



Asia-Pacific Reinsurance Sector Update

Still In Recovery Mode

S&P Global
Ratings

WenWen Chen
Director

Trupti Kulkarni
Associate Director

October 26, 2023

This report does not constitute a rating action

Asia Pacific Reinsurers Key Metrics Projections Through 2024



5% - 7%
premium growth

100% ↔ 103%

Underwriting loss
continues*



Satisfactory
capitalization[§]

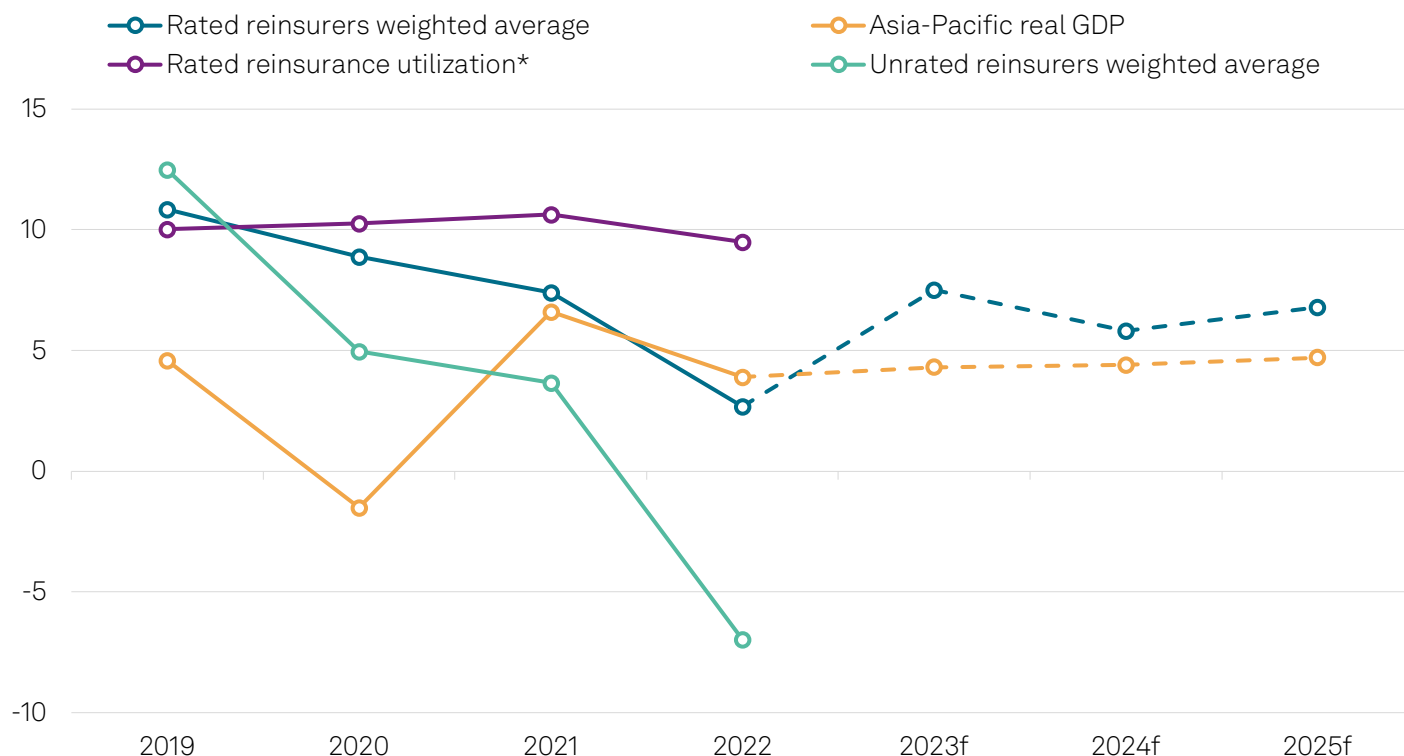
Based on our analysis of 6 rated Asia-Pacific reinsurers. *Combined ratio above 100% reflects underwriting loss. §Per S&P risk-based capital model, redundancy at BBB confidence level.
Source: S&P Global Ratings.

Asia-Pacific Reinsurance Sector: Key Trends And Risks

- Rated regional reinsurers' credit profile are seeing signs of stabilization post-COVID.
- We expect premium rates and underwriting conditions to remain tight, and capital buffers to stay adequate.
- Premium growth underlines ongoing rate hardening and expansions into new business lines by direct insurers.
- Demand for catastrophe protection to increase amid rising frequency of extreme weather events and related claims.
- Costlier retrocession, in line with global trends, reflects tightening capacity and higher catastrophe losses.
- Underwriting stresses persist, though improving. Improving investment returns to offset underwriting losses.
- "Higher for longer" interest rates could improve investment yields, benefiting earnings, but investment market volatility could erode capital buffers.
- Capitalization to remain healthy, however narrowing buffers bring focus on capital and risk management strategies.

Growth Is Recovering For Rated Regional Reinsurers

Premiums growth trending upward (%)

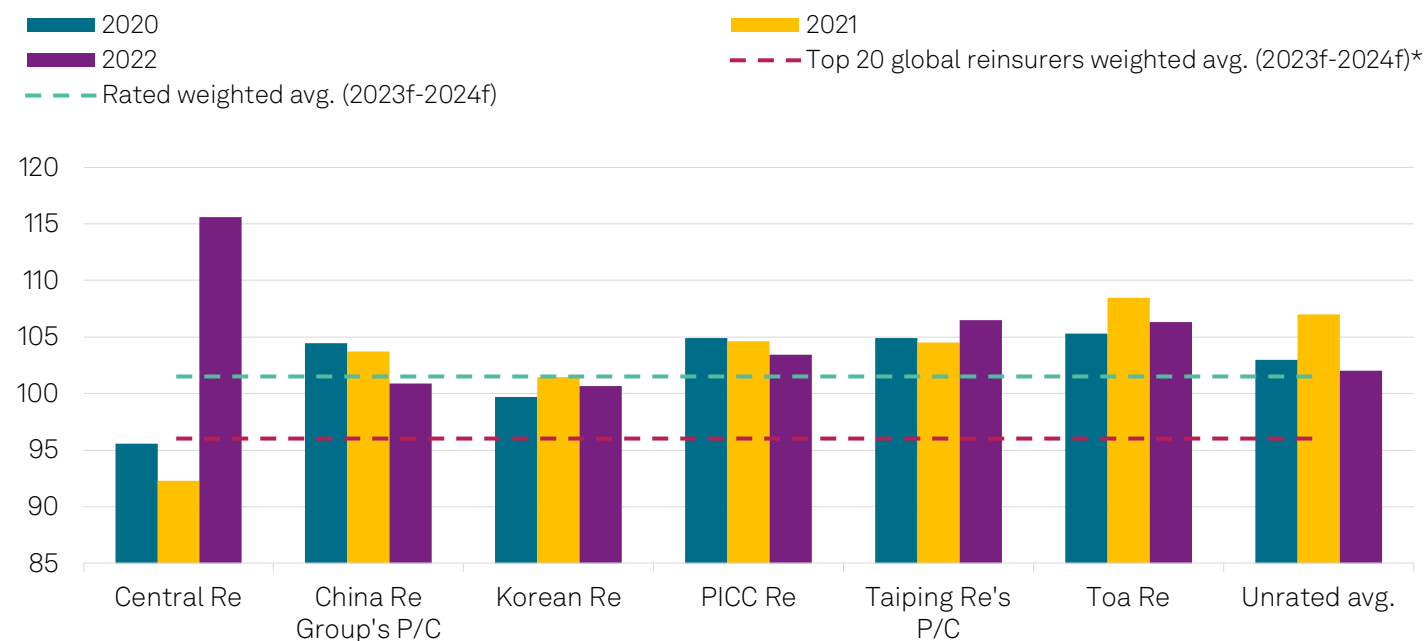


Note: For list of rated and unrated reinsurers see slide ten for the 15 Asia-Pacific reinsurers included in this study. *Based on weighted average.
Source: S&P Global Ratings.

- We forecast premium growth for rated regional reinsurers will grow at a faster rate than real GDP, thanks to **improving pricing adequacy**.
- Concurrently, **resuming economic activities** post COVID and **growing demand for agriculture insurance** present new growth opportunities.
- However, **slower economic growth headwinds** could implicate recovery.
- Rated regional reinsurers **maintain dominance in home markets**, despite increasingly higher retention by direct insurers. **International expansion pace will likely stay gradual**, as rated regional reinsurers become more selective.

Rated Regional Reinsurers Underwriting Losses To Stay Through 2024

Underwriting performance for rated regional reinsurers is weaker than top 20 global reinsurers
NCOR (%)



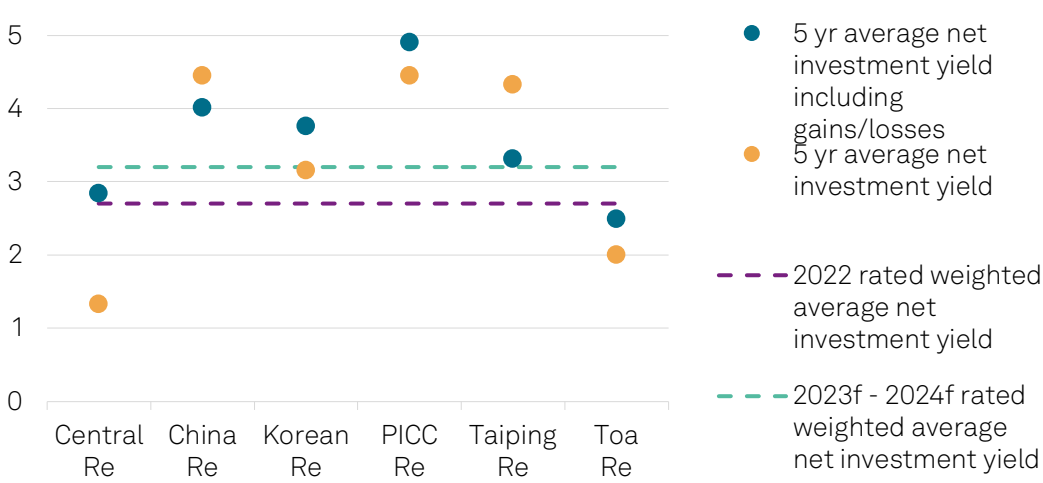
Note: The top 20 global reinsurers are Arch, Ascot, Aspen, AXIS, China Re, Convex, Everest, Fairfax, Fidelis, Hannover Re, Hiscox, Lancashire, Lloyd's, Markel, Munich Re, PartnerRe, RenaissanceRe, SCOR, Sirius, and Swiss Re. *Reflects NCOR maximum forecast from the range of 92%-96%, published in Global Reinsurance Stabilizes As Green Shoots Emerge In Underwriting, Sept. 5, 2023. NCOR--Net combined ratio; f--Forecast. Central Re--Central Reinsurance Corp. China Re--China Reinsurance (Group) Corp. Korean Re--Korean Reinsurance Co. PICC Re--PICC Reinsurance Co. Ltd. Taiping Re--Taiping Reinsurance Co. Ltd. Toa Re--Toa Reinsurance Co. Sources: Annual reports, S&P Global Ratings.

- Rated regional reinsurers will see underwriting losses in 2024 given **continued strong competition** in primary market.
- Meanwhile, **higher retrocession costs** have yet to fully pass through to the direct insurers. This constrains underwriting profitability.
- We expect reinsurers to **maintain prudent oversight** on their underwriting and reserving assumptions.
- Reinsurers could embark on regular reviews of pricing assumptions to **better calibrate climate and unmodelled risks**.
- Global reinsurers' better underwriting metrics mainly reflect **changes in reinsurers' strategies**, increases in pricing, and tighter terms and conditions.

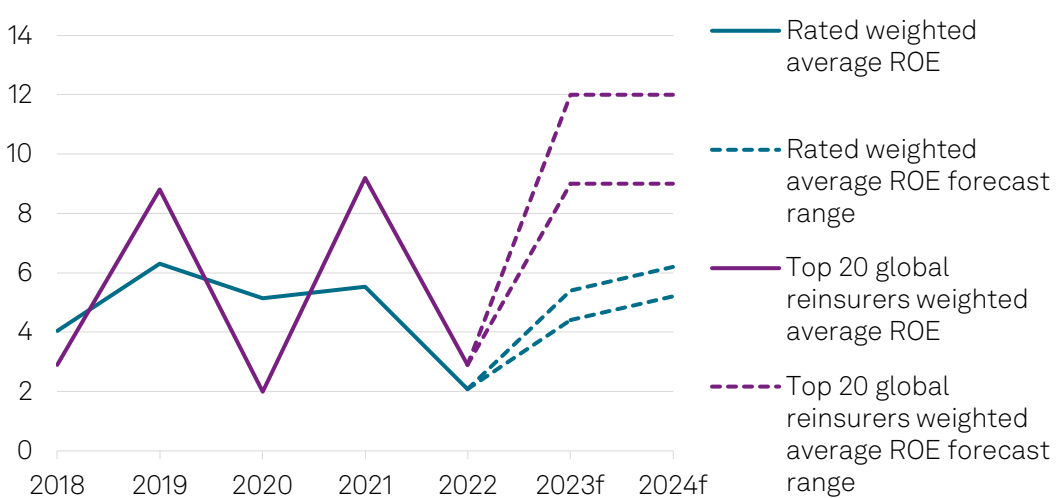
Operating Performance: Investment Returns To Offset Underwriting Losses

- Rated regional reinsurers benefit from **recovering investment returns**, which helps to offset persisting strains on claims.
- Higher interest rates to benefit reinvestment, but existing debt investments could see **marked-to-market valuation losses**.
- We expect rated regional reinsurers to **reduce risky investment allocations** to better manage rising credit and market risks.

Yields to remain range bound over next two years
(%)



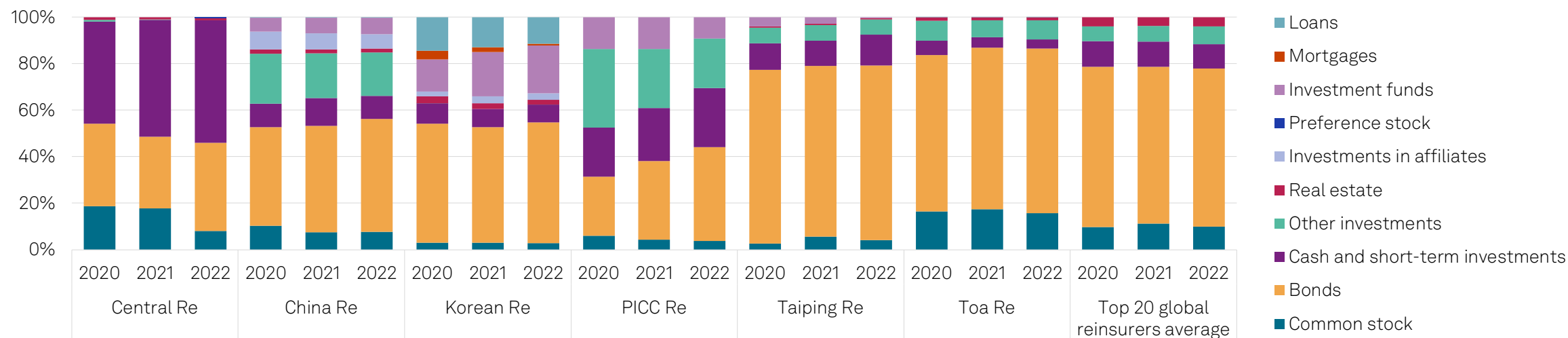
Improving investment income to support prospective earnings
ROE (%)



Note: The top 20 global reinsurers are Arch, Ascot, Aspen, AXIS, China Re, Convex, Everest, Fairfax, Fidelis, Hannover Re, Hiscox, Lancashire, Lloyd's, Markel, Munich Re, PartnerRe, RenaissanceRe, SCOR, Sirius, and Swiss Re.
NCOR--Net combined ratio; ROE--Return on Equity. Central Re--Central Reinsurance Corp. China Re--China Reinsurance (Group) Corp. Korean Re--Korean Reinsurance Co. PICC Re--PICC Reinsurance Co. Ltd. Taiping Re--Taiping Reinsurance Co. Ltd. Toa Re--Toa Reinsurance Co. For list of rated and unrated reinsurers refer slide 10 for the 15 Asia-Pacific reinsurers included in this study. Sources: Annual reports, S&P Global Ratings.

Portfolio Mix: Higher Allocation To Risky Assets To Stay

- Relatively **higher allocation to risky assets** (e.g., equities, unrated bonds) compared with global peers' underline dependency on investment returns for profits.
- **Minimal real estate investments** on rated regional reinsurers balance sheets.
- China-based reinsurers could see asset impairment and write-down amid **rising counterparty risks**, intensifying capital pressure.



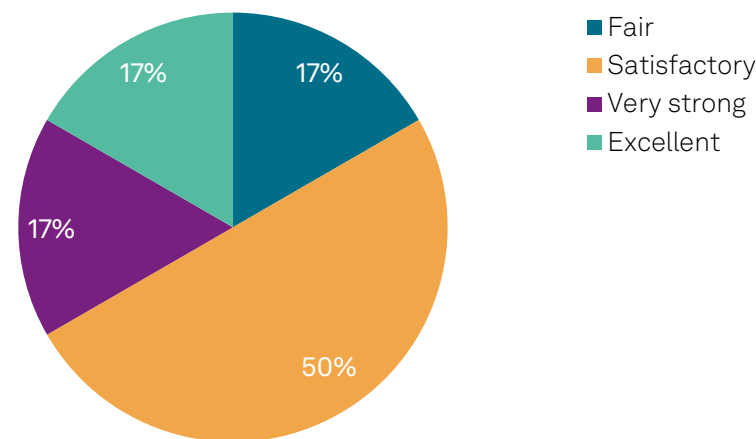
Note: The top 20 global reinsurers are Arch, Ascot, Aspen, AXIS, China Re, Convex, Everest, Fairfax, Fidelis, Hannover Re, Hiscox, Lancashire, Lloyd's, Markel, Munich Re, PartnerRe, RenaissanceRe, SCOR, Sirius, and Swiss Re. Central Re--Central Reinsurance Corp. China Re--China Reinsurance (Group) Corp. Korean Re--Korean Reinsurance Co. PICC Re--PICC Reinsurance Co. Ltd. Taiping Re--Taiping Reinsurance Co. Ltd. Toa Re--Toa Reinsurance Co. Sources: Annual reports, S&P Global Ratings.

Capitalization: Buffers Sensitive To High Rates And Market Swings

- Capitalisation to remain **satisfactory** (i.e., redundant at BBB confidence levels) amid thinning buffers.
- Regional reinsurers to **closely manage their catastrophe appetite**, particularly overseas markets, to limit swings in underwriting.
- However, extreme weather events could see **increasing costs** from secondary perils.

Capitalization to remain healthy

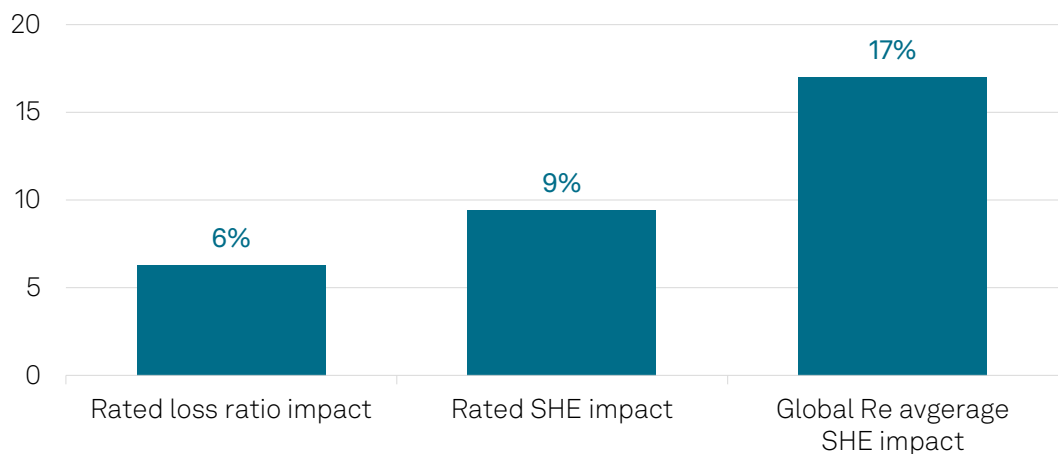
Capital and earnings scores of rated regional reinsurers (%)



Rated Reinsurers in Asia are: Central Reinsurance Corp., China Reinsurance (Group) Corp., Korean Reinsurance Co., PICC Reinsurance Co. Ltd., Taiping Reinsurance Co. Ltd., Toa Reinsurance Co. SHE--Shareholder Equity.
Source: S&P Global Ratings' risk-based insurance capital adequacy model.

Catastrophe impact is limited

Net 1-In-250-year aggregate loss impact (%)

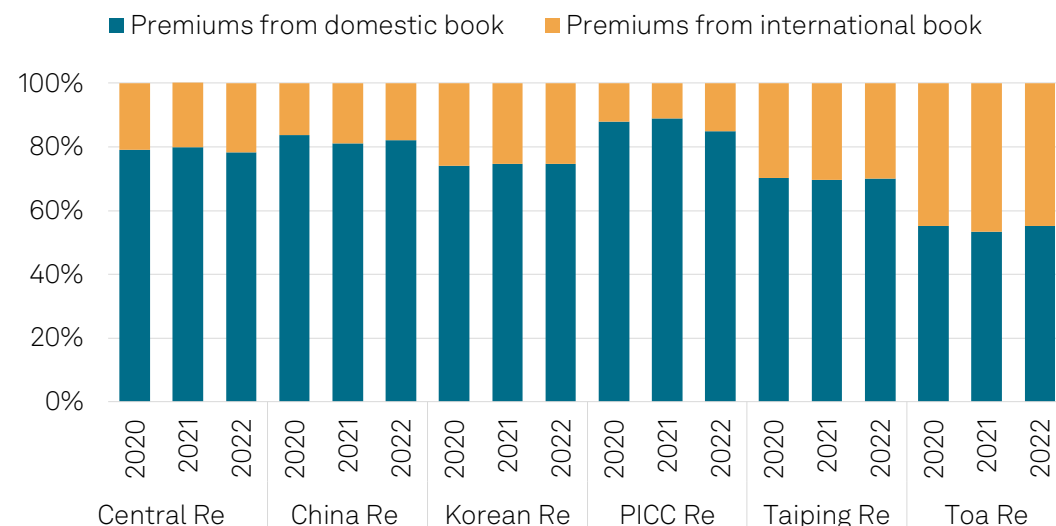


Source: S&P Global Ratings' risk-based insurance capital adequacy model.

Diversification Continues Via International Expansion And Life Reinsurance

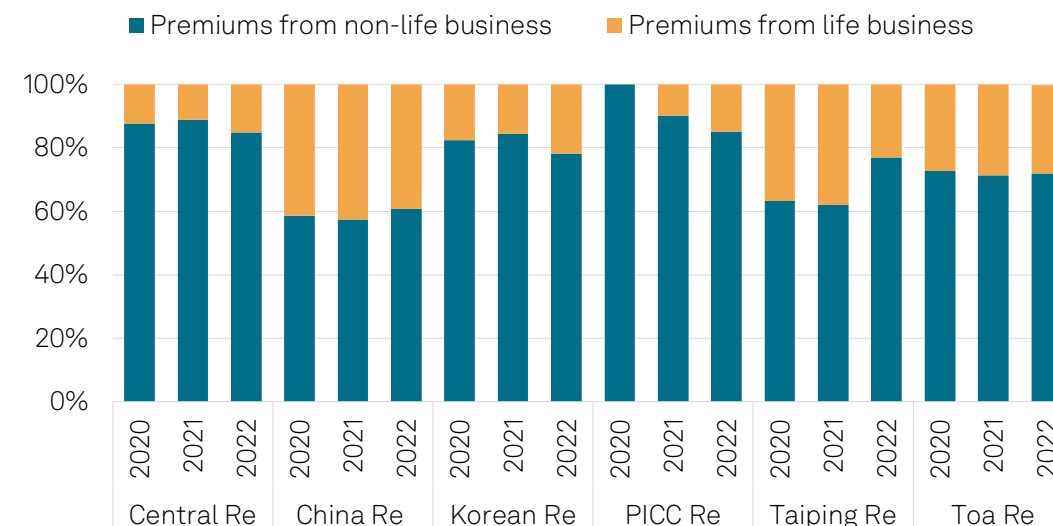
Tighter oversight needed for international risk selection

- Underwriting losses from the overseas portfolio, over the past few years, prompted a **need for strong curation of risk exposures**.
- Amid hardening rates, we anticipate regional reinsurers to **retain international exposure** – to capture the better pricing environment.



Life reinsurance is here to stay, but evolution required

- Higher interest rates and capital requirements will lead regional reinsurers to **revisit existing product offerings** (such as financial reinsurance).
- We expect reinsurers to **drive product innovation** (such as simplified underwriting protection products).



Note: Taiping Re's domestic book contains business from Mainland China and Hong Kong. Central Re--Central Reinsurance Corp. China Re--China Reinsurance (Group) Corp. Korean Re--Korean Reinsurance Co. PICC Re--PICC Reinsurance Co. Ltd. Taiping Re--Taiping Reinsurance Co. Ltd. Toa Re--Toa Reinsurance Co. Sources: Annual reports, S&P Global Ratings.

Appendix: Snapshot Of 15 Asia-Pacific Reinsurers

Ranking*	Companies	Jurisdictions	Ratings/Outlook	NPW (mil. US\$)			Net Income (mil. US\$)			NCOR (%)			ROE (%)		
				2022	2021	2020	2022	2021	2020	2022	2021	2020	2022	2021	2020
1	China Reinsurance (Group) Corp.	China	A/Stable/--	22,998	22,905	21,675	227.1	990.6	859	100.9%	103.7%	104.5%	1.6%	6.2%	5.9%
2	Korean Reinsurance Co.	Korea	A/Stable/--	5,605	5,244	4,977	136.1	155.5	127.6	100.7%	101.4%	99.7%	6.4%	7.1%	6.1%
3	General Insurance Corp. of India	India	N.R.	4,192	5,209	5,685	786.6	269.3	258.7	108.3%	108.4%	113.1%	10.4%	3.7%	4.4%
4	Toa Reinsurance Co.	Japan	A/Stable/--	2,374	2,733	2,602	18.1	-11.3	25.9	106.3%	108.5%	105.3%	1.2%	-0.7%	1.6%
5	Taiping Reinsurance Co. Ltd.	Hongkong	A/Stable/--	2,027	2,057	1,764	7.8	1.2	-21.9	106.5%	104.5%	104.9%	0.5%	0.1%	-1.6%
6	Peak Reinsurance Co. Ltd.	Hongkong	N.R.	1,777	1,726	1,544	-94.3	59.9	84.6	114.0%	105.9%	105.8%	-7.1%	4.0%	6.6%
7	PICC Reinsurance Co. Ltd.	China	A-/Stable/--	1,169	967	672	24.8	23.7	14.6	103.4%	104.6%	104.9%	4.1%	3.9%	2.6%
8	Qianhai Reinsurance Co. Ltd.	China	N.R.	764	1,139	966	11.96	32.2	29.8	98.3%	107.5%	99.3%	2.4%	6.5%	6.9%
9	Central Reinsurance Corp.	Taiwan	A/Stable/--	620	696	580	8.5	73.9	51.5	115.6%	92.3%	95.6%	1.5%	13.8%	11.9%
10	Malaysia Reinsurance Bhd.	Malaysia	N.R.	401	364	319	18.4	14.9	32.1	102.3%	102.6%	99.8%	4.4%	3.5%	7.5%
11	PT Reasuransi Indonesia Utama	Indonesia	N.R.	256	275	302	-13.1	-36.2	7.3	105.9%	117.5%	103.4%	-8.2%	-16.8%	3.1%
12	Thai Reinsurance Public Co	Thailand	N.R.	111	121	131	-5.6	-10.7	7.4	108.3%	115.1%	98.6%	-6.1%	-10.3%	6.1%
13	Singapore Reinsurance Corp. Ltd.	Singapore	N.R.	84	67	52	18.8	11.6	3.9	85.7%	102.9%	108.1%	8.9%	5.6%	1.9%
14	National Reinsurance Corp. of the Philippines	Philippines	N.R.	54	56	66	1.0	2.8	2.5	104.0%	107.0%	98.0%	1.0%	2.5%	2.2%
4.5	Vietnam National Reinsurance Corp.	Vietnam	N.R.	51	51	60	15.1	13.9	12.4	90.6%	97.1%	99.4%	11.2%	10.8%	10.0%

*Ranking is based on 2022's NPW. NPW--Net premiums written. NCOR--Net combined ratio. ROE--Return on equity. N.R.--Not rated. N.A.--Not applicable. N/A--Not available. Sources: Company Annual Reports, S&P Global Ratings.

Rated Asia-Pacific Reinsurers

Credit Ratings Summary

Central Reinsurance Corp.

Financial Strength Rating: A/Stable/--

Issuer Credit Rating: A/Stable/--

Contacts: Judy Chen (judy.chen@spglobal.com) and Serene Hsieh (serene.hsieh@spglobal.com)

Central Re has a strong foothold in Taiwan's reinsurance market as the only domestic reinsurance company. Relationships with local life and nonlife insurers remain tight, as demonstrated through its solid market share and ability to secure quality business. It remained the reinsurer's strategy to diversify its portfolio by exploring the international reinsurance market, but its risk appetite for high growth and catastrophe risks overseas has moderated. Central Re is likely to maintain a stable portfolio both domestically and overseas over the coming one to two years with an emphasis on underwriting profits.

We anticipate Central Re will maintain its capital and earnings at the current very strong level over the coming two years. The reinsurer's capital buffer did fluctuate somewhat during 2022 amid surging claims against P/C insurers' COVID-related policies. However, the completion of a new Taiwan dollar (NT\$) 3.3 billion capital raising plan before the end of 2022 and the realization of capital gains from equity investments during the year helped make up for its losses from COVID-related products and provided a buffer to maintain its excellent capitalization.

We believe Central Re can maintain its credit profile over the coming two years through satisfactory underwriting profits, proactive capital planning, and prudent control over investment risk exposure. Impacts from the COVID-related policies were one-time as policies reinsured had all expired by May 2022 and had a minimal impact in 2023. We expect that Central Re will report a satisfactory underwriting result in 2023, driven by its profitable core reinsurance business. Except for the underwriting losses in 2022 due to the COVID-related losses, Central Re's combined ratio has consistently been slightly better than that of similarly rated reinsurers in Asia Pacific. Central Re has maintained a satisfactory combined ratio, averaging 94% over the past five years ending 2021. The reinsurer posted a combined ratio of about 93% for the first quarter of 2023. The combined ratio is a measure of profitability, with a figure below 100% representing underwriting profit.

China Reinsurance (Group) Corp.

Financial Strength Rating: A/Stable/--

Issuer Credit Rating: A/Stable/--

Contacts: Judy Chen (judy.chen@spglobal.com) and Wenwen Chen (wenwen.chen@spglobal.com)

A leading market presence in China with an increasing international footprint underpin China Re Group's very robust competitive position. It is the longest established and largest reinsurance group in China. Its strong ties to primary insurers, comprehensive product offerings, and established infrastructure (including data systems and risk management framework) underpin its dominant market position in China's reinsurance market. The reinsurance group's key operation in the overseas market, Chaucer Group (China Re International Co. Ltd., Chaucer Insurance Co., DAC, and China Re Australia HoldCo Pty Ltd.), should bring diversification benefits and technical expertise. The state-owned reinsurance group contributes to important government initiatives, such as building financial resilience in the economy through the expansion of catastrophe-related coverage in China.

We believe China Re Group will continue to prioritize margins and value generation, particularly leveraging industry-wide premium rate hikes. Together with the continuous portfolio overhaul, the underwriting pressure of the group's property/casualty (P/C) reinsurance portfolio should gradually ease. China Re Group will also likely actively manage its retained exposure in light of rising retrocession costs and strengthen its risk selection process as it expands its footprint in the global insurance and reinsurance markets. China Re Group's domestic and overseas P/C reinsurance businesses reported a combined ratio of 99.7% and 88.5%, respectively, for the first half of 2023 (compared with 99.6% and 96.5% a year ago). The combined ratio is a measure of profitability, with a figure below 100% representing underwriting profit.

China Re Group's dependence on investment returns will remain high amid resumed growth in savings-type policies in the first half of 2023. Investment market swings and still-low interest rates in China will continue to constrain the reinsurance group's investment income. China Re Group is more susceptible to credit and market risks than its international peers due to its large holdings of high-risk assets. Potential asset impairment losses amid increasing counterparty risk and spillovers from the troubled Chinese real estate sector could weigh on its capital position. We expect the group to review its investment guidelines and risk control processes.

Korean Reinsurance Co.

Financial Strength Rating: A/Stable/--

Issuer Credit Rating: A/Stable/--

Contact: Emily Yi (emily.yi@spglobal.com)

Korean Re's dominant market position in Korea with a long operating history and strong relationships with local primary insurers will likely underpin stable revenue growth in its domestic reinsurance portfolio over the next two years. The reinsurer had a market share of approximately 50% in Korea's P/C reinsurance market in terms of gross premiums written in 2022.

Korean Re will likely maintain largely stable underwriting performance over the next two years. This is backed by the reinsurer's tightened underwriting guidelines and reduction of underperforming insurance policies. We expect the reinsurer's combined ratio to be 99%-100% over the next two years.

Korean Re has low capital and earnings volatility, given its high reinsurance utilization on commercial lines and catastrophe exposures. The reinsurer's commission arrangement associated with loss experience with local cedants also support its earnings stability. That said, its exposure to natural catastrophe events could increase owing to its growing international presence. The overseas business accounted for about 25% of gross premiums written in 2022.

PICC Reinsurance Co. Ltd.

Financial Strength Rating: A-/Stable/--

Issuer Credit Rating: A-/Stable/--

Contact: Wenwen Chen (wenwen.chen@spglobal.com)

PICC Re plays a very important role in the internationalization strategy of the People's Insurance Co. (Group) of China Ltd. (PICC Group). This role includes the group's initiative in serving Chinese corporates' insurance needs in overseas markets. We believe the China-based reinsurer will increasingly contribute to the parent group's risk management strategy and gradually introduce domestic and international insurance industry insights to the parent group. The reinsurer also benefits from business referrals from parent group affiliates. Group-related business will remain the dominant contributor to PICC Re's topline and underwriting results over the next two years. This segment grew by 5.0% and represented 54.5% of the reinsurer's premium income in 2022.

A portfolio revamp initiative and evolving risk selection practices reflect PICC Re's increasing focus on underwriting margin. This will likely facilitate narrowing underwriting losses. That said, increased extreme weather could still add volatility to the reinsurer's underwriting results. The reinsurer's combined ratio was 103.4% as of year-end 2022, versus 104.6% the year before. PICC Re will likely moderate its growth in domestic third-party P/C and international book, amid ongoing portfolio overhaul.

The reinsurer will likely further tap life opportunities in China. The reinsurer started underwriting life reinsurance in the country late 2020, and the business grew 48.9% in 2022. The strong growth was driven by demand from financial reinsurance business, following the implementation of Phase II of China's Risk-Oriented Solvency System. We expect the growth of life reinsurance to moderate to a similar level with P/C reinsurance, at 8%-10%.

On Oct. 13, 2023, PICC Group and PICC Property & Casualty Co. Ltd. announced the planned capital injection of RMB 2.0 billion to PICC Re. The additional capital will likely support the reinsurer's business development and help ease the reinsurer's pressurized earnings from strained underwriting results and lower investment return. We also believe the parent group will provide necessary support, if needed, to avoid defaults in the reinsurer's debt obligations and the risk of reputational damage by association. The reinsurer had Chinese RMB 2.0 billion of subordinated debt outstanding as of March 31, 2023.

Taiping Reinsurance Co. Ltd.

Financial Strength Rating: A/Stable/--

Issuer Credit Rating: A/Stable/--

Contacts: Judy Chen (judy.chen@spglobal.com) and Wenwen Chen (wenwen.chen@spglobal.com)

The Hong Kong-based Taiping Re provides reinsurance support and regional insurance market insights to China Taiping Insurance Group's affiliates. This supports the parent group's expansion in the Greater Bay Area (Hong Kong, Macau, and Guangdong) and international markets. Through increasing collaboration with strategic minority investor, Ageas Insurance International N.V., we believe Taiping Re could leverage this strategic investor's expertise in investment, risk management, and governance. Ageas' presence in Asia and Europe could further aid in the group's expansion outside Greater China.

Continuous portfolio overhaul and evolving risk selection for new business will likely lead to a moderate growth appetite for Taiping Re over the next two years. A more selective growth strategy could result in a gradual narrowing of underwriting losses for the reinsurer over the next two years. That said, the reinsurer's underwriting results are sensitive to weather-related large losses, given its increasing retained exposure to property reinsurance. We estimate Taiping Re's life reinsurance premiums will continue to contract over the next two years, mainly driven by its effort to curtail growth in the savings-type life reinsurance portfolio. Taiping Re's more proactive review of liability costs and development of protection-type policies reflect a shift in focus to insurance margin.

We expect Taiping Re to proactively manage its regulatory capital adequacy over the next two years. In addition to the capital demand for business growth, the ongoing development of Hong Kong Risk-Based Capital Regime could also prompt further needs for supplementing regulatory capital. Investment market volatility will continue to constrain the reinsurer's capital and earnings. The insurer is susceptible to credit and market risks due to its large holdings of high-risk assets. Potential asset impairment loss amid rising counterparty risk on legacy investments could also weigh on its capital position. We believe Taiping Re will continue to follow its parent group's tightened investment risk control.

Toa Reinsurance Co.

Financial Strength Rating: A/Stable/--

Issuer Credit Rating: A/Stable/--

Contact: Kentaro Mukoyama (kentaro.mukoyama@spglobal.com)

Toa Re's strong foothold in the Japan reinsurance market, good diversification along business lines, and excellent capital position support its overall credit profile. Toa Re is the only reinsurance group in Japan that serves both the non-life and life sectors in domestic and overseas markets, and it has maintained direct relationships with Japanese clients since its establishment in 1940. Toa Re has been expanding its business portfolio overseas to diversify its earning sources and risk, although the performance of overseas business has not been successful.

The group's operating performance continued to deteriorate from fiscal 2018 to 2022 (year ending March 31). Its combined ratio (loss ratio and expense ratio) exceeded 100% for a fifth consecutive year. This was caused by a series of unforeseen industry-wide events, such as the pandemic's impact, additional reserve accumulation in its U.S. non-life reinsurance business because of social inflation, and several natural catastrophes. Even under circumstances where any risks are realized, we expect Toa Re's strong capital commitment to work and to take measures to secure levels of capital at the 'AAA' category. The group has publicly set such numerical targets for capital in its medium-term management plan for fiscal 2021 to 2023.

Related Research

- [Global Reinsurance Stabilizes As Green Shoots Emerge In Underwriting](#), Sept. 5, 2023
- [Catastrophe Risk Appetite Varies Among Global Reinsurers](#), Aug. 24, 2023
- [Volatility Ahead For Asia-Pacific Reinsurance Sector](#), Oct. 27, 2022
- [Asia-Pacific Reinsurers And Governments Fortify Natural Disaster Defenses](#), Sept. 13, 2022
- [Is The Global Reinsurance Sector About To Turn A Corner?](#), Sept. 6, 2022
- [China's Summer Struggle: Drought, Food Inflation, And Shortages](#), Aug. 31, 2022
- [Global Reinsurers Part Ways On Natural Catastrophe Risk—Even As Prices Rise](#), Aug. 29, 2022
- [Asia-Pacific Reinsurers: More Volatility To Come As Risks Evolve](#), Nov. 4, 2021
- [The Global Reinsurance Sector Outlook Remains Negative As Returns Fall Short](#), Oct. 28, 2021
- [China's Extreme Weather Is Testing Its Major Property/Casualty Insurers](#), Aug. 10, 2021.
- [APAC's Costly Catastrophes: Reinsurance And More Required](#), Oct. 21, 2020
- [Asia-Pacific's Reinsurers: Evolve Or Dissolve?](#), Oct. 29, 2019

Analytical Contacts

Eunice Tan

**Head of Credit Research, Asia-Pacific Sector Lead
Asia-Pacific Insurance Ratings**

Hong Kong, +852-2533-3553

eunice.tan@spglobal.com

Trupti Kulkarni

Associate Director, Insurance Ratings

Singapore, +65-6216-1090

trupti.kulkarni@spglobal.com

Emily Yi

Director, Financial Services Ratings

Hong Kong, +852-2532-8091

emily.yi@spglobal.com

Research Contributors

Rishabh Maheshwari, CRISIL

Philip Chung

**Analytical Manager and Senior Financial Services
Ratings/Sovereign and IPF**

Singapore, +65-6239-6343

philip.chung@spglobal.com

Serene Hsieh

Director, Financial Services Ratings

Taiwan, + 886-2-2175-6823

Serene.hsieh@spglobal.com

Kentaro Mukoyama

Associate Director, Insurance Ratings

Tokyo, +81-3-4550-8775

kentaro.mukoyama@spglobal.com

Pranav Manek, CRISIL

Wenwen Chen

Director, Insurance Ratings

Hong Kong, +852-2533-3559

wenwen.chen@spglobal.com

Judy Chen

Associate Director, Insurance Ratings

Hong Kong, +852-2532-8059

judy.chen@spglobal.com

Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.spglobal.com/ratings (free of charge) and www.ratingsdirect.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.spglobal.com/ratings/usratingsfees.

Australia: S&P Global Ratings Australia Pty Ltd holds Australian financial services license number 337565 under the Corporations Act 2001. S&P Global Ratings' credit ratings and related research are not intended for and must not be distributed to any person in Australia other than a wholesale client (as defined in Chapter 7 of the Corporations Act).

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

spglobal.com/ratings

S&P Global
Ratings