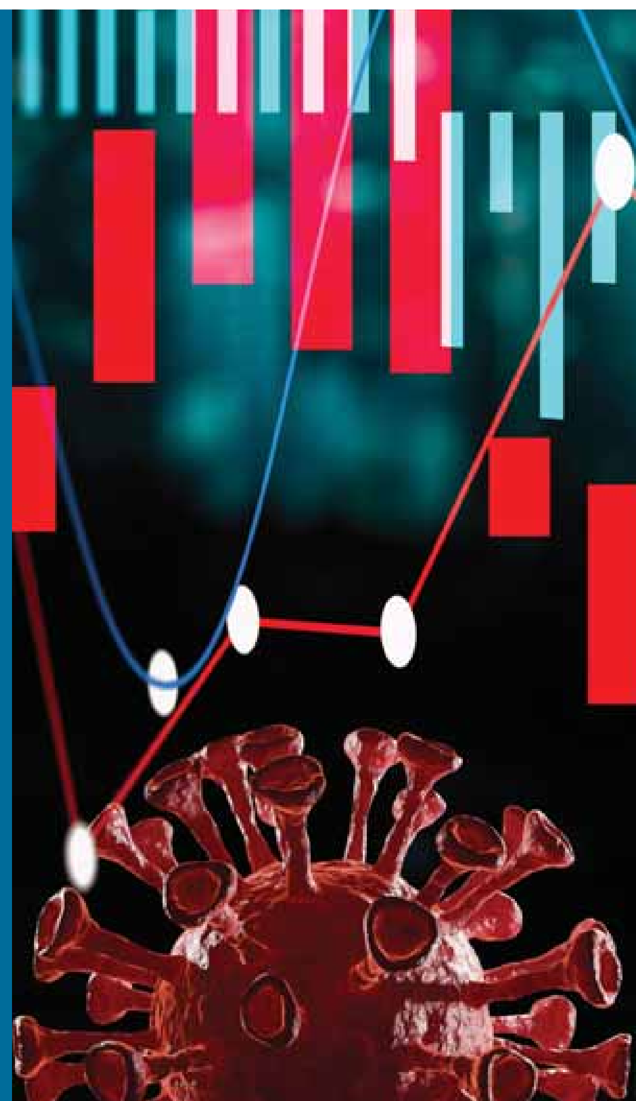
AM Best
August 31, 2021
Global Reinsurance Markets

Global Reinsurance Outlook Remains Stable in a More Uncertain World



Our Insight, Your Advantage™

Welcome to AM Best's annual report on the global reinsurance market.

In December 2020, AM Best announced that we were maintaining our outlook for the global reinsurance segment at Stable despite the ongoing COVID-19 pandemic, which has created economic and operational challenges globally. Positive trends include resilient balance sheets, as demonstrated by insurers' ability to raise capital recently. In addition, reinsurance pricing has improved. Reinsurers may still face challenges, however, in the form of pandemic-related losses or loss creep from the higher frequency of medium-sized catastrophes in 2020. Nevertheless, the traditional reinsurers remain well capitalized.

This year, we adjusted our methodology for ranking the world's largest reinsurers to better reflect their presence in the reinsurance industry. We think it appropriate to omit premiums that are attributable to the primary business. Munich Re regained the top spot in our new listing of the world's 50 largest reinsurers.

A number of reinsurers are expanding their presence in the direct non-life segment, focusing particularly on commercial, specialty, and excess & surplus business. For the life reinsurers, the pandemic has led to excess mortality in several regions, with high infection and death rates peaking or resurfacing at different times. Health reinsurance accounts for a relatively small share of premiums, but it is growing, along with the rising cost of claims and the rapid expansion of the middle class, especially in Asia.

Dedicated capacity remains ample. Pure reinsurers are few and far between, as most global reinsurers engage in business beyond just reinsurance. Many now write in the primary market, in addition to ceding business to alternative capital facilities. Meanwhile, sound risk management practices, strategic technology use, and a maturing partnership with alternative capital have diminished the market's cyclical extremes. To remain above or meet the cost of capital, reinsurers need to be flexible to adjust to changing market conditions.

The insurance-linked securities (ILS) market remains robust despite recent catastrophe losses, trapped capital, and the pandemic. Factors contributing to its resilience include the rise in cat-bond issuance, firm pricing discipline, stable capacity in the industry loss warranty (ILW) market, and slight growth in the sidecar market. Private mortgage insurers have followed a "buy, manage, and distribute" strategy in recent years, resulting in the growth of ceded mortgage guaranty insurance exposures.

Lloyd's ranks as the world's seventh-largest reinsurer by 2020 reinsurance gross premiums written and fourth-largest if life premiums are excluded. Reinsurance is Lloyd's largest segment, accounting for 35% of its 2020 GPW—which is high compared to the large specialty insurers and reinsurers.

For Latin America, we expect reinsurance growth opportunities in the countries already rebounding from the pandemic. The region's low insurance penetration, greater risk awareness, and alternative risk transfer solutions are likely to contribute to the segment's growth as well. However, slowing vaccination rates, social unrest, or political turmoil could thwart growth.

The introduction of a new state-owned agriculture-focused reinsurer in China has changed the dynamics in the world's second-largest reinsurance market. Other parts of Asia—among them, India, Indonesia, and the Philippines—are also primed for reinsurance growth, as governments and insurance regulators take steps to close the protection gap against catastrophes and climate risk.

In the Middle East and North Africa, pricing and terms are starting to favor reinsurers after several years of soft market conditions. Minimal market penetration in Sub-Saharan Africa provides global reinsurers with opportunities for diversification and growth, although 2020 was a challenging year owing to the pandemic, oil price volatility, double-digit inflation, and local currency depreciation.

We at AM Best are committed to sharing our expertise to address the wide range of challenges that reinsurers face. I hope you find this report valuable to your understanding of AM Best's views on issues that impact the reinsurance industry, as well as our ratings, and welcome your thoughts. Please feel free to reach out to me or my colleagues with any questions.

Jim Gillard
Executive Vice President & Chief Operating Officer, AM Best

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Reinsurers adjust as traditional risks take on unpredictable patterns

Table of Contents:

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2021-140.1

AM Best's outlook on the global reinsurance segment remains at Stable, as improved pricing trends for most business lines are offsetting growing claims uncertainty and the abundance of capital. The events of 2020, dominated by the COVID-19 pandemic and the higher frequency of medium-sized catastrophe losses, exacerbated the focus on price. Global reinsurers generally have been able to absorb the exceptional shock from the pandemic despite material losses. Their balance sheets remain resilient; business has been renewed under more restrictive terms and conditions and at better rates.

After several years of struggling to meet their cost of capital, key players have started to turn the corner. However, considerable uncertainty about sizable COVID-related claims reserves—most of them incurred but not reported (IBNR)—which will take years to develop, remains. Risk in general has become more difficult to model and price and therefore (re)insure, due to unexpected correlations in a highly interconnected world that is increasingly dependent on technology. New capital—so far still modest and being deployed cautiously—continues to enter the market. A lack of investment alternatives in the low interest rate environment is driving the growing focus on underwriting results. A change in economic trends, highly dependent on unpredictable government policies, may drastically change investors' expectations.

The global commerce and business environment is rapidly evolving, becoming increasingly interconnected and dominated by intangible assets. Reinsurers need to be flexible and innovative in order to maintain their relevance within the broader economy. A higher share of uninsurable risks—because they are considered non-measurable, non-manageable, or systemic— translates into a smaller role for the (re)insurance industry.

Company-specific risk modeling and data will be essential for a better understanding of risks. Only the most innovative players may be in a position to succeed. Differentiation and innovation in product design should be critical to cover emerging and evolving risks. Innovative risk management techniques should allow the slicing and dicing of different components of risk, contributing to a broader participation of capital markets for particular elements depending on investor appetite. Similar developments may enable closer cooperation with governments, to mitigate, identify, and isolate the most systemic elements of risk and transfer them to bespoke, publicly sponsored platforms.

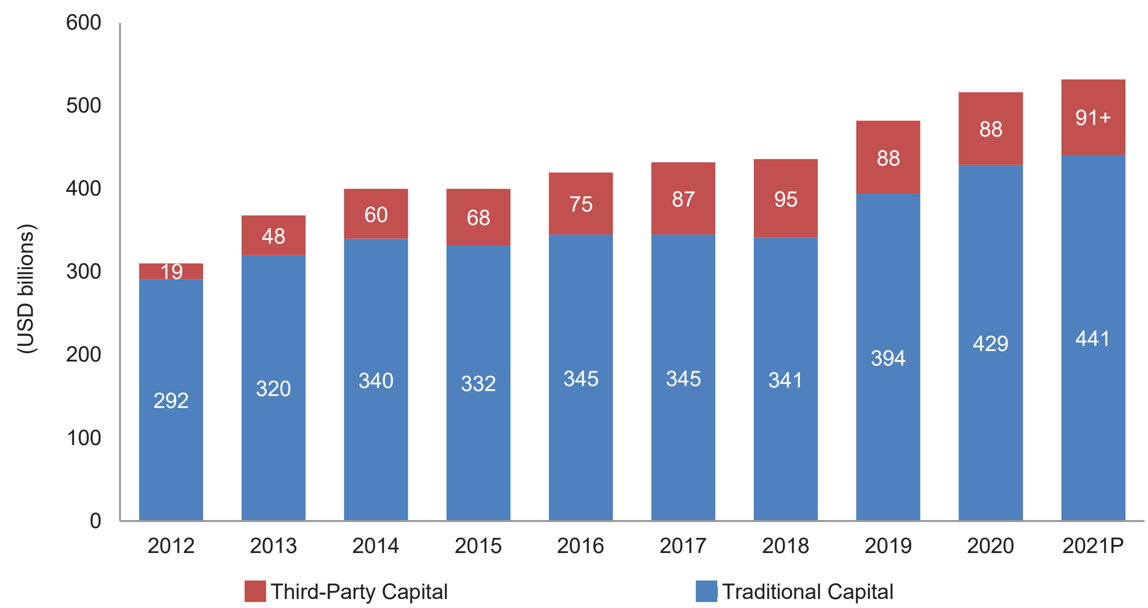
Historically, the global reinsurance segment has endured numerous challenges from natural/man-made catastrophes, low interest rate environments, adverse reserve development to intense competition. Despite these challenges, it has always met its claims-paying ability.

Market Remains Well Capitalized; ILS Expansion Slows but Retains Critical Role

According to AM Best and Guy Carpenter's latest estimates, dedicated capital in the global reinsurance segment was approximately USD520 billion as of year-end 2020. Unlike other, much higher industry estimates, our figures reflect the capital allocation for the reinsurance business only, excluding as much as possible the primary segment, asset management, and other non-insurance activities normally covered by group consolidated figures. This total is broadly split 80/20 between traditional and third-party capital, the latter almost unchanged in the last two years. After several years hovering around $340 billion, traditional capital expanded materially in 2019 and 2020 to almost $430 billion, as a result of capital raising initiatives and appreciation in the stock markets. By contrast, the expansion of third-party capital through 2017-2018 seems to have slowed down, with a slight rebound in recent months. Heightened claims activity in 2017 and 2018 highlights the different responses of traditional and third-party capital as would be expected, in line with their time horizons. Traditional capital acknowledged the need to reinforce their balance sheet positions to withstand their risks for the medium to long term, while third-party capital became more cautious as to the level of their participation in the market, stabilizing around the $90 billion mark the last four years.

The impact of large natural catastrophe (nat cat) events, secondary perils, and social inflation in the insurance-linked securities (ILS) markets since 2017 is well documented. Unlike prior periods following peak loss events, overall levels of capital remained healthy without triggering an immediate spike in rates. This sluggish pricing environment, combined with trapped capital and loss creep issues, forced investors to reassess their positions. COVID-19 exacerbated these factors, adding momentum to improving rate trends. Despite ongoing claims uncertainty, additional clarity of contract language, temporary rollover of capital, and a shift in focus toward higher-risk layers and retrocession are translating into renewed interest in the ILS market. This is particularly the case with catastrophe bonds, whose dominance among ILS instruments continues to grow thanks to their liquidity. Record issuance by quarter has started to overtake maturities, while the rise in multiple (coupon divided by expected loss) observed since 2018 has reverted slightly in the last 12 months due to a rebound in investor demand. More recently, the collateralized reinsurance space has also seen some renewed interest.

Exhibit 1
Global Reinsurance – Total Dedicated Reinsurance Capital



Source: AM Best data and research; Guy Carpenter

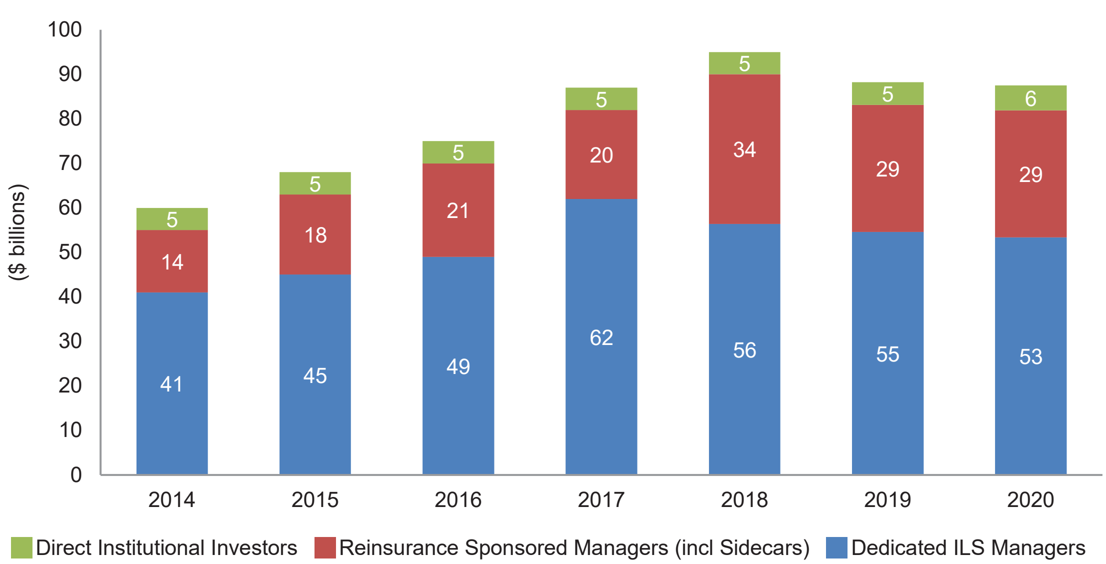
As traditional reinsurers attempt to minimize volatility in their balance sheets, the role of third-party capital in providing retrocessional capacity is critical. Most major global reinsurers continue to strengthen their ILS platforms, seeing the segment as a partner rather than a competitor. For several of the largest investors—especially pension and sovereign funds—(re)insurance risk is still considered immaterial as a share of their portfolio allocation. Their impact on the reinsurance segment, however, is significant. The diversification benefits—although questionable in an increasingly correlated world—remain attractive as long as participation is relatively modest and the returns justify it. Despite the expressed appetite from some players to expand into risks other than property nat cat, challenges related to modeling and pricing, as well as the horizon mismatch between investors and potentially long-term liabilities, remain.

Resilience in the Face of COVID

Despite heavy losses in 2020, traditional reinsurers remain strongly capitalized. Companies in AM Best's composite of global reinsurers (a grouping of the 30 largest property/casualty reinsurers with a global footprint) experienced COVID-19 losses adding between 7% and 20% to their loss ratios. The most significant ones correspond to the largest European reinsurers and Lloyd's due to their degree of exposure to event cancellation and non-US/non-property damage business interruption. While material reserves for other lines of business—including financial lines, workers compensation, mortgage, and credit—have been booked, reported claims remain much lower than originally expected. Losses related to mortality risk are heavily concentrated in the US market and affect mainly the Big Four European reinsurers, given their dominant presence in the life reinsurance segment. Recognized COVID-related losses for the (re)insurance industry so far stand at approximately USD40 billion. This compares to original estimates that easily exceeded twice that figure, with around half the recorded losses attributed to the reinsurance segment, but final settled amounts may take many years to develop and could differ materially. On the asset side, a few reinsurers with material exposures to stocks suffered heavy unrealized losses during the first quarter of 2020. In most cases, however, this situation was reversed toward the end of the year.

Exhibit 2

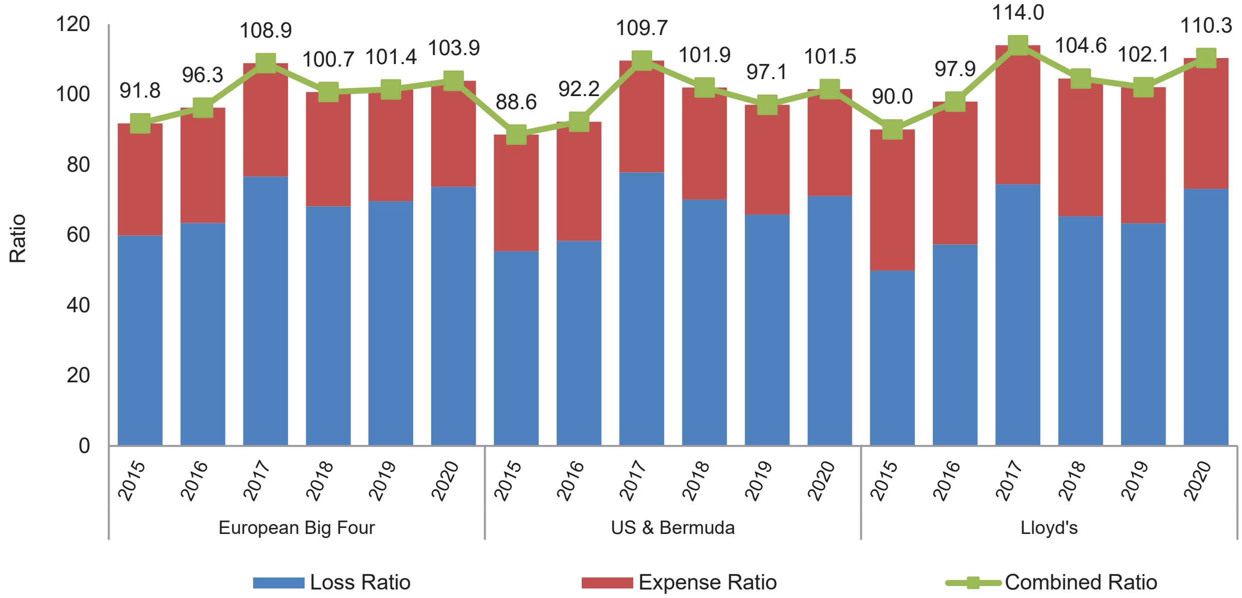
Global Reinsurance – Estimated Total Third-Party Capital



Source: AM Best data and research; Guy Carpenter

Exhibit 3

Global Reinsurance – Combined Ratio



Source: AM Best data and research

The level of uncertainty about COVID-19-related claims reserves remains high. However, in our view, reinsurers in general have been conservative in their loss estimates. Typically, in years of severe industry-wide losses, companies react early and prudently. This is also usually seen as an opportunity to reassess prudence margins relative to the broader underwriting portfolio. Last year, in the middle of the pandemic, we saw several reserve strengthening initiatives related to social inflation on casualty lines for previous years. After a long period of diminished positive reserve release development, we see signs that the trend may be starting to reverse, or at least stabilize. Barring industry-wide retroactive legislation expanding (re)insurers' liability for non-property damage business interruption (BI), especially in the US—something that we believe is highly unlikely and against contract law, and that would be devastating for the whole industry—we remain confident that reserving and solvency positions for the market as a whole remain solid.

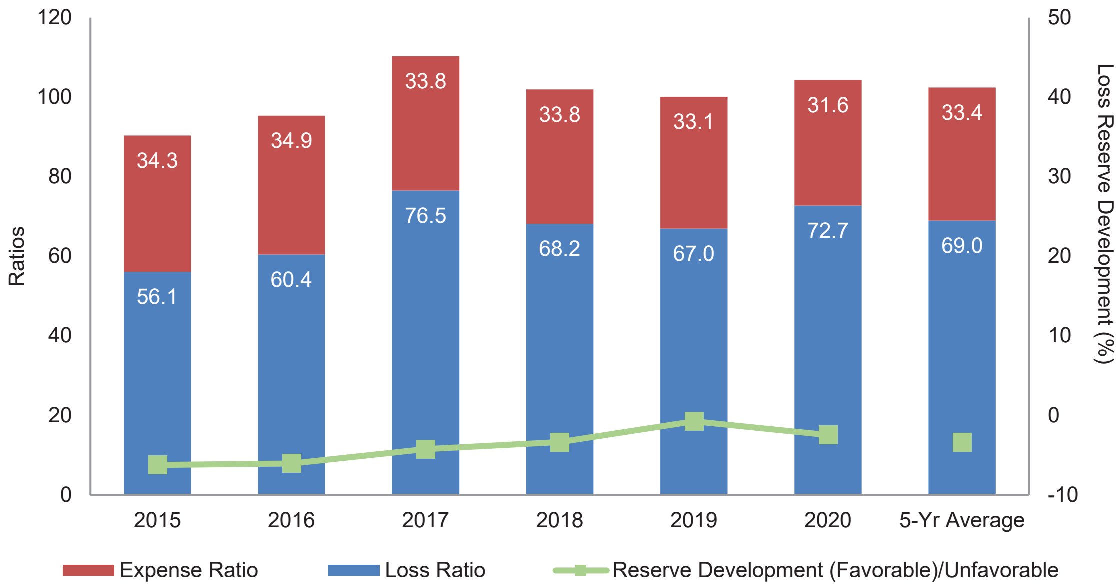
Regardless of the outcomes of future court decisions in the US, which until now have overwhelmingly favored the insurance industry, litigation of business interruption claims will continue to be an issue for many years to come. Legislative or regulatory decisions in Europe, which have been restricted to the primary sector, despite being significant, are manageable in size and have the benefit of adding financial certainty. In cases where contract language and terms are unclear or ambiguous, we expect these situations to result in protracted negotiation and arbitration.

As New Capital Enters Industry, Fundamentals Are Unchanged

With regard to the whole global reinsurance segment, AM Best estimated that, as of the end of 2020, about USD115 billion would have to be depleted for companies' Best's Capital Adequacy Ratio (BCAR) at the 99.6% VaR (Value at Risk) level to reach 10% (considered "very strong"). At the same time, our calculations indicate that only 82% of total available capital is needed to support a BCAR at 99.6% VaR of 25% (considered "strongest"). Of the estimated USD20+ billion raised by (re)insurance start-ups and scale-ups during 2020, only about half is being allocated to reinsurance risks. AM Best estimates a net increase of almost 7% in total available capital from traditional providers, even allowing for dividend, largely offset by asset market movements.

Exhibit 4

Global Reinsurance – Loss Ratios, Expense Ratios, Favorable Loss Reserve Development



Source: AM Best data and research

This is dominated by an even larger increase of 12% for the top 10 reinsurers. Unlike previous pricing cycles, we see no signs of a material erosion of capital this time. Rate pressures stem from a sustained underperformance for several years in a row. New capital influx arises owing to both improving market conditions and a lack of other attractive investment opportunities. Balance sheets remain strong, but capital is still being deployed judiciously.

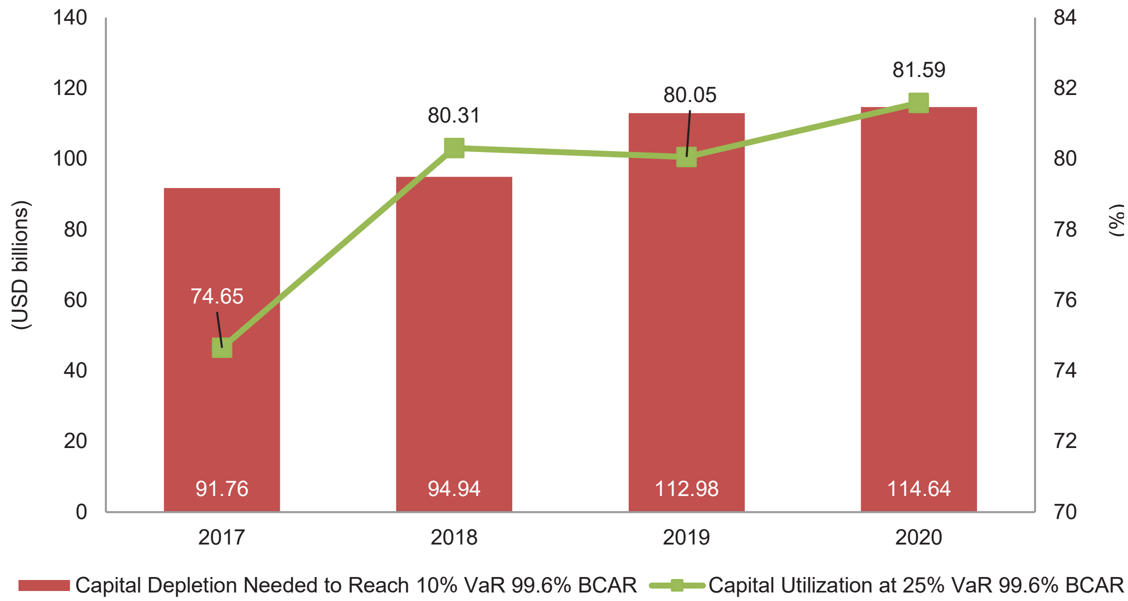
Several of the start-ups formed in 2020 became operational only toward the end of the year, unable to take full advantage of the opportunities offered by the January renewals. In a market driven by price improvements across the board, led by several product lines in the primary segment, and with property nat cat reinsurance rates still lagging, broad offerings and existing tenure are two key advantages for the more established players. Typically run by well-seasoned management teams, with the clear benefit of a clean balance sheet and following a hybrid model covering both insurance and reinsurance, the impact of new entrants has been modest thus far. New business has been written opportunistically, sometimes in niche areas that would otherwise have been subject to dislocation.

AM Best expects further start-up initiatives over the next 12 months. We do not see any signs of naïve capital or a softening market. We expect firming pricing conditions to continue at least for this year and next. These fundamentals should remain in place while companies demonstrate their ability to meet their cost of capital. The exact role of new players will take some time to take shape as they develop and establish their market positions.

Non-Modeled Losses Becoming an Un-Patterned Pattern

The year 2021 started with significant catastrophe activity for reinsurers, in the form of major winter storms in the southern United States, an early test of the year's budgeted catastrophe loads. Estimates place the total industry loss around USD15 billion to USD20 billion, probably the largest first-quarter US nat cat event to date. For AM Best's reinsurance composite,

Exhibit 5
Global Reinsurance – Capital Utilization



Source: AM Best data and research

the initial estimate of losses translates into an average of three points in the loss ratio. This compares with a range of five to 12 points in the combined ratio for a nat cat load that most reinsurers included in their budgets for the full year—loadings that had already been increased after the events of 2020. Although these losses are certainly significant, so far they have not elicited any rating events among the companies in the composite, given their strong balance sheets, reflected in BCARs of around 40% at 99.6% VaR level. Whether the budgeted cat loadings will be sufficient, as we traverse the North Atlantic hurricane season, remains to be seen.

For the last couple of years, "normalized" (ex-cat) loss ratios generally have declined, reflecting corrective underwriting actions by most players. However, the pandemic and higher incidence of secondary perils—the understanding and quantification of which are still in the early stages of development—have added noise to the results for the last 15 months. In the past, this could have been considered part of the claims cycle. Recent experience, however, seems to indicate a relentless rise in the frequency of non-attritional losses, adding a more sustained layer of volatility to the results.

Until now, the natural response from most reinsurers has been to restrict coverage, shifting the focus toward higher layers of protection for non-proportional business or even declining participation altogether in specific risks, from commercial auto to communicable diseases to cyber risks. Over the short term, we expect to see some expansion in capital available, which doesn't necessarily translate into much larger amounts of exposures covered. The segment is attracting investors due to rate increases in specific business segments, not in expectation of the pie becoming larger. The increased risk awareness from insureds and cedents is not being seen yet as an opportunity to develop new products and close the (re)insurance gap. As the proportion of unmodeled risks grows, the gap is likely to widen.

Although greater risk awareness may lead to stronger (re)insurance demand, the perils that society faces are becoming more complex and interrelated. The robustness of established models covering traditionally well-understood risks, such as Atlantic hurricanes, has been put into question. The occurrence of several separate catastrophe events within a short period (e.g., Hurricanes Harvey, Irma, and Maria in 2017; Typhoons Trami and Jebi in 2018) triggered issues related to loss creep and trapped capital, which weren't sufficiently considered in conventional models. These storms disproved the conventional wisdom about the supposed short-tail nature of nat cat events. Climate-risk-associated trends will make the almost simultaneous occurrence of these events more likely, not less. The COVID-19 pandemic has shown that, contrary to widely accepted assumptions, (re)insured losses were not restricted to life and health risks, but driven by government intervention in the form of nationwide lockdowns and travel restrictions that triggered business interruption and event cancellation claims. Life/health losses for the top four global reinsurers—with a balanced underwriting portfolio of life and non-life risks—so far account for only 20% or so of their total 2020 COVID-related booked losses. This is something that traditional pandemic models failed to foresee.

Risk Modeling Continues to Evolve

Periods with large claims experience driven by new, unpredictable factors—e.g., asbestos, the 9/11 terrorist attacks, Thai floods, wildfires, and cyber—normally lead companies to exit particular lines of business or regions, or to add exclusions or restrict coverage. Price adjustments and a better understanding of the risk is expected to follow before supply returns to prior levels. The current environment, however, is different, characterized by much more uncertainty, as traditional risks are now following unpredictable patterns. The frequency of secondary perils—by definition, smaller in magnitude per individual event—is on the rise. As such, accumulation issues and their impact on reinsurers are becoming more critical for risk management.

Moreover, the world economy is being increasingly dominated by intangible assets (such as patents, trademarks, copyrights, and similar types of intellectual property). According to the World Intellectual Property Organization (WIPO), a United Nations agency, intangible assets account for more than 80% of company value and continue to grow. In addition, given our critical dependence on technology in all sorts of activities, evolving risks such as cyber are becoming more dominant but are still not properly understood. Moreover, they are extremely difficult to quantify.

Mainstream vendors are working to include more detail in their existing models or developing new models for secondary perils, incorporating factors that had not been considered material enough in the past. Significant efforts are being made to quantify complex risks such as product liability, social inflation, and cyber. Although there may be consensus on the general direction of trends—e.g., climate risks, social inflation—there is substantial disagreement when evaluating their short-term impact. The past has become less relevant as an indicator of the future. Critical factors—e.g., government intervention, nuclear verdicts, cyber attacks—are the direct result of human intervention, which tends to be difficult to model accurately.

The very definition of certain emerging risks is evolving, heavily dependent on how companies decide to limit the extent of cover. Even if a precise quantification of risk in its current form were possible, growing correlations and their potentially systemic nature are likely to be out of line with most investors' appetite.

The role of modeling to better understand risk for strategic purposes, both directionally and in terms of magnitude, will continue to be critical. However, for underwriting and pricing decisions, which require more precise numbers, its relevance may be somewhat diminished. The level of uncertainty for unmodeled risks is being followed by a generally cautious attitude in deploying capital. Appetite for particular business segments can be very company-specific and heavily dependent on track record. Even with property nat cat risks—given the unknowns related to climate risks—expert knowledge and a proprietary evaluation of risks in addition to that provided by commercial vendors are on the rise. The quality and availability of company-specific data are essential for modeling emerging risks. A deeper understanding of the perils covered might become a key differentiator that determines whether only a few leading or very specialized companies succeed in product lines that some may have seen until recently as commoditized.

Stable Performance and Improved Margins Drive Changes in Business Mix

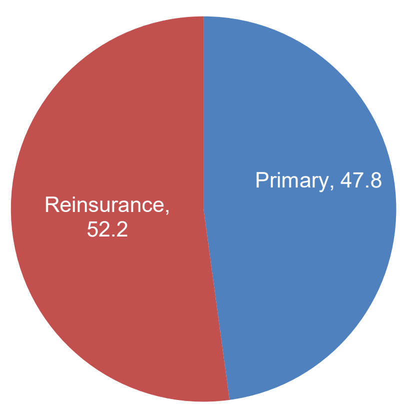
Despite differing opinions as to the sufficiency of rate improvements by product line, there is widespread agreement that price firming continues across the board. It is also clear that the reinsurance segment has been lagging primary writers and the retro market. Among reinsurers themselves, perceptions about rate improvements vary, depending on their particular business mix and recent claims experience. The most bullish companies tend to have a strong market position in loss-affected segments—where the most significant rises are evident—or in very specialized, differentiated, and technical lines with wider margin potential. Concerns about volatility of results in property nat cat remain. As for casualty lines, attitudes regarding social inflation vary by company, depending on the risk profile of their existing portfolios. These factors explain the shifts in the business model that most reinsurers follow, which is the tendency to get closer to primary risks while minimizing volatility in their results.

Getting closer to primary risks to take advantage of the faster rate increases has taken many forms. A number of established reinsurance groups continue to enhance their direct insurance platforms, with a particular emphasis on commercial, specialty, and excess & surplus business. A similar focus can be seen in newly formed companies, based on the idea that a more balanced portfolio of risks will benefit from the current wider margins and long-term, more stable underwriting results. There is also renewed interest in expanding their presence in the proportional treaty business due to the automatic impact of rate increases, as well as the typically more predictable nature of the risks covered. During the reinsurance renewals earlier in the year, some pressure to renegotiate ceding commissions was expected but did not result in any material impact.

The reinsurance segment is one of the most innovative due to the level of sophistication in product development and capital management. Reinsurers have become more active at working with insurtechs, several of them effectively digital managing general agent (MGA) start-ups. Volumes involved are still relatively small but growing rapidly. The combination of a low-cost distribution channel and an efficient administration and claims platform, added to robust capital support and underwriting expertise from reinsurers, seems appealing. Start-up expenses and prudent management of technically profitable growth can be a challenge, but this is mitigated by the potential advantages of having access to granular insureds' data in real time, a more refined understanding of customers' behaviors, and abundant opportunities for new product development in a more digitized world.

These initiatives always have the potential of conflict with cedents and brokers. A common strategy is to operate through very well-defined business units, separate subsidiaries, as a minority investor, or through agreements

Exhibit 6
Top 50 Reinsurers – Primary vs. Reinsurance Split
Weighted Average (%)



Source: AM Best data and research

with third parties. The focus tends to be on new niches, product lines, or customer segments where the likelihood for conflict with previous business partners is minimized. Sometimes brokers and insurers are offered the opportunity to play a clear role as partners, not as competitors. It is a fine balancing exercise. Reinsurers are still investing modestly in these areas, but in a methodical and organized way, with well-defined budgets and close monitoring of outcomes, trying to keep abreast of the latest technological developments to retain relevance.

As for a shift toward more stable results, the most visible changes relate to property nat cat. At reinsurers' request, retention levels have increased, limits lowered, and contract language tightened. Reinsurers' cover has moved upwards in the tower. Closer cooperation with third-party capital for retro cover is evident, thanks to the large size and long-term horizon of the most dominant, committed investors; a lack of other investment opportunities; expected higher returns; and the regulatory efficiency of the capital markets (in particular, cat bonds). Despite third-party capacity having stabilized in the last two years, we see potential for renewed expansion. There is clear interest in diversifying away from nat cat risks toward casualty lines. However, challenges in price modeling remain, as does the mismatch of term horizons between liabilities and investors' expectations. Potential conflict with traditional capital also cautiously interested in expanding into these lines may be another obstacle to significant change in the risk profile of the ILS markets.

Risks and Opportunities in the Post-Pandemic World

COVID-19 and the changing nature of risks are providing a real-life stress test for the global reinsurance industry. AM Best shares the generally accepted view that, despite the uncertainty embedded in companies' balance sheets, the pandemic is an earnings, not a capital, event. As in previous years, the market remains overcapitalized. No significant negative rating actions have been triggered by the pandemic. Since the onset of the pandemic, the natural response has been to add exclusions and restrict cover in general. As rates rise, additional capital and new players emerge; the most attractive slices of risk are identified; and competition intensifies and concentrates on reallocating capital, capturing those business segments offering the highest margins. All the efforts revolve around either rebalancing the business mix or raising market share at the expense of the competition. There is no expectation that the size of the pie as such will expand.

As societies struggle to return to some sort of normalcy in the middle of an ongoing pandemic and intangible assets increase as a share of the worldwide economy, risks are becoming more difficult to measure and manage. On top of that, in a more interconnected economy—resulting from both globalization and technology—correlations shoot up dramatically in times of crisis, making risks systemic. The world overall faces more risk. In their current form, those risks may not meet the conditions to be considered insurable, given that technical prices would be prohibitive.

At the beginning of the pandemic, government authorities and industry leaders—particularly in Europe—floated the idea of developing a (re)insurance pool scheme based on a public/private partnership framework similar to those already in place for large natural disasters, but enthusiasm never materialized and political priorities changed. Despite the evident willingness of certain global reinsurers to play an active role, many felt that governments should take the first step.

From a strictly financial strength point of view, AM Best does not have concerns about the financial health of the global reinsurance segment. Most individual balance sheets remain solid. Most highly rated companies have demonstrated that they have the ability to adapt their business plans to changing market conditions and generate sustained profits.

Appendix 1

Global Reinsurance Market Trends

(USD billions)

	2015	2016	2017	2018	2019	2020	5-Year Average
NPW (P/C only)	131.7	130.3	144.5	150.0	161.6	184.0	154.1
Net Earned Premiums (P/C only)	129.7	128.0	143.3	147.3	156.9	180.4	151.2
Net Investment Income	18.9	20.4	25.8	16.1	27.7	17.7	21.5
Realized Investment Gains/Losses	-0.9	2.3	4.2	8.0	12.0	8.7	7.0
Total Revenue	**210.3**	**216.4**	**238.8**	**223.8**	**268.7**	**279.1**	**245.4**
Net Income	**18.5**	**16.7**	**0.3**	**2.2**	**19.0**	**5.7**	**8.8**
Shareholders' Equity (End of Period)	**200.2**	**204.2**	**207.8**	**191.4**	**213.7**	**237.9**	**211.0**
Loss Ratio	56.1	60.4	76.5	68.2	67.0	72.7	69.0
Expense Ratio	34.3	34.9	33.8	33.8	33.1	31.6	33.4
Combined Ratio	90.4	95.3	110.3	101.9	100.1	104.3	102.4
Reserve Development - (Favorable)/Unfavorable	**-6.2**	**-6.0**	**-4.3**	**-3.3**	**-0.8**	**-2.5**	**-3.4**
Net Investment Ratio[1]	14.6	15.9	18.0	10.9	17.6	9.8	14.5
Operating Ratio	75.8	79.4	92.3	91.0	82.4	94.5	87.9
Return on Equity (%)	9.2	8.4	0.1	1.1	9.4	2.5	4.3
Return on Revenue (%)	8.8	7.7	0.1	1.0	7.1	2.1	3.6
NPW (P/C only) to Equity (End of Period) (%)	66	64	70	78	76	77	73
Net Reserves to Equity (End of Period) (%)	244	244	234	270	246	247	248
Gross Reserves to Equity (End of Period) (%)	266	266	267	310	276	286	281

[1] AM Best's reinsurance composite changes over time as companies enter and exit the market or rating process. In some cases, companies have been added or removed retroactively. When possible, historical data has been updated to reflect changes in companies' segment reporting.

[2] Net investment ratio based on P/C net premiums earned.

Source: AM best data and research

Appendix 2
European Big Four Market Trends
(USD billions)

	2015	2016	2017	2018	2019	2020	5-Year Average
NPW (P/C only)	59.3	59.8	64.8	67.5	72.5	81.9	69.3
Net Earned Premiums (P/C only)	58.4	58.8	65.3	67.2	70.5	82.0	68.8
Net Investment Income	14.2	14.3	18.9	10.8	18.7	10.2	14.6
Realized Investment Gains/Losses	0.6	1.5	2.0	2.6	4.7	4.4	3.0
Total Revenue	**129.9**	**134.7**	**146.9**	**134.8**	**157.6**	**166.4**	**148.1**
Net Income	**10.0**	**8.2**	**2.4**	**4.6**	**5.7**	**2.0**	**4.6**
Shareholders' Equity (End of Period)	**84.0**	**86.5**	**85.6**	**74.8**	**82.3**	**81.2**	**82.1**
Loss Ratio	59.9	63.4	76.7	68.1	69.6	73.8	70.3
Expense Ratio	31.9	32.8	32.2	32.6	31.8	30.2	31.9
Combined Ratio	91.8	96.3	108.9	100.7	101.4	103.9	102.2
Reserve Development - (Favorable)/Unfavorable	**-4.6**	**-5.7**	**-5.0**	**-3.3**	**-0.2**	**-2.1**	**-3.2**
Net Investment Ratio[1]	24.3	24.3	28.9	16.1	26.5	12.5	21.7
Operating Ratio	67.5	72.0	79.9	84.6	74.9	91.4	80.6
Return on Equity (%)	11.5	9.7	2.7	5.8	7.2	2.4	5.6
Return on Revenue (%)	7.7	6.1	1.6	3.4	3.6	1.2	3.2
NPW (P/C only) to Equity (End of Period) (%)	71	69	76	90	88	101	85
Net Reserves to Equity (End of Period) (%)	426	424	392	487	440	495	448
Gross Reserves to Equity (End of Period) (%)	445	441	413	515	461	516	469

[1] AM Best's reinsurance composite changes over time as companies enter and exit the market or rating process. In some cases, companies have been added or removed retroactively. When possible, historical data has been updated to reflect changes in companies' segment reporting.

[2] Net investment ratio based on P/C net premiums earned.

Source: AM best data and research

Appendix 3
US & Bermuda Market Trends
(USD billions)

	2015	2016	2017	2018	2019	2020	5-Year Average
NPW (P/C only)	41.2	42.0	46.1	50.0	55.5	67.1	52.1
Net Earned Premiums (P/C only)	40.8	41.3	45.0	48.2	52.6	63.3	50.1
Net Investment Income	4.1	4.5	4.9	4.1	5.7	5.1	4.9
Realized Investment Gains/Losses	-0.9	0.8	1.6	6.0	6.0	3.6	3.6
Total Revenue	**49.2**	**51.7**	**56.3**	**56.3**	**72.5**	**74.4**	**62.2**
Net Income	**5.3**	**6.0**	**0.6**	**-1.1**	**10.0**	**5.0**	**4.1**
Shareholders' Equity (End of Period)	**80.4**	**83.6**	**86.2**	**81.8**	**92.2**	**111.6**	**91.1**
Loss Ratio	55.4	58.3	77.8	70.0	65.8	71.1	68.6
Expense Ratio	33.2	33.9	31.8	31.9	31.3	30.4	31.9
Combined Ratio	88.6	92.2	109.7	101.9	97.1	101.5	100.5
Reserve Development - (Favorable)/Unfavorable	**-7.4**	**-7.2**	**-4.2**	**-3.1**	**-1.5**	**-3.4**	**-3.9**
Net Investment Ratio[1]	10.1	10.8	11.0	8.4	10.7	8.1	9.8
Operating Ratio	78.5	81.4	98.6	93.5	86.3	93.4	90.7
Return on Equity (%)	6.7	7.3	0.7	-1.3	11.6	4.6	4.6
Return on Revenue (%)	10.8	11.5	1.1	-2.0	13.9	6.7	6.2
NPW (P/C only) to Equity (End of Period) (%)	51	50	54	61	60	60	57
Net Reserves to Equity (End of Period) (%)	107	104	116	122	120	114	115
Gross Reserves to Equity (End of Period) (%)	125	123	148	160	142	156	146

[1] AM Best's reinsurance composite changes over time as companies enter and exit the market or rating process. In some cases, companies have been added or removed retroactively. When possible, historical data has been updated to reflect changes in companies' segment reporting.

[2] Net investment ratio based on P/C net premiums earned.

Source: AM best data and research

Appendix 4

Lloyd's Market Trends

(USD billions)

	2015	2016	2017	2018	2019	2020	5-Year Average
NPW (P/C only)	31.2	28.4	33.6	32.5	33.6	35.0	32.6
Net Earned Premiums (P/C only)	30.5	27.9	33.1	31.9	33.8	35.1	32.3
Net Investment Income	0.6	1.7	1.9	1.3	3.4	2.3	2.1
Realized Investment Gains/Losses	-0.6	0.0	0.5	-0.6	1.3	0.8	0.4
Total Revenue	**31.1**	**30.0**	**35.5**	**32.7**	**38.6**	**38.3**	**35.0**
Net Income	**3.1**	**2.6**	**-2.7**	**-1.3**	**3.3**	**-1.2**	**0.1**
Shareholders' Equity (End of Period)	**35.9**	**34.1**	**36.1**	**34.8**	**39.1**	**45.0**	**37.8**
Loss Ratio	49.9	57.3	74.5	65.4	63.4	73.2	66.7
Expense Ratio	40.1	40.6	39.5	39.2	38.7	37.2	39.0
Combined Ratio	90.0	97.9	114.0	104.6	102.1	110.3	105.8
Reserve Development - (Favorable)/Unfavorable	**-7.9**	**-5.1**	**-2.9**	**-3.9**	**-0.9**	**-1.8**	**-2.9**
Net Investment Ratio[1]	2.0	5.9	5.8	3.9	10.0	6.5	6.4
Operating Ratio	88.1	92.0	108.2	100.6	92.1	103.8	99.4
Return on Equity (%)	8.9	8.1	-7.3	-3.7	9.0	-2.9	0.6
Return on Revenue (%)	10.1	8.6	-7.6	-3.9	8.6	-3.1	0.5
NPW (P/C only) to Equity (End of Period) (%)	87	83	93	93	86	78	87
Net Reserves to Equity (End of Period) (%)	125	131	142	149	133	129	137
Gross Reserves to Equity (End of Period) (%)	160	172	205	220	200	194	198

[1] AM Best's reinsurance composite changes over time as companies enter and exit the market or rating process. In some cases, companies have been added or removed retroactively. When possible, historical data has been updated to reflect changes in companies' segment reporting.

[2] Net investment ratio based on P/C net premiums earned.

Source: AM best data and research

August 31, 2021

World's 50 Largest Reinsurers

Munich Re tops the rankings as we fine-tune the methodology to more precisely reflect market dynamics

Pure reinsurers have become a rarity in recent years, with many traditional reinsurers seeking the diversification and portfolio optimization that can accompany branching into the primary space. This trend is highlighted in AM Best's annual ranking of the world's largest reinsurance groups by Munich Re's ascension to first place in the 2020 list **(Exhibit 1)**.

To achieve greater precision in ranking, this year we have included only year-end gross reinsurance premiums written, eliminating any primary premiums, even for companies that had not attained our former 25% threshold. As a result, Munich Re, which last topped the list in 2017, has surpassed Swiss Re, which occupied the top position in 2018 and 2019. Had we adopted this methodological change in last year's ranking, Munich Re would have been first then as well.

For year-end 2020, Munich Re posted reinsurance GPW growth of 21.1% (USD7.9 billion), driven by broad-based expansion in the property/casualty lines of business across Munich Re's geographically diversified book, along with increases in the life and health lines, driven primarily by business originating in the UK. This exposure growth was heightened by euro appreciation of just under 10% against the USD, as Munich Re reports consolidated results in euros.[1] For several companies in the top 50, currency appreciation versus the USD as of year-end 2020 was a significant contributor to the growth in their GPW, with currencies such as China's yuan (CNY) appreciating 7%; Swiss franc (CHF), 10%; and South Korea's won (KRW), 6%.

World's 50 Largest Reinsurers Ranking – Methodology

AM Best's ranking of leading global reinsurers has continued to evolve over time, but the intention of the Top 50 exercise is to try to isolate a reinsurer's business profile using gross written premiums as the metric. To obtain the most accurate figures possible, we make a number of assumptions and adjustments as we navigate through different financial statements, accounting standards, and segment reporting. Capturing only third-party business and excluding affiliated or intergroup reinsurance are perhaps the most essential adjustments.

In previous reports, AM Best had included primary premiums in the calculation of GPW premium if the percentage was below what AM Best deemed a material threshold (25%). AM Best has revised its methodology to exclude all non-reinsurance premium, leading to a change in the ranking of the top two reinsurers this year.

Finally, in cases when financial statements and supplements do not provide a proper breakdown of reinsurance premiums, AM Best obtains data through direct dialogue with the reinsurer.

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[1] Munich Re reports its figures in euros, while Swiss Re reports in USD. AM Best converts all reporting currencies to USD using the foreign exchange rate that coincided with the date of companies' financial statements. Currency exchange rate fluctuations have a meaningful effect on companies' rankings. This conversion was especially significant in this year's ranking, given pandemic-related foreign exchange market volatility.

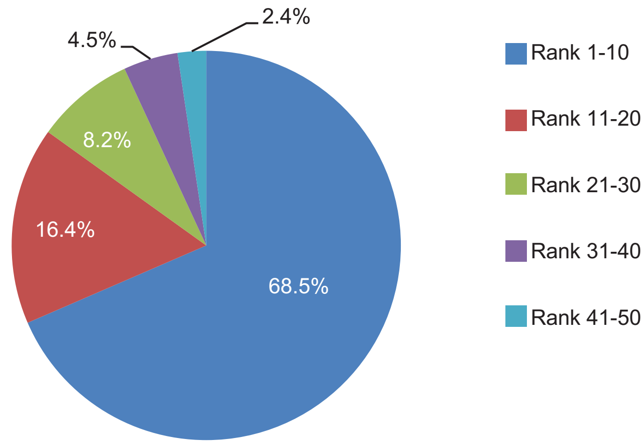
Exhibit 1
Top 50 Reinsurers, Ranked by Unaffiliated Gross Premium Written, 2020
(USD millions)[1]

		Reinsurance Premiums Written				Total			
		Life & Non-Life		Non-Life Only		Share-holders		Ratios[3]	
Ranking	Company Name	Gross	Net	Gross	Net	Funds[2]	Loss	Expense	Combined
1	Munich Reinsurance Company	45,846	43,096	30,237	29,011	36,845	74.7	30.9	105.6
2	Swiss Re Ltd.	36,579	34,293	21,512	20,636	27,258	78.7	30.3	109.0
3	Hannover Rück SE[4]	30,421	26,232	20,568	17,449	14,543	72.8	29.1	101.9
4	SCOR S.E.	20,106	17,910	8,795	7,695	7,588	70.2	30.1	100.2
5	Berkshire Hathaway Inc.	19,195	19,195	13,333	13,333	451,336	80.8	25.4	106.2
6	China Reinsurance (Group) Corporation	16,665	15,453	6,422	6,020	15,772	68.0	33.8	101.8
7	Lloyd's[5, 6]	16,511	12,213	16,511	12,213	45,010	73.7	33.9	107.6
8	Canada Life Re	14,552	14,497	N/A	N/A	21,137	N/A	N/A	N/A
9	Reinsurance Group of America Inc.	12,583	11,694	N/A	N/A	14,352	N/A	N/A	N/A
10	Korean Reinsurance Company	7,777	5,432	6,427	4,229	2,261	84.6	14.9	99.6
11	Everest Re Group Ltd.	7,282	6,768	7,282	6,768	9,726	76.3	26.7	103.0
12	PartnerRe Ltd.	6,876	6,301	5,377	4,826	7,327	79.5	26.5	106.0
13	General Insurance Corporation of India[7]	6,481	5,773	6,310	5,608	7,289	91.7	21.4	113.1
14	RenaissanceRe Holdings Ltd.	5,806	4,096	5,806	4,096	7,560	74.0	27.9	101.9
15	AXA XL	5,326	4,201	5,326	4,201	13,238	80.5	30.5	111.0
16	Transatlantic Holdings, Inc	5,237	4,845	5,237	4,845	5,377	72.9	30.7	103.6
17	Arch Capital Group Ltd.[11]	4,201	2,995	4,201	2,995	13,929	76.0	35.8	111.8
18	MS&AD Insurance Group Holdings, Inc.[7, 8]	3,922	N/A	3,922	N/A	15,007	N/A	N/A	101.7 [2]
19	Assicurazioni Generali SpA	3,831	3,831	1,122	1,122	39,056	80.8	29.4	110.2
20	R+V Versicherung AG[9]	3,785	3,785	3,785	3,785	2,641	83.1	24.5	107.6
21	MAPFRE RE, Compañía de Reaseguros S.A.[10]	3,600	3,003	3,004	2,416	2,175	69.1	29.3	98.4
22	Sompo International Holdings, Ltd.	3,580	3,088	3,580	3,088	7,386	67.2	29.5	96.7
23	The Toa Reinsurance Company, Limited[7, 8]	3,104	2,579	2,226	1,801	2,792	72.4	35.0	107.4
24	AXIS Capital Holdings Limited	2,809	1,979	2,809	1,979	5,296	76.4	27.4	103.8
25	Validus Reinsurance, Ltd.	2,409	1,823	2,409	1,823	3,439	77.4	27.8	105.2
26	Caisse Centrale de Réassurance	2,292	2,107	2,155	1,975	6,493	94.4	15.5	109.9
27	Pacific LifeCorp	2,283	1,771	N/A	N/A	17,452	N/A	N/A	N/A
28	Odyssey Group Holdings, Inc.	2,214	2,123	2,214	2,123	4,774	66.9	28.7	95.6
29	Taiping Reinsurance Co. Ltd[8]	2,098	1,765	1,327	1,089	1,557	70.7	33.2	103.9
30	Peak Reinsurance Company Ltd	1,966	1,517	1,867	1,420	1,487	71.0	26.5	97.4
31	IRB - Brasil Resseguros S.A.	1,846	1,034	1,846	1,034	819	102.3	29.7	132.0
32	SiriusPoint Ltd.[13]	1,828	1,241	1,826	1,238	2,437	80.7	32.6	113.3
33	Aspen Insurance Holdings Limited	1,661	1,302	1,661	1,302	2,998	74.2	27.6	101.8
34	Qianhai Reinsurance Co., Ltd.	1,574	1,020	386	324	475	75.6	23.1	98.7
35	Deutsche Rückversicherung AG	1,490	958	1,391	915	376	66.5	34.1	100.5
36	QBE Insurance Group Limited	1,417	1,245	1,417	1,245	8,492	83.9	25.2	109.1
37	Tokio Marine & Nichido Fire Insurance Co., Ltd.	1,372	1,083	1,372	1,083	17,374	N/A	N/A	103.7
38	American Agricultural Insurance Company[12]	1,291	420	1,291	420	639	83.6	17.5	101.2
39	Markel Corporation	1,131	960	1,131	960	12,815	69.8	33.9	103.7
40	Allied World Assurance Company Holdings, AG	956	873	956	873	4,377	69.1	26.5	95.6
41	Fidelis	855	411	855	411	2,034	55.7	32.6	88.3
42	Chubb Limited	832	731	832	731	59,441	62.3	30.2	92.5
43	Lancashire	814	519	814	519	1,539	59.6	50.8	110.4
44	W.R. Berkley Corporation[14]	810	N/A	810	N/A	631	N/A	N/A	95.3
45	African Reinsurance Corporation	805	651	744	600	1,017	62.4	37.6	100.1
46	Nacional de Reaseguros, S.A.	747	590	608	452	497	66.8	30.7	97.6
47	Hiscox Ltd	743	193	743	193	2,354	102.0	33.1	135.2
48	DEVK Re	703	654	695	646	1,565	71.8	28.0	99.8
49	Central Reinsurance Corporation	655	608	549	504	576	71.7	26.5	98.2
50	Qatar Reinsurance Company, Limited	652	547	652	547	750	106.3	34.2	140.5

[1] All non-USD currencies converted to USD, using foreign exchange rate at company's fiscal year-end.
[2] As reported on balance sheet, unless otherwise noted.
[3] Non-Life only.
[4] Net premium written data not reported, net premium earned substituted.
[5] Lloyd's premiums are reinsurance only. Premiums for certain groups within the rankings also may include Lloyd's Syndicate premiums when applicable.
[6] Total shareholders' funds includes Lloyd's members' assets and Lloyd's central reserves.
[7] Fiscal year ended March 31, 2021.
[8] Net asset value used for total shareholders' funds.
[9] Ratios are as reported and calculated on a gross basis.
[10] Premium data excludes intergroup reinsurance.
[11] Based on Arch Capital Group Ltd. consolidated financial statements and includes Watford Re segment.
[12] Data and ratios based on US statutory filing.
[13] Figures represent the combined pro-forma 2020 position of SiriusPoint taking into account the merger between Third Point Reinsurance Ltd. and Sirius
[14] Ratios are based on the group's operations.
N/A = Information not applicable or not available at time of publication.
Source: AM Best data and research

Due to the methodological change, Swiss Re's total GPW appears to have declined year over year, but when primary premiums are excluded from its 2019 numbers, Swiss Re's total GPW actually increased. Swiss Re's P/C GPW declined slightly, but the company achieved growth in its North American catastrophe-exposed business. Reinsurance GPW in the life and health lines increased, driven by expansion in business originating in the EMEA and Asia-Pacific regions.

Exhibit 2
Global Reinsurance – Life and Non-Life GPW Distribution by Ranking, Year-End 2020



Source: AM Best data and research

Swiss Re and Munich Re will likely continue to occupy the top two spots on the list, as together they account for 25.6% of the top 50 GPW in 2020, down slightly from 27.8% in 2019. As they did in 2019, the 10 largest reinsurers on the list accounted for over two thirds of the total GPW in 2020: 68.5%, very similar to the 68.6% they held in 2019. (The slight decline was likely the result of excluding Swiss Re's primary business.)

Notably, the 10 largest reinsurers' share of premiums remained largely the same, despite the increase in GPW to USD220 billion in 2020, up from USD197.5 billion in 2019 **(Exhibit 2)**. Total GPW among the top 50 in 2020 rose to USD321 billion. The substantial increase in GPW can be partially attributed to rate increases derived from the hardening reinsurance market, a trend that AM Best expects will continue into 2022. The static nature of the top 10's market shares reflects their dominant relationships with brokers and cedents, along with their pricing power and their more insulated positions from competition. However, for cedents, this concentration means that diversifying their reinsurance panels and ameliorating counterparty risk remains a challenge.

In addition to the change at the top of the ranking, there was movement among the remaining companies comprising the Top 10 for year-end 2020. Notably, China Re rose from eighth in 2019 to sixth place in 2020, surpassing Lloyd's of London. China Re's GPW grew by 26.6% (including currency appreciation) in 2020, as the group continued to see strong growth in its domestic P/C business, as well as in its savings-type life and health business. Additionally, Korean Re—which had been replaced in the Top 10 in 2019 by Partner Re—returned to number 10, with 11.7% GPW growth for the year, owing largely to the won's rise versus the dollar. Although they maintained their same rankings as the previous year, both Hannover (at 20.2%) and Berkshire Hathaway (at 19.3%) saw significant growth. The top 10 reinsurers that were exclusively focused on the life business—Canada Life Re and Reinsurance Group of America Inc.—had less dramatic growth in premiums, indicating less pricing momentum.

The biggest rise in ranking this year was Qianhai Re, which jumped from number 39 last year to 34 this year **(Exhibit 3)**. This was only Qianhai's third year in the top 50, as the company was established in December 2016 and first made the list in 2019 (for year-end 2018 premiums). Qianhai has achieved favorable performance in its life financial reinsurance business since its inception and benefited from currency appreciation. Other notable movers included Arch Reinsurance, Generali, and Caisse Centrale de Reassurance, all of which moved up four spots. Peak Re, which has improved its ranking the most of any company since its first year of inclusion in 2016, continued its upward (albeit more modest) climb, moving up one spot in the ranking this year to 31.

Hiscox, IRB, and Qatar Re moved down the most: Hiscox from number 40 to 47; IRB from 25 to 31; and Qatar Re from 43 to 49. For Hiscox, this move reflected capital redirected toward its primary business, given the rate hardening seen on the direct side. IRB has undergone underwriting changes since its management transition, while Qatar Re (which reports in USD) continued to face challenges in the group's international operations. IRB was also significantly impacted by the depreciation of the Brazilian real versus the dollar, as it declined by 22% year over year.

Exhibit 3
Global Reinsurance – Notable Ranking Changes

Upwards	Current	Prior	Change
Qianhai Re	34	39	5
Arch Capital	18	21	4
Assicurazioni Generali	19	23	4
Caisse Centrale de Réassurance	26	30	4
Validus Reinsurance	25	28	3

Downwards	Current	Prior	Change
Hiscox	47	40	-7
IRB	31	25	-6
Qatar Re	49	43	-6
AXIS Capital	24	19	-5
African Re	45	42	-4

Source: AM Best data and research

New entrants to the list this year include Fidelis and Lancashire, both Bermuda-based companies and both specialty writers. The specialty market has seen some of the highest rate increases in this hardening environment, and both of these companies have diversified business platforms through which to access these increases.

The combined ratio for the top 50 was 104.9 in 2020, a deterioration from the 102.4 in 2019. COVID-19-related losses were significant for several companies, accompanied by continued social inflation in US casualty business and secondary peril natural catastrophe activity. For the four largest reinsurers alone, 2020 COVID-19 P/C reinsurance-related losses accounted for a range of approximately 5 to 15 percentage points in their combined ratios. With an anticipated return to normalcy after the pandemic, along with expected continued rate hardening, an improvement in combined ratios is expected for 2021, barring an above average wind season.

Top 15 Non-Life and Top 10 Life Global Reinsurers

AM Best continues to break out two additional sub-rankings for non-life and life, comprising reinsurance groups that have a global footprint or business profile **(Exhibits 4 and 5)**. These groups not only have diverse product offerings but generally maintain a strong geographic spread of risk and provide material capacity to numerous different markets. While they may not always be dominant market leaders outside of their domestic space, they all have significantly expanded their presence beyond their traditional jurisdictions, seeking geographic and product diversification.

There is no set rule to determine when or how a reinsurer becomes global. As market dynamics ebb and flow, so can a group's profile. Given that some of the world's largest reinsurance groups continue to enter new markets and provide capacity, we expect they will be added to these lists in due time.

Notably, AM Best added China Re, Korean Re, and General Insurance Corporation of India (GIC) to the top 15 non-life global reinsurers 2020 rankings. Given China Re's acquisition of Chaucer in 2019, which boosted the group's overseas P/C reinsurance revenue to one third of its overall P/C reinsurance book, the group now has a material global footprint. Similarly, a significant percentage of GIC's business—over 30% of its GPW—comes from markets such as

Exhibit 4

Top 15 Global Non-Life Reinsurance Groups, Ranked by Unaffiliated Gross Premiums Written in 2020

(USD millions)

		Non-Life Only		Total Share-holders'	Combined
Rankin	Company Name	Gross	Net	Funds	Ratio
1	Munich Reinsurance Company	30,237	29,011	36,845	105.6
2	Swiss Re Ltd.	21,512	20,636	27,258	109.0
3	Hannover Rück SE	20,568	17,449	14,543	101.9
4	Lloyd's	16,511	12,213	45,010	107.6
5	Berkshire Hathaway Inc.	13,333	13,333	451,336	106.2
6	SCOR S.E.	8,795	7,695	7,588	100.2
7	Everest Re Group Ltd.	7,282	6,768	9,726	103.0
8	Korean Reinsurance Company	6,427	4,229	2,261	99.6
9	China Reinsurance (Group) Corporation	6,422	6,020	15,772	101.8
10	General Insurance Corporation of India	6,310	5,608	7,289	113.1
11	RenaissanceRe Holdings Ltd.	5,806	4,096	7,560	101.9
12	PartnerRe Ltd.	5,377	4,826	7,327	106.0
13	AXA XL	5,326	4,201	13,238	111.0
14	Transatlantic Holdings, Inc	5,237	4,845	5,377	103.6
15	Arch Capital Group Ltd.	4,201	2,995	13,929	111.8

Please see Exhibit 1 for other footnotes.

All non-USD currencies converted to USD using the foreign exchange rate as of company's fiscal year end.

Source: AM Best data and research

Exhibit 5

Top 10 Global Life Reinsurance Groups, Ranked by Unaffiliated Gross Premiums Written

(USD millions)

		Life Only		Total Share-holders'
Rankin	Company Name	Gross	Net	Funds
1	Munich Reinsurance Company	15,609	14,085	36,845
2	Swiss Re Ltd.	15,067	13,657	27,258
3	Canada Life Re	14,552	14,497	21,137
4	Reinsurance Group of America Inc.	12,583	11,694	14,352
5	SCOR S.E.	11,311	10,215	7,588
6	Hannover Ruck SE[4]	9,853	8,783	14,543
7	Berkshire Hathaway Inc.	5,862	5,862	451,336
8	Assicurazioni Generali SpA	2,709	2,709	39,056
9	Pacific LifeCorp	2,283	1,771	17,452
10	PartnerRe Ltd.	1,499	1,475	2,124

Please see Exhibit 1 for other footnotes.

All non-USD currencies converted to USD using the foreign exchange rate as of company's fiscal year end.

Source: AM Best data and research

the US, Europe, the Middle East, and Asia. Korean Re has also expanded beyond its dominant domestic position with around a quarter of its premiums coming from outside Korea, including from emerging insurance markets in Latin America.

August 31, 2021

Dedicated Reinsurance Capacity Continues to Grow

The increase in total reinsurance capital in 2020 was noteworthy, given the loss-affected operating results across the industry

For the past nine years, AM Best has estimated the amount of global capital dedicated to supporting the reinsurance market. This estimate is a joint effort between AM Best and Guy Carpenter, with AM Best providing an estimate of traditional reinsurance capital and Guy Carpenter providing an estimate of third-party capital.

As the global reinsurance market has evolved, so has the capital supporting this business. The alignment of interests between third-party capital and large commercial lines capacity with reinsurance capital has impacted not just capital levels, but also the utilization of that capital. This trend has resulted in almost all reinsurers writing primary business as well as ceding business to alternative capital facilities.

Reinsurance available capacity and excess capital are the most useful measures of the segment's capital. Our estimate of available capacity is not a simple aggregation of the shareholders' equity of all companies that write reinsurance. Pure reinsurers are a relative rarity, as most global reinsurers are engaged in business other than reinsurance, such as specialty insurance, or other outside interests. Thus, not all of a company's capacity is allocated to its reinsurance business. AM Best's estimate of available capacity takes into account these allocations by line of business. Since year-end 2018, AM Best's estimate of available capacity has been less than 60% of total shareholders' equity based on consolidated figures for groups identified as reinsurance writers. As reinsurers continue to expand into primary lines, more in-depth analysis is required to determine these estimates.

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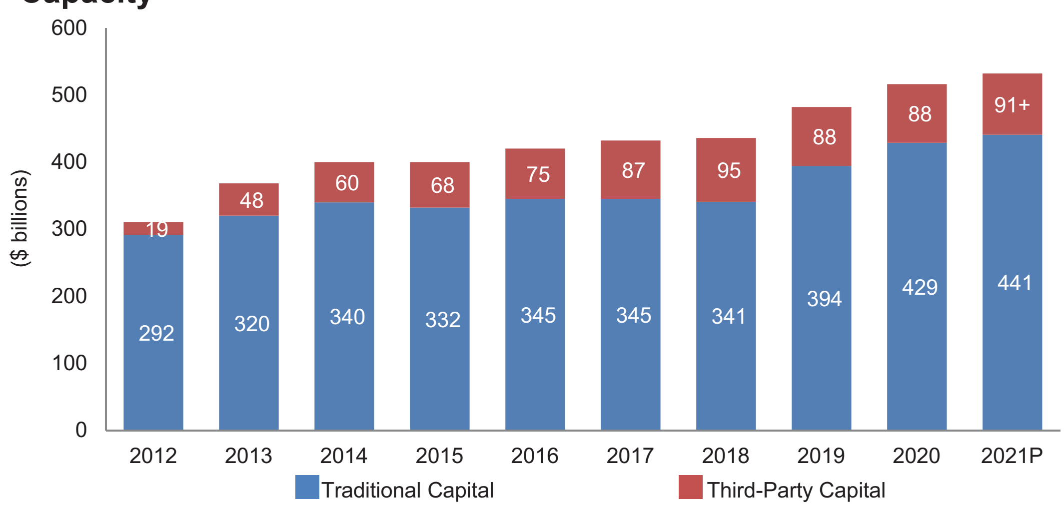
Exhibit 1
Global Reinsurance – Estimated Total Dedicated Reinsurance Capacity



P=Projected
Source: AM Best data and research; Guy Carpenter

How We Calculate Total Dedicated Capacity

The data in the report is obtained through analysis of the BCARs of the Top 50 reinsurers. These BCARs are used to measure an individual company's available capital and required capital. To adjust for organizations that provide capacity in both primary and reinsurance markets, we apply a haircut based on a company's split of business, based on net premiums earned. The haircuts for all 50 companies are then consolidated and grossed up by 10% to account for organizations that are not in the Top 50. The consolidation of these numbers results in AM Best's estimation of traditional reinsurance capital, which we then combine with Guy Carpenter's estimate of third party capital, for the Total Dedicated Reinsurance Capacity. In addition to this process, AM Best estimates excess capital in the market.

The estimation of excess capital is similar to that of traditional reinsurance capital. The difference is that the BCARs incorporate the impact of a catastrophic event at the company level. We then apply the same haircut, consolidation, and grossing up procedure to the catastrophe-stressed BCARs. The consolidated figures are then examined to determine how much available capital must fall before the market's BCAR ratio falls below 25% at the VaR 99.6% level, the strongest measure of BCAR in AM Best's criteria.

Available Capital Up in 2020

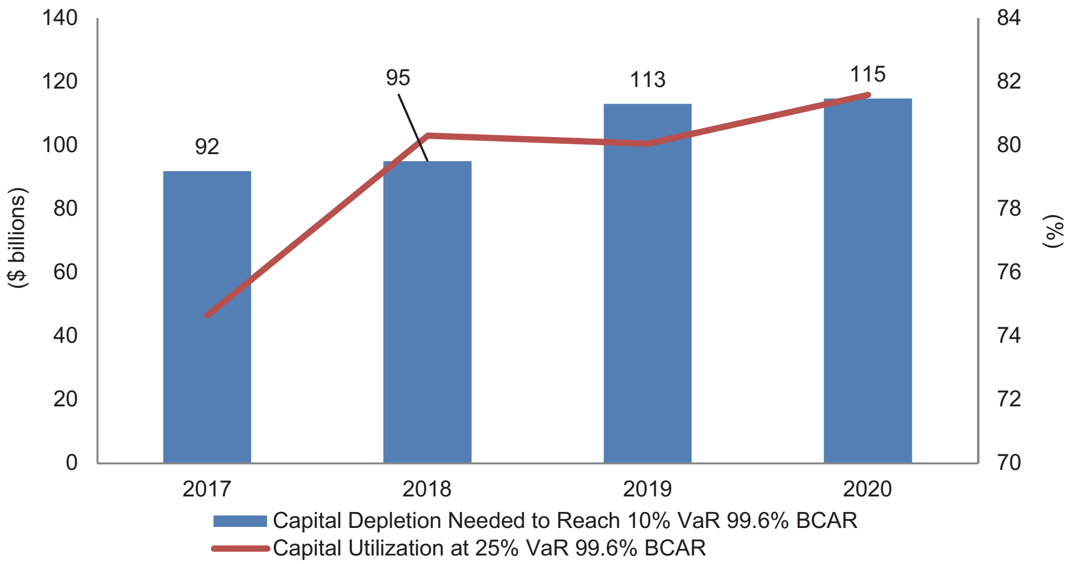
AM Best estimates that total dedicated reinsurance capacity increased by USD35 billion (or 7%) from USD482 billion at December 31, 2019, to USD517 billion at December 31, 2020. The increase is wholly attributable to the rise in traditional reinsurance capital, from USD394 billion at year-end 2019, to USD429 billion at December 31, 2020. Capital levels were influenced by events throughout a tumultuous 2020, a year that was punctuated by a pandemic still raging in many places in the second half of 2021.

The onset of the COVID-19 pandemic brought significant volatility to the reinsurance segment in the first half of 2020, due mainly to equity market fluctuations and conservative initial incurred but not reported (IBNR) margins for COVID losses. However, as 2020 progressed and countries implemented stimulus and economic relief programs, the equity markets rebounded and interest rates decreased. This was particularly notable for the Top 10 reinsurers, which saw a 9% increase in fixed-income market values as well as a 19% increase in equity market values. These increases and other factors resulted in the growth in available capital of roughly 12% for the Top 10.

The influx of new capital into the reinsurance segment was widely publicized, but the overall impact of these new ventures was relatively restrained given the lag required to deploy the capital, along with relatively more attractive opportunities on the primary side. Market volatility stemming from the pandemic in 2020 had a significant impact on our biannual estimate of available capacity. At mid-year 2020, reinsurers' investment portfolios were still in the process of recovering from the mark-to-market unrealized losses on both fixed income and equities in the second quarter. However, by year-end 2020, balance sheets had largely recovered with some of the larger reinsurers having significant unrealized gains.

The year-end 2020 increase in Total Dedicated Reinsurance Capacity is noteworthy given the loss-affected operating results across the industry. However, this is an absolute measure of total capital and not relative. Thus, given the size and diversification of segment investment portfolios (roughly 60.7% fixed income, 7.8% equity, 10.9% cash and short-term investments, and 20.6% other at year-end 2020), values can be driven heavily by investment markets. Furthermore, the largest reinsurers generally have sophisticated and time-tested enterprise risk management (ERM) programs in place to function in adverse conditions, such as the COVID-19 pandemic.

Exhibit 2
Global Reinsurance – Capital Utilization



Source: AM Best data and research

Our previous estimates for 2020 were relatively flat year over year, given the general uncertainty in underwriting results and investment market volatility throughout the year. The same applied to our original expectations as to capital utilization, which approximates how much of the available capital of the market is required to maintain the risk-adjusted capitalization at the strongest BCAR (Best's Capital Adequacy Ratio) of 25% at a 99.6% VaR (Value at Risk) level. We also track how much capital depletion is needed to reduce BCAR to 10% at 99.6% VaR. This measure approximates the tolerance afforded companies in extreme stress scenarios. Increases in the capital depletion buffers demonstrate the segment's proactive management of tail-risk exposures, despite the ongoing deterioration in capital utilization metrics for standard BCARs.

A close look at the calculated available capital relative to increases in required capital for the same segment paints a much clearer picture as to how capital is being deployed. In 2018, capital utilization rose to 80%, from 75% in 2017, the result of a USD4 billion reduction in traditional reinsurance capacity. The following year, in 2019, capital utilization was flat at 80%, despite a USD53 billion increase in traditional reinsurance available capital. By year-end 2020, capital utilization had increased to 82% following another year of strong available capital growth (USD35 billion). Overall, available capital has grown approximately 24% since 2017, even though the buffer between available capital and risk-adjusted capitalization levels has shrunk.

The smaller buffer is due to the increase in required capital stemming from hardening market conditions (such as increases in estimates for catastrophe exposures and loss reserves), plus asset volatility over the three prior years. Required capital, as measured in BCAR, can be broken down into eight separate factors—fixed income securities, equity securities, interest rate, credit, net loss & loss adjustment expense (LAE) reserves, net premiums, business, and catastrophic—with an additional covariance adjustment to reduce the total level of required capital. In 2020, the segment's largest increase in risk (7%) was from catastrophes. This increase is largely model-driven, as most companies incorporate AIR, RMS, or internal model results into their capital models. Additionally, the segment realized a 3.8% increase in required capital from fixed income and 5% from equity securities. Persistent volatility in both the fixed income and equity markets could further pressure capital, as risk factors adjust to the latest trends. The last factor of note is a 5.4% increase in net loss & LAE reserve risk. This figure is driven by numerous items, including US social inflation, declining redundancy levels globally, and uncertainty about COVID-19 claims.

The increased risk and associated required capital for traditional reinsurers continues to drive capital utilization levels up. Although the largest reinsurers continue to find ways to expand the overall capital base with diversification strategies and access to cheap debt financing, hardening market conditions continue to stress overall risk-adjusted capitalization levels. This is consistent with AM Best's view that the segment is in the early stages of a hard market cycle. As pricing conditions continue to improve and underwriting results become more favorable, we expect the required capital burden to diminish and capital utilization levels to begin to fall.

2021 Estimated Available Capital Also Up

AM Best's estimate for available capital in 2021 includes a 3% increase in traditional reinsurance capital, to USD441 billion, driven primarily by anticipated improvements in underlying (ex-cat) performance by many companies in 2020, which is expected to continue during 2021. This is a result of the ongoing rate increases in both primary and reinsurance lines since last year. Although these pricing developments are a direct response to continued heightened catastrophic activity, coupled with adverse loss cost trends in casualty lines, the net effect is favorable and more stable underwriting results, a trend that AM Best expects will continue at least for the next couple of years.

August 31, 2021

Challenges to Reinsurers' Ability to Meet the Cost of Capital

Hardening market points to reinsurers meeting cost of capital in medium term. Challenges remain in the form of COVID-19 uncertainty, climate risk, and macroeconomic pressures.

Sound risk management, strategic use of technology, and a maturing partnership with alternative capital have subdued the cyclical nature of the reinsurance market slightly, by shrinking the extremes on both sides. To remain above or meet the cost of capital, reinsurers must also remain flexible to market conditions.

The hardening market environment points to a more sustainable pricing momentum and the ability of reinsurers to meet their cost of capital over the medium term. The low interest rate environment has lowered the cost of debt and made equity markets more attractive. The cost of equity has been lower due to the performance of the equity markets until recently and the lower volatility (apart for some brief periods in 2020). The reinsurance industry's weighted average cost of capital had decreased from 9.25% in 2007 to 6.19% in 2019, before increasing slightly in 2020. However, the ability to generate returns above the cost of capital are offset by lingering uncertainty about the COVID-19 pandemic, as well as rising climate risk and social inflation costs.

Traditional hard markets historically have been driven by a scarcity of capital. This does not seem to be the case this time. As AM Best and Guy Carpenter research shows, total dedicated capital for the global reinsurance segment stands at about USD520 billion, with a utilization rate (based on the capital needed to support a "strongest" BCAR) of 82%. Pricing has been hardening of late due to greater risk awareness about both the supply and demand for reinsurance capital. Insurers have been strategically partnering with reinsurers to tackle the effects of climate risk, social inflation, and, more recently, the pandemic and its associated commercial distress. Despite the abundance of capital, reinsurers have been careful about deploying capital and demanding appropriate risk-adjusted rates.

The pandemic's full impact is uncertain. AM Best views COVID-19 as comparable to a medium-sized natural catastrophe, with most reported losses relating to event cancellation and business interruption claims. Although the pandemic has not generated material consequences for the overall market, underwriting uncertainty has grown significantly.

Dispersion of Returns Emphasizes the Importance of Risk Management

The spreads on reinsurers' returns on common equity (ROCE) have varied over the past 14 years. Generally, in years when losses were more severe, the variance in the spread of returns was wider (**Exhibit 1**). In 2016, for example, reinsurers' returns ranged from just 2% to 14%. In 2017—a remarkably high catastrophe year—returns ranged from -22% to 18%.

Reinsurers in the third quartile experience more volatility in these cases, due to the lack of effective risk management and exposures to risks outside investors' risk appetite. Risk management should be effective and responsive to market conditions. Effective communication of a reinsurer's risk profile is key to managing investors' expectations.

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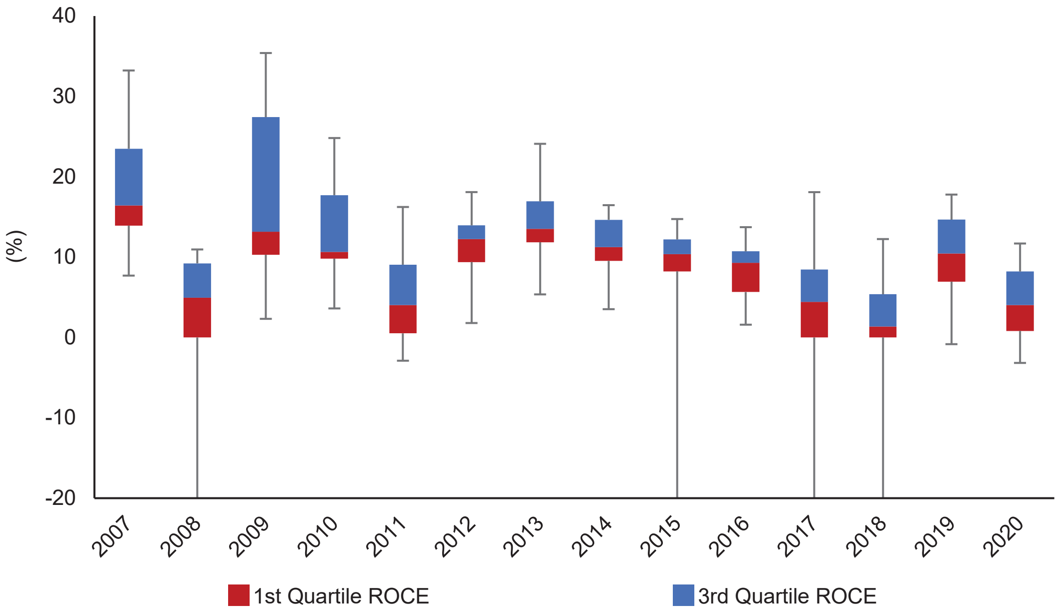
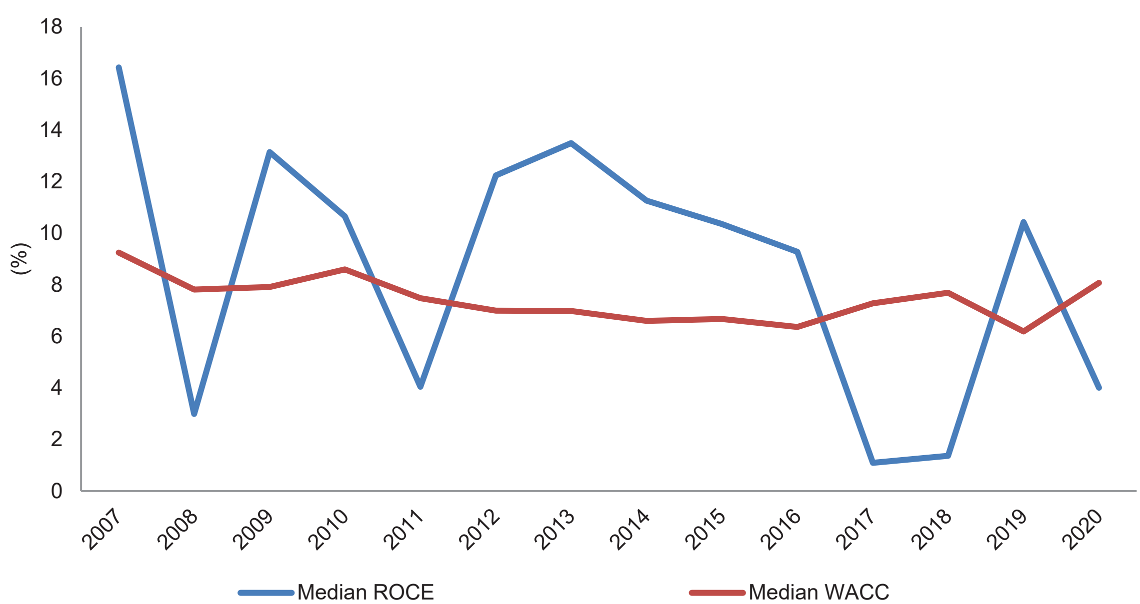
Exhibit 1
Reinsurers – ROCE Dispersion



Source: Bloomberg

Exhibit 2
Reinsurers' Median ROCE and ROIC Compared to Median WACC



Source: Bloomberg

Reinsurers in the first quartile tend to focus on effective risk management, adequate portfolio concentration, and diversification. They are more likely to see a narrower spread of returns, often meeting or exceeding the cost of capital. These reinsurers do a much better job of communicating their risk profiles to investors. When losses do happen, investors are not surprised.

Significant Catastrophe Losses Impact Returns

For reinsurers that take on high severity risks, meeting their cost of capital during years of severe catastrophe losses is a challenge (**Exhibit 2**), which is especially evident when comparing the median ROCE and the median weighted average cost of capital (WACC). The years when returns exceed the cost of capital are generally the ones with a lower frequency and severity of natural disasters.

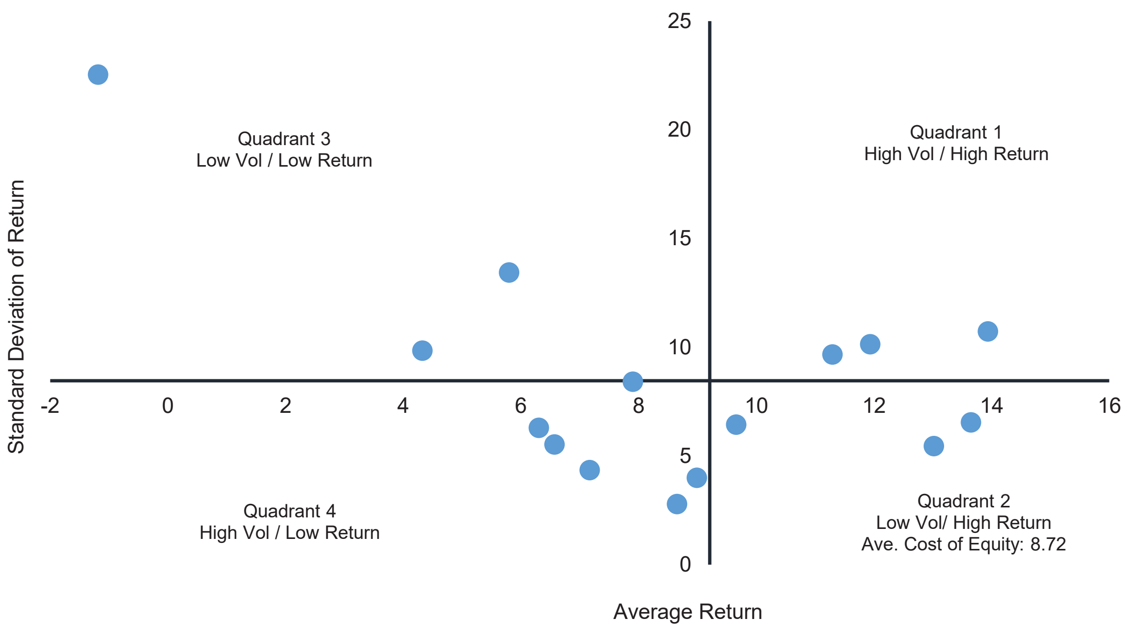
Reinsurers did not meet the cost of capital in 2020, for the fifth time since 2007. According to Swiss Re, insured losses in 2020 were USD89 billion, the fifth highest amount since 1970. Most of these losses were due to secondary perils such as severe convective storms and wildfires.

Returns dropped in both 2017 and 2018, with global insured losses in 2017 skyrocketing to approximately USD144 billion. Major losses resulted from Typhoon Jebi in Japan, a number of major Atlantic hurricanes (notably Harvey, Irma, and Maria), and severe wildfires in California.

Over the past few years, third-party capital and insurance-linked securities (ILS) have grown as investors seek to diversify their portfolios in the prolonged low interest rate environment and generate yields uncorrelated to the economic markets. However, the rising frequency of severe catastrophes, including secondary perils, as well as the emergence of trapped capital risk and unexpected loss creep (evident in Hurricane Irma and the associated litigation issues related to Assignment of Benefits in the state of Florida) have created skepticism about the modeling behind these risks.

Investors are becoming more selective and conservative, focusing on improvements in underwriting performance and risks where the modeling uncertainty is relatively lower. Still, third-party capital continues to flow into the market. The ILS market continues to expand, with a record-setting USD11+ billion issued in catastrophe bonds in 2020 and USD2.8 billion in the first quarter of 2021. Both account for over 60% of total ILS issuance, according to Artemis. ILS fund managers and investors remain persistent in their search for new opportunities and growth in the reinsurance market.

Exhibit 3
Average Returns vs. Volatility of Returns



Source: AM Best data and research

Challenges in Risk/Return Trade-Off Will Persist

Reinsurers look to optimize their cost of capital and maximize their returns while taking risks commensurate with their risk appetites. Significant volatility in returns can indicate inefficiencies with regard to managing risks, resulting in increased cost of capital. **Exhibit 3** identifies 15 reinsurers and their returns. Reinsurers in Quadrant 1 generate higher-than-average returns with slightly higher-than-average volatility. This nominal trade-off results in a low cost of capital for the reinsurers in this quadrant. Reinsurers in Quadrant 2 achieve high returns with low levels of volatility, while those in Quadrant 3 generate lower-than-average returns. Reinsurers in Quadrant 4 generate lower returns with higher volatility, resulting in an increased cost of capital.

While measuring operating performance, we may look at an insurer's returns on equity both in comparison to its peers and vis-à-vis cost of capital, as well as equally important metrics such as return on revenue, combined ratio, return on assets, and underwriting expenses. We also examine the absolute level of these metrics as well as their historic volatility.

An insurer's ability to raise capital (especially in times of stress) and the potential cost of capital are important considerations in the ratings process. During the COVID-19 pandemic, reinsurers took advantage of the lower cost of capital in the debt markets to protect their balance sheets and deployed marginal capital to risks that appeared to be relatively more attractive in light of higher pricing.

August 31, 2021

Lloyd's Resilient Against Significant COVID-19-Related Losses

As a live catastrophe event, uncertainty around COVID-19-related losses persists

As a leading underwriter of specialty property and casualty risks, Lloyd's occupies a strong position in the global insurance and reinsurance markets.

The collective size of the Lloyd's market and its unique capital structure enable syndicates to compete effectively with large international (re)insurance groups under the well-recognised Lloyd's brand. Its competitive strength derives from a reputation for innovative and flexible underwriting, supported by the pool of underwriting expertise in London.

On July 21, 2021, AM Best affirmed the Best's Financial Strength Rating (FSR) of A (Excellent) and the Issuer Credit Rating (ICR) of "a+" on the Lloyd's market. The outlook for each rating is Stable. The ratings reflect Lloyd's balance sheet strength, which AM Best assesses as Very Strong, as well as its Strong operating performance, Favourable business profile, and Appropriate enterprise risk management.

Lloyd's ranks as the seventh-largest risk carrier by 2020 reinsurance gross premiums written (GPW) and the fourth-largest when life premiums are excluded. It has an excellent brand in its core markets, in which conditions are currently improving. Reinsurance is Lloyd's largest segment, accounting for 35% of GPW in 2020, and comprises property (with property catastrophe excess of loss being the largest component), casualty (primarily non-marine excess of loss and US workers' compensation), and specialty reinsurance (marine, energy, and aviation reinsurance).

In 2020, total reinsurance premiums written by Lloyd's increased by 7.0% to GBP12.2 billion (2019: GBP11.4 billion). Property reinsurance, which accounts for over half the reinsurance segment, reported a 3.5% increase in GPW. Given the higher frequency and severity of loss activity in recent years, syndicates showed greater focus on client selection and aggregate deployment, resulting in a reduction of exposure that was offset by significant rate increases.

Recent underwriting performance at Lloyd's has been below AM Best's expectations for a Strong assessment, demonstrated by a five-year (2016-2020) combined ratio of 105.9%. However, the market is expected to report strong operating performance across the underwriting cycle, taking into account potential volatility due to its catastrophe exposure.

Improving market conditions, as evidenced by rate increases of 10.8% in 2020, as well as the robust performance oversight by the Corporation, have started to materialise in measurable improvements in the market's attritional accident-year performance.

AM Best notes that the market's consolidated operating performance cannot be viewed as a leading indicator of its future balance sheet strength to the same extent as it is for other (re)insurers. Earnings generated by the market do not directly build or erode Lloyd's capital base. The capital to support underwriting at Lloyd's is instead supplied by its members at the

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2021-140.5

start of each underwriting year, and replenished during the year if required (for example, due to adverse loss experience). Therefore, we additionally consider the impact of the market's operating results on its ability to retain and attract the capital required for continued trading.

Despite the market's recently weaker performance, it continues to be able to attract capital, with several new syndicates launching in recent years. Since 2018, we have also noted a number of syndicate closures. This has coincided with performance improvement initiatives, including Lloyd's Decile 10 review.

Lloyd's reported combined ratio at year-end 2020 was 110.3%, with COVID-19-related losses accounting for 13.3 percentage points. The market reported an estimated gross and net COVID-19 loss of GBP6.2 billion and GBP3.4 billion, respectively. Contingency, property (direct and facultative), and property treaty books of business account for the majority of these losses, with political risk, credit and financial guarantee lines contributing a smaller proportion. In line with the market's geographic composition, COVID-19-related losses originate primarily from the United States. As a live catastrophe event, uncertainty around COVID-19-related losses persists. An area of uncertainty is reinsurance recoverability, which presents moderate risk for the market.

Elevated catastrophe activity, also negatively impacted Lloyd's operating performance during 2020, adding 9.7 percentage points to the combined ratio. The 2020 Atlantic hurricane season was the most active and fifth-costliest hurricane season on record. In addition, performance was affected by hailstorms and wildfires in the US. Secondary perils including wildfires, torrential rainfall, and droughts, are accounting for an increasingly significant portion of global catastrophe losses and are beginning to challenge reinsurers.

Catastrophe experience in 2021 to date has been somewhat elevated, with significant losses incurred related to Winterstorm Uri and, more recently, flooding in Germany and China. Moreover, the level of US windstorm activity in the second half of the year will be a key driver of final performance, due to the nature of business written.

Enhanced exposure management led by the Corporation, strict underwriting guidelines, and comprehensive reinsurance protection are expected to support the market in profitably writing catastrophe business across the cycle.

Lloyd's reinsurance segment reported an overall loss in 2020. Prior-year reserve releases in the property segment were higher than in 2019, with experience on prior years being favourable overall, in spite of deteriorations on some historical catastrophe events. In addition, the casualty book saw favourable reserve development in 2020, despite emerging trends such as social inflation, which has become more prevalent, particularly in the US, driving increased uncertainty.

The property and casualty reinsurance segments reported calendar-year combined ratios above 100% driven by elevated natural catastrophe activity and COVID-19-related claims, whereas the specialty reinsurance segment reported a calendar-year combined ratio of 95.1% underpinned by higher reserve releases.

The overall market reported an operating expense ratio of 37.2% at year-end 2020. The ratio has been steadily trending downwards since its highest point of 40.6% at 2016, although it remains high compared with its peers. The actions being taken to reduce the cost of placing business at Lloyd's, as outlined in the Future at Lloyd's prospectus and subsequent Blueprints, should start to realise benefits over the short term.

Lloyd’s use of reinsurance is high compared with large specialty insurers and reinsurers. This is due to the nature of the market, which consists of small to medium-sized businesses that purchase reinsurance independently. The market as a whole ceded 27.2% of its GPW in 2020. This figure is somewhat inflated as it includes premium ceded by syndicates to related groups, as well as between syndicates.

Lloyd’s continues to analyse its reinsurance exposure through a range of submitted returns, complemented by the monitoring of Realistic Disaster Scenarios and its Catastrophe Risk Oversight Framework for individual syndicates.

The security required by managing agents for their syndicate reinsurance programmes is reviewed regularly, to address any issues that have the potential to affect the financial strength of the overall market. In particular, total outstanding reinsurance recoverables, counterparty concentration risk, and the purchasing trends of individual syndicates are closely monitored.

August 31, 2021

Ceded Mortgage Guaranty Insurance Exposures on the Rise

More than 15% of private mortgage insurers' GPW ceded to non-affiliates in 2020

Ceded mortgage guaranty insurance exposures have been rising the last few years, as private mortgage insurers maintain a "buy, manage, and distribute" strategy. Private mortgage insurers provide mortgage guaranty insurance for loans with loan-to-value ratios (the ratio of the amount of the mortgage loan to the value of the subject property) that are typically 80% or higher. Before the Great Recession, private mortgage insurers used a "buy and hold" risk and capital management strategy with affiliated reinsurers, with a limited amount of business ceded to the traditional reinsurance market. Private mortgage insurers also ceded business to reinsurers that were captives of mortgage lenders, also known as captive mortgage reinsurance arrangements.

The majority of these captive mortgage reinsurance arrangements were aggregate excess of loss reinsurance agreements. The captive reinsurer is required to maintain a separate trust account, of which the private mortgage insurer is the sole beneficiary, to support the captive's layer of the insured risk. The captive's ultimate liability is limited to the assets in the trust account.

Three key events led to the change in the private mortgage insurers' business strategy from "buy and hold" to "buy, manage, and distribute":

- Following the Great Recession and an investigation by the Consumer Financial Protection Bureau (CFPB), consent orders were signed in 2013, which prohibited private mortgage insurers from entering into any new reinsurance arrangements with captives of mortgage lenders or reinsuring any new loans under existing arrangements for 10 years.
- In 2015, the Federal Housing Finance Agency (FHFA) introduced Private Mortgage Insurer Eligibility Requirements (PMIERs), which specified conditions that private mortgage insurers must meet for loans to be acquired by Fannie Mae and Freddie Mac, the government-sponsored enterprises (GSEs). The main goal of PMIERs was to ensure that private mortgage insurers maintained adequate liquidity and claims-paying resources in times of economic stress.
- Mortgage insurance-linked securities (MILS)—a collateralized reinsurance program tapping into the capital market—emerged as a new market.

CFPB Investigates Captive Mortgage Reinsurance Arrangements in 2011

The CFPB alleged that lenders would recommend particular private mortgage insurers to borrowers because those private mortgage insurers would then purchase reinsurance from that lender's captive, which violated the Real Estate Settlement Procedures Act of 1974 (RESPA). The CFPB described the practice as "widespread kickback arrangements with lenders across the country" and claimed this exercise was rampant in the years leading up to the Great Recession.

The investigation ultimately ended with a settlement and consent orders were signed in 2013. Under the terms of the settlement, the offending private mortgage insurers were prohibited

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2021-140.6

from entering into any new captive mortgage reinsurance arrangements or reinsuring any new loans under existing arrangements for 10 years. Once any pre-existing arrangements ended, those private mortgage insurers would forfeit any right to funds not directly linked to collecting reinsurance claims. Offending private mortgage insurers paid USD15.4 million in penalties and were required to make regular reports to the CFPB to ensure their compliance with the orders. There were no admissions of guilt by any of the private mortgage insurers involved.

Exhibit 1

Mortgage Guaranty Composite – Gross and Ceded Premiums, 2001-2020

(USD thousands)

Year	Gross Premiums Written	Premiums Ceded to Affiliates	Premiums Ceded to Non-Affiliates	% GPW Ceded to Affiliates	% GPW Ceded to Non-Affiliates
2001	3,593,785	241,473	257,439	6.7	7.2
2002	4,172,924	353,889	352,477	8.5	8.4
2003	4,738,920	357,631	466,403	7.5	9.8
2004	4,545,686	431,659	508,775	9.5	11.2
2005	4,705,177	366,748	536,573	7.8	11.4
2006	5,927,000	641,560	850,440	10.8	14.3
2007	7,062,000	806,368	1,001,632	11.4	14.2
2008	7,448,000	942,760	1,129,240	12.7	15.2
2009	6,252,000	919,415	767,585	14.7	12.3
2010	5,602,000	757,206	599,794	13.5	10.7
2011	5,229,000	608,170	388,830	11.6	7.4
2012	4,884,752	638,406	289,510	13.1	5.9
2013	5,136,750	583,711	239,577	11.4	4.7
2014	5,111,326	635,316	386,092	12.4	7.6
2015	5,353,115	948,283	184,672	17.7	3.4
2016	5,405,461	877,561	558,709	16.2	10.3
2017	5,974,563	1,283,145	649,302	21.5	10.9
2018	6,123,831	1,034,544	812,856	16.9	13.3
2019	6,331,194	933,969	915,474	14.8	14.5
2020	6,445,707	923,231	1,062,212	14.3	16.5

Source: AM Best data and research

Exhibit 1 shows the gross premiums written (GPW) for AM Best's mortgage guaranty composite (a group of companies specializing in mortgage guaranty insurance), as well as the amounts ceded to affiliates and non-affiliates from 2001 through 2020.[1] The amount of GPW private mortgage insurers ceded to affiliates and non-affiliates ranged from 13.9% in 2001 to 27.8% in 2008. During this period, the majority of ceded GPW was to non-affiliated entities, primarily to captives of lenders and servicers.

GPW ceded to non-affiliates declined steadily from a peak of 15.2% in 2008 to just 4.7% in 2013, while the GPW ceded to affiliates was stable, averaging 12.8%. Given that the GPW ceded to affiliates was relatively flat during the period, the decline in the amount of GPW ceded to non-affiliates was most likely a result of two factors: the Great Recession and the CFPB's investigation into captive mortgage reinsurance arrangements.

Buy, Manage, and Distribute Strategy Takes Hold

In 2016, private mortgage insurers began to implement what they refer to as a "buy, manage, and distribute" strategy for which the implementation of PMIERs and the emergence of MILS (which came about in 2015) were likely catalysts. Under PMIERs, private mortgage insurers may receive capital relief through traditional third-party reinsurance as well as MILS. This had a noticeable effect on the behavior of private mortgage insurers. The GPW ceded to non-affiliates spiked from 3.4% in 2015 to 10.3% in 2016 and continued to grow, reaching 16.5% in 2020.

MILS have been a staple of the private mortgage insurers the last few years, as they provide insurers with a cost-effective source of capital. However, after the onset of the COVID-19 pandemic in the US in March 2020, the MILS market came to an abrupt halt, with no issuance from March through May of 2020. When MILS returned to the market in June, there was a noticeable widening in spreads and higher retention levels. After June, these spreads

[1] Starting in 2015, the GPW ceded to non-affiliates includes the amount ceded through MILS.

and retention levels quickly began to narrow, although not to the lows seen in early 2020. Market conditions continued to improve in the second half of 2020, and the total issuance for the year was higher than in 2019, as **Exhibit 2** shows. This remarkable bounce-back shows the resilience of the MILS market. Exhibit 2 also shows USD17.1 billion in total MILS transactions issued from 2015 through 1H 2021, with approximately USD12.3 billion still outstanding.

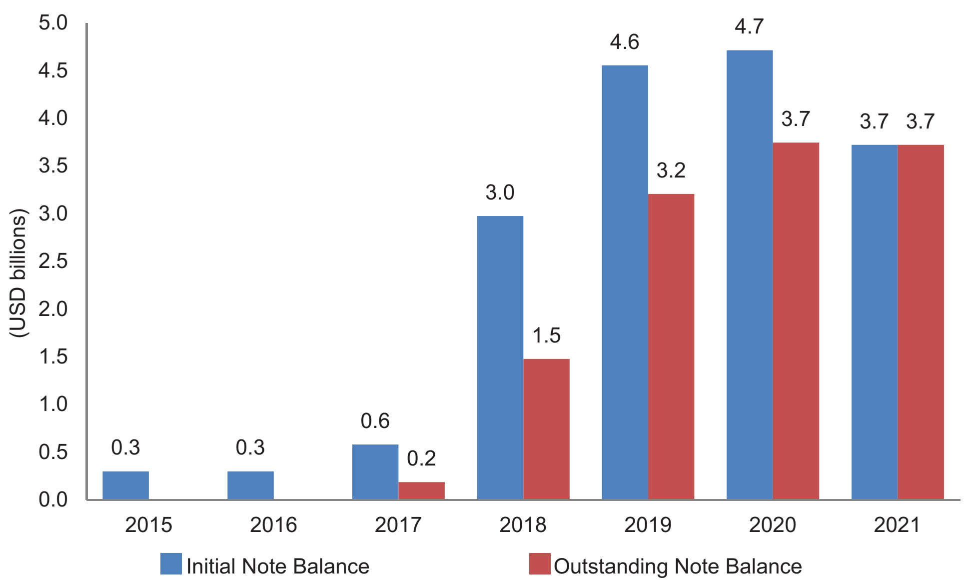
The increase in ceding mortgage risk to the traditional reinsurance market was welcome news for well-diversified P/C reinsurers, as they were seeking to boost income due to prolonged soft P/C reinsurance market conditions from 2013 through 2017. The soft market stemmed from competition from the alternative capital sector; thus, the reinsurance market's return on equity was low and pricing remained below profitable return levels. The addition of mortgage risk provided substantial diversification benefits due to the low correlation between mortgage reserve risk and the reserve risk of other P/C business lines. The incremental net required capital for a well-diversified P/C reinsurer resulting from the addition of the mortgage risk as calculated by Best's Capital Adequacy Ratio (BCAR) model is relatively small.

Exhibit 3 shows the GPW amounts ceded to affiliates and non-affiliates for the period from 2016 to 2020. Private mortgage insurers ceded approximately 13% (USD4.0 billion out of USD30.3. billion) of GPW to non-affiliates in 2016 through 2020, but in 2020 they ceded 16.5% to non-affiliates. This is the highest cession to non-affiliates since 2001; only the years leading up to the Great Recession, when captive reinsurance with lenders was the main form of reinsurance, come close.

AM Best expects traditional reinsurers and MILS to assume a greater proportion of private mortgage insurers' share of mortgage exposures in the future.

Exhibit 2

MILS Initial and Outstanding Note Balances by Issue Year, 2015-2021



As of June 30, 2021.
Source: AM Best data and research

Exhibit 3

Mortgage Guaranty Composite – Percentage of GPW Ceded to Non-Affiliates, 2016-2020

(USD thousands)

Year	GPW	Premiums Ceded to Affiliates	Premiums Ceded to Non-Affiliates	% GPW Ceded to Non-Affiliates
2016	5,405,461	877,561	558,709	10.3
2017	5,974,563	1,283,145	649,302	10.9
2018	6,123,831	1,034,544	812,856	13.3
2019	6,331,194	933,969	915,474	14.5
2020	6,445,707	923,231	1,062,212	16.5
2016-2020	**30,280,756**	**5,052,449**	**3,998,554**	**13.2**

Source: AM Best data and research

August 31, 2021

Insurance-Linked Securities Market Remains Resilient

The ILS market remains robust, despite recent catastrophe losses, trapped capital issues, and COVID-19-related events

The insurance-linked securities (ILS) market remains resilient, as evidenced by the following:

- An increase in catastrophe bond issuance given recent narrowing of spreads
- Firm pricing discipline in the collateralized reinsurance market
- Stable capacity in the industry loss warranty (ILW) market despite a spill-over from softening in the cat bond market
- Slight growth in the sidecar market

The market remains robust, despite recent catastrophe losses, trapped capital issues, and the COVID-19-pandemic.

COVID-19 Impact Will Be Limited

AM Best still expects that the overall impact of the COVID-19 pandemic on the ILS market will be limited. Current industry reserve estimates associated with the pandemic for the entire reinsurance market have moved from approximately USD50 billion (mostly IBNR) initially, to around USD20 billion, and are expected to decline further. However, uncertainty remains about the impact of COVID-19, as companies continue to re-examine their ultimate loss projections.

The effect of the pandemic on losses is not uniform across all segments of the ILS market.

Losses in the cat bond market are limited, given the named-peril focus and remoteness of the coverage provided. Prices in the secondary cat bond market declined significantly at the onset of the pandemic in mid-March 2020 but have since recovered. The market values of cat bonds were pressured as investors were willing to trade them to bolster their liquidity. The recovery of the cat bond market reflects the transparency of these structures, the type of coverage provided, a clearer understanding of potential exposed losses, and limited exposure to the pandemic, which have led in part to the increase in demand for these instruments.

Insurance policies without explicit exclusions for losses due to communicable diseases pose potential problems for the collateralized reinsurance market. Trapped capital remains an issue even though some cedents have allowed ILS fund managers to roll over some of the trapped capital during prior renewal periods.

The ILW market is less likely to see any claims activity from the COVID-19 pandemic, given the named peril focus and remoteness of the coverage provided.

The sidecar market, on the other hand, has experienced higher claims activity. Some sidecar investment vehicles that follow the fortunes of reinsurers on a quota share basis were exposed to business interruption claims due to the COVID-19 pandemic.

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Rate Renewals Are Up

The Guy Carpenter Global Property Catastrophe Rate-On-Line Index showed an increase of nearly 5% between the January 1, 2020 and January 1, 2021 renewal periods. The Japanese property catastrophe rate rose around 7%, and earthquake perils, 3% to 4%, at the April 1 renewals. This is the third year of hardening in the Japanese market, albeit at a more moderate pace than in the two prior years. Per discussions with market participants, pricing for the US property catastrophe reinsurance segment at the June 1 renewals was up between 5% and 10% on average, which was lower than anticipated.

The renewal rate increases thus far have been largely a result of a declining risk appetite from reinsurers and ILS fund managers, especially for the lower risk layers, rather than a capital shortage, given the ample amounts of capital raised in 2020. Uncertainty due to modeled losses from natural catastrophe events, social inflation, and the pandemic continued to weigh on the market, as ILS managers push for further rate increases.

The Elusive ILS Capital Figures

The total ILS capacity has become a bit more elusive over the past few years. What's more, it is difficult to ascertain how much of ILS capacity is un-trapped and deployable. Guy Carpenter and AM Best collaborate in publishing figures for global reinsurance capacity and, in that effort, estimated that ILS capacity was about USD88 billion at the end of 2020. Aon, on the other hand, pegged ILS capacity at about $94 billion in the same period. As you can see, the ILS capacity figures can diverge considerably among industry observers. The only ILS segment that can be objectively determined is the catastrophe bond market.

Cat Bond Market Issuance Rises

Property/casualty 144A cat bond risk capital outstanding was estimated at approximately USD30.5 billion as of the first quarter of 2021. **Exhibit 1** shows P/C 144A cat bond issuance by quarter since 2012.

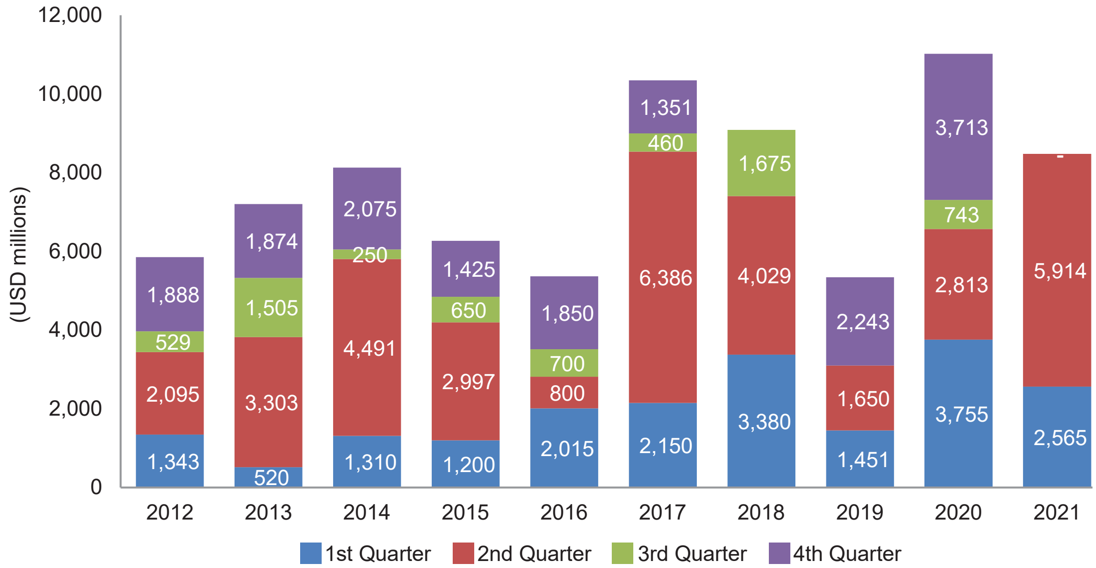
The cat bond market has emerged from the initial pandemic-related price volatility and has quickly rebounded. Through June 30, 2021, 29 traditional P/C 144A cat bonds transactions were placed, totaling USD8.5 billion of limit, which is roughly 29% higher than the first half 2020 total of USD6.6 billion in limit from 28 transactions. In the second quarter of 2021, USD5.9 billion of limit was placed, more than double the USD2.8 billion placed in the second quarter of 2020. The increase was driven by the large number of cat bonds maturing through the first half of 2021 and high demand from investors, as well as the facts that cat bonds represent the most liquid segment of the ILS market and that cat bonds emerged relatively unscathed from the peak of the pandemic compared to other ILS market segments.

Growing Size and Narrowing Spread for 144A Cat Bonds

Exhibit 2 compares the initial and final sizes of the 29 cat bond transactions so far in 2021. Twenty of the 29 (69%) 144A cat bond transactions in the first half were upsized from their initial guidance levels, for an increase of 62.3%, or USD2.43 billion higher than the initial level. The average increase in size for the 20 transactions was approximately USD121 million. Of the remaining nine transactions, seven maintained their initial guidance amounts, while issuance amounts declined by 18.8% (or USD150 million) for two.

A staggering 44 of the 48 (92%) of cat bond tranches issued in the first half of 2021 had an average pricing decrease of 11.3% from their original mid-point guidance range. Furthermore,

Exhibit 1
Cat Bond Issuance by Quarter, 2012-2021



Source: AM Best data and research

the final prices of 35 of the 44 tranches came in below the low end of initial pricing guidance.

The increases in issuance amount and decreases in pricing from the second quarter of 2020 contrast starkly to the second quarter of 2020. Most of the transactions in the second quarter of 2020 were smaller, and pricing tended to be at the upper end of guidance, to ensure smooth placement amid uncertainty about COVID-19. In contrast, the second quarter of 2021 saw larger transactions at the lower end of pricing guidance.

Volume of Cat Bond Groupings

Cat bonds can be grouped into five main categories, the volume of which nearly all increased in the first half of 2021 over the first half of 2020.

- Government-backed, or the so-called residual market, including Citizens Property Insurance Corporation of Florida and State Wind Pools, amounted to USD2.6 billion, or 30.8% of the USD8.5 billion issued during the first half of 2021.
- Soft retro, which are either per occurrence or aggregate industry loss triggers (based on the industry's loss amount of one or more catastrophe events as the threshold for the payout), generally employed by traditional reinsurers, amounted to USD1.6 billion, or 18.6.% of the total.
- Large nationwide US primary insurers ceded exposures to the capital market totaling USD1.9 billion, or 22.5% of the total.
- Japanese, European, Bermuda primary carriers, and others, which generally account for a small portion of the cat bond market, totaled roughly USD1.3 billion, or 15.8% of the total.
- Small to medium-sized US domestic insurers, mostly Florida insurers heavily involved in the cat bond market, amounted to USD1.0 billion, or 12.3% of the total.

Exhibit 3 compares these five segments for the first half of 2020 and 2021.

Exhibit 2

Cat Bonds Issued During First Half of 2021

(USD millions)

#	Vehicle	Sponsor	Initial Amt (USD)	Final Amt (USD)	Change (USD)	Change (%)
1	Sierra Ltd. (Series 2021-1)	Bayview Asset Management, LLC	150.0	200.0	50.0	33.3
2	FloodSmart Re Ltd. (Series 2021-1)	FEMA / NFIP via Hannover Re	350.0	575.0	225.0	64.3
3	Ursa Re II Ltd. (Series 2021-1)	California Earthquake Authority	150.0	215.0	65.0	43.3
4	First Coast Re III Pte. Ltd. (Series 2021-1)	Security First Inc Co	100.0	225.0	125.0	125.0
5	Cape Lookout Re Ltd. (Series 2021-1)	North Carolina Inc Underwriting Assn	100.0	250.0	150.0	150.0
6	Torrey Pines Re Pte. Ltd. (Series 2021-1)	Palomar Specialty Inc Co	300.0	400.0	100.0	33.3
7	Cosaint Re Pte. Ltd. (Series 2021-1)	Universal Property and Casualty Inc Co (UPCIC)	100.0	150.0	50.0	50.0
8	Kizuna Re III Pte. Ltd. (Series 2021-1)	Tokio Marine & Nichido Fire Inc Co. Ltd.	150.0	150.0	0.0	0.0
9	Sakura Re Ltd. (Series 2021-1)	Sompo Japan Inc & Affiliates	200.0	400.0	200.0	100.0
10	Kilimanjaro III Re Ltd. (Series 2021-1)	Everest Re	400.0	320.0	-80.0	-20.0
11	Kilimanjaro III Re Ltd. (Series 2021-2)	Everest Re	400.0	330.0	-70.0	-17.5
12	Merna Re II Ltd. (Series 2021-1)	State Farm	350.0	350.0	0.0	0.0
13	Kendall Re Ltd. (Series 2021-1)	Aspen	225.0	300.0	75.0	33.3
14	Vista Re Ltd (Series 2021-1)	Vantage Risk	150.0	225.0	75.0	50.0
15	Pelican IV Re Ltd. (Series 2021-1)	Louisiana Citizens Property Inc Corp	125.0	125.0	0.0	0.0
16	Residential ReInc 2021 Ltd (Series 2021-1)	USAA	275.0	400.0	125.0	45.5
17	Herbie Re Ltd. (Series 2021-1)	Fidelis Inc	50.0	150.0	100.0	200.0
18	Putnam Re Pte. Ltd. (Series 2021-1)	St. Johns Inc Co	100.0	120.0	20.0	20.0
19	Everglades Re II Ltd. (Series 2021-1 & 2021-2)	Citizens Property Inc	500.0	950.0	450.0	90.0
20	Sanders Re II Ltd. (Series 2021-1)	Allstate	200.0	250.0	50.0	25.0
21	Riverfront Re Ltd. (Series 2021-1)	Great American Inc Group	200.0	305.0	105.0	52.5
22	Alamo Re Ltd (Series 2021-1)	Texas Windstorm Inc Assn (TWIA)	250.0	500.0	250.0	100.0
23	Titania Re Ltd. (Series 2021-1)	Syndicate 1910 (Ariel Re)	150.0	150.0	0.0	0.0
24	Mystic Re IV Ltd. (Series 2021-2)	Liberty Mutual	240.0	300.0	60.0	25.0
25	Baldwin Re Ltd. (Series 2021-1)	Vermont Mutual Inc Co	100.0	150.0	50.0	50.0
26	Umigame Re Pte. Ltd. (Series 2021-1)	Tokio Marine & Nichido Fire Inc Co. Ltd.	200.0	200.0	0.0	0.0
27	Lion III Re DAC	Assicurazioni Generali S.p.A.	238.8	238.8	0.0	0.0
28	Mona Lisa Re Ltd. (Series 2021-1)	Renaissance Re and DaVinci Re	150.0	250.0	100.0	66.7
29	Merna Re II Ltd. (Series 2021-2)	State Farm	300.0	300.0	0.0	0.0

Sources: Artemis, AM Best data and research

Increase in Issuance Amount of Large Transactions

The first half of 2021 saw a number of large cat bond transactions compared to the first half of 2020. The largest issuance in the first half of 2020 was for USD700 million by Sutter Re Ltd, sponsored by California Earthquake Authority. The first half of 2021 included the following large transactions:

- A USD950 million Everglades Re II Ltd. (Series 2021-1 & 2021-2) catastrophe bond sponsored by Florida Citizens Property Insurance Corporation, one of the company's largest cat bonds on record. The bond gives the sponsor fully collateralized reinsurance protection on an indemnity trigger and annual aggregate basis against losses in Florida for named storms over a three-year term.
- Everest Re returned to the cat bond market with USD650 million of notes in six tranches issued by Kilimanjaro III Re Ltd.
- The US Federal Emergency Management Agency (FEMA) secured flood reinsurance coverage from the capital market for its National Flood Insurance Program (NFIP), by issuing a USD575 million cat bond through its FloodSmart Re Ltd. vehicle.
- The Texas Windstorm Insurance Association (TWIA) issued a USD500 million cat bond through Alamo Re Ltd.

Exhibit 3
144A Cat Bond Groupings, 1H20 v 1H21
Groupings of Cat Bond (Rule 144A) Transactions As of June 30 for 2020 and 2021 (USD millions)

	First Half 2020		First Half 2021	
	Company	**Amount**	**Company**	**Amount**
Government Backed/Residual Market	Alamo Re II Pte. Ltd. (Series 2019-1)	400.00	Alamo Re Ltd. (Series 2021-1)	500.00
	Sutter Re Ltd.	700.00	Everglades Re II Ltd. (Series 2021-1 & 2021-2)	950.00
	Everglades Re II Ltd.	110.00	Pelican IV Re Ltd. (Series 2021-1)	125.00
	Catahoula Re Pte. Ltd.	60.00	North Carolina Inc Underwriting Assn	250.00
	International Bank for Reconstruction and Development	485.00	California Earthquake Authority	215.00
	FloodSmart Re Ltd. (Series 2019-1)	400.00	FEMA / NFIP via Hannover Re	575.00
	Subtotal	**2,155.00**	**Subtotal**	**2,615.00**
Soft Retro	Windmill II Re Ltd.	113.00	Mona Lisa Re Ltd (Series 2021-1)	250.00
	Matterhorn Re Ltd (Series 2020-1)	350.00	Titania Re Ltd. (Series 2021-1)	150.00
	Matterhorn Re Ltd (Series 2020-2)	255.00	Vista Re Ltd (Series 2021-1)	225.00
	Atlas Capital ReInc 2020	200.00	Kendall Re Ltd. (Series 2021-1)	300.00
	Matterhorn Re Ltd (Series 2020-3)	215.00	Kilimanjaro III Re Ltd. (Series 2021-2)	650.00
	3264 Re Ltd.	150.00		
	Stratosphere Re Ltd.	100.00		
	Mona Lisa Re Ltd.	400.00		
	Subtotal	**1,783.00**	**Subtotal**	**1,575.00**
Large Nationwide US Primary Insurers	Sanders Re II Ltd. 2020-1 and 2020-2	350.00	Mystic Re IV Ltd. (Series 2021-2)	300.00
	Residential ReInc 2020 Ltd	200.00	Riverfront Re Ltd. (Series 2021-1)	305.00
	Merna ReInc II 2020-1 Ltd	250.00	Sanders Re II Ltd. (Series 2021-1)	250.00
	Caelus Re VI Ltd.	490.00	Residential ReInc 2021 Ltd (Series 2021-1)	400.00
			Merna Re II Ltd. (Series 2021-1)	350.00
			Merna Re II Ltd. (Series 2021-2)	300.00
	Subtotal	**1,290.00**	**Subtotal**	**1,905.00**
Japanese, European and Bermuda Primary Carriers & Others	Blue Halo Re Ltd. (Series 2020) -1	175.00	Lion III Re DAC	238.80
	Herbie Re Ltd.	125.00	Umigame Re Pte. Ltd. (Series 2021-1)	200.00
	Akibare Re Pte Ltd.	100.00	Herbie Re Ltd. (Series 2021-1)	150.00
	Nakama Re Ltd.	200.00	Sakura Re Ltd. (Series 2021-1)	400.00
	Sierra Ltd	225.00	Kizuna Re III Pte. Ltd. (Series 2021-1)	150.00
			Sierra Ltd. (Series 2021-1)	200.00
	Subtotal	**825.00**	**Subtotal**	**1,338.80**
Small to Medium-Sized US Domestic Insurers	Casablanca Re Ltd.	65.00	Baldwin Re Ltd. (Series 2021-1)	150.00
	MetroCat Re Ltd.	100.00	Putnam Re Pte. Ltd. (Series 2021-1)	120.00
	Integrity Re II Pte Ltd.	150.00	Cosaint Re Pte. Ltd. (Series 2021-1)	150.00
	Bonanza Re Ltd.	200.00	Torrey Pines Re Pte. Ltd. (Series 2021-1)	400.00
			First Coast Re III Pte. Ltd. (Series 2021-1)	225.00
	Subtotal	**515.00**	**Subtotal**	**1,045.00**
Total		**6,568.00**		**8,478.80**

Source: AM Best data and research

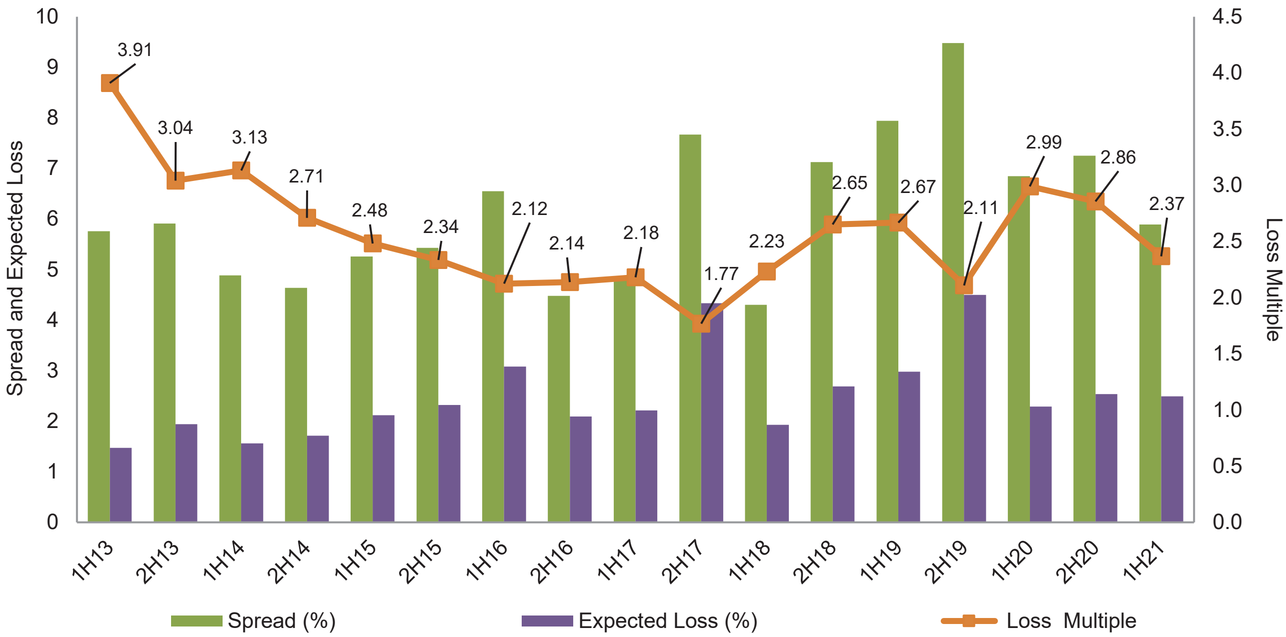
New Sponsors Entered the Market

A number of new sponsors entered the cat bond market in the first half of 2021, including the following:

- Vantage Risk, a new Bermudian reinsurer, sponsored its first 144A index-triggered cat bond transaction with Vista Re Ltd. issuing USD225 million of notes.
- Vermont Mutual Insurance, one of the oldest P/C insurers in the US, issued a USD100 million cat bond out of Baldwin Re Ltd.
- Titania Re Ltd. is the first cat bond ever to benefit reinsurer Ariel Re (Lloyd's Syndicate 1910), in the amount of USD150 million.

Exhibit 4

Cat Bond Loss Multiple, 1H13-1H21



Source: AM Best data and research

- St. John's Insurance Company issued USD120 million of notes through its special purpose reinsurance vehicle, Putnam Re Pte. Ltd.
- Universal Insurance Holdings, via Cosaint Re Pte., Ltd., issued a USD150 million cat bond providing indemnity reinsurance on a per-occurrence basis over a three-year term.

Loss Multiple for 144A Cat Bonds Declines

A key indicator investors use to gauge risk-adjusted returns for a cat bond is the ratio of its spread to expected loss, or the loss multiple. **Exhibit 4** shows the loss multiples in six-month increments from 2013 through 2021. The loss multiple declined steadily from the first half of 2013 to the second half of 2017, when it bottomed out at 1.77x. This was followed by a steady increase from the first half of 2018, to 2.99x in the first half of 2020 (albeit with a blip in the second half of 2019), as a result of heavy catastrophe losses experienced during the period. It then declined slightly to 2.86x in the second half of 2020, driven mainly by high investor demand for cat bonds. As of the first half of 2021, the loss multiple dropped further, to 2.37x.

Secondary Market Activity Remains Robust

In the secondary market, bid/ask spreads widened in early March 2021 for loss-affected aggregate cat bonds that were exposed to a number of catastrophe events over the previous 12 months, including Winter Storm Uri. Since then, spreads have narrowed owing to increased trading interest for aggregate deals. Some aggregate cat bond transactions have now been confirmed as being exposed to losses due to catastrophe events in 2020 and 2021. Loss-free cat bonds have largely recovered, even though spreads had also somewhat widened in March 2021. Current trading activity in the secondary market for cat bonds remains robust.

Cat Bond Lite Up by Amount and Number of Transactions

Privately placed cat bonds, or cat bond lite, have increased by both dollar volume and number of transactions in the first half of the last three years. Through the first half of 2021, 17 tranches of cat bond lites were issued, amounting to USD631 million, versus 12 tranches in the first half of 2020 totaling USD146 million. A three-year cat bond lite of USD250 million was placed through the Artex Risk Solution platform, a segregated accounts company; it was the first transaction placed through this platform and the largest cat bond lite on record by far, surpassing the average cat bond lite issuance of USD50 million. This transaction was placed with qualified institutional investors and ILS funds instead of the syndicate market.

Collateralized Reinsurance Capacity Is Also Growing

AM Best estimates collateralized market capacity at approximately USD50 billion as of the first quarter of 2021. The segment's capacity seems to have increased slightly, after a contraction in 2020 driven in part by (1) investors' moves toward the cat bond market, (2) trapped capital issues, (3) the above-average losses of the past few years, and (4) the potential for COVID-19-related losses.

The collateralized reinsurance market appears to be pushing for more favorable terms related to collateral trapping and the release of collateral. Much like traditional reinsurers, collateralized reinsurers have had to tighten their contractual terms and conditions.

Rate increases during the June renewals were attractive for the collateralized reinsurers, building on the prior rate increases achieved at the January renewals. This market maintains pricing discipline, achieving the same rate increase as traditional reinsurers. However, the rate increases in June were less than anticipated, due to an influx of new capital from existing and start-up reinsurers, as well as ILS fund managers moving to provide coverage in more remote layers and new players aiming to write business offering protection for the lower layers.

Pricing between the cat bond market, where spreads are narrowing, and the collateralized reinsurance market, where rates are increasing, has diverged. As discussed earlier, cat bonds are relatively liquid and provide more clarity into potential losses because they involve clearly defined risks and the use of named perils. However, the collateralized reinsurance market is still haunted by loss creep and trapped capital associated with prior catastrophe events, as well as potential COVID-19-related losses.

Despite all of the issues the collateralized reinsurance market faces, investors remain interested in this ILS segment. Starting in late 2020, some new players emerged in the collateralized reinsurance market, among them:

- Broker Aon established Marilla Reinsurance Ltd., a new collateralized reinsurer, which is expected to write catastrophe reinsurance business.
- Vantage Risk, the insurance and reinsurance start-up, established its first ILS vehicle in Bermuda called AdVantage Retro I Ltd., a collateralized reinsurer class.
- Nectaris Re Ltd., a rated reinsurance company in 2021, retains the tail risk for Leadenhall-sponsored segregated accounts managed by Horseshoe Re II Ltd.
- Lloyd's of London launched its first ILS structure, London Bridge Risk PCC Ltd.

ILW Is Still Attracting Interest

The ILW product continues to attract significant interest from a wide range of market participants, including those seeking the retro protection this instrument offers. Industry sources have placed ILW in-force limits in the first quarter of 2021 at approximately USD5.50 billion.

ILS funds have continued to be a major driver in the ILW market, both as purchasers of ILWs and as suppliers of ILW capacity. The attractiveness to protection sellers is due to the instrument's lower exposure to loss creep and named-peril focus. ILW is also viewed as one of the more insulated segments of the ILS market against potential COVID-19-related losses.

The rate hardening in the ILW market in 2020 due to ILS capacity dislocation after high catastrophe losses seems to have reversed course in 2021. ILWs exposed to Florida wind and other US perils seemed to be pricing below the firm order terms during the June 2021 renewals compared to last year. According to some observers, Florida wind ILW with a USD50 billion trigger is pricing as much as 20% below what they were a year ago. The softening of the ILW market reflects investor interest due to spillover from the cat bond market, with which ILW instruments share characteristics such as transparency and named-peril focus.

Sidecars Have Rebounded

The sidecar market contracted in 2020, but has since seen an uptick in capacity. The decline in late 2020 was driven by losses as a result of catastrophe events from 2017 through 2019. The advent of the COVID-19 pandemic in 2020 has further complicated matters, with potential business interruption losses and trapped capital issues. Industry estimates placed sidecar capacity at approximately USD7 billion as of the first quarter of 2021.

Several capital redemptions have occurred, as investors pulled back from the sidecar market, including the following:

- At January 31, 2021, the Stone Ridge Reinsurance Risk Premium Interval Fund (SPRIX) shrank by approximately 5%, to USD2.68 billion of assets, down from USD2.82 billion at the end of October 2020.
- Mount Logan Re sidecar's asset base dropped to roughly USD800 million in the second quarter of 2020, from USD940 million in July 2019; current assets under management are approximately USD903 million.
- Hannover Re's K-Cession quota-share retro sidecar declined from USD680 million to USD610 million at the beginning of 2021.

Despite the capital reductions of some of these sidecars, the number of direct quota-share transactions between institutional investors and global insurance or reinsurance companies—thereby passing the ILS funds—is on the rise, according to broker Willis Re. This resurgence has occurred because investors are willing to share underwriting results of globally diversified reinsurers and attempt to diversify from peak perils, which make up the majority of the sidecar market.

Actively managed sidecars, which are more permanent, will continue to play a role in the ILS market, as they have become valuable revenue sources for some sponsors, by performing underwriting and investment management services in return for a fee.

August 31, 2021

COVID-19 Generates New Challenges and Opportunities for Life/Annuity and Health Reinsurers

Market participants find growth areas in annuity and spread-based reinsurance

For the global life/annuity and health reinsurance segments, 2020 undoubtedly was the most interesting and challenging year in recent memory. Even as the COVID-19 outbreak spread rapidly in the US starting in March 2020, death claims remained at a manageable level. The overall mortality impact remained within a tolerable range during the first half of the year, but the more deadly second wave that hit the US generated the most significant earnings impact. Although the segment was susceptible to a significant earnings hit in 2020, it was also equipped with capital levels sufficient to maintain its favorable position. In fact, COVID-19 has yet to show itself as a 1-in-200-year mortality event despite the tragic loss of life.

Concurrent with the pandemic, various macroeconomic and operational factors affected the entire financial services sector and the economy as a whole. A shutdown of the US economy and the economies of many of its trading partners caused US GDP to rapidly plummet. This was followed by a quick rebound fueled by enormous amounts of stimulus money, resulting in a much more muted impact on reinsurers' credit exposure than originally feared. The economic impacts of these actions remain today and are driving the trends we continue to observe.

Impact of COVID-19 on Global Life Reinsurers

The COVID-19 pandemic has led to excess mortality in several regions across the globe, with the timing and severity varying by country. COVID-19 infection and death rates in different countries have peaked at different times, and several countries are currently experiencing high infection and death rates as the pandemic continues.

Reinsured portfolios have been affected mainly by US excess mortality, in particular from the deadly second wave that hit the US in the fourth quarter of 2020 and the first quarter of 2021. Europe also was affected by excess mortality, but mortality insurance products in Europe tend to focus on working age individuals rather than the retired elderly population, which accounts for a disproportionate number of COVID-19 fatalities. In the UK and some other European countries, there has also been an offsetting benefit on longevity portfolios, so profitability for the region has been minimally affected by excess mortality claims.

In the US, mortality coverage in the affected age bracket is more common, partly related to the use of life insurance as an estate planning tool. The global life reinsurers' profitability was negatively affected by US mortality experience in the fourth quarter of 2020 and the first quarter of 2021, when the second COVID wave hit. A major loss driver for some of the bigger, more established, reinsurers has been their higher capacity per life. Excess mortality claims have been seen from both direct COVID-19 deaths and deaths from other causes—likely due to a combination of overburdened health services, delayed diagnoses, and patients avoiding treatments they would have sought otherwise.

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2021-140.8

Reinsurers' base scenarios typically assume that the excess mortality in the US during the first half of 2021 will temper. However, reinsurers' enterprise risk management (ERM) practices typically require modeling other scenarios, including another wave of COVID deaths in the second half of 2021. This possibility, if realized, would prolong the drag on life reinsurers' profitability.

Life reinsurers have also reported COVID-19 mortality losses from regions other than the US, due to high mortality rates in countries in Latin America, Asia, and Africa. The magnitude of claims from these regions combined is still much smaller than in the US. However, the emergence of losses in other geographical regions means that the impact of the pandemic on the life reinsurers' profitability could last longer than originally anticipated.

As noted earlier, life reinsurers' COVID-19 losses thus far have been less severe than the 1-in-200-year event in their typical stress scenarios, which model excess deaths to be upwards of ten million worldwide. Overall, life reinsurers are helped by the fact that the typical insured population is less vulnerable to this virus than the general population due to the underwriting standards applied.

The value of longstanding reinsurance relationships has been reinforced by the pandemic. Established reinsurers' marketing efforts tend to highlight their full-service capabilities, as well as the expertise of their medical professionals, geneticists, big data specialists, and other knowledgeable personnel.

Questions remain about the impact of pandemic-related experience on assumptions and future pricing for the life reinsurance business. Life reinsurers generally have not adjusted their assumptions at this stage, instead adopting a wait-and-see approach until they have more definitive information on how the pandemic will impact long-term mortality trends. Mortality may improve once the pandemic has run its course, partly an effect of mortality having been front-loaded during the pandemic and partly as a result of medical advances and good hygiene practices. However, the pandemic may have a longer-term negative impact on life expectancy, which would need to be priced into future policies. This could occur if COVID-19 remains a problem for longer than expected or because of a spillover effect on other causes of death. For example, delayed diagnoses as individuals avoid doctor's offices could adversely impact future mortality.

Accelerated (fluidless) underwriting for policies written during the pandemic could have lapses that are higher than priced for, as they may be replaced with fully underwritten policies that do not have the same conservativeness built into them. Also notable, reinsurers have established incurred but not reported (IBNR) provisions for increased morbidity risk, particularly for disability and long-term care policies, in anticipation of an uptick in notifications due to pandemic-related claims.

Global Life Reinsurer Market Dynamics

Almost all of the largest global reinsurers write both life and non-life business. For traditional life reinsurers, the overall market landscape has not changed very much with the top tier global life reinsurers—Munich Re, Swiss Re, Canada Life Re, RGA, SCOR, and Hannover Re—maintaining their leading market positions by a relatively large margin. These top tier companies currently account for over 90% of the total US individual life inforce that is reinsured (**Exhibit 1**) and they maintain similar market shares on a global basis.

These reinsurers remain focused on traditional individual life insurance, which has relatively high barriers to entry. This differs sharply from the growing interest-sensitive block/

reinsurance annuity market in the US, which has seen an influx of new entrants that often receive the tax, regulatory, and capital benefits that come with being domiciled offshore. Traditional reinsurers have been less willing to take on the additional investment risk needed to compete in this market. Moreover, traditional reinsurers headquartered in Europe have avoided asset-intensive reinsurance product lines (such as annuities and pension risk transfer) due to the unfavorable treatment they receive under Solvency II and the Swiss Solvency Test.

Exhibit 1
Top US Life Reinsurers by Individual Life Insurance in Force, 2020
($ 000s)

AMB#	Company Name	Total Individual Amount in Force
070253	SCOR Life US Group	1,786,143,253
009080	RGA Reinsurance Company	1,768,965,426
007283	Swiss Re Life & Health America Inc.	1,481,914,440
068031	Hannover Life Reassurance Co of America	1,245,679,229
006746	Munich American Reassurance Company	1,105,635,553
009791	Canada Life Assurance Company USB	264,441,103
006234	General Re Life Corporation	229,470,124
008863	Optimum Re Insurance Company	81,793,286
060560	Wilton Reassurance Company	79,188,588
006976	Employers Reassurance Corporation	78,786,178
061745	PartnerRe Life Reinsurance Co of America	72,930,289
009096	M Life Insurance Company	56,224,059

Source: AM Best data and research

Traditional life reinsurers continue to adhere to disciplined pricing and underwriting practices, while focusing on maintaining the strong relationships with current clients that have been built over decades. However, several large reinsurers have set up offshore vehicles in which they own a minority stake, to participate in large interest-rate-sensitive block acquisitions without taking the full risk on their own balance sheets.

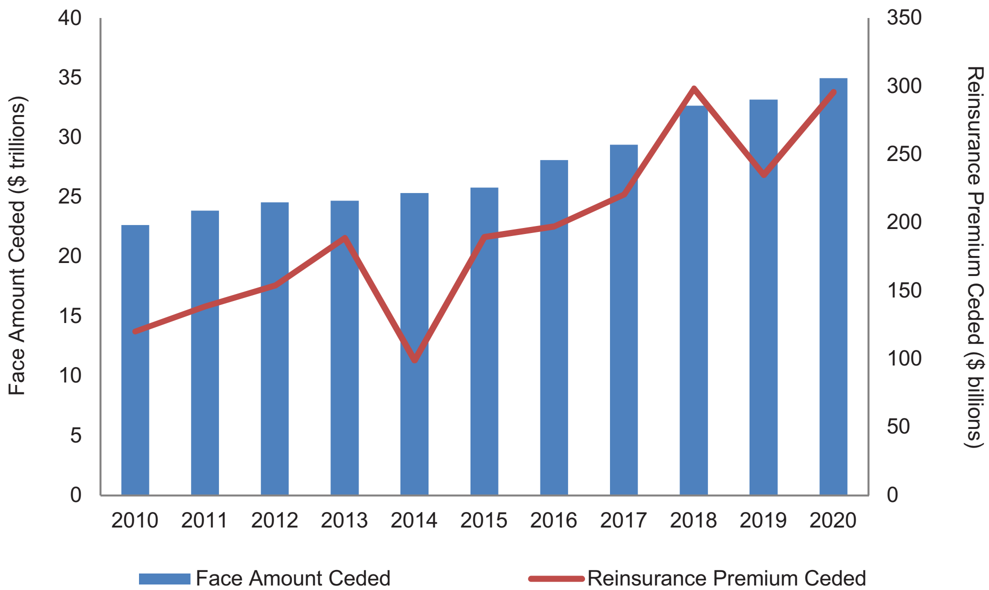
The move toward a more global market continues in spite of the COVID-challenged environment. In June 2020, Canada Life Reinsurance executed a significant deal with Dai-ichi Life, agreeing to reinsure JPY125 billion (CAD1.4 billion) of in-force life insurance liabilities in the Japanese market. In July, Global Atlantic signed a deal reinsuring life insurance liabilities of USD4.8 billion written by AXA in the Hong Kong market. Transactions such as these have signaled that international markets are available for those who understand the underlying business as well as the culture of the decision makers at the cedent. These markets may also prove to be less competitive and an alternative to the crowded bidding process in the US.

The conversation about a global minimum tax likely will impact the reinsurance market, but it is too early to tell what that will entail. The current goal is to have the global minimum tax in place by 2023. As of this writing, Bermuda and the Cayman Islands have signed on to it, but Ireland and Barbados have not. Not all reinsurers are tax-driven, but those that aren't should pay attention to developments that may impact their competitors.

The US life reinsurance market has been pressured by historically low cession rates for many years. However, there has been a notable rise in business ceded over the past five-plus years (**Exhibit 2**). Factors driving this trend include the introduction of principle-based reserving, the 2017 CSO mortality table, and the growing use of automated underwriting, which includes the use of more sophisticated tools such as data analytics. With more companies relaxing some of their underwriting standards during the pandemic, including raising policy size thresholds for fluidless underwriting, life insurers may look for the assistance and guidance of traditional reinsurers. Helping these trends is the new consumer awareness of the importance of life insurance that arose during the pandemic.

Exhibit 2

US Reinsurance Ceded



Source: AM Best data and research

To offset the relatively low cession rates and declining interest rates of recent years, the largest life reinsurers have been seeking new revenue sources, including offering their clients services such as predictive modeling, e-underwriting, and other technology-driven initiatives. Some reinsurers have also started assuming flow business in the fixed-annuity market. New companies entering this market have been actively developing technology-based solutions. While established reinsurers tend to see fixed annuities as a growth opportunity and a way to diversify their books of business, the new participants have approached the market with strategies that anticipate better investment performance than their cedents.

The ratios most often used to measure reliance on reinsurance to support capital needs are reinsurance leverage and surplus relief.

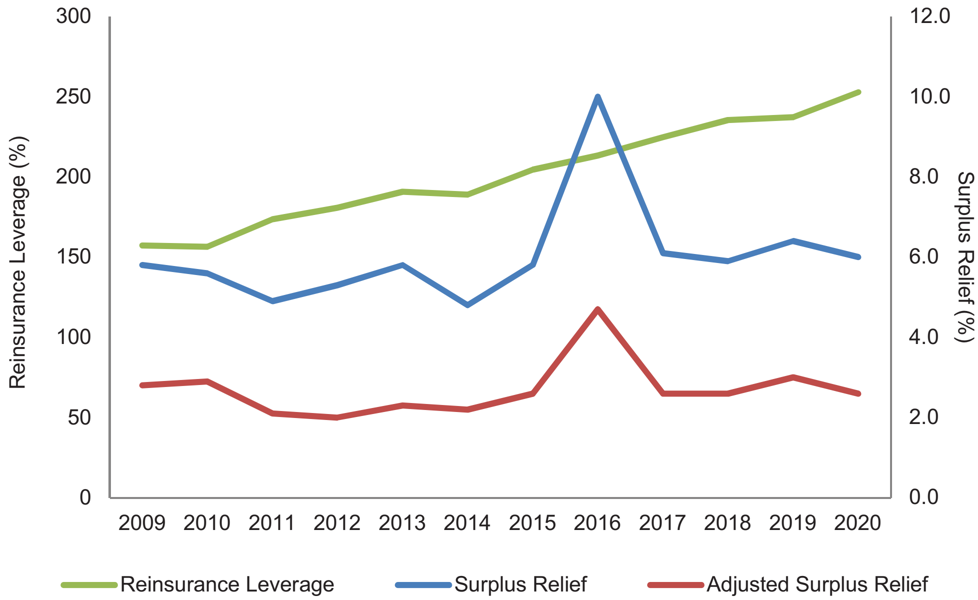
- The *reinsurance leverage ratio* is defined as aggregate reserves ceded plus amounts recoverable and funds held, divided by surplus.
- The *surplus relief ratios* are defined as reinsurance commissions and expense allowances on reinsurance ceded (reported as income on the statutory statement) divided by statutory surplus, illustrating the degree to which a company depends on reinsurance to maintain its surplus ratios—for example, risk-based capital as defined by the National Association of Insurance Commissioners and Best's Capital Adequacy Ratio (BCAR).

With the exception of 2016, the life reinsurance segment has maintained a surplus relief ratio in a narrow band of 4.5% to 6.5% (**Exhibit 3**). In 2016, several companies had large cessions that resulted in elevated commissions and expenses on reinsurance ceded business, thus raising the surplus relief ratio to roughly twice the longer-term average.

The adjusted surplus relief ratio simply nets out expenses and commissions on reinsurance assumed (recorded as a statutory expense) before dividing by surplus. As a result, the adjusted surplus relief ratio for the industry is less volatile and reports at an overall lower level.

Exhibit 3

L/A Industry – Reinsurance Leverage & Surplus Relief



Source: AM Best data and research

Reinsurer Asset Portfolios

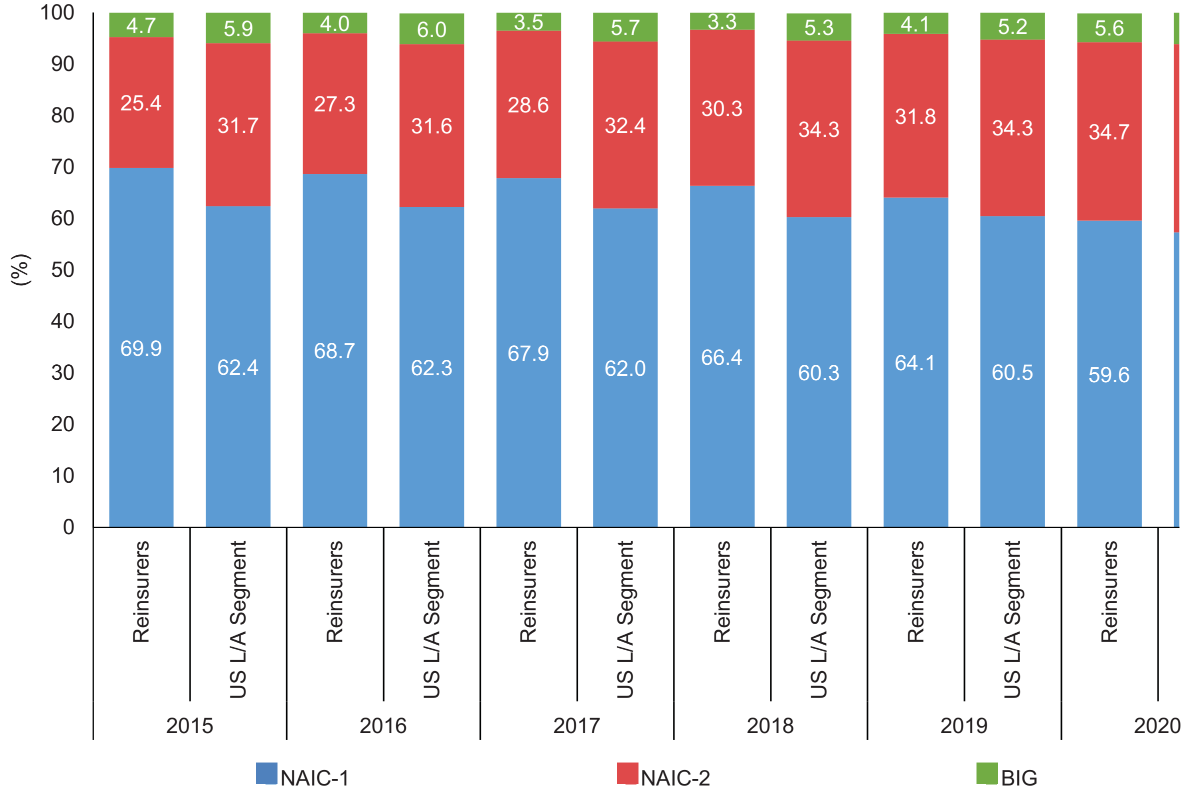
Credit impairments for both insurers and reinsurers have been surprisingly low since the beginning of the pandemic. However, the decline in interest rates over the past year has exacerbated the long-term trend of declining investment yields for both direct writers and reinsurers. Generally, the latter is less affected than the former. Traditional reinsurers tend to focus more on underwriting/biometric risk and take less risk on the asset side of the balance sheet. As a result, the investment return on the asset portfolio is less of a driver of earnings. Reinsurers typically benefit from scale, in-depth expertise, and less pressure to meet sales targets, allowing them to generate higher profit margins on underwriting. In addition to a more conservative investment portfolio through higher allocations to bonds and cash, the credit profiles of life reinsurers' bond portfolios have historically been of higher quality, with larger allocations to investment-grade bonds and smaller allocations to below-investment-grade (BIG) bonds.

Reinsurers operating in the US life segment have clearly been increasing allocations to NAIC-2 (i.e., BBB) and BIG bonds in recent years, looking to enhance investment yields (**Exhibit 4**). Reinsurers' exposure to mortgage loans (8.5%) is lower than that of direct writers (12.5%), an asset class that AM Best views as less liquid than investment-grade bonds (**Exhibit 5**). This was a particular concern the past year, especially for commercial mortgage loan portfolios with large exposures to the retail and travel and leisure sectors. Despite the conservativeness of reinsurers' portfolios relative to direct writers, net yields do not differ greatly between the two groups. This can be explained by the longer duration of assets in reinsurers' portfolios, lower investment expenses incurred by reinsurers, and various reinsurance structures that can affect net yield calculations.

Start-Up Reinsurers Taking a Different Approach

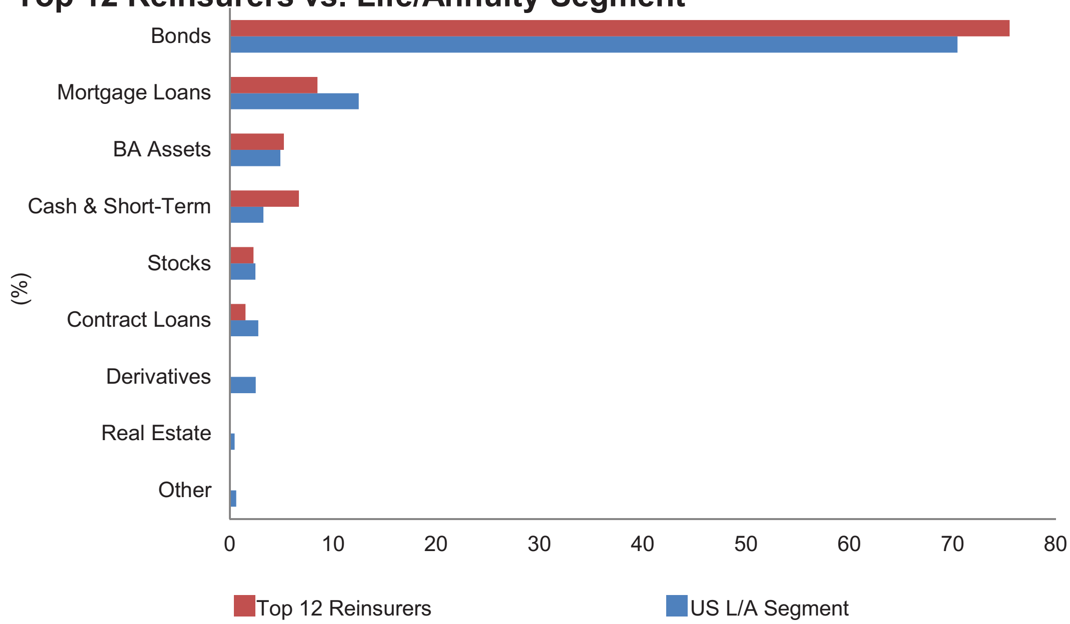
Newer reinsurance companies are gaining more acceptance in the market. Most have focused on the general account annuity business, while a few have participated in the separate account

Exhibit 4
US Bond Portfolio Quality – Reinsurers vs. Life/Annuity Segment



Source: AM Best data and research

Exhibit 5
US Distribution of Invested Assets – YE 2020
Top 12 Reinsurers vs. Life/Annuity Segment



Source: AM Best data and research

business. New capacity and new money supporting start-ups have made for a competitive market environment. Both rated and non-rated companies that operate on a funds withheld basis can be found in the market.

Throughout the COVID-19 crisis, existing players and hopeful new entrants have made moves into the block reinsurance/acquisition business. Market participants have been very active, aggressively searching for growth in areas such as annuity reinsurance and other spread businesses. Typically, they are backed by private equity firms with expertise in managing less liquid alternative investments, in the hopes of boosting investment returns. In general, their focus is out-earning the asset portfolios of cedents, and they are less focused on the biometric component of risk, which they may choose to hedge away. Larger, more established players may partner with start-ups when their interests are aligned. For example, a large established life reinsurer may partner with a start-up backed by private equity to take the life business available in a bidding process, while the start-up seeks to reinsure a block of fixed annuities in the same auction.

Interest rates remain an important factor for both reinsurers and cedents. But with the drop in interest rates, some companies have seized on the opportunity. This has accelerated the formation of new start-ups and has helped motivate some cedents to attempt to shed their interest-sensitive legacy books. However tempting this opportunity looks, reinsurers generally prefer to avoid risk that is non-diversifiable and blocks of business containing too much interest rate risk, which does not fit the reinsurers' criteria.

Pricing for block transactions and annuity reinsurance in the US market has been aggressive. Notably, the US pension risk transfer (PRT) market remains highly competitive, while the UK dominates the large longevity market, which focuses on pension plan assets. Part of the reason for this is the potential longevity risk charges in the NAIC risk-based capital calculation. These charges are currently being reviewed by the NAIC.

Successful execution and credibility are key to winning PRT business. While pension issues remain at US municipalities, it is not a market worth pursuing at this time. Corporate counterparties, on the other hand, have thus far proven they are more apt to raise capital, have identifiable balance sheet assets, and have fewer vested interests that can prevent a PRT from happening.

Health Reinsurance: Small but Growing

Health reinsurance still represents a relatively small share of premium for global reinsurance carriers. Although health insurance accounts for about 50% of global insurance premiums, the short-term nature of obligations, relative flexibility to re-price, and limited exposure to catastrophic events reduce the need for reinsurance. In addition, 80% of global health insurance premium is generated in the US, where large primary carriers with strong balance sheets dominate the market. These companies traditionally retain premiums with little or no need for excess of loss protection.

More recently, however, the demand for health reinsurance has grown steadily, owing to the significant expansion of global health insurance premiums and the rising cost of claims. Emerging economies have been responsible for the majority of the premium growth given the rapid expansion of the middle class, especially in Asia, and demand for better access to healthcare. In addition, an aging population and the worsening burden of chronic diseases worldwide fuel the need for more medical services. At the same time, progress in biomedical science is offering costly new sophisticated therapies. The focus on premium growth has limited primary carriers' profitability and resulted in lagging capital accumulation. These trends create reinsurance needs for both capital relief due to growing premium volume and protection against high-cost claims.

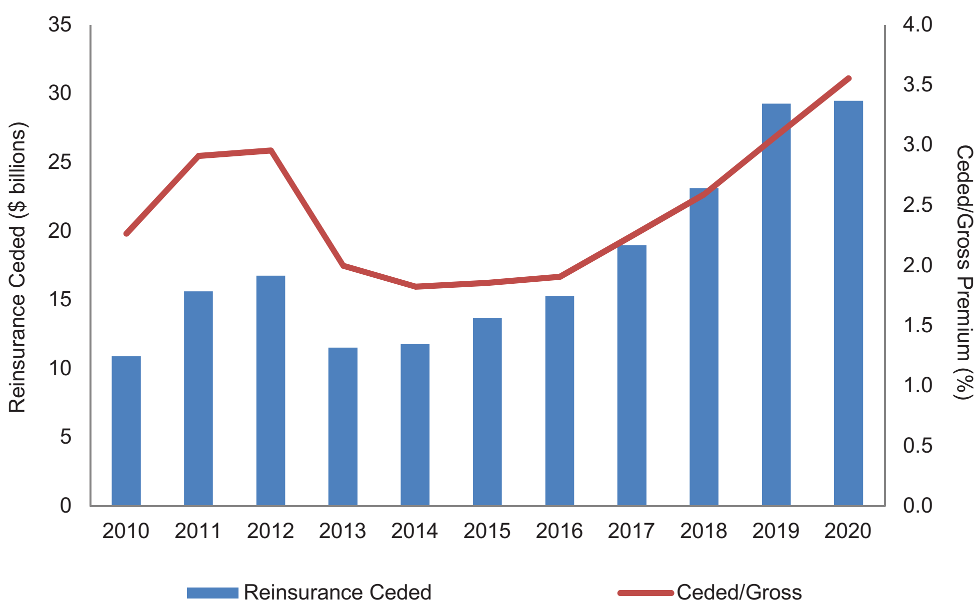
As a result, major global providers of life/health reinsurance reported accelerated growth of health premiums:

- At Swiss Re, health premium as a share of total premium has increased from 11% to 14% over the past decade (2011-2020), while life premium declined from 35% to 25%.
- Hannover Re reported 46% growth in morbidity premium from 2016 to 2020, while mortality premium declined by 1.5%. Morbidity products were the largest drivers of growth, rising from less than 23% to 30% of total premium.
- For RGA, morbidity risk grew from 9% in 2005 to 23% in 2019. The most recent five-year growth rate for morbidity products was 8.5%, compared to 4.9% for mortality.
- Munich Re's health premium accounted for about 4% of total premium and 18% of the life/health segment. In 2020, health premium grew by 8%, compared with less than 5% for life.

The US health reinsurance market has grown in terms of both quota share and excess of loss reinsurance arrangements. The volume of ceded premium almost tripled and increased from 2.3% to 3.7% of direct premium between 2010 and 2020 (**Exhibit 6**). (The share of ceded commercial premium remained relatively unchanged.) The growth was driven largely by government programs, where premium expansion was more robust during the period. Ceded premium grew from 0.4% to 1.7% for the Medicare Advantage segment and from 0.7% to 4.4% for Medicaid managed care (**Exhibit 7**). Other lines of business with large ceded volumes include stop-loss and dental.

A sizable amount of ceded premium in the US health market is reinsured to affiliates. Large health insurers usually have multiple subsidiaries, providing flexibility to optimize internal capital structure and business flow. However, global reinsurers have captured some of the

Exhibit 6
US Health – Reinsurance Ceded
(Orange book/DMHC filers only)

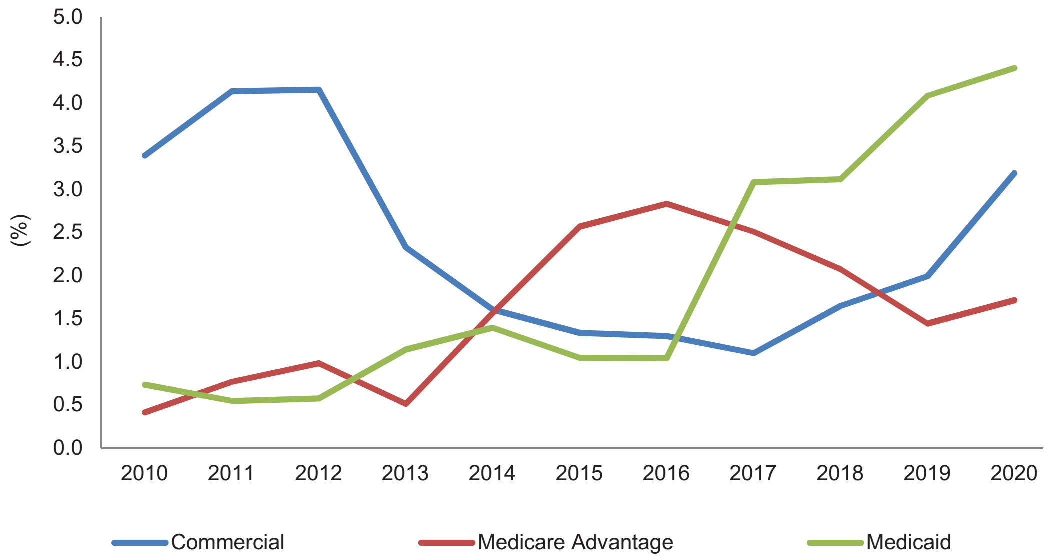


Source: AM Best data and research

Exhibit 7

US Health – % of Gross Premium Ceded by Line of Business

(Orange book/DMHC filers only)



Source: AM Best data and research

growing ceded health premium. Hannover Re has assumed about USD3 billion of CVS Health's Aetna Medicare Advantage business. That arrangement makes Hannover Re one of the largest non-affiliated reinsurers of US health business. RGA and Munich Re are the other two global companies among the top 20 quota share reinsurers of health premium in the US.

The growth of government programs, especially Medicare Advantage, where premium per insured tends to be very high, and increasing demand for supplemental health products, are likely to create a need for quota share reinsurance that is going to persist. In addition, despite the significant dominance of large carriers, the US health insurance segment saw a number of new entrants in recent years, including three new publicly traded health insurers in 2021. Given the high capital requirements of health insurance, combined with relatively low margins, newcomers usually face capital limitations and a need for premium relief.

Another area of growing demand for reinsurance in the US health market comes from growth in catastrophic claims, as advances in medical technology and pharmaceuticals create new opportunities for treatment. The implementation of the Patient Protection and Affordable Care Act (ACA) in 2014 removed lifetime caps on individuals' medical claims (under major medical ACA-compliant products), creating opportunities for wider adoption of more expensive medical interventions.

US healthcare providers have traditionally been at the forefront of medical breakthroughs and new treatment protocols. Some of these treatments are not a cure, so once a condition is diagnosed, the catastrophic costs may continue for a number of years. The age distribution of high-cost claims has been shifting toward children, especially as new therapies for severe genetic diseases emerge. According to Sun Life's most recent high-cost claims report, from 2016 to 2019, members with claims above USD1 million increased 22%, claims between USD2 and USD3 million rose 44%, and those that totaled USD3 million or more doubled.

The rising volume of large claims has more of an impact on stop-loss carriers since it represents a higher share of total claims. Smaller stop-loss and major medical carriers have traditionally relied on excess of loss reinsurance protection even before the rise in large claims. What has changed in recent years, however, is that medium-sized and even large insurers have begun purchasing high-cost claims protection in light of the rising number, duration, and severity of catastrophic claims.

In response to the market demand, reinsurers have been building expertise to both predict and manage high-cost medical conditions, to set appropriate pricing and limit the losses. The innovative capabilities on case management of complex high-cost claims have become a value-added service offered to primary carriers seeking excess of loss protection.

Because medical reinsurance was relatively limited prior to recent years, the vast majority of historical claims data in the US belongs to primary carriers. Reinsurers have developed their own data analytics operations and some collaborated with technology companies to make inroads into predictive analytics for health claims. Swiss Re Corporate Solutions, a commercial insurance unit of Swiss Re, collaborated with Google's Verily subsidiary and became a minority investor in Granular Insurance, a company that uses precision risk technology to improve the performance of stop-loss products.

The growth of reinsurance demand for health products in emerging markets has been generated primarily in Asia by the rapid premium expansion of fixed benefits products such as critical illness and personal accident. Morbidity is widely thought to be the most significant protection gap in Asian markets. The growing frequency of chronic diseases, combined with poor access to advanced medical care, can affect individuals' ability to be productive and impede a transition to middle-class living. Health business has proven to be local in nature, creating opportunities for national, rather than global, carriers. However, local insurers tend to have limited access to capital and a lack of underwriting expertise. Global reinsurers offer cedents both premium relief and access to operational and underwriting capabilities. In addition, reinsurers play a role in creating innovative health ecosystems with collaboration among insurers, medical providers, and less traditional distribution players such as technology and social media companies. Such partnerships in China and Southeast Asia appeal to new middle class consumers seeking efficient and easier access to modern healthcare.

Reinsurers can help emerging market primary carriers design more complex health products. Although fixed benefits products have been widely adopted, the growth of more comprehensive reimbursement products in Asia has been slow. There is a demand for full medical reimbursement products, especially in China, where fragmented government coverage results in high out-of-pocket healthcare costs for consumers. However, primary carriers have been reluctant to offer reimbursement products owing to a lack of reliable data, the dominance of public hospitals, and the potential difficulty of repricing products appropriately. Reinsurers have an opportunity to facilitate the development of these products by offering their data resources and product design expertise, as well as traditional reinsurance protection.

The performance of the health insurance segment during the COVID-19 pandemic has surpassed expectations. A global decline in elective medical procedures resulted in lower loss ratios for the industry. US stop-loss carriers saw a lower volume of large claims due to a lack of regular diagnostic testing. For global reinsurers, health earnings partially offset the COVID-19 mortality losses in their life business. Furthermore, Asia's markets continued to record growing health insurance premiums—despite a deep economic recession—driven by the rise in health awareness and consumers' willingness to invest in protection products. In the US market, health premium, including individual and voluntary products, continued to grow despite high unemployment and an economic downturn. AM Best believes that the growing health reinsurance segment will continue to present opportunities for global reinsurers, as the health insurance market will look to reinsurers to offer innovative solutions for capital optimization and cost control.

August 31, 2021

China Ramps Up Agricultural Industry Resilience

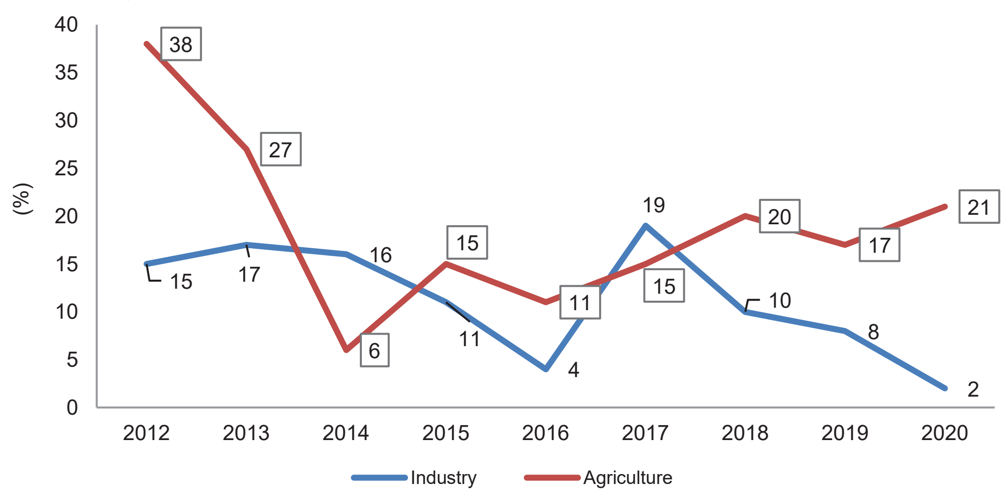
Changes abound in the agricultural market as the government pushes for its robust and sustainable development

The establishment of a new state-owned China Agricultural Reinsurance Co., Ltd. has brought abrupt changes to the dynamics in the world's second largest reinsurance market, China. In addition, the recent major flood catastrophe in Henan province and the anticipated introduction of the China Risk Oriented Solvency System (C-ROSS) Phase 2 are expected to alter the buying behaviour of local cedents in the upcoming 2022 reinsurance renewal season.

The Chinese government has made the long-term sustainable development of its agricultural industry a core focus, and aims to ensure food safety, promote economic growth in rural areas, as well as strengthen the fight against poverty. Under government initiatives and subsidy schemes, China's agricultural premium revenue reached USD12.5 billion in 2020, compared to USD0.7 billion in 2007, when the country first introduced fiscal subsidy incentives. This rapid expansion led China to surpass the US as the world's largest agricultural insurance market. Over the past five years, the agricultural insurance segment has consistently posted double-digit growth (**Exhibit 1**), which has also fuelled the demand for reinsurance.

The Chinese government noted the vulnerability of relying solely on commercial reinsurers for protection, which may be unstable especially in the aftermath of major natural catastrophe occurrences. Indeed, between 2018 and 2020, the agricultural market faced heavy losses from a series of natural disasters including the African swine flu outbreak, droughts and major typhoons. Following the events, reinsurance pricing hardened, while terms and conditions were tightened, most notably for livestock coverage. China Agro Re was set up in line with the government's plan in September 2020 and began operations on 31 December 2020. The goal is to ensure a stable source of reinsurance capacity for the agricultural industry to reinforce food

Exhibit 1
China Non-Life Insurance – Direct Premium Written Growth, 2012-2020



Source: China Banking and Insurance Regulatory Commission

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2021-140.9

Exhibit 2
Shareholders of China Agriculture Reinsurance Co., Ltd

	Share (%)
Ministry of Finance of the People's Republic of China	55.9
China Reinsurance (Group) Corporation	6.21
Agricultural Development Bank of China	6.21
China United Property Insurance Company	6.21
China Life Property and Casualty Insurance Company Ltd.	6.21
Beidahuang Investment Holding Co., Ltd.	6.21
China Pacific Property Insurance Co Ltd.	4.97
Ping An Property & Casualty Insurance Company of China, Ltd.	4.97
PICC Property & Casulaty Company Ltd.	3.11

Source: AM Best data and research

security. AM Best notes that the introduction of the new reinsurer will be a game changer for the Chinese agricultural (re)insurance market.

Supporting Sustainable Agricultural Market Growth

China Agro Re is majority-owned by China's ministry of finance and eight other shareholders; of the eight, six are large domestic (re)insurers that account for over 75% of the Chinese agricultural insurance segment (**Exhibit 2**) in terms of direct premium written. The new player, with registered capital of USD2.5 billion, is second only to China Property & Casualty Reinsurance Company Ltd. in terms of capital and surplus (USD3.4 billion), the largest non-life reinsurer in the country. Regionally, China Agro Re's capital and surplus base is comparable to South Korea's national reinsurer, Korean Reinsurance Company (USD2.3 billion), and Japan's The Toa Reinsurance Company, Limited (USD2.8 billion), both of which have diversified global footprints in life and non-life reinsurance. AM Best notes that the company's large capital base reflects the government's prudent capital planning to support the fast-growing agricultural insurance market, concentration risk in a single line of underwriting, and exposure to natural catastrophe risks.

Unlike commercial reinsurers whose primary aim is profitability, the state-backed reinsurer was formed to support the sustainable growth of the local agricultural reinsurance market, including facilitating information exchange within the industry, raising the protection of and broadening natural catastrophe coverages, as well as constructing and managing the China Agricultural Catastrophe Fund.

Shift in Chinese Agricultural Market Dynamics

Since commencing operations in January 2021, AM Best notes that the new reinsurer has brought changes to the agricultural reinsurance dynamics in the local market. Direct insurers are required to make a 20% quota share cession to China Agro Re for policy-based subsidised agricultural products. Policy-based agricultural insurance products include central government subsidised crops (e.g., rice, wheat, cotton, potato); forests; livestock (e.g., pig, dairy cattle, breeding sow); and local specialised produce. As such, participation by other commercial reinsurers (both domestic and foreign) was reduced significantly, albeit the agricultural reinsurance inward book has historically been unprofitable due to adverse selection in the programme design and high geographic concentration risk of natural catastrophes.

Based on the segment's five-year average annual growth rate of 16.8% (2015-2020), AM Best estimates that China's overall agricultural direct premium written for 2021 will reach USD14.5

billion. Under the 20% compulsory quota share cession scheme, China Agro Re's reinsurance premium revenue is expected to reach USD2.9 billion. To put it in context, this volume of reinsurance premiums has exceeded the combined agricultural reinsurance premium revenue of all onshore reinsurers in China before China Agro Re's establishment.

Commercial reinsurers have had to swiftly adjust their strategies to compete in the much narrower competitive segment of additional proportional and excess-of-loss agriculture treaties, as well as retrocession programmes of China Agro Re. AM Best expects that many reinsurance companies will adjust their business strategy in China and reallocate their capital to other lines of business.

Benefits to the Local Market and More Funding

Nonetheless, AM Best notes that the introduction of China Agro Re and the compulsory cession requirement has brought benefits to the overall Chinese agricultural industry. Given that the local agricultural insurance segment has high geographic concentration and significant catastrophe risk exposure, a major weather event could lead to potentially high losses from agricultural products planted in surrounding areas. The government-subsidised nature of insurance coverage means that this book of business has a relatively thin margin and potentially high volatility. Thus, the best way to mitigate the concentration risk is to maintain a portfolio that is well diversified by geography and product. With a large diversified book, China Agro Re can also easily achieve cost effectiveness in retrocession purchase due to economies of scale.

With compulsory cessions, adverse selection in the reinsurance buyer's programme construction is substantially eliminated. Previously, cedents that understood their portfolios well were able to "smartly" purchase reinsurance cover by retaining good risks and ceding out bad risks (be it by product or geography). However, the new fixed priority cession scheme is expected to have the effect of reducing the adverse selection and allowing cross-subsidisation to improve reinsurance profitability.

Furthermore, with all direct insurers ceding to China Agro Re, the reinsurer is in a better position to advance the development of the country's agricultural insurance market through reinsurance support and guidance. Such guidance includes the enhancement of protection and coverage via policy wording, the coordination and facilitation of information exchange within the industry through data collection, and the setup and management of the China Agricultural Catastrophe Fund. The setup of China Agro Re has allowed the central government to steer the development of the agricultural insurance value chain, and it has announced plans for more agricultural insurance subsidies in more pilot areas.

Insurers Expected to Review Needs for Additional Catastrophe Reinsurance Protection

The recent severe rainstorm that hit the province of Henan, China, is expected to be one of the costliest natural catastrophe insurance events for the country, based on the estimates as of 10 August 2021, with direct economic losses of USD20.6 billion and insured losses of USD1.8 billion. In contrast to one of the costliest flood years (2020) when a large area of Southern China was affected and resulted in direct economic losses of USD17 billion (of which just 2% was insured according to Munich Re), this extreme weather event in Henan had hit a major city, Zhengzhou, and thus resulted in much higher insured losses. AM Best notes that the majority of the ultimate loss burden of the Henan flood disaster is expected to fall on the motor segment.

Motor insurance remains the largest line of business in the Chinese non-life market. Over the past decade, most cedents in China have ceded their motor insurance book to reinsurers in multi-line bundled proportional treaty programmes, mainly for the purpose of capital relief. AM Best expects that the insurers impacted by Henan flood catastrophe will be well-placed, in terms of capitalisation, to absorb the net retained losses. However, this event following the coverage expansion from the motor comprehensive reform in September 2020 and the potential earning and capital impact from natural disasters in urban areas has highlighted the need for motor catastrophe excess-of-loss protection. We expect that cedents will be prompted to review the appropriateness of their reinsurance programme to ensure that new and expanding risk exposures are well protected by reinsurance agreements.

C-ROSS Phase 2 Implications for the Chinese Reinsurance Market

The official enactment of C-ROSS in January 2016 brought material impact to reinsurance renewal strategies during that year. As the industry did not see a major dip in the solvency ratios, most non-life direct insurers had reduced their reinsurance cession, especially for the largest line of business, motor insurance. In addition, a disparity in reinsurance credit risk charges applied to reinsurance recoverables between onshore and offshore reinsurers led to reinsurer panel selections that were more favourable to onshore players. This is because cedents, especially those that are highly dependent on reinsurance cession, which use offshore reinsurers, will have lower solvency ratios.

In September 2017, to enhance the framework of the new-generation solvency regime, the then-China Insurance Regulatory Commission (CIRC) kick started the C-ROSS Phase 2 research project. The industry anticipates that the China Banking and Insurance Regulatory Commission (CBIRC) will finalise and announce the details of C-ROSS Phase 2 in the third quarter of 2021, with a short preparation period before the new framework officially takes effect in January 2022. AM Best expects that the overall changes will lead to stricter rules while resulting in weaker regulatory solvency adequacy ratios of insurance companies, assuming companies take no other actions to impact their regulatory solvency.

One major focus of the new framework will be to address issues that have emerged during the (re)insurance industry's development, such as capital quality, the review of complex investments, and long-term equity investments. Stricter measures relating to the admittance of assets as capital is likely to lead to solvency pressure on (re)insurers that have adopted aggressive investment strategies. In terms of underwriting, AM Best notes that key changes that may have major implications for the upcoming January 2022 renewal will involve a significant increase in the risk charge for financing-type credit insurance, avoidance of over reliance on financial reinsurance to improve solvency positions, and a significant reduction of the offshore reinsurer credit risk charge.

AM Best anticipates that there will be further waves of capital increases and capital supplementary bond issuances to maintain or bolster solvency levels. It will be rather challenging for small to medium insurance companies without such financial flexibility, but which face significant solvency pressure, to adjust their underwriting, investment, and capital planning strategies within a short span of time. Nonetheless, this is an area where reinsurers will be able to offer capital relief support through alternative capital solutions.

Overall, the regulatory reform will further open up China's financial sector to foreign players. The move to narrow the gap between the risk charge for onshore and offshore reinsurers is likely to increase offshore reinsurers' share of reinsurance programme placements for the upcoming January 2022 and/or future renewal seasons. Given the already competitive Chinese reinsurance market and the abundance of capacity, cedents will have a greater variety of reinsurer options and be able to improve the credit quality of its reinsurance panel, and this scenario might lead to the continuation of a soft market. Thus, while direct insurers in China are likely to continue enjoying low reinsurance cost, it may not bode well for the operating performance of both local and global reinsurers that have a major footprint in China.

August 31, 2021

South and Southeast Asia Reinsurers Place Greater Focus on Technical Profitability

Reinsurers in the region are making concerted efforts to improve technical profitability amid challenging investment conditions

Insurance markets in the South/South East Asia (S/SEA) region have demonstrated solid growth trajectories over the past decade spurred by economic expansion and increased insurance penetration. The growth of primary insurance markets over recent years and elevated natural catastrophe (cat) exposure in parts of S/SEA have driven the increased demand for reinsurance protection in the region.

According to Swiss Re Institute's natural catastrophe resilience index, emerging Asia-Pacific is the least resilient region, with over 96% of natural catastrophe losses unprotected. Indonesia, India and the Philippines are among the least resilient to natural catastrophes as only five to seven percent of physical assets are estimated to be insured against major natural perils. Governments and insurance regulators across S/SEA have been launching initiatives with a view to reduce the insurance protection gap for natural catastrophe and climate risks.

While local and regional reinsurers have ramped up operations to support the development of the S/SEA insurance markets, this has also been matched by international reinsurance capacity that consider Asia-Pacific to be instrumental to their growth and portfolio diversification strategies. This has led to a general increase in capacity over recent years, which has created competitive market conditions, rate pressures and underperformance of the reinsurance industry in the region. Furthermore, heightened cat claims experience in recent years and an expectation of a challenging investment landscape over the medium term has driven a renewed focus by reinsurers on achieving improved and sustainable underwriting performance.

Reinsurer Dynamics in the Region

The reinsurance participants in S/SEA can broadly be categorised into domestic players, regionally-domiciled reinsurers, and internationally headquartered reinsurance groups operating in the region via subsidiaries or branches.

Domestic reinsurers in the region have been established over many years for a variety of reasons. In some cases, their origins are closely tied to government mandates to support reinsurance capacity and local risk retention. The reinsurers created in such instances often benefit from compulsory cessions or at least preferential access to local business (**Exhibit 1**). As S/SEA insurance markets expanded, regional reinsurers with diverse external capital and shareholders have also been established.

Local and regional S/SEA reinsurers typically focus on classes of business and product offerings in which they hold a competitive edge over their international counterparts. This has led to some regional reinsurers seeking to develop non-traditional or bespoke reinsurance coverages as opposed to traditional offerings to achieve a competitive edge over other participants. AM Best notes that local reinsurers in Thailand and Vietnam often focus on reinsurance offerings for retail lines of business, such as health and personal accident. Regional reinsurers also have

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2021-140.13

Exhibit 1
S/SEA Domestic Cession Arrangements

Country	Nature of Cession	Recipient Reinsurers
Philippines	Local insurers required to offer 10% of all foreign reinsurance cessions	National Reinsurance Corp of the Philippines
Malaysia	"Voluntary" cession of 2.5% by local insurers	Malaysian Reinsurance Berhad
India	“Obligatory” cession of 5% by local insurers	General Insurance Corporation of India
Indonesia	Local insurers required to cede a sizable portion to domestic reinsurers, although a phased reduction to obligatory cessions (for some risk types) is expected to take place over the next few years.	Domestic reinsurers

Source: AM Best data and research

a degree of advantage when launching retakaful windows or sharia compliant products, given their local knowledge of the takaful business in countries such as Malaysia and Indonesia. In these instances, these reinsurers often partner with local insurers to develop specific product offerings which not only support growth at the primary insurer level, but also drives reinsurance transfer.

By comparison, foreign reinsurers typically cultivate a greater level of sophistication in the way reinsurance risks are managed in S/SEA, spurring trends such as more advanced insurance coverages and the use of alternative reinsurance structures. Furthermore, large international reinsurance groups typically offer a full suite of solutions and services to local insurers, including product expertise, data analytics and modelling capabilities. International reinsurers provide essential capacity to support large risks and enable the management of aggregation and accumulation from catastrophe risks in S/SEA. International reinsurers also remain crucial to supporting large property, engineering and marine risks, which even the largest of regional reinsurers in S/SEA can still typically only seek to take a share of, given the magnitude of these gross exposures.

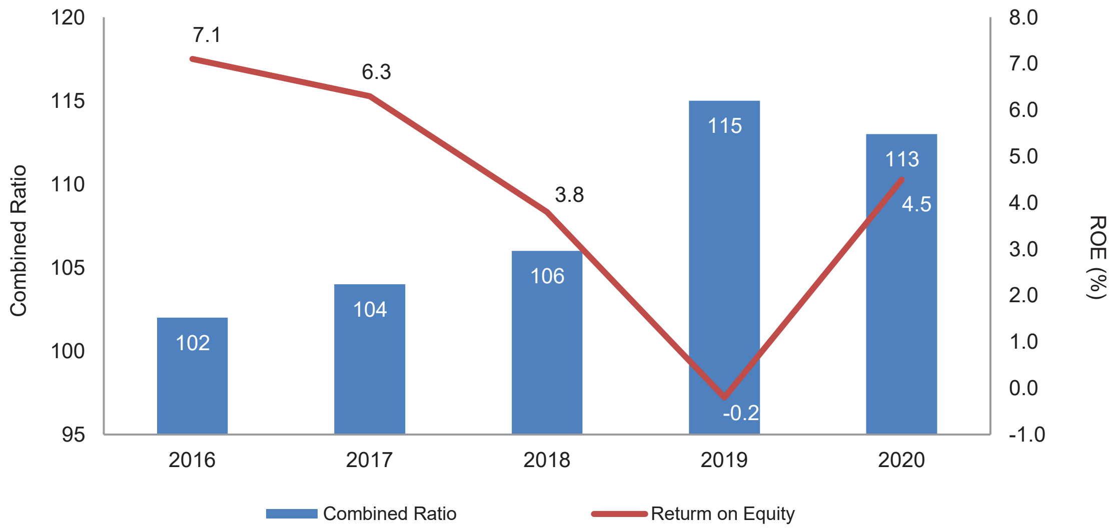
The existence of financial hubs, such as Singapore and Labuan, support the ease of doing business in S/SEA, and in some cases incentives are made available to global (re)insurers to further the development of these centres. In 2021, Munich Re launched a retakaful window through its syndicate operations on the Labuan platform.

Although the value proposition of international reinsurer groups are often different from that of domestic and regional reinsurers, the significant propagation of (re)insured risk in this region over the past decade, along with the growth in capacity typically outpacing the demand, has resulted in competitive market conditions in recent years. The challenging S/SEA operating environment has resulted in increased mergers and acquisitions. For example, in 2020, Asia Capital Re Group Pte. Ltd. ceased writing new business after its acquisition by Catalina, an international specialty run-off group; in 2021, Fairfax Asia Limited, a subsidiary of the leading Fairfax insurance group headquartered in Canada, acquired a majority ownership stake in Singapore Reinsurance Corporation Ltd.

Headwinds Remain Despite Resilient Response to COVID-19

The performance of S/SEA primary insurance markets improved in 2020 as claims experience benefitted from a decline in travel, motor and workers compensation claims due to COVID-19 driven movement restrictions. Compared to their global counterparts, S/SEA reinsurers benefitted from the performance of these lines and experienced a negligible to manageable impact from COVID-19 related business interruption claims in 2020. Following the 2003 severe acute respiratory syndrome (SARS) outbreak in Asia, most reinsurers in the region had incorporated effective infectious disease and business interruption exclusions in policy wordings in their reinsurance contracts.

Exhibit 2
S/SEA Reinsurers' Operating Performance



Note: The scope of study covers select AM Best rated non-life focused reinsurers domiciled in S/SEA. Combined Ratio excludes life underwriting profit/loss, which accounts for a relatively small proportion of the total underwriting results.
Source: AM Best data and research

Regional reinsurers in S/SEA have diversified underwriting portfolios with cat exposures spread across Asia. After elevated loss incidence in 2018 and 2019, largely from Japanese natural catastrophes, the loss experience of S/SEA reinsurers in 2020 was generally moderate, with a few notable storms and typhoons reported in the Philippines, Vietnam and Korea. However, 2021 has already recorded a significant loss event with the Fukushima earthquake in Japan estimated to exceed USD2 billion in insured losses. Given domestic reinsurers' high reliance on retrocession to protect against severe earnings or capital events, performance challenges are compounded by climbing retrocession costs and a noticeable squeeze on capacity at this level.

The combined ratio for regional reinsurers has trended up and remained above 100% consistently over the last five years (2016-2020) (**Exhibit 2**). AM Best also notes that these operating performance pressures were exacerbated by COVID-19 driven investment market shocks in 2020, which reduced investment yields and fuelled fair-value volatility for higher risk investment assets. S/SEA reinsurers have historically relied on a stable stream of investment income to support bottom line profitability. However, the continued expectation of supressed interest rates over the near to medium term is forcing reinsurers to recalibrate their underwriting strategy and undertake initiatives like expense management, portfolio rebalancing and enhanced cat exposure management, all aimed at growing underwriting margins.

SEA Reinsurance Markets Progress to a Correction Phase

AM Best notes that S/SEA reinsurers have approached key renewal seasons in 2021 with a focus on improving technical profitability due to expectations of "lower for longer" investment returns, given the prolonged period of low interest rates and a generally challenging investment landscape.

Following several years of seemingly unrelenting soft market conditions, and persistent pressure on the underwriting performance of many reinsurers, the S/SEA reinsurance market appears to have progressed to a market correction phase in 2021. It is however important to point out that adjustments to terms, conditions and pricing seen to date have been largely corrective in nature and focused on loss-affected accounts. Therefore, the experience still falls somewhat short of achieving hard market conditions, largely due to robust traditional capital supporting abundant reinsurance capacity.

The ongoing COVID-19 pandemic has also resulted in increased scrutiny of policy wordings. In recent renewal negotiations, reinsurers have placed greater emphasis on the scope of cover provided in respect of both infectious diseases and business interruption, with exclusions typically being tightened where needed.

Property remains the dominant line of business for treaty reinsurance in S/SEA. According to Willis Re's January 2021 renewal report, Asian reinsurance buyers overall saw flat to low single digit risk adjusted rate increases for loss-free renewals in the property class, while loss-hit accounts saw rate increases in the range of +5% to +10%. Marine exhibited a similar trend wherein price increases were significant for loss-making accounts. Reinsurers also sought to restructure treaties, including profitable accounts, to improve positions going forward.

For the April 2021 renewal season in SEA, Willis Re reported that loss-free property excess-of-loss programmes saw average risk-adjusted increases of low single digits. Significant capacity was deployed in the regional and multi-territory retrocession market, which stifled previously anticipated price increases. Pro-rata capacity remained tight but was unlocked in most cases after further tightening of terms. Overall, cedents remained focused on earnings stability and a greater appetite for restructuring options at the lower layers was observed, factoring in cost-benefit considerations.

The year 2020 proved to be another year of high loss incidence and limited capacity in the retrocession market. Consequently, the retro price hardening trend continued during January 2021 renewals with double digit increases seen in risk-adjusted retrocession rates for loss hit accounts. Globally, third-party capital, particularly cat bond issuances, have gained traction as a mechanism to providing retrocession capacity. However, retrocession strategies in S/SEA have not shifted materially and still rely on traditional forms of retrocession, despite increasing costs. Reinsurers in the region have sought to focus on prudent exposure management while maintaining or moderately increasing retention levels in the face of these retrocession conditions.

Rating Considerations

All AM Best rated reinsurers domiciled in Asia-Pacific have Financial Strength Ratings (FSRs) of at least "B+" **(Exhibit 3)**. Reinsurers in the region are generally well-capitalised, as determined by Best's Capital Adequacy Ratio (BCAR), underpinning the balance sheet strength assessment of these participants. Capital requirements are typically driven by underwriting risk, although some market participants in the region have opted for more aggressive investment strategies, which can also be a significant driver of required capital. Counterparty credit risk emanating from retrocession is typically a small component of required capital, reflecting the use of well-rated international retrocessionaires.

Operating performance remains the key area of pressure for many rated reinsurers in the region, with negative rating outlooks assigned in some instances closely aligned with this challenge.

Nonetheless, robust capitalisation remains a strength for most reinsurers in the region. Almost all AM Best rated reinsurers domiciled in the S/SEA region have risk-adjusted capitalisation that is assessed to be at the strongest level, as measured by BCAR.

Exhibit 3
S/SEA Reinsurers – AM Best-Rated Companies
Ratings as of 10 August 2021

AMB#	AMB Company Name	Country of Domicile	Financial Size Category	Best's Long-Term ICR	Best's FSR	Best's ICR & FSR Action	Best's ICR Outlook	Rating Effective Date
86041	General Insurance Corp of India	India	XV ($2 billion or greater)	bbb+	B++	Downgraded	Negative	02/07/2020
86913	Labuan Reinsurance (L) Ltd	Malaysia	VIII ($100 million to $250 million)	a-	A-	Affirmed	Negative	03/12/2020
78303	Malaysian Reinsurance Berhad	Malaysia	IX ($250 million to $500 million)	a-	A-	Affirmed	Stable	10/12/2020
86771	Nat'l Reinsurance Corp of Philippines	Philippines	VIII ($100 million to $250 million)	bbb	B++	Affirmed	Stable	10/06/2021
85224	Singapore Reinsurance Corp Ltd	Singapore	VIII ($100 Million to $250 Million)	a-	A-	Affirmed	Stable	15/07/2021
85568	Asian Reinsurance Corp	Thailand	VII ($50 million to $100 million)	bbb-	B+	Affirmed	Stable	06/05/2021
91691	Thaire Life Assurance Public Co Ltd	Thailand	VI ($25 million to $50 million)	a-	A-	Affirmed	Negative	22/07/2021
91541	PVI Reinsurance Joint-Stock Corp	Vietnam	VI ($25 million to $50 million)	bbb	B++	Under Review	Developing	01/07/2021
91508	Vietnam National Reinsurance Corp	Vietnam	VIII ($100 million to $250 million)	bbb+	B++	Affirmed	Stable	22/04/2021

Notes: Table excludes branches and subsidiaries of international groups which are assigned the group (g) affiliation code. ICR = Issuer Credit Rating. FSR = Financial Strength Rating.
Source: AM Best data and research

Prospective Challenges and Expectations

Overall, AM Best expects the S/SEA reinsurance market to face several headwinds over the medium term. Some of these factors including strong competition, premium rate pressures, excess capacity and high natural catastrophe activity have been prevalent for a number of years. However, more recent market dynamics emerging from the COVID-19 pandemic, including a challenging investment landscape, are expected to weigh further on reinsurers' operating performance.

Despite some level of focused correction in 2021 renewals, AM Best is of the view that pricing increases remain insufficient for S/SEA reinsurers to achieve notable improvements in technical profitability, which is becoming increasingly crucial to meet the cost of capital given rising retrocession costs and lacklustre investment returns. Further rate corrections and ongoing underwriting discipline is required to allow reinsurers to achieve sustainable operating performance metrics that meet the cost of capital over the medium term.

Demand for Alternative Capital and Risk Transfer Solutions Expected to Grow in S/SEA

Historically, cedents in S/SEA have seemingly preferred traditional reinsurance solutions, and have demonstrated low appetite for complex alternate capital and risk transfer structures, in part driven by the excess capacity conditions. However, from a risk management perspective, AM Best expects the region's insurers to increasingly consider and gradually develop the use of alternative forms of capital and risk transfer over time.

In 2019, the World Bank issued a USD225 million cat bond sponsored by the Philippines to cover losses arising from earthquakes and tropical cyclones in the country over a three-year period.

Over the last few years, Singapore has attracted significant cat bond issuances owing to its grant scheme, which is due to expire at the end of 2022. This scheme, which funds 100% of certain upfront costs for cat bonds up to SGD2 million (USD1.5 million), is aimed at expanding the growth of the ILS market and boosting the number of issuances in Asia. Since its launch in 2018, the scheme has facilitated CAT bond issuances providing coverage of perils in Australia, Japan, and North America. In early 2021, MS Amlin launched a Singapore-domiciled special purpose reinsurance vehicle, Phoenix 1 Re Pte. Ltd., to provide USD42 million of collateralised capacity to support MS Amlin Syndicate 2001's Asia reinsurance portfolio.

Another popular risk transfer solution that has emerged in S/SEA are captive insurance companies; in 2020, captive formations in Asia-Pacific grew by 6.3% to 186. Although Singapore is the largest domicile in the region, with 81 total captives at the end of 2020, Labuan with 55 captives, accounts for a quarter of all captives in Asia-Pacific and the MENA region. Property market underwriters in the region are seeking captive formations, as risks for such structures are typically capped by the reinsurance market through aggregate and stop-loss protection.

August 31, 2021

Latin American Reinsurers Navigate Lingering Pandemic Stress

Low insurance penetration, risk awareness, and alternative risk transfer solutions drive market growth opportunities

The COVID-19 pandemic remains a top concern throughout Latin America. In AM Best's view, reinsurance growth opportunities will be in countries whose economies are already recovering, but conditions could revert if vaccination efforts slow down or in the event of social or political unrest. The reinsurance market in Latin America has cautiously deployed capacity, making few adjustments in treaty terms, while facultative programs have been adjusted case by case. There are growing opportunities owing to low insurance penetration, risk awareness, and alternative risk transfer solutions.

Growth Opportunities for Primary Insurance Segment

The IMF is projecting 4.6% growth in Latin America's GDP in 2021, reflecting the mixed results of local efforts to tackle the economic crisis caused by the pandemic. Demand in the region's primary insurance markets was adversely affected by the lockdowns and other restrictions implemented to stem the spread of the virus. In addition, constant political turmoil and social unrest challenge the region.

Insurance use declined, as public expenditures were rerouted to battle the pandemic. AM Best estimates that in 2020, Latin America's insurance market contracted by 1.5% on average in real terms and local currency. In USD as a total, the region contracted around 11.4%, due mostly to a drop in the life segment, while demand for health insurance, due to major medical expense, resurged. Slow—albeit ongoing—vaccination programs continue to limit the development of underlying industries that rely on insurance.

AM Best expects primary companies to maintain profitable risk selection, although pandemic-related claims continue to evolve. Insured losses have been low in recent years, but market participants remain aware of the region's susceptibility to earthquakes, tropical weather volatility, and social unrest.

Mixed 2020 Reinsurance Market Results

AM Best estimates ceded premium in the Latin American reinsurance market at USD22.8 billion, down 3% from 2019 (**Exhibit 1**). The region accounts for roughly 5% of global reinsurance premiums. The largest Latin American reinsurance markets are in countries most prone to natural catastrophes or countries with a high GDP.

Results for the reinsurance-dependent property/casualty lines in 2020 were mixed, with some markets facing the economic crisis by absorbing risks, while others weathered the financial strains through governmental economic incentives. Despite a record-setting Atlantic hurricane season in 2020 (30 named storms according to the US National Oceanic and Atmospheric Administration (NOAA)), catastrophe activity in Latin America was limited. Hurricanes Eta and Iota were significant events in Central America, but due to low insurance penetration, only 1.8% of the $8.1 billion in economic losses was covered by insurance. In comparison, a similar US event, Hurricane Sally, generated economic losses of $7 billion, with about half that amount covered by the insurance industry.

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2021-140.10

The low penetration rate for insurance products in Latin America tends to insulate the technical results of the region's reinsurers and, therefore, any major justification for a hardening reinsurance market. In the first half of 2021, the region experienced flooding due to La Niña, as well as minor drought, earthquakes, and severe weather events. The 2021 hurricane season is still in progress, so its impact remains to be seen.

Exhibit 1
Latin America – Ceded Premiums
(USD 000s)

	2019	2020
Mexico	9,022,431	8,005,724
Colombia	2,936,992	3,179,851
Chile	2,333,185	2,889,663
Brazil	2,758,762	2,759,725
Peru	1,699,759	1,679,337
Panama	1,135,830	752,070
Ecuador	713,247	716,763
Argentina	516,065	541,984
Dominican Republic	480,806	448,331
Guatemala	353,937	374,308
El Salvador	259,464	281,330
Bolivia	283,322	280,131
Honduras	232,919	251,722
Costa Rica	452,052	244,024
Uruguay	121,911	129,603
Paraguay	111,801	108,555
Nicaragua	80,187	87,736
Venezuela	26,805	37,600
Belize	16,783	16,741
Total	**23,536,259**	**22,785,198**

Source: BESTLINK, national regulators

Reinsurance Landscape Still Competitive …

Latin America accounts for a relatively small part of the global risk portfolio, but leading global reinsurers and brokers maintain their interest and presence in the region. Global reinsurers maintained their 5% to 7% share of the region's business book in 2020. Lloyd's presence in Latin America the last five years accounted for about 7% of that marketplace.

Most reinsurance companies in Latin America are privately owned. The national players are few, other than in Argentina and Brazil, where they have right of first refusal and fiscal advantages over foreign participants. In the rest of Latin America, the reinsurance market tends to be dominated by foreign reinsurers. Brazil differs from most Latin American markets, due to its more robust reinsurance industry, which has grown more than the country's GDP and growth in the primary insurance industry. In the first quarter of 2021, Brazil's insurance industry grew 29.8% from the first quarter of 2020. For full year 2020, reinsurance premiums increased 21.6% over 2019—quite remarkable given that local reinsurance industry growth was significantly higher than the primary insurance industry, and the economy overall, during a global pandemic.

There are other small and medium-sized privately owned reinsurers in Latin America domiciled outside the region (mostly in the Caribbean) that have domestic capital and ties. These carriers tend to be more active in lower layers of programs led by global players and in the past few years have diversified into Europe, the Middle East, North Africa, and Asia through vehicles such as Lloyd's syndicates or by setting up their own operations. However, the experience has been mixed, as implementation costs and loss experience have not met participants' projections.

… but with Potential for Growth

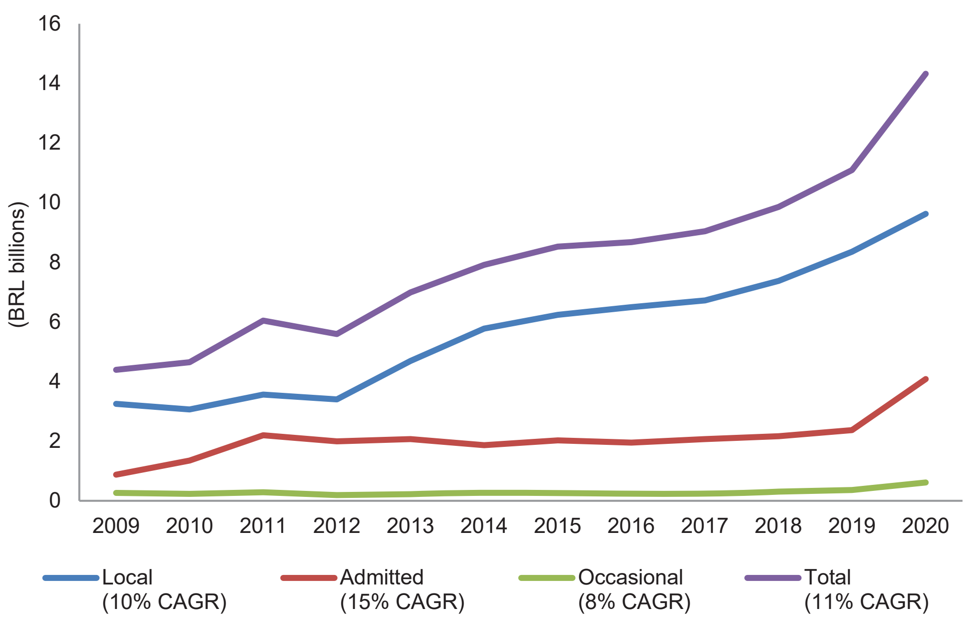
AM Best expects a substantial part of this year's reinsurance demand to come from large risks as infrastructure projects and local demand are gradually reactivated. Reinsurance premium volumes for industries heavily affected by the current negative economic cycle, especially tourism, are expected to remain limited, even as travel restrictions are reduced and a gradual recovery takes place hand in hand with vaccination efforts. Specialty risks such as cyber and energy will remain dependent on the risk appetite of the global markets.

In 2021, primary insurers became interested in reinsurance for personal lines, which tends to be less reinsurance-intensive. Claims exposure has not yet met levels to justify the cost of excess of loss, particularly for the life segment. The greatest challenge comes from collective policies, whose performance was affected by the pandemic, which negatively impacted results on proportional contracts. Reinsurance renewals could be problematic given the regulatory requirements on coverage and price adjustments for primary insurers. Ultimately, this may limit reinsurers' capacity to provide comprehensive, cost-efficient coverage to match those limitations faced by cedents.

The global reinsurance market has hardened somewhat due to business interruptions, event cancellations, and major (re)insurance penetration in catastrophe-prone regions. In Latin America, low insurance penetration and lower economic and market development have insulated insurers' balance sheets and limited reinsurers' exposures. These conditions have dampened the capacity of the region's reinsurers to adjust their offerings. Major adjustments have focused on facultative programs, while captive usage has surged as owners of profitable risks aim for a more efficient cost solution than traditional (re)insurance.

Given Brazil's low penetration (1.7%), the country's (re)insurance industry has plenty of room for growth. Local (re)insurers' balance sheets denominated in BRL, however, are susceptible to devaluation against the US dollar, limiting their ability to match the capacity of their "admitted" and "occasional" global peers or even when operating regionally in Latin America (**Exhibit 2**). This is the case for policies denominated in USD that require that the equivalent capacity be denominated in the same currency.

Exhibit 2
Brazil: Premiums Ceded to Reinsurers by Type of Reinsurer



Source: AM Best data and research

Brazil – Types of Reinsurers

Local: Fully compliant with local (re)insurance rules; partial right of first refusal in local primary business; a minimum mandatory percentage of business is ceded to them

Admitted: Domiciled abroad; files local financial statements; representative office

Occasional: Domiciled abroad (except for tax havens); recent regulatory change practically equates it to Admitted

Challenges Turn into Opportunities

Despite the current challenges Latin American reinsurers face, there may be cause for optimism. During 2020 and 2021, many global reinsurers were pressed by limited performance and prospects in other regions. This resulted in global players cautiously deploying their capacity in Latin America and, in some cases, exiting businesses, replaced by local capital as regional players adopted a more active role.

Regular reinsurance conditions will continue for markets prone to natural catastrophes, as 2020 did not include natural disasters of significant magnitude, even as frequency increased. Latin America remains attractive to reinsurers and other market participants such as data providers and risk modeling agencies, as insurers seek to optimize coverage. There is a greater understanding of exposures, particularly in catastrophe-prone areas with low insurance penetration. Cat coverage demand will continue, given the need to safeguard productive assets in the region, providing opportunities for parametric alternatives (in which a triggering event occurs or a specified threshold is reached), as a cost-efficient strategy for insurers.

Latin American insurers are aware of the need to cover contingencies (especially business interruption), liabilities, and rising risks (such as cyber), due to new working environment dynamics (both remote and onsite). Regulatory changes may lead to opportunities in Ecuador, where the regulator has allowed primary insurers to cede a wider array of personal lines coverages. In Brazil, regulatory changes at the end of 2019 allowed for an increase in cession limits to admitted and occasional reinsurers, intensifying competition with local reinsurers as well as contributing to the distribution of risks over a larger number of market participants and to the overall development of the reinsurance market.

Global reinsurers have been active in their due diligence throughout Latin America and may constitute an additional resource to support the growth and expansion of Latin American companies worldwide. Historically, reinsurers provided an alternative for better returns than other asset classes during bear markets. Nevertheless, industry results in previous years have made investors wary of the risks, limiting additional capacity. Alternative risk capital in the region is still low, with very limited insurance-linked securities and cat bonds used mostly by sovereigns, with the exception of Brazil, where the first-ever cat bond sponsored by a local Brazilian reinsurer covering Latin American reinsurance was issued a few years back. The strengthening of solvency regulations and minimum ratings for foreign reinsurers will continue to provide local insurers with solid reinsurance providers to protect their balance sheets.

AM Best expects stability in the reinsurance market in Latin America but is maintaining its Negative outlooks for many of the region's individual markets. Most of those outlooks are tied to lines less focused on reinsurance. Our Negative outlooks for the insurance markets in Chile and Peru are driven by the life side, owing to regulatory changes, although their P/C reinsurance markets continue to perform well. Our Negative outlook for Mexico's insurance industry takes into account the lack of economic growth incentives and the impact on revenue, although demand for reinsurance is tied to catastrophic exposures. Our Negative outlook for Brazil's reinsurance segment is based on the industry's unfavorable profitability and its dependence on investment income for capitalization growth, although we recognize the sophistication and strength of the country's reinsurance system. Our only Stable outlook in the region is for Guatemala, due to the country's macro stability.

August 31, 2021

MENA Reinsurance: Improving Market Conditions Signal Change for Region's Reinsurers

Reinsurance rates began to firm in 2020, a trend that has continued through 2021

Following several years of persisting soft market conditions, pricing and terms in the Middle East and North Africa (MENA) are turning in favour of the region's reinsurers. The MENA reinsurance market has long suffered from weak pricing driven by ample supply, creating challenging operating conditions for the region's reinsurers. The current market hardening, partly a bi-product of global reinsurance trends, and partly in response to regional underwriting performance strains, is a clear tailwind for reinsurance providers in the region.

However, challenges persist for MENA regional reinsurers. Ample capacity remains in the market, and the resultant competition may curtail the extent to which the region's reinsurers are able to leverage firming market conditions. Furthermore, the economic fall-out from the COVID-19 pandemic adds to the challenges faced by reinsurers operating in the region.

Reinsurance Capacity in the MENA Region

Available reinsurance capacity in the MENA region comes from many sources, with global reinsurers, regionally domiciled players, as well as reinsurance groups from Africa and Asia all operating in the market.

For certain international participants, the appetite to deploy capital in the MENA region is in part driven by the diversification offered, with the region overall exposed to a low level of catastrophe risk. For others, and reinsurers domiciled in the region, it provides growth opportunities, often in following participations on programmes led by international markets.

The composition of capacity has been dynamic in recent periods. Several regional and international players have withdrawn from the market, often because they have struggled to generate sufficient returns. Over the past several years, reinsurance market conditions across the region have been characterised by highly competitive pricing, an abundance of capacity, as well as incidences of large losses. In spite of these departures, in AM Best's view, there remains more than enough reinsurance capital available in the region for the market's needs.

High profile changes in regional reinsurance capacity include the reduction in operations since 2018 of Trust International Insurance and Reinsurance Company, and Arab Insurance Group's decision to enter into run-off in August 2020. Prior to these events, a number of additional local reinsurers faced difficulties, failing to generate sufficient returns, and exited the market over several years. More recently, several Lloyd's syndicates and international players have withdrawn from, or reduced their footprint in, the region.

AM Best's estimate of market premiums written by reinsurers domiciled in the region has reduced year-on-year since 2017 (see **Exhibit 1**), indicating that these changes in capacity have been picked up by international reinsurers who remain competitive in the market.

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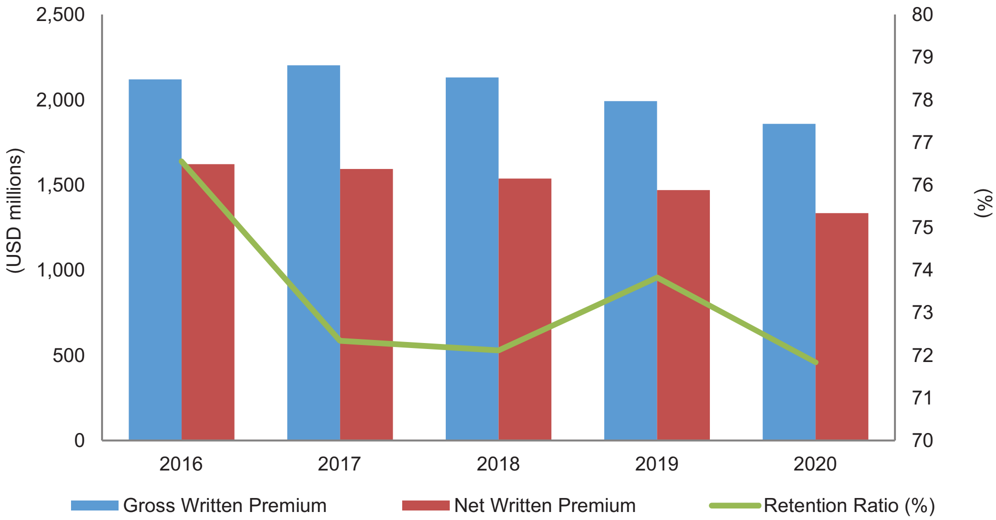
2021-140.11

Exhibit 1

MENA Reinsurance – Written Premiums and Retention Ratios, 2016-2020



Sources: BESTLINK Best's Financial Suite - Global, AM Best data and research

Rates on the Rise, But for How Long?

The direct market in the MENA region has long benefited from the ample capacity in the local reinsurance market to which it can cede business at competitive rates and with attractive ceding commissions. This has remained the case in spite of several large, high profile risk losses in recent years, the impacts of which have mainly been passed to reinsurance providers.

However, reinsurance rates began to firm in 2020, a trend that has continued through 2021. This is reflective of hardening conditions in global reinsurance markets and reinsurers in the region tightening their focus on profitability to achieve required returns. At the January 2021 renewals, rate rises were most apparent in energy and property lines in the region, as reinsurers deployed their capital selectively. AM Best observed increases again at the summer renewal period, particularly for loss-affected accounts.

Opinions diverge as to whether meaningful rate increases can be sustained, particularly with reinsurance capacity remaining readily available. The extent to which regional reinsurers will be able to benefit from current favourable conditions will depend on a number of factors. Many MENA regional reinsurers typically act as “followers” in reinsurance structures, and this reduced role in dictating lead terms may inhibit their ability to drive extensive rate change, especially if larger, more diversified competitors are willing and able to accept lower price increases.

AM Best notes that hardening conditions have also extended into the region’s retrocession markets. MENA reinsurers are often large purchasers of retrocession capacity to support their growth initiatives and manage volatility (see **Exhibit 1**). Large ceded losses, for example the port explosion in Beirut in August 2020—one of the largest losses to hit the region in the past 10 years with an insured loss estimate between USD1 billion and USD1.5 billion—have contributed to increasing retrocession rates, particularly as several of the principal retrocession providers to the region will be managing accumulations from such events from a number of sources. The increasing cost to MENA reinsurers of placing their retrocession provides an incentive to push for further pricing improvements in their accepted portfolios.

Direct Market Seeks Inward Facultative Opportunity

In recent years, a growing number of MENA primary insurance companies have shown renewed interest in participating in the regional reinsurance market on an inward facultative basis. Inward facultative interest has accelerated further over 2020 and 2021 as insurers look to bolster their toplines and access new insurable risk opportunities. This is despite the segment having been a source of underwriting losses and volatility for several insurance companies in the market historically. Primary insurers in these markets typically enjoy well-capitalised balance sheets and maintain credit ratings that support their ability to write inward facultative business on an opportunistic basis.

Increasing appetite among the region's direct participants to offer reinsurance products is augmenting available reinsurance capacity, introducing more competitive challenges for MENA reinsurers. Further available reinsurance capacity has the potential to reverse the positive pricing steps taken by reinsurers to correct and improve technical performance.

In general, reinsurance markets in the MENA region remain open and liberal, with few regulatory restrictions concerning the provision of reinsurance capacity. This is demonstrated by the ability of direct writers to participate extensively on inward facultative placements. Some regulators have taken steps to control the volume of inward facultative placements written by the direct market (for example, through the application of limits on the amount of reinsurance that can be written as a proportion of total premiums), while others have opened and liberalised their markets, temporarily removing minimum credit rating requirements for reinsurance business. AM Best expects primary insurers' interest in writing inward facultative reinsurance business to remain a competitive dynamic in the coming years.

Underwriting Returns – Not One Size Fits All

Through a period of generally soft market conditions, achieving consistent strong underwriting returns has been a challenge for MENA reinsurers. Recent market conditions have, however, turned more favourably for the region's reinsurers which, in AM Best's view, is a signal of an enhanced focus on underwriting profitability following recent performance challenges.

Aside from strong competition, the performance hurdles faced by MENA regional reinsurers have included a lack of both scale and diversification when compared with their international counterparts. Additionally, they often participate as followers on reinsurance programmes, particularly those outside of their home market, which restricts their ability to influence terms.

Strategies adopted by regional MENA reinsurers vary considerably. Certain reinsurers benefit from long-standing legal cessions or strong positions in their domestic markets, while others focus on providing proportional capacity. Strategic shifts are ongoing, with some looking to increase non-proportional and facultative business, as well as attain regional and international diversification.

It is not uncommon for MENA regional reinsurers to report comparatively strong performance in their local markets, where they benefit from local expertise and long-standing relationships with market participants. In contrast, geographical diversification is often accompanied by thinner margins and increased volatility, a function of smaller, "follower" participations, increased cost of market access through intermediaries and varied risk exposures, which differ from those in domestic markets.

Exhibit 2 highlights the wide range in underwriting returns achieved by MENA domiciled reinsurers, with over half reporting underwriting losses and non-life combined ratios in excess of 100% at least once in the past three years. Furthermore, a moderately high level of volatility is observed in technical performance over this period.

An increasing volume of natural catastrophe losses has also affected performance in recent years. Cyclone and flood events have been experienced, while the region carries underlying exposure to earthquake risk. The frequency of flooding in the region has increased, with notable flood events occurring recently in several countries. Despite a renewed focus on, and improvements in, regional catastrophe risk modelling, AM Best considers that further work is required to ensure that exposure to natural perils is appropriately modelled and priced into policies.

Although the incidence of natural catastrophe events has increased over the years, the region's exposure to catastrophe losses is relatively low on a global scale. However, the market has not been immune to large single loss events, particularly on property, engineering and energy lines. Typically, the region's direct insurers heavily rely on the reinsurance market to provide the capacity to underwrite these risks, and subsequently, bear the brunt of losses.

Hardening reinsurance market conditions currently experienced across the region, as well as changes in reinsurers' appetites as to where they deploy their capital, reflect the lower than anticipated profitability of regional business and the need for reinsurers to strengthen their returns on capital. Following the persistent soft pricing environment and high catastrophe loss years, reinsurers are utilising global rate rises as an opportunity to recalibrate pricing and terms to ensure sufficient margins on MENA business.

Notwithstanding recent pressures on underwriting margins, overall returns have generally remained robust for MENA reinsurers, with returns on equity (ROE) largely sitting around the mid-single digits. Investment returns continue to be a core component of operating results. Despite the volatile investment landscape in 2020 driven by the COVID-19 pandemic, many regional reinsurers reported solid investment results, contributing to resilient operating earnings (see **Exhibit 3)**.

Exhibit 2
MENA Reinsurance – Technical Performance, 2018-2020
(%)

			Loss Ratio - Non-Life				Combined Ratio - Non-Life			
AMB #	Company Name	Country	2018	2019	2020	3yr Avg	2018	2019	2020	3yr Avg
89190	Arab Reinsurance Co. SAL	Lebanon	69.6	71.1	72.6	71.1	105.4	105.7	104.0	105.0
85013	Arab Insurance Group (B.S.C.) *	Bahrain	84.0	59.5	43.0	62.2	118.3	96.4	90.5	101.7
90777	Compagnie Centrale de Réassurance	Algeria	52.7	59.4	52.7	54.9	83.3	84.3	82.2	83.3
78849	Hannover Re Takaful B.S.C. (c)	Bahrain	69.1	63.8	63.2	65.4	101.6	102.8	100.4	101.6
85585	Kuwait Reinsurance Co. K.S.C.P.	Kuwait	63.9	65.9	68.8	66.2	96.2	96.5	97.3	96.7
85454	Milli Reasurans Turk Anonim Sirketi	Turkey	93.9	89.2	88.8	90.6	128.9	122.4	123.9	125.1
93609	Oman Reinsurance Co. SAOC	Oman	55.2	66.5	62.1	61.3	93.7	106.6	102.8	101.0
90005	Saudi Reinsurance Co.	Saudi Arabia	63.2	63.6	58.2	61.7	98.1	95.4	94.7	96.1
84052	Société Centrale de Réassurance	Morocco	51.0	35.1	45.1	43.7	93.2	81.8	92.5	89.1
83349	Société Tunisienne de Réassurance	Tunisia	73.3	62.3	60.3	65.3	113.2	99.2	96.2	102.9
86326	Trust International Insurance & Reinsurance Co. BSC **	Bahrain	73.0	88.9	–	80.9	102.9	150.0	–	126.4

* Aug. 13, 2020: Arab Insurance Group (B.S.C.) announced that it would cease writing further reinsurance business and seek to carry out an orderly run-off of its existing portfolio.
** At the time of publication, 2020 financial statements were not available.

Sources: BESTLINK *Best's Financial Suite - Global* , AM Best data and research

Ongoing COVID-19 Effects a Headwind

It is clear that reinsurers in the region have taken several steps to strengthen underwriting performance. However, the ongoing fall out of the COVID-19 pandemic remains, in AM Best's view, a prominent headwind for MENA (re)insurance markets. In March 2021, AM Best maintained its negative market segment outlook on the Gulf Cooperation Council (GCC)—a significant, and largely oil-reliant, sub-section of the MENA region—owing to the ongoing pressures facing regional insurance markets.

Following economic contraction in 2020, economies across the region are forecast to report growth over 2021. Furthermore, Brent crude oil prices have continued to rise over the first half of 2021, albeit subject to volatility, forming a notable economic tailwind for hydrocarbon driven economies. However, the speed of the economic recovery and global oil demand remain vulnerable to resurgences of COVID-19 and virus containment measures.

Historically, many insurance markets in the region have relied on government spending—notably from infrastructure projects—for a sizeable share of premium growth. These risks are typically heavily ceded to the region's reinsurance market, and have provided profitable opportunities for MENA reinsurers. Although regional reinsurers generally cede a large portion of their participations to international reinsurance partners, they benefit from the associated commissions. Should government spending in the region decline due to weaker fiscal revenues, insurers, and subsequently reinsurers, are likely to see reductions in highly profitable growth opportunities.

In addition, further delays in the implementation of mandatory product coverages, as well as changes in consumer behaviour in respect of compulsory coverages, and reduced demand for non-compulsory insurance products will have a knock on effect for the reinsurance segment.

Despite the challenges posed by the COVID-19 pandemic and the current economic conditions, AM Best expects government-driven expenditure projects to present a longer-term opportunity for (re)insurance markets in the region. Notably, many countries have made commitments to reduce dependence on petrochemicals and to diversify into greener industries. In this context,

Exhibit 3
MENA Reinsurance – Investment Yield and Return on Equity, 2018-2020
(%)

			Investment Yield				Return on Equity			
AMB#	Company Name	Country	2018	2019	2020	3yr Avg	2018	2019	2020	3yr Avg
89190	Arab Reinsurance Co. SAL	Lebanon	5.9	7.4	2.7	5.3	5.3	-3.1	2.4	1.5
85013	Arab Insurance Group (B.S.C.) (C) *	Bahrain	2.0	1.8	1.5	1.8	-20.6	7.8	5.0	-2.6
90777	Compagnie Centrale de Réassurance	Algeria	4.2	4.6	4.8	4.5	9.0	8.3	13.2	10.2
78849	Hannover Re Takaful B.S.C. (c)	Bahrain	0.7	7.2	4.2	4.0	2.8	2.0	17.2	7.3
85585	Kuwait Reinsurance Co. K.S.C.P.	Kuwait	3.3	3.9	3.3	3.5	7.1	9.3	9.4	8.6
85454	Milli Reasurans Turk Anonim Sirketi	Turkey	15.7	16.2	10.4	14.1	13.1	10.5	8.2	10.6
93609	Oman Reinsurance Co. SAOC	Oman	1.5	4.0	4.1	3.2	3.0	3.6	6.0	4.2
90005	Saudi Reinsurance Co.	Saudi Arabia	0.7	2.4	2.3	1.8	0.1	5.3	5.1	3.5
84052	Société Centrale de Réassurance	Morocco	2.6	2.8	7.1	4.2	11.8	11.3	13.0	12.0
83349	Société Tunisienne de Réassurance	Tunisia	8.1	8.7	8.8	8.5	8.7	5.8	6.1	6.9
86326	Trust International Insurance & Reinsurance Co. BSC **	Bahrain	1.1	1.5	–	1.3	-11.7	-23.9	–	-17.8

* Aug. 13, 2020: Arab Insurance Group (B.S.C.) announced that it would cease writing further reinsurance business and seek to carry out an orderly run-off of its existing portfolio.
** At the time of publication, 2020 financial statements were not available.

Sources: BESTLINK *Best's Financial Suite - Global*, AM Best data and research higher levels of fiscal expenditure is likely to be channelled into green infrastructure projects, including green buildings and solar parks, presenting insurable risk opportunities. These projects represent significant opportunities for regional (re)insurers that can embrace the shift, develop the required capabilities and tailor their products accordingly.

Rating Considerations

The majority of AM Best-rated reinsurers domiciled in the MENA region have seen rating affirmations over the past 12 months, indicative of stable rating fundamentals (see **Exhibit 4**).

The credit ratings encompass Financial Strength Ratings (FSR) of "B-" through to "A-". The wide range in FSRs partly reflects divergent country risk conditions across the region. AM Best defines country risk as the risk that country-specific factors could adversely affect an insurer's ability to meet its financial obligations. Countries are placed into one of five tiers, ranging from Country Risk Tier 1 (CRT-1), denoting a stable environment with the least amount of risk, to Country Risk Tier 5 (CRT-5) for countries that pose the most risk and, therefore, the greatest challenge to an insurer's financial stability, strength and performance. The MENA region encompasses countries assessed between CRT-3 and CRT-5, indicative of higher country risk assessments. AM Best notes that country risk has been a factor influencing recent rating actions for AM Best-rated MENA reinsurers.

MENA reinsurers tend to demonstrate "strongest levels" of risk-adjusted capitalisation, as measured by Best's Capital Adequacy Ratio, reflective of significant capital buffers relative to their operational exposures.

Conversely, the persistent challenges that have tested MENA reinsurers in recent years have resulted in a wider range of operating performance assessments. As shown in **Exhibits 1 and 2**, consistent, strong performance metrics have not been observed for most reinsurers in the region. AM Best rated MENA reinsurers carry operating performance assessments from "Marginal" to "Strong". The current hardening market trends are a clear performance tailwind for MENA reinsurers over the near term. But obstacles, such as the medium-term effects of the COVID-19 pandemic, and the availability of capacity (including from the direct market), remain and may limit the extent to which MENA reinsurers can grasp the current market opportunity.

Exhibit 4

MENA Reinsurers – AM Best-Rated Companies

Ratings as of August 20, 2021.

AMB #	Company Name	Country	Best's Long-Term Issuer Credit Rating (ICR)	Best's Financial Strength Rating (FSR)	Best's ICR & FSR Action	Best's ICR & FSR Outlook	Rating Effective Date
89190	Arab Reinsurance Co. SAL	Lebanon	bb-	B-	Downgraded	Negative	13-Aug-21
90777	Compagnie Centrale de Réassurance	Algeria	bbb-	B+	Affirmed	Stable	14-Oct-20
85585	Kuwait Reinsurance Co.K.S.C.P.	Kuwait	a-	A-	Affirmed	Stable	29-May-21
85454	Milli Reasurans Turk Anonim Sirketi	Turkey	bb+	B	Affirmed	Stable	2-Jul-21
84052	Société Centrale de Réassurance	Morocco	bbb	B++	Affirmed	Stable	9-Dec-20
83349	Société Tunisienne de Réassurance	Tunisia	bbb-	B+	Affirmed	Negative	11-Aug-21

Sources: BESTLINK *Best's Financial Suite - Global*, AM Best data and research

Retakaful – Missed Opportunity Given to the Conventional Market

Retakaful (Islamic reinsurance) operators have yet to achieve traction in the MENA region, despite ample opportunities. Over the past two decades, there has been significant growth and interest in the MENA retakaful market. Many retakaful formations have been structured as greenfield investments, and others have been formed by existing reinsurers looking for additional distribution platforms. However, the initial strong momentum has stalled. Inconsistent and underperforming technical returns have led to market contraction in recent years, with "dedicated" retakaful operators such as Takaful Re and Emirates Retakaful (both from the United Arab Emirates) exiting the market due to poor performance, driven in part by their inability to gain sufficient scale.

In AM Best's opinion, several factors are constraining the success of retakaful in the region. These include the underachievement and small size of the region's direct takaful markets, and most notably competitive pressure from the conventional reinsurance market. Takaful contributions in the primary market were challenged in 2020, losing ground to the conventional market. Until sufficient insurable risks can be consistently ceded to the retakaful market, the market opportunity for dedicated retakaful operators is expected to remain limited. Furthermore, Shari'a boards of takaful operators are yet to adopt a strict approach to retakaful enforcement, allowing contributions to be ceded to conventional markets. This exception is often accepted on the basis of policyholder protection – conventional reinsurers in the region have generally carried comparatively stronger FSRs than their retakaful counterparts. Without tighter regulation and Shari'a control of ceded contributions, the retakaful market is likely to continue to be overlooked in favour of conventional reinsurers, inhibiting material growth.

AM Best views the potential of the retakaful market to be highly dependent on the successful development of the region's primary takaful market. Continued performance improvements and the expansion of the direct market's footprint and product offerings should ultimately allow more contributions to be ceded to the retakaful market. However, given the challenges faced in establishing sustainable, standalone retakaful operators, retakaful capacity in the region is currently primarily provided by branches, takaful windows or subsidiaries of conventional reinsurers, and question marks remain as to whether a dedicated retakaful segment will be able to capitalise on developments in primary takaful markets.

August 31, 2021

Sub-Saharan Africa Reinsurance: Significant Growth Potential, Despite Challenging Operating Conditions

Increasing investment in infrastructure, together with steady levels of GDP growth, have contributed to the expansion of the region's reinsurance markets

For several years, the sub-Saharan Africa (SSA) reinsurance market, though limited in scale by global standards, has provided reinsurers with an opportunity for diversification and profitable growth. However, increasing economic volatility and elevated competition have led to a gradual deterioration in performance.

Throughout 2020, the operating environment across SSA was difficult for both domestic and international reinsurers, largely due to the impact of the COVID-19 pandemic on local economies, volatility in global oil prices, and in some countries by double-digit inflation and local currency depreciation.

With the COVID-19 pandemic persisting through 2021, already high levels of inequality across the region have worsened, in some cases resulting in local pockets of social unrest, including widespread rioting in South Africa, the region's largest insurance market. This is expected to result in significant losses for the reinsurance industry.

Despite the challenges, AM Best believes the growth potential for the SSA reinsurance segment remains substantial. The region has considerable and untapped reserves of natural resources, solid long-term projected economic growth rates, and increasing underlying insurance penetration.

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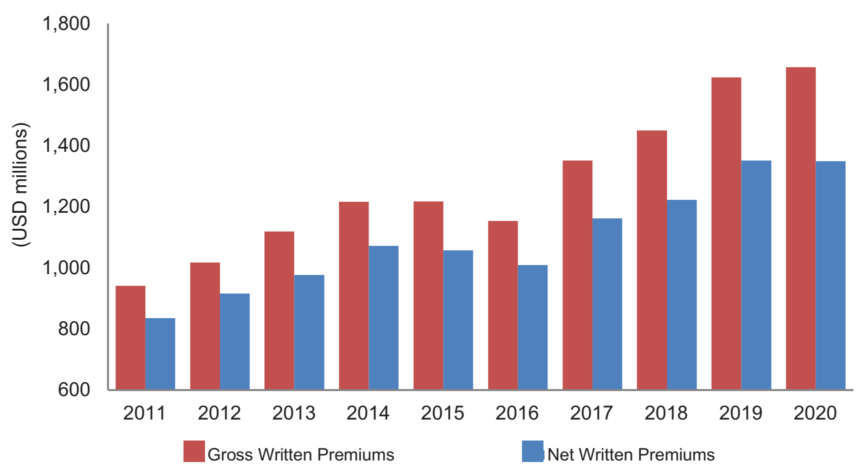
Exhibit 1
Sub-Saharan Africa – AM Best-Rated Reinsurers, Premiums, 2011-2020



Sources: BESTLINK *Best's Financial Suite – Global*, AM Best data and research

Long-Term Growth of the Reinsurance Market

Increasing investment in infrastructure in SSA, together with steady levels of real gross domestic product (GDP) growth, have contributed to the expansion of the region's reinsurance markets over the past decade, a trend that AM Best expects will continue.

SSA reinsurers rated by AM Best have experienced good growth over the longer term. Gross written premium (GWP) has grown at a 10-year compound annual growth rate (CAGR) of 5.8% (calculated in US Dollars). GWP growth has been driven predominantly by the non-life insurance segment, with the life segment at a nascent stage of development in many of the region's countries.

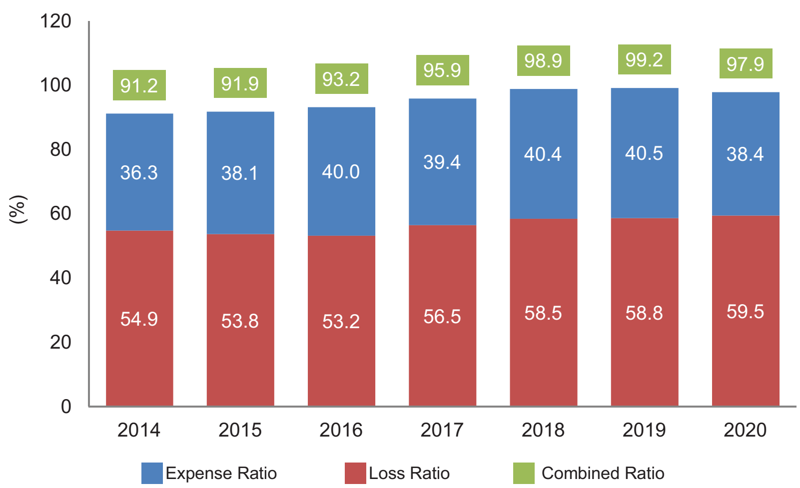
Over the past decade, steady growth in GWP (see **Exhibit 1**) has been achieved, despite the significant depreciation of local currencies against the US Dollar. The Nigerian Naira and South African Rand, representative of the region's two largest economies, depreciated against the US Dollar by 63.5% and 54.8%, respectively, between 2011 and 2021. More recently, the economic recovery following the 2014-to-2016 oil price crash bolstered reinsurers' revenue, as is demonstrated by a four-year (2016-2019) GWP CAGR of 8.9%. However, this trend was curtailed by the COVID-19 pandemic and associated recession, with GWP growth of just 2.1% in 2020.

Over the medium term, growth of the SSA reinsurance market is expected to pick up again, supported by the region's economic recovery. The International Monetary Fund projects that SSA will achieve real GDP growth of 3% in 2021, rising to around 4% per annum in the five years thereafter, comfortably exceeding the long-term forecasts for both Western Europe and North America.

Profit Margins Continue to Narrow

Traditionally, SSA reinsurers have focused largely on local African risks. As a result, the region's AM Best-rated carriers were not exposed to the major natural catastrophe losses experienced by the global reinsurance market over recent years. In 2020, the weighted average loss ratio for

Exhibit 2
Sub-Saharan Africa – AM Best-Rated Reinsurers, Combined Ratio, 2014-2020



Sources: BESTLINK *Best's Financial Suite – Global*, AM Best data and research

AM Best-rated reinsurers in SSA was 59.5% (see **Exhibit 2**), compared with an equivalent figure of 72.6% for the top 50 composite of reinsurers[1].

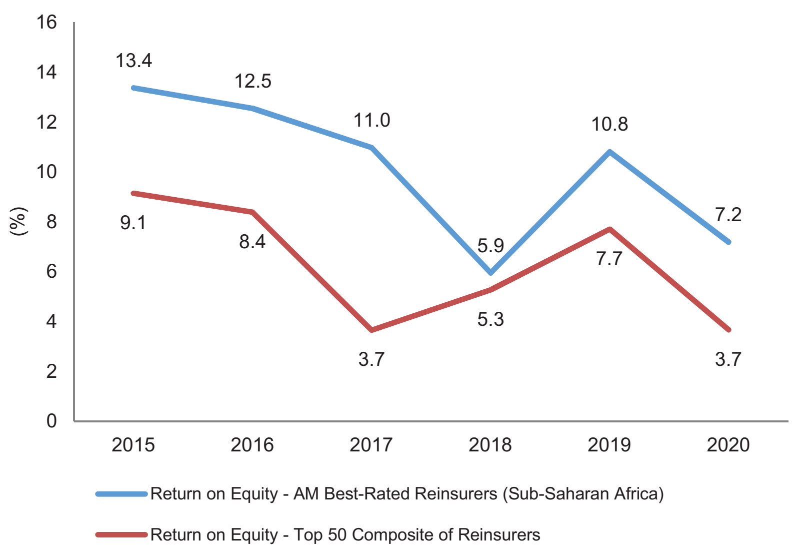
Despite the generally lower and less volatile loss experience of SSA reinsurers when compared to their global peers, AM Best has observed a general deterioration in underwriting performance for the reinsurers that it rates in the region. The weighted-average loss ratio of AM Best-rated SSA reinsurers has risen steadily since year-end 2016, when it was as low as 53.2%, to 59.5% in 2020.

While domestic markets have not reported any major loss events in recent years, stiff competition and subsequent rate erosion has contributed to the decline in underwriting performance. In addition, the underwriting results of a number of AM Best-rated SSA domiciled reinsurers were negatively impacted by the poor performance of non-core overseas business, most notably in the Indian subcontinent. The aggressive expansion into the Indian agricultural segment by a number of SSA reinsurers in particular, has played a noteworthy role in the deterioration of the average loss ratio. AM Best has however observed a drastic decline in the region's appetite to write this business going forward.

Furthermore, negative exchange rate movements—particularly in the Nigerian Naira—in almost all years between 2016 and 2021 has led to claims inflation, especially on lines of business that rely on the import of goods and spare parts. While inflation is typically priced into (re) insurance products, it has contributed to the gradual deterioration of the loss ratio, particularly for those African reinsurers that do business in US Dollars and report in local currency.

Performance is also affected by the generally high cost of doing business in the region and the relatively small size of individual reinsurers, with many market participants unable to realise economies of scale. Consequently, the weighted average expense ratio reported in 2020 for the region compared unfavourably with the broader reinsurance market at 38.4% (see **Exhibit 2**), versus an equivalent figure of 28.7% for the 50 largest global reinsurers.

Exhibit 3
Sub-Saharan Africa – AM Best-Rated Reinsurers, Return on Equity, 2015-2020



Return on equity figures are calculated on a weighted average basis for the purposes of this report.

Sources: BESTLINK *Best's Financial Suite – Global*, AM Best data and research

[1]Performance ratios may differ from those in "World's 50 Largest Reinsurers," due to the change in the calculation (weighted-average basis).

Despite the decline in underwriting results, AM Best-rated SSA reinsurers continue to return solid levels of profitability to their shareholders, demonstrated by a five-year (2016-2020) weighted average return on equity (ROE) of 9.5%, compared with 5.7% reported for the global reinsurance top 50 composite (see **Exhibit 3**). The SSA benchmark's weighted-average ROE is heavily influenced by the performance of Africa Re and ZEP Re, both of which report in US Dollars, which, to some extent, limits the impact of high inflation in their core markets on their reported net income. The ROE for SSA reinsurers must also be considered in conjunction with their generally high levels of risk-adjusted capitalisation, as measured by Best's Capital Adequacy Ratio (BCAR) (see **Exhibit 4**), which tempers this metric.

Exhibit 4

Sub-Saharan Africa – AM Best-Rated Reinsurers, Capital & Surplus

AMB #	Company Name	2020 C&S (Including Minority Interests) (USD 000s)	2019 Best's Capital Adequacy Ratio (VaR 99.6%)
83411	African Reinsurance Corporation	1,017,106	62.9
85416	Kenya Reinsurance Corporation Ltd.	317,487	37.7*
78388	ZEP-RE (PTA Reinsurance Co.)	275,752	60.3
93852	CICA Re	103,729**	60.6
94468	WAICA Reinsurance Corporation PLC*	99,393	48.1*
78723	Continental Reinsurance PLC	98,591	35.1
90035	Ghana Reinsurance Co. Ltd.	66,287	60.0
77803	East Africa Reinsurance Co. Ltd.	49,576	55.7

* BCAR scores based on year-end 2020 data.

** Capital & Surplus based on year-end 2019 data.

Sources: BESTLINK *Best's Financial Suite - Global*, AM Best data and research

AM Best expects the steady economic recovery of the region and a general hardening of reinsurance rates to bolster the results of the SSA reinsurance market. However, should the COVID-19 pandemic persist, the region's projected economic recovery could be jeopardised, which in turn may curtail the reinsurance market's revenue growth, impact the collectability of premiums, as well as introduce volatility into investment results.

Regional Capacity Is Limited

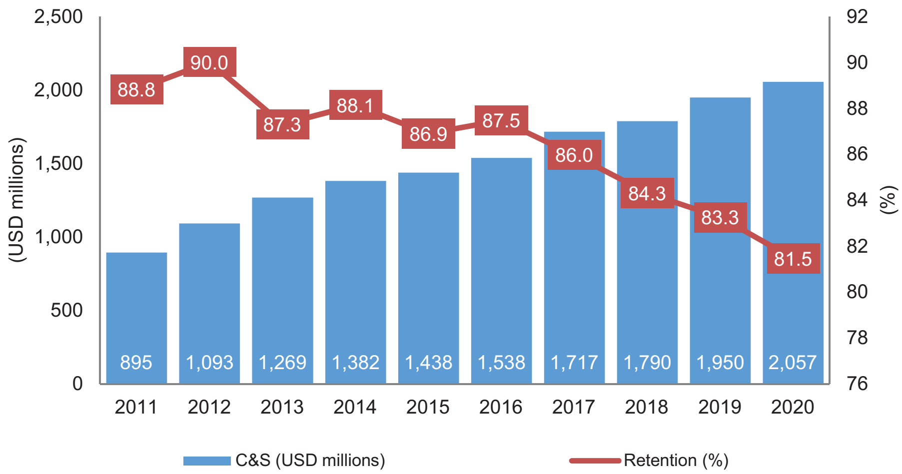
The larger reinsurers in SSA (excluding South Africa) tend to be either national or supra-national entities, which often benefit from compulsory cessions and have a mandate to develop the local (re)insurance industry. With a few exceptions, African reinsurers tend to focus on local and regional markets. Further competition comes from a relatively small group of sophisticated global reinsurers, and a handful of smaller privately-owned African companies.

Despite solid growth in capital in recent years (see **Exhibit 5**), the capacity offered by Africa-domiciled reinsurers is still low, with the capital bases of the majority of SSA reinsurers too small to meet fully the needs of local primary markets, particularly where major construction and energy risks are concerned. As the region's economies have industrialised, their insurance needs have grown, which in turn has contributed towards lower levels of retention for SSA reinsurers. Local players often lean on more sophisticated global reinsurers for the expertise and capacity needed to underwrite complex risks.

High Barriers to Entry

Barriers to entry remain high in many African reinsurance markets and include protectionist local regulations and the presence of state-owned reinsurance companies or specialised state-sponsored pools. The limited competition from global reinsurers is due to

Exhibit 5
Sub-Saharan Africa – AM Best-Rated Reinsurers, Capital & Surplus vs. Retention, 2011-2020



Sources: BESTLINK, *Best's Financial Suite – Global*, AM Best data and research

a multitude of factors, including the expansive geography of the continent, the small size of national reinsurance markets, and the significant cultural and fiscal policy differences between countries.

Over the past decade, local regulators have become more active in championing their national markets, often forcing primary insurers to offer risks to local reinsurers of a generally weaker credit quality before they can explore international markets. Supra-national reinsurers such as Africa Re, CICA Re and ZEP Re play an important role in supporting the underlying insurance markets, maintaining a mandate that goes beyond a pure commercial existence.

However, high barriers to entry have not completely deterred new market entrants. In early 2021, specialty reinsurance start-up Africa Specialty Risks commenced underwriting from its Mauritius entity.

South Africa

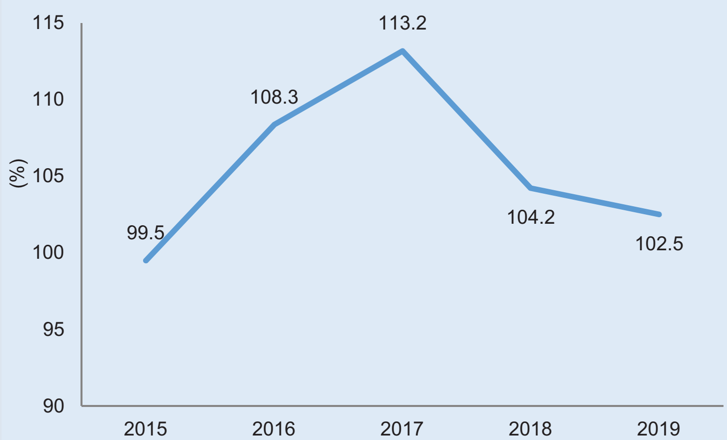
South Africa has a relatively mature insurance market compared with other countries on the continent, with well-established life and non-life segments. In 2020, South Africa's insurance market generated GWP of approximately USD 41 billion, according to Swiss Re Institute's sigma report "World insurance: the recovery gains pace".

However, the region's largest (re)insurance market is facing turbulence. The COVID-19 pandemic exacerbated an already steep downward trend in the country's economy, with business confidence and employment rates reaching their lowest level in years. Long-term economic and political pressures in the country have resulted in an operating environment that has not been conducive to profitable underwriting results.

The weighted average combined ratio for the reinsurance market was 102.5% in 2019, up from 99.5% in 2015 (see **Exhibit 6**). Performance of the market's reinsurers has been significantly impacted by soft pricing conditions and a spate of severe weather events between 2017 and 2019.

Exhibit 6

Sub-Saharan Africa – South Africa, Combined Ratio (includes Life Business), 2015-2019



Source: KPMG Insurance Survey (includes life business)

In 2020 and 2021, the COVID-19 pandemic has further impacted the South African reinsurance industry. Following the December 2020 court ruling, which overturned an appeal by Guardrisk Insurance Company Limited, the insurance market has commenced settling contingent business interruption (CBI) claims associated with the pandemic. In its year-end 2020 financial statements, market leader Santam Limited, which has a market share of 24%, estimates its gross and net CBI exposure to be USD 356 million and USD 136 million, respectively. This indicates a gross industry loss that significantly exceeds USD 1 billion. Reinsurers with policies written back-to-back are expected to bear a sizeable share of the costs borne by the primary market.

In addition, recent large-scale social unrest triggered by the arrest of former president Jacob Zuma, has led to rioting and looting in some of the country's major urban centres. State-owned South African Special Risks Insurance Association (SASRIA) is the specialist insurer that solely covers losses relating to politically motivated crimes in the country. SASRIA's latest estimate indicates an insurance industry loss of USD 1.3 billion. A material proportion of these losses are expected to ultimately fall on Europe's largest reinsurers through their South African subsidiaries, along with the Lloyd's market.

Exhibit 7
Sub-Saharan Africa – AM Best-Rated Reinsurers
Ratings as of August 16, 2021

AMB #	Company Name	Best's Long-Term Issuer Credit Rating (ICR)	Best's Financial Strength Rating (FSR)	Best's ICR & FSR Action	Best's ICR & FSR Outlook	Rating Effective Date
83411	African Reinsurance Corporation	a	A	Affirmed	Stable	15-Dec-20
93852	CICA Re	bb+	B	Affirmed	Positive	12-Feb-21
78723	Continental Reinsurance PLC	bbb-	B+	Affirmed	Stable	15-Dec-20
77803	East Africa Reinsurance Co. Ltd.	bb+	B	Affirmed	Stable	8-Oct-20
90035	Ghana Reinsurance Co. Ltd.	bb	B	Affirmed	Stable	18-Dec-20
85416	Kenya Reinsurance Corporation Ltd.	bb+	B	Affirmed	Negative[1]	20-May-21
94468	WAICA Reinsurance Corporation PLC	bbb-	B+	Affirmed	Stable	2-Jul-21
78388	ZEP-RE (PTA Reinsurance Co.)	bbb	B++	Affirmed	Stable	16-Oct-20

[1] Kenya Re: FSR Outlook Stable

Sources: BESTLINK *Best's Financial Suite – Global*, AM Best data and research

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Version 010320

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