Gallagher Re

Reinsurance Market Report

Results for half-year 2023

SEPTEMBER 2023

TABLE OF CONTENTS

KEY FINDINGS

Welcome to the Gallagher Re half year 2023 Reinsurance Market Report which tracks the capital and profitability of the global reinsurance industry.

Global reinsurers performed well in the first half of 2023, reporting a robust increase in their capital base and improved underwriting profitability and ROEs. Underlying[1] profitability also improved due to a lower underlying combined ratio and higher recurring investment income. The reinsurance industry's underlying ROE improved markedly, building on the gradual recovery seen over the past 3-4 years, and the average ROE is now well above the industry's cost of capital. Taking into account current interest rate levels and rate increases booked at renewals YTD, a further meaningful improvement is possible. This makes earnings increasingly resilient and leaves a meaningful earnings buffer above the cost of capital.

Global reinsurance dedicated capital totalled USD709 billion at half year 2023, an increase of 13% versus the restated full year 2022 base.[2] This growth was driven almost entirely by the INDEX[3] companies. Total capital inflow amounted to a relatively modest USD7B.

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

- INDEX capital increased by 14% to USD581B. Just over three-quarters of this increase was due to unrealized investment appreciation, most of which was attributable to National Indemnity. Excluding National Indemnity's gains, INDEX capital increased 5%.
- The rise in capital was also supported by strong net income due to significant improvement in investment income and steadily improving underwriting performance.
- The global reinsurance industry's capital position also remains robust on an economic basis, the measure which Gallagher Re views as more relevant for management teams' decision making. For the four top European reinsurers, average solvency (or SST[4] coverage in the case of Swiss Re) improved to 264% (2022 FY: 255%). In most cases, solvency remains well above these four companies' target levels.

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

- Revenue[5] growth slowed down but remained strong in 2023 HY at 8.7%, supported by rate increases. Volume growth was limited, partly due to rising attachment points and a shift in business mix.
- The reported combined ratio reduced to 87.6%, (2022 HY: 89.2%, restated for IFRS 17), despite conservative reserving, a moderate increase in the natural catastrophe load (from 5.3% to 6.0%) and a slight decrease in the support from reserve releases (from 1.8% to 1.5%). The improvement was largely driven by the increase in the IFRS 17 discounting benefit (from 2.1% to 4.0%) caused by higher interest rates and a better expense ratio.
- On an underlying basis, the combined ratio continued to improve, from 97.7% to 95.4%, driven by the better expense ratio and a lower load of normalized natural catastrophes. The underlying combined ratio, in particular, was the strongest underwriting performance achieved over the ten years Gallagher Re has conducted this analysis
- The reported ROE increased strongly in 2023 HY, from 4.4% to 19.3%, especially driven by improvement in the investment gains yield to 0.5% (2022 HY: -3.5%).
- The underlying ROE increased to 13.4%, a material improvement over 10.2% in 2022 HY, driven by improved underlying underwriting margins and higher running investment income. For a second year in a row the underlying ROE is now well above the cost of capital, after an elongated period of sub-par returns.
- With portfolio investment yields still well below reinvestment yields, we estimate a possible further uplift in underlying ROE of 2-5 percentage points (ppts), all else being equal, if the portfolio yield converges to current reinvestment yields. Also, earn through of booked renewal rate increases could potentially further enhance the underlying ROE by up to 1.5ppts.
- All of this makes the underlying earnings power of the industry more resilient and places the industry in a better position to absorb any potential earnings volatility, such as for example related to natural catastrophe losses. Based on the current underlying 13% ROE, the industry could potentially absorb at least 10ppts (in terms of combined ratio) of incremental natural catastrophe losses beyond the annual normalized level of natural catastrophe losses (8ppts) and still deliver an underlying ROE in line with the current cost of capital. Allowing for the 2023 HY exceptionally strong reported ROE of 19.3%, the industry would be able to absorb about 17ppts of incremental natural catastrophe losses. See details on page 17.

[1]The underlying combined ratio basis replaces actual natural catastrophe and COVID-19 losses with a normalized natural catastrophe load and strips out prior year reserve movements and discounting (for IFRS 17 reporters). Additionally, for the underlying ROE, the impact of investment gains/losses is removed.

[2]We have re-stated year-end 2022 capital from USD638B to USD629B due to late filers and re-stated capital for IFRS 17 reporters.

[3]The INDEX companies are listed in Appendix 2. This also lists the SUBSET companies, which are those companies that make the relevant disclosure in relation to natural catastrophe losses and prior year reserve releases.

[4]The Swiss Solvency Test (SST) is the regulatory standard for insurers and reinsurers domiciled in Switzerland, recognized by the European Union as equivalent to Solvency 2.

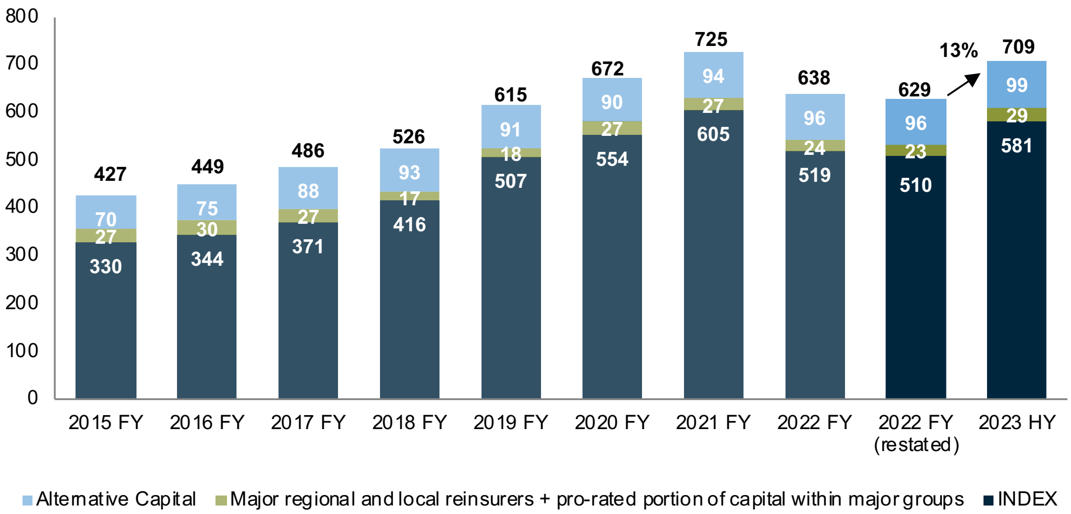
[5]We have used net insurance service revenue for IFRS 17 reporters and net earned premiums for US GAAP reporters.

AT A GLANCE

Capital

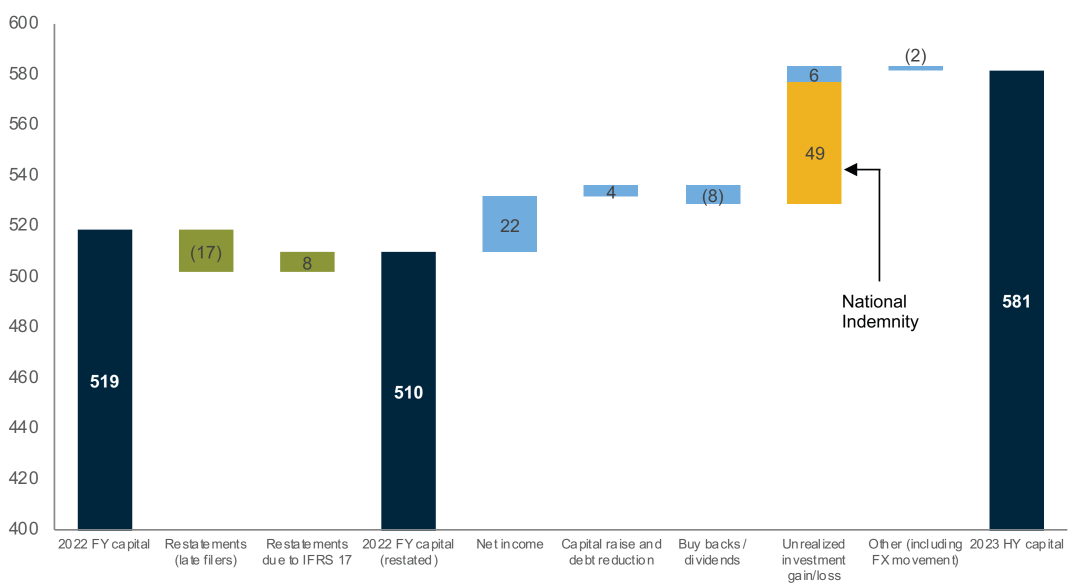
Reinsurance dedicated capital increases but remains below 2021 FY levels

Total reinsurance dedicated capital (USD bn)[6,7]



INDEX capital increases due to unrealized investment appreciation and net income

Capital analysis for the INDEX (USD bn)



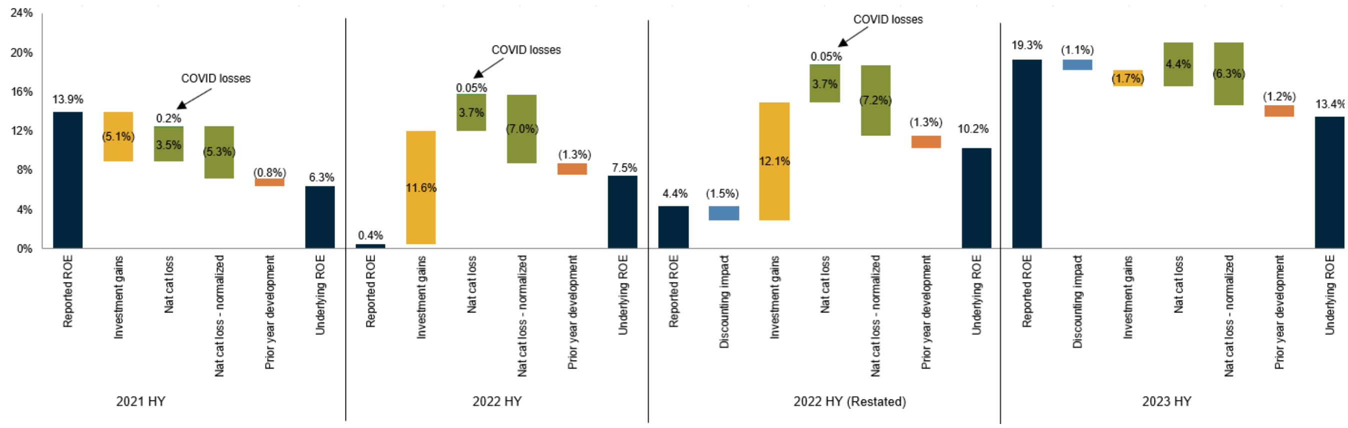
[6]We have re-stated year-end 2022 INDEX capital from USD519B to USD510B due to late filers and re-stated capital for IFRS 17 reporters.

[7]Alternative capital excludes life, accident and health (LAH) ILS AuM and mortgage ILS AuM.

Underlying ROE for the SUBSET

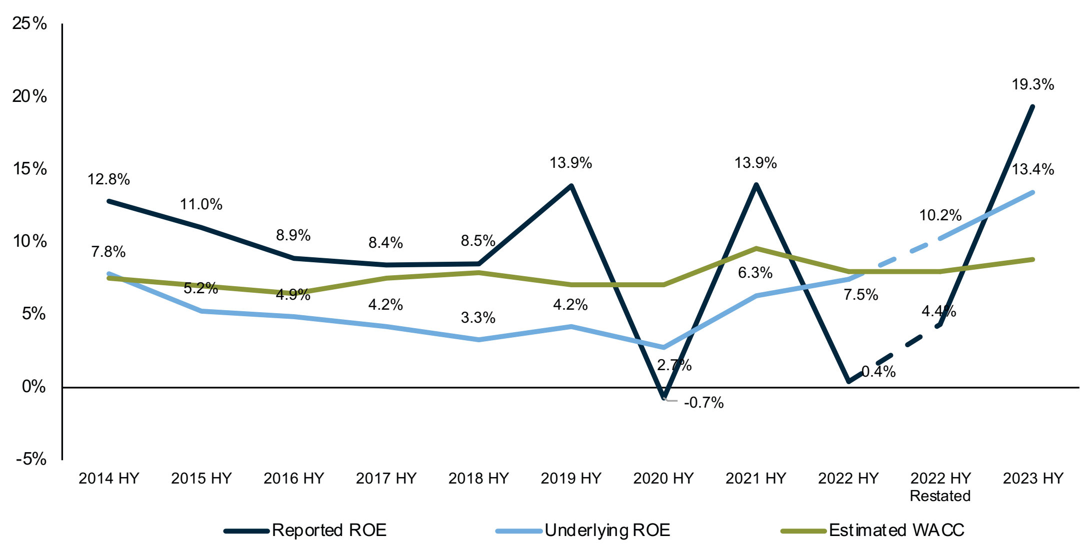
Significant improvement in both headline and underlying ROE

ROE analysis for the SUBSET[8]



Underlying ROE now at a meaningful margin above the WACC[9]

ROE for the SUBSET[8 10]



[8]PYD 2022 HY estimated for Lancashire; Nat cat 2022 HY estimated for SCOR and Hannover Re: Discounting impact on CR 2022 HY estimated for SCOR and Hannover Re; Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR. To calculate 2022 HY restated RoE, we have used 2022 HY equity instead of average equity for IFRS 17 reporting companies.

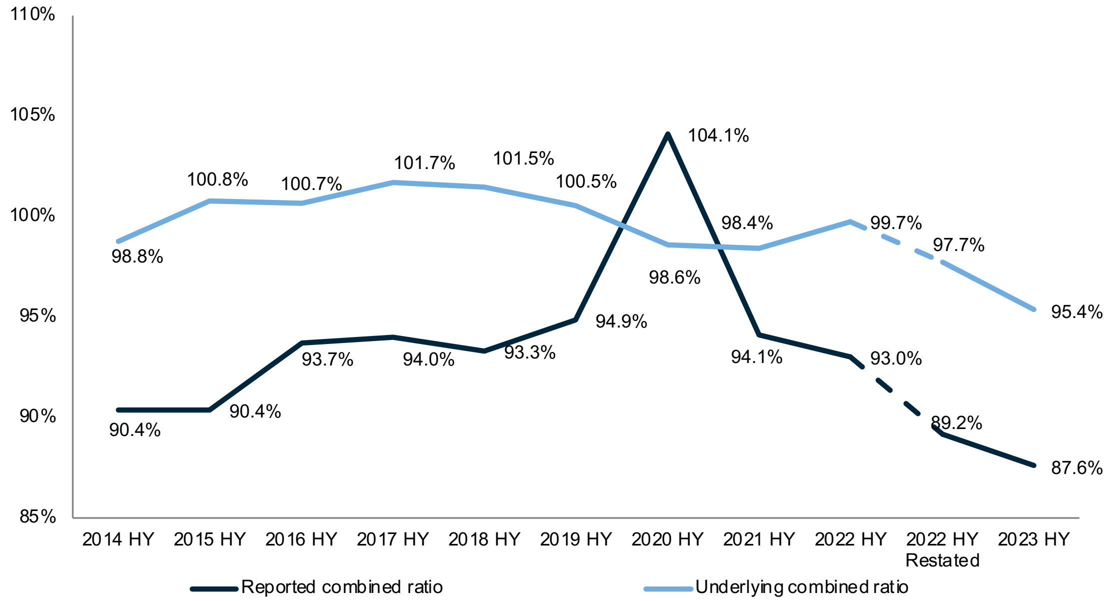
[9]Weighted average cost of capital

[10]S&P estimated WACC figures other than 2022 FY and 2023 HY which are Gallagher Re estimates (taking the S&P WACC for 2022 HY and adjusting for the change in risk-free rates). Underlying ROE excludes investment gains/losses for 2018 HY onward.

Combined ratio for the SUBSET

Reported and underlying combined ratios continue to improve

Reported and underlying combined ratio for the SUBSET[11]



Reported combined ratio strong, despite high natural catastrophe losses, due to discounting impact

Combined ratio detail for the SUBSET[11 12]

SUBSET	2014 HY	2015 HY	2016 HY	2017 HY	2018 HY	2019 HY	2020 HY	2021 HY	2022 HY	2022 HY (Restated)	2023HY
Reported combined ratio	90.4%	90.4%	93.7%	94.0%	93.3%	94.9%	104.1%	94.1%	93.0%	89.2%	87.6%
Add discounting impact (IFRS 17)										2.1%	4.0%
Remove prior year development	4.5%	5.2%	5.2%	3.6%	3.0%	1.2%	0.7%	1.3%	1.6%	1.8%	1.5%
Accident year combined ratio	94.9%	95.6%	98.9%	97.6%	96.3%	96.0%	104.8%	95.4%	94.7%	93.0%	93.1%
Strip out nat cat loss	-2.5%	-1.2%	-4.6%	-2.3%	-1.2%	-2.6%	-3.3%	-5.6%	-5.0%	-5.3%	-6.0%
Strip out COVID loss							-11.1%	-0.4%	-0.1%	-0.1%	0.0%
Ex-nat cat accident year CR	92.4%	94.4%	94.3%	95.3%	95.1%	93.4%	90.4%	89.4%	89.6%	87.6%	87.1%
Add in normalized nat cat loss	6.4%	6.4%	6.4%	6.4%	6.4%	7.1%	8.2%	9.0%	10.1%	10.1%	8.2%
Underlying combined ratio	98.8%	100.8%	100.7%	101.7%	101.5%	100.5%	98.6%	98.4%	99.7%	97.7%	95.4%
Expense ratio					33.1%	32.2%	30.8%	29.6%	29.4%	20.6%	19.9%
Ex-nat cat accident year loss ratio					62.0%	61.2%	59.6%	59.8%	60.2%	67.1%	67.3%
Ex-nat cat accident year combined ratio					**95.1%**	**93.4%**	**90.4%**	**89.4%**	**89.6%**	**87.6%**	**87.1%**

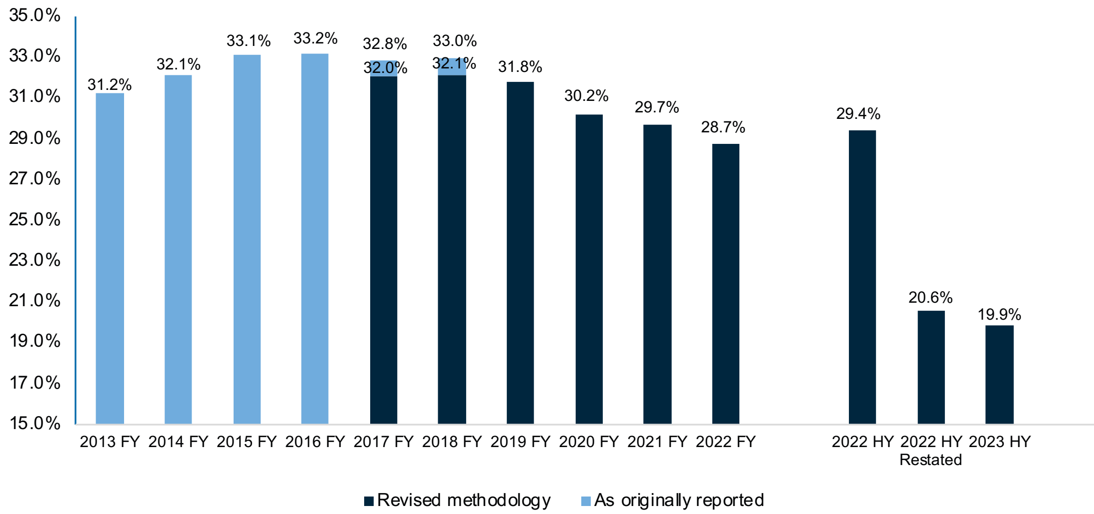
[11]PYD 2022 HY estimated for Lancashire; Nat cat 2022 HY estimated for SCOR and Hannover Re: Discounting impact on CR 2022 HY estimated for SCOR and Hannover Re; Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR.

[12]The normalized natural catastrophe load is the five-year moving average of the SUBSET's full-year actual natural catastrophe loss impact (excluding COVID-19 losses).

Expenses for the SUBSET

Expense ratio impacted by IFRS 17 and broadly flat as premium growth largely matches expense growth

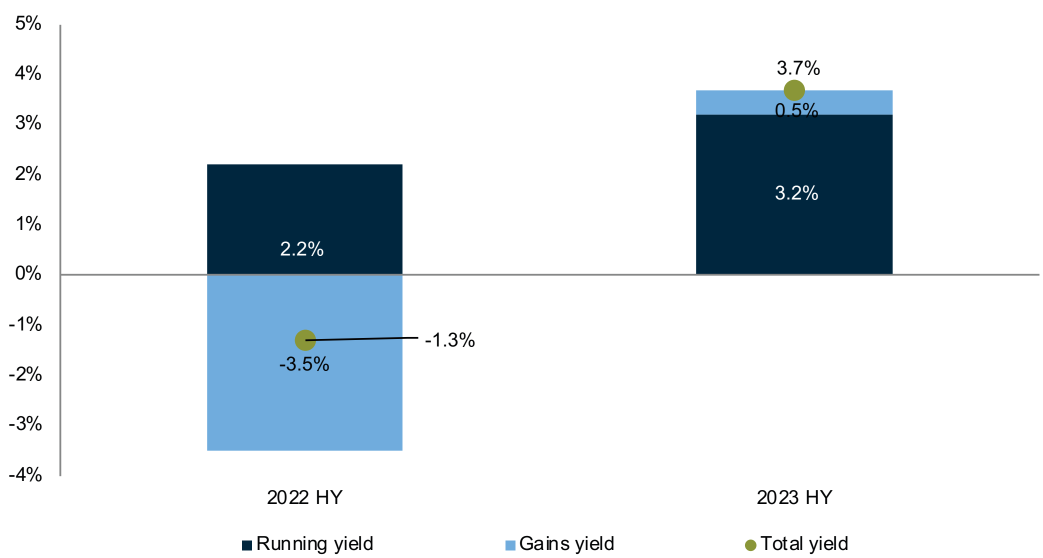
Weighted average expense ratio for the SUBSET[13 14 15]



Investment yield for the SUBSET

Investment income increases due to improved running yield and positive gains yield

Investment yield for the SUBSET[16]



[13]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.

[14]Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR.

[15]See page 25 for further details.

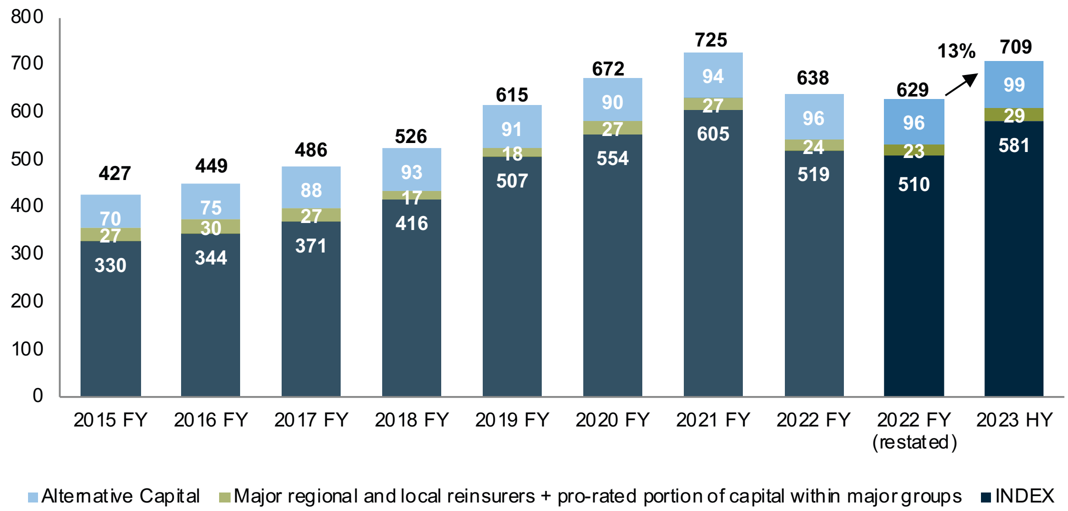
[16]Running yield captures items such as bond coupons, equity dividends and interest income.

CAPITAL

Total reinsurance dedicated capital

Reinsurance dedicated capital increases but remains below 2021 FY levels

Chart 1: Total reinsurance dedicated capital (USD bn)[17]



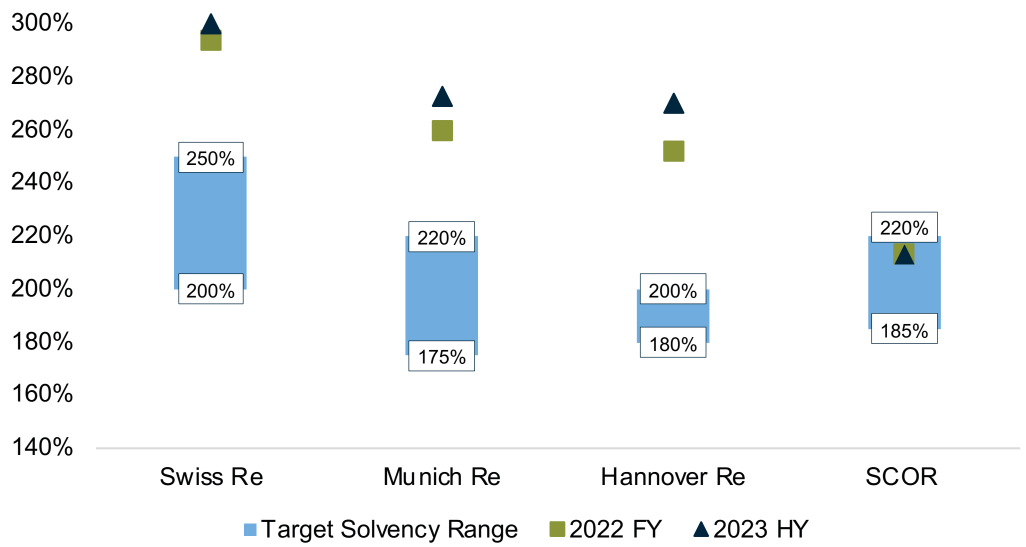
- Global reinsurance capital increased by 13% in the first six months of 2023 to USD709B, roughly two-thirds of which was due to unrealized investment appreciation. As a consequence, industry capital levels are almost back to their 2021 peak.
- Capital for the INDEX companies, which contribute just over 80% of total reinsurance dedicated capital, increased by 14% to USD581B.
- Non-life alternative capital increased by 4% YTD to USD99B. From a product perspective, the key driver of the growth was catastrophe bonds, which recorded a USD5B increase in H1. From an AUM perspective, the key drivers were net inflows and mark-to-market gains. Collateralized reinsurance on the other hand continues to shrink on a relative share basis, in line with developments seen in 2022.
- As well as increasing on an accounting basis, global reinsurers' capital adequacy remains robust on an economic basis, the measure which Gallagher Re views as more relevant for management teams' decision making. Average solvency for the top four European reinsurers improved to 264% (2022 FY: 255%), comfortably at the upper end of, and in some cases above, management target levels.[18]

[17] Alternative capital excludes life, accident and health (LAH) ILS AuM and mortgage ILS AuM

[18] Rising interest rates are usually a positive for economic measures such as the EU's Solvency 2 and Switzerland's SST. This is because liabilities are discounted, and a higher discount rate brings down their value. Many reinsurers have a longer liability duration than asset duration, and so the value of liabilities falls more than the value of assets.

Economic capital adequacy further strengthens at 2023 HY

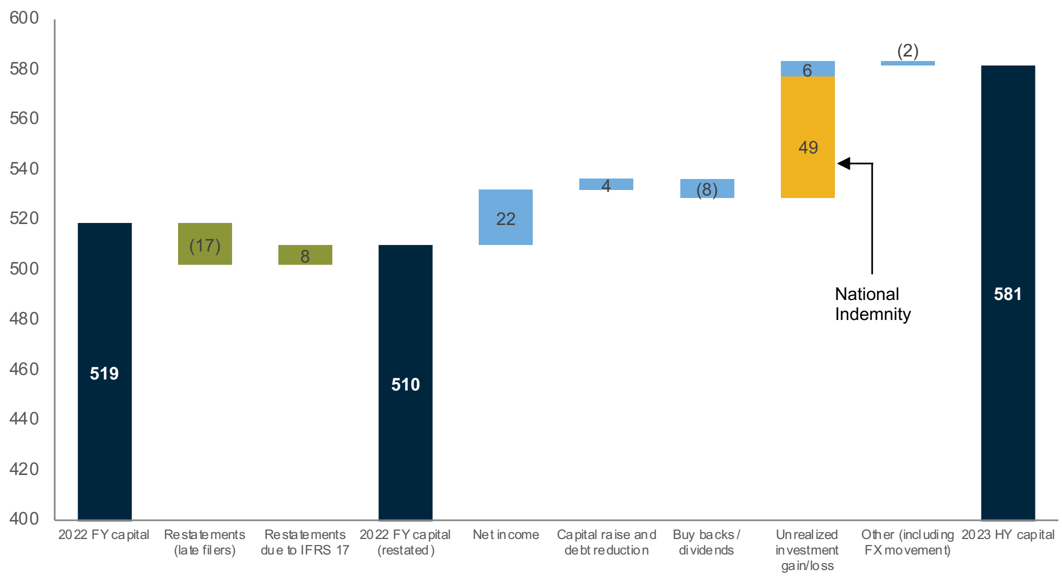
Chart 2: European solvency ratios



INDEX capital

INDEX capital increases due to unrealized investment appreciation and net income

Chart 3: Capital analysis for the INDEX (USD bn)[19]

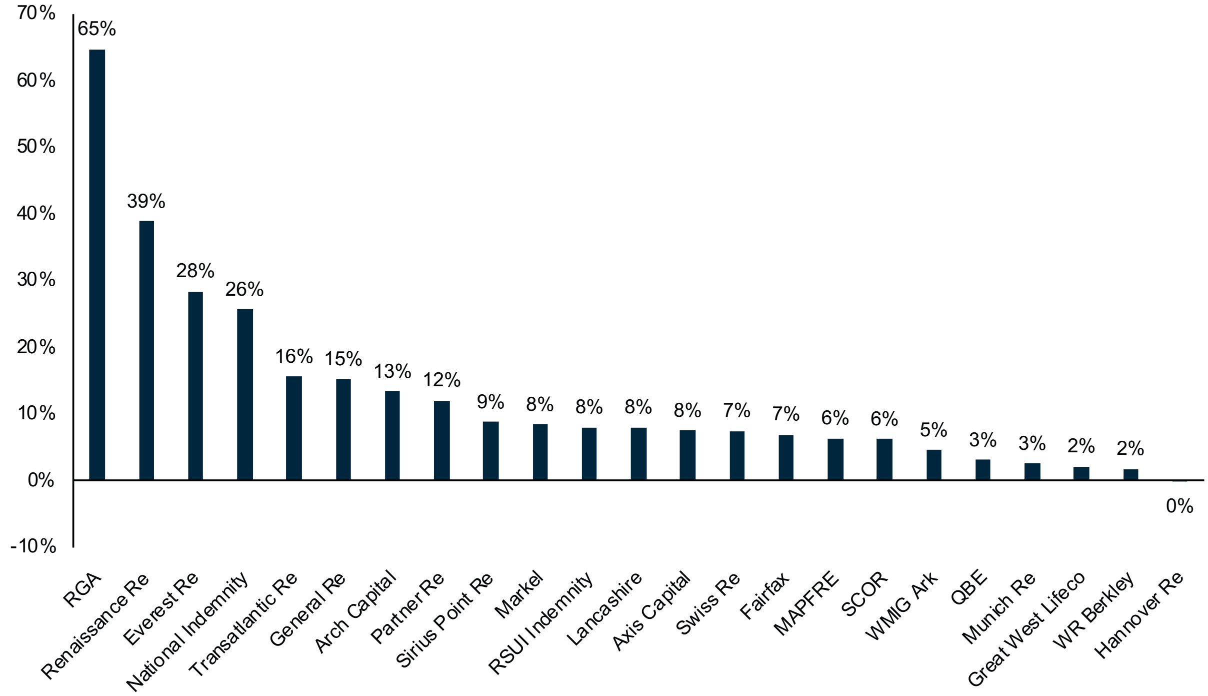


- The USD71B increase in INDEX capital to USD581B was driven by USD55B of unrealized investment appreciation, most of which was attributable to National Indemnity whose significant US equity holdings increased in value in H1. The USD 55 billion in unrealised investment appreciation reverses about two-thirds of the unrealized investment losses reported in 2022 FY.
- In addition to continued strong underwriting profitability, net income of USD22B benefited from higher investment income due to an increase in the running yield and a return to a positive gains yield driven by significant unrealized investment appreciation recognized through P&L for certain reinsurers.
- Roughly one-third of net income was returned through buy-backs and dividends of USD8B. Dividends accounted for 90% of this.
- Despite continued favourable market conditions, capital raises and debt reduction accounted for only USD4B.

[19]We have re-stated year-end 2022 capital from USD519B to USD510B due to late filers and re-stated capital for IFRS 17 reporters.

Capital increases for nearly all INDEX companies

Chart 4: Movement in capital reported as at 2023 HY for the INDEX constituents[20]



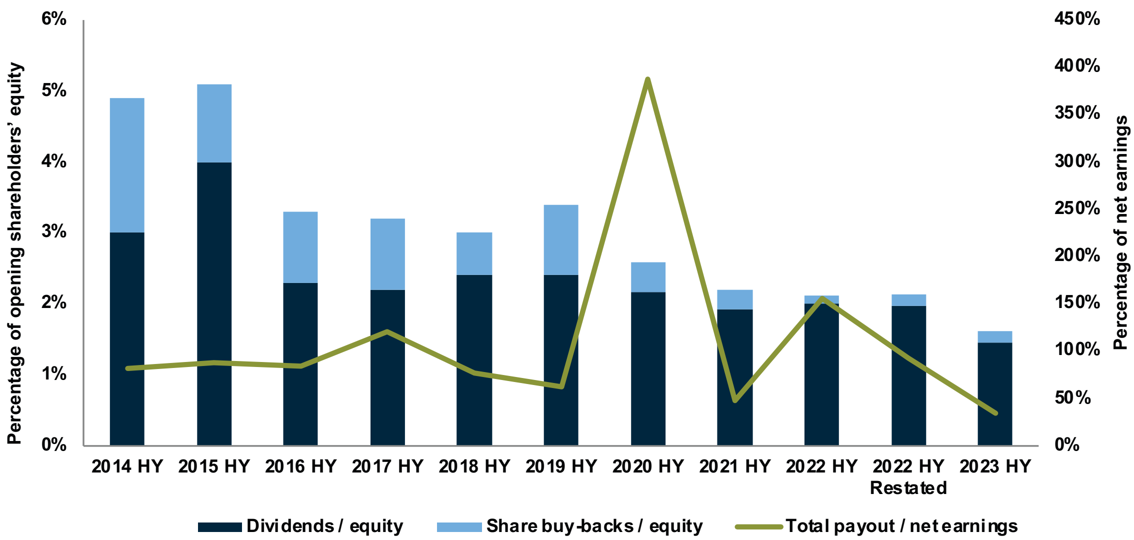
- All INDEX companies reported higher capital bases, apart from Hannover Re which was roughly flat due to repayment of EUR500M of subordinated debt in 2023 HY (excluding which Hannover Re's capital base would have increased 3%).
- RGA's 65% increase in capital was due almost entirely to an accounting change; growth in capital relative to its restated 2022 FY capital base was approximately 8%.
- Renaissance Re's 39% rise in capital was due to a USD1.4B capital raise to support its purchase of Validus Re and net income of USD0.8B.
- Everest Re's 28% increase in capital was due to a USD1.4B capital raise to target growth in the current favourable market conditions and net income of USD1.0B.

[20]Excludes companies who have not yet reported 2023 HY.

Return of capital

Return of capital decreases as management teams target growth

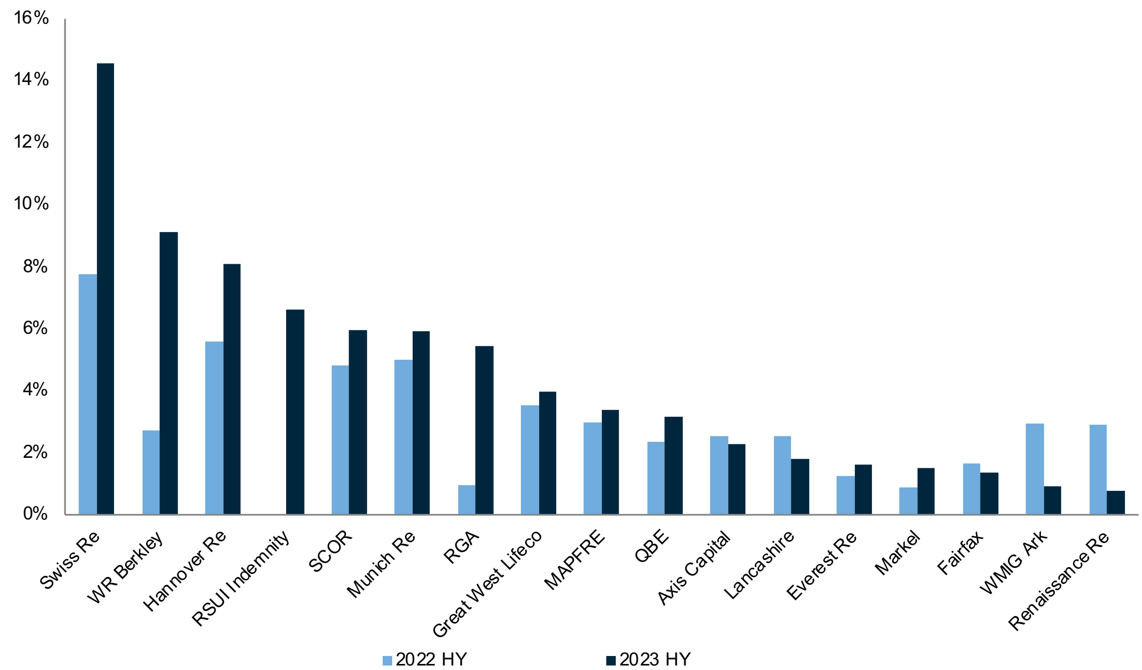
Chart 5: Return of capital (as a percent of opening shareholders' equity) and payout ratio for the INDEX



- Continuing the downward trend since 2019 HY, total capital return (dividends plus buy-backs) as a percentage of shareholders' equity reduced to 1.6% (2022 HY: 2.1%) due to the combination of a lower numerator and a higher denominator.
- As is usually the case at half-year, capital return was mainly through dividends which comprised 90% of the total. The top four European reinsurers contributed approximately two-thirds of these dividends (2022 HY: 58%).
- The payout ratio as a percentage of net earnings reduced to 34% (2022 HY: 93%), again due to both a lower numerator and a higher denominator. This ratio is typically more volatile than capital return as a percentage of shareholders' equity, because capital levels are typically more stable than earnings. Changes or trends in capital payout as a percentage of shareholders' equity should therefore be more informative. Earnings more than doubled from depressed 2022 HY levels. Overall dividends were down 11% due to a lack of dividends paid by National Indemnity.

Capital return increases for most INDEX companies

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

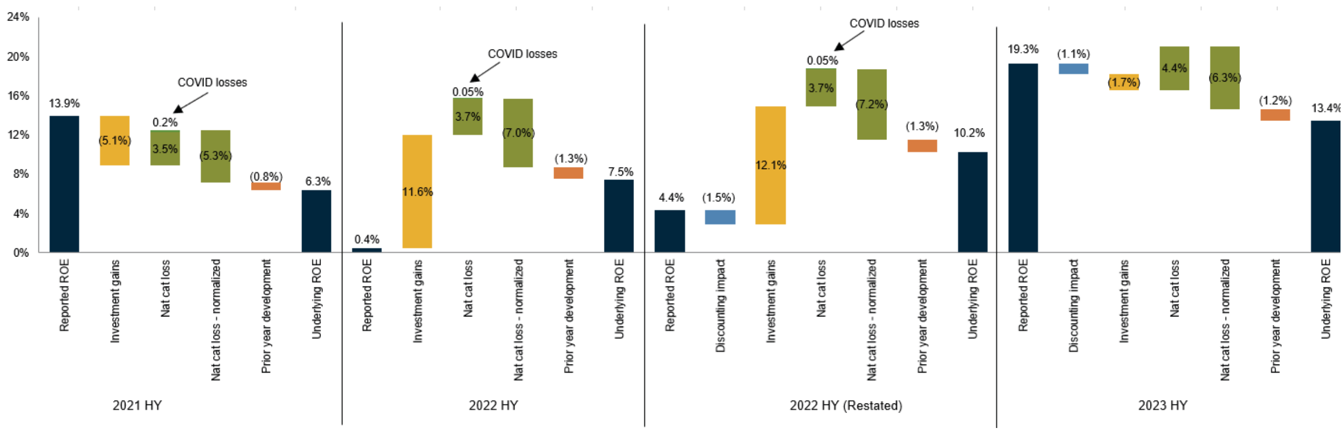


- The ratio of capital return as a percentage of opening shareholders' equity increased for most INDEX constituents at 2023 HY. In most cases this was due to lower opening capital bases compared to the prior period due to unrealized investment depreciation during 2022 FY.
- Despite 2023 HY capital returns being comparable to the prior period on a monetary basis, the capital return ratios increased for the top four European reinsurers due to lower opening shareholders' equity, most notably for Swiss Re.
- W.R. Berkley's capital return ratio increased at 2023 HY due to growth in capital return outpacing growth in shareholders' equity. The higher capital return was due to a USD428M buy-back (2022 HY buy-backs: nil).

Return on equity

Significant improvement in both headline and underlying ROE

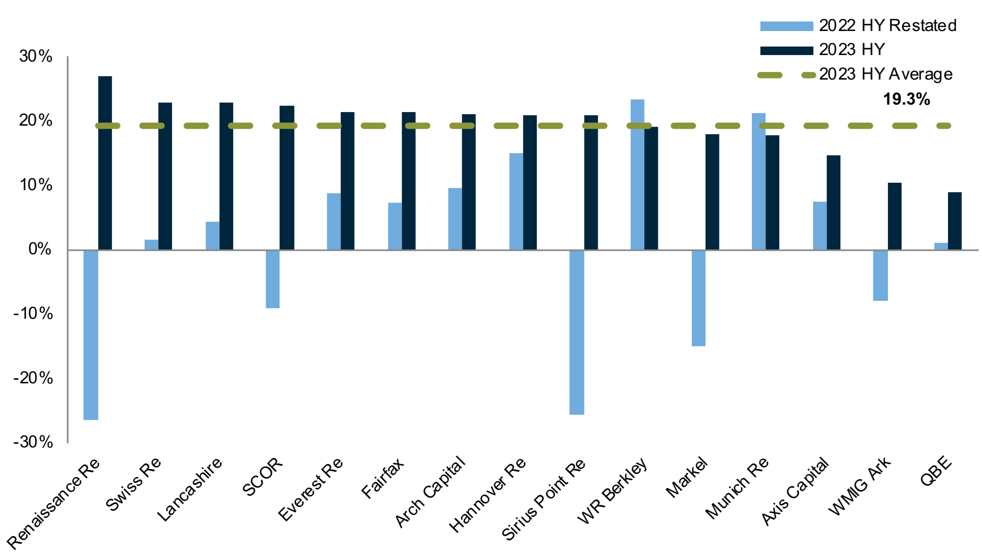
Chart 7: ROE analysis for the SUBSET[21]



- The reported ROE for the SUBSET companies increased to 19.3% (2022 HY: 4.4%). The main driver of the material improvement is a normalization of investment gains. In 2022 HY investment losses dragged the ROE down by 12.1ppts, compared to a benefit of 1.7ppts in 2023 HY.
- In calculating the underlying ROE we strip out investment gains/losses[22], the impact from prior year developments, and we normalize for natural catastrophe losses. Adjusting for these factors, we calculate an underlying ROE of 13.4%, a material improvement over 10.2% in 2022 HY.

The improvement in ROE is widely carried across the SUBSET companies

Chart 8: Reported ROE for the SUBSET constituents[23]



- The material improvement in headline ROE to 19.3% is widely carried across the SUBSET companies with 80% of the coverage delivering a ROE of 17.9% or higher. Only AXIS Capital, WMIG Ark and QBE reported a (meaningfully) lower ROE than the average.

[21] PYD 2022 HY estimated for Lancashire; Nat cat 2022 HY estimated for SCOR and Hannover Re: Discounting impact on CR 2022 HY estimated for SCOR and Hannover Re; Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR. To calculate 2022 HY restated RoE we have used 2022 HY equity instead of average equity for IFRS 17 reporting companies.

[22] We strip out investment gains/losses because, 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.

[23] 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.

Both improved underwriting and higher interest rates drive the uplift in underlying ROE

Chart 9: ROE components for the SUBSET[24]

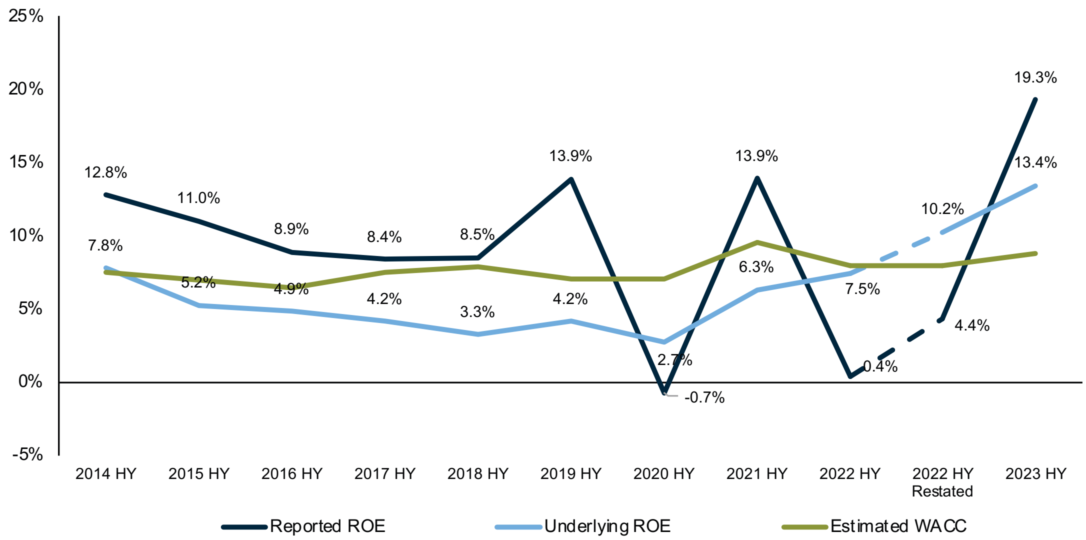
	2021 HY	2022 HY	2022 HY Restated	2023 HY
Reported ROE	**13.9%**	**0.4%**	**4.4%**	**19.3%**
Remove impact of discounting			-1.5%	-1.1%
Remove nat cats (ex-COVID)	3.7%	3.7%	3.7%	4.4%
Remove COVID losses	0.0%	0.0%	0.0%	0.0%
Add in normalized nat cats	-5.3%	-7.0%	-7.2%	-6.3%
Remove prior year development	-0.8%	-1.3%	-1.3%	-1.2%
Strip out investment gains/losses	-5.1%	11.6%	12.1%	-1.7%
Underlying ROE	**6.3%**	**7.5%**	**10.2%**	**13.4%**
Composition of underlying ROE				
Underlying underwriting margin	1.0%	0.2%	1.6%	3.6%
Running investment income	7.1%	8.7%	7.1%	10.7%
Other income/expenses	-1.8%	-1.5%	1.5%	-0.9%
Underlying ROE	**6.3%**	**7.5%**	**10.2%**	**13.4%**

- Looking at the components of the underlying ROE, the improvement in running investment income is the biggest driver of the underlying ROE increase. Due to rising interest rates, the running yield improved materially over the year and as a result the ROE contribution increased to 10.7%, (2022 HY: 7.1%). It is important to note that the running investment income relates to the entire group and not just the P&C reinsurance operations of the companies included in SUBSET.
- The underlying underwriting margin also contributed to the underlying ROE improvement, driven by the meaningful improvement in underlying combined ratio. The underlying underwriting margin increased from 1.6% a year ago to 3.6%.
- 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.
- The increase in underlying ROE as a result of the improved underwriting margin and higher running yield is making earnings considerably more resilient and provides an increasing cushion to absorb any potential earnings volatility coming from natural catastrophe losses, for example, or financial market volatility.

[24] PYD 2022 HY estimated for Lancashire; Nat cat 2022 HY estimated for SCOR and Hannover Re: Discounting impact on CR 2022 HY estimated for SCOR and Hannover Re; Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR. To calculate 2022 HY restated RoE we have used 2022 HY equity instead of average equity for IFRS 17 reporting companies.

Underlying ROE now at a meaningful margin above the WACC

Chart 10: ROE time series for the SUBSET[25 26]



- 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 and stronger running investment income.
- Our analysis of underlying reinsurer ROEs stretches back ten years and for the second 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 higher interest rates are finally enabling reinsurers to generate underlying returns that create shareholder value and potentially recoup some of the underperformance (vs WACC) witnessed prior to 2022.
- Although the running investment yield improved materially (1ppt) in 2023 HY to 3.2%, it is still 0.5-1.5ppts below the reinvestment yields. Therefore, all else being equal, the underlying ROE is expected to continue to improve when the investment portfolio has been fully reinvested at the current reinvestment yields. As shown in the table below, we estimate a 50bps increase in the running yield would add 1.6ppts to the underlying ROE. This implies a potential underlying ROE uplift of 2-5ppts over the coming years coming from the increase in running yield based on current interest rates. This would increase the underlying ROE to 15-18%.

[25]S&P estimated WACC (weighted average cost of capital) figures other than 2022 FY and 2023 HY which are Gallagher Re estimates (taking the S&P WACC for 2022 HY and adjusting for the change in risk-free rates). Underlying ROE excludes investment gains/losses for 2018 HY onward.

[26]PYD 2022 HY estimated for Lancashire; Nat cat 2022 HY estimated for SCOR and Hannover Re: Discounting impact on CR 2022 HY estimated for SCOR and Hannover Re; Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR. To calculate 2022 HY restated RoE we have used 2022 HY equity instead of average equity for IFRS 17 reporting companies.

Uplift to running yield based on current interest rate levels could increase the ROE by 1.6-4.9 ppts

Chart 11: Sensitivity of underlying ROE to increase in running yield – based on SUBSET companies data

Impact of investment yield uplift			
Incremental investment yield uplift	0.5%	1.0%	1.5%
ROE uplift	1.6%	3.3%	4.9%
Implied ROE after uplift running yield	15.1%	16.7%	18.4%

- In addition to the uplift in running investment income there will be some further earn through from rate increases achieved at renewals YTD over the coming 12-18 months, increasing the underlying underwriting margin. However, we estimate this to be materially less significant at a group level (up to approximately 1.5ppts underlying ROE uplift) than the potential ROE uplift from running investment income.

Resilient underlying ROE provides earnings buffer in case of volatility

Chart 12: Earnings buffer analysis based on underlying ROE

Earnings buffer analysis	
Underlying ROE	13%
Earnings buffer above WACC, USD billion	29
In ppts of relevant Net Earned Premium (NEP)	10%
Earnings, USD billion	90
In ppts of relevant Net Earned Premium (NEP)	30%

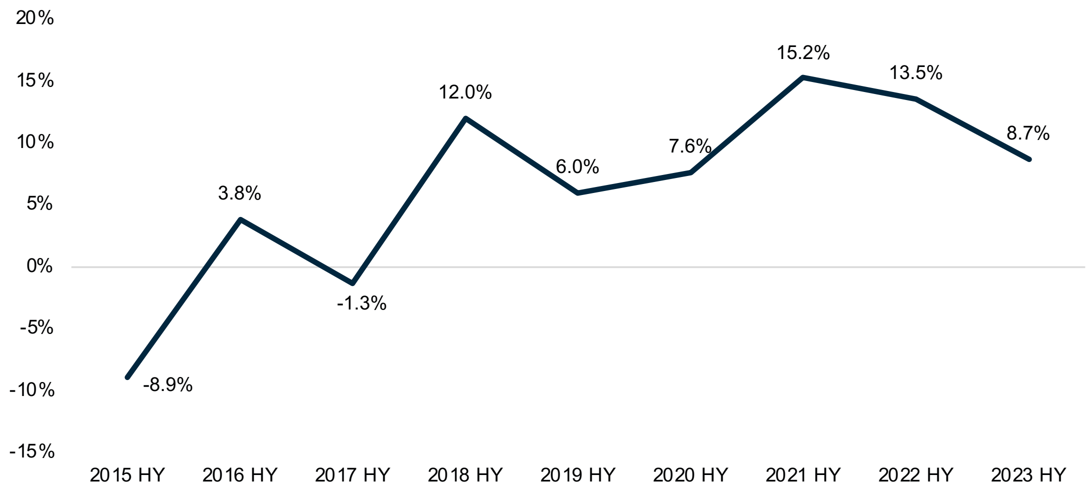
- As discussed above, the improving underlying earnings power of the reinsurance industry provides resilience and a better ability to absorb any potential volatility coming from for example natural catastrophe losses. Based on the current underlying 13% ROE the traditional reinsurance companies could potentially absorb natural catastrophe losses of at least USD29B and still deliver an ROE in line with the cost of capital (WACC). This is equivalent to 10ppts on the combined ratio for the relevant companies and comes on top of our assumption of 8.2ppts of normalized natural catastrophe losses. Allowing for the 2023 HY exceptionally strong reported ROE of 19.3%, the industry would be able to absorb about 17ppts of incremental natural catastrophe losses.

UNDERWRITING PERFORMANCE

Premium volumes

Revenue growth continues but at a lower level than in 2021 and 2022

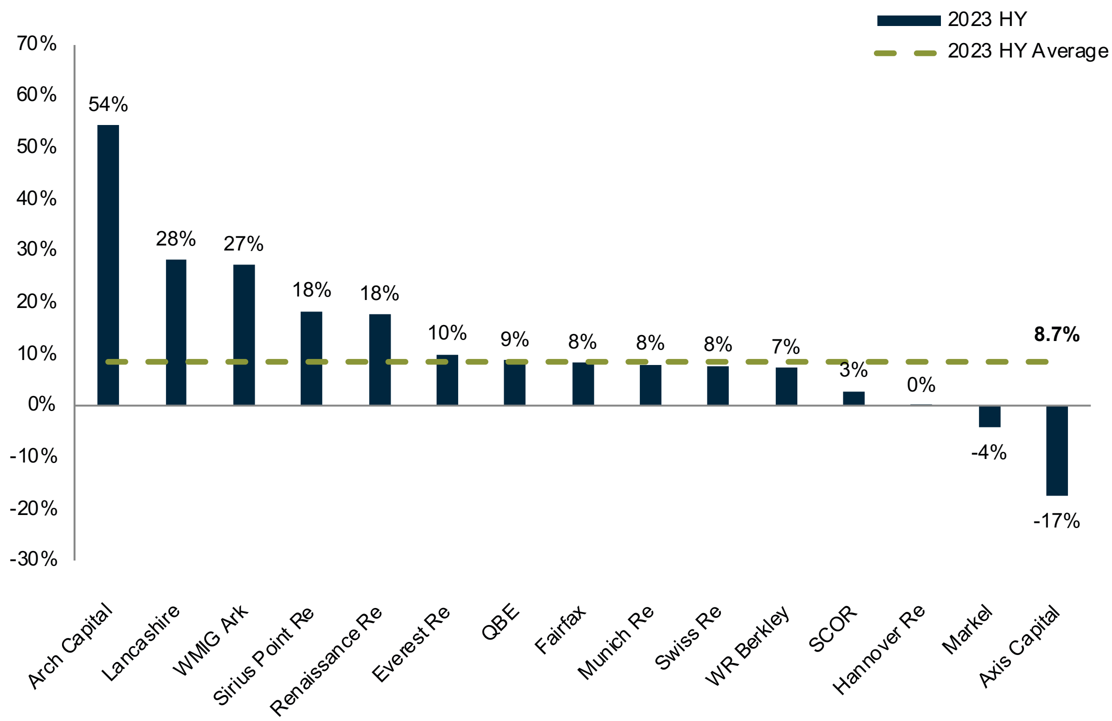
Chart 13: Revenue growth over time of SUBSET constituents (USD basis)[27]



[27] Net earned premiums (for companies that report on a US GAAP basis), or net insurance service revenues (for companies that report on an IFRS17 basis), relate to the reinsurance segment if disclosure is available, or otherwise to the consolidated group. Appendix 1 explains in more detail.

Most companies experienced revenue growth with Bermudians leading the pack

Chart 14: 2023 HY change in relevant net revenues[27] (USD basis) for the SUBSET constituents



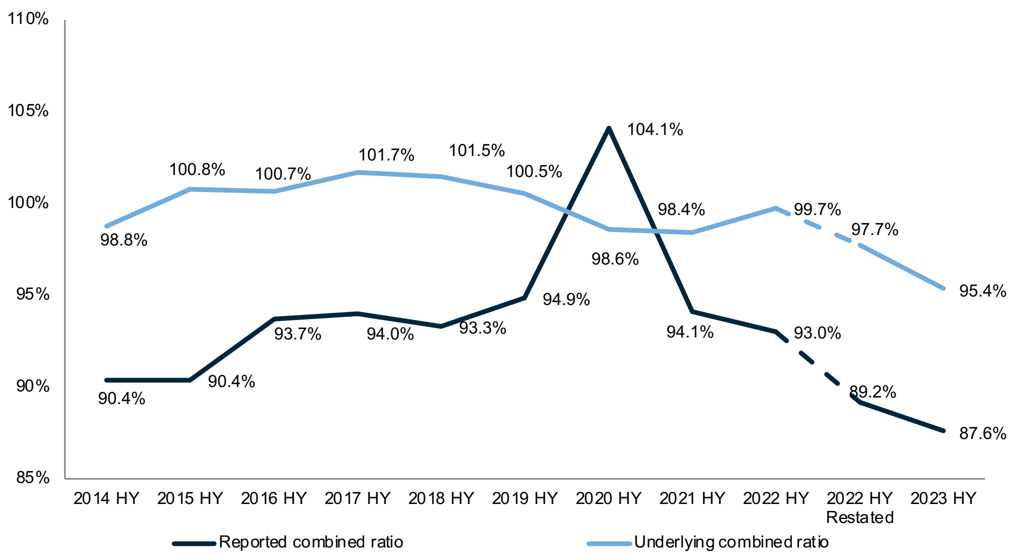
- 2023 HY revenue growth declined to 8.7%, down from 13.5% in 2022 HY. Whilst there were significant rate increases for property reinsurance and commercial insurance business, volume growth was muted as a result of increasing attachment points and portfolio management actions.
- Two-fifths of companies reported double-digit revenue growth; the most significant rises were due to targeted expansion in the hard market, in particular in property lines. Arch Capital's 54% growth was driven by strong growth in property business.
- Portfolio repositioning 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. Hannover Re's revenues for the reinsurance segment remained flat as a result of portfolio management at January renewals and an increase in retrocessional coverage. On a gross basis reinsurance revenues grew by 6.6%.

[27]Net earned premiums (for companies that report on a US GAAP basis), or net insurance service revenues (for companies that report on an IFRS17 basis), relate to the reinsurance segment if disclosure is available, or otherwise to the consolidated group. Appendix 1 explains in more detail.

Combined ratios

Reported and underlying combined ratios continue to improve

Chart 15: Reported and underlying combined ratio time series for the SUBSET[28]



Reported combined ratio strong, despite high natural catastrophe losses, due to discounting impact

Chart 16: Combined ratio detail for the SUBSET[28 29]

SUBSET	2014 HY	2015 HY	2016 HY	2017 HY	2018 HY	2019 HY	2020 HY	2021 HY	2022 HY	2022 HY (Restated)	2023HY
Reported combined ratio	90.4%	90.4%	93.7%	94.0%	93.3%	94.9%	104.1%	94.1%	93.0%	89.2%	87.6%
Add discounting impact (IFRS 17)										2.1%	4.0%
Remove prior year development	4.5%	5.2%	5.2%	3.6%	3.0%	1.2%	0.7%	1.3%	1.6%	1.8%	1.5%
Accident year combined ratio	94.9%	95.6%	98.9%	97.6%	96.3%	96.0%	104.8%	95.4%	94.7%	93.0%	93.1%
Strip out nat cat loss	-2.5%	-1.2%	-4.6%	-2.3%	-1.2%	-2.6%	-3.3%	-5.6%	-5.0%	-5.3%	-6.0%
Strip out COVID loss							-11.1%	-0.4%	-0.1%	-0.1%	0.0%
Ex-nat cat accident year CR	92.4%	94.4%	94.3%	95.3%	95.1%	93.4%	90.4%	89.4%	89.6%	87.6%	87.1%
Add in normalized nat cat loss	6.4%	6.4%	6.4%	6.4%	6.4%	7.1%	8.2%	9.0%	10.1%	10.1%	8.2%
Underlying combined ratio	98.8%	100.8%	100.7%	101.7%	101.5%	100.5%	98.6%	98.4%	99.7%	97.7%	95.4%
Expense ratio					33.1%	32.2%	30.8%	29.6%	29.4%	20.6%	19.9%
Ex-nat cat accident year loss ratio					62.0%	61.2%	59.6%	59.8%	60.2%	67.1%	67.3%
Ex-nat cat accident year combined ratio					**95.1%**	**93.4%**	**90.4%**	**89.4%**	**89.6%**	**87.6%**	**87.1%**

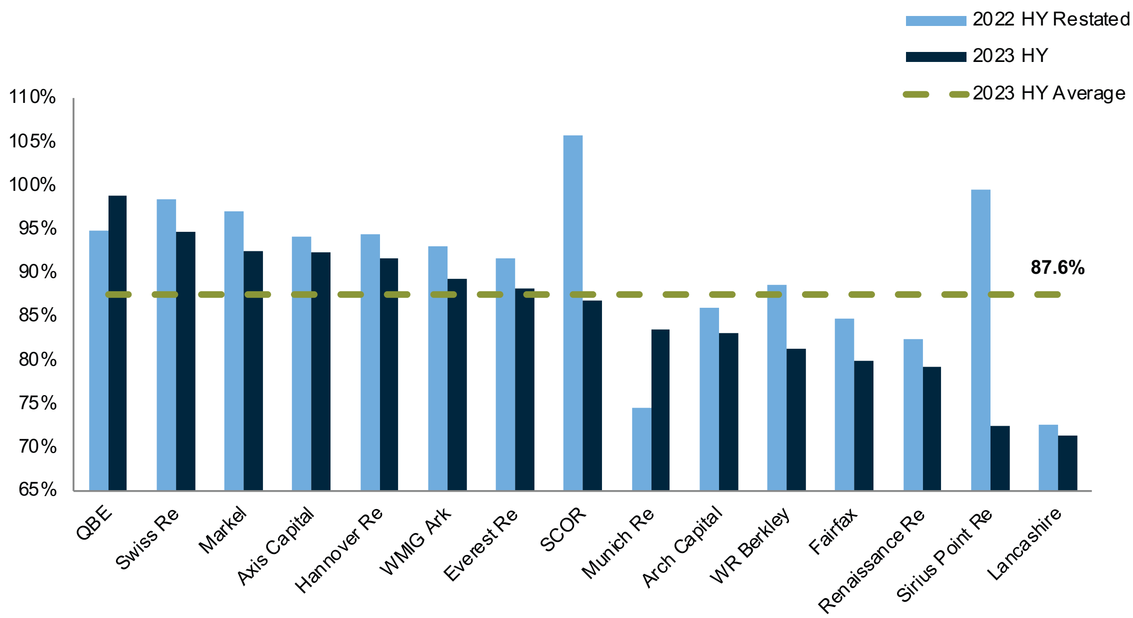
[28]TPYD 2022 HY estimated for Lancashire; Nat cat 2022 HY estimated for SCOR and Hannover Re: Discounting impact on CR 2022 HY estimated for SCOR and Hannover Re; Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR.

[29]The normalized natural catastrophe load is the 5-year moving average of the SUBSET's full-year actual natural catastrophe loss impact (excluding COVID-19 losses).

- The reported combined ratio improved significantly to 89.2% at 2022 HY on transition to IFRS 17, from 93.0% originally reported. This is mainly driven by the introduction of discounting and ceding commissions being deducted from revenues, rather than being reflected in expenses for IFRS 17 reporters.
- The reported combined ratio improved further from this basis to 87.6% in 2023 HY, driven by the increase in the IFRS 17 discounting benefit (from 2.1% to 4.0%) caused by higher interest rates and a better expense ratio. This was partly offset by a slightly weaker (0.2ppts) ex-nat cat accident year loss ratio, a 0.7ppts deterioration in the impact from natural catastrophes and by a 0.3ppts reduction in support from reserve releases.
- The natural catastrophe loss ratio increased to 6.0% (2022 HY: 5.3%) primarily due to an increase in Munich Re's natural catastrophe loss ratio, partially offset by several companies experiencing a reduction in natural catastrophe losses. Munich Re's increase of 5.1ppts to 10.3% (2022 HY: 5.2%) was driven by the Turkey earthquake, Italian floods and US weather events, however Munich Re still remain broadly in line with their 2023 FY budget of 10%.
- As indicated in our 2022 FY RMR, following consecutive increases since 2018, the normalized natural catastrophe load reduced to 8.2% from 10.1% at 2022 HY as 2017 (heavily impacted by the Harvey-Irma-Maria hurricanes) is no longer part of that calculation.
- This, together with the 0.5ppt reduction in the ex-nat cat accident year combined ratio contributed to the 2.3ppt improvement in the underlying combined ratio, which only fell short of the 95% hurdle by 40bps in 2023 HY, reflecting the strongest level achieved since the commencement of our time series in 2014.
- It is worth noting that a number of companies have indicated extra conservatism in their current year loss picks and built reserve buffers over 2023 HY, reinvesting the discounting benefit or any remaining natural catastrophe budget. This suggests that the true underlying improvement to combined ratios could be more material.
- IFRS 17 represents a fundamental accounting change which directly influenced components of reported combined ratios. Under IFRS 17, claims are discounted at prevalent interest rates, resulting in a lower claims ratio. The discount is typically locked-in and unwound in subsequent years, but outside of the combined ratio, thereby creating an accounting mismatch, and given recent movements in interest rates, currently boosting profitability. Fixed ceding commissions are no longer recognised within expenses driving a significant reduction in the expense ratio for reinsurers. Expenses that are not directly attributable to insurance activities are stripped out of the insurance service result (IFRS 17's underwriting profit). However, certain firms have opted to include non-attributable expenses in the expense ratio.

All companies reported combined ratios under 100%, and most reported improving combined ratios

Chart 17: Reported combined ratios for the SUBSET constituents

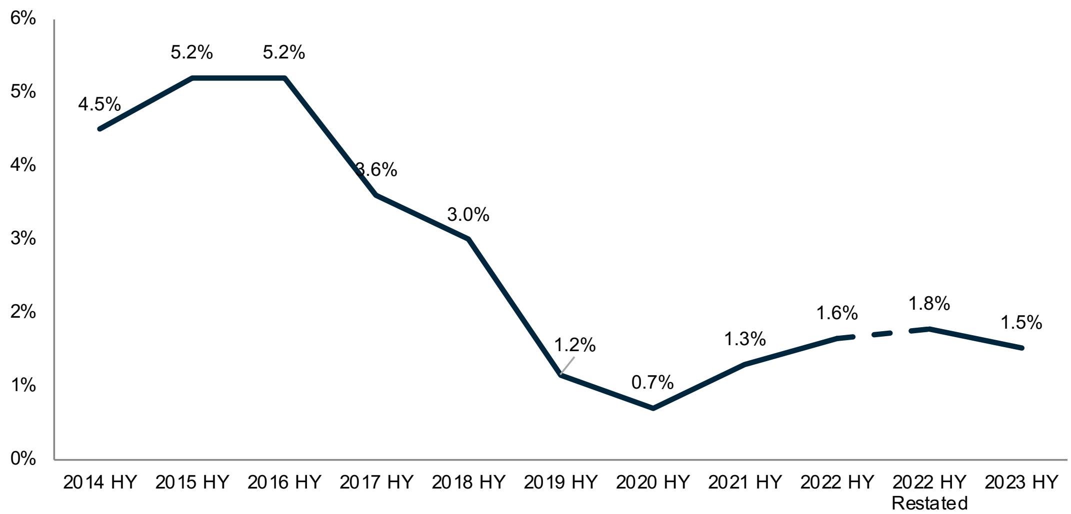


- All companies reported a sub-100% combined ratio in 2023 HY.
- All companies except QBE and Munich Re reported an improved combined ratio in 2023 HY. Munich Re reported a normalization of major losses and reserve releases after an exceptionally strong H1 2022. QBE's combined ratio increased due to higher natural catastrophe losses, reduced reserve releases and the one-off impact of implementing a loss portfolio transfer (LPT).
- Sirius Point Re and SCOR both experienced material improvements in their combined ratio. For Sirius Point Re, this is due to lower natural catastrophe losses, higher reserve releases due to the execution of an LPT and a reduction in the expense ratio. SCOR's 2022 HY combined ratio was adversely impacted by natural catastrophe losses, losses from the Brazilian drought and reserve strengthening relating to claims in the 1970s and 1980s in its US casualty portfolio.

Prior year loss development

Reserve releases broadly stable but much lower than in 2014-2018

Chart 18: Prior year development impact on combined ratio for the SUBSET[30 31]

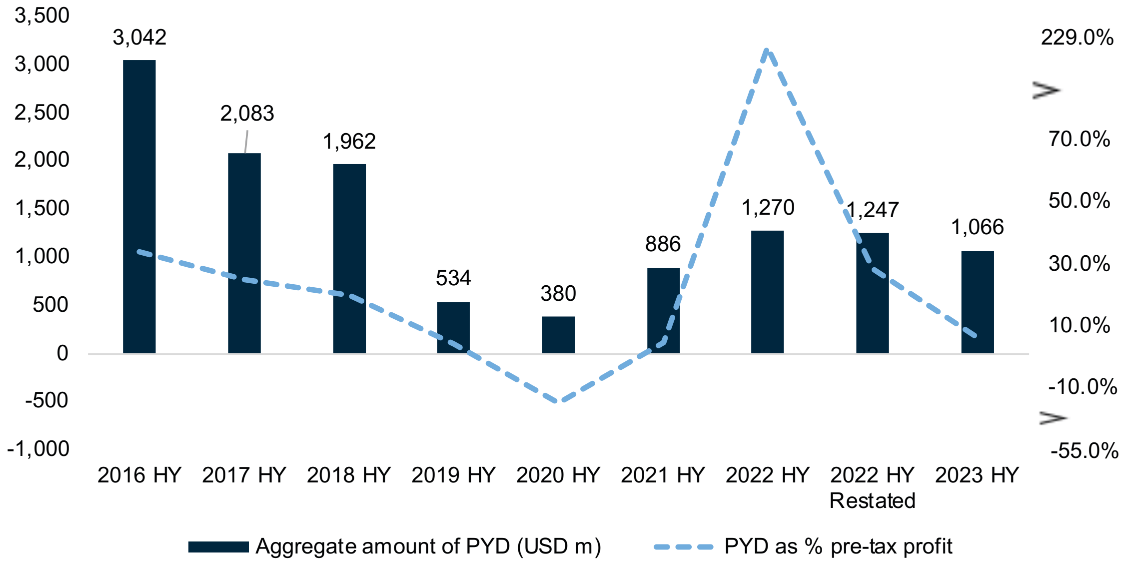


[30]Positive number indicates a favorable prior year impact.

[31]PYD 2022 HY estimated for Lancashire

PYD and its contribution to pre-tax profit reduces

Chart 19: Prior year development for the SUBSET (positive number = benefit)

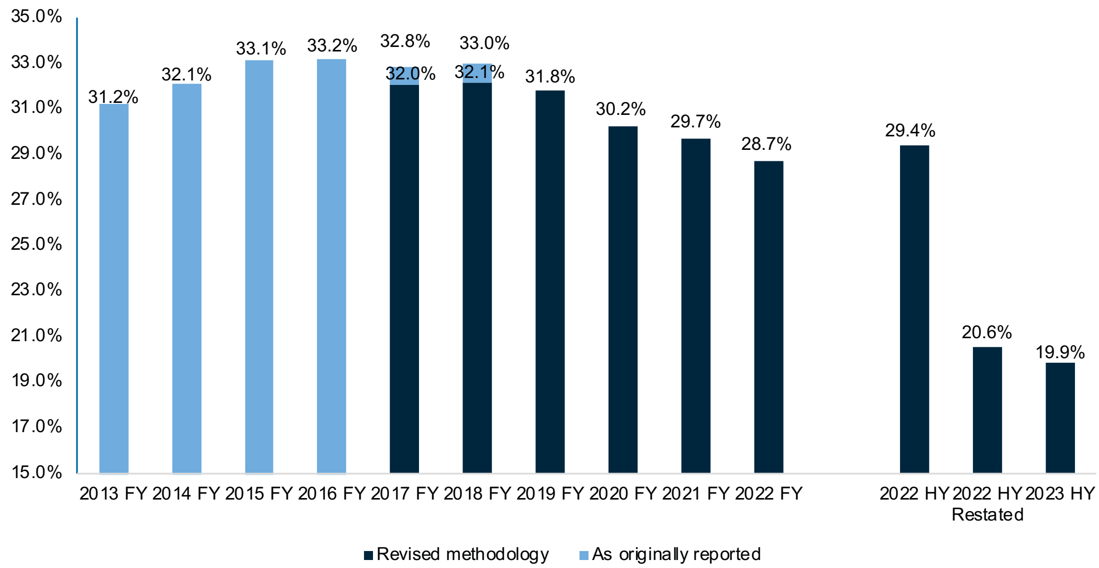


- In 2023 HY, reserve releases on average benefited companies' combined ratio by 1.5%, which is a slightly lower benefit than 1.8% in 2022 HY. The contribution of reserve releases to the combined ratio has been sitting around 1% to 2% since 2019, which is much lower than the levels achieved between 2014 and 2018. Given continued inflationary pressures we do not expect any material uplift in the near-term.
- Reserve releases reduced 15% in monetary terms in 2023 HY. However, the 2023 HY increase in pre-tax profit led to a larger decrease in the contribution of reserve releases to pre-tax profit, from 29% in 2022 HY restated to 6% in 2023 HY.
- A number of companies emphasized social inflation as a returning theme in the US as US courts are catching up on their backlog, generating a strengthening in casualty for certain firms.
- Several companies increased reserve levels in 2022 FY in response to inflation. These buffers could potentially be used to stabilize reserve releases in future periods.
- Swiss Re and WMIG Ark are the only two SUBSET firms that reported a reserve strengthening in 2023 HY. Swiss Re's strengthening was small, representing 0.3% of net earned premium, driven by casualty. WMIG Ark's strengthening represented 4.0% of net earned premium and was primarily due to three large claims in the property and marine and energy lines of business.
- Sirius Point Re reported significant favorable PYD following implementation of an LPT.

Expense ratios

Expense ratio impacted by IFRS 17 and broadly flat as premium growth largely matches expense growth

Chart 20: Weighted average expense ratio for the SUBSET[32 33]



- The introduction of IFRS 17 has led to material reduction in the expense ratio, as fixed ceding commissions are deducted from revenues rather than being recognized as an expense. This drives a material restatement in the expense ratio for 2022 HY, reducing from 29.4% to 20.6%.
- From this new basis, the expense ratio further improved 0.7ppts to 19.9%. This reduction is explained by changes to the composition of the SUBSET[34]. Assuming a consistent composition of the SUBSET, the expense ratio increased 0.2ppts (from 19.7% in 2022 HY) as the 8.7% premium growth fell slightly short of the 9.6% expense growth.
- One driver of the growth in expenses is inflation. Another, however, is the industry's continued investment in technology and digitalisation of the underwriting process. This has been partly triggered by the pandemic and should result in long-term efficiencies.

[32]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.

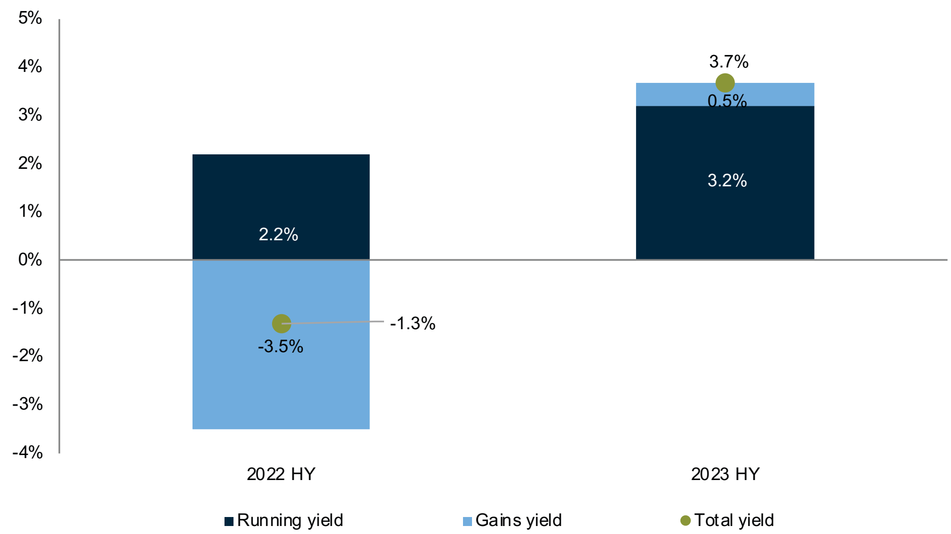
[33]Expense ratio for 2022 HY and 2023 HY estimated for Fairfax and Hannover Re and 2022 HY for SCOR.

[34]Change in SUBSET: ARGO, Alleghany, and Partner Re are removed and WMIG Ark is added.

INVESTMENT PERFORMANCE

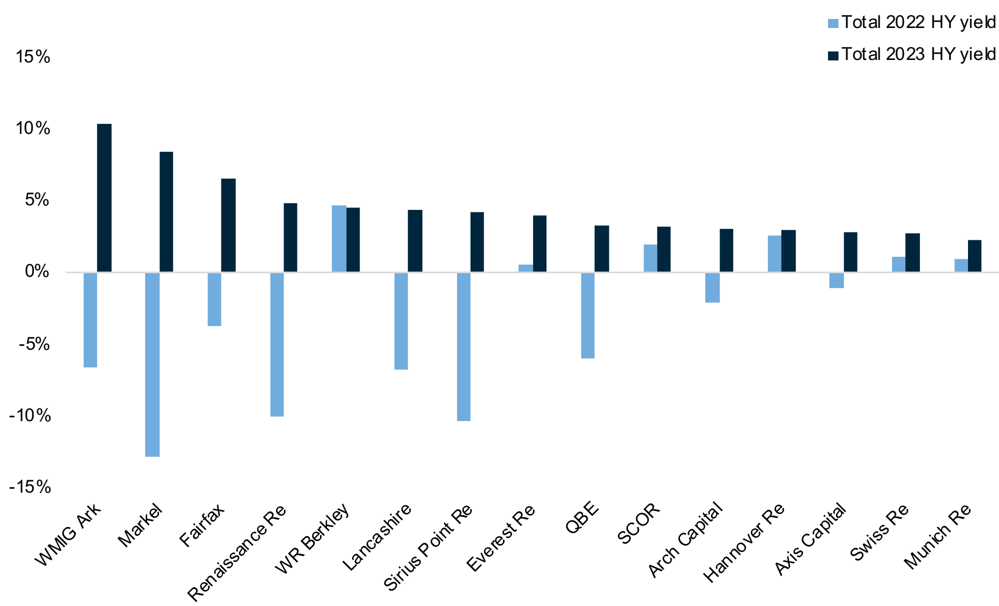
Investment income increases due to improved running yield and positive gains yield

Chart 21: Investment yield for the SUBSET[35]



Investment yield improved for almost all companies

Chart 22: Investment yield for the SUBSET constituents



- Due to improvement in both the gains yield to +0.5% (2022 HY: -3.5%) and the running yield to +3.2% (2022 HY: +2.2%), the total investment yield increased to +3.7% (2022 HY: -1.3%), contributing to the increase in the reported ROE.
- The increase in the gains yield was driven by significant unrealized investment gains due to improving equity and bond markets (which for US GAAP reporters flows through the P&L).
- Higher reinvestment rates generated the uptick in the running yield to +3.2% (2022 HY: +2.2%), however this is still 0.5-1.5ppts below the reinvestment yields. Therefore, the running yield is expected improve further when the investment portfolio has been fully reinvested at current reinvestment yields.

[35] 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 2022 HY capital position for late filers. The impact is the USD17B of 'Restatements' shown in Chart 3.

.

Index

Capital at least USD1B or total group NWP at least USD1B, and reinsurance NWP at least 10% of group NWP.

Major regional and local reinsurers

Capital at least USD250 million, or total group NWP at least USD250M, 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 USD250M.

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

2023 HY results detail for INDEX

Group 2023 HY 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 6mth	2021 HY	2022 HY	2023 HY	Δ HY/HY	2021 HY	2022 HY	2023 HY	Δ HY/HY	2021 HY	2022 HY	2023 HY	Δ HY/HY ppts
African Re	(2)	1,001	991	991													
Arch Capital	(1)	13,546	12,910	14,641	13.4%	4,553	5,319	6,852	28.8%	1,092	580	1,366	135.6%	94.5%	86.0%	83.1%	-2.9
Aspen	(2)	2,775	2,358	2,358													
AXA XL	(2)	13,139	9,334	9,334													
Axis Capital	(1)	5,831	5,061	5,442	7.5%	2,983	3,130	3,055	-2.4%	344	169	316	86.9%	95.2%	94.2%	92.4%	-1.8
CCR, France	(2)	3,545	3,507	3,507													
China Re	(2)	16,149	13,726	13,726													
Convex	(2)	2,400	2,063	2,063													
DEVK Re	(2)	2,717	2,616	2,616													
Everest Re	(1)	10,363	8,659	11,120	28.4%	5,363	5,833	7,003	20.0%	1,022	420	1,035	146.2%	92.5%	91.6%	88.2%	-3.4
Fairfax	(5)	21,316	23,019	24,619	7.0%	8,675	9,738	10,552	8.4%	2,007	557	1,984	256.5%	95.1%	84.8%	79.9%	-4.9
Fidelis	(2)	2,078	2,046	2,046													
General Re	(6)	13,927	12,739	14,689	15.3%	1,001	964	1,259	30.7%	136	333	239	-28.4%				
GIC India	(2)(3)	7,903	8,152	8,152													
Great West Lifeco	(5)	24,167	21,276	21,729	2.1%	19,968	NA	NA		1,196	1,696	811	-52.2%				
Hamilton Re	(2)	1,744	1,580	1,580													
Hannover Re	(1)(5)	17,893	14,623	14,621	0.0%	15,761	11,792	11,591	-1.7%	808	890	1,037	16.6%	96.0%	94.4%	91.7%	-2.7
Korean Re	(2)	2,149	2,305	2,305													
Lancashire	(5)	1,859	1,772	1,915	8.1%	428	396	508	28.3%	48	31	159	413.5%	80.7%	72.6%	71.4%	-1.2
MAPFRE	(5)	12,270	11,218	11,934	6.4%	10,430	9,809	10,619	8.3%	439	335	324	-3.1%				
Markel	(1)	14,718	13,128	14,239	8.5%	3,633	4,265	4,425	3.8%	1,348	-987	1,166	NM	105.0%	97.0%	92.5%	-4.5
Milli Re	(2)	304	373	373													
Munich Re	(1)(5)	40,942	34,191	35,073	2.6%	33,687	28,757	30,024	4.4%	2,048	3,341	2,624	-21.5%	94.3%	74.5%	83.5%	9.0
National Indemnity	(6)	239,470	207,276	260,558	25.7%	16,089	17,401	31,296	79.9%	6,321	3,245	4,886	50.6%				
Pacific LifeCorp	(2)	17,005	6,728	6,728													
Partner Re		8,101	6,845	7,670	12.1%	3,843	4,254	4,540	6.7%	248	-1,146	783	NM				
Peak Re	(2)	1,470	1,198	1,198													
QBE	(5)	12,144	11,601	11,967	3.2%	7,816	7,328	7,977	8.9%	441	48	400	733.3%	90.2%	94.9%	98.8%	3.9
QIC	(2)	3,081	2,869	2,869													
R&V Versicherung	(2)	2,445	2,562	2,562													
Renaissance Re		6,624	5,325	7,403	39.0%	3,336	4,029	4,460	10.7%	180	-719	755	NM	87.5%	82.4%	79.2%	-3.2
RGA	(4)	14,133	5,654	9,314	64.7%	6,012	6,385	6,722	5.3%	483	135	457	238.5%				
RSUI Indemnity	(6)	1,851	1,510	1,632	8.1%												
SCOR	(5)	10,216	7,466	7,933	6.3%	8,308	7,097	7,033	-0.9%	458	-300	542	NM	97.2%	105.7%	86.9%	-18.8
Sirius Point Re		2,503	2,083	2,268	8.9%	769	1,337	1,462	9.3%	195	-278	205	NM	94.2%	99.6%	72.5%	-27.1
Swiss Re	(1)	31,389	20,520	22,058	7.5%	23,329	24,582	25,336	3.1%	1,046	157	1,447	821.7%	94.4%	98.5%	94.7%	-3.8
Toa Re	(2)(3)	1,741	1,527	1,527													
Transatlantic Re	(6)	5,066	3,875	4,482	15.7%												
Validus RE	(9)	3,548	3,307	0													
WR Berkley	(1)	7,675	7,777	7,917	1.8%	4,262	4,999	5,386	7.8%	467	770	650	-15.5%	88.0%	88.6%	81.3%	-7.3
WMIG Ark			4,119	4,311	4.7%		841	1,096	30.4%		-136	199	NM		93.1%	89.3%	-3.8
Index aggregate	**(7)(8)**	**601,198**	**509,891**	**581,473**	**14.0%**	**180,247**	**158,254**	**181,197**	**14.5%**	**20,324**	**9,140**	**22,146**	**142.3%**				
Subset aggregate	**(7)(8)**	**197,019**	**172,254**	**185,527**	**7.7%**	**122,904**	**119,442**	**126,760**	**6.1%**	**11,503**	**4,542**	**13,886**	**205.8%**	**94.0%**	**89.2%**	**87.6%**	**-1.6**

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 2023 HY is based on 2022 FY disclosure.

(3) Companies which have a March 31 financial year-end. Data for the year ended March 31 2023 is included in the column headed FY 2022 (and similar for prior years), and 2023 HY data is also based on year-end March 31, 2023, disclosure.

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

(5) 2022 HY and 2023 HY figures for net premiums are net insurance service revenue.

(6) Numbers are sourced from unconsolidated financial statements.

(7) 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.

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

(9) Acquired by Renaissance Re

.

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.**

AJG.com/uk

Gallagher Re