Gallagher Re

Reinsurance Market Report

Results for full-year 2022

APRIL 2023

TABLE OF CONTENTS

Key findings....3
At a glance.... 4
Capital.... 4
Underlying ROE for the SUBSET.... 5
Combined ratio for the SUBSET....6
Expenses for the SUBSET.... 7
Investment yield for the SUBSET.... 7
Capital.... 8
Total reinsurance dedicated capital.... 8
INDEX capital.... 10
Return of capital....12
Return on equity....14
Underwriting performance....18
Premium volumes....18
Combined ratios.... 20
Prior year loss development....23
Natural catastrophe losses....25
Expense ratios....27
Investment performance....28
Appendix 1....29
Methodology....29
Appendix 2....30
2022 FY results detail for INDEX.... 30

KEY FINDINGS

Welcome to the Gallagher Re full-year 2022 Reinsurance Market Report which tracks the capital and profitability of the global reinsurance industry.

The headline figures, both in terms of reinsurers' capital positions and earnings, are open to misinterpretation. If measured on an accounting basis, capital declined materially. However, when reported on an economic basis, solvency not only remained strong but in fact generally increased during the year. Similarly, the decline in reported Return on Equity (ROE) masks a notable improvement in underlying performance, to the point where the reinsurance industry's underlying[1] ROE exceeded its cost of capital for the first time since at least 2013.

Global reinsurance dedicated capital totaled USD 638 billion as of the end of 2022, a decline of 12% versus the restated 2021 base.[2]

Focusing on the INDEX companies, which contribute more than 80% of the industry's capital:

- The INDEX companies' reported capital declined by 14% (though this was slightly offset by 2% growth in alternative capital).
- This drop is entirely explained by a decline in the value of investments across all major asset classes — equities, government bonds and corporate bonds.
- However, while rising interest rates depress the value of investments, they normally improve economic measures of capital and solvency, and this was indeed the case for most of the large European reinsurers where Solvency 2/Switzerland's SST disclosure is available. Gallagher Re's view is that most (re)insurers make decisions based more on economic views of capital than on accounting measures. In our view, the global reinsurance industry's capital position remains robust.
- There was also a conspicuous absence of new capacity, despite the potential attraction of much-tightened pricing and terms and conditions.
- While capital, or 'supply', is healthy in our view, demand also increased sharply in 2022 FY, principally due to inflation.

Drilling further into profitability, for the SUBSET of companies within the INDEX that provide the relevant disclosure:

- Premium growth remained strong in 2022 FY at 12.3%, supported by rate increases and exposure growth (the latter particularly driven by inflation).
- The reported combined ratio was broadly stable at a healthy 97.8%. Within that, though, the ex-nat cat accident year loss ratio deteriorated by 2.0 percentage points as price increases failed to keep pace with claims inflation. This was offset by a lighter load of nat cat losses and an improved expense ratio. Prior year reserve development, which provided significant support for reported combined ratios in the past, has been more subdued over the past three years.
- On an underlying basis, the combined ratio improved for the third year in a row, from 99.7% to 98.8%, driven by the better expense ratio and a lower load of normalized natural catastrophes.
- The average ROE on a reported basis declined from 11.4% to 6.8% because of a reversal of investment gains (a strong tailwind in 2021 FY, a strong headwind in 2022 FY).
- However, the underlying ROE has been steadily improving in recent years (2020 FY: 1.3%, 2021 FY: 6.3% and 2022 FY: 11.2%) to the point where underlying ROE now exceeds the industry's cost of capital. This improvement has been driven by better underwriting results, stronger running investment income, and for 2022 FY, more operating leverage (i.e., a smaller denominator of shareholders' equity).

[1]The underlying basis replaces actual natural catastrophe and COVID-19 losses with a normalized cat load and strips out prior year reserve movements, and for ROE, investment gains.

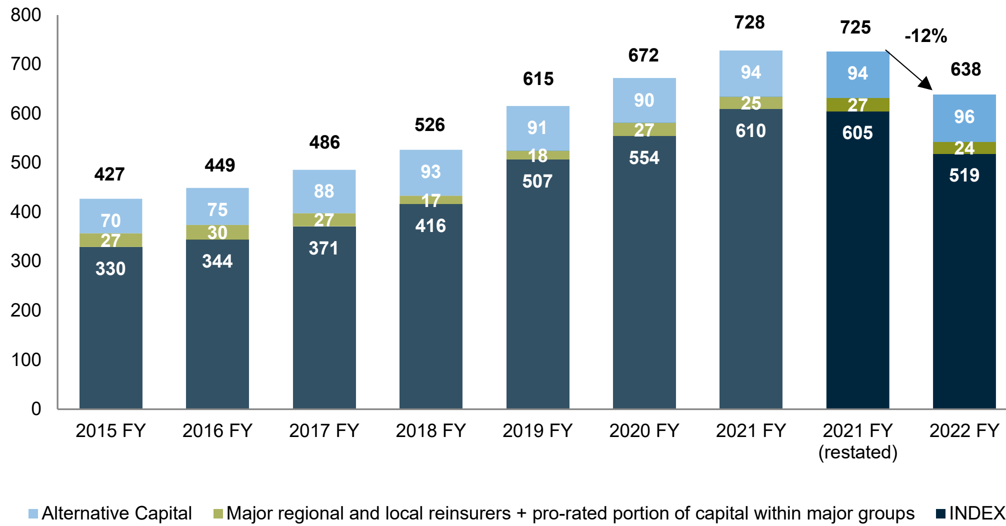
[2]We have re-stated year-end 2021 capital from USD 728 billion to USD 725 billion, following our annual review of constituents.

AT A GLANCE

Capital

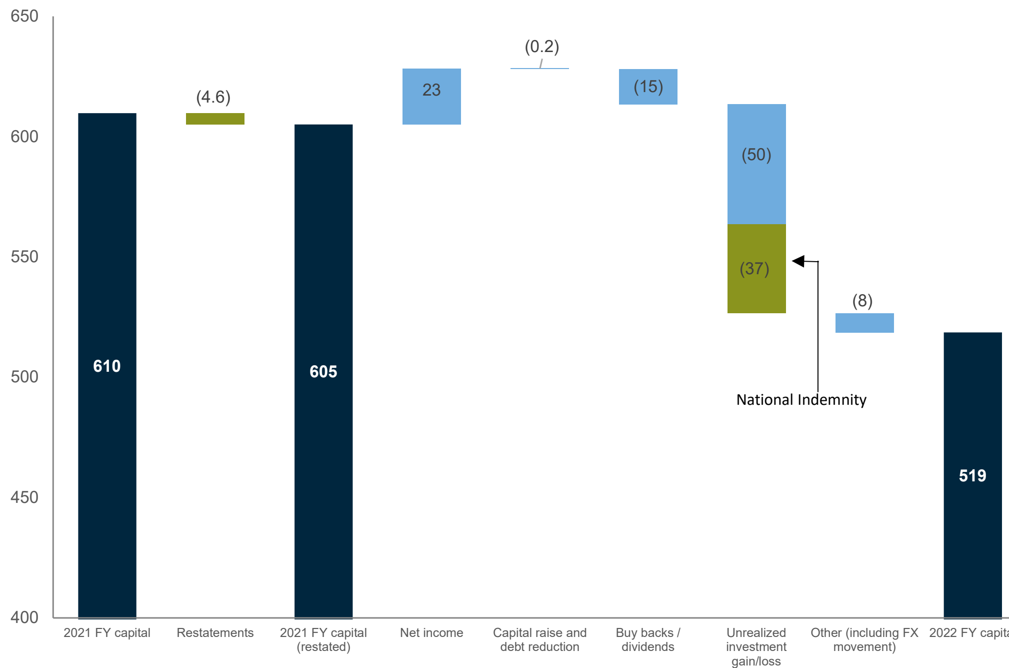
The first full-year drop in reinsurers' accounting capital since at least 2015

Total reinsurance dedicated capital (USD bn)[3]



Investment losses more than explain the drop in INDEX capital

Capital analysis for the INDEX (USD bn)[4]



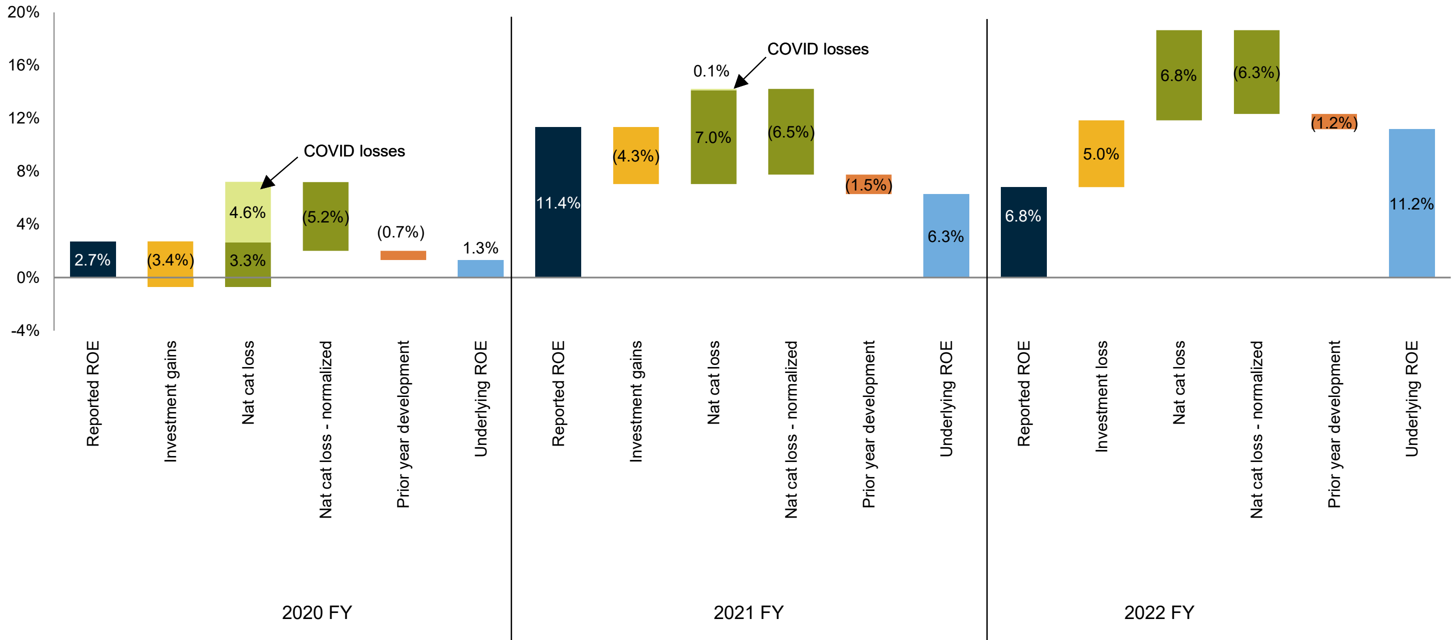
[3]We have re-stated year-end 2021 capital from USD 728 billion to USD 725 billion, following our annual review of constituents.

[4]Change in constituents includes 2021 FY late filers.

Underlying ROE for the SUBSET

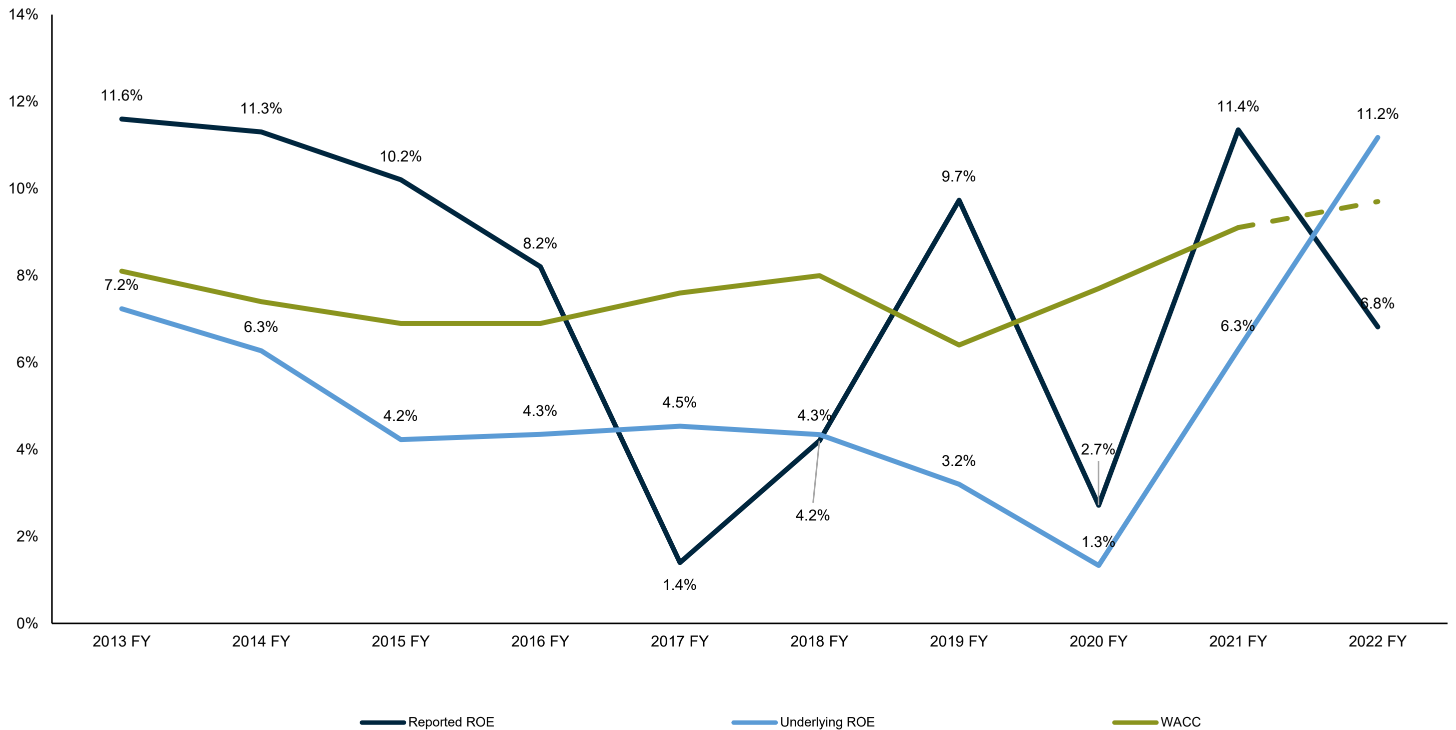
Significant improvement in underlying ROE

ROE analysis for the SUBSET



Underlying ROE exceeds WACC for the first time in ten years

ROE for the SUBSET[5]

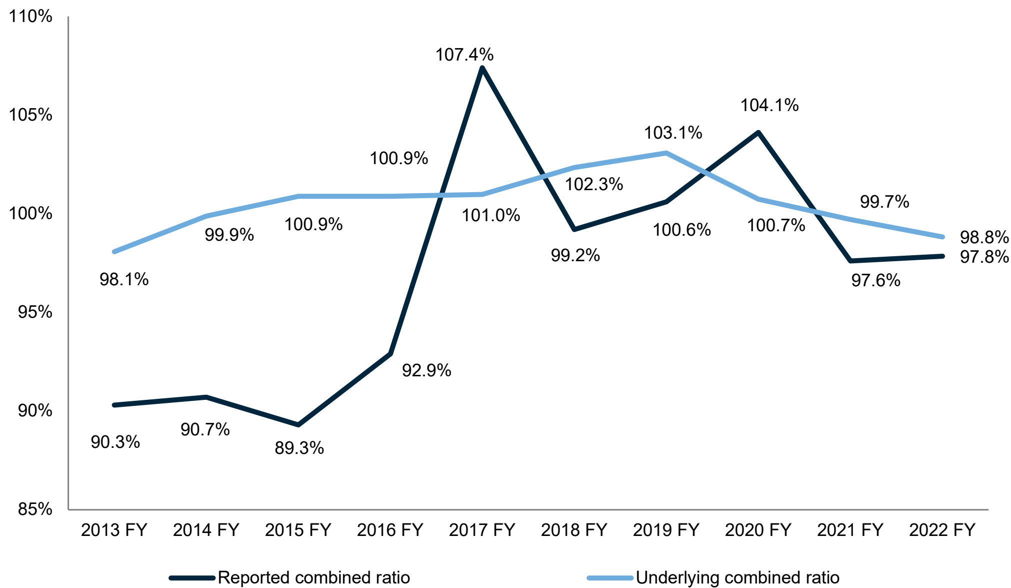


[5]S&P estimated WACC (weighted average cost of capital) figures. Underlying ROE excludes investment gains/losses for 2018 FY onward. 2022 FY WACC is Gallagher Re estimated, by taking the S&P WACC for 2022 HY and adjusting it for the change in risk-free rates.

Combined ratio for the SUBSET

Reported and underlying combined ratios remain sub-100%; underlying continues to improve

Reported and underlying combined ratio for the SUBSET



Reported combined ratio strong, despite higher ex-nat cat accident year loss ratio

Combined ratio detail for the SUBSET[6]

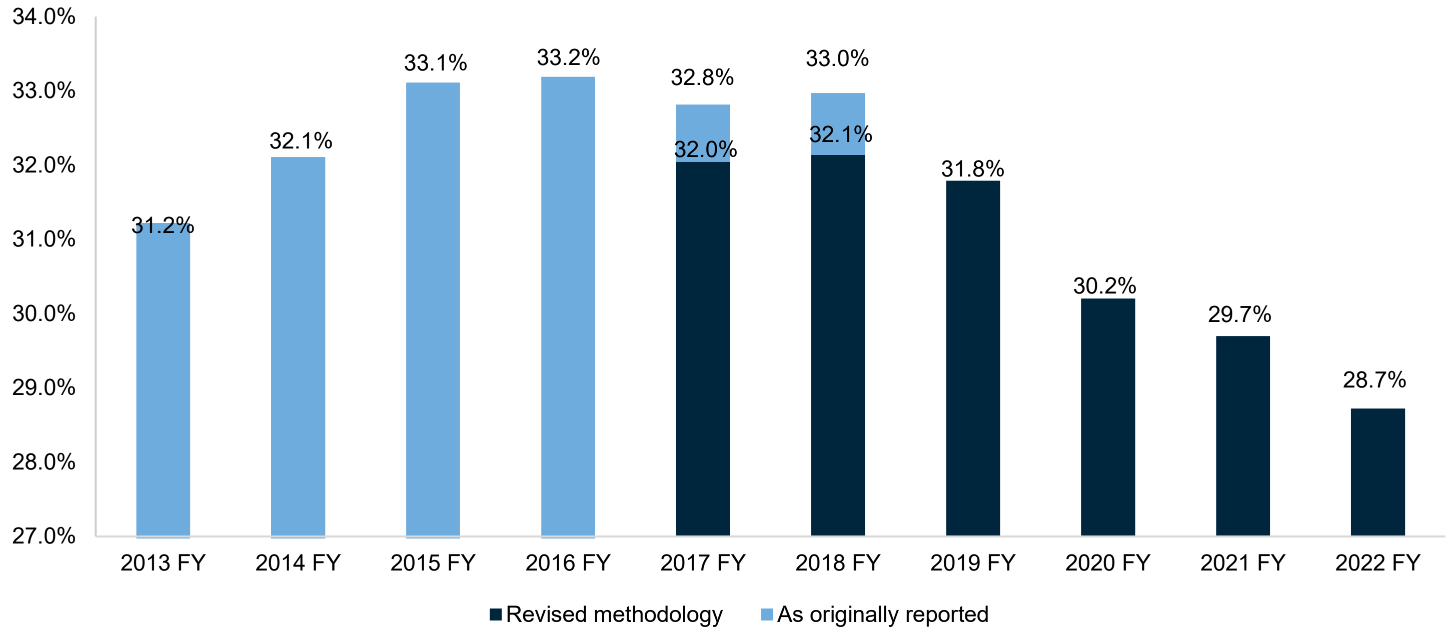
SUBSET	2014 FY	2015 FY	2016 FY	2017 FY	2018 FY	2019 FY	2020 FY	2021 FY	2022 FY
Reported combined ratio	**90.7%**	**89.3%**	**92.9%**	**107.4%**	**99.2%**	**100.6%**	**104.1%**	**97.6%**	**97.8%**
Remove prior year development	5.6%	6.7%	6.3%	5.3%	4.6%	2.3%	1.5%	2.3%	1.5%
Accident year combined ratio	**96.3%**	**96.0%**	**99.2%**	**112.7%**	**103.8%**	**102.9%**	**105.6%**	**99.9%**	**99.3%**
Strip out nat cat loss	-2.8%	-1.5%	-4.7%	-18.1%	-8.6%	-8.1%	-5.7%	-10.1%	-8.8%
Strip out COVID loss							-8.2%	-0.2%	0.0%
Ex-nat cat accident year combined ratio	**93.5%**	**94.5%**	**94.5%**	**94.6%**	**95.2%**	**94.9%**	**91.7%**	**89.6%**	**90.6%**
Add in normalized nat cat loss	6.4%	6.4%	6.4%	6.4%	7.1%	8.2%	9.0%	10.1%	8.2%
Underlying combined ratio	**99.9%**	**100.9%**	**100.9%**	**101.0%**	**102.3%**	**103.1%**	**100.8%**	**99.7%**	**98.8%**
Expense ratio	32.1%	33.1%	33.2%	32.0%	32.1%	31.8%	30.2%	29.7%	28.7%
Ex-nat cat accident year loss ratio	61.4%	61.4%	61.3%	62.6%	63.1%	63.1%	61.5%	59.9%	61.9%
Ex-nat cat accident year combined ratio	**93.5%**	**94.5%**	**94.5%**	**94.6%**	**95.2%**	**94.9%**	**91.7%**	**89.6%**	**90.6%**

[6]The normalized natural catastrophe load is the five-year moving average of the SUBSET's natural catastrophe losses (excluding COVID-19 losses), calculated on the basis of annual results.

Expenses for the SUBSET

Expense ratio reduces further as premium growth exceeds expense growth

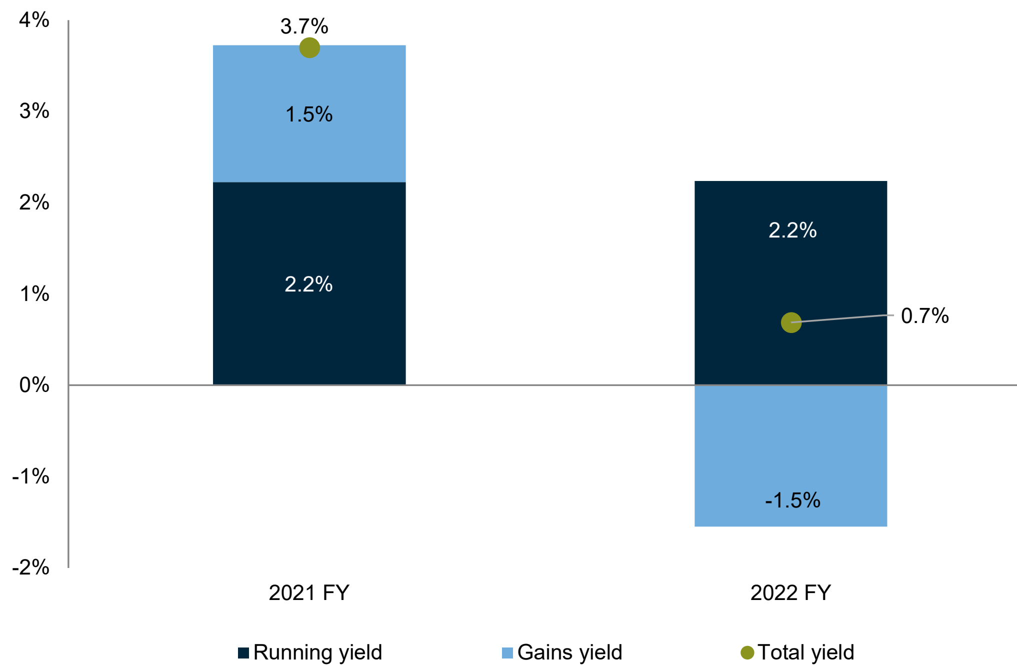
Weighted average expense ratio for the SUBSET[7]



Investment yield for the SUBSET

Investment income reduces due to negative gains yield; running yield stable

Investment yield for the SUBSET[8]



[7]The revised methodology we introduced with our half-year 2019 report produced a discontinuity in our time series of SUBSET expense ratios. Several of the companies removed from our constituent list, particularly Lloyd's companies, have high expense ratios. Therefore, our 'revised methodology' expense ratios for 2017 and 2018 are approximately one percentage point lower than the ratios we originally reported.

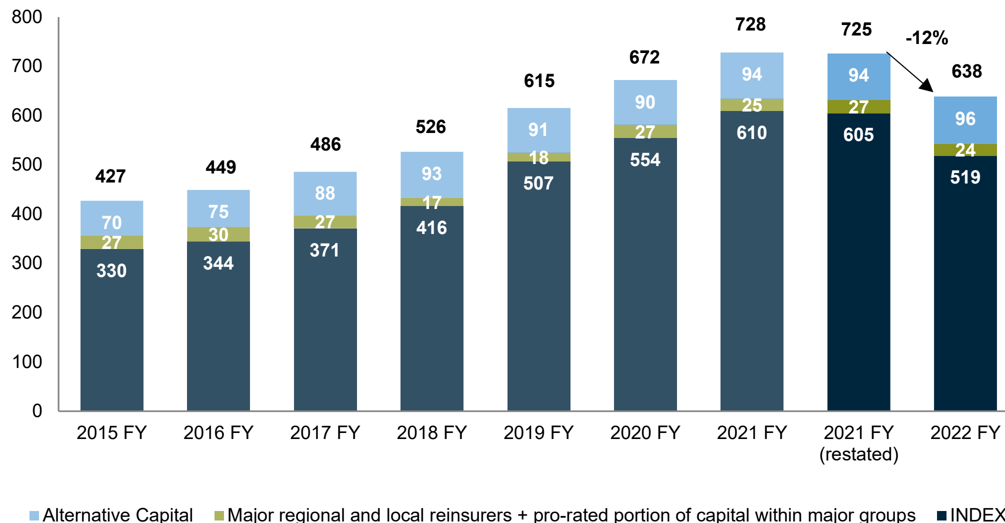
[8]Running yield captures items such as bond coupons, equity dividends and interest income.

CAPITAL

Total reinsurance dedicated capital

The first full-year drop in reinsurers' accounting capital since at least 2015

Chart 1: Total reinsurance dedicated capital (USD bn)



- Global reinsurance capital declined by 12% in 2022 FY to USD 638 billion, similar to the 11% drop recorded in the first half of 2022. The drop is entirely explained by a decline in the value of investments across all the major asset classes — equities, government bonds and corporate bonds.
- Just over 80% of global reinsurance capital comes from the INDEX companies, among which capital declined by 14%. This was slightly offset by 2% growth in alternative capital, to USD 96 billion. The expansion of alternative capital was driven by net inflows and investment returns, which more than offset natural catastrophe losses and USD strengthening.
- While global reinsurance capital has dropped as measured on an accounting basis (US GAAP and IFRS), it is a very different picture when measured on an economic basis. While rising interest rates (and therefore falling bond prices) are a negative for accounting measures of capital, they are usually a positive for economic measures.[9] This is the case for the EU's Solvency 2 and Switzerland's SST. From 2023 IFRS is also changing to an economic basis, with IFRS 17 being implemented to replace IFRS 4. The EU's Solvency 2 and Switzerland's SST measures of regulatory solvency improved for three of the European big four reinsurers last year. SCOR's Solvency 2 ratio, while declining slightly, remains comfortably above its target.
- Rating agency measures of capital fall between US GAAP and IFRS 4 on the one hand, and Solvency 2 and SST on the other. Generally, the agencies so far have taken a benign view of the impact of rising interest rates on reinsurers' capital positions, provided they deem the reinsurer to have adequate liquidity and therefore not be a forced seller of securities at a loss.
- Many (re)insurance management teams, in setting their capital key performance indicator (KPI), also adjust headline shareholders' equity to strip out unrealized gains/losses.
- Gallagher Re's view is that economic views of capital are more relevant than pure unadjusted accounting measures and that they are more relevant for management decision-making at most (re)insurers. In our view, the global reinsurance industry's capital position remains robust.

[9] This is because liabilities are discounted, and a higher discount rate brings down their value. Many (re)insurers have a longer liability duration than asset duration, and so the liability value falls more than the asset-side impact.

On an economic basis solvency is still strong

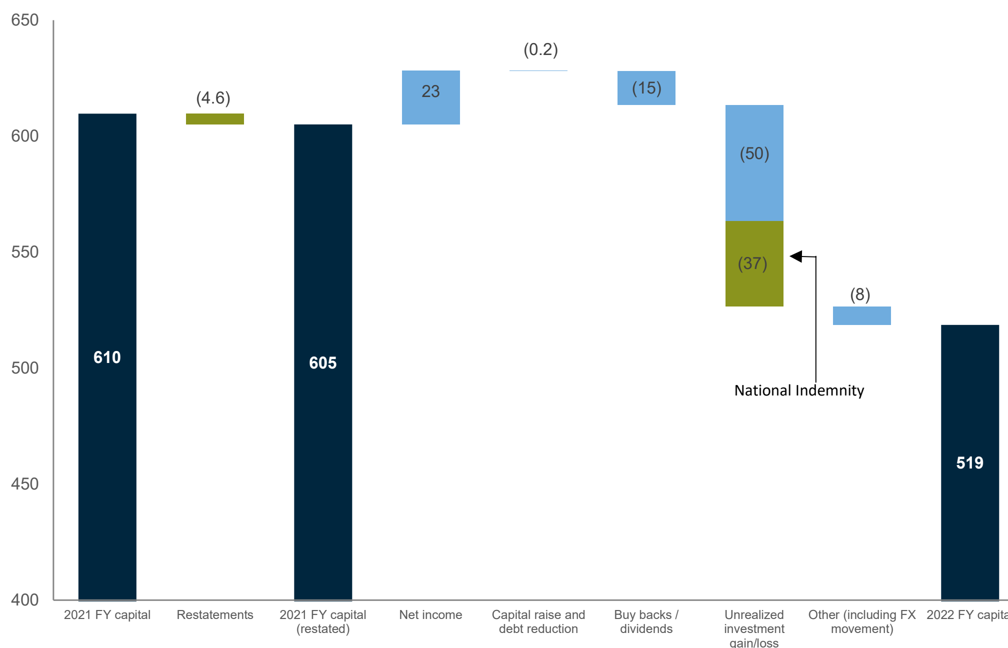
Chart 2: European solvency ratios[10]

[10]Target is the midpoint of the company's target range, except for Hannover Re which expresses the target as a minimum solvency ratio.

INDEX capital

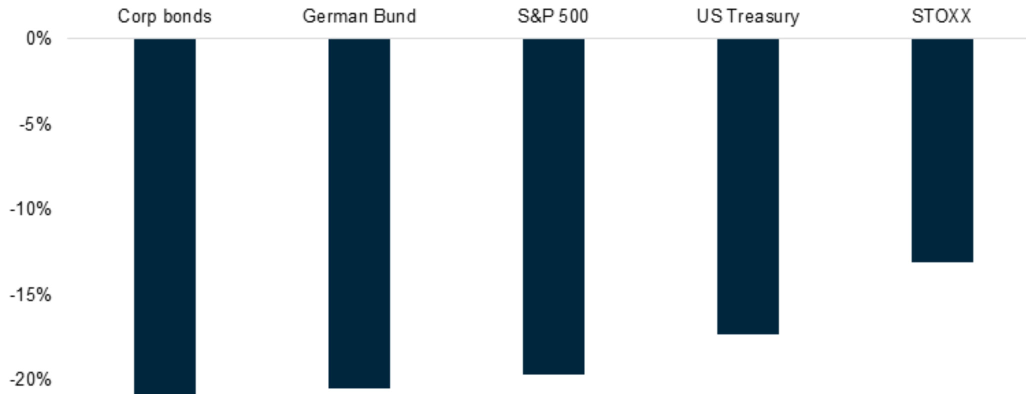
Investment losses more than explain the drop in INDEX capital

Chart 3: Capital analysis for the INDEX (USD bn)[11]



All major investment classes performed poorly in 2022

Chart 4: Performance of main investment classes in 2022[12]



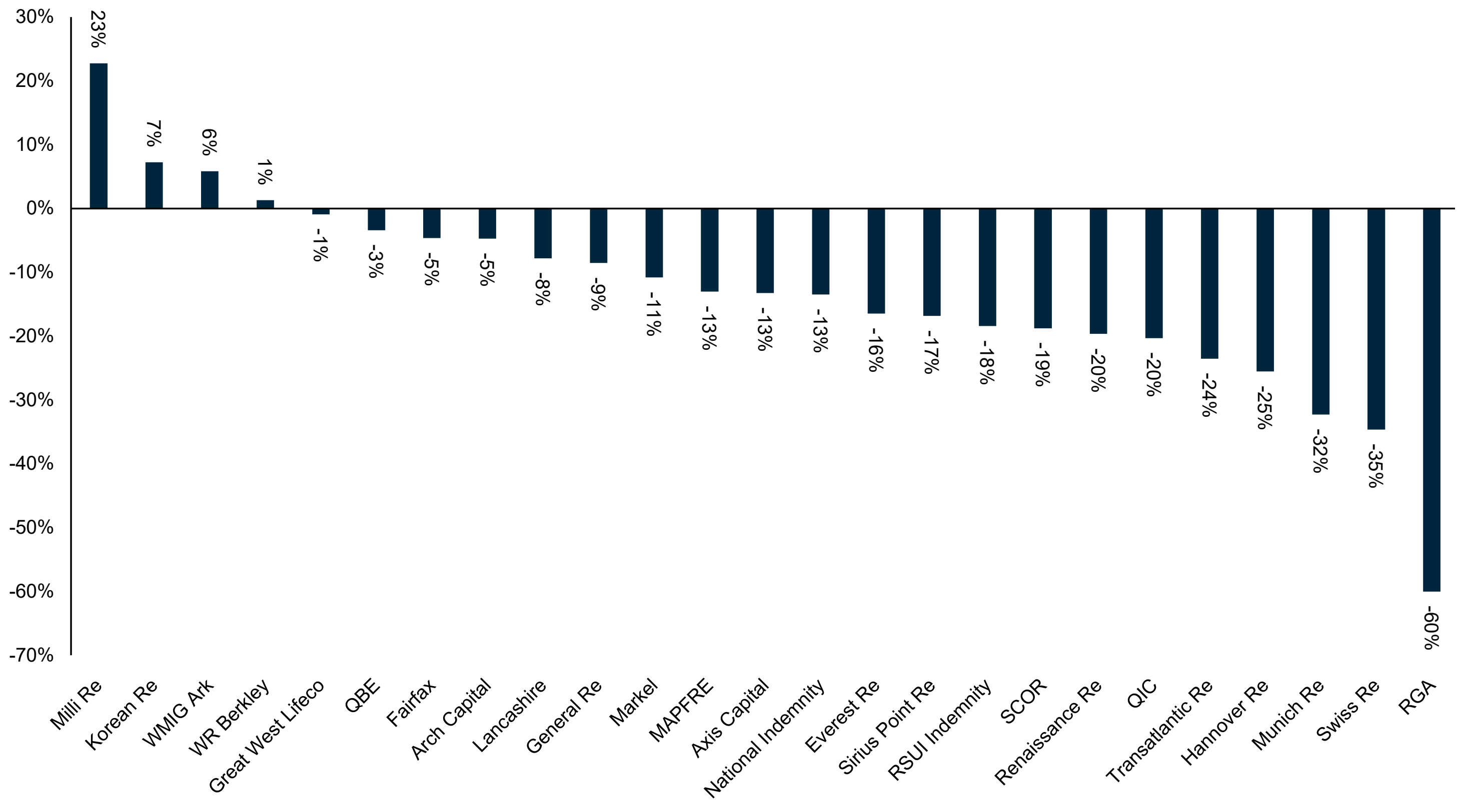
- Chart 3 illustrates all the moving parts in INDEX capital, with declining investment values being the major one.
- As Chart 4 shows, the asset classes that are most relevant for reinsurers — equities, government bonds and corporate bonds — all posted steep declines in 2022.
- Mitigating this drop, reinsurers did not return all of their net income to shareholders, with the balance of net income less buy-backs/ dividends adding modestly to capital positions.
- One of the most talked-about features of the January renewals was the absence of new capacity, despite the potential attraction of much tightened pricing and terms and conditions. This can also be seen in the waterfall chart above: there was virtually nil equity raising and the balance of debt issuance/redemptions almost exactly netted to zero (-USD 0.2 billion in Chart 3). Moreover, no start-ups entered our analysis, whether as an INDEX company or as a major regional or local market player.

[11]Change in constituents includes 2021 FY late filers.

[12]US Treasury and German Bund are the 10-year bonds. Corporate bonds are the iShares $ Corp Bond UCITS ETF.

Nearly all INDEX companies reported a decline in capital bases

Chart 5: Movement in capital reported as at 2022 FY for the INDEX constituents[13]



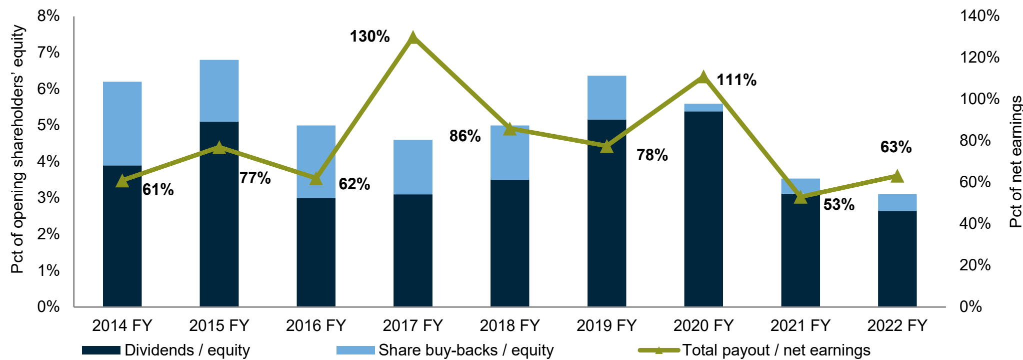
- The drop in overall INDEX capital was mirrored nearly across the board with the individual INDEX companies. The reinsurers who saw the biggest drops in capital were the ones with the highest ratio of assets/equity and whose investment portfolios had the longest duration. For example, the long-duration and asset-intensive life portfolio of RGA drove its significant drop in reported capital. As mentioned above, on an economic basis we would expect to see a very different, and potentially opposite, picture. As noted, Hannover Re, Munich Re and Swiss Re also recorded improvements in their regulatory solvency position in 2022.
- Only four reinsurers recorded an increase in capital. Milli Re led the way as a depreciation in the Turkish Lira led its non-Lira investments to increase in value when translated back into Lira.

[13]Excludes companies who have not yet reported 2022 FY.

Return of capital

Return of capital stabilized in 2022

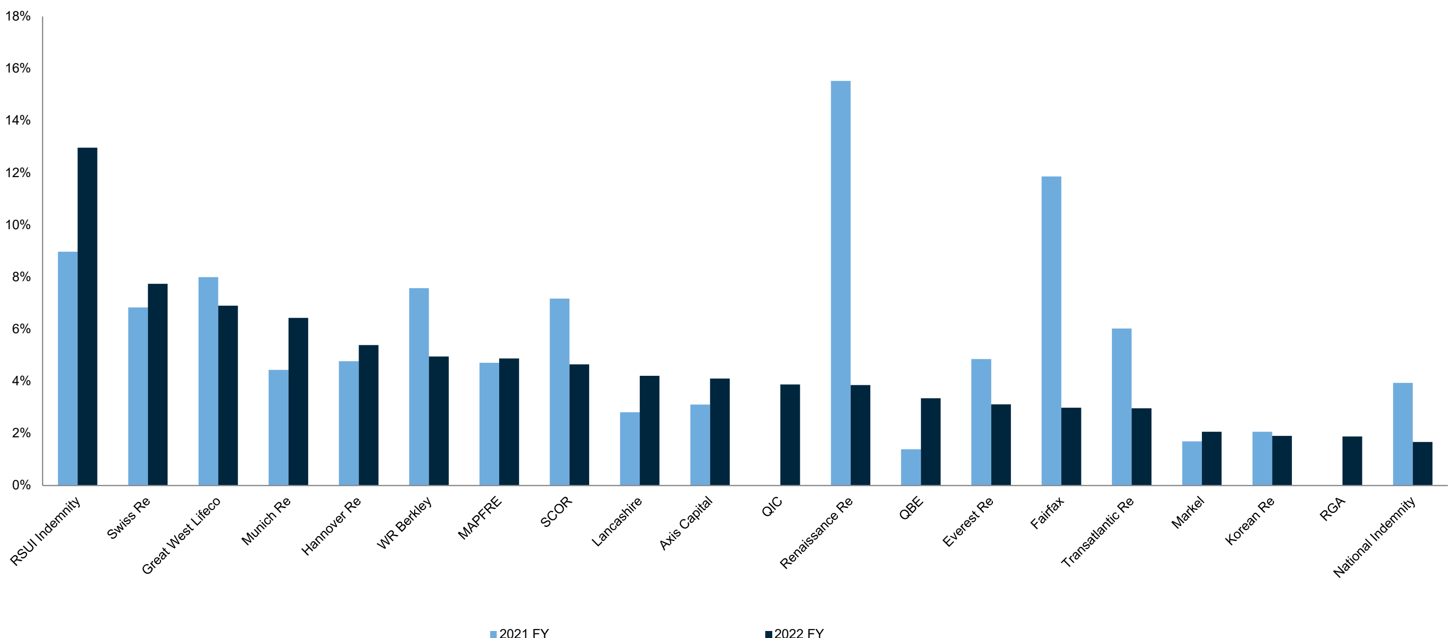
Chart 6: Return of capital (as a percent of opening shareholders' equity) and payout ratio for the INDEX



- Return of capital stabilized in 2022, both as a percent of net earnings and of equity.
- The payout ratio as a percentage of earnings, by its nature, can be volatile given the variability of earnings. Changes or trends in the payout as a percent of equity should therefore be more telling. As a percent of equity, the payout hump over 2019–2020 is largely due to a single company — Berkshire's National Indemnity. Excluding National Indemnity, the total payout declined slightly, from 5.0% in 2021 to 4.6%.
- Notwithstanding the lack of capital raises to take advantage of firming reinsurance market conditions, this decline in payout was likely driven by reinsurers seeking to keep more deployable capital for the renewals.

A wide range of payouts across the INDEX companies

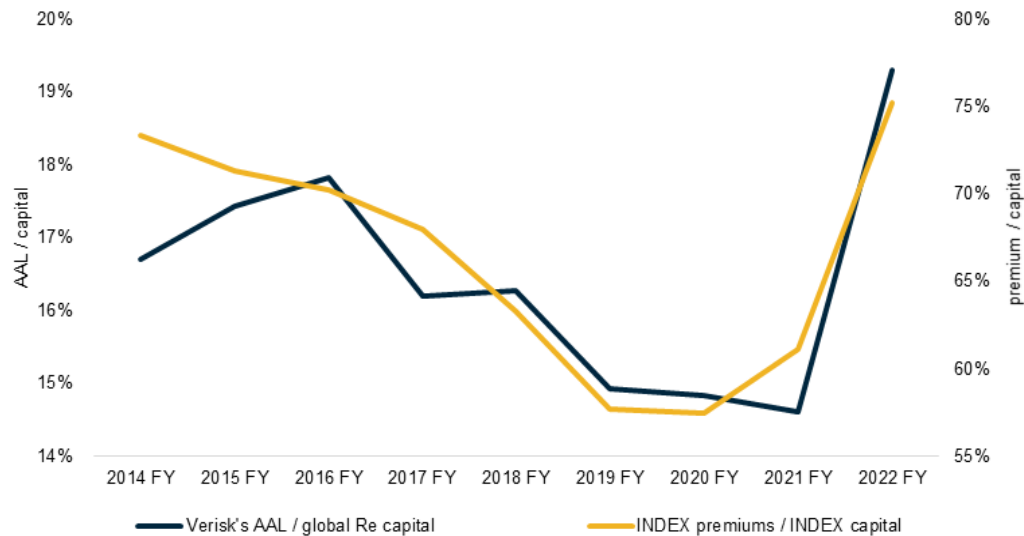
Chart 7: Return of capital (as a percent of opening shareholders' equity) for the INDEX constituents



- The drop in National Indemnity's payout was large in absolute terms, despite not being a stand-out in percentage terms.
- Renaissance Re's and Fairfax's payouts dropped as they did not repeat abnormally large 2021 payouts.
- Of the big four European reinsurers, Swiss Re, Munich Re and Hannover Re all increased their payouts, and the payouts were of a healthy size relative to peers. SCOR on the other hand did not repeat a buy-back that had been conducted in 2021.

An increase in demand, with supply potentially not keeping pace

Chart 8: Verisk loss scenarios and premiums vs capital[14]



- If the reinsurance industry's capital base is 'supply', then a proxy for 'demand' is the premiums ceded to reinsurers. Another proxy is catastrophe modeling agency Verisk's aggregate annual loss (AAL).[15]
- Both measures are imperfect. Premiums capture price changes as well as exposure growth and Verisk's figures reflect only the natural catastrophe portion of reinsurance demand. As mentioned above, capital is measured on an accounting basis, movements of which are not always in sync with the regulatory and rating agency measures of capital which tend to be struck on an economic basis.
- Nevertheless, the indicative picture that emerges for 2022 FY is quite striking. The ratio of demand (measured both ways) to supply increased significantly which suggests, other things equal, a significant tightening of capacity relative to demand.
- As mentioned above, we believe the accounting definition of capital overstates the actual drop in supply, if in fact there was a drop at all. We readily accept, though, that demand has increased, largely due to inflation. Reinsurance premium growth of 12% includes inflation-driven exposure growth as well as higher prices. Likewise, Verisk increased its AAL measure by 16% for the 2022 FY, the largest annual increase since Verisk started publishing this metric in the 2012 FY.

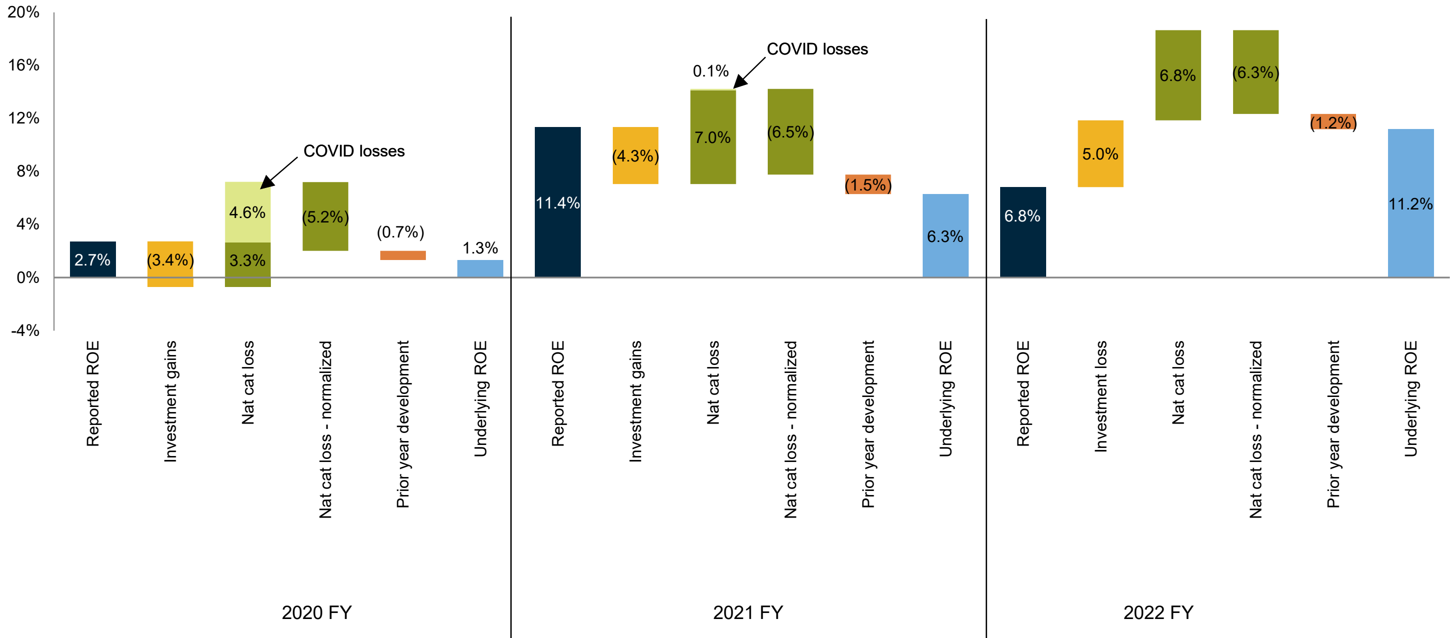
[14]Source: Verisk Global Modeled Catastrophe Losses report.

[15]AAL is Verisk's mean value of a loss exceedance probability (EP) distribution. It is the expected loss per year, averaged over many years.

Return on equity

Significant improvement in underlying ROE

Chart 9: ROE analysis for the SUBSET



- The reported ROE for the SUBSET companies fell back in 2022 FY, from 11.4% to 6.8%. However, this is more than explained by a swing in investments: in 2021 FY investment gains boosted the ROE by 4.3 percentage points, but in 2022 FY investment losses dragged it down by 5.0 percentage points.
- In calculating the underlying ROE we strip out investment gains/losses,[16] the impact from prior year developments, and we normalize for natural catastrophe losses. In both 2021 FY and 2022 FY the latter two impacts were much smaller than investment gains/losses.
- Adjusting for these factors, we calculate an underlying ROE of 11.2%, a material improvement over 2021 FY's 6.3%, which itself was a big improvement over the previous year's 1.3%.

[16]We strip out investment gains/losses as, over time in a stable macro environment, they should largely net out to zero. Gains on fixed income should net out to zero. Equity investments should produce gains over time but most reinsurers allocate very little of their investments to equities.

All three ROE components drove the improvement in underlying ROE

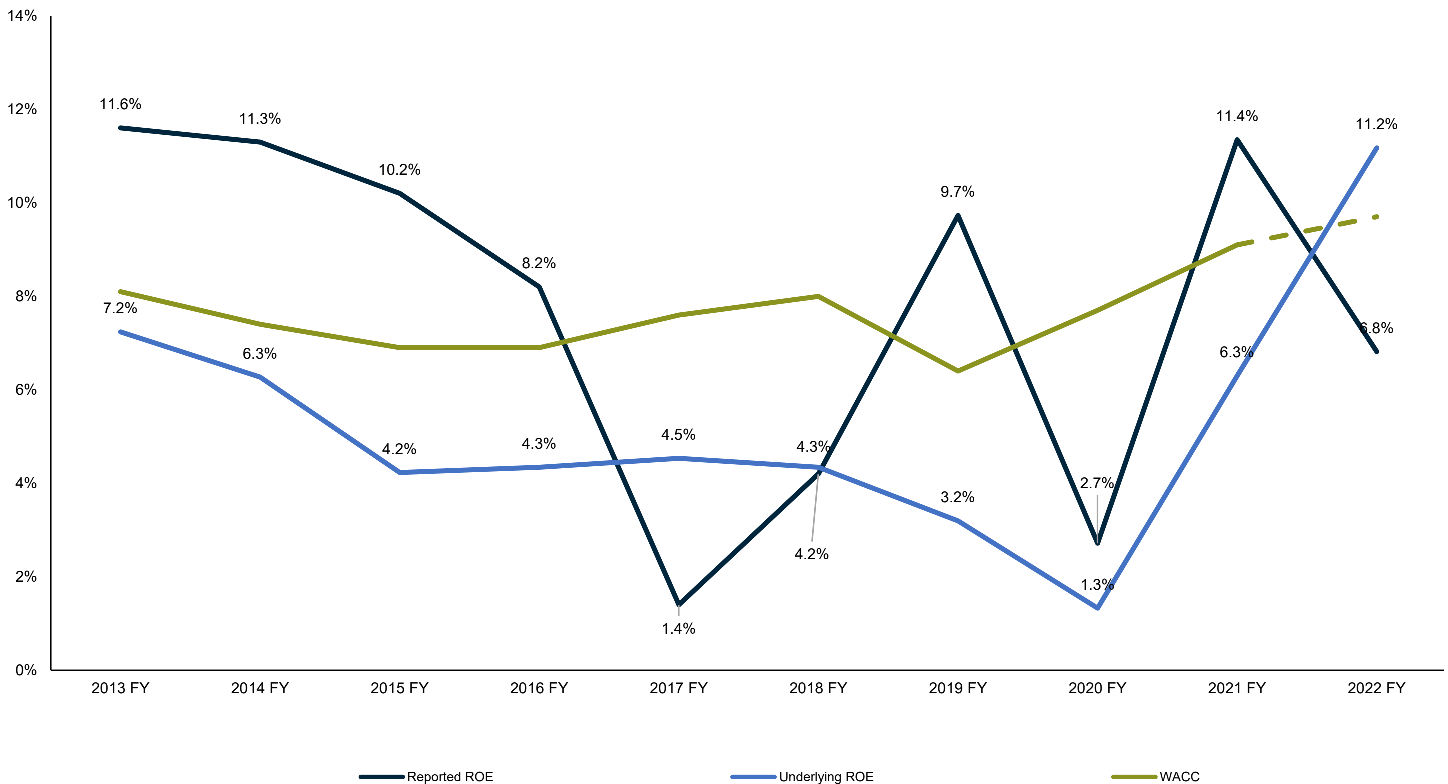
Chart 10: ROE components for the SUBSET

	2020 FY	2021 FY	2022 FY
Reported ROE	**2.7%**	**11.4%**	**6.8%**
Remove nat cats (ex-COVID)	3.3%	7.1%	6.8%
Remove COVID losses	4.6%	0.1%	0.0%
Add in normalized nat cats	-5.2%	-6.5%	-6.3%
Remove prior year development	-0.7%	-1.5%	-1.2%
Strip out investment gains/losses	-3.4%	-4.3%	5.0%
Underlying ROE	**1.3%**	**6.3%**	**11.2%**
Composition of underlying ROE			
Underlying underwriting margin	-0.4%	0.2%	0.9%
Running investment income	5.9%	6.5%	6.9%
Other income/expenses	-4.2%	-0.4%	3.4%
Underlying ROE	**1.3%**	**6.3%**	**11.2%**

- Looking at the components of the underlying ROE, the contribution from the underlying underwriting margin has improved over each of the past two years, driven by the improvement in the underlying combined ratio that we calculate.
- The contribution from running investment income has also improved slightly. This is more a case of the denominator getting smaller (shareholders' equity), as the running investment yield itself was stable in 2022 FY.
- The 'other' component has been volatile over time and includes companies' non-reinsurance activities as well as other earnings drivers not related to P&C reinsurance underwriting or investment income.

Underlying ROE exceeds WACC for the first time in ten years

Chart 11: ROE time series for the SUBSET[17]

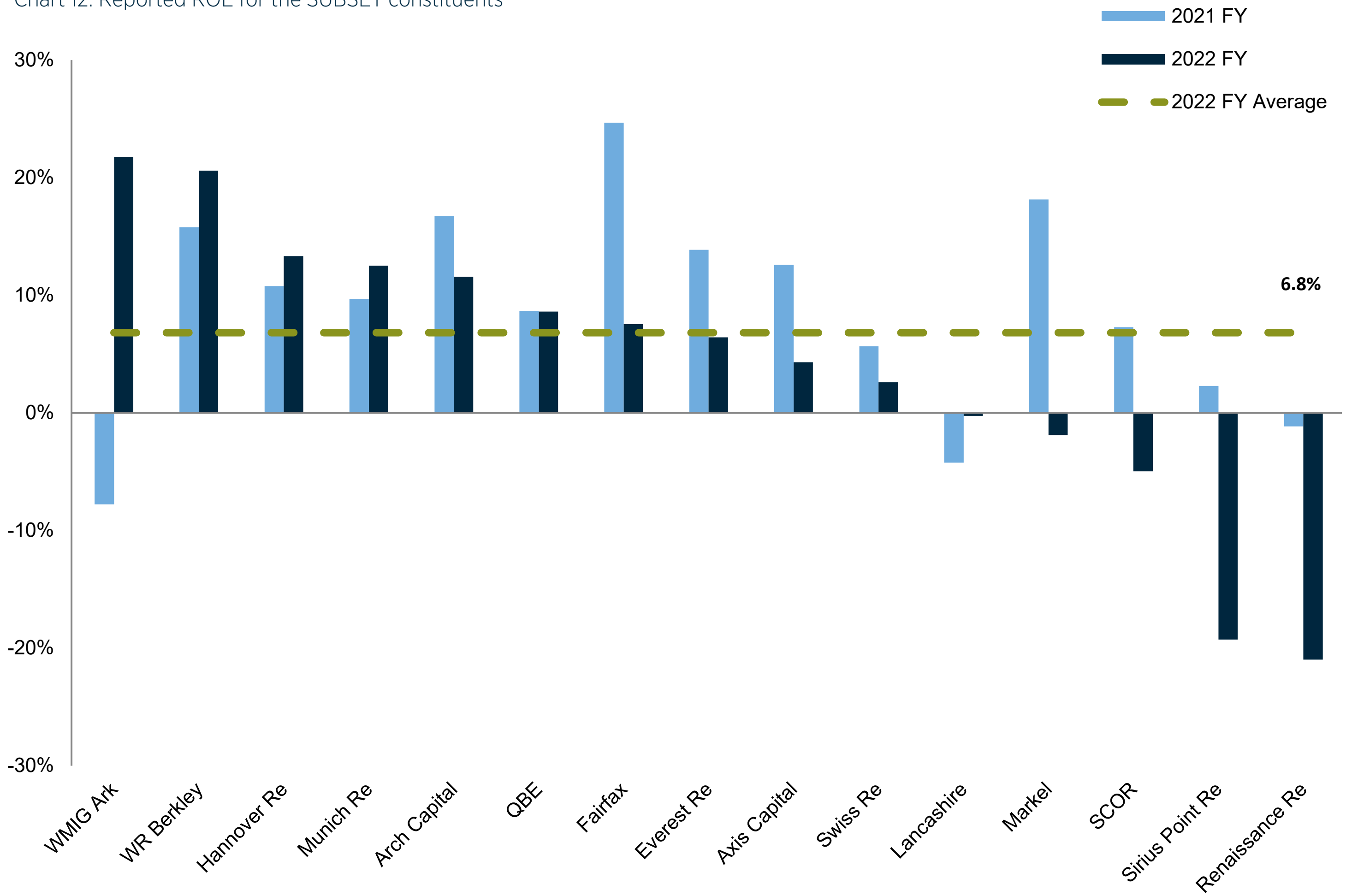


- Reported ROEs have been highly volatile over the past several years, due to both natural catastrophe activity and volatile investment markets. However, the underlying ROE has shown a marked improvement over the past two years. This has been aided by better underlying underwriting results, stronger running investment income, and for 2022, more operating leverage (i.e., the 12% drop in reported capital has introduced more operating leverage into ROEs, as the denominator of shareholders' equity is now smaller).
- Our analysis of underlying reinsurer ROEs stretches back ten years and for the first time we calculate an underlying ROE that surpasses reinsurers' weighted average cost of capital (WACC). Strictly speaking, ROEs should be compared to cost of equity, which will be somewhat above WACC. Nevertheless, improved underlying operating results and tighter operating leverage are finally enabling reinsurers to narrow and perhaps close the gap, and to generate underlying returns that create shareholder value.

[17]S&P estimated WACC (weighted average cost of capital) figures. Underlying ROE excludes investment gains/losses for 2018 onward. 2022 FY WACC is Gallagher Re estimated, by taking the S&P WACC for 2022 HY and adjusting it for the change in risk-free rates.

A wide dispersion of reported ROEs across the SUBSET companies

Chart 12: Reported ROE for the SUBSET constituents[18]



- Reported ROEs for the SUBSET companies were widely dispersed around the 6.8% average. WMIG Ark and WR Berkley recorded ROEs in excess of 20%. SCOR's ROE was -5%, driven in large part by its 113% reported combined ratio. Sirius Point Re and Renaissance Re reported large negative ROEs, largely due to investment losses which flowed through earnings. Renaissance Re reported an operating ROE (stripping out this impact) more in-line with peers while Sirius Point's measure of 'core income' remained in a small loss position.

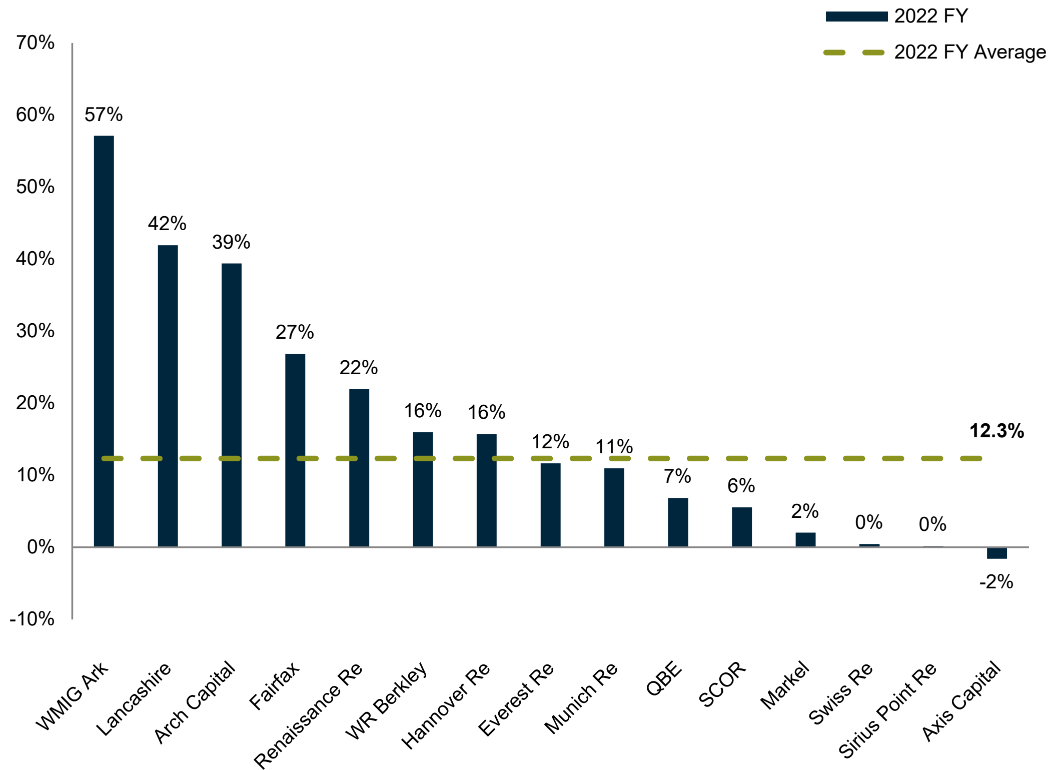
[18]ROEs are based on 'all-in' net income. They do not necessarily match the 'headline' ROEs reported by the companies as these are sometimes struck on an operating net income basis.

UNDERWRITING PERFORMANCE

Premium volumes

Favorable pricing supports double-digit average premium growth

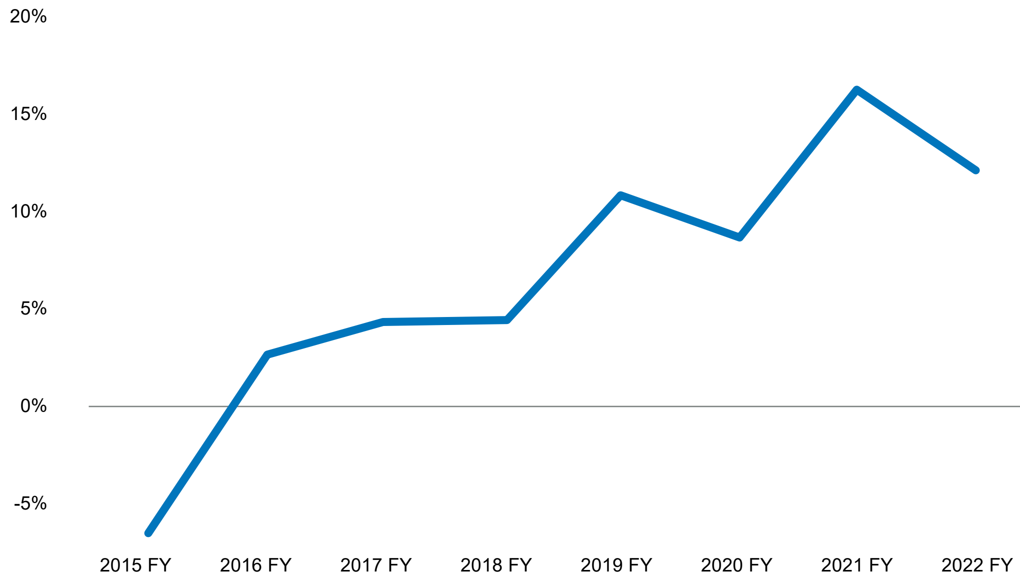
Chart 13: 2022 change in relevant[19] net earned premium (USD basis) for the SUBSET constituents



[19]Net earned premiums relate to the reinsurance segment if the disclosure is available, or otherwise to the consolidated group. Appendix 1 explains this in more detail.

Recent trend of strong premium growth continues

Chart 14: Premium growth over time of SUBSET constituents (USD basis)

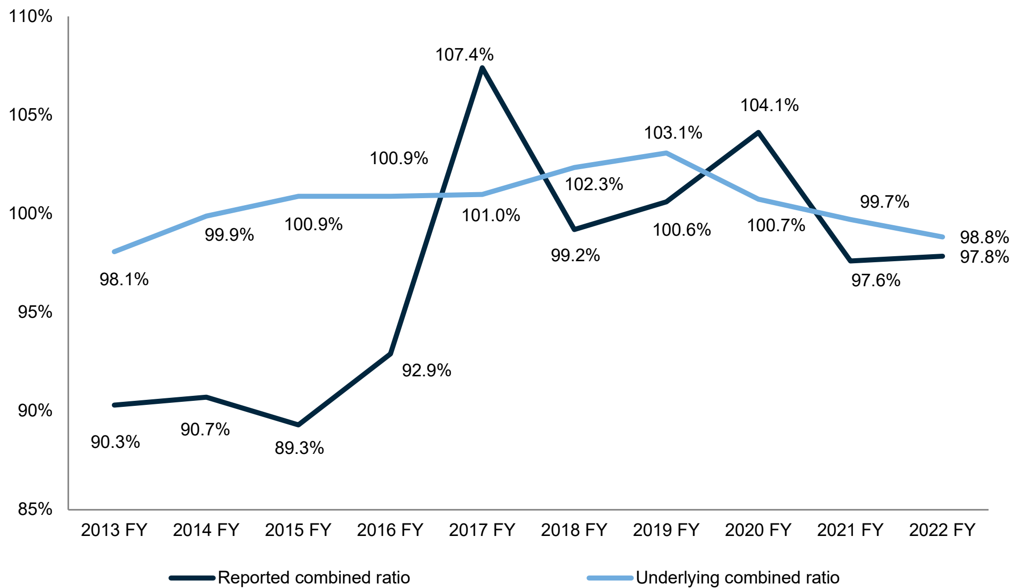


- 2022 FY premium growth remained strong at 12.3%, albeit down from 16.6% in the prior year, supported by rate increases for reinsurance and commercial insurance business and exposure growth (largely due to inflation).
- 60% of companies reported double-digit premium growth; the most significant rises were due to targeted expansion as the reinsurance market hardened.
- Portfolio repositioning, including reducing exposure to property catastrophe business, contributed to moderate growth (low to mid-single digits) for several companies. For example, Axis Capital's premium reduction reflected its decision to exit property reinsurance.

Combined ratios

Reported and underlying combined ratios remain sub-100%; underlying continues to improve

Chart 15: Reported and underlying combined ratio time series for the SUBSET



Reported combined ratio strong, despite higher ex-nat cat accident year loss ratio

Chart 16: Combined ratio detail for the SUBSET[20]

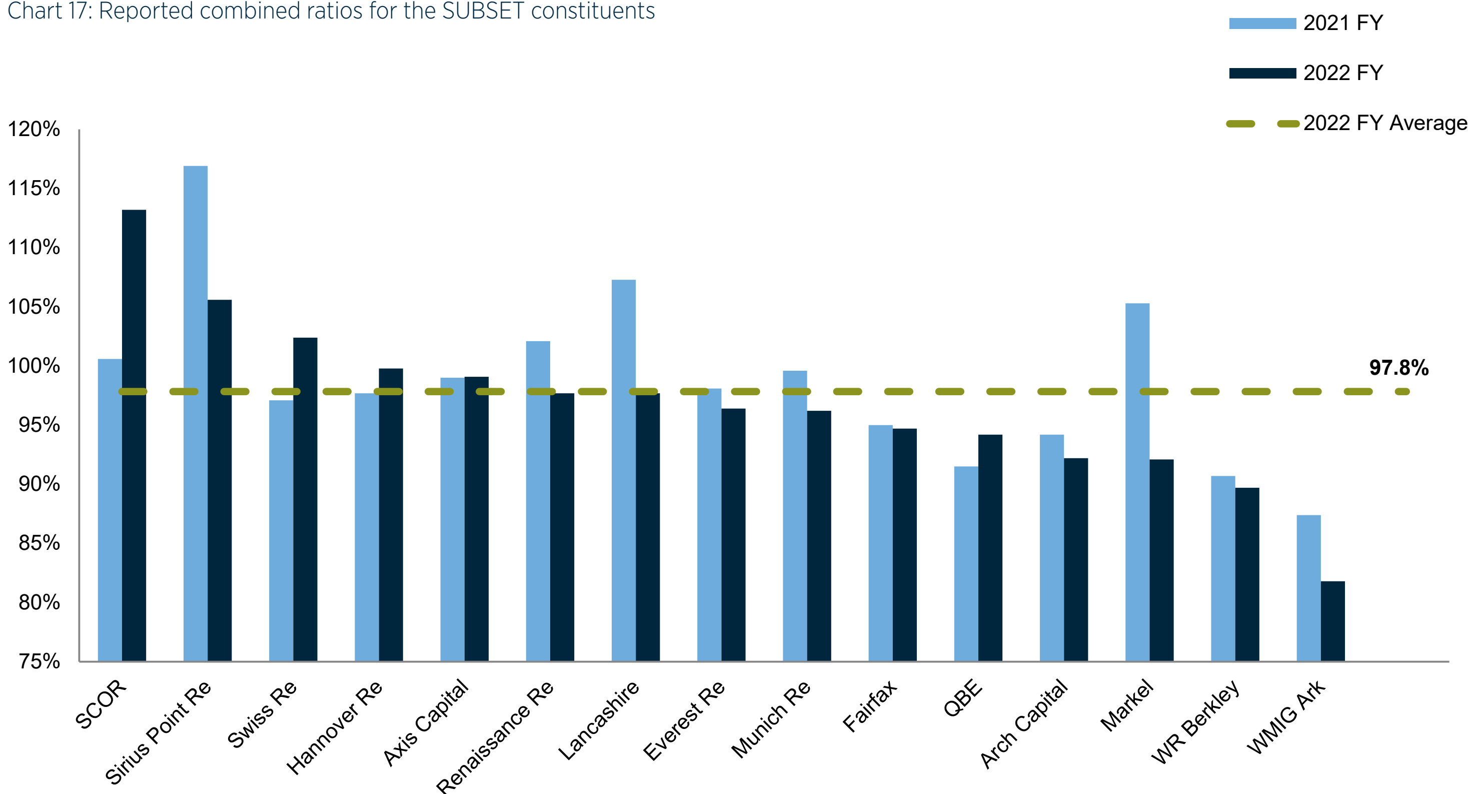
SUBSET	2014 FY	2015 FY	2016 FY	2017 FY	2018 FY	2019 FY	2020 FY	2021 FY	2022 FY
Reported combined ratio	**90.7%**	**89.3%**	**92.9%**	**107.4%**	**99.2%**	**100.6%**	**104.1%**	**97.6%**	**97.8%**
Remove prior year development	5.6%	6.7%	6.3%	5.3%	4.6%	2.3%	1.5%	2.3%	1.5%
Accident year combined ratio	**96.3%**	**96.0%**	**99.2%**	**112.7%**	**103.8%**	**102.9%**	**105.6%**	**99.9%**	**99.3%**
Strip out nat cat loss	-2.8%	-1.5%	-4.7%	-18.1%	-8.6%	-8.1%	-5.7%	-10.1%	-8.8%
Strip out COVID loss							-8.2%	-0.2%	0.0%
Ex-nat cat accident year combined ratio	**93.5%**	**94.5%**	**94.5%**	**94.6%**	**95.2%**	**94.9%**	**91.7%**	**89.6%**	**90.6%**
Add in normalized nat cat loss	6.4%	6.4%	6.4%	6.4%	7.1%	8.2%	9.0%	10.1%	8.2%
Underlying combined ratio	**99.9%**	**100.9%**	**100.9%**	**101.0%**	**102.3%**	**103.1%**	**100.8%**	**99.7%**	**98.8%**
Expense ratio	32.1%	33.1%	33.2%	32.0%	32.1%	31.8%	30.2%	29.7%	28.7%
Ex-nat cat accident year loss ratio	61.4%	61.4%	61.3%	62.6%	63.1%	63.1%	61.5%	59.9%	61.9%
Ex-nat cat accident year combined ratio	**93.5%**	**94.5%**	**94.5%**	**94.6%**	**95.2%**	**94.9%**	**91.7%**	**89.6%**	**90.6%**

[20]The normalized natural catastrophe load is the 5-year moving average of the SUBSET's natural catastrophe losses (excluding COVID-19 losses), calculated on the basis of annual results.

- The reported combined ratio remained strong at 97.8%, marginally up from 97.6% at 2021 FY. The combination of an inflation-driven 2 percentage point increase in the ex-nat cat accident year loss ratio to 61.9%, its first deterioration since 2018 FY, and 0.8 percentage points less support from reserve releases, more than offset the combined benefit of a 1.5 percentage point reduction in the impact from natural catastrophe and COVID-19 losses, and a one percentage point reduction in the expense ratio (due to rate-driven growth in premium exceeding growth in expenses).
- The reduced support from prior year development was due to a combination of lower reserve releases in monetary terms and strong premium growth. The main driver of the former was reserve strengthening by SCOR and Swiss Re. Certain other companies moderated their reserve releases, due in part to the continued challenging macroeconomic backdrop.
- Following consecutive increases since 2018 FY, the normalized natural catastrophe load reduced to 8.2 percentage points from 10.1 percentage points at 2021 FY as 2017 FY (heavily impacted by the Harvey-Irma-Maria hurricanes) is no longer part of that calculation (which is based on a five-year moving average of actual natural catastrophe and COVID-19 losses). The actual natural catastrophe loss impact of 8.8 percentage points exceeded the normalized load of 8.2 percentage points.
- Despite deterioration in the ex-nat cat accident year combined ratio to 90.6% (2021 FY: 89.6%), the underlying combined ratio reduced to 98.8% (2021 FY: 99.7%) due to the reduction in the normalized natural catastrophe load. This is the third consecutive year of improvement for the underlying combined ratio.

Reported combined ratios improved for most companies due to lower nat cat losses and expense ratios

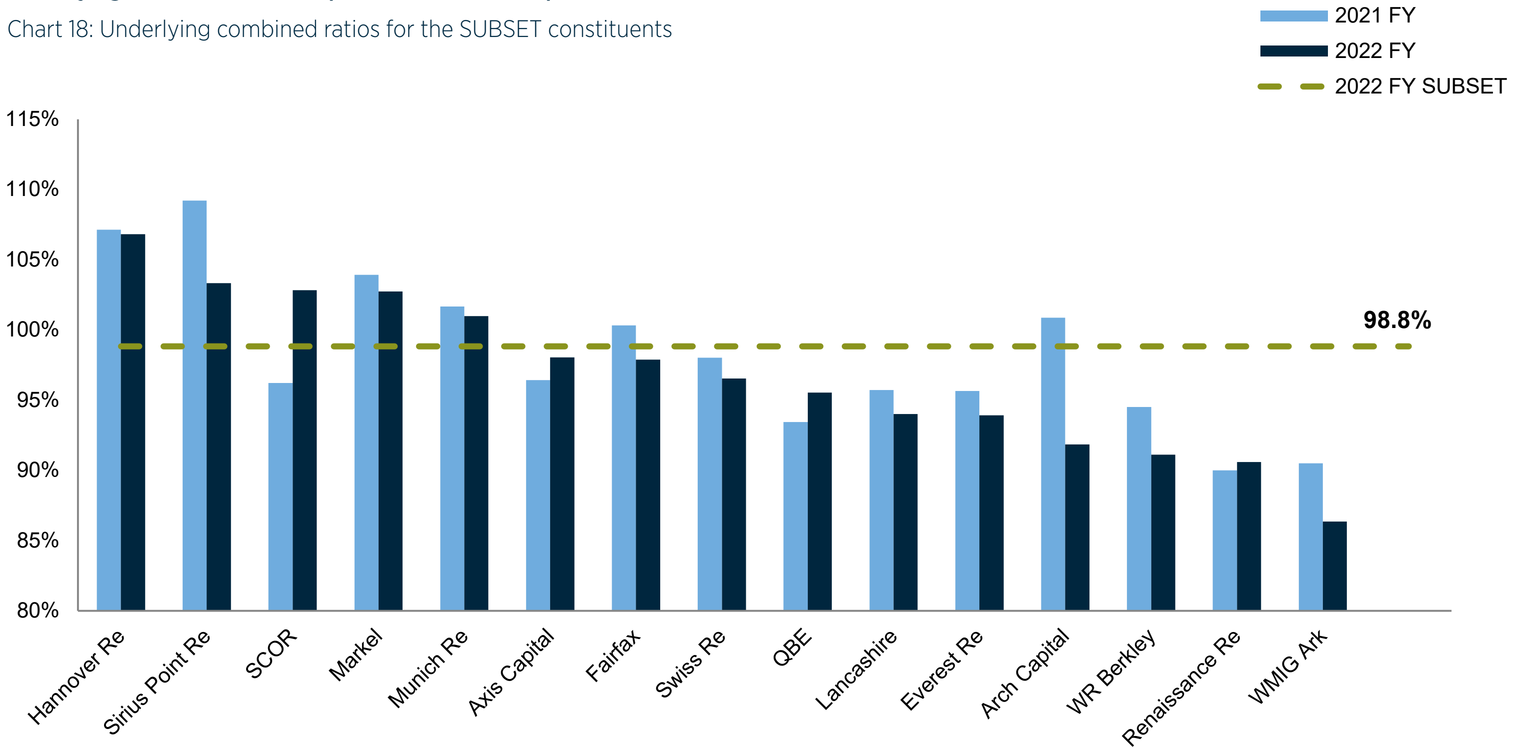
Chart 17: Reported combined ratios for the SUBSET constituents



- A sub-100% combined ratio was reported by 80% of companies in 2022 FY with most companies improving versus the prior year.
- WMIG Ark continued its strong profitability with an improved combined ratio of 81.8% (2021 FY: 87.4%), supported by a reduced impact from natural catastrophe losses and increased support from reserves releases.
- Reserve strengthening and a higher ex-nat cat accident year loss ratio were the main drivers of the deterioration in SCOR's combined ratio.

Underlying combined ratios improved for most companies

Chart 18: Underlying combined ratios for the SUBSET constituents

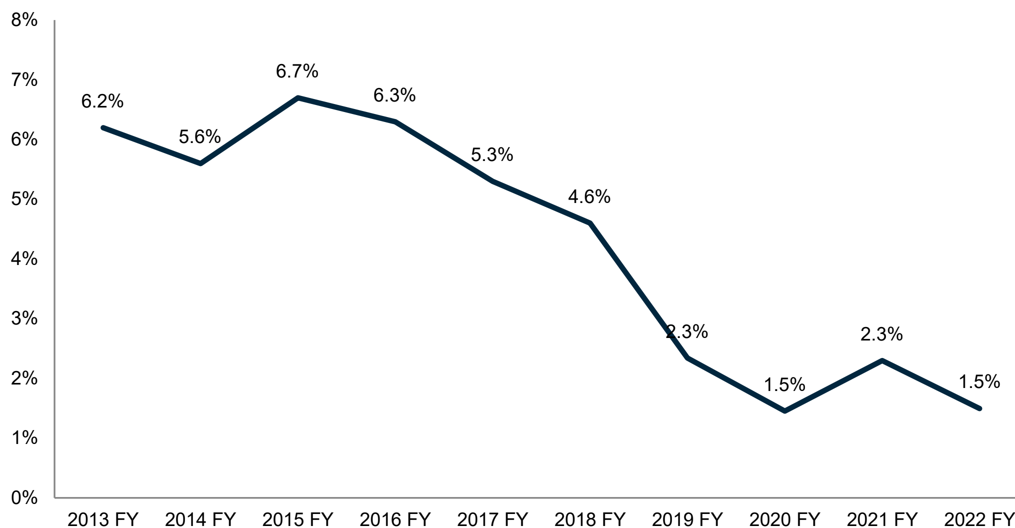


- Most companies maintained strong underlying combined ratios with two-thirds achieving a sub-100% result.

Prior year loss development

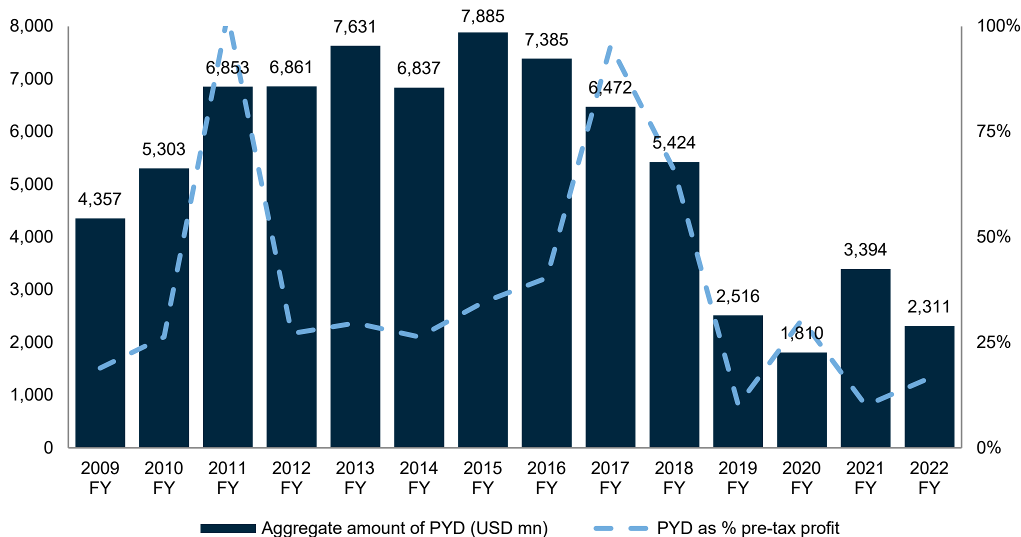
Reserve releases reduce in 2022, resuming the largely downwards trend since 2015

Chart 19: Prior year development impact on combined ratio for the SUBSET[21]



PYD reduces in monetary terms but makes a higher percentage contribution to pre-tax profit

Chart 20: Prior year development for the SUBSET (positive number = benefit)

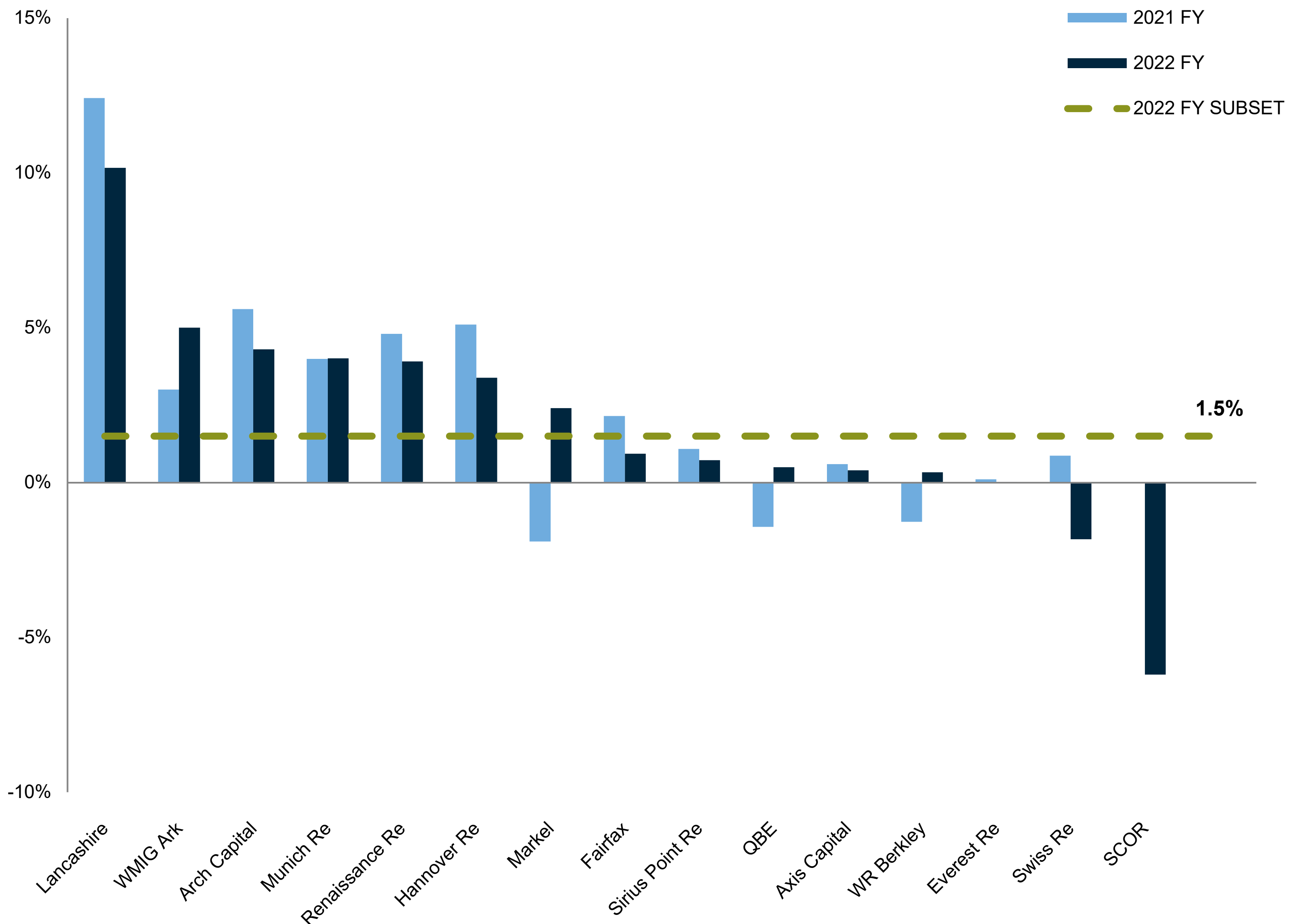


- Having increased to 2.3 percentage points at 2021 FY, PYD support to the combined ratio reduced to 1.5 percentage points at 2022 FY due to a combination of lower reserve releases in monetary terms and strong premium growth.
- Between 2015 FY and 2022 FY, support from reserve releases to the combined ratio was largely on a downwards trend. Given continued inflationary pressures we do not expect any material uplift in the near term.
- Although lower in absolute terms, reserve releases contributed 16% to group pre-tax profit, up from 10% in the prior year. This increase reflects an investment-driven reduction in average group pre-tax profit at 2022 FY.

[21]Positive number indicates a favorable prior year impact.

Lower reserve support for most companies in 2022

Chart 21: Prior year development impact on combined ratio for the SUBSET constituents (positive number = benefit)

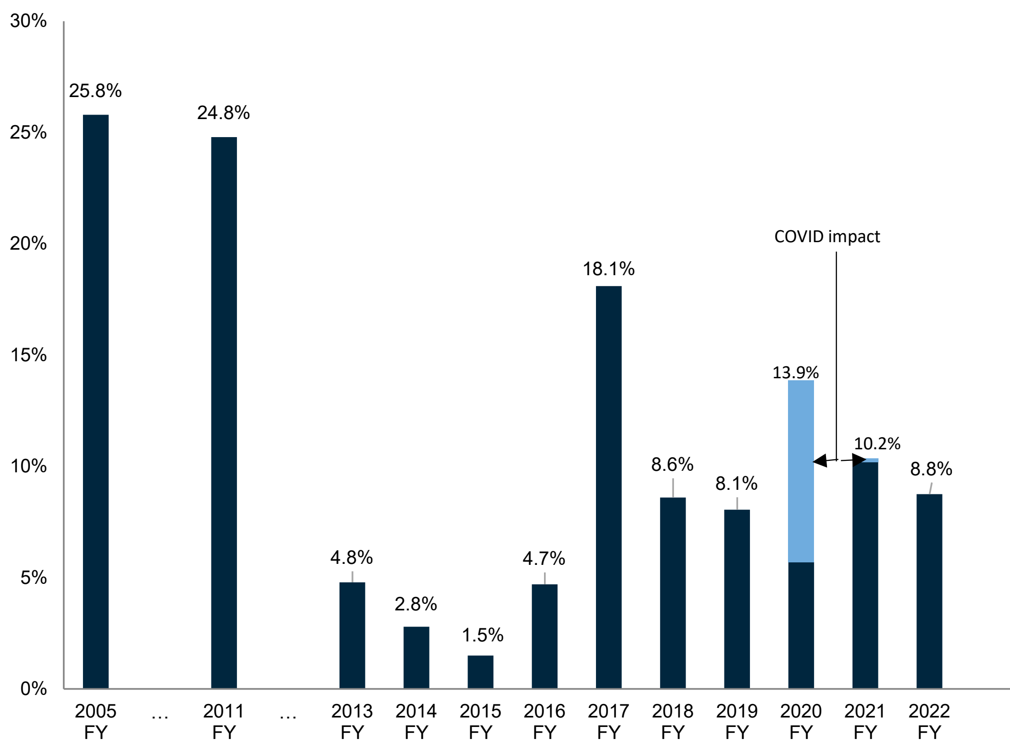


- Most companies had reduced support to their combined ratios from reserve releases, due in part to the continued challenging macroeconomic backdrop.
- Albeit down from the prior year, Lancashire reported another significant reserve release. SCOR's reserve strengthening, due to revised assumptions for inflation and latent exposures, added 6.2 percentage points to its 2022 FY combined ratio.

Natural catastrophe losses

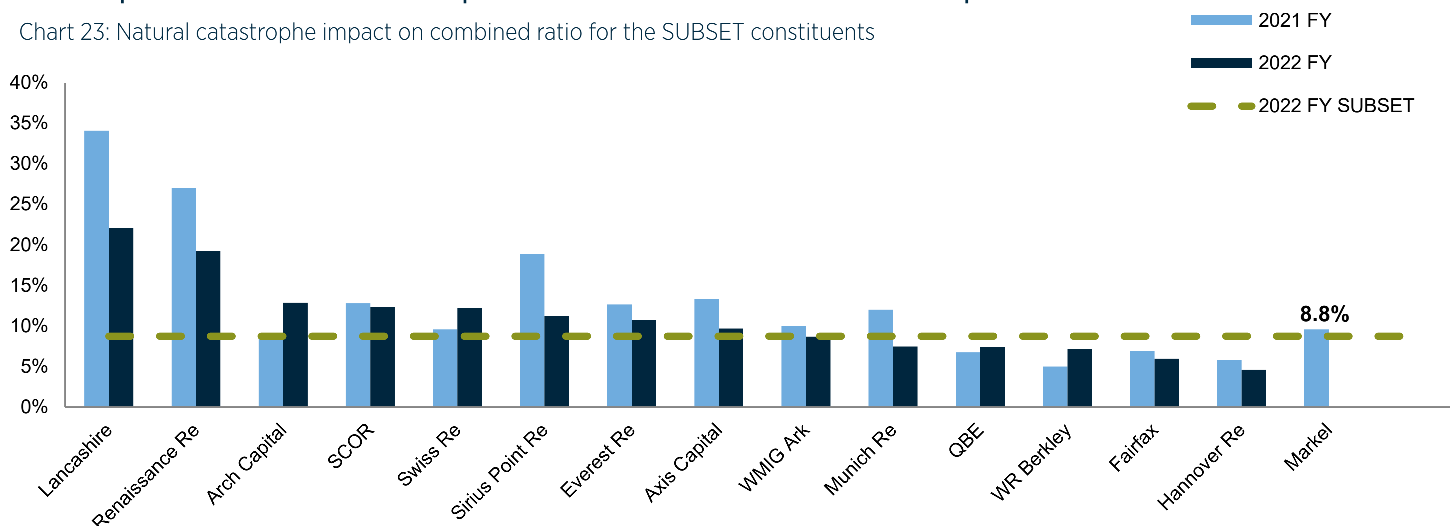
Although down from the prior year, 2022 was the fourth-largest natural catastrophe load since 2011

Chart 22: Natural catastrophe impact on combined ratio for SUBSET



Most companies benefited from a lower impact to the combined ratio from natural catastrophe losses

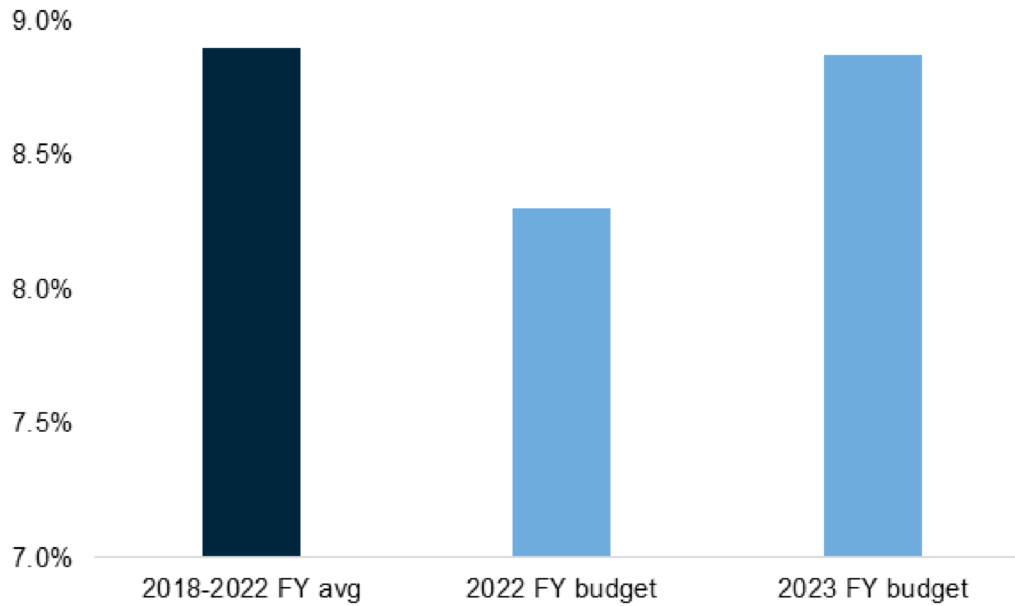
Chart 23: Natural catastrophe impact on combined ratio for the SUBSET constituents



- The weighted average impact on the combined ratio from natural catastrophe losses reduced to 8.8 percentage points (2021 FY: 10.1 percentage points), which was above the normalized natural catastrophe load of 8.2 percentage points.
- Gallagher Re estimates insured losses from major natural catastrophes in 2022 FY at USD 140 billion. This was the fifth time in the last six years that insured losses were at least USD 100 billion (see Gallagher Re's Summary of Natural Catastrophe Events 2022 FY). Hurricane Ian resulted in the largest insured loss of the year at USD 55 billion. Other significant events included US drought (USD 9 billion), European windstorms Dudley, Eunice and Franklin (which totaled USD 4.3 billion), and Eastern Australia floods (USD 4 billion).
- Although lower than the prior year, Lancashire and Ren Re had significant impacts from natural catastrophe losses at 22 percentage points and 19 percentage points respectively.

Recent natural catastrophe loss impact has exceeded budget

Chart 24: Natural catastrophe impact versus budget, for SUBSET companies who report budget

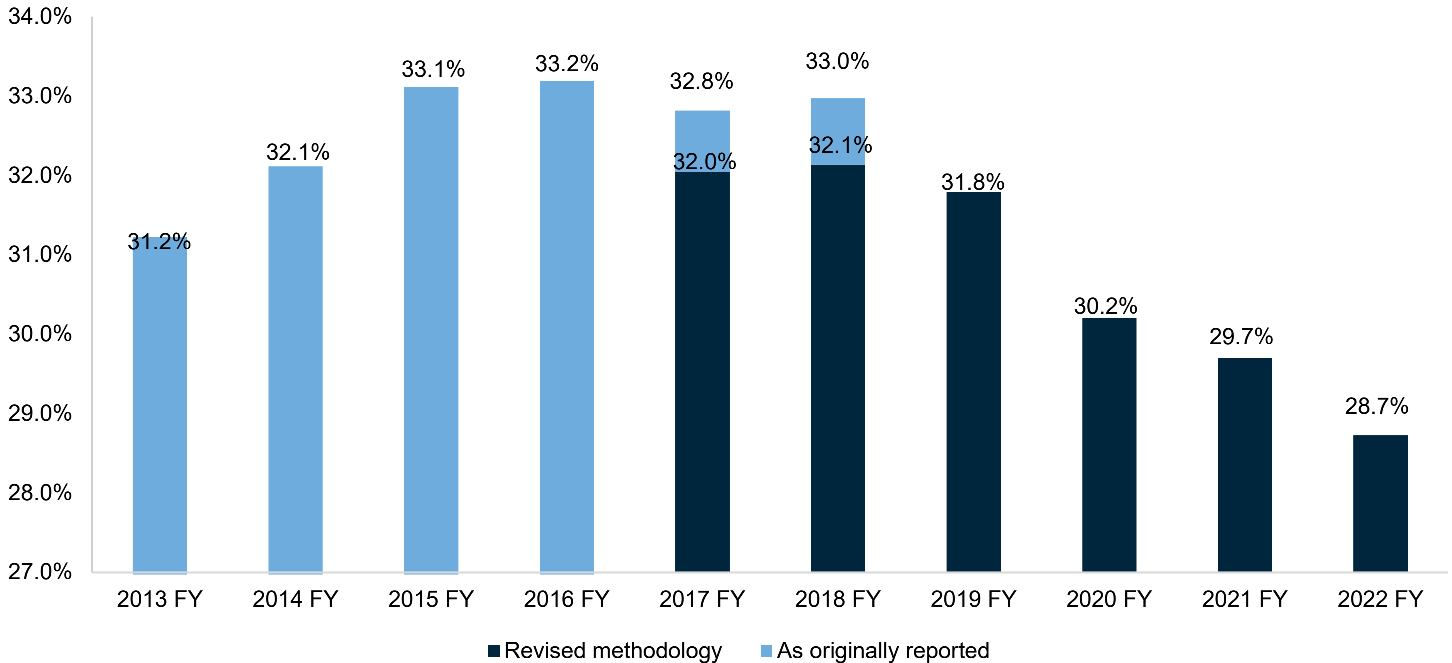


- Several reinsurers publish a budget for 'normal' natural catastrophe losses. As shown above, the five-year average natural catastrophe loss impact on combined ratios exceeded the 2022 FY budget. As a result of upwards revisions by several companies, the average 2023 FY natural catastrophe budget is now broadly in line with actual experience over 2018–2022.
- Given the ongoing challenge of climate change risk we expect companies to maintain a watchful eye on their natural catastrophe budgets and make further upwards revisions as required.

Expense ratios

Expense ratio reduces further as premium growth exceeds expense growth

Chart 25: Weighted average expense ratio for the SUBSET[22]



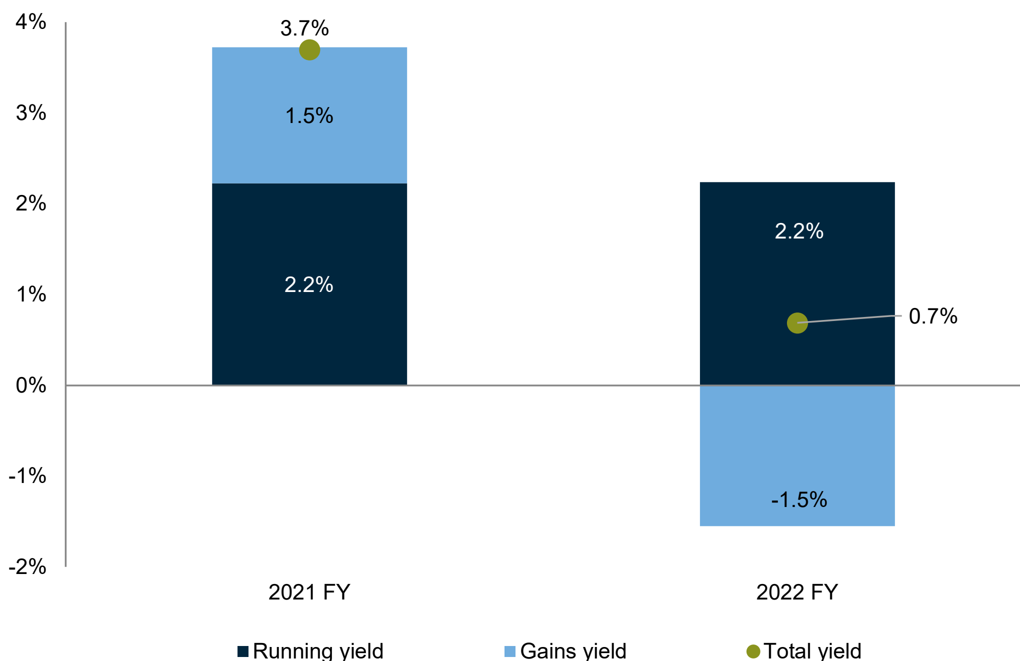
- The average expense ratio for the SUBSET further improved to 28.7%, continuing its downward trend since 2018 FY. This improvement reflects strong premium growth which has exceeded the growth in absolute expenses. Premium growth in 2022 FY was 12% compared to growth in absolute expenses of 8%.
- Lower expense ratios provide important support to combined ratios, particularly given the increased ex-nat cat accident year loss ratio and less support from reserve releases.

[22]The revised methodology we introduced with our half-year 2019 report produced a discontinuity in our time series of SUBSET expense ratios. Several of the companies removed from our constituent list, particularly Lloyd's companies, have high expense ratios. Therefore, our 'revised methodology' expense ratios for 2017 and 2018 are approximately one percentage point lower than the ratios we originally reported.

INVESTMENT PERFORMANCE

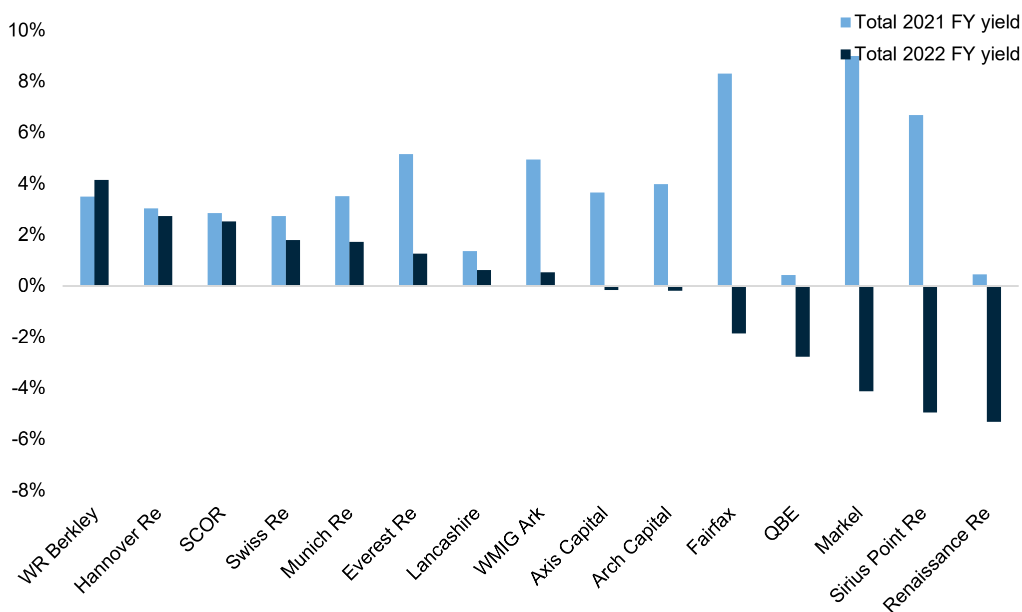
Investment income reduces due to negative gains yield; running yield stable

Chart 26: Investment yield for the SUBSET[23]



Investment yield deteriorated for almost all companies

Chart 27: Investment yield for the SUBSET constituents



- Due to deterioration in the gains yield to -1.5% (2021 FY: +1.5%), the total investment yield reduced to 0.7% from 3.7% at 2021 FY, placing a significant drag on the reported ROE.
- The deterioration in the gains yield was driven by significant unrealized investment depreciation due to falling equity markets (which for US GAAP reporters flows through the P&L) and, for all companies, realized losses across all asset classes.
- Higher reinvestment rates supported an increase in the absolute level of running investment income. However, the running yield remained flat at 2.2% due to the offsetting impact of a higher denominator (which is based on the average of cash and invested assets at 2022 FY and 2021 FY).

[23]Running yield captures items such as bond coupons, equity dividends and interest income.

APPENDIX 1

Methodology

In our 2019 HY report, we broadened our definition of capital to include subordinated debt and minority interests, and restated 2018 FY capital accordingly. We also introduced the rules below to choose the constituents of our capital calculation for the traditional reinsurance market. As per chart 1 on page 8, these components are the INDEX, major regional and local reinsurers, and pro-rated portion of capital within major groups.

We review and adjust our constituents annually based on year-end data.

The constituents of these components within this report have been selected by applying the rules below to year-end 2022 disclosures. We also restate the prior year's capital position. The impact on the previous year's capital position from these constituent changes is the USD 4.6 billion 'Change in constituents' shown in Chart 3.

Index

Capital at least USD 1 billion or total group NWP at least USD 1 billion, and reinsurance NWP at least 10% of group NWP.

Major regional and local reinsurers

Capital at least USD 250 million, or total group NWP at least USD 250 million, and reinsurance NWP at least 10% of group NWP.

Pro rata of composites

In the case of large groups whose reinsurance NWP is less than 10% of group NWP, we take a pro-rated portion of capital which must be at least USD 250 million.

Segment versus group data for the SUBSET

In our combined ratio analysis, we use P&C reinsurance segment combined ratios for those SUBSET reinsurers which provide the disclosure. Otherwise, we use group combined ratios. In calculating the SUBSET averages, we weight these combined ratios by the appropriate segment or group net earned premium. In the section on premium volumes, we show the growth rate in this 'relevant NEP'. In Appendix 2, premium income is on a written basis and relates to the entire group.

Lloyd's market

The treatment of the Lloyd's market is complex given its nature. Lloyd's syndicates are not explicitly included in this study, in order to avoid double-counting. Many of the companies included in this study have capital backing Lloyd's syndicates, which is included in each company's individual contribution.

APPENDIX 2

2022 FY results detail for INDEX

Group 2022 FY results table (USD millions)																	
Consolidated data unless otherwise stated	Notes	Total capital				Net written premium				Net income				Combined ratio			
		2020 FY	2021 FY	2022 FY	Δ FY	2020 FY	2021 FY	2022 FY	Δ FY	2020 FY	2021 FY	2022 FY	Δ FY	2020 FY	2021 FY	2022 FY	Δ FY ppts
African Re	(2)	1,017	1,001	1,001													
Arch Capital	(1)	13,929	13,546	12,910	-4.7%	7,438	9,018	11,077	22.8%	1,364	2,093	1,436	-31.4%	99.5%	94.2%	92.2%	-2.0
Aspen	(2)	2,998	2,775	2,775													
AXA XL	(2)	13,222	13,139	13,139													
Axis Capital	(1)	5,716	5,831	5,061	-13.2%	4,336	4,927	5,263	6.8%	-151	588	193	-67.2%	103.8%	99.0%	99.1%	0.1
CCR, France	(2)	3,597	3,545	3,331													
China Re	(2)	15,762	16,149	14,874													
Convex	(2)	2,478	2,400	2,400													
DEVK Re	(2)	2,794	2,717	2,553													
Everest Re	(1)	9,950	10,363	8,659	-16.4%	9,117	11,446	12,344	7.9%	514	1,379	597	-56.7%	103.0%	98.1%	96.4%	-1.7
Fairfax		17,712	21,316	20,336	-4.6%	14,865	18,278	22,272	21.8%	218	3,401	1,147	NM	97.8%	95.0%	94.7%	-0.3
Fidelis	(2)	2,034	2,078	2,078													
General Re	(5)	12,181	13,927	12,739	-8.5%	499	4,974	2,078	-58.2%	399	258	467	81.1%				
GIC India	(3)	7,288	7,903	7,255													
Great West Lifeco		21,280	24,167	23,953	-0.9%	32,078	42,124	40,573	-3.7%	2,194	2,495	2,473	-0.9%				
Hamilton Re	(2)	1,512	1,744	1,744													
Hannover Re	(1)	17,212	17,893	13,331	-25.5%	25,450	29,384	31,489	7.2%	1,007	1,456	1,479	1.6%	101.6%	97.7%	99.8%	2.1
Korean Re	(1)	2,270	2,149	2,305	7.3%	4,972	5,240	5,586	6.6%	128	155	136	-12.8%	100.3%	100.3%	100.4%	0.1
Lancashire		1,736	1,859	1,714	-7.8%	519	816	1,188	45.6%	5	-62	-3	NM	107.8%	107.3%	97.7%	-9.6
MAPFRE		13,406	12,270	10,673	-13.0%	19,192	21,097	20,941	-0.7%	936	905	675	-25.4%	94.8%	97.5%	98.0%	0.5
Markel	(1)	12,815	14,718	13,128	-10.8%	5,932	7,120	8,203	15.2%	816	2,389	-250	NM	104.0%	105.3%	92.1%	-13.2
Milli Re	(1)	491	304	373	22.8%	999	1,058	1,312	24.0%	49	55	52	-4.9%	117.0%	136.0%	144.1%	8.1
Munich Re	(1)	42,864	40,942	27,733	-32.3%	59,453	65,254	66,710	2.2%	1,381	3,467	3,608	4.1%	105.6%	99.6%	96.2%	-3.4
National Indemnity	(5)	187,762	239,470	207,276	-13.4%	30,401	34,348	35,070	2.1%	12,609	10,054	9,185	-8.6%				
Pacific LifeCorp	(2)	17,452	17,005	17,005													
Partner Re	(2)	7,884	8,101	8,101													
Peak Re	(2)	1,487	1,470	1,470													
QBE		11,441	12,144	11,730	-3.4%	12,343	14,474	15,081	4.2%	-1,511	750	770	2.7%	107.4%	93.7%	94.2%	0.5
QIC		3,019	3,081	2,455	-20.3%	2,240	2,336	2,150	-8.0%	35	169	-178	-205.3%				
R&V Versicherung	(2)	2,630	2,445	2,298													
Renaissance Re		7,560	6,624	5,325	-19.6%	4,096	5,939	7,196	21.2%	762	-73	-1,097	NM	101.9%	102.1%	97.7%	-4.4
RGA	(4)	15,471	14,133	5,654	-60.0%	11,694	12,513	13,078	4.5%	415	617	623	1.0%				
RSUI Indemnity	(5)	1,671	1,851	1,510	-18.4%	1,032	1,235	1,435	16.2%	166	191	143	-25.1%				
SCOR		10,661	10,216	8,302	-18.7%	16,622	16,952	16,790	-1.0%	267	539	-316	NM	100.2%	100.6%	113.2%	12.6
Sirius Point Re		1,565	2,503	2,083	-16.8%	548	1,735	2,549	46.9%	144	45	-403	NM	110.3%	116.3%	105.6%	-10.7
Swiss Re	(1)	35,332	31,389	20,520	-34.6%	39,827	43,220	43,917	1.6%	-878	1,437	472	-67.2%	109.0%	97.1%	102.4%	5.3
Toa Re	(3)	1,709	1,741	1,527													
Transatlantic Re	(5)	4,813	5,066	3,875	-23.5%	4,498	5,014	4,734	-5.6%	87	446	-129	-128.8%				
Validus Re	(2)	3,439	3,548	3,548													
WR Berkley	(1)	7,428	7,675	7,777	1.3%	7,262	8,863	10,004	12.9%	531	1,022	1,381	35.1%	93.1%	90.7%	89.7%	-1.0
WMIG Ark			3,891	4,119	5.9%		906	1,195	31.9%		-275	793	NM		87.4%	81.8%	-5.6
Index aggregate	**(6)(7)**	**545,587**	**605,088**	**518,638**	**-14.3%**	**315,415**	**368,268**	**382,235**	**3.8%**	**21,486**	**33,500**	**23,253**	**-30.6%**	**99.4%**	**98.0%**	**98.6%**	**0.6**
Subset aggregate	**(6)(7)**	**203,805**	**205,120**	**166,709**	**-18.7%**	**207,810**	**238,332**	**255,279**	**7.1%**	**4,468**	**18,156**	**9,806**	**-46.0%**	**104.1%**	**97.5%**	**97.8%**	**0.3**

NB : Shaded rows in the above summary denote SUBSET groups. NM = not meaningful.

APPENDIX 2 (CONTINUED)

(1) Combined ratios are in respect of the P&C Reinsurance segment only.

(2) Due to lack of disclosure at the time of the report, total capital shown for 2022 FY is based on 2021 FY disclosure.

(3) Companies which have a March 31 financial year-end. Data for the year ended March 31, 2022 is included in the column headed 2021 FY (and similar for prior years). 2022 FY data is also based on year-end March 31, 2022 disclosure.

(4) Figures for net premiums are net earned premiums, not net written premiums.

(5) Numbers are sourced from unconsolidated financial statements.

(6) Total of numbers reported, converted to USD at exchange rates prevailing at end of reporting period for total capital figures. For net income and NWP figures, we use average exchange rates over the reporting period.

(7) Pre 2022 FY aggregates shown in this appendix will not necessarily match the aggregates shown in the body of the report. In the body, prior year figures have generally not been restated for changes in constituents. The figures here have been restated.

It’s the *way* we do it.

Drawing on our network of reinsurance and market specialists worldwide, and as part of the wider Gallagher company, Gallagher Re offers the benefits of a top-tier reinsurance broker, one that has comprehensive analytics and transactional capabilities, with an on-the-ground presence and local understanding. Whether your operations are global, national or local, Gallagher Re can help you make better reinsurance and capital decisions, access worldwide markets, negotiate optimum terms and boost your business performance.

For more information, visit **GallagherRe.com**.

This analysis has been prepared by Gallagher Re on the condition that it shall be treated as strictly confidential and shall not be communicated in whole, in part, or in summary to any third party without prior written consent from Gallagher Re. Gallagher Re is a business unit that includes a number of subsidiaries and affiliates of Arthur J. Gallagher & Co. which are engaged in the reinsurance intermediary and advisory business. All references to Gallagher Re below, to the extent relevant, include the parent and applicable affiliate companies of Gallagher Re.

Gallagher Re has relied upon data from public and/or other sources when preparing this analysis. No attempt has been made to verify independently the accuracy of this data. Gallagher Re does not represent or otherwise guarantee the accuracy or completeness of such data nor assume responsibility for the result of any error or omission in the data or other materials gathered from any source in the preparation of this analysis. Gallagher Re shall have no liability in connection with any results, including, without limitation, those arising from based upon or in connection with errors, omissions, inaccuracies, or inadequacies associated with the data or arising from, based upon or in connection with any methodologies used or applied by Gallagher Re in producing this analysis or any results contained herein. Gallagher Re expressly disclaims any and all liability, based on any legal theory, arising from, based upon or in connection with this analysis. Gallagher Re assumes no duty in contract, tort or otherwise to any party arising from, based upon or in connection with this analysis, and no party should expect Gallagher Re to owe it any such duty.

There are many uncertainties inherent in this analysis including, but not limited to, issues such as limitations in the available data, reliance on client data and outside data sources, the underlying volatility of loss and other random processes, uncertainties that characterise the application of professional judgment in estimates and assumptions. Ultimate losses, liabilities and claims depend upon future contingent events, including but not limited to unanticipated changes in inflation, laws, and regulations. As a result of these uncertainties, the actual outcomes could vary significantly from Gallagher Re’s estimates in either direction. Gallagher Re makes no representation about and does not guarantee the outcome, results, success, or profitability of any insurance or reinsurance programme or venture, whether or not the analyses or conclusions contained herein apply to such programme or venture.

Gallagher Re does not recommend making decisions based solely on the information contained in this analysis. Rather, this analysis should be viewed as a supplement to other information, including specific business practice, claims experience, and financial situation. Independent professional advisors should be consulted with respect to the issues and conclusions presented herein and their possible application.

Gallagher Re makes no representation or warranty as to the accuracy or completeness of this document and its contents.

This analysis is not intended to be a complete actuarial communication, and as such is not intended to be relied upon. A complete communication can be provided upon request. Subject to all terms of this Disclaimer, Gallagher Re actuaries are available to answer questions about this analysis.

Gallagher Re does not provide legal, accounting, or tax advice. This analysis does not constitute, is not intended to provide, and should not be construed as such advice. Qualified advisers should be consulted in these areas.

Gallagher Re makes no representation, does not guarantee and assumes no liability for the accuracy or completeness of, or any results obtained by application of, this analysis and conclusions provided herein.

Where data is supplied by way of CD or other electronic format, Gallagher Re accepts no liability for any loss or damage caused to the Recipient directly or indirectly through use of any such CD or other electronic format, even where caused by negligence. Without limitation, Gallagher Re shall not be liable for: loss or corruption of data, damage to any computer or communications system, indirect or consequential losses. The Recipient should take proper precautions to prevent loss or damage—including the use of a virus checker.

This limitation of liability does not apply to losses or damage caused by death, personal injury, dishonesty or any other liability which cannot be excluded by law.

This analysis is not intended to be a complete Financial Analysis communication. A complete communication can be provided upon request. Subject to all terms of this Disclaimer, Gallagher Re analysts are available to answer questions about this analysis.

Gallagher Re does not guarantee any specific financial result or outcome, level of profitability, valuation, or rating agency outcome with respect to A.M. Best or any other agency. Gallagher Re specifically disclaims any and all liability for any and all damages of any amount or any type, including without limitation, lost profits, unrealised profits, compensatory damages based on any legal theory, punitive, multiple or statutory damages or fines of any type, based upon, arising from, in connection with or in any manner related to the services provided hereunder.

Acceptance of this document shall be deemed agreement to the above. Gallagher Re is a trading name of Arthur J. Gallagher (UK) Limited, which is authorised and regulated by the Financial Conduct Authority. Registered Office: The Walbrook Building, 25 Walbrook, London EC4N 8AW. Registered in England and Wales. Company Number: 1193013. FPXXX-2023 Exp. XX.04.2024.

AJG.com/uk

© 2023 Arthur J. Gallagher & Co. | GRE5436

Gallagher Re