AM Best
August 31, 2022
Market Segment
Report

Global Reinsurance: More Stable and Improved Results Following Shift from Property Catastrophe Risks

BEST'S MARKET SEGMENT REPORT

Our Insight, Your Advantage™

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

Despite lingering economic and operational challenges stemming from the COVID-19 pandemic, AM Best's outlook for the global reinsurance industry remains at Stable. Over the last year, a series of both positive and negative drivers have tended to counter each other, resulting in a state of equilibrium for the industry. However, heightened catastrophe and secondary peril activity over the last five years have put investors' risk tolerance levels to the test, and recent fears about sustained inflation and a potential recession may point to a decline in overall available capital.

In our annual listing of the world's 50 largest reinsurers, Munich Re retained the top spot. Notable changes from last year's ranking include the rise of Pacific LifeCorp. from #27 to #19, and Canada Life Re from #8 to #4, as well as Liberty Mutual entering the list at #26. Our comprehensive analysis of the reinsurance industry includes additional detailed metrics by region and market.

Most reinsurers' risk profiles are moving rapidly toward excess and surplus lines, casualty lines, or primary specialty business, owing to expectations of higher and more stable underwriting margins, even amid persistent concerns about economic and social inflation. For life reinsurers, the pandemic has led to excess mortality, but has been mostly an earnings event rather than a capital event, as the segment remains well capitalized. Despite the tragic loss of life and widespread illness, COVID-19 has not risen to a 1-in-200-year mortality event. Health reinsurance accounts for a relatively small—but growing—share of premiums. Demand for health reinsurance tends to be lower because of the short-term nature of obligations, flexibility in re-pricing, and limited exposure to catastrophes.

Traditional reinsurance capital grew in 2021, due mostly to investment gains and affordable debt rates, but is projected to decline in 2022 amid elevated volatility.

The pandemic has had a minimal effect on the insurance-linked securities (ILS) market. Paid claims ratios remain very low, and market participants believe that most capital trapped by the pandemic has been released.

Lloyd's ranks as the world's seventh-largest reinsurance provider by 2021 reinsurance gross premiums written and fourth-largest if life premiums are excluded. Reinsurance is Lloyd's largest segment, accounting for 37% of the market's 2021 GPW.

In Latin America, minimal catastrophe activity the last few years has prompted reinsurers to adjust their product offerings by raising deductibles, narrowing coverages, and seeking exclusions.

The major Asia-Pacific reinsurers generated more stable operating ratios and returns on equity in 2021 compared to global peers, while regional players focused on overseas growth and M&A opportunities. In the South and Southeast Asia markets, technical underwriting performance improved in 2021, but returns on equity declined owing to weakened investment returns.

In the Middle East and North Africa, the hardening market conditions in 2021 continued to favor regional reinsurers given the positive pricing momentum of recent renewal seasons.

In Sub-Saharan Africa, steady real GDP growth, together with international investment, has spurred expansion of the region's reinsurance market over the past decade.

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

BEST'S MARKET SEGMENT REPORT

Our Insight, Your Advantage™

August 15, 2022

Global Reinsurance: More Stable and Improved Results Following Shift from Property Catastrophe Risks

Stable results driven by reduced property cat exposures and a hardening market, countered by inflationary pressures and risk modelling uncertainty

Table of Contents:

Analytical Contact:
Carlos Wong-Fupuy, Oldwick
+1 (908) 439-2200 Ext. 5344
Carlos.Wong-Fupuy@ambest.com

Contributors:
Mathilde Jakobsen, Amsterdam
Catherine Thomas, London
Steven Chirico, Oldwick
Dan Hofmeister, Oldwick

2022-098.1

Principal Takeaways

- Positive and negative drivers have tended to counter each other.
- Heightened natural catastrophe activity over the last five years has put investor risk tolerance levels to the test.
- Secondary risks are becoming more prevalent.
- Fears of sustained inflation and a potential recession may portend a decline in overall available capital.

Four years ago, AM Best changed its outlook on the global reinsurance segment to Stable from Negative. After major natural catastrophe losses in 2017 and 2018, pricing conditions started to improve for the first time in a while. Unlike previous market cycles, dominated by a few, but clear trends such as a wave of new entrants to the market attracted by steep rate increases, following capital erosion, the last four years have been characterized by a number of positive and negative drivers, with limited influence on their own, but which, on balance, continue to counter each other.

The strength and relevance of each of these drivers remain in flux. For example, the expected pace and effect of new entrants emerging since 2019 has not materialized. Recent concerns about a long-term low interest rate environment transformed into fears of sustained inflation and potential recession. Rates, terms, and conditions continue to improve, but with no consensus about their adequacy. The declining appetite for property natural catastrophe risk has changed direction and recently accelerated. Most reinsurers' risk profiles are shifting rapidly toward excess and surplus lines, casualty lines, or primary specialty business, thanks to expectations of higher and more stable underwriting margins, despite persistent concerns about economic and social inflation.

Changes in Risk Appetite and Growing Skepticism about Models

The global risk environment continues to get more complex. Traditional natural catastrophe models are being subjected to renewed scrutiny due to the increase in the frequency of events in the last five years, usually attributable to climate trends, but for which scientists do not yet have definitive answers, especially in quantitative terms. "Secondary" perils are becoming more prominent—and thus less secondary. By definition, their modelling is less well developed and less accepted. The industry has realized that pandemic-related losses could be more influenced by government intervention, which are virtually impossible to model, than by biometric risks.

In an increasingly digitized economy, the importance of cyber risks continues to grow, but modelling and pricing are still in their infancy. Defining and quantifying what constitutes a systemic cyber event is extremely difficult. In the wake of the COVID-19 pandemic—and in an increasingly more litigious environment—casualty lines are becoming more visible, and quantifying the risk to an acceptable level of comfort, especially given their long-tail characteristics and their exposure to human behavior, has always been a challenging task.

An increasingly risky and complex world should offer a plethora of opportunities for reinsurers. Much has been said about the (re)insurance gap—the discrepancy between economic and insured losses. Affordability tends to be a critical issue in emerging economies, less so in developed ones. The systemic nature and concentration of certain risks is another significant barrier to closing the protection gap. Government-sponsored schemes, exposure control, and diversification help address those concerns. These tools have allowed the private sector to assume risks such as natural catastrophes, mortgage (re)insurance, and trade credit.

Another typical explanation for the lack of (re)insurers' appetite for particular risks is their inability to quantify those risks and determine a reliable technical price, which seems to be exactly the case for natural catastrophe perils. Although over a ten-plus year period, most companies' technical results hover around breakeven, the higher frequency of events in the last five years and the long-term climate trends affecting them have exerted significant pressure on the level of confidence users put in modelling tools, a key component in the pricing process.

Historically, however, the unavailability of pricing models and the level of accuracy has not stopped reinsurers from accepting risks. Natural catastrophe models have only been widely available for (re)insurance purposes for little more than 30 years—arguably, a period too short to allow for robust testing, given the typical return period of 250 years or more used to assess the probability of the occurrence of major events.

Informed uncertainty is at the core of a portfolio of insurable risks. Models help to better understand the nature of the perils involved, but due to their limitations, they are always going to be imperfect predictors of a technical price. It is part of our human nature to give more weight to the experience of recent years than to much longer periods, regardless of what quantitative models may suggest. In the end, the balance between the volatility of recent experience and perceived margins embedded in current rates is what determines current risk appetite—and for certain types of risks (such as natural catastrophes), recent volatility has become either too onerous, or simply unacceptable for some.

No one can suggest that price modelling for casualty or specialty lines is more robust than for property cat. A number of behavioral elements cannot be easily modelled. The heterogeneity among covers prevents a straight application of the law of large numbers. For many, however, current pricing seems attractive when compared to recent loss experience. Expected margins appear to be high enough to compensate for uncertainty, even when concerns about both social and economic inflation have become more prevalent.

Another factor that explains the relatively stronger appetite for casualty and specialty lines is an apparently more stable claims pattern. These lines are not completely immune from accumulation risk, as shown by the COVID-19 pandemic and more recently the invasion of Ukraine. Major events affecting these classes of risk are generally considered more remote, even when more often than not, it is unclear what that major event may be, and their financial impact seems to be more manageable than that of a natural catastrophe on the property side.

Perhaps the most evident case for growing risk appetite despite the scarcity of robust modelling is the interest that some reinsurers are showing for cyber risk coverage. Pricing has risen steeply over the last few years, making cyber coverage margins appear more attractive and thus giving rise to the fear of missing out on a potential profit opportunity. Available models are still at an early stage of development. Although they help in better understanding the nature of the risk, attempts at quantification generate a very broad range of outcomes at best. Exposure management is based mainly on applying coverage limits. Most importantly, despite a diversity of approaches, there is no consensus on what may constitute a systemic, catastrophic event that would help determine how accumulation risk can be effectively managed.

Most Companies Continue To Restrict Exposures to Property Catastrophe Perils

Volatility in reinsurers' results the last few years has been driven not only by traditional natural catastrophe events, but also by the growth of secondary perils, the pandemic, and, more recently, the Ukraine-Russia conflict. This has been compounded by financial, economic, social, and geo-political uncertainty in general. Heightened natural catastrophe activity in 2017 and 2018 became a turning point for attitudes to risk. Although the global reinsurance segment was well capitalized, the instability of financial results and inability of most players to meet their cost of capital put the level of investors' risk tolerance to the test. This was more immediately evident in the insurance-linked securities (ILS) markets, which after a period of rapid expansion, plateaued and experienced a significant flight to quality when allocating capital.

The traditional markets' risk appetite took a bit longer to move in a similar direction. From 2019, early expectations of rate increases started to attract new capital. There was also the hope that natural catastrophe activity would subside and return to more average historical levels. A number of factors have complicated that picture. Secondary perils have become more prominent than ever. Even without major catastrophic events, the accumulation of small to medium-sized events has had a material impact on claims ratios, sometimes at unexpected times of the year (such as Winter Storm Uri in Texas in the first quarter of 2021) or outside their usual geographical scope (such as the impact of Hurricane Ida, which made landfall in Louisiana but generated widespread tornadoes in the northeastern US). Extremely unusual events (such as the Bernd system floods in Western Europe) are occurring, as wildfires and floods increase in frequency and severity worldwide.

It's not just that the underwriting environment is less predictable. Government actions are having a huge impact on market conditions. The business interruption and event cancellation losses related to COVID-19 were the result of government lockdown measures—and these losses were never factored in pandemic pricing models. One of the reasons for the abundance of capital was the low interest rate environment. Now that central banks are trying to control inflation—attributable to COVID-related supply chain issues, economic stimulus measures, and, more recently, energy price rises due to the Russia-Ukraine conflict—by raising interest rates, capital is becoming tighter, recession fears are looming, and asset valuation declines are hurting balance sheets in a way that catastrophe losses have thus far not been able to.

All in all, the perception of volatility and uncertainty has been magnified for reinsurers, on the asset and liability side of the balance sheet as well as on the bottom line. Investors may not feel as comfortable as they did before these issues emerged—and this is even truer for catastrophe risks, which were traditionally considered high severity, low frequency. But when the frequency component rises beyond a certain tolerance threshold—which seems to be the case after five years of sustained losses—investors will naturally reassess their positions and return expectations.

Theoretically, at least, there should be a price high enough to compensate for that level of uncertainty, but few reinsurers feel that rate increases have reached that point yet. What's more, there is a strong preference for stable results over higher expected profit margins. For the last two years, reinsurers have been shifting covers to higher layers of protection, raising deductibles, lowering limits, adding explicit exclusions, avoiding aggregate covers, restricting specific perils and geographies, and generally becoming more selective with their cedents, to mitigate adverse selection and credit risk—all this, at a time when cedents themselves crave for more stable results and have the protection of their balance sheets at the top of their priority list.

Some companies have been actively shrinking their property cat exposures or even modifying their organizational structures and exiting altogether, although most of the largest European players remain committed to catastrophe risks. While remaining more cautious when it comes to risk selection, their longer-term views on catastrophe risks tend to be influenced by a much greater risk diversification (including the life and primary businesses), size, and financial flexibility, supported by relatively lower reliance on the currently constrained retro markets.

Traditional reinsurers' behavior is consistent with what we are also seeing in the ILS markets. Despite some mixed messages about expanding cat bond issuance and early signs of a small expansion in total alternative capital capacity after several years of stagnation, the investor base remains extremely cautious and selective. The significance of any expansion gets muddled by renewals and trapped capital. Retro capacity is still limited, which is a key constraint for most reinsurers, other than some of the largest European ones.

Capital Being Re-deployed into Lines such as Casualty and Specialty Primary Lines

There is consensus about positive price movements being led by primary markets, particularly the specialty lines. Despite the immediate benefit that reinsurers writing proportional business enjoy, the general feeling is that, overall, they are lagging. Even the retro markets seem to have seen more pronounced price increases, in line with reduced availability.

Casualty lines in most reinsurance portfolios have been seeing attractive price increases—this, for a segment with more stable, predictable patterns than property catastrophe risks. Social and economic inflation remain issues, but the general feeling is that the current margins in pricing reward reinsurers adequately for the risks taken. Social inflation tends to affect more severely particular types of risk originators, such as large corporates or commercial auto. By being more granular when selecting risks, (re)insurers could mitigate the impact of social inflation to a large extent. In addition, the long-term nature of casualty lines provides the opportunity to generate investment returns and dramatically reduces any liquidity risk.

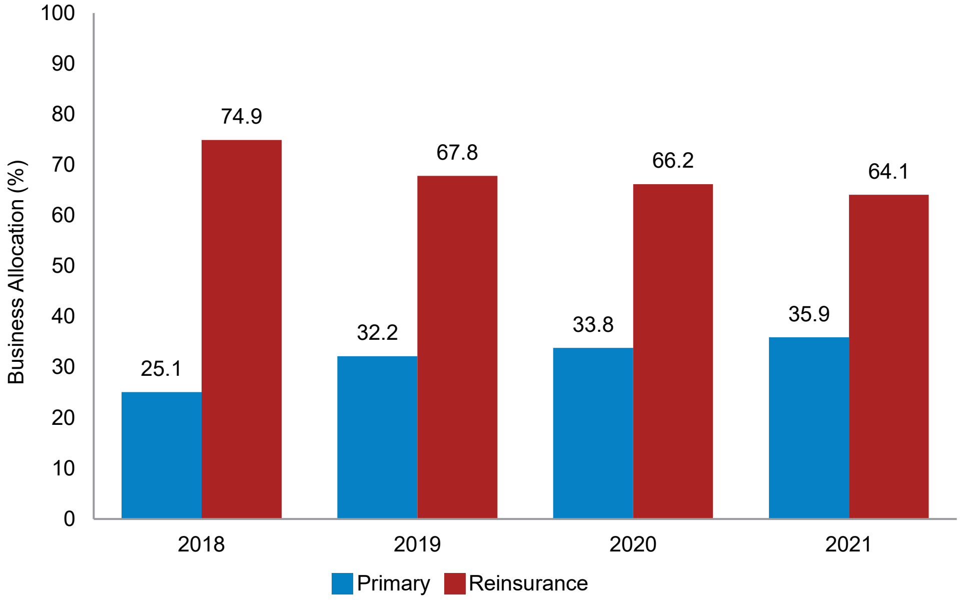
A number of companies have renewed their efforts to expand their casualty and primary specialty business, particularly in the lucrative US market. At the same time, several of the start-ups that have recently emerged, which had stated their intention to deploy capital in the property catastrophe reinsurance market, have ended up more focused on the primary market, based on the attractive margins and lower volatility, despite higher barriers to entry (**Exhibit 1**).

Greater Uncertainty Driving More Conservative Reserving Approaches

Before the severe property catastrophe losses in 2017 and 2018, we had noted repeatedly how reliant companies had become on prior years' reserve releases. Pricing margins were clearly inadequate, but the actual picture was distorted by the effect of positive loss reserve development from previous accident years. At the time, we highlighted the risk of becoming complacent, especially when that trend was simply not sustainable and the ratio of reserve releases to premiums continued to decline.

The heightened claims activity of the last five years has translated into a more conservative approach to reserves in general. Loss creep affected a number of large claims worldwide, related to not just Atlantic hurricanes, but also non-US events such as Japanese typhoons. In the last quarter of 2020, a number of companies strengthened their casualty reserves, to reflect the impact of social inflation issues during the 2014-2018 underwriting years.

Exhibit 1
Global Reinsurance — Primary Insurance vs. Reinsurance NPW Allocations



Source: AM Best data and research

The pandemic has complicated the picture, since a material share of reserves classified as IBNR relates to product lines such as professional liability or financial risks, the originally expected impact of which does not appear to have materialized yet. Even for business interruption, for which a large volume of claims has been reported, a significant share remains as IBNR or outstanding. Given the litigious nature of these exposures and the protracted legal process involved, these reserves will take years to settle.

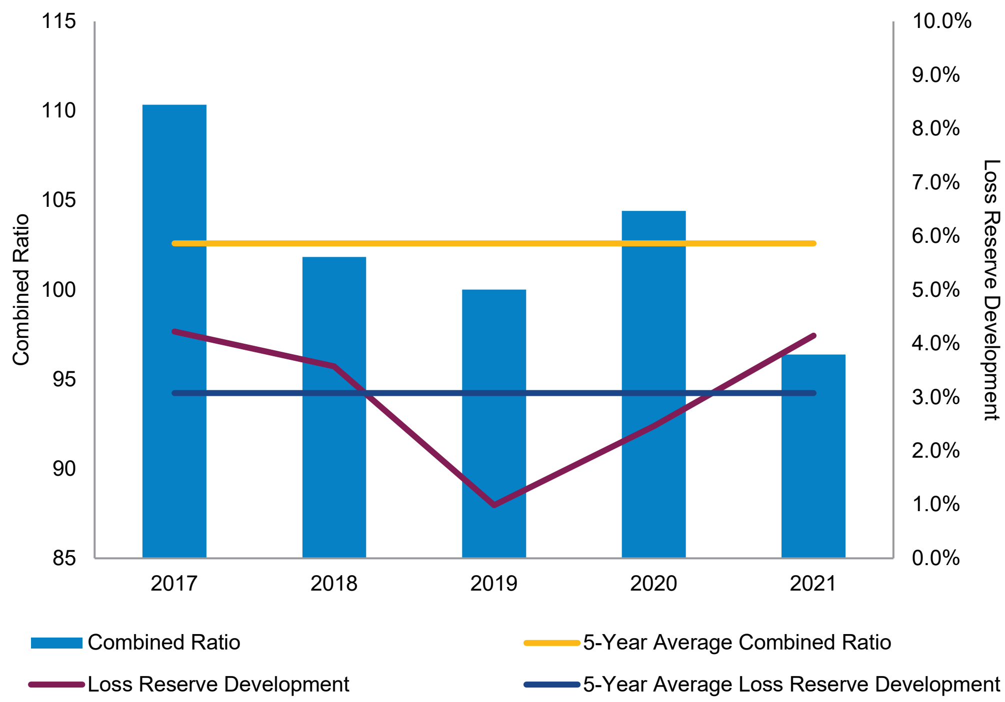
Uncertainty also surrounds potential claims arising from the Ukraine-Russia conflict. In contrast to the pandemic, exposures in this case seem to be much more concentrated in the largest industry players. Although the industry impact is estimated to be comparable to a medium-sized property catastrophe event, individual approaches to booking reserves vary widely. When aggregated, reserves booked as of mid-year 2022 fall far short of whole industry estimates. As in the case with COVID-19, there is a high level of uncertainty with regard to reserves at the primary carrier level; determining estimates for reinsurers becomes even more challenging due to data issues and differences in interpretation regarding accumulation.

Last year, we noted early signs of a rise in reserve releases as a percentage of premiums. That remains the case for a second year in a row. Still, we believe that it is too early to tell if there is a trend and are confident that, in general, the global reinsurance segment maintains a prudent approach to claims reserving. Any possible redundancies from previous years are likely to be countered by inflationary pressures that may not have been explicitly considered just 12 months ago. Except for the occasional blip, reserve releases should stabilize at a level well below the historical highs of the first half of the prior decade. We expect that stabilization level to be closer to the five-year average of 3%, rather than the 6% we observed in 2016 (**Exhibit 2**).

Pricing Continues To Improve—But Is It Enough?

No one questions the sustained improvement in global reinsurance rates since 2018. As in any other previous cycle, the pace at which rates continue to rise varies widely depending on the class of business or territory, and whether a particular account has experienced recent losses or not.

Exhibit 2
Global Reinsurance — Combined Ratios and Favorable Reserve Development



Source: AM Best data and research

Generally, reinsurers—particularly, property cat writers—have been lagging primary carriers and retro providers.

The pace at which pricing continues to harden for property catastrophe exposures, however, seems to be accelerating. Guy Carpenter has calculated a rise of 15% for its US Property Catastrophe Rate-On-Line (ROL) index between January and July 2022. Such an increase has not been seen since 2006 and is leading to speculation that the end of year renewals may witness a "true" hardening that eventually turns the corner for reinsurers.

However, the index itself is just catching up with levels last seen in 2009. The recent sharp increase has also been dominated by the Florida market mid-year renewals, characterized by a certain amount of dislocation. Conditions in Florida–where problems stem from the low credit quality of cedents, concerns about widespread fraud, litigiousness, and a challenging regulatory environment—cannot be wholly attributed to the increased volatility of property catastrophe perils. As such, Florida's pricing movements are not necessarily a good indicator of what may happen in other cat-exposed territories during the next renewal cycle. For example, price improvements in Europe have been more modest, despite the unexpected impact of the Bernd floods last year.

Although pricing for property cat seems likely to continue rising into next year, improvements in casualty and specialty lines have slowed down. Margins remain attractive given the recent claims experience. The same can be said about cyber risks, for which interest is strong but typically accompanied by cautious growth and strict control of cover limits.

The big question at the moment is about the potential impact of inflation. A problem that was originally considered temporary, caused mainly by pandemic-related supply chain disruptions, has become more of a long-term concern. This has led, as expected, to steady increases in interest rates, with their consequential impact on the stock and credit markets, as well as on economic activity in general. A combination of climate-related trends, and economic and social inflation, is driving reinsurers to reconsider whether rates are indeed allowing for sufficient margins, and to what extent cedents are pricing inflationary risks at source.

Underwriting Margins Improving, Becoming More Stable, Amid Inflation Concerns

A number of business re-alignment initiatives have been taking place for at least the last three years. In addition to price increases and more restrictive covers, the focus has been on de-risking portfolios, moving away from volatile lines of business such as property catastrophe, or large corporate accounts in the case of casualty lines. As insurers work to strengthen profit margins, their efforts to become more cost-efficient have also been evident. To a certain extent, the pandemic has provided an opportunity for reinsurers to streamline operational practices—such as cutting back on business travel—and lowering costs.

The impact of these measures has taken some time to manifest. The pandemic complicated the picture, with the need to book a sizeable amount of IBNRs. In 2021, the global reinsurance segment generated a combined ratio below 100 for the first time in five years (**Exhibit 2**).

This is not just the result of lower loss ratios (despite a sequence of property catastrophe events, including some very unusual ones last year, such as Uri, Ida, and Bernd); expense ratios have also declined consistently the last five years. Bottom-line results have benefitted from solid investment returns each of the last five years, as well as improved prices, and from reserve releases that started recovering gradually from their lowest point in 2019.

For 2022, we expect combined ratios to hover around 95—assuming a normalized catastrophe burden. Given the de-risking of most companies, cat loadings should compress materially and help lower volatility. Even with a major cat event, exposure reduction and more restricted covers should help protect most balance sheets. Expense ratios may continue to fall. The impact of reserve releases is likely to stabilize. However, depending on the asset mix, investment results should decline materially from prior years—and may even turn negative, pressuring bottom-line results.

Over the medium term, we are likely to see a more stable pattern of underwriting profits. Companies are already becoming more proactive about making explicit allowances for inflationary trends. However, claims cost inflation not captured in previous underwriting years could still exceed the margins in the more conservative reserving approach of the last five years. (See **Appendices 1 through 5** for 2017 to 2021 market financial indicators.)

Capital Remains Plentiful But Subject to Investment Market Volatility

AM Best's latest estimates for available traditional capital for the global reinsurance segment indicate another year of expansion in 2021 after a period of stagnation between 2016 and 2018. One of the key drivers for this growth is the increase in investment values during 2021, mainly in equities. For year-end 2022, based on how the investment markets have reacted so far to the interest rate hikes as well as fears of sustained inflation and a potential recession, we expect a decline in overall available capital. Based on conservative estimates, we may see a return close to the levels observed at the end of 2020.

Still, available capital growth has been aided by improvements in underwriting results, which reflect a re-alignment of most companies' risk profiles toward more profitable and stable lines of business, the benefit of higher prices, and reduced exposures to property cat. We expect this to continue, even if inflationary pressures may squeeze some of those margins.

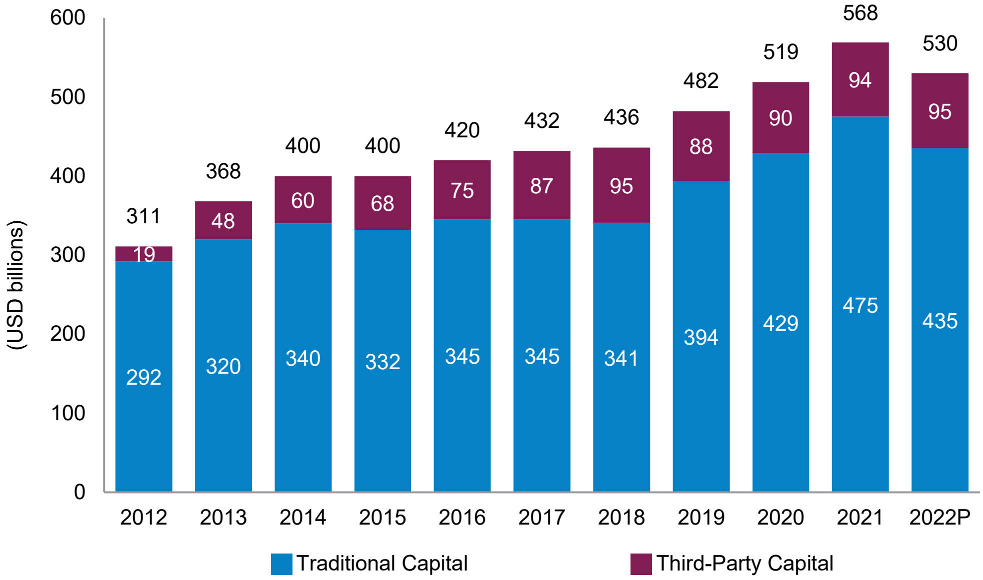
Although available traditional capital continues to expand, an important distinction has to be made between "available" and "dedicated" capital—"available" does not translate automatically into "dedicated." The fact that available capital remains plentiful—over the last five years less than 85% was needed to support a BCAR (Best's Capital Adequacy Ratio) assessment of "Strongest"—has fortunately not translated into lack of underwriting discipline. Reinsurers remain focused on stabilizing results and consistently working to meet their cost of capital—something that still constitutes a mixed bag. Given the current market uncertainty, most players feel the need to keep a material amount of dry powder to protect their balance sheets against market fluctuations and to deploy resources prudently when the right opportunities arise (**Exhibit 3**).

Unlike previous "hardening"—or should we say "firming"?—cycles, new capital has not had a material impact on market conditions. After early signs of enthusiasm and the emergence of a few start-ups since 2019, execution has been slow and inconsistent. Regulatory and recruitment delays have played a role. Business plans have been downsized or changed suddenly based on opportunistic deals rather than on solid strategies. Several projects have not seen yet the light of day. Crucially, investors remain extremely cautious.

Third-party capital, while typically is expected to react more swiftly to market conditions, seems subject to the same level of skepticism. More restrictive covers, terms, and conditions are commonplace. Despite higher demand and improved pricing, the volatility of recent claims remains the key issue. Issues with regard to trapped capital have not gone away completely. "Loss creep" remains well within the memory of investors.

Will the 2023 renewals mark a turning point for a "true" hardening market, able to attract new capital in droves and expand supply? Will third-party capital providers move first, as they have in previous cycles, taking advantage of the current retrenchment from traditional players and driving

Exhibit 3
Global Reinsurance – Estimated Total Dedicated Reinsurance Capital



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

a new softening trend? Trying to predict the future is even more complicated nowadays, because how the year-end renewals go will depend heavily on actual claims activity and on where the global economy goes.

If we have another active property catastrophe year—even one with no major catastrophic event, but an accumulation of several medium-sized ones as in the recent past—and inflationary pressures continue, combined with recession fears, uncertainty could remain so high that few investors will feel comfortable deploying capital regardless of the price. A few new entrants will still try, but their impact is likely to be limited in a market in which rates could continue to rise in response to more limited dedicated capacity.

Appendix 1

Global Reinsurance – Global Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total)	8.4%	8.3%	10.2%	8.3%	2.9%	12.5%
NPW Growth (P/C only)	9.6%	11.8%	9.9%	7.9%	7.3%	11.1%
Reinsurance % of NPE	68.1%	64.1%	66.2%	67.8%	74.9%	67.7%
Shareholders' Equity Growth	3.7%	1.0%	7.2%	11.9%	-3.6%	1.9%
Loss Ratio	69.9	65.5	72.8	66.8	68.0	76.5
Expense Ratio	32.7	30.9	31.6	33.2	33.9	33.8
Combined Ratio	102.6	96.4	104.4	100.0	101.8	110.3
Reserve Development - (Favorable)/Unfavorable	-3.1%	-4.1%	-2.5%	-1.0%	-3.6%	-4.2%
Net Investment Ratio[1]	13.2	10.2	9.7	17.3	10.8	17.9
Operating Ratio	89.4	86.1	94.7	82.7	91.0	92.5
Return on Equity	4.4%	9.1%	2.3%	9.7%	1.0%	0.1%
Return on Revenue	3.5%	7.1%	1.9%	7.4%	0.9%	0.1%
NPW (P/C only) to Equity (End of Period)	76.3	84.4	76.3	74.4	77.2	69.3
Net Reserves to Equity (End of Period)	243.3	244.6	242.6	237.1	260.1	232.2
Gross Reserves to Equity (End of Period)	280.9	290.7	280.8	267.7	300.8	264.6

[1] Net investment ratio based on P/C NPE.

Source: AM Best data and research

Appendix 2

Global Reinsurance – US & Bermuda Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total)	13.9%	20.4%	9.2%	11.1%	20.8%	8.0%
NPW Growth (P/C only)	13.9%	19.8%	9.4%	11.1%	19.0%	10.3%
Reinsurance % of NPE	67.1%	62.7%	66.0%	68.4%	71.4%	66.9%
Shareholders' Equity Growth	6.7%	4.4%	7.3%	13.4%	5.0%	3.3%
Loss Ratio	70.0	65.9	71.4	65.5	69.2	77.8
Expense Ratio	31.3	30.0	30.4	31.7	32.4	32.0
Combined Ratio	101.3	95.8	101.8	97.2	101.6	109.8
Reserve Development - (Favorable)/Unfavorable	-3.9%	-6.1%	-3.3%	-2.0%	-3.8%	-4.1%
Net Investment Ratio[1]	9.2	8.0	8.0	10.5	8.4	10.9
Operating Ratio	92.1	87.9	93.8	86.7	93.2	98.9
Return on Equity	5.3%	10.8%	4.3%	12.0%	-1.3%	0.5%
Return on Revenue	6.1%	12.1%	5.4%	14.1%	-2.0%	0.8%
NPW (P/C only) to Equity (End of Period)	60.7	69.5	60.5	59.4	60.6	53.4
Net Reserves to Equity (End of Period)	116.7	117.9	114.3	117.3	119.5	114.6
Gross Reserves to Equity (End of Period)	154.0	168.1	155.3	142.0	158.7	145.7

[1] Net investment ratio based on P/C NPE.

Source: AM Best data and research

Appendix 3
Global Reinsurance – European Big Four Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total)	6.5%	1.9%	12.1%	8.2%	-2.7%	13.0%
NPW Growth (P/C only)	7.8%	6.0%	12.9%	7.5%	4.2%	8.3%
Reinsurance % of NPE	88.1%	88.3%	90.3%	88.5%	86.0%	87.3%
Shareholders' Equity Growth	-1.4%	-6.8%	3.2%	10.0%	-12.6%	-1.1%
Loss Ratio	71.3	68.3	73.8	69.6	68.1	76.7
Expense Ratio	31.3	29.8	30.2	31.8	32.6	32.2
Combined Ratio	102.6	98.1	103.9	101.4	100.7	108.9
Reserve Development - (Favorable)/Unfavorable	-2.8%	-3.3%	-2.1%	-0.2%	-3.3%	-5.0%
Net Investment Ratio[1]	19.6	14.2	12.5	26.5	16.1	28.9
Operating Ratio	82.9	83.8	91.4	74.9	84.6	79.9
Return on Equity	5.2%	8.1%	2.4%	7.2%	5.8%	2.7%
Return on Revenue	2.7%	3.9%	1.2%	3.6%	3.4%	1.6%
NPW (P/C only) to Equity (End of Period)	92.1	109.7	96.5	88.2	90.2	75.7
Net Reserves to Equity (End of Period)	460.3	508.4	473.7	440.3	486.9	392.0
Gross Reserves to Equity (End of Period)	483.7	535.4	493.9	461.2	515.0	413.0

[1] Net investment ratio based on P/C NPE.

Source: AM Best data and research

Appendix 4
Global Reinsurance – Lloyd's Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total)	6.4%	9.4%	4.2%	3.2%	-2.8%	18.2%
NPW Growth (P/C only)	6.4%	9.5%	4.3%	3.2%	-3.0%	18.2%
Reinsurance % of NPE	32.4%	37.0%	33.0%	30.0%	31.0%	31.0%
Shareholders' Equity Growth	7.4%	7.2%	15.0%	12.3%	-3.5%	5.9%
Loss Ratio	66.9	58.0	73.2	63.4	65.4	74.5
Expense Ratio	38.0	35.5	37.2	38.7	39.2	39.5
Combined Ratio	104.9	93.5	110.3	102.1	104.6	114.0
Reserve Development - (Favorable)/Unfavorable	-2.3%	-2.1%	-1.8%	-0.9%	-3.9%	-2.9%
Net Investment Ratio[1]	6.3	5.5	6.5	10.0	3.9	5.8
Operating Ratio	98.6	88.0	103.8	92.1	100.6	108.2
Return on Equity	0.3%	6.6%	-2.9%	9.0%	-3.7%	-7.3%
Return on Revenue	0.4%	8.2%	-3.1%	8.6%	-3.9%	-7.6%
NPW (P/C only) to Equity (End of Period)	85.9	79.5	77.8	85.8	93.4	92.9
Net Reserves to Equity (End of Period)	135.2	121.9	129.4	133.2	149.2	142.3
Gross Reserves to Equity (End of Period)	201.8	189.6	194.2	199.9	220.4	205.1

[1] Net investment ratio based on P/C NPE.

Source: AM Best data and research

Appendix 5

Global Reinsurance — Asia-Pacific Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total) [2]	9.0%	6.6%	12.3%	14.9%	2.2%	N/A
NPW Growth (P/C Only)[2]	8.7%	5.1%	13.9%	8.8%	7.2%	N/A
Reinsurance % of NPE	92.6%	94.0%	93.4%	93.4%	91.0%	91.0%
Shareholders' Equity Growth[2]	6.7%	0.5%	19.0%	8.0%	-0.8%	N/A
Loss Ratio	72.8	75.7	74.7	73.4	70.3	69.7
Expense Ratio	27.9	25.6	26.2	27.5	30.1	30.2
Combined Ratio	100.7	101.4	100.9	101.0	100.4	99.9
Net Investment Ratio[1]	6.6	7.3	7.2	6.5	6.0	5.9
Operating Ratio	94.1	94.0	93.7	94.4	94.4	94.0
Return on Equity	5.8%	6.6%	5.7%	5.6%	4.9%	6.0%
Return on Revenue	3.6%	4.1%	3.4%	3.4%	3.2%	3.9%
NPW (P/C only) to Equity (End of Period)	149.2	153.3	146.6	153.2	152.2	140.9
Net Reserves to Equity (End of Period)	181.8	205.5	179.1	181.4	176.4	166.9
Gross Reserves to Equity (End of Period)	221.6	248.1	224.2	221.6	215.4	198.7

[1] Net investment ratio based on P/C NPE.

[2] Composite established in 2017

Source: AM Best data and research

August 17, 2022

World's 50 Largest Reinsurers

Munich Re holds on to the #1 spot; life reinsurers move up

Principal Takeaways

- Munich Re remains in the top spot of the world's 50 largest reinsurers, with Swiss Re coming in second.
- Much of the segment's premium growth came from pricing increases, owing to strong pricing in 2021.
- A number of companies have started shrinking their exposure to, if not withdrawing completely from, the property catastrophe market.
- Exchange rate fluctuations dampened premium volume for a number of reinsurers.

In 2021, pricing remained strong in the reinsurance segment. As measured by AM Best's annual ranking of the 50 largest global reinsurance groups, total reinsurance gross premium written (GPW) increased by 9.8%, to USD353 billion, from USD321 billion in 2020. Many of the reinsurance companies AM Best rates reported that a third to half of their premium growth cougld be attributed to pricing increases, not exposure growth. Rate increases in many of the reinsurance lines are expected in 2023, although they will vary by line of business and territory. However, the growth could be countered by reductions in property cat reinsurance premium, as many companies have begun to withdraw or substantially reduce their participation in that market.

The two largest reinsurers at year-end 2021 were the same as in 2020 (**Exhibit 1**). Munich Re, which rose to the top spot last year following the exclusion of primary premiums in the rankings, remains at #1. For year-end 2021, Munich Re posted reinsurance GPW growth of 10.8%,[1] driven entirely by expansion of the group's property/casualty segment. The company

World's 50 Largest Reinsurers Ranking – Methodology

The methodology behind AM Best's ranking of leading global reinsurers has evolved over time, but the intention of the Top 50 exercise is to try to isolate a reinsurer's business profile using gross premiums written (GPW) 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 reports prior to 2021, 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%). Since 2021, AM Best has excluded all non-reinsurance premium.

AM Best converts all reporting currencies to USD using the foreign exchange rate as of the date of companies' financial statements. Currency exchange rate fluctuations have a meaningful effect on rankings.

Finally, when financial statements and supplements do not provide a proper breakdown of reinsurance premiums, AM Best obtains data directly from the reinsurer. In these instances, the data may be unaudited.

Analytical Contacts:
Clare Finnegan, Oldwick
+1 (908) 439-2200 Ext. 5165
Clare.Finnegan@ambest.com

Dan Hofmeister, Oldwick
+1 (908) 439-2200 Ext. 5385
Dan.Hofmeister@ambest.com

Carlos F. Wong-Fupuy, Oldwick
+1 (908) 439-2200 Ext. 5344
Carlos.Wong-Fupuy@ambest.com

Steve Chirico, Oldwick
+1 (908) 439-2200 Ext. 5087
Steven.Chirico@ambest.com

2022-098.2

[1] As reported in the group's annual statement, not calculated by AM Best.

Exhibit 1
Top 50 Global Reinsurers, Ranked by Unaffiliated Gross Premium Written, 2021
(USD millions)[1]

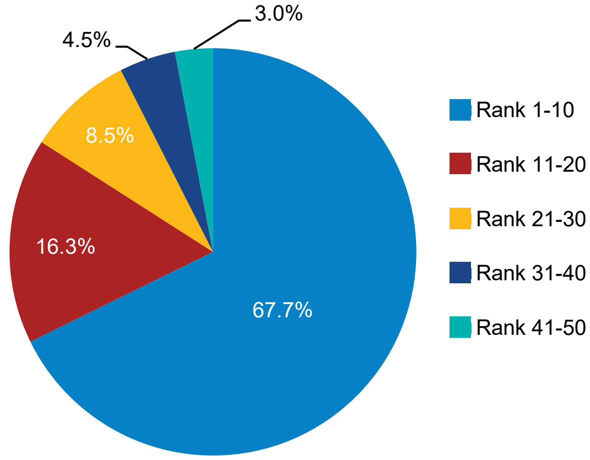
		Reinsurance Premiums Written				Total Share-holders' Funds[2]	Ratios[3]		
		Life & Non-Life		Non-Life Only					
Ranking	Company Name	Gross	Net	Gross	Net		Loss	Expense	Combined
1	Munich Reinsurance Company	46,836	44,417	32,610	31,482	35,047	68.7	30.9	99.6
2	Swiss Re Ltd.	39,202	36,965	23,131	22,381	23,678	67.4	29.7	97.1
3	Hannover Rück SE[4]	31,443	27,344	21,773	18,827	14,447	69.3	28.7	98.0
4	Canada Life Re	23,547	23,514	N/A	N/A	23,854	N/A	N/A	N/A
5	SCOR S.E.	19,933	16,242	9,319	7,939	7,251	72.0	28.6	100.6
6	Berkshire Hathaway Inc.	19,906	19,906	14,285	14,285	514,930	71.9	23.3	95.1
7	Lloyd's[5, 6]	19,343	14,263	19,343	14,263	48,242	65.8	29.4	95.2
8	China Reinsurance (Group) Corporation	17,808	16,181	6,956	6,608	16,104	66.6	28.4	95.1
9	Reinsurance Group of America Inc.	13,348	12,513	N/A	N/A	13,014	N/A	N/A	N/A
10	Everest Re Group Ltd.	9,067	8,536	9,067	8,536	10,139	71.6	26.5	98.1
11	PartnerRe Ltd.	8,204	7,134	6,557	5,511	7,544	64.6	25.9	90.5
12	RenaissanceRe Holdings Ltd.	7,834	5,939	7,834	5,939	7,078	74.6	27.5	102.1
13	Korean Reinsurance Company	7,145	5,102	6,043	4,078	2,126	86.4	14.2	100.6
14	Transatlantic Holdings, Inc	6,034	5,387	6,034	5,387	5,398	69.2	30.2	99.5
15	General Insurance Corporation of India[7]	5,821	5,172	5,630	4,987	7,938	88.8	19.3	108.1
16	AXA XL	5,480	4,313	5,480	4,313	13,139	72.6	31.2	103.8
17	Arch Capital Group Ltd.	5,094	3,254	5,094	3,254	13,546	67.8	26.4	94.2
18	MS&AD Insurance Group Holdings, Inc.[7, 8, 12]	4,393	N/A	4,393	N/A	14,668	N/A	N/A	97.7
19	Pacific LifeCorp	4,098	3,620	N/A	N/A	17,005	N/A	N/A	N/A
20	Sompo International Holdings, Ltd.	3,855	3,417	3,855	3,417	7,433	63.5	29.5	93.1
21	MAPFRE RE, Compañía de Reaseguros S.A.[10]	3,719	3,165	3,080	2,534	2,035	69.3	28.7	98.1
22	Assicurazioni Generali SpA	3,670	3,670	1,242	1,242	36,101	83.5	27.9	111.4
23	R+V Versicherung AG[9]	3,421	3,421	3,421	3,421	2,435	76.0	26.3	102.2
24	Validus Reinsurance, Ltd.	3,171	2,452	3,171	2,452	3,548	72.4	28.6	101.0
25	The Toa Reinsurance Company, Limited[7, 8]	2,988	2,453	2,127	1,690	2,614	77.6	32.5	110.2
26	Liberty Mutual[13]	2,945	N/A	2,945	N/A	27,848	62.0	33.2	95.2
27	Odyssey Group Holdings, Inc.	2,842	2,709	2,842	2,709	5,220	75.1	24.9	100.0
28	AXIS Capital Holdings Limited	2,823	2,032	2,823	2,032	5,411	73.2	26.5	99.7
29	Taiping Reinsurance Co. Ltd[8]	2,339	2,051	1,447	1,229	1,507	71.0	32.9	103.9
30	Peak Reinsurance Company Ltd	2,145	1,794	1,899	1,591	1,470	75.8	26.2	102.1
31	Caisse Centrale de Réassurance	2,144	1,964	1,968	1,792	3,191	50.0	16.8	66.9
32	Qianhai Reinsurance Co., Ltd.	1,994	1,154	410	350	521	75.5	25.1	100.5
33	QBE Insurance Group Limited	1,662	1,482	1,662	1,482	8,882	66.6	6.1	72.8
34	Aspen Insurance Holdings Limited	1,597	1,199	1,597	1,199	2,775	63.0	30.6	93.6
35	Deutsche Rückversicherung AG	1,577	1,042	1,475	1,000	351	76.3	29.2	105.5
36	IRB - Brasil Resseguros S.A.	1,552	984	1,552	984	644	101.5	30.5	132.0
37	Tokio Marine & Nichido Fire Insurance Co., Ltd.[7, 12]	1,483	1,178	1,483	1,178	17,148	N/A	N/A	100.9
38	SiriusPoint Ltd.	1,350	1,125	1,350	1,125	2,503	82.6	33.7	116.2
39	Fidelis	1,289	573	1,289	573	2,078	84.0	27.6	111.6
40	Markel Corporation	1,246	1,126	1,246	1,126	14,695	73.9	31.4	105.3
41	W.R. Berkley Corporation[12]	1,228	1,119	1,228	1,119	6,653	61.0	29.7	90.7
42	Lancashire	1,225	816	1,225	816	1,413	67.6	41.3	108.9
43	Allied World Assurance Company Holdings, AG	1,201	1,106	1,201	1,106	4,792	75.4	25.7	101.1
44	American Agricultural Insurance Company[11]	927	247	927	247	672	82.6	4.1	86.7
45	Chubb Limited	873	873	873	873	59,714	79.2	29.4	108.6
46	African Reinsurance Corporation	845	666	783	612	1,001	56.8	36.7	93.5
47	Hiscox Ltd	808	274	808	274	2,539	40.8	29.7	70.6
48	Somers Re Ltd.	783	705	783	705	943	80.6	23.7	104.3
49	DEVK Re	759	699	754	694	14,447	76.3	28.4	104.7
50	Central Reinsurance Corporation	755	702	645	595	698	67.9	27.6	95.5

[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 for reinsurance only. Premiums for certain groups in the rankings also may include Lloyd's Syndicate premiums when applicable.
[6] Shareholders' funds includes Lloyd's members' assets and Lloyd's central reserves.
[7] Fiscal year ended March 31, 2022.
[8] Net asset value used for shareholders' funds.
[9] Ratios are as reported and calculated on a gross basis.
[10] Premium data excludes intergroup reinsurance.
[11] Data and ratios based on US statutory filing.
[12] Ratios are based on the group's operations.
[13] Ratios are based on Liberty Mutual Insurance Europe SE financial statements.
N/A = Information not applicable or not available at time of publication.
Source: AM Best data and research

reported that the drivers of P/C growth were diverse and not limited to a particular region or line of business. Life and health premiums contracted slightly, approximately 1%.[1]

The appreciation of the US dollar against most other currencies—including the Euro—dampened premium volume for both of Munich Re's segments.[2] As in prior years, the impact of currency fluctuations on the Top 50 was not limited to Munich Re. Other currency fluctuations affecting the Top 50 include the euro, which depreciated by 8%; the Japanese yen, down 10%; South Korea's won, down 10%; and the Brazilian real, down 8%.

Exhibit 2
Global Reinsurance – Life and Non-Life GPW Distribution by Ranking, Year-End 2021



Source: AM Best data and research

Swiss Re, which ranked second again, saw growth in both its P/C and L/H segments. The P/C segment grew by approximately 8%, supported by price increases.[1] On the L/H side, several large longevity transactions contributed to the 7% growth in gross premiums written.[1]

Munich Re and Swiss Re accounted for 24.3% of the Top 50's GPW in 2021, down slightly from 25.6% in 2020, likely driven by the depreciation of the euro. The 10 largest reinsurers on the list again accounted for just over two thirds of total GPW, at 67.9%, a slight decline from the 68.5% the Top 10 held in 2020 (**Exhibit 2**).

Hannover Rück SE maintained its position as #3 on the list this year, increasing its premium volume by 12%.[1] Growth was weighted toward the group's P/C segment, which grew over 16% (based on constant exchange rates), supported by favorable pricing trends.[1]

Although the top three were the same as last year, there was notable movement among the other companies in the Top 10 for year-end 2021. Canada Life Re moved up to #4 from #8 (ahead of SCOR, Berkshire Hathaway, China Re, and Lloyd's), the first time a solely life reinsurance group has ever made the Top 4. Canada Life Re entered several new long-term reinsurance agreements in 2021, including a multi-billion dollar block transfer of Japanese whole life policies, as well as agreements to reinsure pension liabilities in the Netherlands and the UK.

Korean Re, which had been in tenth place in 2020, fell off the Top 10 list to #13 this year, owing to currency fluctuations. Despite premium growth of around 7%, China Re, in sixth place in 2021, slipped back to eighth, the position it held in 2020.

Although surpassed in the rankings by Canada Life, Berkshire Hathaway (#5 in 2021, #6 in 2022) and Lloyd's (#7 in 2021 and 2022) nevertheless experienced premium growth, as Berkshire Hathaway's premiums rose 3.5%, and Lloyd's, 17.2%. Lloyd's reported increases of more than 10% for all of its reinsurance segments—property, casualty, and specialty—with the casualty segment, which includes US workers' compensation, rising the most percentage-wise.[1]

[2] Munich Re reports its figures in euros, while Swiss Re reports in US dollars. AM Best converts all reporting currencies to USD using the foreign exchange rate as of the date of companies' financial statements. Currency exchange rate fluctuations have a meaningful effect on companies' rankings.

SCOR (#4 in 2021, #5 in 2022) saw a decline of less than 1% in premiums, due entirely to currency conversion and fluctuations of the euro versus the US dollar. Based on constant exchange rates, the group reported P/C growth of over 17% and L/H growth of over 3%.[1]

Despite notable cat losses in 2021, many stemming from secondary perils, the Top 50 on average posted a combined ratio under 100 for the first time in five years. The average combined ratio of the Top 10 was 99.2, significantly better than the 104.9 in 2020. The Top 15 non-life reinsurance groups had an average combined ratio of 98.5.

Exhibit 3

Global Reinsurance – Notable Ranking Changes

Upwards	**Current**	**Prior**	**Change**
Pacific LifeCorp	19	27	8
Canada Life Re	4	8	4
QBE Insurance Group Limited	33	36	3
W.R. Berkley	41	44	3
Downwards	**Current**	**Prior**	**Change**
SiriusPoint Ltd.	38	32	-6
American Agricultural Insurance Company	44	38	-6
Caisse Centrale de Réassurance	31	26	-5
IRB - Brasil Resseguros S.A.	36	31	-5
AXIS Capital Holdings Limited	28	24	-4

Source: AM Best data and research

Life and Non-Life GPW Distribution by Ranking

The biggest shift in the ranking this year was Pacific LifeCorp., another life reinsurer (**Exhibit 3**). The group jumped eight spots, to #19, from #27 last year. Other big movers were QBE Insurance Group Ltd. and W.R. Berkley, both of which moved up three spots. QBE, a large multinational group, noted that its growth was mainly in the casualty and specialty lines. For some time, the rate-on-line for property cat reinsurance has lagged expectations. Market developments in 2022 indicate that this may finally be changing.

China-domiciled reinsurer Qianhai Re continued to rise in the rankings. Qianhai Re first made the list in 2019 (for year-end 2018 premiums); this year, Qianhai Re ranked #32, up from #34 last year.

SiriusPoint Ltd. and American Agricultural Insurance Company moved down the most in the rankings: SiriusPoint from #32 to #38 and American Agricultural from #38 to #44. In 2021, SiriusPoint's figures took into account the merger between Third Point Reinsurance Ltd. and Sirius International Insurance Group, Ltd. IRB, which fell from #31 to #36, was significantly affected by the depreciation of the Brazilian real versus the US dollar.

AXIS Capital Holdings Limited dropped from #24 to #28, as it shifted from the volatile property cat business. With the 2022 announcement that AXIS would no longer write property cat reinsurance business at all, the group's ranking may drop next year as well.

Qatar Re, which ranked #50 in 2021, fell off the list, replaced by Central Reinsurance Corporation.

Fidelis, a new entrant to the list last year at #41, moved up two spots, to #39. The reinsurer, which is based in Bermuda and focuses on specialty lines, incurred significant property cat losses in 2021, with a combined ratio of more than 110.

Additions to the list this year include Liberty Mutual, which enters the list at #26, and Somers Re (which is no longer consolidated with Arch), at #48.

Life and Non-Life Global Reinsurers

AM Best breaks out two additional sub-rankings for life and non-life, comprising reinsurance groups with global footprints or business profiles (**Exhibits 4 and 5**). These groups not only have diverse product offerings, but also generally maintain wide geographic spreads of risk and provide a significant amount of capacity in numerous different markets. Although they do not always

Exhibit 4
Top 15 Global Non-Life Reinsurance Groups
Ranked by Unaffiliated Gross Premiums Written in 2021
(USD millions)

		Non-Life Only		Total Share-holders'	Combined
Ranking	Company Name	Gross	Net	Funds	Ratio
1	Munich Reinsurance Company	32,610	31,482	35,047	99.6
2	Swiss Re Ltd.	23,131	22,381	23,678	97.1
3	Hannover Rück SE	21,773	18,827	14,447	98.0
4	Lloyd's	19,343	14,263	48,242	95.2
5	Berkshire Hathaway Inc.	14,285	14,285	514,930	95.1
6	SCOR S.E.	9,319	7,939	7,251	100.6
7	Everest Re Group Ltd.	9,067	8,536	10,139	98.1
8	RenaissanceRe Holdings Ltd.	7,834	5,939	7,078	102.1
9	China Reinsurance (Group) Corporation	6,956	6,608	16,104	95.1
10	PartnerRe Ltd.	6,557	5,511	7,544	90.5
11	Korean Reinsurance Company	6,043	4,078	2,126	100.6
12	Transatlantic Holdings, Inc	6,034	5,387	5,398	99.5
13	General Insurance Corporation of India	5,630	4,987	7,938	108.1
14	AXA XL	5,480	4,313	13,139	103.8
15	Arch Capital Group Ltd.	5,094	3,254	13,546	94.2

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 in 2020
(USD millions)

		Life Only		Total Share-holders'
Ranking	Company Name	Gross	Net	Funds
1	Canada Life Re	23,547	23,514	23,854
2	Swiss Re Ltd.	16,071	14,584	23,678
3	Munich Reinsurance Company	14,226	12,935	35,047
4	Reinsurance Group of America Inc.	13,348	12,513	13,014
5	SCOR S.E.	10,614	8,303	7,251
6	Hannover Rück SE4	9,670	8,516	14,447
7	Berkshire Hathaway Inc.	5,621	5,621	514,930
8	Pacific LifeCorp	4,098	3,620	17,005
9	Assicurazioni Generali SpA	2,428	2,428	36,101
10	PartnerRe Ltd.	1,647	2,428	1,623

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

dominate markets outside their domestic space, they have all 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. Some of the world's largest reinsurance groups continue to enter new markets and provide capacity. As market dynamics ebb and flow, so can a group's profile.

In 2021, the reinsurers comprising the top life and non-life groups were consistent with the prior year, albeit with shifts. Canada Life Re made it to #1 in the Top 10 life list this year, surpassing groups with both life and non-life operations.

August 22, 2022

Dedicated Reinsurance Capital Growth of 2021 May Not Continue

Traditional reinsurance capacity projected to fall as third-party capital holds steady

Principal Takeaways

- Traditional reinsurance capital rose in 2021, driven mainly by investment gains and affordable debt rates.
- Third party capital battles with loss fatigue despite enhanced opportunities.
- Capital is projected to decline modestly in 2022, with the potential for elevated volatility.
- Capital utilization remains flat, despite capital gains in 2021. Risk-adjusted capitalization positions could weaken significantly through 2022.

For the past ten years, AM Best and Guy Carpenter have jointly estimated the amount of global capital dedicated to support the reinsurance market, with AM Best determining traditional reinsurance capital and Guy Carpenter determining third-party capital.

The global reinsurance market has evolved over the past decade, as has the capital supporting it. Third-party capital and large commercial lines capacity are more closely aligned with reinsurance business models, which has impacted not just the levels of capital, but also their utilization. The majority of reinsurance market participants now have primary insurance operations as well as third-party capital capabilities, blurring the lines between reinsurance capital and other activities and business lines at individual organizations.

AM Best's estimate of dedicated reinsurance capital is derived from incisive analysis and consistent aggregation methods, resulting in a more accurate picture of capital backing the reinsurance market. Pure reinsurers with a global reach are rare, as "global reinsurers" are engaged in business other than reinsurance, covering specialty areas, large commercial lines, surplus lines, and other interests. Typically, not all of a company's capacity is allocated to its reinsurance business.

AM Best's estimate of traditional reinsurance capacity takes into account the allocations by business classification. Since year-end 2018, our estimate has been less than 60% of total shareholders' equity of the consolidated figures for groups identifying as reinsurance writers. As reinsurers expand further into other primary insurance lines and other activities, more in-depth analysis will be needed to determine these estimates.

Traditional Capital Up in 2021

Traditional reinsurance capacity increased 10.7%, from USD429 billion at December 31, 2020, to USD475 billion at December 31, 2021 but is projected to fall to USD435 billion at year-end 2022 (**Exhibit 1**). The increase from 2020 to 2021 was due primarily to the rise in shareholders' equity among market participants as a result of substantially improved underwriting returns and strong equity market growth. The AM Best Global Reinsurance Composite reported its lowest combined ratio in five years in 2021 (96.4); equity values grew roughly 17%, partially countered by anemic fixed-income investment returns.

Analytical Contacts:
Dan Hofmeister, Oldwick
+1 (908) 439-2200 Ext. 5385
Dan.Hofmeister@ambest.com

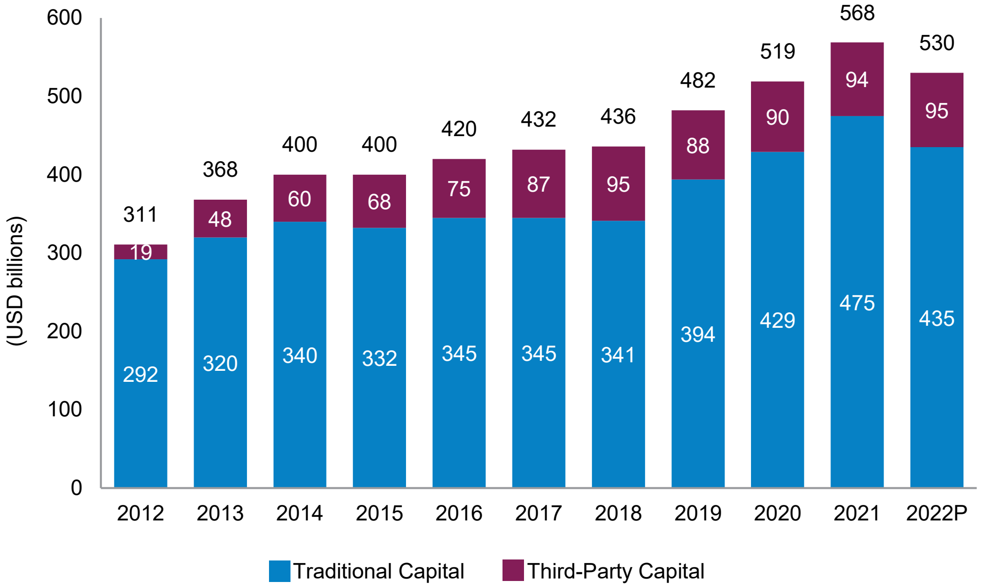
Clare Finnegan, Oldwick
+1 (908) 439-2200 Ext. 5165
Clare.Finnegan@ambest.com

Carlos F. Wong-Fupuy, Oldwick
+1 (908) 439-2200 Ext. 5344
Carlos.Wong-Fupuy@ambest.com

Steve Chirico, Oldwick
+1 (908) 439-2200 Ext. 5087
Steven.Chirico@ambest.com

2022-098.3

Exhibit 1
Global Reinsurance – Estimated Total Dedicated Reinsurance Capital



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

Rates hardened in many reinsurance lines in 2021, boosting underwriting performance. An improvement in reserve development was driven by the generally conservative COVID-19 reserves recorded in 2020, as well as a slowdown in US social inflation, which may be transitory in nature as US courts catch up on their backlog and entertain civil case activity again. The increase in frequency and severity of catastrophic events, including Winter Storm Uri and Hurricane Ida in the United States and the Bernd floods in Europe, partially counterbalanced the impact of the strong investment gains, the improvement in underlying underwriting performance, and reserve releases throughout the year.

The final reason for higher traditional reinsurance capital levels at year-end 2021 was the persistently low interest rate environment, which allowed companies to access affordable debt financing and use the capital to support growth and financing objectives, including lowering the cost of capital.

Third-Party Capital Reallocates

Guy Carpenter estimates relatively stable third-party capital for 2022, despite notable shifts in the insurance-linked securities (ILS) market. The downturn in the US equity market has posed capital supply challenges for some ILS funds, given investor portfolio allocation percentage caps. The muted returns of aggregate-focused covers are another pressure point for investors. However, the pullback of traditional reinsurance in catastrophe-exposed markets such as Florida has created opportunities for ILS funds. By taking advantage of the lack of capacity, some ILS funds have been able to capitalize not only on significant price increases, but also tighter terms and conditions.

Reinsurers with third-party capital facilities generally are supported by large, long-term institutional investors seeking diversification and higher yields. The higher yields in the ILS market are a function of (1) higher interest rates and (2) higher risk premiums in the natural catastrophe reinsurance market due to uncertainty caused by climate change (which translates into modeling risk), ultimately leading to higher rates on line. However, the geographic diversification of these investors is growing, with a significant portion originating outside the United States.

ILS investments have benefitted from a lack of correlation with the financial markets. Despite the possibly greater correlation of casualty-focused ILS, there are signs of early but growing market interest in non-catastrophe exposed transactions. Some deals have addressed investor concerns about the liquidity lockup of the longer-tail casualty business, while the relative absence of volatility has been an appealing offset to natural catastrophe business.

2022 Estimates Very Uncertain But Generally Unfavorable

The rising underwriting rate environment and improving terms and conditions of the past five years have been accretive to capital levels. These favorable market conditions have been partially counterbalanced by elevated catastrophic losses that have been detrimental to operating returns, although the losses have been characterized as "earnings events," rather than capital-deteriorating events. Although underwriting returns for many companies have been close to break even in recent years, capital levels grew through investment gains and inexpensive debt financing. However, the start of 2022 has seen a reversal of most of these conditions.

Underwriting results for the first half of 2022 have been generally favorable, aided by rate increases in prior years. Accurately resolving losses associated with the Russia/Ukraine conflict will take some time, although reinsurers are cautiously optimistic about insured loss development in the region. Market conditions for reinsurance—in both the property and casualty lines (except workers compensation)—continue to improve, which has resulted in compounding rate activity year-over-year and more favorable terms and conditions. Capital market volatility, however, has caused investment returns to deteriorate significantly compared with prior years, as declines in share prices and central bank discount rate increases have led to mostly unfavorable capital contributions from reinsurers' investment portfolios.

Global economies have struggled with supply chain issues that arose just as COVID-19 quarantines began to ease. Across the globe, historically high inflation is pressuring many families and businesses. Food and energy price increases have made it difficult to maintain consumption, which has reduced demand, further compounding the supply chain issues and resulting in a material decline in GDP. Equity market returns, especially for growth stocks, have generally declined due to the supply chain issues. The predicted rise in interest rates throughout 2022 may exacerbate the mark-to-market decline in most asset prices. Although the rise in rates could benefit some companies with shorter durations and credible asset/liability matching strategies, it has generally resulted in substantial mark-to-market capital losses in fixed-income and equity portfolios across the globe. Higher interest rates and spreads are also predicted to result in a precipitous decline in new debt issuance throughout 2022.

AM Best estimates a reduction in traditional reinsurance capital of roughly USD40 billion (8.4%) by year-end 2022. Our estimate takes into account both the tailwinds of the underwriting market and the headwinds of the capital and investment markets, continued geopolitical turmoil, and a potential decline in global GDP. We assume that investment markets will remain depressed throughout the rest of 2022, with the potential for moderate investment gains at year-end that do not fully offset first half losses. We expect that some of these losses will be offset by underwriting gains. Although the historical lack of a strong correlation between underwriting and asset returns may indicate relatively flat capital levels, the repeat of a severe property catastrophe season in 2022 could prove to be adverse for reinsurers.

Many reinsurers substantially decreased exposure through the last renewal cycle. Those still exposed to material amounts of multi-year reinsurance contracts or who did not manage risk exposures prudently, could be exposed to duplicative material losses should they suffer underwriting losses, especially if coupled with adverse investment market returns in 2022. Our estimate incorporates the assumption that more capital will be directed toward the primary insurance operations of larger groups than had been proportionally allocated in prior years.

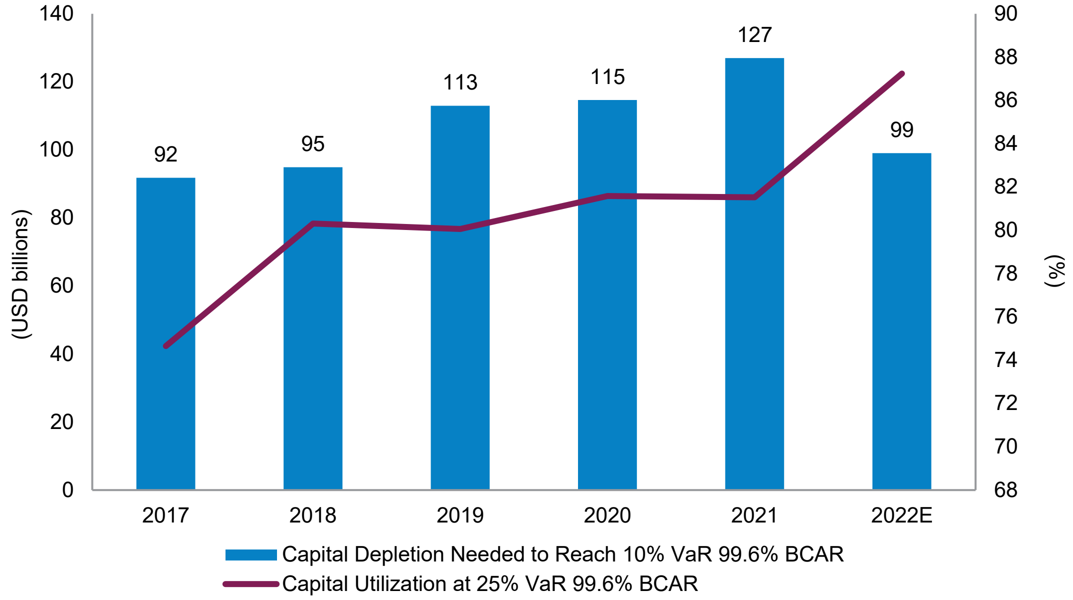
Capital Utilization Still Indicates a Hardening Market

Over the past three years, companies' nominal capital levels have increased substantially. However, despite hardening reinsurance market conditions, so have risk-adjusted capital requirements, driven in part by the rise in required capital to support business that has experienced significant property catastrophe activity, commodity inflation, and social inflation. We approximate required risk-adjusted capital by measuring capital utilization. Capital utilization approximates how much of the available capital 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 a 99.6% VaR. This measure approximates the tolerance afforded companies in the event of extreme stress.

At year-end 2021, the traditional reinsurers' capital utilization was flat with 2020, at 82% (projected at 87% for year-end 2022), despite a 10.7% increase in total nominal capital (**Exhibit 2**). The hardening market conditions in the reinsurance market persisted into the first half of 2022. Although companies have not been able to meaningfully improve risk-adjusted capital levels, they have been able to mitigate tail risk through proactive risk management. This is noted through the catastrophe-stress-tested capital buffer to a 10% BCAR increasing through year-end 2021.

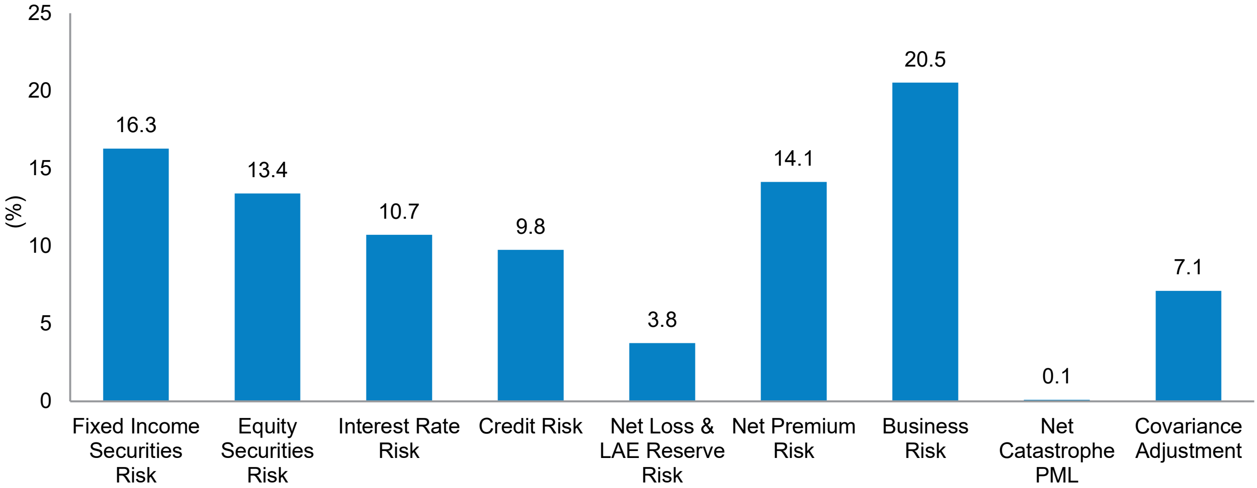
Required capital, as measured in BCAR at the VaR 99.6% level, can be broken down into eight separate risk factors—fixed-income securities, equity securities, interest rate, credit, net loss & loss adjustment expense (LAE) reserves, net premiums, business, and catastrophe—with an additional covariance adjustment that reduces the total level of required capital (taking into account underlying correlations) (**Exhibit 3**). In 2021, one of the segment's largest relative increases in risk (16.3%) was from fixed-income investing, in addition to a 13.4% increase from equities securities risk. This heightened level of risk does not bode well for the economic conditions experienced for the first half of 2022, which has been characterized by elevated equity market volatility and significant mark-to-market losses on fixed income portfolios. While premiums may yet contract in 2022 (many reinsurers have noted considerable reductions in property reinsurance

Exhibit 2
Global Reinsurance – Capital Utilization



E= Estimated.
Source: AM Best data and research

Exhibit 3
2021 Required Capital Growth by Risk Factor



Source: AM Best data and research

exposure), this will likely be counteracted by rising rates in casualty lines. Nevertheless, net premium written rose 14.1% in 2021, and we expect it to continue to rise through 2022 as markets continue to harden.

We expect that the rise in required capital and the deterioration of available capital throughout 2022 will result in the highest capital utilization levels in recent history. Our projection includes an 8.4% drop in capital levels, which is only partially mitigated by a 4% decline in required capital. The reduction in required capital will be driven mainly by a nominal decline in investment values. However, the assumptions are also based on the expectation of a relatively favorable underwriting year, which will offset some of the investment market losses. Capital utilization levels could become further stressed in the event of an unfavorable property catastrophe season or material secondary peril activity. With interest rates predicted to continue rising and equity markets struggling, the reinsurance market's need for strong underwriting returns in 2022 is paramount.

How We Calculate Total Dedicated Capacity

The data in the report is derived by analyzing the BCARs of the Top 50 reinsurers. The BCAR shows 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 the split of a company's 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 estimate of traditional reinsurance capital, which we then combine with Guy Carpenter's estimate of third-party capital, for total global reinsurance market capital.

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

August 24, 2022

US-Bermudian Reinsurers Benefit as Market Conditions Improve

Inflation concerns may temper cautiously optimistic projections

Principal Takeaways

- The US-Bermudian reinsurance composite's 2021 combined ratio improved six points over the prior year.
- Favorable reserve development continues to benefit underwriting performance.
- Inflation fears may put a wedge in various assumptions.
- Volatile performance in the capital markets in 2022 will make it difficult to match overall profitability seen in 2021.

Improvement in the Combined Ratio

AM Best's composite of US and Bermudian reinsurers contains 20 reinsurance groups domiciled in either the US or Bermuda, for which the reinsurance business accounts for a substantial portion of the underwriting portfolio. The composite's profitability improved in 2021, driven by wider underwriting margins and a larger contribution from investment results. Net premiums written (NPW) grew a robust 20% in 2021, benefitting from significant rate improvements in most of the key business lines. In most areas, rate increases continue to be driven by a recognition that further pricing gains are necessary in order to generate adequate risk-adjusted returns on capital. AM Best projects that premiums for the composite will further increase in 2022, as demand has proved resilient, and rates in most key business lines continue to rise, although the pace is slowing.

The 2021 combined ratio of 95.8 represented a six-point improvement over the prior year. Much of the improvement in underwriting margins reflected a larger benefit of prior year reserve releases, which trimmed 6.1 points from the 2021 combined ratio, compared to 3.3 points in 2020. Notably, $2.8 billion of the composite's total $4.5 billion favorable development was reported by General Reinsurance Corp. Gen Re's reported reserve development was driven largely by changes in internal reinsurance contracts with other Berkshire Hathaway affiliates and does not reflect downward revisions in claims estimates for prior accident years. Excluding Gen Re's favorable loss reserve development from both periods, the impact of favorable reserve development benefitted the combined ratio by 2.3 points in 2021 and 1.7 points in 2020.

Reserve Development Remains Favorable

Favorable reserve development may very well continue. COVID-19 claims development has been minimal. What's more, a significant amount of US and Bermudian COVID-19 claims reserves are still IBNR. The composite has consistently reported favorable development the past several years, a relatively small portion of which has come from casualty lines. If frequency and severity trends for recent accident years continue to track with current trends, favorable reserve development would benefit. Any optimism regarding reserve redundancy for recent accident years must be tempered by recognizing that the current spike in inflation could continue for a prolonged period, which could undermine current projections for severity trends in long- or short-tailed business lines.

Analytical Contact:
Gregory Dickerson, Oldwick
+1 (908) 439-2200 Ext. 5161
Gregory.Dickerson@ambest.com

Contributors:
Dan Hofmeister, Oldwick
Carlos Wong-Fupuy, Oldwick

2022-098.5

Exhibit 1

Global Reinsurance – US & Bermuda Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total)	13.9%	20.4%	9.2%	11.1%	20.8%	8.0%
NPW Growth (P/C only)	13.9%	19.8%	9.4%	11.1%	19.0%	10.3%
Reinsurance % of NPE	67.1%	62.7%	66.0%	68.4%	71.4%	66.9%
Shareholders' Equity Growth	6.7%	4.4%	7.3%	13.4%	5.0%	3.3%
Loss Ratio	70.0	65.9	71.4	65.5	69.2	77.8
Expense Ratio	31.3	30.0	30.4	31.7	32.4	32.0
Combined Ratio	101.3	95.8	101.8	97.2	101.6	109.8
Reserve Development - (Favorable)/Unfavorable	-3.9%	-6.1%	-3.3%	-2.0%	-3.8%	-4.1%
Net Investment Ratio[1]	9.2	8.0	8.0	10.5	8.4	10.9
Operating Ratio	92.1	87.9	93.8	86.7	93.2	98.9
Return on Equity	5.3%	10.8%	4.3%	12.0%	-1.3%	0.5%
Return on Revenue	6.1%	12.1%	5.4%	14.1%	-2.0%	0.8%
NPW (P/C only) to Equity (End of Period)	60.7	69.5	60.5	59.4	60.6	53.4
Net Reserves to Equity (End of Period)	116.7	117.9	114.3	117.3	119.5	114.6
Gross Reserves to Equity (End of Period)	154.0	168.1	155.3	142.0	158.7	145.7

[1] Net investment ratio based on P/C NPE.

Source: AM Best data and research

In 2021, natural catastrophe activity was one of the worst on record for global insured catastrophe losses. Despite higher catastrophe losses, the composite's 2021 accident year (excluding prior year reserve development) combined ratio of 101.9 was 3.2 points better than the 105.1 in 2020. The year-over-year improvement was due partly to the impact of a decline in COVID-19 claims in 2021. Because of the ongoing improvement in reinsurance pricing, terms, and conditions, as well as the quiet Atlantic/Gulf hurricane season thus far in 2022, the composite should be able to improve upon its 2021 accident year combined ratio of 101.9, assuming that catastrophe losses in the second half of 2022 are not excessive.

Significant Improvement in ROE

Higher underwriting income and a growing contribution from net investment income generated significantly higher net earnings of $12.5 billion, well over double the $4.7 billion recorded in 2020. The resulting 10.8% return on equity (ROE) for 2021 is a significant improvement over the prior five-year average of 4.5%. Net income in 2021 was bolstered by $6.6 billion of pre-tax realized/unrealized investment gains—$3.0 billion higher than in 2020. Otherwise, the composite ROE would have been cut roughly in half. Given the poor performance of the capital markets in the first half of 2022, investment performance will probably not match that of 2021, although net investment income will benefit from higher reinvestment rates on fixed-income asset classes. The composite will need to generate solid underwriting results in 2022 if it is to a post a double-digit ROE for the year.

Underwriting Leverage Up

Underwriting leverage rose for the US and Bermuda (re)insurance composite, as NPW growth of 20% outpaced equity growth of 6%. The composite's NPW to equity ratio nevertheless remains at a manageable 0.7x. Equity growth was constrained in 2021 by share repurchases, dividends paid, and a decline in accumulated other comprehensive income (AOCI) stemming largely from higher interest rates that depressed valuations on companies' sizable fixed-income portfolios.
AM Best expects underwriting leverage to increase further in 2022, due to a mix of continued rate improvement, the likelihood that GAAP equity growth will continue to be pressured by unrealized losses on fixed-income portfolios, as well as rising interest rates, compounded by the recent sharp declines in equity markets. Most US & Bermudian reinsurers remain well positioned to withstand

some degree of capital erosion while still maintaining solid risk-adjusted capitalization. AM Best further anticipates that these companies possess sufficient liquidity to pay claims without needing to sell invested assets.

Ample Capacity; Diversification and Consolidation to Continue

Capacity remains ample in many business lines, despite constraints in certain areas, particularly in frequency layers of natural catastrophe programs, aggregate covers, and peak catastrophe zones in the US. Underwriters remain particularly cautious about Florida exposure, due to concerns about long-term structural issues in the tort system that appear unlikely to be resolved in the near to medium term.

The pricing environment for property catastrophe risks is improving, with non-loss impacted programs often seeing double-digit rate increases and impacted programs seeing much higher rate hikes, along with limit compression and higher retentions. Regardless, US and Bermudian (re)insurers are more focused on growing their specialty and casualty portfolios, particularly in the excess and surplus (E&S) markets, where pricing is viewed as well in excess of loss cost trends. Several companies have publicly stated their intention to either cut back on their property catastrophe exposures or exit the property catastrophe reinsurance market altogether.

The era of catastrophe-focused traditional reinsurers appears to be over, although there is catastrophe-focused capacity in the insurance-linked securities (ILS) reinsurance and retro markets. A decade ago, several US and Bermudian reinsurers had catastrophe exposures that were either their largest or their sole line of business. Most of these companies have either diversified their portfolios and are no longer dependent on property catastrophe business or have been acquired and now operate as part of a larger and more diversified franchise. Diversified reinsurers have not been immune to consolidation, as acquirers have been willing to pay sizable premiums to purchase solid companies with established market positions in attractive business lines. M&A over the next several years may be driven by (re)insurers' desire to strengthen their positions in the primary markets, especially in specialty areas, as long as the rate environment remains attractive.

August 30, 2022

Despite Lloyd's Improving Underlying Results, Inflation and Conflict are Significant Headwinds

Improving market conditions, as well as the robust performance oversight by the Corporation, has resulted in measurable improvements in underwriting performance

Analytical Contacts:
Tim Prince, London
+44 20 7397 0320
timothy.prince@ambest.com

Jessica Botelho-Young, CA, London
+44 20 7397 0310
jessica.botelho@ambest.com

Catherine Thomas, CFA, London
+44 20 7397 0281
catherine.thomas@ambest.com

Editorial Managers:
Richard Banks, London
+44 20 7397 0322
richard.banks@ambest.com

Richard Hayes, London
+44 20 7397 0326
richard.hayes@ambest.com

2022-098.6

Principal Takeaways

- Lloyd's ranked as the seventh largest reinsurer in 2021.
- 2021 was the first year of profitable underwriting for the reinsurance segment since 2016.
- Social inflation has resulted in increased uncertainty regarding reserve adequacy.

Lloyd's is a leading underwriter of specialty property and casualty risks, and comprises approximately 100 individual syndicates. It continues to occupy a strong position in the global insurance and reinsurance markets. Lloyd's syndicates benefit from the market's excellent financial strength and are able to underwrite a mix of insurance and reinsurance business.

In 2021, reinsurance accounted for 37% of the market's gross written premium (GWP) of GBP 39.2 billion. When taking Lloyd's reinsurance premiums together, it ranked as the seventh largest risk carrier in 2021 according to AM Best's "*World's 50 Largest Reinsurers*" (August 2022), and the fourth largest when life premiums are excluded from the ranking's figures.

Lloyd's reinsurance segment comprises property (with property catastrophe excess of loss the largest component), casualty (primarily non-marine excess of loss and US workers' compensation), and specialty reinsurance (marine, energy, and aviation reinsurance).

In 2021, total reinsurance premiums written by Lloyd's increased by 18% to GBP 14.3 billion, following a 7% rise in the previous year. Property reinsurance, which accounts for approximately half of the reinsurance segment, reported an 11% increase in GWP, while casualty reinsurance, which accounts for almost one third, grew by 34%. Given the higher frequency and severity of loss activity in recent years for property reinsurance business, syndicates have shown greater focus on client selection and aggregate deployment, resulting in significant rate increases. For casualty reinsurance, the market has witnessed considerable tightening in policy coverage and price strengthening.

On July 15, 2022, AM Best affirmed the Best's Financial Strength Rating (FSR) of A (Excellent) and the Issuer Credit Rating (ICR) of "a+" of 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 overall underwriting performance has been improving, although over the past five years has been below AM Best's expectations for a Strong assessment, demonstrated by an average combined ratio of 104.7% (2017-2021). Favourable market conditions, as well as the robust performance oversight by the Corporation, has resulted in measurable strengthening of underwriting performance, as evidenced by the 2021 combined ratio of 93.5%. While improvements in the market's attritional accident-year performance have been observed in recent years, its overall performance remains exposed to potential volatility, due to its exposure to major catastrophe events.

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

The market continues to attract new capital, with several new syndicates launching during 2021. However, there have been a number of syndicate closures since 2018, which have coincided with performance improvement initiatives, including Lloyd's Decile 10 review.

Lloyd's reported combined ratio at year-end 2021 was 93.5%, which was a significant improvement on the five-year (2017-2021) average of 104.7%. This was despite a number of major natural catastrophe losses during the year, and with major claims for the market approximately in line with the longer-term average. The improvement was driven by casualty and specialty lines of business, particularly in the primary classes.

Considering the market's large exposure to casualty business, AM Best notes that social inflation (particularly in the United States) has resulted in increased uncertainty regarding reserve adequacy. However, Lloyd's syndicates frequently reserve prudently, often with a large reserve margin above the actuarial best estimate. This prudence is demonstrated by regular releases on prior years' reserves. In 2021, prior year reserve releases reduced the market's loss ratio by 2.1 percentage points (2020: 1.8%).

Lloyd's reported an underwriting result for its reinsurance business of GBP 489 million in 2021, the first profitable year for the reinsurance segment since 2016. Specialty lines, which accounted for less than one-fifth of reinsurance premiums, were responsible for more than two thirds of its profit. Marine is the largest line within the market's reinsurance specialty book, followed by energy and aviation, and virtually all classes have enjoyed strong price strengthening over a number of years.

The market's operating expense ratio is often in the mid-to-high 30s range, which is high compared to its peers. The ratio has been steadily trending downwards, from 39.5% in 2017 to 35.5% in 2021. 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% of its GWP in 2021. 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.

AM Best notes that while the considerable remedial and modernisation work being carried out within the market, along with strong underlying market conditions, should be a positive for its future performance, there are also significant headwinds. The conflict between Russia and Ukraine has produced material claims uncertainty, particularly for specialty underwriters. At the same time, high general inflation has the potential to impact all lines of business, especially those with longer claims tails or those that are more affected by global supply chain disruption.

August 30, 2022

Global Reinsurance – The European Big Four

A return on equity of 8.1% - up from 2.4% the previous year - illustrated the Big Four's improved performance in 2021

Principal Takeaways

- The combined ratio for the European Big Four improved from 103.9 in 2020 to 98.1 in 2021, notably benefitting from the absence of significant adverse development from COVID-19 losses.
- Nevertheless, the five-year average combined ratio remains elevated reflecting a period with significant natural catastrophe and man-made losses.
- The segment's life reinsurance performance continues to be adversely affected by excess mortality, particularly from US exposures.
- Shareholders' equity is expected to decline at year-end 2022, as was already seen at half year, due to unrealised losses on fixed income portfolios in particular.
- Three of the European Big Four continue to target growth in property catastrophe business, as other global reinsurers retrench from it.

Financial Review

The European Big Four reinsurers—Munich Re, Swiss Re, Hannover Re and SCOR—are composite reinsurers, writing both life and property/casualty (P/C) business.

As shown in **Exhibit 1**, total net premium written (NPW) for the segment grew by just 2% in 2021, and 6% for P/C premiums only. Note that the growth rates in the exhibit were calculated on figures converted to USD for Munich Re, Hannover Re and SCOR, which report in euros. This resulted in a reduced growth rate for 2021 for the segment, hampered by changes in the EUR/USD foreign exchange rate.

For the same reason, each of the Big Four reinsurers reported stronger growth for the P/C segment in 2021 in their reporting currency than shown in the exhibit. Growth for the P/C segment benefitted from material premium rate improvements across many business lines in 2021.

A return on equity of 8.1%—up from 2.4% the previous year—illustrates the Big Four's improved performance in 2021. The ROE for 2021 compares favourably with the five-year average ROE of 5.2%, which was pulled down by low, albeit positive, returns in 2020 and 2017.

The combined ratio for the Big Four improved from 103.9 in 2020 to 98.1 in 2021. Nonetheless, the five-year (2017-2021) average combined ratio remains elevated at 102.6, following a period with substantial natural catastrophe and man-made losses, including a particularly active and damaging Atlantic and Gulf hurricane season in 2017.

Non-life technical performance for 2021 benefitted from the absence of significant adverse development from COVID-19-related losses. Losses stemming from the pandemic had negatively impacted the results in 2020. However, natural catastrophe losses were higher in 2021 than in 2020 and exceeded the groups' considerable budgets for such losses.

Analytical Contacts:
Mathilde Jakobsen, Amsterdam
Tel: +31 20 308 5427
Mathilde.Jakobsen@ambest.com

Ghislain Le Cam, London
Tel: +44 20 7397 0268
Ghislain.Lecam@ambest.com

Contributors:
Konstantin Langowski, Amsterdam
Victoria Ohorodnyk, Amsterdam
Alex Rafferty, London
Angela Yeo, Amsterdam

Editorial Managers:
Richard Banks, London
Tel: +44 20 7397 0322
Richard.Banks@ambest.com

Richard Hayes, London
Tel: +44 20 7397 0326
Richard.Hayes@ambest.com

2022-098.7

Non-life technical performance also benefitted from prior year reserve releases—equivalent to a 3.3 point improvement on the combined ratio for the segment. This is higher than in 2020, but lower than what was observed in the years leading up to 2017. Adverse developments for US casualty business have pulled down the overall positive run-off experience in recent years.

All four groups write sizable US mortality books, which dragged overall profitability in both 2020 and 2021 as a result of excess mortality driven by COVID-19. COVID-19 reinsurance losses have also originated from other regions, such as South Africa, Latin America and India, but to a lesser extent.

The overall hit to life and health reinsurance earnings from these adverse mortality trends varies across the Big Four, depending on their different exposures to US mortality in particular. Positive earnings from longevity, health reinsurance and financial solutions life business have served to reduce the negative impact. In addition, some of the Big Four benefitted from mortality retro cover that reduced the strain on a net basis.

With the COVID-19 pandemic continuing in 2022, the negative impact on return metrics is also likely to continue. Combined, the Big Four reported further COVID-19 life reinsurance losses of approximately USD 1 billion through the first quarter of 2022, reflecting persistent adverse mortality trends largely in the US.

While there is indication that US excess mortality tapered through the second quarter of 2022, the magnitude of the full-year hit (or the extent of performance recovery), will largely depend on the severity of the US autumn and winter COVID-19 surges.

Despite improved performance in 2021, the absolute level of shareholders' equity for the Big Four declined in 2021 compared to 2020 (**Exhibit 1**). The decline in shareholders' equity shown in the exhibit was in part due to movements in foreign exchange rates, as it is calculated on figures converted to USD. Munich Re, Hannover Re and SCOR each reported increases in shareholders' funds in their reporting currency of euros. In addition, the impact of rising interest rates, which resulted in net unrealised losses on fixed income securities accounted for through equity, also had a negative effect on the combined shareholders' equity figure.

Exhibit 1

Global Reinsurance – European Big Four Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total)	6.5%	1.9%	12.1%	8.2%	-2.7%	13.0%
NPW Growth (P/C only)	7.8%	6.0%	12.9%	7.5%	4.2%	8.3%
Reinsurance % of NPE	88.1%	88.3%	90.3%	88.5%	86.0%	87.3%
Shareholders' Equity Growth	-1.4%	-6.8%	3.2%	10.0%	-12.6%	-1.1%
Loss Ratio	71.3	68.3	73.8	69.6	68.1	76.7
Expense Ratio	31.3	29.8	30.2	31.8	32.6	32.2
Combined Ratio	102.6	98.1	103.9	101.4	100.7	108.9
Reserve Development - (Favorable)/Unfavorable	-2.8%	-3.3%	-2.1%	-0.2%	-3.3%	-5.0%
Net Investment Ratio[1]	19.6	14.2	12.5	26.5	16.1	28.9
Operating Ratio	82.9	83.8	91.4	74.9	84.6	79.9
Return on Equity	5.2%	8.1%	2.4%	7.2%	5.8%	2.7%
Return on Revenue	2.7%	3.9%	1.2%	3.6%	3.4%	1.6%
NPW (P/C only) to Equity (End of Period)	92.1	109.7	96.5	88.2	90.2	75.7
Net Reserves to Equity (End of Period)	460.3	508.4	473.7	440.3	486.9	392.0
Gross Reserves to Equity (End of Period)	483.7	535.4	493.9	461.2	515.0	413.0

[1] Net investment ratio based on P/C NPE.

Source: AM Best data and research

AM Best expects the composite's shareholders' equity to decline in 2022, impacted by unrealised losses from rising interest rates and a decline in equity markets. The Big Four reported significant declines in capital due to these factors at half year 2022. Capital positions had previously benefitted from material unrealised gains generated from the period of falling interest rates that followed the financial crisis in 2008. This volatility occurs due to the mismatch in asset and liability accounting in current accounting standards.

Market Dynamics

While a number of US and Bermudian reinsurers have stated their intention to curtail their property catastrophe exposure, or even exit this line altogether, Munich Re, Swiss Re and Hannover Re have a more positive view on the price adequacy and growth opportunities in the property catastrophe reinsurance segment. The three reinsurers are aiming for targeted growth in this business (including in the US), supported by hardening conditions and premium rate increases, but with limited appetite for frequency layers and aggregate covers. On the other hand, SCOR, the smallest of the Big Four, has announced that it plans to reduce its natural catastrophe exposure for the US and overall.

The Big Four are also aiming for growth in specialty segments (both insurance and reinsurance), such as cyber, marine, credit and surety, where price increases achieved since 2018 allow for good returns. The growth in these lines is not solely opportunistic (because of good pricing) but also aimed at achieving increased levels of diversification and so lead to more stable earnings.

On the life side, the pandemic has highlighted the significant exposure of the composite to US mortality trends. In response, the groups are seeking growth in other regions and products to create more balanced portfolios.

It is still unclear how the pandemic will affect long-term mortality trends and, in particular, whether mortality trends will revert to pre-COVID-19 levels once the pandemic has run its course. Despite this uncertainty, some life reinsurers have announced that they will be taking pricing actions on US mortality books in light of the pandemic experience. However, the overall impact on pricing from actions taken remains limited, suggesting that most reinsurers expect mortality and profitability levels to return to normal.

AM BEST SINCE 1899 ®

BEST'S MARKET SEGMENT REPORT

Our Insight, Your Advantage™

August 25, 2022

Supply and Demand Dynamics on Full Display in the Insurance-Linked Securities Market

Demand for reinsurance capital heightened by inflation expectations, while ILS investors require better contractual terms

Principal Takeaways

- The first half of 2022 was dynamic for ILS transactions as supply and demand for capital determined which deals were placed successfully and at what price.
- ILS managers are pursuing commutation to free up capital trapped due to COVID-19.
- Major cat events and broader economic circumstances are causing investor uncertainty, with implications for the supply of capital.
- Demand for reinsurance capital (both traditional and ILS) is increasing, while the supply of capital remains constrained, driving rates higher.
- De-risking and re-underwriting continue apace.
- ILS returns tended to be uncorrelated in the first half of 2022.
- A large volume of cat bond transactions was placed (comparable to 2021), as spreads widened.
- New sponsors entered the cat bond market, but tranches in several deals were not placed.
- Cat bond loss multiples increased.
- Capital providers showed an interest in casualty ILS.

Limited Financial Impact of COVID-19

AM Best expects that the impact of the COVID-19 pandemic on the ILS market will remain limited. To date, the paid claims ratios remain very low, and some market participants believe that more than half of all trapped capital related to COVID has been released. However, the impact of the pandemic has varied by ILS segment and region. Losses due to COVID in the cat bond market are the lowest of the four ILS segments (collateralized reinsurance, cat bonds, sidecars, and industry loss warranties (ILWs)), mostly because of named-peril cat bonds focused on remote coverages.

The collateralized reinsurance market has been affected more heavily, especially in Europe, where COVID remains a significant issue. Contract wording in Europe tended to be less precise than in the US, allowing for a broader interpretation of coverage than intended. Arbitration cases and court rulings have generally favored insurers in the US more than in Europe. The high cost of arbitration and litigation may put the relationships with cedents in jeopardy, prompting some ILS managers to pursue commutations instead. These managers have been able to leverage capacity constraints in the reinsurance market to negotiate commutation terms to free up deployable capital.

Impact of Catastrophe Events Mitigated by Tightened Measures

In the last five years, global insured losses from natural catastrophes have generally been well above the ten-year annual average (**Exhibit 1**), leading some investors to question whether the modelling of cat losses is sufficiently robust. These events have consumed billions of dollars in reinsurance capital, which the traditional and ILS markets have generally been able to replace. However, investors' skepticism of the catastrophe risk modelling may keep them from deploying additional capital even as prices rise to attractive levels.

Analytical Contact:
Emmanuel Modu, Oldwick
+1 (908) 439-2200 Ext. 5356
Emmanuel.Modu@ambest.com

Wai Tang, Oldwick
+1 (908) 439-2200 Ext. 5633
Wai.Tang@ambest.com

Matt Tuite, Oldwick
+1 (908) 439-2200 Ext. 5518
Matt.Tuite@ambest.com

2022-098.8

The first half of 2022 saw major damage from cat events such as floods in Australia, windstorms in Europe, earthquakes in Japan, and severe convective storms in the US. Swiss Re estimates these losses at USD35 billion, higher than the first-half ten-year insured loss average. Although these events caused severe damage and insured losses, ILS managers believe that the underwriting tightening measures taken over the last year should mitigate their impact on ILS investments.

Exhibit 1
ILS – Global Natural Catastrophe Insured Losses
(USD billions in 2021 prices)

	Amount
2017	156
2018	91
2019	57
2020	90
2021	111
10-Year Average	**74**

Source: Swiss Re

Optimism among ILS investors has emerged with regard to the estimated USD15 billion insured losses associated with Winter Storm Uri in 2021. The 130+ insurance companies jointly suing the Electric Reliability Council of Texas (ERCOT) and dozens of power-generating entities for grid failure are increasingly confident that successful litigation or settlement may reduce insurers' losses considerably. Some market participants believe that, if significant subrogation recoveries result from this litigation, the aggregate contracts might ultimately not attach to the coverage layers.

Inflation's Mixed Impact

Recent macroeconomic events serve as a reminder that the ILS markets can be affected by broader economic trends in both positive and negative ways. Headline inflation rose year over year 9.1% on an annual basis in June 2022, the fastest pace since November 1981. Inflation spiked due to rising labor and material costs resulting from the pandemic and was exacerbated by the invasion of Ukraine.

Inflation increases primary insurers' demand for more reinsurance capacity in anticipation of higher loss costs. ILS transactions must price for the higher loss costs. Heightened inflation has a bigger impact on multi-year ILS transactions because they can't be repriced annually to account for new inflation assumptions, and deals that don't take account of elevated inflation are at a greater risk of being underpriced.

On the positive side, interest rate hikes result in higher returns on ILS collateral. Most collateral assets used in cat bonds and collateralized reinsurance are invested in assets with short durations, such as one- and three-month US Treasuries. The rise in short-term interest rates has a positive impact on the collateral's yield.

The rise in interest rates earlier this year led to significant mark-to-market losses on insurers' balance sheets, as unrealized losses on insurers' bond portfolios led to asset value declines and hence lower surplus. The primary insurers' diminished surplus heightened demand for reinsurance capital to fill the void. Meanwhile, inflation led to exposure growth, resulting in a corresponding demand for reinsurance by primary insurers. However, reinsurers were dealing with the same issues, resulting in less traditional reinsurance capital. Therefore, insurers and reinsurers were more motivated to seek out ILS capital for their reinsurance and retro needs.

Elusive ILS Capacity

Total ILS capacity is still hard to pin down, as is ascertaining how much capacity is untrapped and deployable. Guy Carpenter and AM Best project that ILS capacity will be about USD95 billion at year-end 2022. Estimating the capacity in individual segments of the ILS market is more difficult, except for 144A cat bonds, the only segment that can be objectively determined. Here are broad data points regarding ILS capacity:

- 144A cat bond capacity is estimated by Artemis at around USD38 billion as of the end of 2Q 2022.
- Industry estimates place sidecar capacity in the range of USD6 billion to USD7 billion, and that capacity is declining.
- ILW capacity is estimated in the range of USD3 billion to USD7 billion and rising due to capital constraints in the retro market and challenges in placing cat bonds. By some estimates, ILW capacity is up 20% to 25% over last year. ILWs are relatively less expensive forms of coverage cedents use to fill gaps when they cannot buy retro cover in the traditional market or place cat bonds. Rates are estimated to have increased 40% to 50%.
- Collateralized reinsurance capacity is estimated in the USD50 to 60 billion range, with USD20 billion of the capacity going to retro coverage. Market participants believe overall collateralized reinsurance capacity declined 20% to 30% over the past 24 months.

Rising Rates, Tightening Terms and Conditions

Rates are up across the board, with loss-affected programs experiencing significantly higher increases. Guy Carpenter's Global Property Catastrophe Rate-On-Line Index rose nearly 11% between January 1, 2021, and January 1, 2022; the US Property Catastrophe Rate-on-Line Index rose almost 15% from January 2022 through July 2022 renewals.

ILS managers are employing different strategies to improve results: some are emphasizing pricing increases, while others are focused on optimizing deal structures as well as terms and conditions. ILS managers believe they can improve results by moving toward severity-based, rather than frequency-based, agreements. To achieve this goal, they are wording contracts to focus on named-perils only, and writing more per-occurrence contracts rather than aggregate contracts. For the aggregate deals, ILS managers are more inclined to include per-event caps that limit the amount that any single loss contributes to the erosion of the aggregate deductible. In some cases, the per-event caps are set so that the aggregate attachment will not be breached until three to four events have occurred.

ILS Returns

After a very strong 2021, the financial markets declined significantly in the first half of 2022 due to rampant inflation and growing fears of recession. The performance of the ILS market reflects its relatively low correlation with the broader financial markets, supporting its value proposition of offering diversifying benefits to investors.

Exhibit 2 shows the monthly returns for the S&P 500 Index, Barclays US Corporate High Yield Total Return Index, Swiss Re Global Cat Bond Return Index, and the Eurekahedge ILS Advisers Index. Barclay's high yield index and the S&P 500 performed exceptionally well through 2021, but returns in the first half of 2022 have been mostly negative. In contrast, the monthly returns of the Swiss Re Global Cat Bond Return and Eurekahedge ILS Advisers indices have been mostly positive, though modest, since the beginning of 2022. However, selling pressure in the secondary cat

Exhibit 2

ILS – Monthly Returns, Jan-June 2022 – Various Indices

(%)

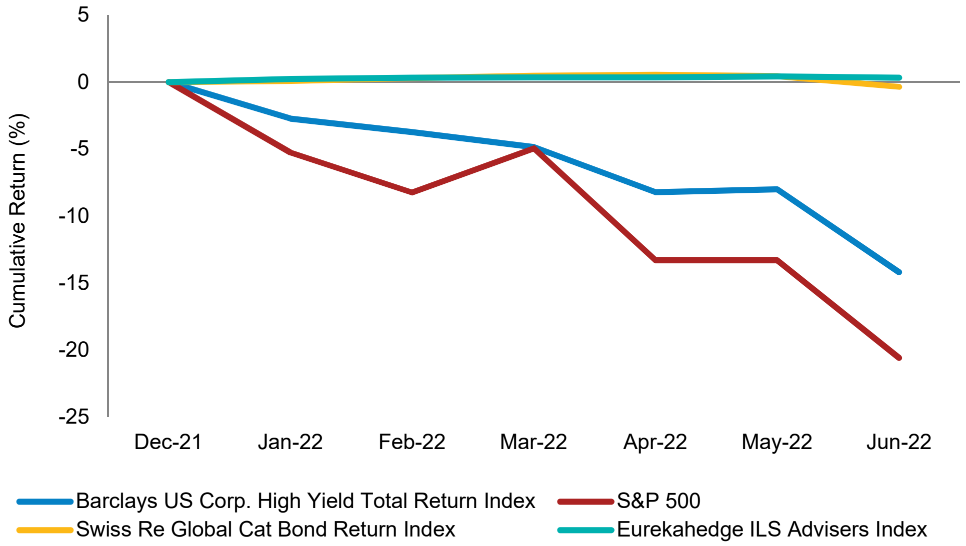
	Barclays US Corp.High Yield Total Return Index	S&P 500	Swiss Re Global Cat Bond Return Index	Eurekahedge ILS Advisers Index
Jan-22	-2.73	-5.26	0.10	0.25
Feb-22	-1.03	-3.14	0.21	0.08
Mar-22	-1.15	3.58	0.17	0.03
Apr-22	-3.56	-8.80	0.06	0.00
May-22	0.25	0.01	-0.10	0.07
Jun-22	-6.73	-8.39	-0.78	-0.09

Source: AM Best data and research

bond market caused the Swiss Re Global Cat Bond Return Index to fall in May and June, leading the cumulative YTD return for that index to turn negative.

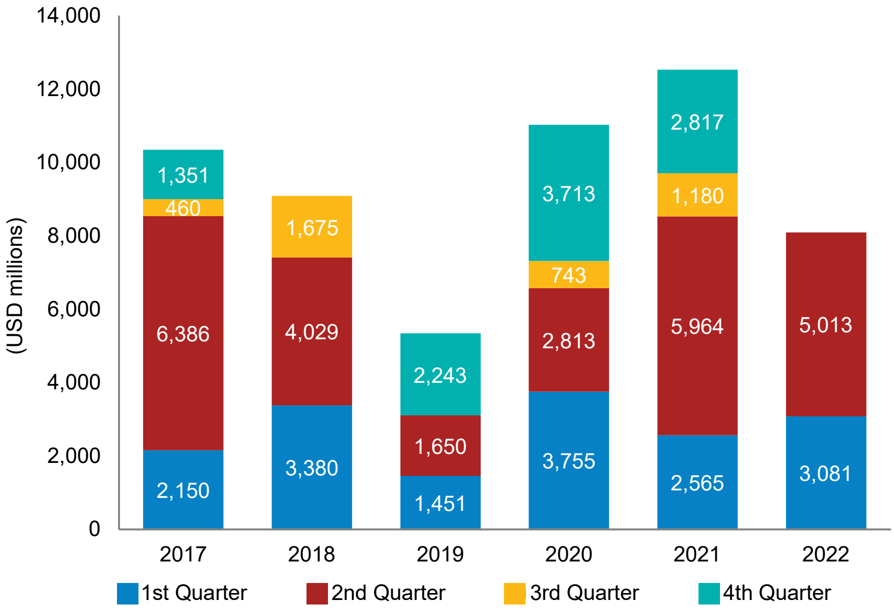
Exhibit 3 shows the cumulative returns of these indices since January 1, 2022. Those of the Swiss Re Global Cat Bond Return and Eurekahedge ILS Advisers indices have been far less volatile than the returns of Barclay's High Yield and S&P 500 indices. The Swiss Re Global Cat Bond Return Index's YTD cumulative return was -0.35% as of June 2022, compared with 2.12% over the same period in 2021. The YTD cumulative return of the Eurekahedge ILS Advisors Index was 0.34%, compared with 0.94% as of June 2021. In contrast, as of June 2022, the cumulative YTD returns of Barclay's High Yield Index (at -14.2%) and the S&P 500 (at -20.6%)

Exhibit 3
ILS – YTD Returns, Various Indices, Jan-June 2022



Source: AM Best data and research

Exhibit 4
ILS – Cat Bond Issuance by Quarter, 2017-2022



Source: Artemis, AM Best data and research are much different compared to the cumulative YTD returns as of June 2021, when Barclay's and the S&P 500 were at 3.6% and 14.4%, respectively.

Cat Bond Market Issuance Down Slightly

Property/casualty (P/C) 144A cat bond risk capital outstanding was estimated at approximately USD38 billion as of the first half of 2022. **Exhibit 4** shows P/C 144A cat bond issuance by quarter since 2017. Through June 30, 2022, 35 traditional P/C 144A cat bond transactions were placed, totaling USD8.1 billion, down slightly from USD8.5 billion in 29 transactions in the first half of 2021. In the second quarter of 2022, USD5.0 billion was placed, down slightly from the USD5.9 billion in the second quarter of 2021.

Growing Size and Widening Spread for 144A Cat Bonds

In the first half of 2022, pricing in the cat bond market hardened as investors required higher compensation for the capital they provided to sponsors. **Exhibit 5** compares the initial and final sizes of the 35 cat bond transactions during the first half. Twenty-three of the 35 (66%) 144A cat bond transactions were upsized from their initial guidance levels, for an average increase of 36%, or USD1.6 billion; the average increase for the 23 transactions was USD69 million. Eight of the remaining 12 transactions maintained their initial guidance amounts, while issuance amounts declined by 9% (or USD75 million) for four. Overall, the amount of cat bonds issued in the first half of 2022 was 23% higher than the initial guidance.

Exhibit 5 also compares the initial pricing guidance range to the final spread for 30 of the cat bond transactions placed in the first half of 2022. Twenty-three of the 30 (77%) 144A cat bonds were priced above the midpoint of the initial pricing guidance; 13 of the 30 were priced above the upper bound of the initial pricing guidance, while only two were priced below the lower bound. Pricing in the first half of 2022 contrasted with pricing outcomes in the first half of 2021, when none of the 29 cat bonds issued during that period priced above the upper bound of initial pricing guidance, while 20 of the 29 priced below the lower bound.

In AM Best's August 2021 report on ILS, we noted that cat bonds were upsized and spreads were narrowing. Cat bonds were still being upsized in the first half of 2022, although by a lower magnitude. However, the size of spreads completely reversed from last year. Strong demand for capital in the face of constrained supply meant that sponsors had to widen the spread of their transactions to place the bonds at the sizes they needed.

There were more cat bond tranches that could not be placed in the first half of 2022 compared to prior years—in some cases, entire deals could not be placed. Fifteen tranches in eight transactions were marketed to investors but pulled in the first half. The target amounts for these tranches came to more than USD500 million. Reasons for pulling a cat bond vary and are not necessarily related to market conditions. However, the inability to place some cat bonds seems to connect with the broader theme of market hardening. More sponsors never made it far enough to market a cat bond because they perceived that pricing and conditions would not be favorable. Sponsors, particularly those with weaker-performing programs, who find placing reinsurance in the traditional reinsurance market difficult also find it challenging in the cat bond market.

With the financial landscape in flux, investors are evaluating their options. Property catastrophe ILS often is touted for its diversification benefits, but investors may be willing to forgo the benefits if the expected return on another asset is high enough to make up for the lack of diversification. For this reason, there appears to be a floor of 6% to 7% for cat bond spreads, regardless of expected loss level, sponsor quality, type of coverage, or other aspects of the transaction.

Exhibit 5

ILS – Cat Bonds Issued During First Half of 2022

(USD millions; spreads expressed as basis points)

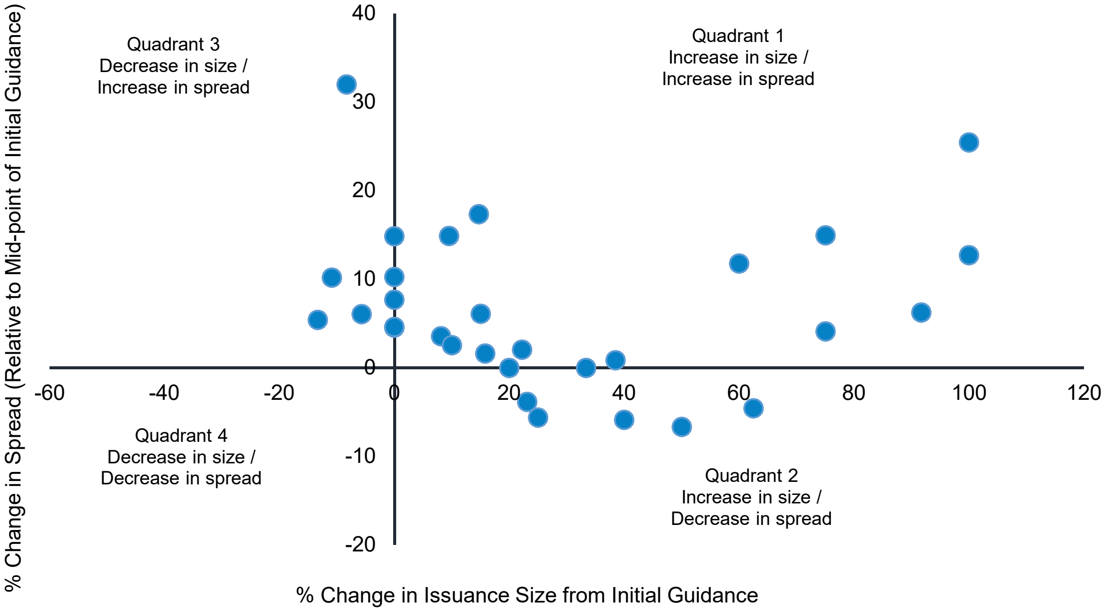
#	Vehicle	Sponsor	Initial Size (USD)	Final Size (USD)	Size Change (USD)	Size Change (%)	Midpoint of Initial Pricing Guidance (bps)	Final Spread (bps)	Spread Change (%)
1	Alamo Re Ltd. (Series 2022-1)	Texas Windstorm Insurance Association (TWIA)	185	200	15	8	700	725	4
2	Atlas Capital Reinsurance 2022 DAC (Series 2022-1)	SCOR SE	150	240	90	60	850	950	12
3	Baltic PCC Limited (Series 2022-1)	Pool Re	98	131	33	33	550	550	0
4	Black Kite Re Limited (Series 2022-1)	Peak Reinsurance Company	75	150	75	100	550	690	25
5	Blue Halo Re Ltd. (Series 2022-1)	Allianz Risk Transfer	100	125	25	25	1336	1261	-6
6	Bonanza Re Ltd. (Series 2022-1)	American Strategic Insurance Group	135	135	0	0	550	575	5
7	Bowline Re Ltd.	Transatlantic Reinsurance Co.	175	165	-10	-6	1095	1162	6
8	Cape Lookout Re Ltd. (Series 2022-1)	North Carolina Insurance Underwriting Association	300	330	30	10	488	500	3
9	Catahoula II Re Pte. Ltd. (Series 2022-1)	Louisiana Citizens Property Insurance Corporation	100	175	75	75	922	1060	15
10	Citrus Re Ltd. (Series 2022-1)	Heritage Property and Casualty Insurance Co.	100	100	0	0	463	510	10
11	Commonwealth Re Ltd. (Series 2022-1)	The Hanover Insurance Group	100	150	50	50	375	350	-7
12	Everglades Re II Ltd. (Series 2022-1)	Citizens Property Insurance	100	200	100	100	688	775	13
13	FloodSmart Re Ltd. (Series 2022-1)	FEMA / NFIP via Hannover Re	325	450	125	38	1206	1217	1
14	Gateway Re Ltd. (Series 2022-1)	SureChoice Underwriters Reciprocal Exchange (SURE)	150	150	0	0	813	850	5
15	Hestia Re Ltd. (Series 2022-1)	Kin Interinsurance Network	100	175	75	75	913	950	4
16	Integrity Re Ltd. (Series 2022-1)	American Integrity Insurance Company of Florida, Inc.	75	75	0	0	650	700	8
17	Kilimanjaro III Re Ltd. (Series 2022-1)	Everest Re	250	300	50	20	525	525	0
18	Long Point Re IV Ltd. (Series 2022-1)	Travelers	300	575	275	92	400	425	6
19	Matterhorn Re Ltd. (Argon 2022-1)	Swiss Re	100	150	50	50	n/a	n/a	n/a
20	Matterhorn Re Ltd. (Series 2022-1)	Swiss Re	200	325	125	63	671	640	-5
21	Matterhorn Re Ltd. (Series 2022-2)	Swiss Re	150	200	50	33	n/a	900	n/a
22	Merna Re II Ltd. (Series 2022-1)	State Farm	300	300	0	0	n/a	n/a	n/a
23	Merna Re II Ltd. (Series 2022-2)	State Farm	200	200	0	0	n/a	750	n/a
24	Merna Re II Ltd. (Series 2022-3)	State Farm	300	300	0	0	n/a	725	n/a
25	Montoya Re Ltd. (Series 2022-1)	Inigo Insurance (Syndicate 1301)	105	115	10	10	588	675	15
26	Northshore Re II Ltd. (Series 2022-1)	AXIS Capital Holdings Ltd. subsidiaries	100	140	40	40	850	800	-6
27	Residential Reinsurance 2022 Limited (Series 2022-1)	USAA	375	430	55	15	480	563	17
28	Sanders Re III Ltd. (Series 2022-1)	Allstate	450	550	100	22	826	843	2
29	Sanders Re III Ltd. (Series 2022-2)	Allstate	250	288	38	15	607	643	6
30	Tailwind Re Ltd. (Series 2022-1)	Validus Holdings	325	400	75	23	1014	975	-4
31	Tomoni Re Pte Ltd. (Series 2022-1)	Mitsui Sumitomo Ins. Co. Ltd., Aioi Nissay Dowa Ins. Co., Ltd.	190	220	30	16	237	241	2
32	Torrey Pines Re Ltd. (Series 2022-1)	Palomar Specialty Insurance Company	300	275	-25	-8	446	589	32
33	Ursa Re II Ltd. (Series 2022-1)	California Earthquake Authority	275	245	-30	-11	525	579	10
34	Vista Re Ltd. (Series 2022-1)	Vantage Risk	65	65	0	0	1263	1450	15
35	Yosemite Re Ltd. (Series 2022-1)	Core Specialty (StarStone)	75	65	-10	-13	925	975	5

Sources: Artemis, AM Best data and research

Comparing Change in Size with Change in Spread

Cat bonds that were upsized were often accompanied by a widening in the final spread compared to the midpoint of initial guidance (**Exhibit 6**), suggesting that sponsors had to pay more for the additional coverage. However, the outcomes for the deals were quite diverse, with timing playing a role. In April and May, for example, spread widening was more pronounced than at other points

Exhibit 6
Change in Size vs. Change in Spread



Source: Artemis, AM Best data and research

in the first half; the most pronounced spread widening was for Torrey Pines Re Ltd. Series 2022-1, which was downsized slightly from the initial target.

Loss Multiples for 144A Cat Bonds

As interest rates rose and the stock markets declined in the first half of 2022, the size of investment managers' debt and equity portfolios fell significantly. For managers that had invested in cat bonds, the amount of their cat bond holdings might be out of proportion and needed to be rebalanced. As a result, investors offloaded their cat bonds in the secondary market, which pressured spreads. The competition among cat bond sponsors for each dollar of ILS capital of the new issuances was quite intense. Spreads widened even more, which allowed capital providers to be more selective about which deals to invest in.

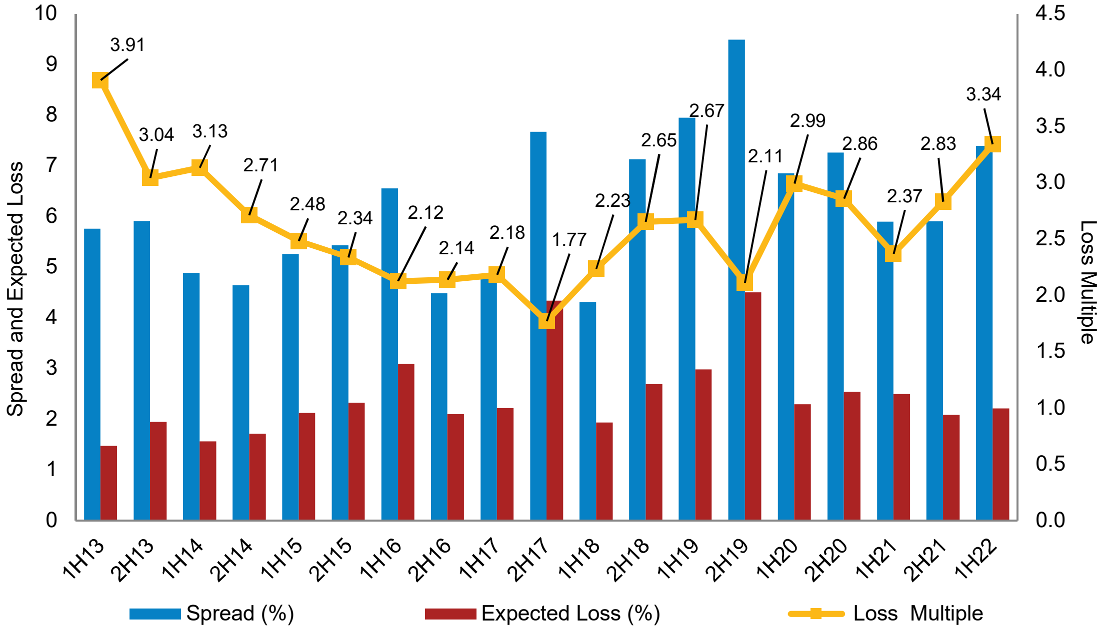
A key indicator investors use to gauge risk-adjusted returns for cat bonds is the ratio of the spread to expected loss, or the loss multiple. The loss multiple has increased significantly since the first half of 2021, standing at 3.34x for the first half of 2022—the highest it has been since the first half of 2013, when it was 3.91x. **Exhibit 7** shows the loss multiples in six-month increments from 2013 through the first half of 2022.

New Sponsors in the Market

A number of new sponsors entered the cat bond market in the first half of 2022, including the following:

- Kin Interinsurance Network, a growing insurtech, sponsored a USD175 million cat bond covering Florida named storms.
- Peak Reinsurance Company, headquartered in Hong Kong, sponsored a USD150 million cat bond covering typhoon risk in Japan.
- The Hanover Insurance Group sponsored a USD150 million cat bond covering named storms in the northeastern US.

Exhibit 7
ILS – Cat Bond Loss Multiple, 1H13-1H22



Source: Artemis, AM Best data and research

- Core Specialty (StarStone) sponsored a USD65 million cat bond covering named storms and earthquakes across the US.
- SureChoice Underwriters Reciprocal Exchange sponsored a USD150 million cat bond covering named storms in Alabama, Louisiana, Mississippi, and Texas.

Interest in Non-Cat ILS

The ILS world typically focuses on natural catastrophe property risk, but, in the last few years, interest in non-cat ILS risks, especially in the casualty and liability lines, has increased. On the capital supply side, investors are looking for returns with a low to moderate correlation to the broader capital markets, without the digital risk profile of property catastrophe risk. In some instances, casualty risks may be more correlated with the capital markets than property catastrophe risk. The asset strategy employed in the casualty ILS transaction also affects the degree of correlation.

On the demand side, cedents (typically fronting carriers in the MGA market) are looking for alternative sources of capital, a trend some trace back to a lack of capacity in the Lloyds market in the wake of the 2017 natural cat events.

Diverse industry players such as traditional reinsurers, insurtech companies, and longtime ILS investors believe there is an opportunity to transfer casualty risk to the capital markets via ILS transactions. Renaissance Re created Fontana Holdings, a joint venture backed by third-party capital focused on casualty and specialty risk. Capital advisory firms like MultiStrat, as well as insurtech companies like Ledger and Vesttoo, have facilitated the transfer of casualty risk to the capital markets. Ontario Teachers Pension Plan (OTPP) made a USD150 million investment in a casualty risk fund, which is significant because it is a longtime investor in natural catastrophe ILS. Typically, casualty ILS investors are composed of family offices or similar entities with a longer investment horizon, but interest from other types of investors has grown, suggesting that the investor base may be broadening.

The types of casualty risks in ILS transactions span a broad spectrum of lines of business, including automobile liability and physical damage, general liability, and workers' compensation. Generally, short- and medium-tailed lines with three- to five-year durations are targeted for inclusion. Because many casualty lines have tails that extend beyond that timeframe, a well-defined commutation mechanism is needed to conclude the transaction at its legal maturity.

August 30, 2022

Life/Annuity & Health Reinsurers Remain Well Capitalized as They Face Elevated Mortality

Segment earnings suffered in 2021 due to adverse mortality trends, but the impact on profits varied

Principal Takeaways

- The life reinsurance segment remains well capitalized.
- Mortality is elevated as a result of the indirect effects of the COVID-19 pandemic.
- The large, global market players still dominate but start-ups continue to make inroads.
- Health reinsurance is a small but growing area of the market.

The global life/annuity and health reinsurance segments continued to face challenges in 2022. COVID-19 and its related impacts contributed to elevated mortality in both the insured and general populations after starting 2020 with death claims at a manageable level. This was followed by a deadlier second wave in the US in late 2020, which proved to be more of an earnings event than a capital event. This trend continued into 2021. However, the segment has remained well capitalized through this pandemic. Although tragic and prolonged, COVID-19 has yet to show itself as a 1-in-200 year mortality event.

Impact of COVID-19 on Global Life Reinsurers

The COVID-19 pandemic is in its third year and continues to bring with it excess mortality affecting the profitability of life reinsurers. For mortality books, actual to expected death claim ratios that exceed 125% have not been uncommon. This excess mortality has been attributed to both the direct COVID-19 deaths and indirect effects of COVID-19 on death from other causes.

As the pandemic began, reinsurers generally fared relatively well as fatalities disproportionately occurred in the retired, elderly population. But as the pandemic lingered on, mortality among the US working age population increased. This phenomenon has been described as "deaths of despair," a term coined by Princeton economists Anne Case and Angus Deaton in work they published in March 2020, when COVID-19 had yet to emerge. Trends associated with this are now beginning to disproportionately affect the group life business. US life reinsurers are noticing a rise in a variety of causes of death, including liver disease, diabetes, and drug-related deaths.

Reinsurers' earnings in 2021 suffered from these adverse mortality trends, although the overall impact on the profits of the life and health segments varies. Offsets coming from earnings from other books such as longevity, health, and financial solutions businesses have played a role, but with the pandemic continuing in 2022, return metrics are also likely to continue to suffer negative impacts.

Questions remain about the near- and long-term impacts of pandemic-related mortality experience on assumptions and future pricing for the life reinsurance industry. Whether the pandemic will cause a permanent shift in mortality, or mortality will revert to pre-COVID

Analytical Contacts:
Michael Porcelli, FSA, Oldwick
+1 (908) 439-2200 Ext. 5548
Michael.Porcelli@ambest.com

Michael Adams, Oldwick
+1 (908) 439-2200 Ext. 5133
Michael.Adams@ambest.com

Mathilde Jakobsen, Amsterdam
Tel. +31 20 308 5427
Mathilde.Jakobsen
@ambest.com

Doniella Pliss, Oldwick
+1 (908) 439-2200 Ext. 5144
Doniella.Pliss@ambest.com

2022-098.9

levels once the pandemic has finally dissipated, remains to be seen. Early evidence indicates differing approaches to insurers' mortality assumptions, with some choosing to update assumptions and pricing for the pandemic experience while others have not.

In the US, the impact on mortality pricing has been only slight so far, suggesting mortality is expected to return to normal. A possible driver for static mortality pricing is the relationship component that has long been a feature of the US life reinsurance market. However, given the ease of repricing the group life product, this may be an area that could see premium increases. In the UK, there has been a greater expectation of a permanent shift in mortality. As such, this is being felt in the longevity market and has led to more price competition.

Exhibit 1a
Top US Life Reinsurers by Individual Life Insurance in Force, 2021

AMB#	Company Name	Individual Amount in Force ($000s)
009080	RGA Reinsurance Company	1,778,685,283
007283	Swiss Re Life & Health America Inc.	1,760,361,768
070253	SCOR Life US Group	1,700,933,330
006746	Munich American Reassurance Company	1,221,833,669
068031	Hannover Life Reassurance Co of America	1,210,828,591
006234	General Re Life Corporation	288,295,764
009791	Canada Life Assurance Company USB	245,332,693
061745	PartnerRe Life Reinsurance Co of America	104,787,766
060560	Wilton Reassurance Company	90,881,557
008863	Optimum Re Insurance Company	85,608,548
006976	Employers Reassurance Corporation	70,640,865
009096	M Life Insurance Company	61,571,521

Source: BESTLINK

Exhibit 1b
Top US Life Reinsurers by Group Life Insurance in Force, 2021

AMB#	Company Name	Group Amount in Force ($000s)
009791	Canada Life Assurance Company USB	3, 901,480,682
006746	Munich American Reassurance Company	369,452,713
007283	Swiss Re Life & Health American Inc.	97,434,801
009080	RGA Reinsurance Company	74,651,419
070253	SCOR Life US Group	38,323,652
006234	General Re Life Corporation	38,229,728
068031	Hannover Life Reassurance Co of America	1,901,835
006297	Union Fidelity Life Insurance Company	229,007
008491	Commonwealth annuity and Life Ins Co	142,790
008863	Optimum Re Insurance Company	32,426
006976	Employers Reassurance Corporation	15,860
060006	Southern Financial Life Insurance Co.	15,221

Source: BESTLINK

Global Life Reinsurer Market Dynamics

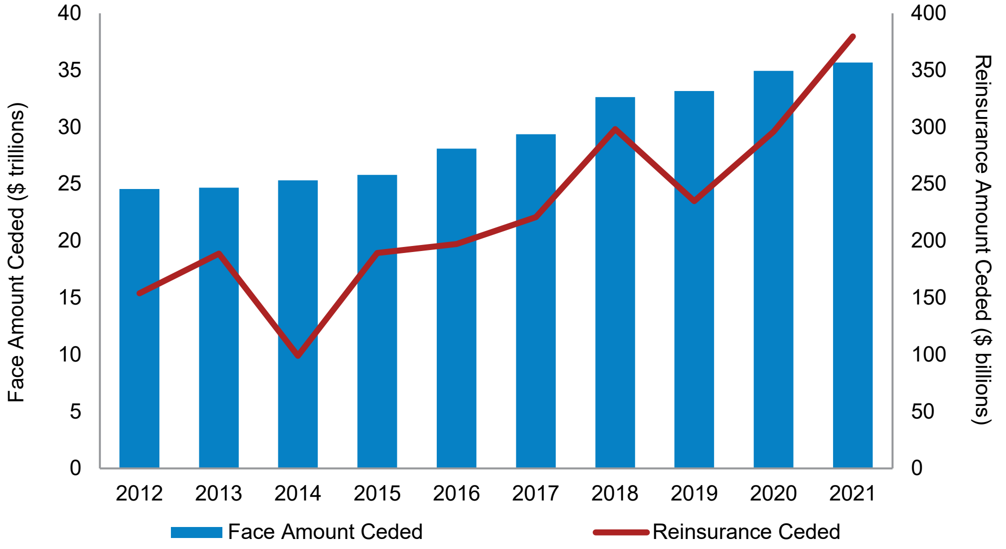
Almost all of the largest global reinsurers write both life and non-life business. For traditional life reinsurers, the overall market landscape has not changed very much, with the top tier global life reinsurers—Canada Life Re, General Re, Hannover Re, Munich Re, RGA, SCOR, and Swiss Re—maintaining their leading market positions by a relatively wide margin. These top-tier companies account for over 95% of the US individual (**Exhibit 1a**) and group life (**Exhibit 1b**) in force that is reinsured and similar market shares globally.

The US traditional life reinsurance market has been pressured by historically low cession rates for many years. However, the notable rise in US business ceded over the past few years continued in 2021 (**Exhibit 2**). Factors noted in prior years continue to drive this trend. They include the introduction of principle-based reserving, the 2017 CSO mortality table, and the growing use of automated underwriting, which entails the use of more sophisticated tools such as data analytics. With more companies relaxing some of their underwriting standards during the pandemic, including rising policy size thresholds for fluidless underwriting, life insurers have looked for assistance and guidance from traditional reinsurers. Helping these trends is a new consumer awareness of the importance of life insurance owing to the pandemic.

The ratios most often used to measure reliance on reinsurance to support capital needs are the *reinsurance leverage ratio*, *surplus relief ratio,* and *adjusted surplus relief ratio.*

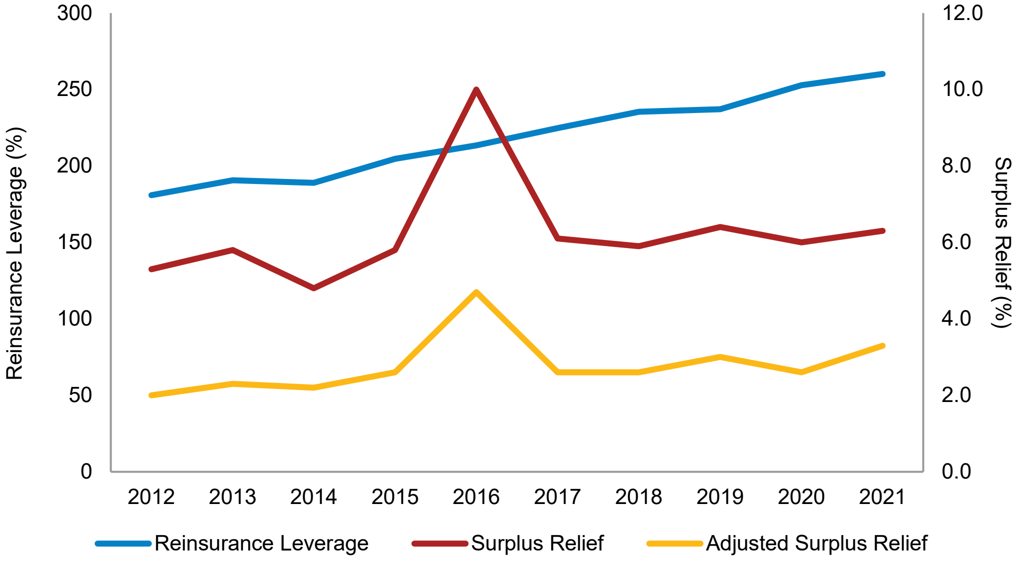
- The *reinsurance leverage ratio* is defined as aggregate reserves ceded plus amounts recoverable and funds held, divided by surplus.
- The *surplus relief ratio*, defined as reinsurance commissions and expense allowances on reinsurance ceded (reported as income on the statutory statement) divided by statutory surplus, illustrates the degree to which a company depends on reinsurance to maintain its surplus ratios (e.g., NAIC RBC/AM Best's BCAR).
- *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 2
US Reinsurance Ceded



Source: BESTLINK

Exhibit 3
US L/A Industry Reinsurance Leverage & Surplus Relief, 2012-2021



Source: BESTLINK

With the exception of 2016, the US industry has maintained a surplus relief ratio in a narrow band of 4.5% to 6.5% (Exhibit 3). An anomaly occurred in 2016, as several companies had some 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.

Reciprocal Status and the Life Segment

Over two years ago, the National Association of Insurance Commissioners placed the Bermuda Monetary Authority, Japanese Financial Services Agency, and Swiss Financial Market Supervisory Authority on the NAIC's list of reciprocal jurisdictions. This allowed for non-US reinsurers operating on a cross-border basis to post less than 100% collateral for US claims, depending on the non-US reinsurer's financial strength and several other prerequisites. Previously, state insurance regulators had required non-US reinsurers to hold 100% collateral in the US for the risks they assumed from US insurers. To date, only a few insurers have received reciprocal status and not all state insurance departments have approved the use of reciprocal jurisdictions. But several are actively pursuing this designation. Many newer start-ups do not yet satisfy all of the prerequisites for obtaining it, which includes two years of audited financial statements and a minimum of $250 million of capital and surplus.

Although AM Best does not expect a significant impact on the industry, this could give a leg up to reinsurers who have the designation, as it provides another layer of credibility. It may allow for more flexibility in structuring deals, including more straightforward coinsurance treaties instead of modco funds withheld transactions, which can cause some accounting friction and other investment-related restrictions. AM Best will continue to monitor this emerging trend, with a greater focus on how future transactions are structured.

Legislative Developments in 2022

n March, Senator Sherrod Brown of Ohio called on the US Treasury's Federal Insurance Office and the NAIC to study the growing presence of private equity fund owners in the L/A segment. Senator Brown stated his concern that these firms may threaten the security of retirees' incomes by taking more investment risk than traditional life insurers while operating under a less stringent capital regime. In his letter, he stated that "many workers who chose to invest their retirement savings in conservative and long-lived insurance firms now find themselves paying premiums to much riskier firms with less experience in the insurance business." Of particular note—and one that has been on many insurance regulators' radar for some time—is the issue of a relatively larger allocation to structured securities and how they are risk-adjusted under the Bermudian regulatory regime. Senator Brown requested a report to Congress no later than May 31, 2022.

In an 11-page response to Senator Brown, the NAIC stated that it has been tracking private equity firm influence on the L/A industry and found that there are no significant issues of which it is not already aware. The NAIC letter further states that "It should provide you and the public comfort to know the state insurance regulatory system has already been working on many of the concerns that you and others have highlighted, and we possess the tools and resources to address these issues."

Private equity and other asset manager firms have been more than happy to pick up unwanted blocks of more capital-intensive and interest rate-sensitive annuity and pension business for well over a decade now. This trend picked up during the pandemic, as low interest rates and volatile equity markets made it more difficult for publicly traded firms to hit their internal benchmarks and generate the necessary shareholder returns. In AM Best's 2021 report, *Insurance Companies Remain Prime Targets for Private Equity*, we noted that PE-backed insurers' assets increased to $604 billion in 2020, from $67.4 billion in 2011, accounting for 13% of the industry's annuity reserves at year-end 2020, up from 2.4% in 2011.

PE-backed firms are not the only ones establishing offshore reinsurance companies for capital and tax efficiencies. Several more established life insurers have also set up affiliated offshore reinsurance vehicles. Although AM Best reviews regulatory capital ratios as part of our analysis of companies' capital and liquidity adequacy, we rely primarily on our own proprietary capital and liquidity models in our in-depth analyses of reinsurers' investments.

Reinsurers' Asset Portfolios

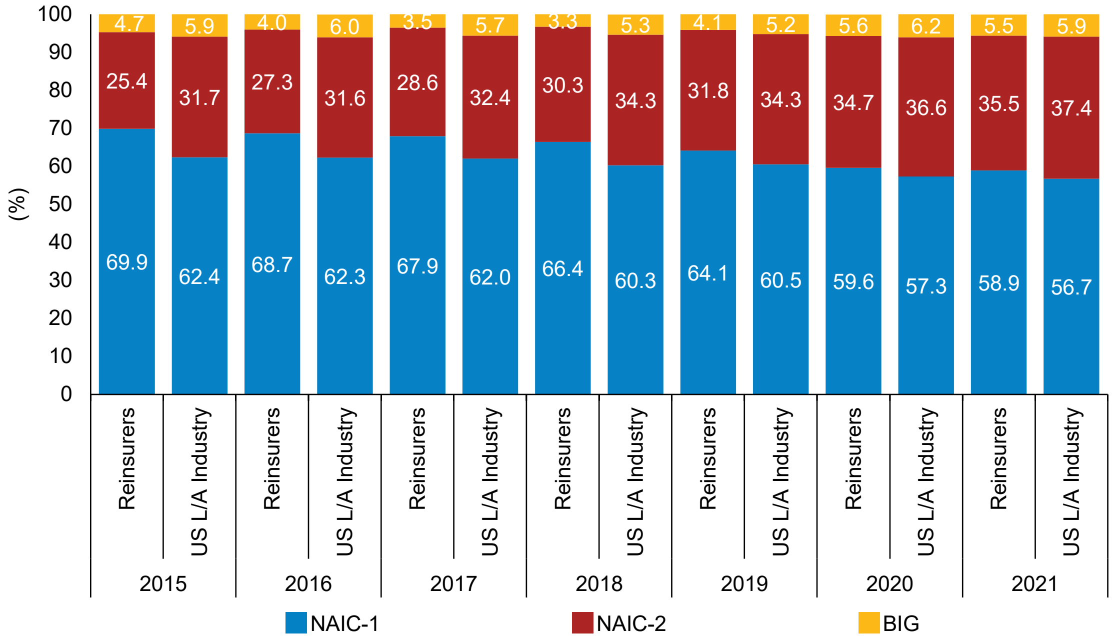
In addition to a more conservative investment portfolio through higher allocations to bonds and cash, the credit profiles of life reinsurers' bond portfolios have historically been of higher quality, with larger allocations to investment-grade bonds and smaller allocations to below-investment-grade bonds. However, reinsurers operating in the US life segment continue to increase their allocations to NAIC-2 (i.e., BBB) and below-investment grade bonds, as they look to address declining investment yields (**Exhibit 4**). Although life reinsurers have the same objective as primary writers seeking higher yields, some of this push may result from dabbling in the asset-intensive reinsurance marketplace. Reinsurers' exposure to mortgage loans (8.4%)—an asset class that AM Best views as less liquid than investment-grade bonds—remains lower than that of direct writers (12.7%) (**Exhibit 5**). Of particular concern in the COVID and post-COVID world are commercial mortgage loan portfolios with large exposures to the retail and travel and leisure sectors. Despite the conservativeness of reinsurers' portfolios compared with direct writers, net yields between the two groups do not differ greatly.

Health Reinsurance Demand Continues to Grow

The demand for health reinsurance solutions in the US and globally has grown significantly. Primary carriers face the growing pressure of high-cost claims that come with innovative treatments and new therapies. In addition, fast expansion of health premium, combined with relatively narrow margins, create capital pressure. COVID-19 somewhat slowed down the rate of global health premium expansion, but also enhanced the awareness of the value of health protection products, which is expected to fuel near-term growth. Reinsurance provides a solution for capital relief and allows primary carriers to focus on further growth.

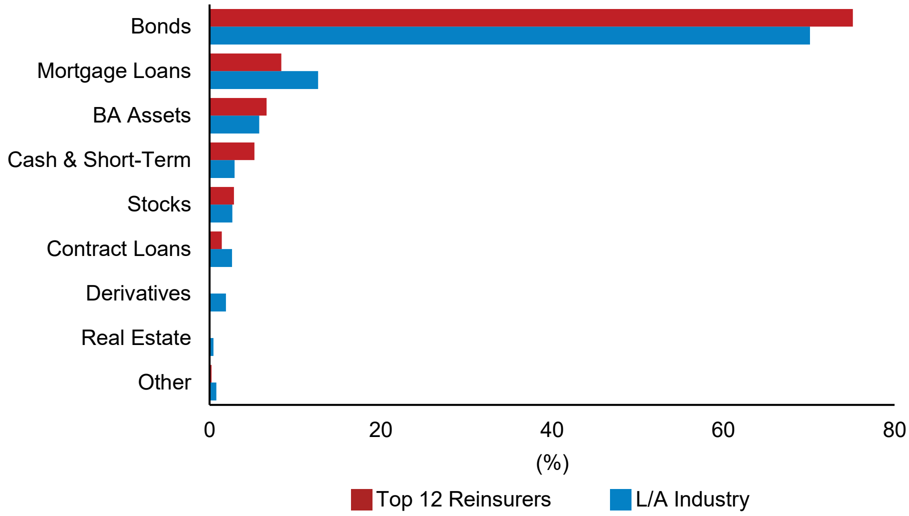
Exhibit 4

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



Source: BESTLINK

Exhibit 5
US Distribution of Invested Assets, 2021
Top 12 Reinsurers vs. Life/Annuity Segment



Source: BESTLINK

Health reinsurance remains 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, around 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 chose to retain premiums with little or no need for excess of loss protection.

More recently, however, the demand for health reinsurance has grown steadily. Emerging economies have been responsible for the majority of health insurance premium growth due to a rapid expansion of the middle class, especially in Asia, and demand for better access to healthcare. In addition, aging populations and a higher burden of chronic diseases worldwide fuel the need for more medical services.

What's more, the progress of biomedical sciences offers new sophisticated therapies, some in the form of ongoing and very costly maintenance treatments rather than a cure. Focus on premium growth has limited primary carriers' profitability and resulted in a lag in capital accumulation. These trends create reinsurance needs for both capital relief due to growing premium volume and protection against high-cost claims.

Major global providers of health reinsurance have reported accelerated growth in premiums over the past decade. In 2021, however, health reinsurance premium declined somewhat due in part to COVID-related disruptions in primary health products sales, especially in some emerging markets. Swiss Re, Hannover Re, RGA, and SCOR are some examples. Swiss Re's health premium as a share of total premium increased from 11% to 14% between 2011 and 2020. However, the share of health premium fell back to 11% in 2021, as health premium was flat while total premium grew 5%. EBIT for health business more than doubled in 2021 compared to 2020. Life premium declined from 35% to 24% of total between 2011 and 2021.

Hannover Re's morbidity premium grew 44% from 2017 to 2021, but the rate of growth slowed down to 4.7% in 2021. During the same period, total premium grew 21%; mortality premium, 0.5%; and longevity, 19%. The share of morbidity premium increased from 24% to 29% of total premium from 2017 to 2021, while mortality declined from 45% to 38%. However, morbidity products premium declined in the first quarter of 2022.

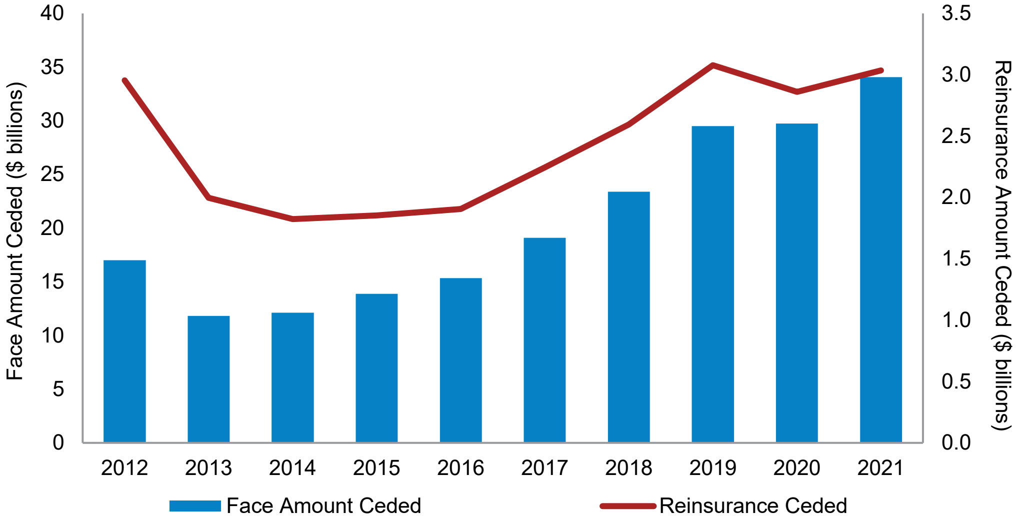
RGA's morbidity risks grew from 9% in 2005 to 25% in 2021, while mortality declined from 89% to 61%.

Finally, SCOR's health premium (critical illness, disability, long-term care) grew from 18% of premium in 2013 to 28% in 2021, while mortality premium declined from 69% to 56%, and longevity grew from 3% to 8%.

The US health reinsurance market has seen growth in both quota share and excess of loss reinsurance arrangements. The volume of ceded health premium (combined for health and L/H statutory filers) was slightly over $85 billion in 2021 and has almost doubled in the past ten years, but remained relatively flat as a share of direct premium, at around 6% (**Exhibit 6**).

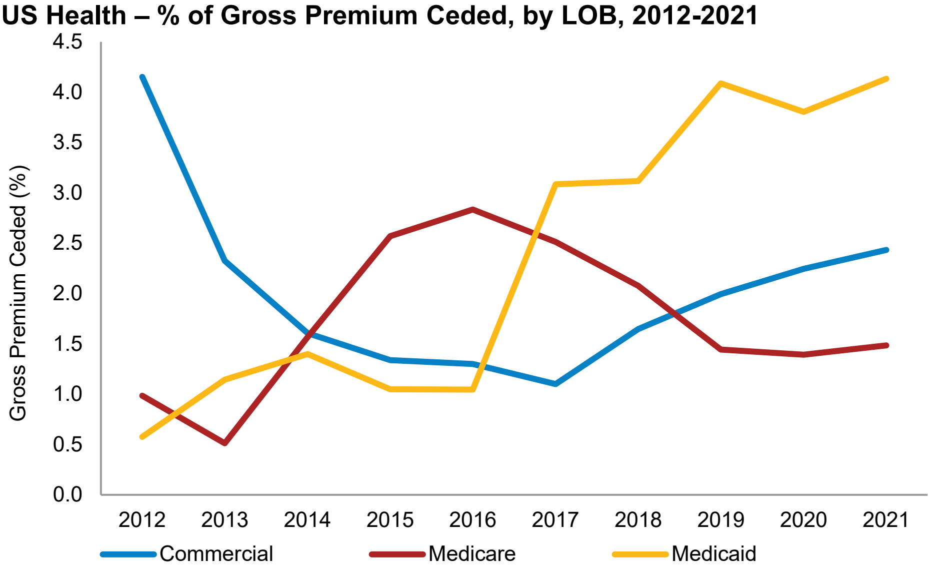
The growth was driven largely by government programs, in which premium expansion was more robust during the period. Ceded premium grew from 0.4% to 1.5% for the Medicare Advantage

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



Source: BESTLINK

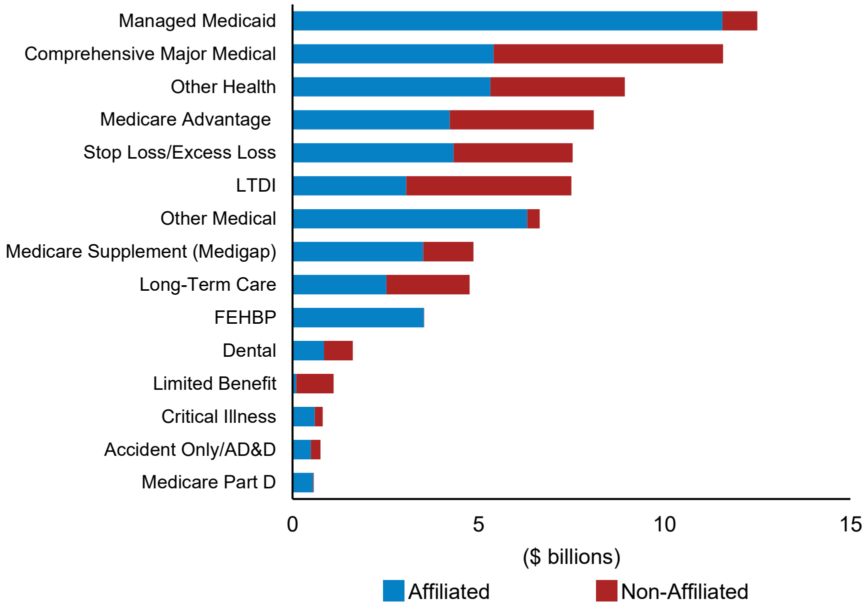
Exhibit 7
US Health – % of Gross Premium Ceded, by LOB, 2012-2021



Source: BESTLINK

segment and from 0.7% to 4.1% for Medicaid managed care (**Exhibit 7**). Other lines of business with large ceded volumes include stop-loss and Medicare Supplement (**Exhibit 8**).

Exhibit 8
US Health Premium Ceded by Product



Source: BESTLINK

A sizable amount of ceded premium in the US health market is reinsured to affiliates, as large health insurers usually have multiple subsidiaries and use the flexibility to optimize their internal capital and business flow. However, that varies by lines of business. The majority of Medicaid business is ceded to affiliates as multiple subsidiaries, including captives, are usually utilized to write and balance these products, while half the ceded premium for commercial, Medicare Advantage, and stop-loss is reinsured externally.

Structured Reinsurance – Opportunities for Capital Relief and Enhanced Financial Flexibility

The changing economics of the health insurance segment is creating more demand for structured reinsurance solutions in the US. The health insurance segment remains profitable but most of the growth in recent years has been generated in government lines of business—Medicare Advantage (MA) and Managed Medicaid. Historically, the profitability of the government segment has been lower compared to commercial. At the same time, MA and, especially, Medicaid are capital-intensive lines of business with capital requirements substantially higher than commercial premium.

The MA segment will continue to expand rapidly given the aging population and value proposition of that product. Competition in the MA space remains very intense, with more companies at local, regional, and national levels entering the line of business. The competition and price sensitivity of the senior population limit margin opportunities, which will make the capital accumulation needed to support very high premium volume challenging.

Reinsurers view MA as an attractive opportunity for structured products growth and have the potential to play a larger role in the segment. Medicaid is less attractive for reinsurers due to fluctuating profitability, contract limitations on margins, and the high exposure to regulatory risks. Structured reinsurance arrangements are used also for individual ACA and stop-loss lines of business.

Structured reinsurance can be used to fund a portion of the capital structure, but unlike debt, it does not affect financial leverage. Primary carriers retain all the future profits minus a reinsurance financing charge. The arrangement is usually multi-year, and if a block of reinsured business is unprofitable, the reinsurer will set up a loss carry-forward against future profits.

Primary carriers can use structured reinsurance to write more premium or free up capital for other purposes—M&A, investment in the business, return to shareholders. Alternatively, structured reinsurance allows the primary carrier to meet risk-based capital requirements without turning to more expensive sources like borrowing, which limits business growth opportunities, or using capital for other needs.

Structured reinsurance is getting more traction among large US carriers. Among publicly traded managed care carriers, CVS/Aetna Inc. has shown a consistent appetite for capital relief through structured solutions. The reinsurance of over $3 billion of MA premium to Hannover Re following its merger with CVS and subsequent accelerated deleveraging, allowed Aetna to grow the MA segment without pressuring capital. In addition, Aetna continues to use its wholly owned captive, Health Re, for an insurance-linked security (ILS) transaction to protect against potential spikes in its commercial medical loss ratio. The ILS arrangement has been in place for over a decade and has allowed Aetna to hold less capital at the lead regulated entity.

Despite the high degree of large carrier dominance, the US health insurance field saw a number of new entrants in recent years, including three new publicly traded health insurers in 2021. Given the high capital intensity of health insurance, combined with relatively narrow margins, newcomers usually face capital limitations and a need for premium relief.

The negative impact of high COVID expenses on the health insurance industry underscores the need for additional capital support. In 2020, the health insurance industry posted record earnings, driven by the deferral of elective medical services. In addition, since 2020, the industry has experienced substantial premium growth in Managed Medicaid enrollment/premiums following the expansion of eligibility, increased government subsidies, and the inability of states to conduct a redetermination of those covered by the program, which led to an improvement in both absolute and risk-adjusted capital in 2020. However, in 2021, underwriting results deteriorated significantly due to much higher COVID claims and general utilization getting closer to historical levels. The commercial segment underwriting earnings dropped from historical highs in 2020 to barely above breakeven in 2021.

As a result, risk-adjusted capitalization declined for the first time since 2016. Results are projected to improve in 2022, but given market developments thus far in 2022, uncertainty about COVID costs and possible realized and unrealized losses on investment portfolios remains. At the same time, large and medium-sized industry participants are under pressure to enhance vertical integration capabilities and invest in innovation to improve the efficiency of care delivery and outcomes.

Companies look for flexibility to deploy capital while supporting the growth of premium in government programs. For the past several years, large and some medium-sized carriers have been taking advantage of the low cost of debt to meet their capital needs. With rising interest rates, however, new debt will result in much higher interest expenses, which may expand the role of structured reinsurance for capital relief and meeting regulatory requirements.

Pressure from Rising High-Cost Claims

Another reason for the growing demand for reinsurance in the US health market is the rapid 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.

According to Sun Life's most recent high-cost claims report, from 2018 to 2021, the number of members with claims above $1 million increased 37%. The growth of $1 million-plus claims has accelerated more recently, rising by 21% from 2020 to 2021. The age distribution of high-cost claims has been shifting toward children, as new therapies emerge for some severe genetic diseases. In 2021, children under the age of two accounted for 26% of claims over $1 million. Some of these treatments are not a cure, meaning that once the condition is diagnosed the catastrophic costs may continue for a number of years.

The number of transplants in the US—high cost medical procedures that in many cases are reinsured—increased from about 30,000 in 2014 to slightly over 41,000 in 2021. Between 2010 and 2020, transplant procedures grew more than 35%, compared with under 25% in the prior decade.

The rise in large claims has had a greater impact on stop-loss carriers, since they account for a larger share of these insurers' claims. With the active transition from fully insured to self-funded in the commercial segment, the volume of stop-loss premium has grown, generating more demand for reinsurance.

Smaller stop-loss and major medical carriers have traditionally relied on excess of loss reinsurance protection even before the rise in large claims. In recent years, however, 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. The cost of excess of loss reinsurance has been growing because of the growth in high-cost claims. Primary carriers have been gradually increasing the deductibles to balance the rate increases.

Another area of demand for health reinsurance is value-based care arrangements. Each year, primary insurance carriers report growth in value-based medical spend for which payments are tied to quality outcomes and risk is shared with providers. Medical providers are turning to reinsurance to limit their potential exposure through excess of loss type protection. A number of reinsurers are participating in this small but growing segment.

In response to market demand, reinsurers have been building up their expertise on both predicting and managing high-cost medical conditions to set appropriate pricing and limit losses. Innovative case management of complex, high-cost claims has become a value-added service offered to primary carriers seeking excess of loss protection.

Since medical reinsurance was relatively limited until recently, the vast majority of historical claims data in the US belongs to primary carriers. Reinsurers have developed their own data analytics operations, and some have 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 subsidiary Verily and became a minority investor in Granular Insurance, a company that uses precision risk technology to improve the performance of stop-loss products.

Growth in Emerging Health Insurance Markets

Globally, health reinsurance has been used primarily to support premium growth. Much of the growth of reinsurance demand for health products in emerging markets has been generated in Asia by fast premium expansion of fixed benefits products such as critical illness and personal accident. These products have relatively low barriers to entry and are priced to low margins as many companies are focused on growth. Low policy limits ensure there is no exposure to large claims. However, because capital accumulation has been an issue, reinsurance is being used to provide capital relief and ensure compliance with regulatory capital requirements.

Morbidity is widely thought to have the most significant protection gap in Asian markets. The growing frequency of chronic diseases, combined with poor access to advanced medical care, may affect individuals' ability to be productive and impede a transition to middle-class living. The health business has created opportunities for national rather than global carriers, but 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 an innovative health ecosystem, with collaboration among insurers, medical providers, and less traditional distribution players such as technology and social media companies. In China and southeast Asia, these partnerships 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. Fixed benefits products have gained wide adoption, but the growth of more comprehensive reimbursement products in Asia has been slow. Despite demand for full medical reimbursement products, primary carriers have been reluctant to offer reimbursement products owing to a lack of reliable data 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 in addition to traditional reinsurance protection.

On a broader scale, global reinsurers view the health segment as an important pillar of ESG (Environmental, social, and governance) and sustainability initiatives, such as closing protection gaps, improving wellbeing solutions, and supporting aging populations. More recently, mental health has come into focus due to its severe impact on individuals, societies, and businesses and has been added to the list of major risks by several global reinsurance carriers. Reinsurers provide primary carriers enhanced support to expand mental health assessments and implement proactive solutions to curb future claims costs.

AM Best believes reinsurers will continue to play an important role in supporting the ongoing growth of the health insurance segment, not only through capital support and cost reduction solutions, but also by identifying and helping to manage emerging risks.

Other Trends

Economic uncertainty could provide opportunities for reinsurers, particularly those with a focus on structured reinsurance business models. A sharp hike in interest rates could be disruptive and lead to a greater demand from the reinsurance market as a source of capital. Reinsurers can also provide capabilities with asset-liability management, as well as support during periods of dislocation. AM Best believes that, given the change in accounting regimes, mortality shifts due to the COVID-19 pandemic, and economic and demographic environments, reinsurers will continue to grow their operations and assist direct writers as they adapt to new realities.

People issues and the war for talent remain on the minds of reinsurers as well as primary writers. These concerns were prominent early this year at the annual ReFocus conference and have been a key issue throughout 2022. Start-ups face hiring needs as they build out their teams, while established reinsurers continue to face the risk of losing experienced talent in a robust job market. The problem is exacerbated in Bermuda, where a small population is presenting growing opportunities for senior positions as new life reinsurers emerge with licensed entities on the island. Furthering the talent squeeze is the deployment of people to accounting change projects such as IFRS-17 and Long Duration Targeted Improvements implementation. With additional resources devoted to accounting changes, workloads will remain a challenge for employers, and smaller companies are likely to feel the greatest pain.

August 30, 2022

Meeting Cost of Capital Elusive for South and Southeast Asian Reinsurers Despite Improved Underwriting Performance

Inflationary pressures may diminish the underwriting improvements made by reinsurers

Principal Takeaways

- Underwriting performance improved in 2021, but return-on-equity declined due to weakened investment returns.
- Reinsurers continue to be well-capitalised albeit capacity was provided selectively and remained constrained for poor performing accounts during 2022 renewals.
- The impact of persistent inflation on underwriting performance could outstrip increases in investment returns, which may add to challenges in meeting cost of capital.

Strong competition and excess capacity have challenged the technical profitability of South and Southeast Asia (S/SEA) reinsurance markets for many years. Nonetheless, the underwriting performance of reinsurance players in the region has exhibited improving trends recently, driven by focus on disciplined underwriting, improved pricing conditions and manageable losses from catastrophe activity. However, volatile investment returns and expectations of a prolonged inflationary environment may weaken profitability. Although AM Best expects the segment to see stable growth, supported by the expansion of primary insurance markets with economic recovery and increased insurance penetration, S/SEA reinsurers are likely to face headwinds in meeting their cost of capital over the intermediate term.

Reinsurance Demand Supported by Domestic and International Capacity

The growth of primary insurance markets over recent years and elevated natural catastrophe exposure in parts of S/SEA have driven the increased demand for reinsurance protection in the region, which has been met by both domestic and international reinsurance players.

A number of S/SEA reinsurers were established in line with government mandates to provide reinsurance capacity to domestic cedents, as well as retain more insurance risk in the country. These reinsurers often benefit from compulsory cessions or at least preferential access to local business (**Exhibit 1**). However, the level of compulsory cessions have seen a gradual reduction over the years in many markets, creating a more level playing field and allowing for the participation of regional and foreign reinsurers. Most recently in April 2022, India's insurance regulator reduced the obligatory cession for general insurance business to General Insurance Corporation of India from 5% to 4%.

In 2021, there was a contraction of capacity in the S/SEA reinsurance market, with several players not renewing loss-making accounts and undertaking portfolio pruning actions to improve technical profitability. Nonetheless, new capacity was added in the region with Himalayan Reinsurance Limited starting operations in Nepal in 2021. In addition, promoters of Fairfax group and Go Digit General Insurance have recently applied to the regulator for approval to set up a private domestic reinsurance company in India. If approved, the new

Analytical Contact:
Kanika Thukral, Singapore
+65 6303 5025
Kanika.Thukral@ambest.com

Michael Dunckley, Singapore
+65 6303 5020
Michael.Dunckley
@ambest.com

Editorial Manager:
Dawn Sit, Singapore
+65 6303 5015
Dawn.Sit@ambest.com

2022-098.10

Exhibit 1
S/SEA Domestic Cession Arrangements

Country	Nature of Cession	Recipient Reinsurers
Philippines	At least 10% of the outward reinsurance placed with foreign reinsurers must first be offered for cession to the National Reinsurance Corporation of the Philippines	National Reinsurance Corp of the Philippines
Malaysia	"Voluntary" cession of 2.5% by local insurers	Malaysian Reinsurance Berhad
India	“Obligatory” cession of 4% by local insurers. In addition, General Insurance Corporation of India benefits from the right of first refusal on the remaining reinsurance business placed in India.	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
Nepal	“Mandatory” cession of at least 20% (in total) by local insurers to the two Nepalese reinsurers with provision to seek further reinsurance support if required. However, mandatory cession rates are expected to dimish over the medium to long term.	Nepal Re-Insurance Company Ltd, Himalayan Reinsurance Limited

Source: AM Best data and research

entity will be the second domestic reinsurance company and the only privately owned reinsurer in India. Considering that the addition of new capacity and portfolio pruning activities are largely completed, AM Best expects stable growth of the regional reinsurance market over the medium to long term.

International reinsurance players have also supported the development of the S/SEA reinsurance market as they consider Asia-Pacific instrumental to their growth and portfolio diversification strategies. International reinsurers remain crucial for 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 size of these gross exposures.

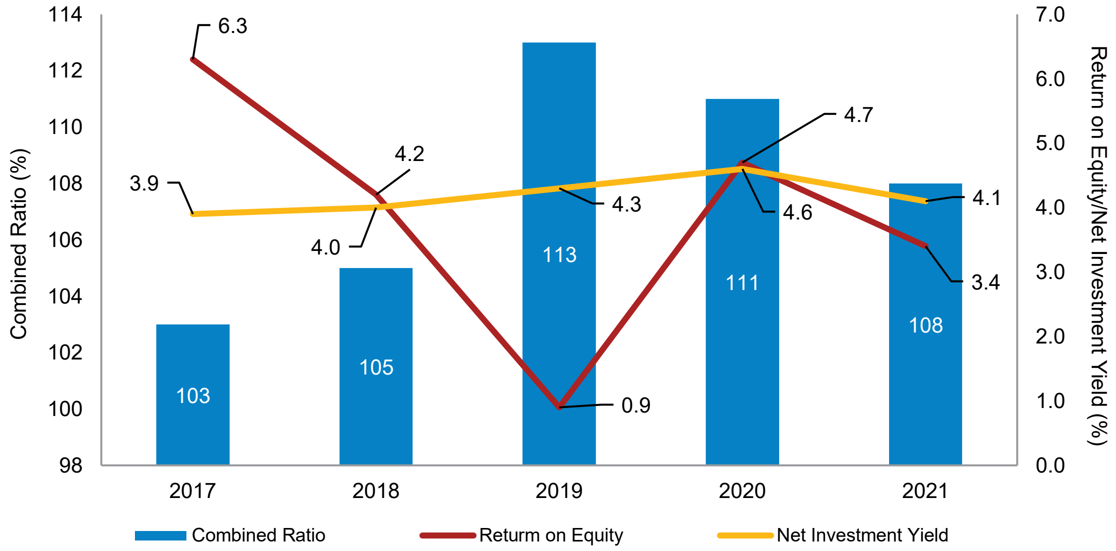
Due to the scale of their operations, large international reinsurers have more resources to devote to innovation than smaller local and regional S/SEA players. As a result, they have typically led the way in developing more advanced insurance covers, and the use of alternative reinsurance structures. In 2021 and 2022, MS Amlin launched Singapore-domiciled special purpose reinsurance vehicles (SPRVs), Phoenix 1 and Phoenix 2, to provide capacity to a select reinsurance portfolio written via its underwriting platform in Singapore. Both SPRVs were launched using the Monetary Authority of Singapore’s insurance-linked securities grant scheme.

Improved Loss Experience During the Pandemic

The attritional loss experience of S/SEA primary insurance markets improved in 2020 and 2021 due to a decline in travel, motor and workers compensation claims, which were attributed to movement restrictions during the pandemic. S/SEA reinsurers benefitted from the performance of these lines and experienced a negligible to manageable impact from COVID-19 related business interruption claims as most reinsurers in Asia had incorporated such exclusions in policy wordings following the 2003 severe acute respiratory syndrome (SARS) outbreak.

However in 2021, improvements in underwriting performance of these lines were partly offset by higher frequency and severity of health claims observed in several countries, particularly in Thailand and India due to the highly transmissible waves of COVID-19 emerging during the year. In addition, the technical performance of Indonesian reinsurers was weakened due to the negative impact of credit insurance claims arising from higher default rates given the economic fallout from the pandemic.

Exhibit 2
S/SEA Reinsurers' Operating Performance



Note: The scope of study covers select non-life focused reinsurers domiciled in S/SEA (excludes business written by branches and subsidiaries of international reinsurers). 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

With respect to cat losses, 2020 and 2021 were manageable years for S/SEA reinsurers given the measures taken in recent years to manage down exposures. Few regional reinsurers in S/SEA have maintained diversified underwriting portfolios with cat exposures spread across Asia and internationally. After elevated loss incidence in 2018 and 2019, largely from Japanese and global cats, many reinsurers in the region have reduced capacity provided to cat exposed business in recent years and have heavily relied on retrocession to protect underwriting profitability and capital. The market also saw significant rate increases on loss impacted accounts during the 2021 renewal seasons. Given these measures, regional S/SEA reinsurance companies were not materially impacted by recent significant events, such as the Tohoku earthquake (Japan) and the Henan floods (China). The impacts of cat events reported in the Philippines (Typhoon Rai), India (Cyclone Tauktae) and Malaysia floods were largely limited to local reinsurers of these countries.

Given the improved attritional and cat claims experience, S/SEA reinsurers demonstrated improvement in the overall combined ratio for 2020 and 2021, compared to 2018 and 2019 (**Exhibit 2**). However, underwriting performance remains pressured with continued reliance on investments to achieve bottom line profitability.

Inflation to Exacerbate Pressures in Meeting Cost of Capital

Despite the improvement in technical performance, the overall return on equity declined in 2021, due to low investment yields amid a prolonged low interest rate environment in most S/SEA markets. Although investment returns are expected to increase over the near term alongside a recovery in interest rates, rising inflation in the region is likely to pose challenges in meeting the cost of capital prospectively. Inflation-related impacts on underwriting performance could outstrip any benefits from higher investment yields. AM Best expects social inflation to have a low impact on S/SEA reinsurers; however, their non-life portfolios are largely exposed to the increase in claims severity due to a rise in wages, repair costs and medical inflation. Although these impacts are likely to be managed through rate increases by both primary insurers and reinsurers, the impact on long-tail businesses may be more pronounced, with persistent inflation leading to reserve deficiencies.

In general, the management teams of S/SEA reinsurers are aware of the challenges posed by inflation and will be able to take steps to mitigate its impact on operating performance. These include strengthening expense management, as well as maintaining disciplined underwriting, pricing and reserving.

S/SEA Reinsurance 2022 Renewals

The S/SEA reinsurers have approached key renewal seasons in 2022 with a focus on achieving technical profitability, due to expectations of a challenging investment landscape and an inflationary environment. Following several years of soft market conditions, and persistent pressure on the underwriting performance of many reinsurers, the S/SEA reinsurance market appeared to have reached a market correction phase in 2021; during this time, adjustments to terms, conditions and pricing had been largely corrective in nature and focused on loss-affected accounts. The focus of renewal negotiations in 2022 was therefore to achieve further improvement in pricing, despite robust traditional capital supporting abundant reinsurance capacity.

Property remains the dominant line of business for treaty reinsurance in S/SEA. January 2022 renewals largely saw low single digit risk adjusted rate increases for loss-free excess of loss renewals in the property class, while loss-hit accounts saw notable rate increases, in some instances exceeding 10%.

During the April 2022 renewal season, loss-free property excess-of-loss programmes in Philippines saw a low single digit increase in average risk-adjusted rates, with loss-hit accounts seeing significant rate increases exceeding 20%. In India, pricing discipline was evident with flat to risk adjusted rate increases of up to 20% for both loss-free and loss-hit accounts. Given that in recent periods, price increases for the property line were observed in the primary insurance market as well, AM Best is of the view that the recent rate increases are likely to benefit the underwriting performance of S/SEA reinsurers. However, the overall 2022 renewal experience may continue to fall short of achieving hard market conditions, mainly due to inflationary trends.

The year 2021 proved to be another year of high loss incidence, particularly due to secondary perils, and limited capacity in the global retrocession market. Consequently, the retrocession price

Exhibit 3

S/SEA Reinsurers – AM Best-Rated Companies

Ratings as of 5 August 2022

Financial Size Category	AMB#	AMB Company Name	Country of Domicile	Best's Long-Term Issuer Credit Rating (ICR)	Best's Financial Strength Rating (FSR)	Best's ICR & FSR Action	Best's ICR and FSR Outlook	Rating Effective Date
VI ($25 million to $50 million)	91541	PVI Reinsurance Joint-stock Corporation	Vietnam	bbb	B++	Affirmed	Stable	2/11/2022
VI ($25 million to $50 million)	91691	Thaire Life Assurance Public Co Ltd	Thailand	a-	A-	Affirmed	Negative	7/22/2021
VII ($50 million to $100 million)	85568	Asian Reinsurance Corporation	Thailand	bbb-	B+	Affirmed	Stable	5/20/2022
VII ($50 million to $100 million)	74846	Himalayan Reinsurance Limited	Nepal	bb+	B	Assigned	Stable	2/11/2022
VIII ($100 million to $250 million)	86771	National Reinsurance Corp of Philippines	Philippines	bbb	B++	Affirmed	Stable	6/10/2022
VIII ($100 million to $250 million)	86913	Labuan Reinsurance (L) Ltd	Malaysia	a-	A-	Affirmed	Stable	12/8/2021
VIII ($100 million to $250 million)	91508	Vietnam National Reinsurance Corp	Vietnam	bbb+	B++	Affirmed	Stable	4/22/2022
VIII ($100 million to $250 million)	85224	Singapore Reinsurance Corp Ltd	Singapore	a	A	Upgraded	Stable	8/5/2022
IX ($250 million to $500 million)	78303	Malaysian Reinsurance Berhad	Malaysia	a-	A-	Affirmed	Stable	9/12/2021
XV ($2 billion or greater)	86041	General Insurance Corporation of India	India	bbb+	B++	Affirmed	Stable	9/17/2021

Note: Table excludes branches and subsidiaries of international groups that are assigned the group (g) affiliation code.
Source: AM Best data and research

hardening trend continued during January 2022 renewals with double-digit increases seen in risk-adjusted retrocession rates for loss-hit accounts. S/SEA reinsurers have not significantly amended their retrocession strategies and continue to rely on traditional forms of retrocession, despite increasing costs. Instead, market players have sought to focus on prudent exposure management while maintaining or moderately increasing retention levels in view of these retrocession conditions.

Rating Considerations

All AM Best rated reinsurers domiciled in S/SEA have Financial Strength Ratings (FSRs) of at least "B" (**Exhibit 3**). Capital requirements for reinsurers in the region are typically driven by underwriting risk, although some market participants 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 volatility is generally the key area of pressure for many rated reinsurers in the region, however, with improvements in underwriting profitability, rating outlooks for a few reinsurers have been revised to stable from negative over the past 12 months.

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

Prospective Challenges and Expectations

Overall, AM Best expects the S/SEA reinsurance market to face several headwinds over the medium term. More recent market dynamics including a challenging investment landscape and a high inflationary environment could weaken reinsurers' prospective operating performance.

Even with rate improvements seen in the 2021 and 2022 renewal seasons, AM Best is of the view that pricing increases may not be sufficient for S/SEA reinsurers to achieve significant improvements in technical profitability given expected increase in loss costs, if an inflationary environment persists over the medium term. In addition with rising retrocession costs and lacklustre investment returns, reinsurers may continue to struggle to meet their cost of capital. As such, to achieve improvements in operating performance over the medium term, reinsurers will need a prudent investment and retrocession strategy, along with continued underwriting discipline.

Reinsurance Solutions Supporting Disaster Financing in Under-penetrated S/SEA Countries

According to Swiss Re Institute's natural catastrophe resilience index, emerging Asia-Pacific is the least resilient region, with around 95% of cat losses unprotected by insurance. 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 launched initiatives with the support of reinsurers aimed at narrowing the insurance protection gap for cat and other large risks.

Philippines, one of the most cat prone countries in the S/SEA region is developing the Philippines Catastrophe Insurance Facility (PCIF) for non-life insurers in the country to redirect cat risks to the facility. The PCIF will then share the pooled risks with participating companies. In January 2020, the Philippines' Insurance Commission, together with the Philippine Insurers and Reinsurers Association and the National Reinsurance Corporation of the Philippines signed a Memorandum of Understanding to formalise the PCIF and review minimum cat risk insurance rates.

In 2022, the Philippines government also received a USD52.5 million payout under its World Bank issued cat bond, after calculation agent AIR Worldwide determined that super typhoon Rai breached the trigger for wind. Swiss Re and Munich Re are understood to have been the structuring agents, placement agents and joint managers for this cat bond issuance.

Similar to Philippines, Malaysia is also looking to develop disaster financing solutions, particularly after the December 2021 floods for which economic losses have been estimated to exceed USD1 billion with insurance covering less than a quarter of it. In recognising that the burden of disaster financing largely falls on the government, the country's National Disaster Management Agency has approached Malaysian Re to devise solutions for managing flood risk, including a potential flood pool.

Indonesia launched an earthquake pool in 2003, in which participation was made mandatory for all insurers and reinsurers. In 2004, the pool vehicle was converted into a company, PT. Asuransi MAIPARK Indonesia. Since then, besides its function as a reinsurer, the company engages in research support, educating the public about natural disasters, risk mitigation and more stringent and safer construction standards and building codes.

India is another example, wherein the state government of Nagaland is devising a public-private disaster risk insurance scheme with domestic insurer TATA AIG Insurance Company Ltd, and reinsurance partner Swiss Re. The scheme will cover implementation of parametric insurance solutions for the monsoon season and earthquakes in the state. In addition, the country's state owned reinsurer, GIC Re, leads a terrorism pool along with several general insurers, providing cover for over USD125 million.

August 29, 2022

Asia-Pacific's Major Reinsurers Deliver Stable Performances Amid Growing Competition and Uncertainty

Alternative capital solutions can offer growth opportunities and bring regional players to par with global peers

Principal Takeaways

- Major Asia-Pacific reinsurers continued to deliver more stable operating ratios and return on equity in 2021 as compared to global peers.
- Regional players hold stable home market positions while pursuing organic and inorganic growth through overseas expansion and M&A.
- In addition to having robust risk-adjusted capitalisation, companies have been actively diversifying capital sources, such as tapping into the alternative capital market to support retrocession needs.

Despite the growing threat of climate risks, global economic uncertainties, as well as increasing competition from global reinsurers, major reinsurers in Asia-Pacific have generally remained resilient. According to AM Best's Asia-Pacific reinsurance composite (a grouping of selected Asia Pacific domiciled reinsurers from the Top 50 Reinsurers) (**Exhibit 1**), most major reinsurance companies in the region continue to deliver more stable returns than global peers. For Asia-Pacific, the composite's five-year average return on equity is 5.8%, having ranged from 4.9% to 6.6% between 2017 and 2021. While the loss ratio shows an increasing trend, this is offset by a decreasing expense ratio, resulting in a stable combined ratio that hovers around the technical break-even point. Investment returns remains stable, hence the composite operating ratio has been stable at around 94%.

Exhibit 1
Global Reinsurance — Asia-Pacific Market Financial Indicators

	5-Year Average	2021	2020	2019	2018	2017
NPW Growth (Total) [2]	9.0%	6.6%	12.3%	14.9%	2.2%	N/A
NPW Growth (P/C Only) [2]	8.7%	5.1%	13.9%	8.8%	7.2%	N/A
Reinsurance % of NPE	92.6%	94.0%	93.4%	93.4%	91.0%	91.0%
Shareholders' Equity Growth [2]	6.7%	0.5%	19.0%	8.0%	-0.8%	N/A
Loss Ratio	72.8	75.7	74.7	73.4	70.3	69.7
Expense Ratio	27.9	25.6	26.2	27.5	30.1	30.2
Combined Ratio	100.7	101.4	100.9	101.0	100.4	99.9
Net Investment Ratio [1]	6.6	7.3	7.2	6.5	6.0	5.9
Operating Ratio	94.1	94.0	93.7	94.4	94.4	94.0
Return on Equity	5.8%	6.6%	5.7%	5.6%	4.9%	6.0%
Return on Revenue	3.6%	4.1%	3.4%	3.4%	3.2%	3.9%
NPW (P/C only) to Equity (End of Period)	149.2	153.3	146.6	153.2	152.2	140.9
Net Reserves to Equity (End of Period)	181.8	205.5	179.1	181.4	176.4	166.9
Gross Reserves to Equity (End of Period)	221.6	248.1	224.2	221.6	215.4	198.7

[1] Net investment ratio based on P/C NPE.
[2] Composite established in 2017
Source: AM Best data and research

Analytical Contact:
Christie Lee, Hong Kong
+852 2827 3413
Christie.Lee@ambest.com

Editorial Manager:
Dawn Sit, Singapore
+65 6303 5015
Dawn.Sit@ambest.com

2022-098.11

Based on the operating performance of reinsurers in the composite, 2022 is shaping up to be another profitable year thanks to benign natural catastrophe activity in the region during the first half of the year. Reinsurance pricing momentum in most markets is expected to firmly support premium rate increases for the 2023 renewal seasons, given the recent years of underperformance and retrocession capacity reduction in the global reinsurance market, particularly for retrocession aggregate coverage. For instance, property reinsurance rates in Japan continued to harden for a fourth year to pay back losses sustained from typhoon events in 2018 and 2019, albeit at a moderate pace relative to the past three years.

China's implementation of its China Risk-Oriented Solvency System (C-ROSS) Phase 2 in December 2021 presents opportunities for Asia-Pacific reinsurers to provide capital relief support to cedents potentially facing solvency pressures. Nevertheless, factors that may offset operating performance include China's economic slowdown as a result of its zero COVID policy; poor equity market performance in 2022 year to date; and higher retrocession costs after pricing in the high global inflation and a strong US dollar.

The underwriting results of Korean Reinsurance Company and China Property & Casualty Reinsurance Company (China Re P&C), the P/C subsidiary of China Reinsurance (Group) Corporation (China Re), dominate the underwriting performance of AM Best's composite of Asia-Pacific reinsurance companies given their ranking among the top 50 global reinsurers. Most reinsurers in the composite have benefitted from strong economic growth in their home markets in the past decades, by providing capacity to cedents for capital relief via proportional treaties. Because of a large book of proportional treaties, the overall combined ratio is generally very stable and hovers around 100%, attributed to loss absorbing features in proportional treaty commission schemes, such as a wide sliding scale and loss participation. These secure a stable but thin profit margin in the domestic reinsurers' proportional treaty book.

Global Expansion Strategies Shaped by Nat Cat Risks in Home Markets

Domestic/national reinsurers typically have a concentration on nat cat risks in their respective home markets due to their sizeable traditional property portfolios that include motor, commercial and residential property, and engineering lines. Consequently, nat cat risk accumulation in home markets was previously one of the most significant top risks. Therefore, major Asia-Pacific reinsurers tend to share a common theme in their business strategies with regard to global expansion and portfolio diversification.

AM Best notes that reinsurers in the region have put in years of effort to diversify growth, including China Re's acquisition of Chaucer Group, as well as several regional reinsurers converting their overseas branches to subsidiaries to perform active marketing and underwriting. China Re's acquisition of Chaucer Group (which include The Hanover Insurance Holdings Ltd., Chaucer Insurance Company Designated Activity Company, and The Hanover Australia Holding Company Pty Ltd) expanded its international footprint to account for one third of its P/C reinsurance book. Regional market players are now reaping the benefits from a business profile that is more balanced between domestic and overseas contributions, as well as life and non-life business. If one geographical area, such as their home market, performs badly in a year—for example, due to natural catastrophe events—the operating performance could be offset by good performance from another class of business or region. Diversification enhances returns stability, cost of capital and pricing competitiveness.

However, Asia-Pacific reinsurers' overseas portfolios are often allocated differently from many global and US-Bermuda peers given their conservative appetite for overseas nat cat risks. This is evident from significant global loss events including the US hurricanes (Harvey, Irma and Maria in

2017) and COVID-19 business interruption losses in 2020, which led to technical losses for many global reinsurance companies. But the impacts from those events were not quite as severe on major Asia-Pacific reinsurers. **Exhibit 2** shows a list of the reported major nat cat and loss events in and outside the region that have impacted Asia-Pacific reinsurers over the past few years.

As mentioned, the technical balance of reinsurers in the Asia-Pacific composite hovers around break-even point, with a stable and positive return on equity (ROE) (five-year average of 5.8%, 2017-2021) that is supported by a stable stream of investment returns. Although investment portfolios and strategies vary among reinsurance companies, fixed income securities typically account for a majority of their investment allocations.

In view of the low interest rate environment, several reinsurers have taken advantage of favourable bond valuations due to declining interest rates in 2020, and recognised capital gains from the disposal of the bonds. Part of those proceeds were reinvested into higher risk asset classes, including public and private equities, as well as alternative assets (such as real estate funds, trust plans and debt investment schemes) that provide stable but better returns.

Apart from The Toa Reinsurance Company, Limited, which holds half of its investment portfolio in foreign securities, many major domestic reinsurers in the region maintain investment portfolios that are concentrated on their respective home markets. In particular, the foreign securities held by major Chinese and South Korean reinsurers consist mainly of foreign currency denominated Chinese or South Korean bonds. Given the lack of geographic diversification, investment returns from these holdings are highly correlated with the home market's capital market volatility.

Catching Up to Global Peers

From 2017 to 2021, reinsurers in the composite recorded a solid annual average growth of 8.7% in net premium written (NPW). While domestic/national reinsurers have managed to maintain stable shares in their home markets, most have sought to drive growth either through organic expansion overseas or by acquisitions.

China Re's acquisition of Chaucer in 2018 allowed the reinsurer to gain a meaningful presence in the international primary and reinsurance markets. The overseas non-life reinsurance book now accounts for roughly one third of its non-life reinsurance portfolio, while its overseas branches

Exhibit 2

Major Natural Catastrophe and Loss Events

	Asia-Pacific Events	Non Asia-Pacific Events
2017	Hong Kong/Macau typhoon (Hato) Vietnam typhoon China floods	US hurricanes (Harvey, Irma, Maria) California wildfires
2018	Japan typhoon (Jebi, Trami) Hong Kong typhoon (Mangkhut)	US hurricane (Michael) California wildfires
2019	Japan typhoon (Faxi, Hagibis) China typhoon (Lekima) Livestock swine flu	US hurricance (Dorian)
2020	China heavy rain	Beirut port explosion Midwest derecho US hurricane (Laura) COVID-19 pandemic
2021	India cyclone (Tauktae) Australia floods China Henan floods	Europe floods Europe hailstorm US hurricane (Ida) US winter storm (Uri)

Source: AM Best data and research

expanded to include 11 countries and regions. With the acquisition, China Re joins a growing number of global reinsurers which have adopted a hybrid model of writing both reinsurance and specialty insurance business to hedge against performance volatilities. At the same time, China Re is able to benefit from Chaucer's technical expertise in political and nuclear risks as it supports the Chinese government's Belt and Road Initiative.

Between 2017 and 2019, Peak Reinsurance Company Limited, Toa Re and Korean Re had converted their European branches to subsidiaries to support their growth strategy in Europe. Unlike its peers, Toa Re has had a history of expanding its footprint in the US since 1982 via Toa Re America, which accounted for over 20% of the Japanese reinsurer's total NPW in 2020.

Capturing Business Opportunities by Diversifying Capital Sources

All of the major Asia-Pacific reinsurers in the composite have robust risk-adjusted capitalisation to absorb potential losses, with a simple average Best's Capital Adequacy Ratio (BCAR) of 51% that is well above the 25% "strongest" assessment BCAR threshold at the 99.6% VaR confidence level. Most of these companies have strong parental support given their domestic reinsurer positions, and are either owned by the government, or have financially sound ultimate parents.

Large Chinese reinsurers were historically dependent on the Chinese government's capital injections to achieve their goal of supporting the country's economic growth. However, we note that reinsurers in the region are learning from international peers by actively diversifying their capital source for self-sustainability.

In 2020, the Asia-Pacific reinsurance composite's capital and surplus strengthened by 19%. Taiping Reinsurance Company Limited introduced a new strategic investor, Ageas Insurance International N.V., which injected HKD3.04 billion (USD392 million) to acquire a 25% stake of Taiping Re. This capital injection raised the company's capital and surplus by 34% from HKD9.04 billion (USD1.17 billion) to HKD12.07 billion (USD1.56 billion). Similarly, Peak Re's capital was boosted by a USD250 million issuance of perpetual subordinated guaranteed capital securities in October 2020, while in December 2020, China Re P&C issued capital supplementary bonds of CNY4 billion.

Notwithstanding, Asia-Pacific reinsurers are relatively late bloomers with regard to including insurance-linked securities (ILS) as an integral part of their retrocession strategies—a method that global reinsurance companies have adopted for some time.

AM Best is of the view that ILS capacity can support regional reinsurers in capturing rate hardening opportunities, such as in Japan's current rate environment. Although reinsurers in China enjoy relatively cheap retrocession capacity due to an abundant supply of capital, the ILS grant introduced by the Hong Kong Insurance Authority (HKIA) to subsidise upfront costs could raise the economic attractiveness of a catastrophe bond issuance over traditional reinsurance capacity.

Regulatory Push to Deepen Alternative Capital Markets

Both the Singapore and Hong Kong governments are keen to leverage their positions as financial powerhouses to develop their respective alternative capital markets for the issuance of ILS. In 2018, Singapore pioneered a grant scheme to subsidise upfront ILS issuance costs up to SGD2 million, which was extended to 31 December 2022. The grant scheme has proven to be very successful in attracting international sponsors to choose Singapore as an ILS domicile, subsequently leading to the provision of coverage for perils in Australia, Japan and North America.

Hong Kong's Legislative Council passed the Insurance (Amendment) Ordinance 2020 to provide for a regulatory framework to facilitate ILS issuance through special purpose vehicles, which will be regulated as a new type of authorised insurer. In May 2021, following Singapore's footsteps, the HKIA announced a new grant scheme to subsidise upfront costs of up to HKD12 million (USD1.55 million) per ILS issuance.

With HKIA's strong push and policy support from the Chinese central government, China Re established Greater Bay Re Limited and issued a typhoon cover of USD30 million, the first cat bond issued from Hong Kong. Subsequently in June 2022, Peak Re issued a USD150 million 144A cat bond via Black Kite Re Limited, a newly established special purpose insurer in Hong Kong, which provides Peak Re with a multi-year protection against typhoon risk in Japan. Earlier in 2018, Peak Re also launched Asia's first reinsurance sidecar via a newly established Bermuda-domiciled special purpose insurer, Lion Rock Re Ltd, which offered additional reinsurance capacity to support the company's property and engineering excess-of-loss treaties written in some peak zones. Given China's proximity to Hong Kong, AM Best notes that the ILS grant scheme could support the "proof of concept" for Asia-Pacific (re)insurers with significant nat cat accumulation, as well as to prepare for when the company may need to use alternative capital in post-event hard market conditions.

From an investor perspective, cat bonds that cover Asian risks present an attractive alternative for institutional investors looking to diversify their existing cat bond portfolios as current ILS issuances are largely focused on risks in the US and European markets. However, some education effort will be required for investors to gain a better understanding of Asian risks and pricing, as well as the interpretation of catastrophe modelling results.

August 30, 2022

Limited Claims Activity Amid Inflationary Pressures for Latin America Reinsurers

Pricing and claims costs are still pressured, due mainly to the global inflationary environment

Principal Takeaways

- Few large severity events have occurred in the past three years; as a result, reinsurers have incurred no major losses.
- The regional reinsurers are trying to diversify profits geographically.
- Political risk remains a key factor for reinsurers domiciled in the region.

Latin America contains several markets—Mexico, Guatemala, Costa Rica, Ecuador, Chile, and Peru—that are vulnerable to numerous cat events in both magnitude and frequency. However, in the past three years, large severity events have been few and have not resulted in major insured losses, questioning the need for the market hardening that took place at the onset of the pandemic. Reinsurers have adjusted their product offerings by raising deductibles, narrowing coverages, and pressing for exclusions (with different degrees of success), as they try to expand net profits by retaining more risks. In addition, most of the region's large insurers have ample amounts of available capital as a result of exceptional results in 2021 and redundant reserves, which have given them the ability to expand their risk appetites.

As market hardening diminishes, some global reinsurers have followed the mandate of their parents to exit or limit their business in Latin America, pressured by a more conservative risk appetite that is less focused on cat-prone areas, or to target their capital in regions that justify price increases. These conditions have opened opportunities for domestic reinsurers and reinsurers outside Latin America to participate in lower layers of programs. We are thus seeing new names coming into large reinsurance programs.

The strategies of the domestic and global participants in the region differ. The slowdown in hardening conditions should be viewed with some caution, especially by domestic participants trying to fill the gaps left by global reinsurers. These program gaps are being filled by either a diverse group of reinsurers or other global reinsurers, but communications with brokers and further detailed analyses of PMLs (probable maximum losses) remain key to further developing efficient and profitable reinsurance solutions in a market that could quickly incur insured losses as a result of earthquakes, hurricanes, or other events.

Regional reinsurers with expertise outside Latin America have shifted to a wide array of non-cat lines both in and outside the region, mostly fidelity and some other low-exposure liabilities. Some are cutting back on their cat exposures in the region, while others are limiting their exposures by either using retro structures or demanding stricter terms and conditions.

Direct business (opportunities found by reinsurers, which are then underwritten by primary insurers), captive solutions, and automated faculties for external underwriters such as

Analytical Contacts:
Elí Sanchez, Mexico City
52 55 11022720 ext. 122
Eli.Sanchez@ambest.com

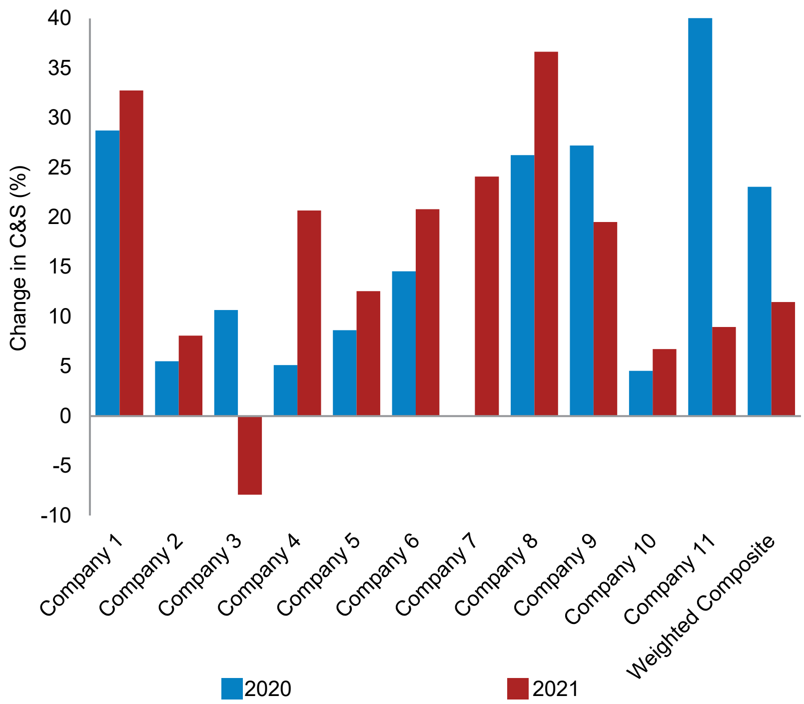
Guilherme Monteiro Simoes, Oldwick
+1 (908) 439-2200 Ext. 5301
Guy.Simoes@ambest.com

2022-098.12

managing general agents (MGAs) are gaining traction as ways not only to diversify revenue sources but also to address market dynamics. For example, some countries in Latin America are considered tax havens by German regulations, which discourage German reinsurers from conducting business through incremental taxes. As a result, segregated cell companies domiciled in non-tax haven territories do fronting for those businesses. And, in Nicaragua, capital outflows are extremely limited, so insurance groups with a regional presence there are limited with regard to the fungibility of their resources; a way to access the market there is through fronting with foreign reinsurers that are already registered in the country.

Exhibit 1

Latin America Reinsurance – Change in Capital & Surplus (Selected Reinsurers, ex Brazil)



Source: AM Best data and research

Reserve development in the region has been positive, owing to the dearth of significant cat events the last couple of years. COVID-related coverages such as business interruption have not materially deteriorated the balance sheets of Latin American reinsurers. Some domestic participants built up reserves in 2020 and 2021, while others have started releasing reserves, given the lack of any significant increase in claims.

Claims activity has been favorable for reinsurers' income, but pricing and claims costs are still pressured, due mainly to the global inflationary environment. Additionally, currency depreciation remains a constant across the continent. Although most contracts are in US dollars, a decline in purchasing power owing to higher prices could continue to soften renewals for primary insurers. Large contracts for government-related risks are particularly sensitive in this regard, given the growing prominence of leftist governments, which could press for flat renewals or better conditions for coverages.

Rising interest rates could help improve net income if portfolio durations allow, depending on asset-liability management. Traditionally, risks in the region could allow for shorter terms, but most large and experienced participants will opt to either take longer terms on investments over reserve requirements or deploy less capital for reinsurance activities. So far, available capital has increased (**Exhibit 1**) due to favorable results overall, but investment portfolios are shifting from fixed income—including real estate—to either higher credit quality instruments or alternative asset classes.

Political risks remain a significant factor for reinsurers domiciled in Latin American countries, which are pressured by investment requirements in sovereigns with deteriorating credit quality. Although there has not been a flight of companies to less risky domiciles as yet, it is a constant in companies' internal risk assessments.

Brazil's Reinsurance Industry

In Brazil (which other than flooding has no significant natural catastrophe exposures that would be covered by (re)insurance), domestic reinsurers with international catastrophe exposure are trimming their property catastrophe exposures, in line with global trends. However, their actions have yet to translate into meaningful underwriting profits or capacity growth.

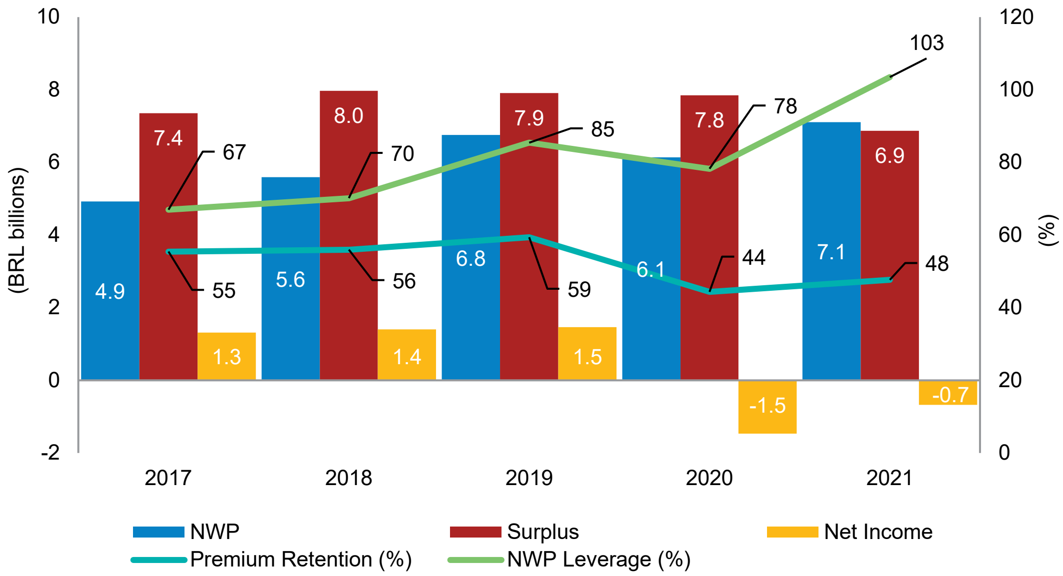
Domestic reinsurers have been focusing on specialty lines (such as surety, oil & gas, marine, agricultural) and property and still have room to grow due to the relatively low insurance penetration in the country. The profitability of Brazil's primary insurance industry is still higher than that of the reinsurance industry. Still, the largest player in the country, which accounted for 50% of domestic gross written premium in 2021, is dedicated exclusively to reinsurance; almost all of the remaining domestic reinsurance companies have a presence in the primary insurance market.

In Brazil, inflation is high at 12% (10% at the end of 2021) and continues to fuel loss costs, but IBNR reserves increased 3% from 2020. Net premiums grew significantly, by 16%, with premium retention rising to 48% (after a significant decline to 44% in 2020), contributing to the increase in underwriting leverage of 104%, from 78% in 2020 (**Exhibit 2**). The 42% jump in investment income over 2020 was not enough to offset the underwriting losses that have been incurred the past two years. Net premium retention and the increase in underwriting losses resulted in a double-digit decline in surplus in the domestic industry, down 12% in 2021, in Brazilian reais. This decline becomes even more significant when converted to US dollars: 18%.

For the domestic Brazilian reinsurance industry, surplus growth and the retention of profitable business remain key. Pricing remains favorable, with the help of the hard global reinsurance market and inflation, and despite the Central Bank of Brazil's hawkish interest rate hikes, these have not been enough to generate profitable results for the industry. In a year of presidential elections aggravated by global instability, reinsurance groups will likely find attracting capital from investors and increase capacity difficult.

Exhibit 2

Latin America Reinsurance – Local Brazilian Reinsurers' NWP Leverage and Premium Retention



Source: AM Best data and research

Brazil – Types of Reinsurers

Domestic: 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.

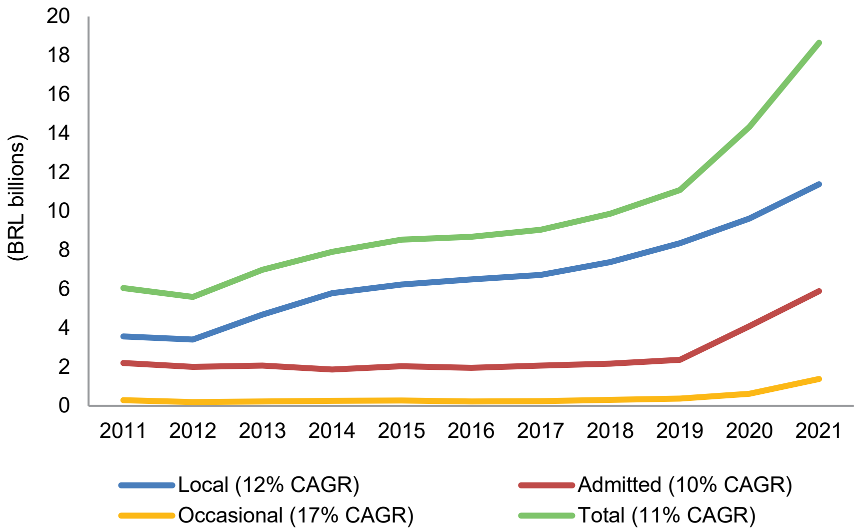
Occasional: Domiciled abroad (except for tax havens); recent regulatory change makes practically equal to admitted.

The most significant lines of business contributing to annual growth in 2021 were property, automobile, and agricultural reinsurance. Agricultural (re)insurance can be considered natural catastrophe-like exposure, but innovative techniques are being used to monitor climate risks to which the sector is vulnerable. New technologies may help improve the operating performance of the agricultural line, which continues to incur underwriting losses.

As the industry continues to evolve, insurers and domestic reinsurers gross premium cession limits to occasional reinsurers skyrocketed at the end of 2019, to 95% from 10%. As a result, occasional reinsurers have posted significantly higher growth in the past two years, with a 94% CAGR, compared with 58% for the admitted reinsures and 17% for the domestics. Occasional and admitted reinsurers have had another tailwind in their favor: The Brazilian real was devalued further, strengthening their USD capacity versus the BRL.

The country's regulatory framework continues to evolve towards a more open and less restrictive reinsurance market, allowing occasional and admitted global participants to access the market with greater efficiency, while maintaining strict regulatory metrics to protect policyholders.

Exhibit 3
Latin America Reinsurance – Premiums Ceded to Reinsurers by Type of Reinsurer



Source: AM Best data and research

BEST'S MARKET SEGMENT REPORT

Our Insight, Your Advantage™

August 30, 2022

Opportunities Arise for MENA Reinsurers, Amid Divergent Economic Conditions

Longer-term prospects for the reinsurance market may transpire from growing product offerings in primary markets

Principal Takeaways

- Hardening reinsurance market conditions in the region, as well as changes in reinsurers' appetites as to where they deploy their capital, have sustained the positive price momentum over recent renewal seasons
- Reinsurance capacity in the region continues to be highly changeable and dynamic, sourced through global reinsurance players, regionally domiciled reinsurers, and reinsurance groups from Africa and Asia
- Divergent economic conditions are expected to continue across the region for oil-exporting and oil-importing countries
- Operational challenges and deteriorating country risk landscapes in several countries have weighed negatively on AM Best's view of the financial strength of the reinsurers domiciled and operating there

Hardening markets conditions over 2021 continued to benefit regional reinsurers domiciled in the Middle East and North Africa (MENA). Positive pricing momentum has been maintained over recent renewal seasons, driven by changes in the region's reinsurance capacity providers, rising claims inflation, elevated frequency of large loss events and improved market discipline. Current market conditions contrast to the persisting soft market experienced in the region prior to 2020, themselves a by-product of plentiful capacity and high levels of price competition.

The reinsurance pricing environment in the MENA region reflects both regional drivers, such as recent underwriting performance strains, as well as global reinsurance trends, and are a clear tailwind for reinsurance providers in the region. In general, AM Best views the region as having good reinsurance growth potential, supported by rebounding economic activity, the extraction of natural resources, and intentions to increase insurance penetration across the region.

However, MENA reinsurers are facing fresh and varying challenges, from supply chain disruptions and inflationary pressures, to elevated economic, financial and political instability in certain markets. AM Best notes that the region is not homogenous, and that what is a positive driver for one market, such as buoyant oil prices, can be a negative contributor for others, and consequently for the regional reinsurers operating there. In this context, AM Best views deteriorating country risk factors in several of the region's markets as a negative credit trend.

Diverging Economic Conditions to Impact Reinsurance Markets

Over 2021, the MENA region experienced a general improvement in economic conditions as countries rebounded following the COVID-19 pandemic. In AM Best's view, this provided a solid platform for (re)insurance market opportunities. In March 2022, AM Best revised

Analytical Contacts:
Emily Thompson, London
+44 20 7397 0291
emily.thompson@ambest.com

Alex Rafferty, London
+44 20 7397 0312
alex.rafferty@ambest.com

Editorial Managers:
Richard Banks, London
+44 20 7397 0322
richard.banks@ambest.com

Richard Hayes, London
+44 20 7397 0326
richard.hayes@ambest.com

2022-098.13

its market segment outlook on the Gulf Cooperation Council (GCC)—a significant, and largely oil-reliant, sub-section of the MENA region—to Stable from Negative owing to rallying oil prices driving economic recovery, increased opportunities for insurance sector growth and recovering financial markets.

Several of the economies in the region are heavily reliant on hydrocarbon industries. The current buoyant oil price environment, attributable to supply concerns amid excess demand for oil and energy linked to post-pandemic activity and disruption caused by Russia's invasion of Ukraine, is expected to have a substantial impact on the region's economies. Insurance markets in the region are reliant on government spending—notably from infrastructure projects—for a sizeable share of premium growth. These risks are typically heavily ceded by primary insurers to reinsurance partners, and have provided profitable underwriting opportunities for the region's reinsurers. AM Best expects strengthening economic fundamentals for the region's oil-exporting economies to directly contribute to insurable risk opportunities and in turn premium volumes ceded to the region's reinsurance markets.

Conversely, AM Best notes that certain markets in the region are experiencing a significant economic deterioration. For those countries that are net importers of energy, the current oil price environment is challenging fiscal manoeuvrability, while inflationary pressures and supply side constraints on the importation of foodstuffs and other commodities are compounding economic challenges. In AM Best's view, current geopolitical volatility has served to exacerbate the country risk vulnerabilities exposed during the COVID-19 pandemic, which may constrain opportunities and the financial strength of (re)insurers in those markets.

Deterioration in the country risk environments of several countries has been cited as a driver of negative rating actions taken over the past year on several regional reinsurers with a material concentration of operations, underwriting exposures or asset portfolios to these operating environments. Examples of such jurisdictions that are experiencing heightened country risk challenges include Turkey, Tunisia and Lebanon.

Economic Transition to Support Longer-Term Opportunities

Longer-term prospects for the reinsurance market may transpire from growing product offerings in primary markets, namely in cyber and liability lines of business along with opportunities created by the commitments of the region's oil-exporting countries to reduce dependence on petrochemicals and create economic diversification. To reach these targets, higher levels of fiscal expenditure are expected to be channelled into 'green' and other infrastructure projects, including green buildings and solar parks. In AM Best's view, the region's reinsurers that can embrace the economic shift, develop the required capabilities and tailor their products accordingly should be well placed to benefit from this expected increase in insurable risk opportunities.

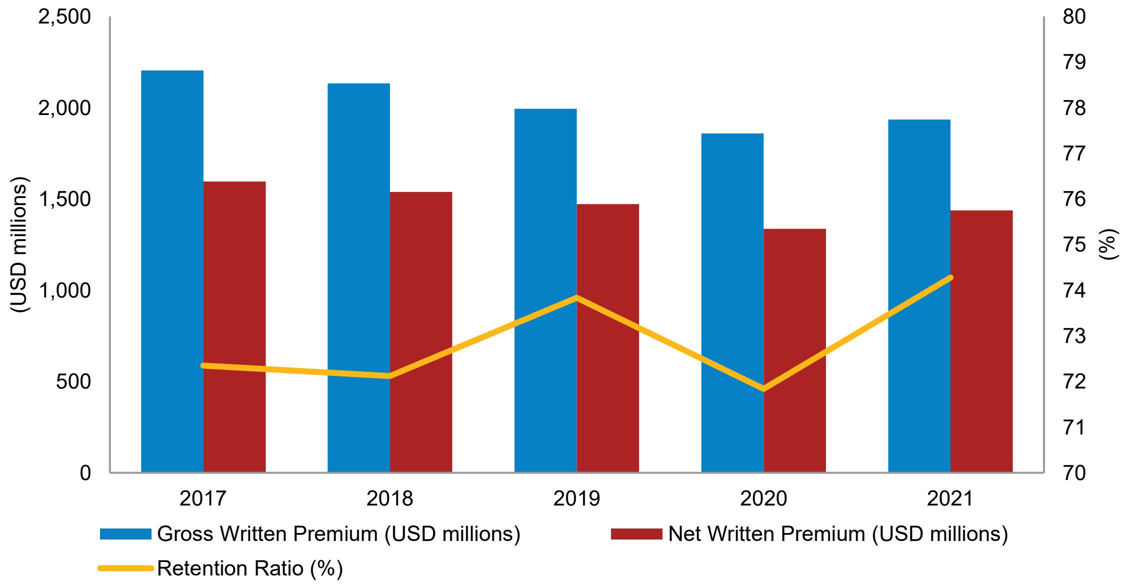
Reinsurance Capacity in the MENA Region

In general, the region's reinsurance markets remain open and liberal, with few regulatory restrictions concerning the provision of reinsurance capacity. Accordingly, the region's capacity comes from many sources, including global reinsurance players, regionally domiciled reinsurers, and reinsurance groups from Africa and Asia. Furthermore, primary insurance companies in the region are once again increasing their appetite to participate in the reinsurance segment. For international participants, the region has long been seen as an opportunity to diversify their exposures into historically low natural catastrophe risk environments. For others, and reinsurers domiciled in the region, it has provided growth opportunities, often through taking following participations on programmes led by international markets.

Exhibit 1

MENA Reinsurance – Gross/Net Written Premiums and Retention Ratio, 2017-2021

(USD millions (Premiums) and % (Retention Ratio))



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

Reinsurance capacity in the region continues to be highly changeable and dynamic. In recent periods, several regional and international players, including certain Lloyd's syndicates, have withdrawn from the market, revising their appetite for the region often following weaker than expected performance and an inability to generate sufficient returns. At the same time, appetite clearly remains to participate in the region's reinsurance market, with a steady flow of international reinsurers, as well as African and Asian regional players, establishing a presence to enhance proximity to clients and execute growth and diversification strategies.

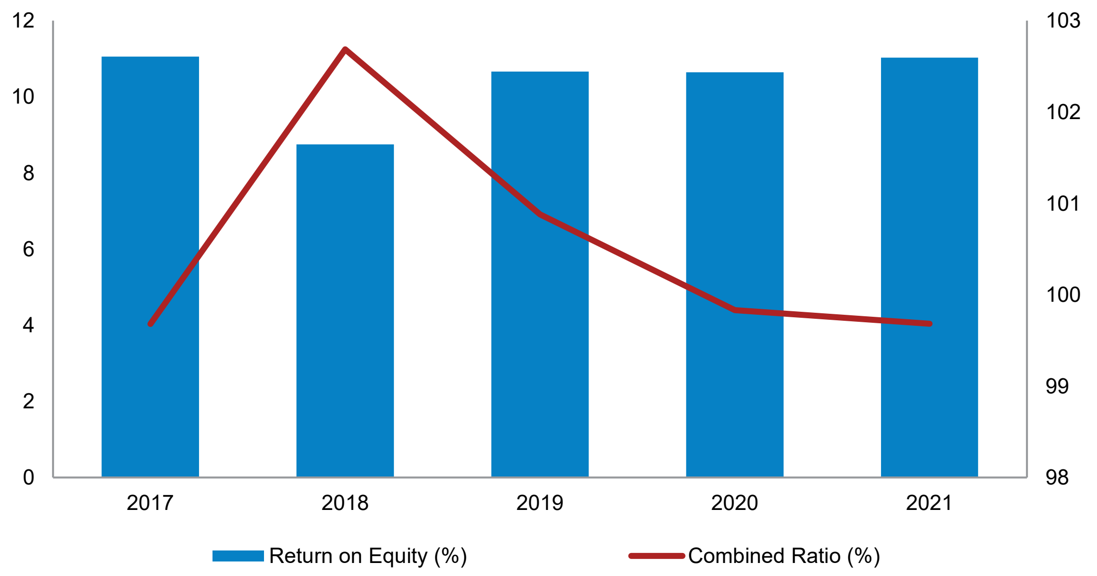
Despite changes in the region's capacity providers, AM Best has yet to note material growth in market premiums written by the remaining regionally domiciled reinsurers (see **Exhibit 1**). This suggests that these companies have not been able to fully capture the premium income left by those exiting the market and that sufficient capacity remains in the market overall. Whilst a marginal increase in premiums has been observed in 2021, this can be largely attributed to rate rises and supportive economic conditions following the lifting of virus containment measures in place during 2020. The premium growth rate observed over 2021 is also partially distorted by currency volatility to the US dollar. While several countries in the region maintain pegs (or similar) to the US dollar, those with free-floating currencies experienced devaluation over the year, and in some cases, positive underlying premium growth rates in local currencies were negative in US dollar terms.

A growing number of the region's primary insurers have shown a renewed interest in participating in the regional reinsurance market on an inward facultative basis. Inward facultative interest has accelerated since 2020 as primary insurers have looked to bolster their toplines and access insurable risk opportunities. AM Best notes that the inward facultative segment has been a source of underwriting losses and volatility for several insurance companies in the market historically, demonstrating the risks presented by this diversification strategy for the region's insurers.

Exhibit 2

MENA Reinsurance – Market Average Return on Equity and Combined Ratio, 2017-2021

(%)



Dataset based on a selection of regionally domiciled reinsurers.

Sources: BESTLINK

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

AM Best expects primary insurers' interest in writing inward facultative reinsurance business to remain a competitive dynamic in the coming years, and indicative of reinsurance capacity remaining plentiful in the region. In this context, regional reinsurers will need to demonstrate strong underwriting discipline to ensure that recent positive pricing momentum is not reversed.

Underwriting Returns – Changing Focus for Regional Reinsurers

Through a period of generally soft market conditions, achieving consistent strong underwriting returns has been a challenge for MENA reinsurers. However, recent market conditions have become more favourable, which, in AM Best's view, is also a signal of an enhanced focus on underwriting profitability.

Aside from strong competition, the performance hurdles faced by the region's reinsurers include a lack of both scale and diversification when compared with their international counterparts, and their participation often as followers on reinsurance programmes, which restricts their ability to influence pricing and terms. Additionally, market-wide performance has been adversely impacted in recent years by an increasing volume of natural catastrophe losses and several single large loss events. Reinsurers in the region are having to adapt pricing and modelling capabilities following greater incidences of weather-related losses, such as flood events (particularly in the GCC), to ensure these exposures are appropriately factored into underwriting decisions and risk appetites. Single large event losses, such as the Beirut blast in August 2020 and several high profile fire events, have weighed particularly on property, engineering and energy lines that in general are heavily ceded by the direct market.

Exhibit 2 shows the aggregate underwriting performance of reinsurers domiciled in the region, and highlights how overall, the cohort of companies has struggled to achieve consistently profitable underwriting returns in recent years.

Exhibit 3
MENA Reinsurance – Technical Performance, 2019-2021
(%)

			Loss Ratio - Non-Life				Combined Ratio - Non-Life			
AMB #	Company Name	Country	2019	2020	2021	3yr Avg	2019	2020	2021	3yr Avg
89190	Arab Reinsurance Co. SAL	Lebanon	71.1	72.6	66.6	70.1	105.7	104.0	108.0	105.9
85013	Arab Insurance Group (B.S.C.)[1]	Bahrain	59.5	43.0	-103.8	-0.4	100.4	90.5	-10.7	60.1
90777	Compagnie Centrale de Réassurance	Algeria	59.4	52.7	51.4	54.5	84.3	82.2	77.8	81.4
78849	Hannover Re Takaful B.S.C. (c)	Bahrain	63.8	63.2	43.4	56.8	102.8	100.4	85.5	96.2
85585	Kuwait Reinsurance Co. K.S.C.P.	Kuwait	65.9	68.8	65.5	66.7	96.5	97.3	92.2	95.3
85454	Milli Reasurans Turk Anonim Sirketi	Turkey	89.2	88.8	113.9	97.3	122.4	123.9	150.6	132.3
93609	Oman Reinsurance Co. SAOC	Oman	66.5	62.1	63.1	63.9	106.6	102.8	103.0	104.1
90005	Saudi Reinsurance Company	Saudi Arabia	63.6	58.2	61.3	61.0	95.4	94.7	96.2	95.4
84052	Société Centrale de Réassurance	Morocco	35.1	45.1	46.3	42.2	81.8	92.5	88.4	87.6
83349	Société Tunisienne de Réassurance	Tunisia	62.3	60.3	57.2	59.9	99.2	96.2	98.0	97.8
86326	Trust International Insurance & Reinsurance Co. BSC[2]	Bahrain	88.9	-	-	88.9	150.0	-	-	150.0

1: 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.
2: At the time of writing audited year-end 2020 and 2021 financial statements were not available

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

Strategies adopted by the region's reinsurers vary considerably. They tend to benefit from long-standing, strong positions in their domestic markets, and several are executing strategies to attain regional and international diversification. Strategic shifts are ongoing, with some looking to increase non-proportional and facultative business and reduce reliance on providing proportional capacity.

In this market dynamic, it is not uncommon for the region's 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 3 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. Given recent improved market conditions, most MENA domiciled reinsurers recorded strengthened combined ratios in 2021. While there were some modest improvements on loss ratios, rate driven premium growth in local currencies provided strong scale benefits and pushed down expense ratios in many cases.

Notwithstanding recent pressures on underwriting margins, overall returns have generally remained robust for the region's reinsurers, with the weighted average return on equity (ROE) for the cohort of companies standing at 10% over the five years to 2021. Thinner underwriting margins have been more than compensated by generally robust investment returns over the period. On a company-by-company basis, the comparability of ROE is somewhat skewed by the prevailing inflationary and interest rate environment in their respective countries of operation.

Positive Pricing Momentum

Hardening reinsurance market conditions in the region since 2020, 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. Additional factors including global reinsurance trends, a tightening focus on underwriting discipline, increased inflationary pressures and in some countries, economic challenges, are contributing positively to the rate environment.

As with global reinsurance markets, the MENA region is not immune from the spectre of inflation, even with the resilience to oil price increases for the net oil-exporting economies. Supply-side inflation may weigh on loss cost trends for the region's reinsurers over the near term. As the inflationary environment develops, the region's reinsurers will need to remain nimble and disciplined to adjust premium rates to ensure loss cost inflation is adequately covered and does not erode already thin underwriting margins.

While recent market hardening is a positive for the region's reinsurers, there remain questions over the sustainability of rate increases, particularly in the context of 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, including their ability to dictate lead terms and drive extensive rate changes, especially if larger, more diversified competitors are willing and able to accept lower price increases.

AM Best has observed an increased focus in the region on underwriting control, selection and profitability, with some strategic changes emerging as a result. Regional reinsurers are looking to capitalise on the current pricing environment, reduced international capacity and increased loss events to increase their exposure to facultative business. They believe that this is where they will be able to exert greater control over rates, terms and underlying exposures rather than on treaty business.

MENA Reinsurers – Rating Considerations

AM Best's credit ratings of reinsurers domiciled in the region 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

Exhibit 4

MENA Reinsurers – AM Best-Rated Companies

Ratings as of August 1, 2022

AMB #	Company Name	Country (optional)	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	21-Oct-21
85585	Kuwait Reinsurance Co.K.S.C.P.	Kuwait	a-	A-	Affirmed	Stable	2-Jun-22
85454	Milli Reasurans Turk Anonim Sirketi	Turkey	bb-	B-	Downgraded	Negative	9-Jun-22
84052	Société Centrale de Réassurance	Morocco	bbb	B++	Affirmed	Stable	10-Dec-21
83349	Société Tunisienne de Réassurance	Tunisia	bb+	B	Downgraded	Negative[1]	8-Apr-22

1: FSR Outlook: Stable

Sources: BESTLINK

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

Exhibit 5

MENA Reinsurers – AM Best-Rated Companies – Assessment Descriptors

As of August 1, 2022

AMB #	Company Name	Balance Sheet Strength Assessment	BCAR @ VaR 99.6	BCAR Assessment Keyword	Operating Performance Assessment	Business Profile Assessment	Enterprise Risk Managment Assessment
89190	Arab Reinsurance Co. SAL	Strong	24%	Very Strong	Marginal	Neutral	Marginal
90777	Compagnie Centrale de Réassurance	Very Strong	39%	Strongest	Strong	Neutral	Marginal
85585	Kuwait Reinsurance Co.K.S.C.P.	Very Strong	44%	Strongest	Adequate	Neutral	Appropriate
85454	Milli Reasurans Turk Anonim Sirketi	Adequate	-35%	Very Weak	Adequate	Neutral	Appropriate
84052	Société Centrale de Réassurance	Strong	39%	Strongest	Strong	Neutral	Appropriate
83349	Société Tunisienne de Réassurance	Very Strong	57%	Strongest	Adequate	Limited	Marginal

Sources: BESTLINK

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

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.

Over the past 12 months, operational challenges and deteriorating country risk landscapes in several countries have weighed negatively on AM Best's view of the financial strength of the reinsurers domiciled and operating there. Increasing economic, fiscal and political risk is prevalent in several of the region's countries, typically the non-oil exporting nations. Increased public debt burdens taken on during the pandemic, coupled with increasing oil and other commodity prices and currency devaluations against the US dollar, have contributed to, among other things, weakening current account balances, sovereign debt downgrades, high inflation and ultimately the need to secure external funding to counteract economic woes.

In this context, several companies have experienced downgrades over the past year to their Long-Term Issuer Credit Ratings (see **Exhibit 4**). Negative rating actions and outlook revisions reflect the impact that elevated country risk can have on a company's balance sheet fundamentals as well as on the risk profile a company must face and manage.

On the whole, AM Best-rated 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 **(Exhibit 5)**. Most rated MENA reinsurers typically enjoy preferred or dominant positions in their operating markets resulting in neutral business profile assessments. On the other hand, as highlighted in this report (see **Exhibits 2 and 3**) persistent performance challenges have resulted in a wider range of operating performance assessments, with AM Best-rated MENA reinsurers carrying operating performance assessments that range from "Marginal" to "Strong".

Retakaful – Yet to Capitalise on a Growing Takaful Market

Retakaful (Islamic reinsurance) operators have yet to achieve traction in the MENA region, despite the expected market opportunities. Initial strong momentum in the retakaful segment has stalled, with several early entrants to the sector withdrawing from the market following inconsistent and underperforming technical returns and an inability to gain necessary scale. Retakaful capacity in the region is currently primarily provided through branches, takaful windows or subsidiaries of conventional reinsurers, rather than "dedicated" retakaful operators.

In AM Best's opinion, several factors have constrained 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 amidst the ongoing acceptance by Shari'a boards of conventional reinsurance capacity on retakaful panels (often on the basis of their comparative financial strength). Until sufficient insurable risks can be ceded consistently to the retakaful market, the opportunity for dedicated retakaful operators in the region remains limited.

AM Best views the potential of the retakaful market to be highly dependent on the successful development and performance of the region's primary takaful market. Establishing Islamic compliant (re)insurance solutions remains a hot topic in many of the region's markets. The recent establishment of primary takaful regulation and operators in several North African territories is indicative of general support for the segment. If successful, such recent initiatives should ultimately generate more contributions that would increase the demand for retakaful capacity. However, AM Best expects that, at least initially, the retakaful needs of these start-up takaful operators will be met by the opening of takaful windows in already established conventional reinsurers. Given the challenges faced in establishing sustainable, standalone retakaful operators, it is uncertain whether a dedicated retakaful segment will be able to capitalise on these developments in the near term.

August 30, 2022

Sub-Saharan Africa Reinsurance: Fresh Challenges for Reinsurers as Performance Improves

The long-standing focus on local African risks by SSA reinsurers has largely underpinned their consistently profitable underwriting results

Principal Takeaways:

- Steady real GDP growth, together with international investment, has spurred expansion of sub-Saharan Africa's reinsurance market over the past decade
- While a focus on local African risks has underpinned profitable underwriting results, there is a degree of concentration towards some of the largest markets on the continent, giving rise to some concern about risk accumulation
- Despite solid growth in capital in recent years, the capacity offered by Africa-domiciled reinsurers remains low and local players often rely on the support of global reinsurers
- Civil unrest in larger African economies have resulted in substantial (re)insurance losses
- A trend of increasing severity of adverse weather events is changing the natural catastrophe dynamic for the region and affecting reinsurers' risk appetites

Volatile oil prices, double-digit inflation, as well as the impact of the COVID-19 pandemic on various local economies, have put pressure on the results of sub-Saharan (SSA) reinsurers in recent years. Analysis of AM Best-rated reinsurers across the continent shows the impact of the significant headwinds the regional sector faced.

Despite the re-opening of global economies during 2021 and the first half of 2022, some long-standing challenges persist. In addition, the Russia-Ukraine conflict has exacerbated inflationary forces initiated by COVID-19-related supply chain difficulties. Medium-term inflation expectations have risen and global gross domestic product (GDP) growth projections have been revised downwards by influential bodies such as the International Monetary Fund (IMF).

Notwithstanding these near-term pressures, over the long run, AM Best believes the SSA reinsurance segment has substantial potential for profitable growth. The region has considerable, untapped reserves of natural resources, solid long-term economic growth prospects, and increasing underlying insurance penetration, all of which stand to benefit its reinsurance market.

Growth Prospects of the Regional Reinsurance Market

Steady real GDP growth – together with international investment – have contributed to the expansion of the region's reinsurance market over the past decade. SSA reinsurers rated by AM Best have experienced healthy growth over the underwriting cycle. Gross written premium (GWP) has grown at a 10-year compound annual growth rate of 6% (calculated in US dollars) (see **Exhibit 1**). 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.

Analytical Contacts:
Ben Diaz-Clegg, London
+44 20 7397 0293
ben.diaz-clegg@ambest.com

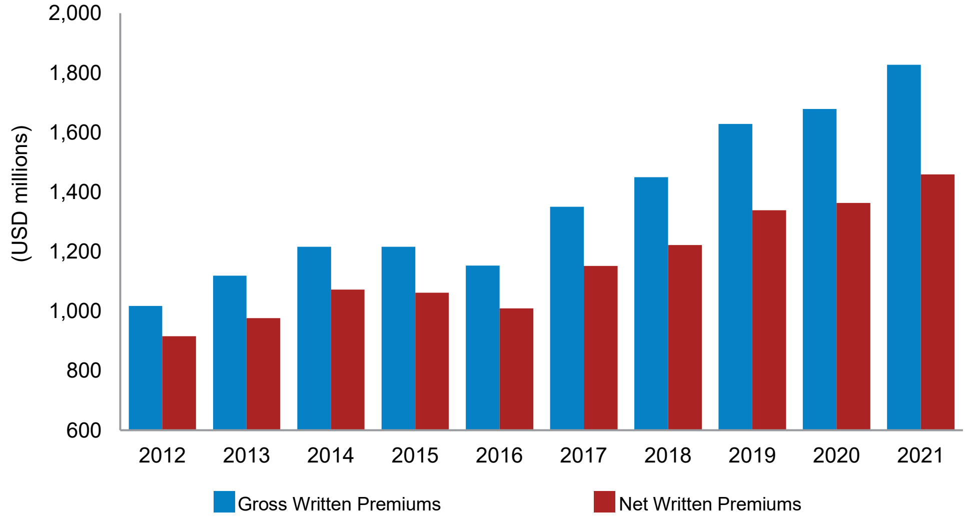
Tim Prince, London
+44 20 7397 0320
timothy.prince@ambest.com

Editorial Managers:
Richard Banks, London
+44 20 7397 0322
richard.banks@ambest.com

Richard Hayes, London
+44 20 7397 0326
richard.hayes@ambest.com

2022-098.14

Exhibit 1
Sub-Saharan Africa – AM Best-Rated Reinsurers, Premiums, 2012-2021



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

But the trend seen in **Exhibit 1** does not tell the whole story: the currencies in two of the region's largest economies have fared badly against the US dollar during the period. The Nigerian naira and South African rand depreciated against the US dollar by 62% and 47%, respectively, between 2012 and 2021. In local currency terms, the growth in GWP has been even more marked.

While AM Best expects steady real GDP growth, together with international investment in local infrastructure projects, to continue, uncertainties exist regarding the near-term prospects for the SSA reinsurance market. Wavering global economic activity and weakening local currencies in particular have the potential to put the brakes on near-term real growth rates.

Local Focus Underpins Long-Run Underwriting Results

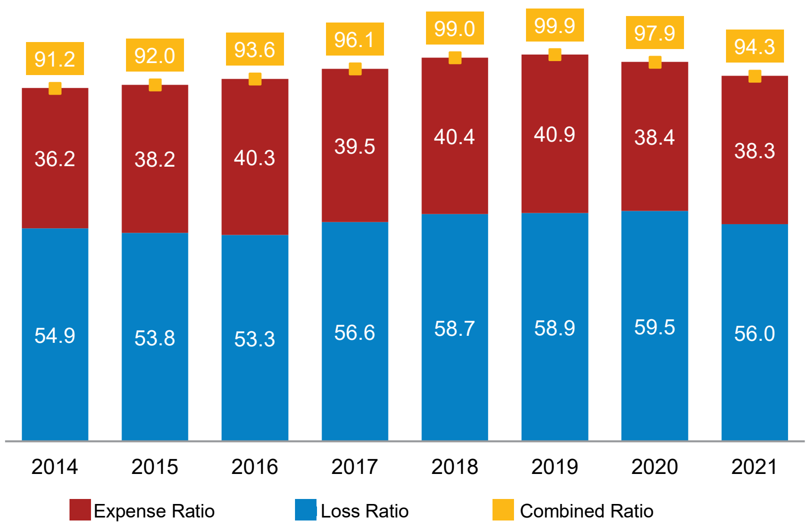
The long-standing focus on local African risks by SSA reinsurers has largely underpinned their consistently profitable underwriting results (see **Exhibit 2**). However, business tends to be concentrated in some of the largest markets on the continent, including South Africa, Nigeria and Kenya, giving rise to some concern about risk accumulation.

The years 2017 to 2020 marked a turbulent period for the region's players. Many of the cohort of AM Best-rated SSA reinsurers looked overseas for growth and diversification. Most notably, some grew their exposures within the Indian subcontinent, and subsequently were hit by losses from crop insurance schemes.

In part, this explains the deterioration in the weighted average combined ratio of AM Best-rated SSA reinsurers from 94% in 2016, to 100% in 2019. Since 2020 – in the wake of unfavourable results – there has been a decline in the appetite of SSA reinsurers to write non-African business. This has partially aided the recovery of the combined ratio of the composite to 94% in 2021 (2020: 98%).

Negative exchange rate movements—particularly of the Nigerian naira—in almost every year between 2016 and 2021, has propelled claims inflation, especially in lines of business that rely on the import of goods and spare parts. Despite reinsurers taking inflation into account when pricing their products, volatile inflation trends still contributed to a deteriorating loss ratio between 2016 and 2020.

Exhibit 2
Sub-Saharan Africa – AM Best-Rated Reinsurers, Weighted Average Combined Ratio, 2014-2021
(%)



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

Furthermore, for certain classes of business that operate entirely in US dollars, accounting practices can result in loss ratio volatility, even when the underlying economics of the risks being (re)insured are stable.

While the underwriting results of AM Best-rated SSA reinsurers have shown a second consecutive year of improvement, they are yet to rebound to pre-2017 levels. Soft market conditions continue in certain large primary markets such as Kenya. Those conditions have – to varying degrees – impacted loss ratios of reinsurers geared towards proportional treaties (see AM Best's Market Segment Report, *"Price Competition Inhibits Growth Potential of Kenya's Insurance Market"*, July 2021).

Despite the global economic challenges that persist, AM Best has observed positive steps being taken by important stakeholders in the SSA (re)insurance markets. This development reinforces expectations that the improving trend in performance is sustainable. For example, there has been an increased focus on actuarial-based pricing and the introduction of minimum rates in 2021 and 2022 in key East African markets.

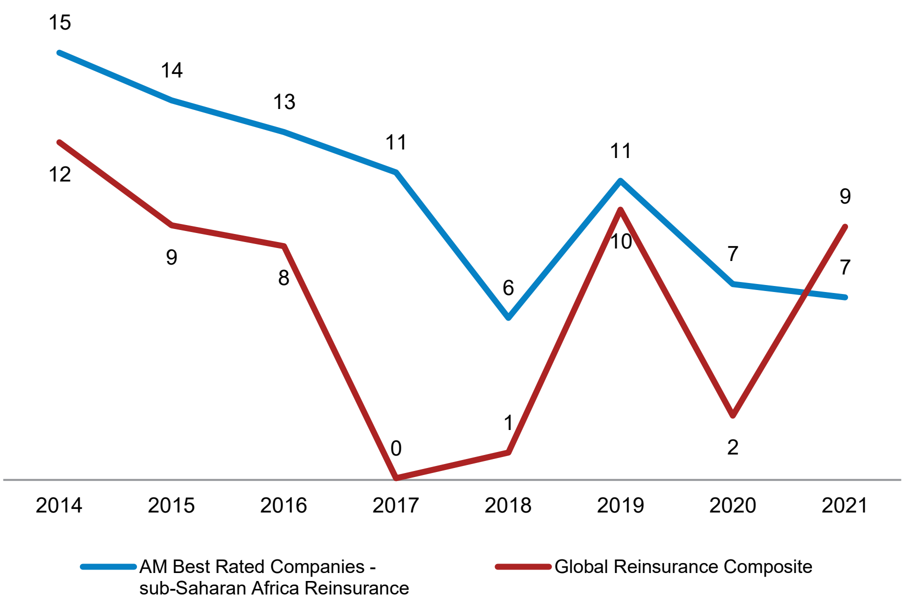
How do the Results of SSA Reinsurers Compare to Global Counterparts?

Over the eight years 2014 to 2021, SSA reinsurers' reported loss ratios have been lower than the AM Best's Global Reinsurance Composite, at 56% and 65%, respectively. SSA loss ratios have also been less volatile than for global players, with a standard deviation of 2% and 7%, respectively. The consistently lower loss experience of the SSA reinsurance composite can largely be explained by highly protectionist regimes in certain African reinsurance markets, which typically reduce competition, as well as the generally low catastrophe risk on the continent.

The typically high cost of doing business in SSA, along with the relatively small size of locally domiciled reinsurers, tends to temper overall underwriting results. Many market participants are unable to realise the economies of scale that larger global companies can achieve.

For example, the weighted average expense ratio reported in 2021 by the AM Best SSA reinsurance composite was 38%, seven percentage points higher than the 31% for the Global Reinsurance Composite.

Exhibit 3
Sub-Saharan Africa – AM Best-Rated Reinsurers, Return on Equity, 2014-2021
(%)



Sources: BESTLINK

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

Best's Financial Suite – Global, AM Best data and research

AM Best-rated SSA reinsurers have returned solid levels of profitability to their shareholders, demonstrated by an eight-year average return on equity (ROE) of 10%, compared with 6% reported for the Global Reinsurance Composite (see **Exhibit 3**). The trend in ROEs across the two benchmarks is remarkably similar, including the 2019 spike, which for SSA reinsurers was largely driven by exposures to non-African investments as well as foreign exchange gains.

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 ROE. However, there has been a general downward trend in the ROE of SSA reinsurers.

Some SSA Markets are Experiencing Increasing Frequency and Severity of Civil Unrest

In recent years, social unrest has impacted the region's reinsurance markets on a number of occasions. While to some extent this can be attributed to global geopolitical and economic turbulence—including disruption caused by COVID-19—civil unrest on the African continent is exacerbated by disproportionately high levels of income inequality and poverty.

In October 2020, the alleged shooting of a civilian by Nigeria's Special Anti-Robbery Squad (SARS), a former unit of the Nigerian Police Force, led to widespread protest. The Lagos Chamber of Commerce and Industry later reported that the country had lost NGN 700 billion (circa USD 1.7 billion) in economic value in the fortnight following the start of the protests, while the Nigerian Insurers Association estimated that insured losses could reach NGN 20 billion.

Exhibit 4

Sub-Saharan Africa – AM Best-Rated Reinsurers, Capital & Surplus (C&S)

AMB #	Company Name	2021 C&S (Including Minority Interests) (USD 000s)	2020 Best's Capital Adequacy Ratio (VaR 99.6%)	Assessment Effective Date
83411	African Reinsurance Corporation	1,000,714	67.0	8-Dec-21
85416	Kenya Reinsurance Corporation Ltd.	330,074	43.9*	15-Jun-22
78388	ZEP-RE (PTA Reinsurance Co.)	294,841	62.3	14-Oct-21
93852	CICA Re	144,494**	59.5	16-Feb-22
94468	WAICA Reinsurance Corporation	113,740	39.4*	29-Jul-22
78723	Continental Reinsurance PLC	105,144	51.0	9-Dec-21
90035	Ghana Reinsurance Co. Ltd.	66,287**	58.9	9-Dec-21
77803	East Africa Reinsurance Co. Ltd.	48,198	53.7	15-Oct-21
74716	ASR Re Ltd.	26,966	88.6*	24-Aug-22

* BCAR scores based on year-end 2021 data.

** 2020 data.

Sources: BESTLINK

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

In 2021, the arrest of the former South African president, Jacob Zuma, led to rioting and looting in some of South Africa's major urban centres. The state-owned South African Special Risks Insurance Association (SASRIA), the specialist insurer covering losses relating to politically motivated crimes in the country, estimated an insurance industry loss of approximately ZAR 34 billion (approximately USD 2.1 billion). In response, the South African government was forced to allocate ZAR 22 billion of additional funding to prevent SASRIA from becoming insolvent. A material proportion of these losses have ultimately fallen on Europe's largest reinsurers through their South African subsidiaries, along with the Lloyd's market.

Limited Regional Capacity

The larger reinsurers in SSA (excluding South Africa) tend to be either national or supranational entities, and often benefit from compulsory cessions and/or 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, the capacity offered by Africa-domiciled reinsurers remains low, and insufficient to meet the needs of local primary markets fully, particularly where major property and energy risks are concerned. As the region's economies have industrialised, their insurance needs have grown. This in turn has contributed towards declining levels of retention for SSA reinsurers (see **Exhibit 5**). As well as capacity, local players often lean on more sophisticated global reinsurers for the expertise needed to underwrite complex risks.

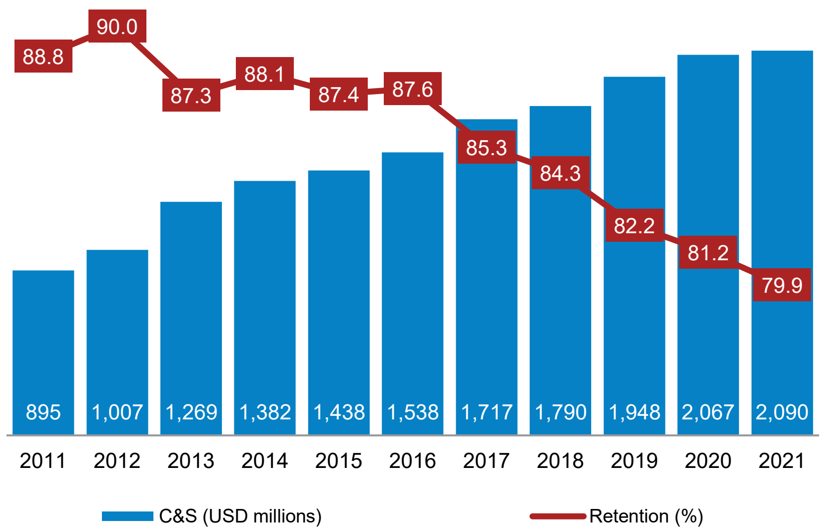
High Barriers to Entry

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 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.

Exhibit 5

Sub-Saharan Africa – AM Best-Rated Reinsurers, Capital & Surplus vs. Retention, 2011-2021

(C&S: USD millions Retention: %)



Sources: BESTLINK

Best's Financial Suite – Global, AM Best data and research

Exhibit 6

Sub-Saharan Africa – AM Best-Rated Reinsurers

Ratings as of August 25, 2022

AMB #	Company Name	Domicile	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	Nigeria	a	A	Affirmed	Stable	8-Dec-21
74716	ASR Re Ltd.*	Bermuda	bbb+	B++	Affirmed	Stable	24-Aug-22
93852	CICA Re	Togo	bbb-	B+	Upgraded	Stable	16-Feb-22
78723	Continental Reinsurance PLC	Nigeria	bbb-	B+	Affirmed	Stable	9-Dec-21
77803	East Africa Reinsurance Co. Ltd.	Kenya	bb+	B	Affirmed	Stable	15-Oct-21
90035	Ghana Reinsurance Co. Ltd.	Ghana	bb	B	Affirmed	Stable	9-Dec-21
85416	Kenya Reinsurance Corporation Ltd.	Kenya	bb+	B	Affirmed	Stable	15-Jun-22
94468	WAICA Reinsurance Corporation PLC	Sierra Leone	bbb-	B+	Affirmed	Negative	29-Jul-22
78388	ZEP-RE (PTA Reinsurance Co.)	Kenya	bbb	B++	Affirmed	Stable	14-Oct-21

* ASR Re is a Bermuda-domiciled reinsurer, underwriting African reinsurance business sourced by affiliated managing general agents (MGAs) owned by the ASR group.

Sources: BESTLINK

Best's Financial Suite – Global , AM Best data and research

Over the past decade, local regulators have become more active in championing their national markets, often forcing primary insurers to exhaust the capacity of local reinsurers, which are generally of a weaker credit quality, before they can explore international markets. Supranational 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 predominantly 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 Mauritius.

South Africa – Challenges Persist

High levels of insurance penetration underpin the relatively more mature (re)insurance market in South Africa (compared with the rest of the SSA region), and its well-established life and non-life segments.

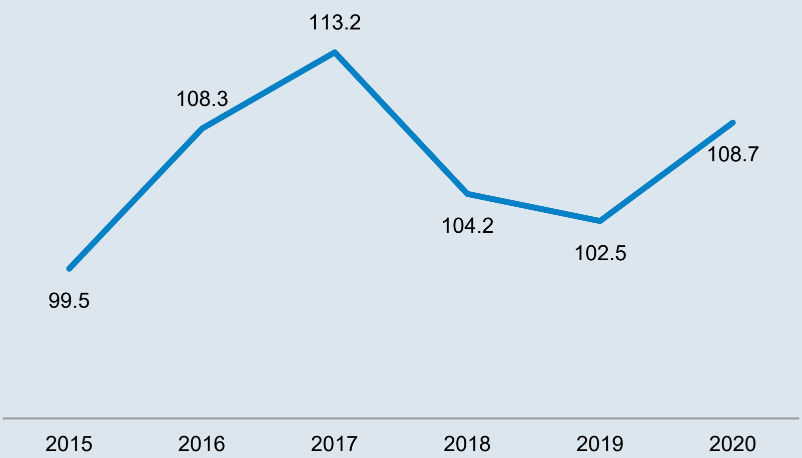
In 2020, South Africa's reinsurance market generated GWP in excess of ZAR 34 billion (USD 2.3 billion), according to KPMG's report "The South African Insurance Industry Survey 2021".

The presence of Underwriting Management Agencies (UMAs) in South Africa have also supported growth in the local (re)insurance market through penetration of niche and specialist risk segments. UMAs, which AM Best captures in the category of Delegated Underwriting Authority Enterprises (DUAEs), are viewed as playing an important role in supporting product innovation, providing specialist underwriting expertise and acting as a conduit for (re)insurers to access niche business. While establishing relationships with UMAs can take time for carriers, those that have been able to develop underwriting authorities, which support an appropriate alignment of interest, have often seen long-standing partnerships arise.

Exhibit 7

Sub-Saharan Africa – South Africa, Combined Ratio (includes Life Business), 2015-2020

(%)



Source: KPMG Insurance Survey (includes life business)

In recent years, the continent's largest reinsurance market has faced a series of blows. 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 South African reinsurance market was 109% in 2020, and has consistently exceeded 100% in each year since 2015 (see **Exhibit 7**). Performance of the market's reinsurers has been significantly impacted by soft pricing conditions, a spate of severe weather events and social unrest events.

In 2020 and 2021, the COVID-19 pandemic further impacted the South African reinsurance industry. Following a December 2020 court ruling, which overturned an appeal by Guardrisk Insurance Company Limited, the insurance market commenced settling contingent business interruption claims associated with the pandemic. AM Best believes the gross industry loss has exceeded USD 1 billion. Reinsurers incurred a sizeable share of these losses.

In March 2022, SASRIA was unable to renew certain aspects of its own reinsurance treaty as certain global reinsurers revisited their appetite for political violence risk in the country, causing a reduction in the level of cover available to the South African insurance market. While local insurers may consider taking advantage of this gap in cover, they will be faced with a similar challenge of securing their own reinsurance capacity.

Severe flooding in the KwaZulu-Natal province in April 2022 highlights a trend of increasing severity of adverse weather events in the region. AM Best expects that losses incurred by the South African insurance industry will rank among the largest natural catastrophe losses in the market's history, with initial estimates indicating a gross loss in excess of ZAR 10 billion (USD 0.6 billion). The market's reinsurers, who collectively reported approximately ZAR 10 billion of capital and surplus at year-end 2020, according to KPMG's South African Insurance Industry Survey, are expected to foot the bulk of the loss, thus marking another gloomy year for the country's reinsurers.

Analytical Contacts/Contributors

Mike Adams, Oldwick
Jessica Botelho-Young, London
Steve Chirico, Oldwick
Ben Diaz-Clegg, London
Greg Dickerson, Oldwick
Michael Dunckley, Singapore
Clare Finnegan, Oldwick
Myles Gould, London
Dan Hofmeister, Oldwick
Mathilde Jakobsen, Amsterdam
Konstantin Langowski, Amsterdam
Ghislain Le Cam, London
Christie Lee, Hong Kong
Sridhar Manyem, Oldwick
Emmanuel Modu, Oldwick
Victoria Ohorodnyk, Amsterdam
Riley Parnham, Oldwick
Doniella Pliss, Oldwick
Mike Porcelli, Oldwick
Timothy Prince, London
Alex Rafferty, London
Elí Sánchez, Mexico City
Guilherme Monteiro Simoes, Oldwick
Wai Tang, Oldwick
Catherine Thomas, London
Emily Thompson, London
Kanika Thukral, Singapore
Matt Tuite, Oldwick
Carlos F. Wong-Fupuy, Oldwick

Published by AM Best

BEST'S MARKET SEGMENT REPORT

A.M. Best Company, Inc.
Oldwick, NJ
CHAIRMAN, PRESIDENT & CEO **Arthur Snyder III**
SENIOR VICE PRESIDENTS **Alessandra L. Czarnecki, Thomas J. Plummer**
GROUP VICE PRESIDENT **Lee McDonald**

A.M. Best Rating Services, Inc.
Oldwick, NJ
PRESIDENT & CEO **Matthew C. Mosher**
EXECUTIVE VICE PRESIDENT & COO **James Gillard**
EXECUTIVE VICE PRESIDENT & CSO **Andrea Keenan**
SENIOR MANAGING DIRECTORS **Edward H. Easop, Stefan W. Holzberger, James F. Snee**

AMERICAS

WORLD HEADQUARTERS
A.M. Best Company, Inc.
A.M. Best Rating Services, Inc.
1 Ambest Road, Oldwick, NJ 08858
Phone: +1 908 439 2200

MEXICO CITY
A.M. Best América Latina, S.A. de C.V.
Av. Paseo de la Reforma 412, Piso 23,
Col. Juárez, Alcadía Cuauhtémoc, C.P. 06600, México, D.F.
Phone: +52 55 1102 2720

EUROPE, MIDDLE EAST & AFRICA (EMEA)

LONDON
A.M. Best Europe - Information Services Ltd.
A.M. Best Europe - Rating Services Ltd.
12 Arthur Street, 8th Floor, London, UK EC4R 9AB
Phone: +44 20 7626 6264

AMSTERDAM
A.M. Best (EU) Rating Services B.V.
NoMA House, Gustav Mahlerlaan 1212, 1081 LA Amsterdam, Netherlands
Phone: +31 20 308 5420

DUBAI*
A.M. Best - MENA, South & Central Asia*
Office 102, Tower 2, Currency House, DIFC
P.O. Box 506617, Dubai, UAE
Phone: +971 4375 2780
*Regulated by the DFSA as a Representative Office

ASIA-PACIFIC

HONG KONG
A.M. Best Asia-Pacific Ltd
Unit 4004 Central Plaza, 18 Harbour Road, Wanchai, Hong Kong
Phone: +852 2827 3400

SINGAPORE
A.M. Best Asia-Pacific (Singapore) Pte. Ltd
6 Battery Road, #39-04, Singapore
Phone: +65 6303 5000

Best's Financial Strength Rating (FSR): an independent opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations. An FSR is not assigned to specific insurance policies or contracts.

Best's Issuer Credit Rating (ICR): an independent opinion of an entity's ability to meet its ongoing financial obligations and can be issued on either a long- or short-term basis.

Best's Issue Credit Rating (IR): an independent opinion of credit quality assigned to issues that gauges the ability to meet the terms of the obligation and can be issued on a long- or short-term basis (obligations with original maturities generally less than one year).

Rating Disclosure: Use and Limitations

A Best's Credit Rating (BCR) is a forward-looking independent and objective opinion regarding an insurer's, issuer's or financial obligation's relative creditworthiness. The opinion represents a comprehensive analysis consisting of a quantitative and qualitative evaluation of balance sheet strength, operating performance, business profile, and enterprise risk management or, where appropriate, the specific nature and details of a security. Because a BCR is a forward-looking opinion as of the date it is released, it cannot be considered as a fact or guarantee of future credit quality and therefore cannot be described as accurate or inaccurate. A BCR is a relative measure of risk that implies credit quality and is assigned using a scale with a defined population of categories and notches. Entities or obligations assigned the same BCR symbol developed using the same scale, should not be viewed as completely identical in terms of credit quality. Alternatively, they are alike in category (or notches within a category), but given there is a prescribed progression of categories (and notches) used in assigning the ratings of a much larger population of entities or obligations, the categories (notches) cannot mirror the precise subtleties of risk that are inherent within similarly rated entities or obligations. While a BCR reflects the opinion of A.M. Best Rating Services, Inc. (AM Best) of relative creditworthiness, it is not an indicator or predictor of defined impairment or default probability with respect to any specific insurer, issuer or financial obligation. A BCR is not investment advice, nor should it be construed as a consulting or advisory service, as such; it is not intended to be utilized as a recommendation to purchase, hold or terminate any insurance policy, contract, security or any other financial obligation, nor does it address the suitability of any particular policy or contract for a specific purpose or purchaser. Users of a BCR should not rely on it in making any investment decision; however, if used, the BCR must be considered as only one factor. Users must make their own evaluation of each investment decision. A BCR opinion is provided on an "as is" basis without any expressed or implied warranty. In addition, a BCR may be changed, suspended or withdrawn at any time for any reason at the sole discretion of AM Best.

AM BEST SINCE 1899 ®

Version 010320

AM Best is a global credit rating agency, news publisher and data analytics provider specializing in the insurance industry. For more information, visit www.ambest.com.

AMERICAS

WORLD HEADQUARTERS
A.M. Best Company, Inc.
A.M. Best Rating Services, Inc.
1 Ambest Road, Oldwick, NJ 08858
Phone: +1 908 439 2200

MEXICO CITY
A.M. Best América Latina, S.A. de C.V.
Av. Paseo de la Reforma 412, Piso 23
Col. Juárez, Alcadía Cuauhtémoc, C.P. 06600, México, D.F.
Phone: +52 55 1102 2720

EUROPE, MIDDLE EAST AND AFRICA (EMEA)

LONDON
A.M. Best Europe - Information Services Ltd.
A.M. Best Europe - Rating Services Ltd.
12 Arthur Street, 8th Floor, London, UK EC4R 9AB
Phone: +44 20 7626 6264

AMSTERDAM
A.M. Best (EU) Rating Services B.V.
NoMA House, Gustav Mahlerlaan 1212,
1081 LA Amsterdam, Netherlands
Phone: +31 20 308 5420

DUBAI*
A.M. Best - MENA, South & Central Asia*
Office 102, Tower 2, Currency House, DIFC
P.O. Box 506617, Dubai, UAE
Phone: +971 4375 2780
*Regulated by the DFSA as a Representative Office

ASIA/PACIFIC

HONG KONG
A.M. Best Asia-Pacific Ltd
Unit 4004 Central Plaza, 18 Harbour Road, Wanchai, Hong Kong
Phone: +852 2827 3400

SINGAPORE
A.M. Best Asia-Pacific (Singapore) Pte. Ltd
6 Battery Road, #39-04, Singapore
Phone: +65 6303 5000