




Solvency II: Navigating evolving and emerging risks

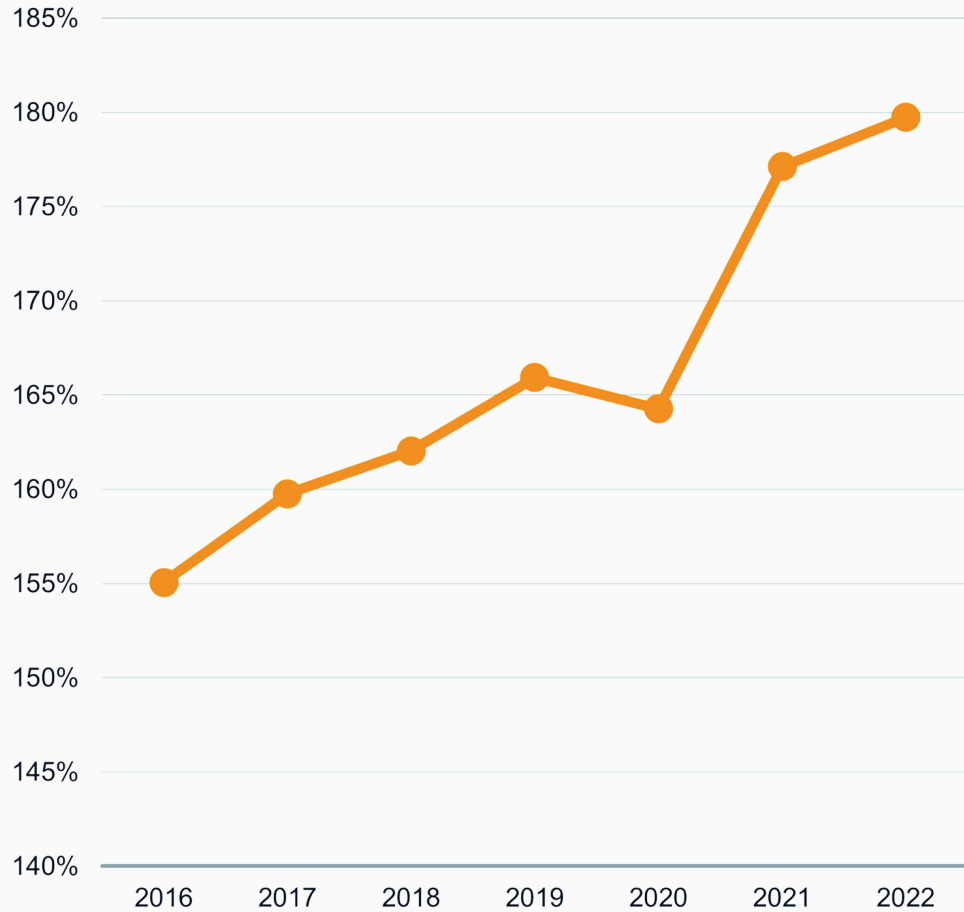
**LCP's seventh annual review
of SFCR reporting by 100 of
the largest non-life insurers
in the UK and Ireland**

September 2023



Key highlights from our report

Aggregate eligible own funds ratio



Total eligible own funds increased from **£97bn** at the end of 2021 to **£101bn** at the end of 2022



Inflation mentioned by **96%** of firms



Russia Ukraine conflict mentioned by **85%** of firms



Cyber risk mentioned by **76%** of firms



More discussion of people risk and AI risks than previous years

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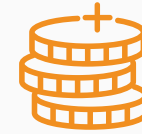
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Our findings

Our seventh annual review of the Solvency II public reporting for 100 of the top UK and Irish non-life insurers provides insights into the financial strength of the insurance industry, including the impact of inflation, the Russian invasion of Ukraine, and other key emerging risks.

Our approach

We have analysed the Solvency and Financial Condition Reports (SFCRs) and public Quantitative Reporting Templates (QRTs), where insurers and reinsurers are required to disclose key metrics relating to financial robustness and details of how they manage their businesses.

In line with our previous reviews, we considered:

- The Solvency II balance sheets and regulatory capital positions of insurers.
- The key risks to which insurers are exposed.
- Market-wide observations that may help with benchmarking insurers against their peers.
- Key changes over the last year and emerging trends.

Firms should focus on more meaningful scenarios, set up internal working groups to refine these and dive a little deeper into overlooked risks and potential second order effects.

Katie Saunders, LCP

Financial strength

The financial strength of the market remains strong, with the average eligible own funds ratio across our sample being 180%.

Total eligible own funds across our sample have steadily increased over the last two years, from £90bn as at 2020 year-end to £101bn as at 2022 year-end, despite the total SCR decreasing slightly for the second year running.

Total gross written premium (GWP) has increased 14% since last year to £148bn at the 2022 year-end. This increase is likely due to hardening rates across many lines of business, driven by persistent high inflation.

Recommendations

Based on our analysis, we have the following recommendations for firms:

- Assess what's unsaid in your SCFR – If a risk is omitted, ensure there is a valid reason. Dive a little deeper into overlooked risks and anticipate potential second order effects.
- Focus on more meaningful scenarios – In particular for inflation and geopolitical risks. Move beyond generic sensitivities and, if necessary, set up internal working groups to refine these scenarios.
- Get ready for Solvency II changes – Be aware of upcoming changes for UK and Irish insurers and their implications, and report on these impacts in the next round of disclosures.

Our findings (continued)

Ukraine

The Russian invasion of Ukraine in February 2022 was a major world event and, as well as the humanitarian cost, also affected insurance companies.

There are two main sources of risk arising from the conflict:

- immediate impact on those insurers that have exposures in the area
- downstream effects as a result of the impact on the economy, supply chain disruption and heightened cyber threat.

Overall, 85% of firms mentioned the conflict, however only 9% described their approach to quantifying the risk.

There has been improved discussion of the downstream effects of the conflict since last year, with 58% of firms discussing the economic impacts of the conflict and 34% specifically mentioning risks due to supply chain issues.

Inflation

Inflation has become one of the biggest risks to economic stability: in the UK price inflation exceeded 11%, and in Ireland it exceeded 9% in 2022. This was exacerbated by the Russian invasion of Ukraine that drove up energy and commodity prices.

While 96% of firms mentioned inflation within their discussion of risk, fewer than half discussed their approach to quantifying the risk to their business. Of those that did, the majority mentioned using stress, sensitivity or scenario testing to quantify the risk.

This disparity between acknowledging inflation as a risk and actively quantifying its impact reveals a potential oversight in risk management strategies.

In particular, the standard formula provides a generalised approach and may not be nuanced enough to capture the complexities introduced by inflation, especially in the current rapidly changing economic environment. For firms using this approach to calculate their capital requirements, there is a risk they may not be adequately quantifying their exposures to inflation, potentially leading to understating capital needs.

Climate change

Climate change is increasingly acknowledged within the insurance sector, with 79% of our sampled insurers mentioning it in their 2022 SFCRs. However, explicit climate change commitments have been declared by only a third of these insurers.

Some firms are using metrics such as Climate Value at Risk to quantify their exposure to climate risk. Meanwhile, others have completed corporate sustainability assessments to frame their sustainability strategies. Although TCFD mentions are scarce, there's an upward trend towards setting up internal climate change working groups and conducting scenario and sensitivity testing to quantify climate risk.

Climate Value at Risk (VaR) is a measure to estimate the potential financial losses that a company could incur as a result of climate change.

Our findings (continued)

Other key risks

Cyber risk is another prevalent concern, with 76% of firms acknowledging it in their reports, and some drawing links to geopolitical tensions, specifically the Russia Ukraine conflict.

As the digital landscape evolves, insurers are observing heightened exposure to risks such as data theft, conduct breaches, and IT system failures. The rapid pace of AI and digital advancements is driving firms both to identify potential risks and to seize emerging opportunities to stay competitive.

Another emerging risk we have seen recognised this year is **people risk**. This highlights the amplified challenges in attracting and retaining talent in the current market.

Emerging risks include nanotechnology, deep fakes, blockchain, and the exploitation of big data, as well as people risk.

Solvency II and Solvency UK

The Bank of England's Prudential Regulation Authority (PRA) has proposed several changes to the supervisory reporting requirements for Solvency II firms. The primary aim is to improve efficiency of reporting and the increase the relevance of the data reported.

Notable changes include simplifying some of the QRTs, removal of the requirement for all Solvency II firms to submit the regular supervisory report (RSR) and a move to principles-based documentation for internal models.

Changes are also anticipated to Solvency II in Europe over the next few years; however, it is expected these changes will take longer to be agreed and rolled out.



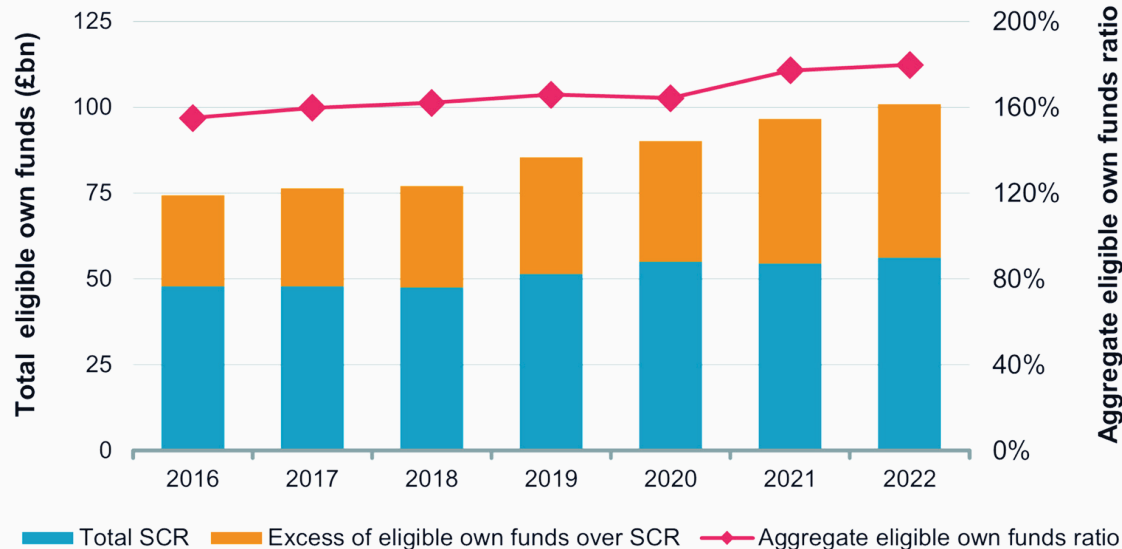
Financial overview

Financial strength of the market on 31 December 2022

Overall, the market has remained financially strong during 2022. The eligible own funds ratio - defined as eligible own funds divided by the Solvency Capital Requirement (SCR) - is an important measure for considering firms' solvency and financial strength. It broadly represents the number of times an insurer can cover its regulatory capital with the net assets on the Solvency II balance sheet.

We have considered the eligible own funds ratios for our sample of 100 insurers aggregated as a whole, as well as for each insurer individually.

Aggregate eligible own funds ratio across the market



In aggregate

Total eligible own funds have steadily increased over the last two years, from £90bn as at 2020 year-end to £101bn as at 2022 year-end. Conversely, the total SCR aggregated across our sample has decreased slightly for the second year running. As a result, the 2022 aggregate eligible own funds ratio of 180% is at its highest level since Solvency II came into force. We comment on some of the major changes below.

For each insurer

The average eligible own funds ratio of our sample of 100 insurers was 223% as at 2022 year-end compared to 201% as at the previous year end. This increase is driven by the increase in eligible own funds ratio for **Marine Insurance**. This ratio is the highest since 2018 and follows three years of consecutive decreases in the average ratio.

The increase in average ratio is in line with the increase in the overall aggregate ratio.

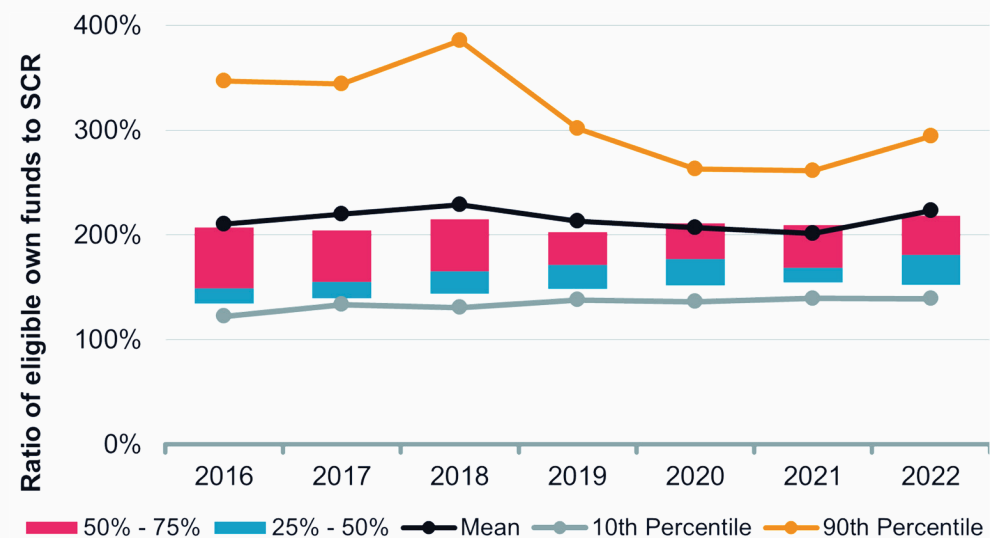
58% of insurers saw an increase in their eligible own funds ratio between the 2021 and 2022 year-ends, whilst 42% saw a decrease.



Financial overview (continued)

The following chart shows the range of eligible own funds ratios for our sample at each year end since 2016.

Range of eligible own funds ratios at each year end



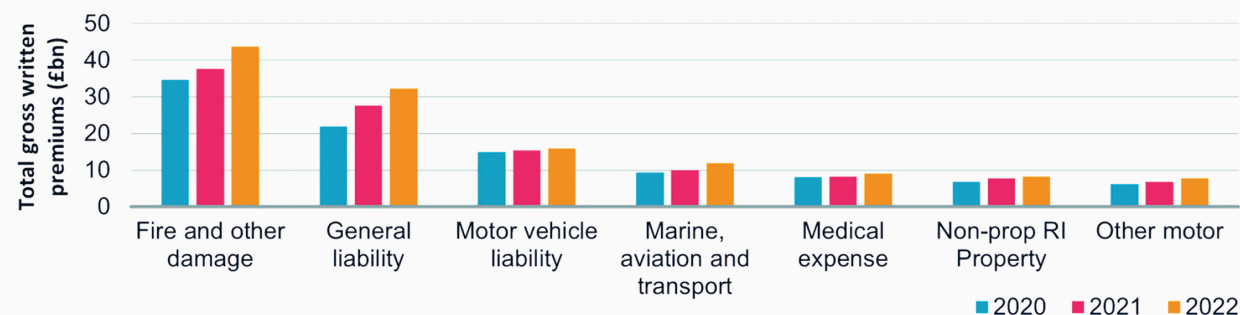
The median eligible own funds ratio, which is less influenced by extreme values than the mean, has increased this year to 180%, which is the highest since Solvency II reporting began. This change is less about individual shifts and more a shared industry trend.

The range of eligible own funds ratios between the 10th and 90th percentiles for our sample increased slightly from the 2021 year-end, although it has still narrowed considerably since 2016.

Breakdown of gross written premium by SII line of business

The following chart shows the breakdown of the total gross written premium (GWP) for our sample of 100 insurers for the largest Solvency II lines of business at the last three year-ends.

Gross written premium (GWP) by SII LoB



Total GWP has increased 14% since last year to £148bn at the 2022 year-end. This increase is likely due to hardening rates across many lines of business, driven by persistent high inflation.

All major lines have seen strong growth. Marine, aviation and transport has had seen growth of 19%. This was driven by **Lloyd's** which wrote nearly 25% more GWP in this class in 2022 compared to 2021.

Among the major lines (ie those shown in the chart above), motor vehicle liability saw the smallest growth, less than 4%. This follows a 9% reduction in 2020 and a modest 3% rise in 2021. This business line's fluctuations often reflect large shifts by individual insurers. For instance, a few insurers like **Aviva International** and **Aioi Nissay Dowa** expanded their portfolios significantly, by over 95% and nearly 30% respectively. Others downsized considerably – **Berkshire Hathaway** cut their motor premiums to one-third of their 2021 levels, while **Allianz Re** shrunk by almost a quarter.

Russian invasion of Ukraine

In February 2022, Russia invaded Ukraine and commenced a military operation that is still ongoing more than a year on. This has created a humanitarian crisis and seen millions of refugees displaced inside Ukraine, and in neighbouring countries. The US, UK and EU have imposed sanctions on Russia, and exports from Ukraine and Russia have been severely reduced.

85% of firms mentioned the conflict in their 2022 year-end SFCRs. The impacts of this conflict, while not yet fully grasped, are now better understood than a year ago.

To put it into perspective, when the conflict began in February 2022, as we reported last year, many 2021 year-end SFCRs were still in draft stages. Consequently, just over three-quarters of these firms acknowledged the conflict, but only a handful delved into its expected impacts on underwriting and investment.

There are two main sources of risk arising from the conflict:

- immediate impact on those insurers that have exposures in the area
- downstream effects as a result of the impact on the economy, supply chain disruption and heightened cyber threat.

Overall, 85% of firms mentioned the conflict and 30% of firms mentioned that they have direct exposure to the region.

Some firms who have direct exposure have assessed in detail the impact of the conflict on their lines of business after reviewing their portfolio.

Fidelis has developed detailed reserving models to address the impact of the conflict, seeking input from its pricing, legal, underwriting and claims teams, whilst also seeking independent input from external actuaries.

For those firms who do not have direct exposure to the conflict, we saw an increase in the number of firms discussing downstream effects of the conflict, with 58% of firms discussing the economic impacts of the conflict and 34% specifically mentioning risks due to supply chain issues.

We highlighted **IGI** in our previous survey as a good example of considering in detail individual secondary risks. This remains one of the best examples of clearly setting out the potential effect on each risk area, supporting the statement that “*IGI UK has no material direct business and investment exposures to Ukraine and Russia*”.



85% of firms mention the invasion



Russian invasion of Ukraine (continued)

Another example is from **SCOR UK** who mentioned the following potential risks and secondary effects:

- Downwards pressures on economic growth
- Adverse interest rate and inflation developments
- International sanctions and other political and social uncertainties
- Supply chain issues
- Currency impacts
- The uncertainty related to the magnitude and duration of the conflict.

Source: SCOR UK SFCR as at 31 December 2022

It has been good to see that more firms explicitly mention the second order effects of the Russia Ukraine conflict. However, we believe that many firms could increase the quality of the documentation of these risks. In particular, very few firms mentioned using stress and scenario testing to quantify these risks.

Over the next year we expect the consideration of indirect risks, and the interdependencies between them, will only become more important as firms undertake increased horizon scanning to understand other potential geopolitical risks.

Matthew Pearlman, LCP



Inflation

In the 12 months to December 2022, the UK Consumer Price Index (CPI) increased significantly, rising by 10.5%. In the same period, Ireland and the wider EU faced inflation rates of 8.2% and 9.2% respectively. Since the start of 2023, there have been signs of inflation slowing, with UK CPI inflation falling to 6.8% in the 12 months to July, while Ireland and the wider EU inflation has fallen to 5.8% and 5.1% respectively.

Inflation remains a key risk for insurers, with 96% of firms mentioning inflation in their SFCRs (this is up from 77% last year). Over 2022, the persistence of high inflation has compounded insurers' concerns, particularly in the UK where inflation has consistently outpaced many other developed economies.

Insurers have faced increased challenges in accurately assessing and projecting claims costs. This is especially true for lines of business that are exposed to the rising prices of medical treatments, repair services, and material costs.

For example, **Soteria** noted that there has been an "increase in claims costs as the cost of vehicle parts and building materials has increased" and that "the observed impact of wage increases on bodily injury claims has been relatively low to date, but is expected to continue to have an impact in 2023,

particularly if current widespread industrial action leads to further wage increases in the public sector".

The threat of potential increases in social inflation adds another layer of uncertainty to the inflation landscape. As does the risk that "heightened inflationary expectations could lead to a wage-price spiral, resulting in a prolonged period of high inflation and low growth", as noted by **LV=** in its SFCR.

Aviva commented in its SFCR that "the recent period of elevated claims inflation and supply chain disruption has distorted historic development patterns", while **Chaucer** commented that "existing reserving methods do not sufficiently cope with a hump in calendar year inflation ie the inflationary environment we are in".

With many stakeholders paying closer attention to the impact on insurers from inflation, many firms have responded by quantifying the impact of inflation on their reserves and overall solvency position.

Of the insurers surveyed, 44% discussed their approach to quantifying the risk to their business, and 35% have disclosed the impact of inflation with either stress, sensitivity or scenario testing.



of firms mention inflation



of firms disclosed the impact of inflation



Inflation (continued)

Aetna was one of the firms to disclose its inflation stress tests. It reported that:

- expense inflation would have to be 18% to 20% pa higher than its current forecast assumption in each of 2023 and 2024 in order to breach its target solvency ratio of 150% at December 2024; and
- medical cost inflation would have to be 18% higher than its current reserving estimate for incurred claims in H2 2022 and 2023 in order to breach its target solvency ratio at December 2023.

AIG UK also reported the results of its stress tests for inflation in its SFCR. It introduced the following 4 new stress tests for 2023, aimed at identifying impacts of different potential future pathways of inflation on its solvency ratio:

- Stagflation
- Persistent inflation
- Transient inflation (inflation reverting to 1-2% above expected level)
- Transient inflation (inflation reverting to expected level).

The overall impacts of each scenario from the baseline solvency ratio was a decrease of 21% - 35%.



Climate change

From our sample of 100 insurers, 79% mentioned climate change, a small increase from 77% in our previous report. It's good to see this number continues to increase, albeit marginally, however, we would still expect to see a higher proportion disclosing their climate change considerations in their SFCRs given the increasing public and regulatory interest.

Meanwhile, a third of insurers in our sample (34%) explicitly stated climate change commitments they have made. Those that did included **Aviva International** stating its ambition to become a Net Zero carbon company by 2040 and **Covea** outlining a desire to align itself with the ABI's Climate Change Roadmap, which includes targets to be net carbon neutral by 2050.

Governance and risk management

A few firms have described their measures to monitor climate risk, including the explicit metrics used to quantify the risk.

- **Aviva** calculates a Climate Value at Risk (VaR) against the Intergovernmental Panel on Climate Change scenarios to assess the climate-related risks and opportunities under different emission projections and associated temperature pathways.
- **Irish Public Bodies** completed a corporate sustainability assessment with S&P Global. It uses the resulting environmental, social and governance evaluation score as a baseline metric to develop its board approved sustainability strategy.
- **Lancashire** monitors the risk to its assets using a Climate VaR. It also notes the importance of identifying and assessing climate-related risks as part of the day to day underwriting process and using underwriting strategy days to anticipate future sources of risk.

Only 9% of firms mentioned the Task Force on Climate-related Financial Disclosures (TCFD) within their SFCRs (compared to 7% last year). The TCFD is an initiative established by the Financial Stability Board to develop consistent climate-related financial risk disclosures. It stems from the increasing need for transparency in how organizations are addressing climate-related risks and opportunities. Reporting of climate-related risks and opportunities in annual reports became mandatory for the largest UK companies (including general insurance companies) from 6 April 2022.

In March 2023, the CBI issued clear guidance, emphasising its expectations of a significant transformation in how insurers address climate change risks. The guidelines particularly highlight the need for insurers, regardless of their size, to evaluate and manage their exposure to climate change risks and assess the influence they exert on the environment through their business operations and investments. Given this latest guidance, we expect to see an increase in both the number of firms mentioning climate change, and in the quality of discussion in SFCRs, at the 2023 year-end, particularly for Irish insurers.

From our sample of 100 insurers, 79% mentioned climate change, a small increase from 77% in our previous report. It's good to see this number continues to increase.

Climate change (continued)

Internal working groups

While direct mentions of TCFD may be limited, we are, however, seeing a positive trend in more insurers setting up internal climate change working groups and involving subject matter experts, especially in the last year.

AXA XL has established a Climate Change Risk & Stress Testing Working Group to ensure that information is relayed across risk types and has been developing stress tests to better understand long-term implications of climate risk, with input from the Division Science & Natural Perils team.

To better understand climate-related risk **FM Insurance** appointed more than 125 researchers to evaluate the potential for natural and technological catastrophes, to develop innovative methods and tools to predict and prevent property damage, and to provide technically sound and cost-effective loss prevention engineering solutions to clients.

Scenario and sensitivity testing

Within their SFCRs, 37% of insurers have detailed their approach to quantifying climate risk and 31% explicitly stated the use of scenario and sensitivity testing to quantify the impact of physical climate risk.

- **Lancashire** disclosed its estimated net loss for a range of 1 in 100 year and 1 in 250 year weather-related scenarios, split by peril and region.
- **AIG UK** provided the impact of a two separate weather event stresses on its solvency position (EU windstorm and UK flood).
- **RSA** participated in the PRA insurance stress test in 2022 to assess its exposure to catastrophic weather events.

Within their SFCRs, 37% of insurers have detailed their approach to quantifying climate risk and 31% explicitly stated the use of scenario and sensitivity testing to quantify the impact of physical climate risk.



Other key risks

Cyber risk

76% of firms referred to cyber risk in their SFCR. While most of these relate to cyber as a key ongoing operational risk, some also made a particular mention of cyber risk in relation to the Russian invasion of Ukraine.

- **Beazley** reported on the importance of using its deterministic realistic disaster scenarios to monitor cyber risk exposure monthly on its portfolio and test the potential application of different policy wordings.
- **LV=** highlighted that the threat of external cyber-attacks remained heightened during 2022, and as a result it communicated to customers and internally to improve awareness of the threat.
- **TransRe**, an international reinsurer, noticed a “greater effort by several leading [insurers] to address the issue of systemic risk with tighter wordings”. Whilst it was anticipating an escalation in cyber-attacks as a result of the Russian invasion of Ukraine, which have not yet materialised, it has highlighted the need to remain vigilant.
- **VHI** specifically highlighted that its stress tests concluded that a cyber-attack scenario would result in a 27% reduction in its solvency cover.

AI and digitisation

The evolving digital landscape in which insurers operate presents its own risks that are beginning to be acknowledged by insurers in their SFCRs.

- **Aviva** noted that its transition towards more digital and automated customer interaction, and its own use of advanced data analytics, have increased its exposure to risks such as data theft, conduct breaches and IT systems failure. These risks are only set to continue escalating in the foreseeable future.
- **Direct Line** acknowledged that falling behind in digital advancements could pose a significant threat to its competitive standing. It is therefore initiating various innovation programmes, and is also in the process of embedding a data ethics framework within the pricing and underwriting team’s policies and procedures.

However, few firms have highlighted the disruptive impact that AI could have on their business, or the opportunities it could present to the industry. Given the rapid changes in this space, and the need to keep up with both customer expectations and competitors, we anticipate that AI risks will become an increasing priority for insurers.

Firms have also flagged other emerging risks, including nanotechnology, deep fakes, blockchain and big data.

9% of firms highlighted either AI, digitisation or technological developments as an emerging risk.

People risk

Another emerging theme identified by our analysis that has not been apparent in SFCRs in the past, is people risk. In particular, the current market has amplified the challenges tied to both attracting and retaining employees, which is seeing people risk move up the agenda for both HR and risk teams.

Bupa has improved benefits, base pay, investment in learning and wellbeing to attract and retain highly engaged employees, with the aim of ensuring that workforce and skills availability does not affect its operations and growth ambitions. It performs a workforce risk scenario annually, demonstrating the impact of these challenges.

Hamilton acknowledged in its SFCR the risk of both recruiting and retaining suitable talent, which it manages and monitors through analysis of turnover and staff tenure.

We expect to see more insurers highlighting people risk explicitly in the future. The current approach of thinking about it as a subset of operational risk, risks overlooking how material it may be and the knock-on effects that it could have on other risk areas.

Solvency UK

On 29 June 2023 the PRA published CP12/23, which sets out significant proposed reforms to the Solvency II regime as it will apply in the UK. The consultation paper, which was open to industry responses over summer 2023, gives the clearest indication yet of how Solvency UK will operate, and how it will diverge from EU rules. The PRA expects to transition to the new regime on 31 December 2024. The key points for general insurers to consider from the consultation will differ to some extent by the “type” of firm. Below are some of the key considerations for a range of general insurance firms.

Insurer type	Key points to note
All	<ul style="list-style-type: none">Removing the requirement to produce the regular supervisory report (RSR)Changes to QRTs to streamline submissions
Internal model users / potential applicants	<ul style="list-style-type: none">Documentation becomes principles-based and not prescriptiveP&L attribution removed and replaced with more comprehensive Analysis of ChangeAbility to give approval to models with residual model limitations. Previously the PRA would have had to reject these modelsSystem of capital add-ons or qualitative “requirement safeguards” where firms have minor model limitations
Branches	<ul style="list-style-type: none">Removal of branch SCR and risk margin calcs, and changes to reporting templates (overall simplification)
Groups	<ul style="list-style-type: none">Simplification of reporting requirementsAdditional flexibility regarding Group SCR calcs, including temporary permission to combine separate capital models (eg internal model and standard formula)
Small insurers, mutuals, and start ups	<ul style="list-style-type: none">GWP threshold for inclusion in Solvency UK rising from €5m to £15m, with the gross TP threshold rising from €25m to £50m. Many (more than half) of the firms operating near the thresholds are mutuals, so these proposals will be of particular relevance to themIf you have not breached these caps in last 3 years and don’t expect to in the next 5, then you can follow NDF (non-directive firm) rules instead if you chooseNew mobilisation regime to allow new entrants to obtain authorisation with lower minimum MCR (£1m) for up to a year, but with significant restrictions on writing business

Simplification of reporting requirements

There are a number of changes proposed that may simplify reporting requirements for firms.

- Regular supervisory reports scrapped: The PRA intends to remove the requirement for firms to produce RSRs. This will benefit all firms.
- Branch reporting streamlined: The PRA plans to remove redundant reporting requirements linked to branch SCRs, risk margins and asset localisation. This is a significant reduction with 20+ templates being dropped. Instead, branches will provide a 3-yearly report on their parent’s resolution plans. Branches previously submitted this via the RSR.
- Group SCR calculation streamlined: The PRA intends to move to a single template for group SCR reporting. Currently there are three, depending on the calculation method. These changes would also capture the additional internal model flexibility that the PRA intends to grant groups.
- QRT in-template changes: The PRA is making changes to a range of other QRTs to simplify its own data ingestion, and to align with other proposed regulatory changes. Insurers will need to ensure that their submission processes are adapted to cover the new forms.

There was no noticeable increase in firms mentioning the upcoming Solvency UK changes in their 2022 SFCR, which is no surprise given these updates have all come after most 2022 SFCR were published.

However, we expect that insurers will now be considering the impact of the changes ahead of their 2023 year-end reporting. Firms should also consider disclosing the impact of these changes and any potential future changes to the calculation of their SCR and TPs in the next round of SFCRs.

Detailed analysis of solvency and financial strength

Financial strength by insurer type

The average eligible own funds ratio across our sample at the 2022 year-end was 223%.

We have considered how eligible own funds ratios vary between different insurer types.

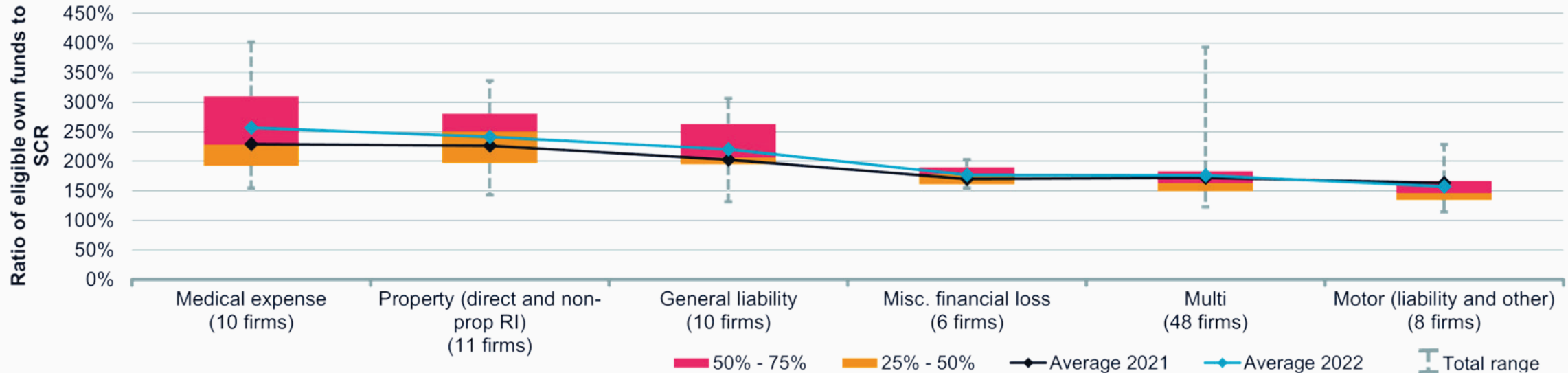
For this purpose, we have allocated insurers to a Solvency II line of business if more than 50% of their 2022 gross written premium was in that line, otherwise they are classified as “multi-line”.

In the graph below, we have excluded insurer types with only a small number of firms in the group as these results can be heavily skewed by individual insurers.

Motor (liability and other) insurers typically have the lowest eligible own funds ratios. They also have a smaller range of eligible own funds ratios between firms relative to most other insurer types.

Since the 2021 year-end, all types of insurer saw an increase in eligible own funds ratios, other than motor (liability and other) insurers who saw a reduction of 6%. The largest increase in eligible own funds ratios was for Medical expense insurers who saw an increase of 28% on average. This was driven by **Aetna** and **Bupa Global** who saw increases of 157% and 109% respectively.

Range of eligible own funds ratios by insurer types

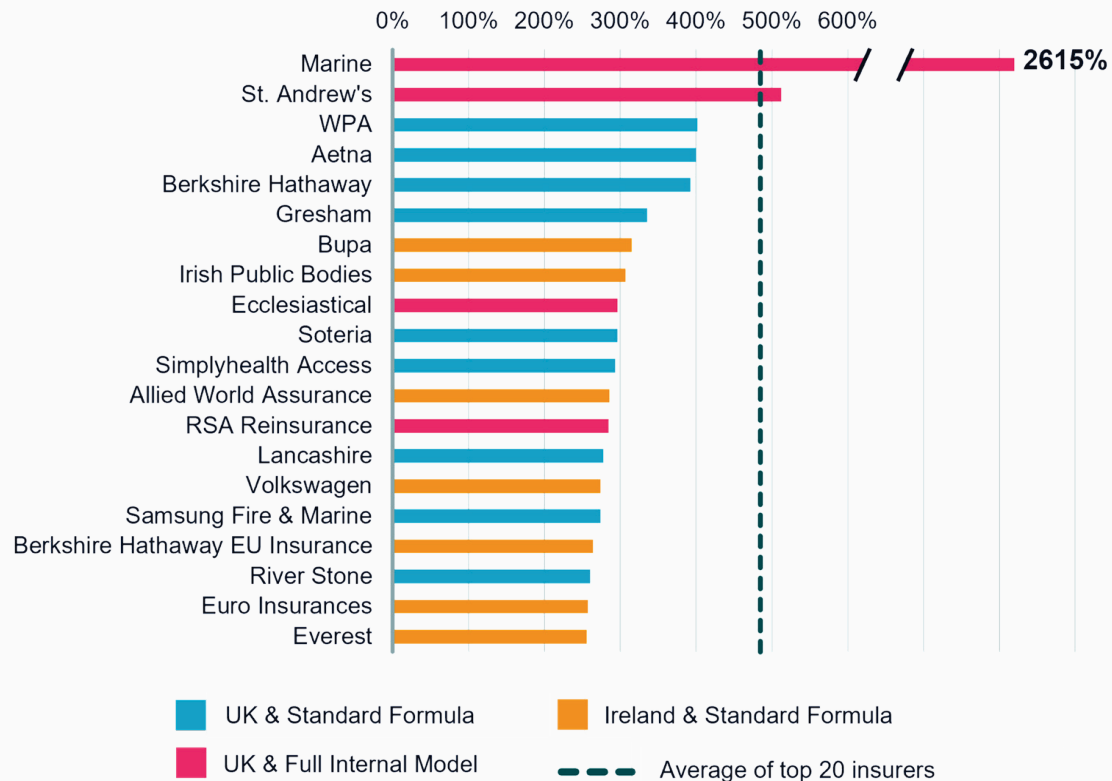


Detailed analysis of solvency and financial strength (continued)

Top twenty insurers by eligible own funds ratio

The following chart shows the top twenty firms by eligible own funds ratio as at their 2022 year-ends

Ratio of eligible own funds to SCR (%)



10 of these firms were also in the top twenty as at 2021 year-end.

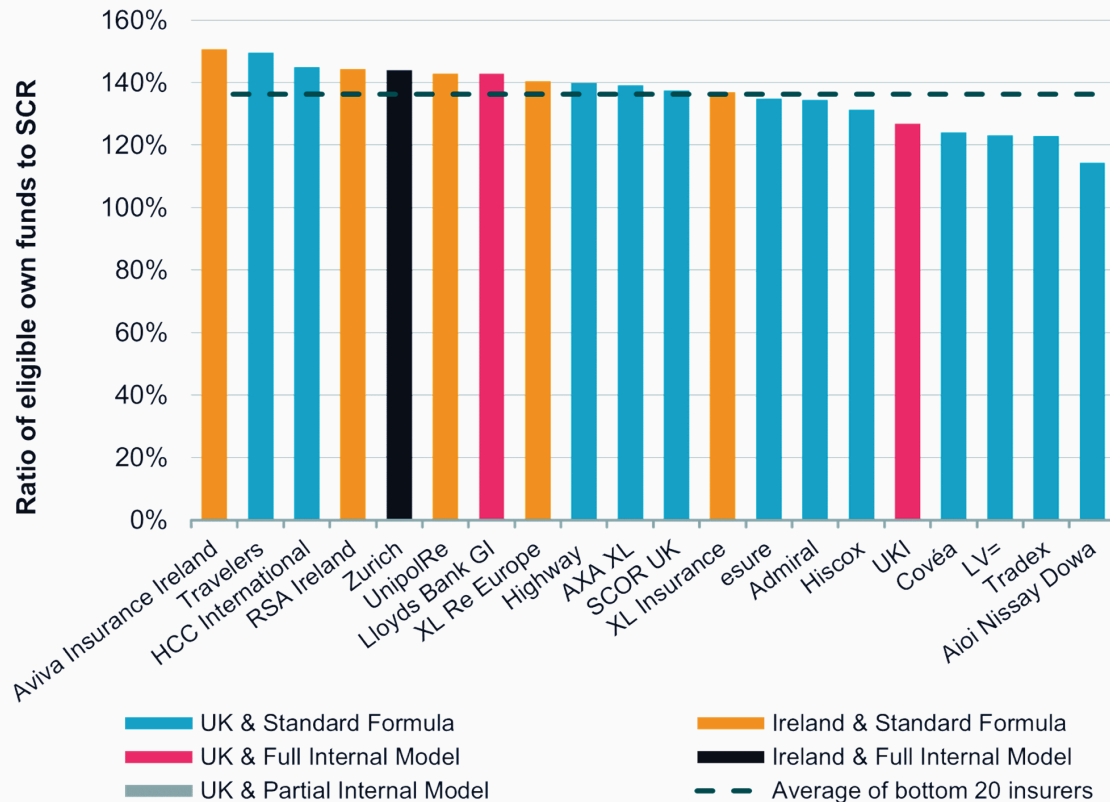
The average eligible own funds ratio for the top twenty firms is 430%, materially higher than the average of 223% across the whole sample, and also higher than the average for the top twenty last year end of 375%. This is largely driven by the ratio for **Marine Insurance** (a subsidiary of RSA Insurance Group) of 2615%. Excluding **Marine Insurance**, the average ratio for the remaining 19 firms is 315%. Some of the more notable changes were:

- **Markel International** has fallen out of the top twenty, with a reduction in its eligible own funds ratio from 266% to 162%. This movement was driven by a significant increase in its SCR from £227.2m to £385.9m. Markel attribute the increase in SCR to several factors including
 - an increase in reserves due to continuing growth;
 - a strengthened view on dependencies and a reduction in diversification; and
 - increases in reinsurance costs and a reduction in recoveries for extreme events due to reduced levels of protection.
- **Marine Insurance** has the highest eligible own funds ratio of all insurers in our sample at 2615%, over five times larger than that of the second highest firm **St. Andrew's**. It also had the highest eligible own funds ratio at 2021 year-end of 1569%.
- A new entry into the top 20 is **St. Andrew's** which now has the second highest eligible own funds ratio. The ratio increased significantly since 2021 from 152% to 513% driven by a reduction in SCR from £97m as at 2021 year-end to £30m as at 2022 year-end. This reduction in SCR is primarily driven by putting its household book into run-off.

Detailed analysis of solvency and financial strength (continued)

Bottom twenty insurers by eligible own funds ratio

The following chart shows the bottom twenty firms by eligible own funds ratio as at their 2022 year-end.



11 of these insurers are new entrants to the bottom twenty firms this year although some of these are due to small movements in the eligible own funds ratio.

Importantly, none of these has an eligible own funds ratio below 100%. In other words, none of the insurers included in this report have experienced a capital shortfall in 2022.

The average eligible own funds ratio for the bottom twenty insurers has increased slightly since 2021 from 132% to 136%. Some of the more notable changes were:

- Amtrust Europe** was in the bottom twenty last year, but their eligible own funds ratio has increased by 40% to 185% in 2022. This increase in eligible own funds is due to a reduction in the SCR driven by:
 - A reinsurance arrangement entered into during the year with AmTrust International, covering business underwritten in 2019 and prior years and their run-off book. This led to a significant reduction to premium and reserve risk.
 - A reduction in debt, which led to a reduction in counterparty default risk.
- esure** saw the largest movement in eligible own funds ratio from the previous year for firms currently in the bottom 20. In 2021 esure had a ratio of 178%. This ratio dropped to 135% as at the 2022 year-end. This decrease in eligible own funds ratio is due to the continued investment into the firm's Blueprint transformation programme. esure also note that the solo entity has received a capital injection from esure Group following the year-end. Had this capital injection occurred before year-end they estimate the eligible own funds ratio would be 142%.
- A new firm in our sample this year, **Aioi Nissay Dowa**, has the lowest eligible own funds ratio. It has fallen from 155% (as reported) as at the 2021 year-end to 114% as at the 2022 year-end. This is due to "the Company's trading performance and because of falls in the market value of the Company's fixed income portfolio". It has resulted in an eligible own funds ratio that falls below the directors' targets but, is still above the SCR.

Detailed analysis of solvency and financial strength (continued)

Ancillary own funds and Tier 2 funds

Tier 2 funds are assets of lower quality and there are restrictions on how much of this type of capital can be counted as eligible own funds. They are typically cumulative preference shares and subordinated liabilities.

Ancillary own funds (AOF) are a form of Tier 2 capital under Solvency II regulations. They are effectively unconditional capital commitments, but that are not paid up or called up when issued. These funds must be callable on demand, and create Tier 1 basic own funds (BOF) capital when paid-up or called-up at a future point in time. They also must be approved by the relevant supervisory authority to be classified as Tier 2 capital on the Solvency II balance sheet.

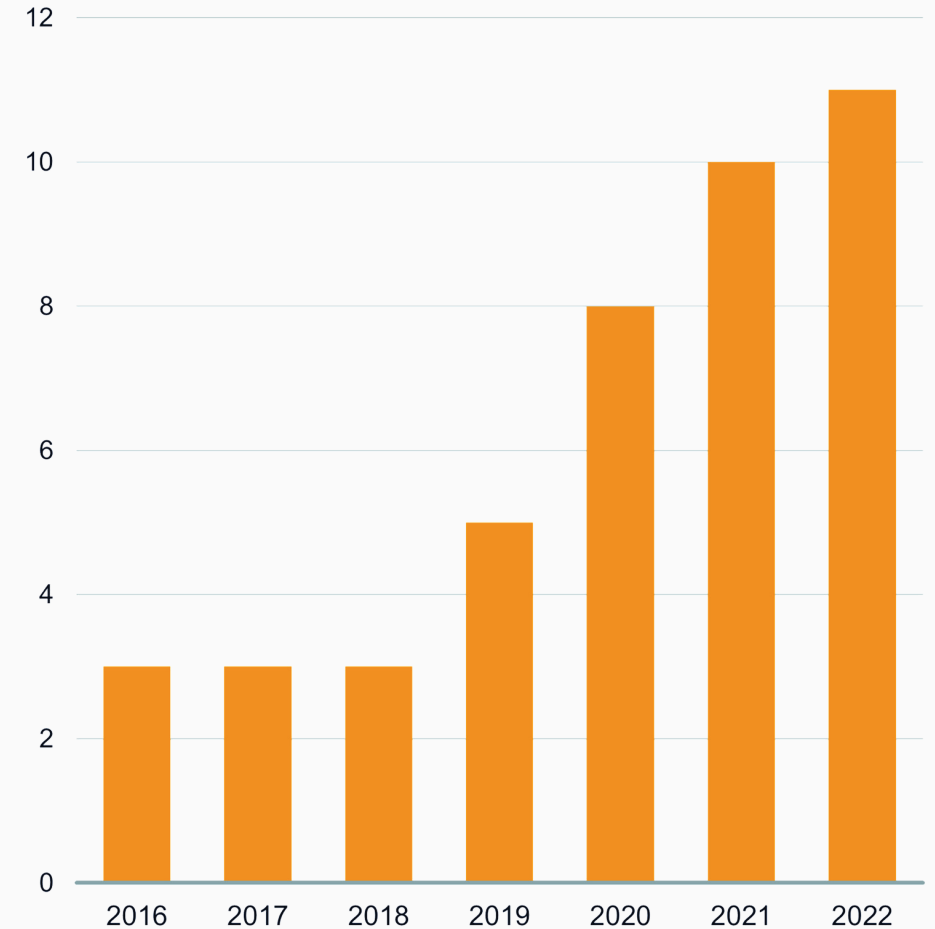
The number of firms with ancillary own funds has increased in recent years. In the first few years of Solvency II, only three firms of our sample of 100 disclosed having ancillary own funds. This has now increased to 11 firms, with **Mitsui Sumitomo** and **RGA** newly disclosing ancillary own funds over the year.

Mitsui Sumitomo introduced £20m of AOF in 2022. **RGA** was granted approval for £88.5m of AOF.

The total amount of Tier 2 capital for the firms in our report has remained stable over the year, increasing only slightly from £10.9bn as the 2021 year-end to £11.0bn at the 2022 year-end. However, there were some large individual movements, for example:

- **Beazley** no longer has the £386m of Tier 2 own funds that it had last year.
- **Lloyd's** has seen an increase of £578m in Tier 2 own funds over the year.
- **RGA** has established £88m of Tier 2 own funds over the year.
- **Soteria** no longer has the £25m of ancillary own funds that it had last year.
- **Direct Line** no longer has the £250m of Tier 2 own funds that it had last year.

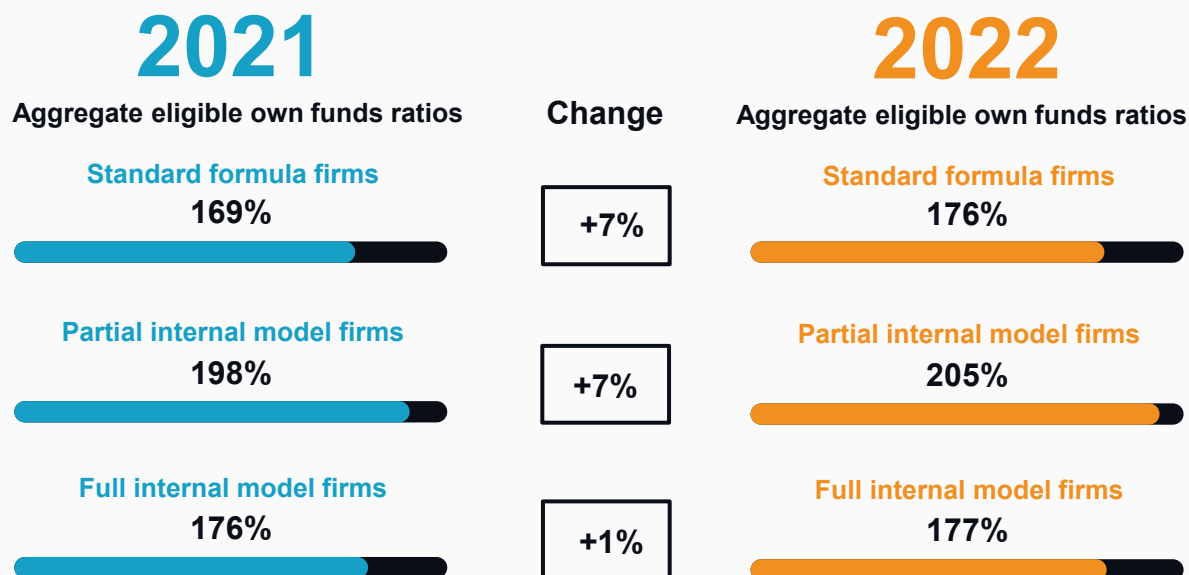
Number of firms with ancillary own funds



Approaches to calculating capital

Analysis of firms by their approach to calculating Solvency II capital

Under Solvency II, firms calculate their SCRs using either the standard formula or, subject to regulatory approval, a partial or full internal model to better reflect their risk profile.



The aggregate eligible own funds ratio for each approach has increased since the previous year. This is consistent with the increase in overall aggregate eligible own funds ratio across the whole sample.

Diversification as a proportion of diversified SCR

We also analysed the level of diversification benefit that insurers allow for within their capital calculations.

The average diversification benefit as a proportion of diversified SCR for firms using the standard formula, partial internal model or full internal model approach to calculate regulatory capital is shown below.

Firms using a full or partial internal model typically get the benefit of a greater level of diversification, since the Standard Formula takes a prudent view on dependencies between high-level risks.

Average diversification benefit for each approach to calculating capital:



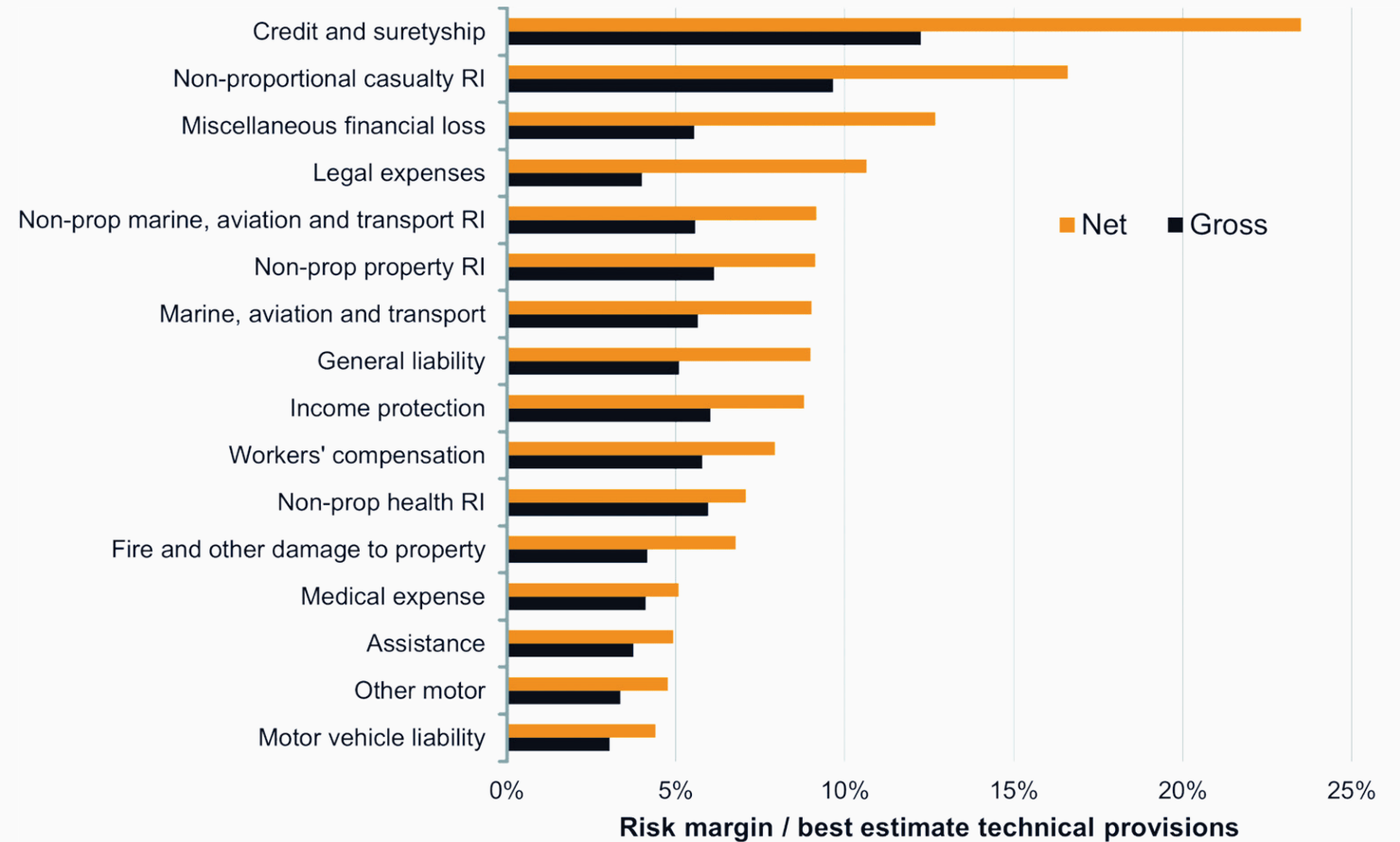
Solvency II risk margin

Variation of Solvency II risk margin by line of business

Firms must hold a risk margin on their balance sheets under Solvency II regulations, which is intended to represent the additional amount that another entity would need to be paid to take on the liabilities, over and above the value of the net best estimate provisions.

The chart on the right shows the aggregated risk margin as a proportion of the gross and net best estimate technical provisions for each Solvency II line of business. This proportion is typically higher for longer tailed classes.

Aggregate risk margin as a proportion of best estimate technical provisions



Solvency II risk margin (continued)

Change in cost of capital

On 22 June 2023, HM Treasury published draft regulations outlining proposed changes to the calculation of the risk margin for UK insurers. This comes as part of the proposed reforms to the Solvency II regulatory regime as it will apply in the UK.

The draft regulations indicate a reduction in the cost-of-capital assumption from 6% pa to 4% pa. It anticipates a corresponding reduction of approximately 30% in UK insurers' risk margins. This change is planned to be introduced by December 2023, so insurers will need to factor this into their 2023 year-end returns.

The EU has separately highlighted plans for reform, including the risk margin. Limited details have been made public, however, changes are likely to be similar to those proposed by the PRA, for example risk margin would reduce to 4.5% and expectations for increased disclosure in respect of climate change.

Insurers will likely need to evaluate the following due to these adjustments:

- Update their SCR and TP calculations to reflect new parameters and ascertain the impact on their SCR coverage;
- Determine how to utilise the probable additional capital surplus resulting from this change; and
- Consider any modifications to their pricing and reinsurance strategies. We have considered the impact of a change in cost of capital from 6% to 4% on the total risk margin of our sample, and the resulting change in aggregate eligible of funds ratio.

For our sample, we have considered a change in the cost-of-capital assumption from **6% to 4.5%** for Irish insurers and to **4%** for UK insurers.

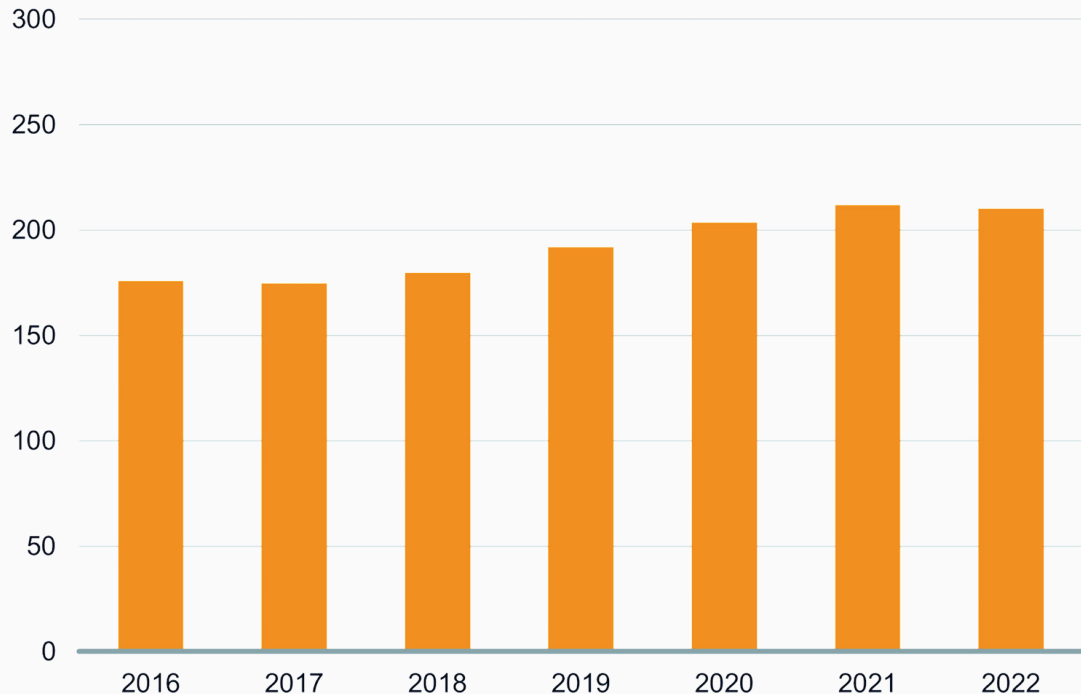
This change would result in a **total release of capital of £2.8bn** and an increase in aggregate eligible own funds ratio from **180% to 189%**.

Investment disclosures

Aggregate investment holdings across the market and trends over time

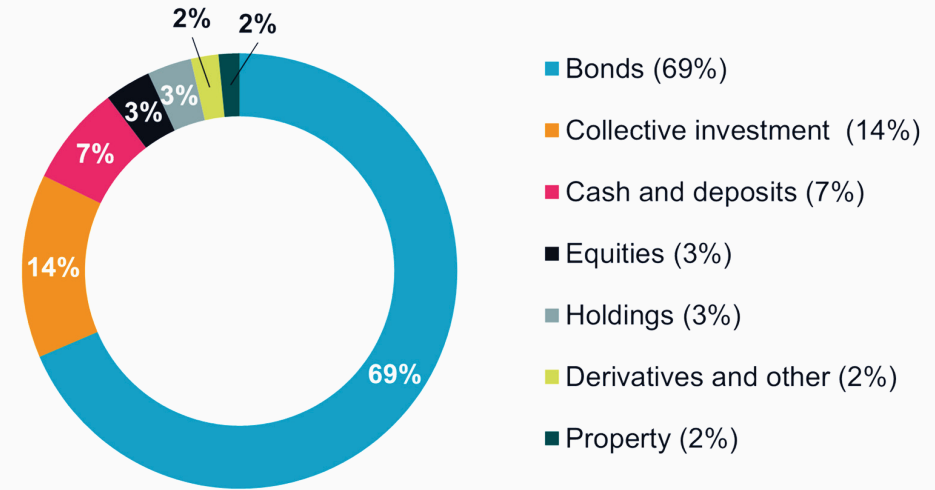
The following charts show the total invested assets and cash, and the aggregated allocation of each asset as a proportion of total investments and cash at 2022 year-end.

Total invested assets & cash (£bn)



Across the 100 insurers in our review, the combined total amount in investments and cash has steadily increased over time, increasing to around £210bn at 2022 year-end.

Aggregated investment holdings



At 2022 year-end, 69% of all invested assets were held in either corporate, government or other bonds, up slightly from 67% as at the 2021 year-end.

Collective investment undertakings, which are pooled funds that allow investors to access a wide range of investments in an efficient way, accounted for 14% of assets. These funds can cover a variety of asset types and the QRTs are not sufficiently granular to allow more detailed analysis into the investment types being invested in.

Investment disclosures (continued)

We have seen a steady increase in the number of firms discussing ESG (environmental, social and governance) issues in their SFCRs, with 57% of firms now including this, compared to 42% last year.

ESG investment considerations

While the number of firms discussing ESG issues has increased from 42% to 57%, the focus of those discussions is unchanged. There remains a particular emphasis on sustainable investment and the transition risks involved as part of climate change. These issues then feed into investment strategy and risk appetites.

Below are some examples of firms that have mentioned integrating ESG criteria and standards in their investment strategies and practices.

- **Bupa** ensures that ESG factors are considered as part of investment management. It excludes investing in certain sectors as well as using ESG rating factors when selecting investment managers. Bupa is aiming to reduce carbon emissions from its investment portfolio with the target of reaching Net Zero by 2040.
- **Chaucer** has rolled out an ESG Balanced Scorecard across several areas of its business including investments. This scorecard measures the ESG performance of clients and business partners.
- **CNA** monitors its investment portfolio in the context of MSCI ESG ratings. The firm also removes assets that do not align with its sustainability strategy.

- **Convex** receives quarterly updates from its external asset managers which include an assessment and rating of the firm's investment portfolio on carbon intensity and ESG metrics against a relevant benchmark. This helps it to monitor its investments to ensure appropriate measures are taken so that the overall sustainability of the portfolio is maintained. In 2022, Convex established an ESG Committee which reviews and recommends priorities which are reported on quarterly.
- **Fidelis** applies restrictions in its investment portfolio with revenue limits in place on assets such as coal, oil or gas. Fidelis is also committed to allocate at least 3% of the core fixed income portfolio to green, social and sustainability bonds.
- **Hiscox** has embedded ESG considerations in its investment processes. It is developing tools to help monitor this using net zero wording in all core bond investment manager mandates as well as having an ESG focused dashboard to be included as part of the Investment Committee reporting.
- **SCOR UK** monitors ESG issues when managing invested assets and performs screening on the assets that the firm invests in.
- **XL Re** has integrated ESG analysis into investment processes. Part of this analysis includes using ESG controversy scores to review and potentially exclude underperforming issuers from its portfolio.

Survey constituents and other notes

To improve the readability throughout this report, we have shortened the names of some insurers when referring to them. The following table sets out the full entity names of the insurers we reviewed, together with the name used in this report, if applicable.

UK-based insurers

Insurance company name	Report name
Admiral Insurance Company Ltd	Admiral
Aetna Insurance Company Ltd	Aetna
Ageas Insurance Ltd	Ageas
AIG UK Ltd	AIG UK
Aioi Nissay Dowa Insurance UK Ltd	Aioi Nissay Dowa
Allianz Insurance PLC	Allianz
AmTrust Europe Ltd	AmTrust Europe
Arch Insurance (UK) Limited	Arch
Assurant General Insurance Ltd	Assurant GI
Assured Guaranty UK Ltd	Assured Guaranty
Aviva Insurance Ltd	Aviva
Aviva International Insurance Ltd	Aviva International
AXA Insurance UK PLC	AXA UK
AXA XL Insurance Company UK Ltd	AXA XL
Berkshire Hathaway International Insurance Ltd	Berkshire Hathaway
BHSF Ltd	BHSF

Insurance company name	Report name
British Gas Insurance Ltd	British Gas
Bupa Insurance Ltd	Bupa
CNA Insurance Company Ltd	CNA
Convex Insurance UK Ltd	Convex
Covea Insurance PLC	Covea
DAS Legal Expenses Insurance Company Ltd	DAS Legal Expenses
Ecclesiastical Insurance Office PLC	Ecclesiastical
Endurance Worldwide Insurance Ltd	Endurance Worldwide
esure Insurance Ltd	esure
Euro Insurances Ltd	Euro
Fairmead Insurance Ltd	Fairmead
Fidelis Underwriting Ltd	Fidelis
FM Insurance Company Ltd	FM Insurance
Gresham Insurance Company Ltd	Gresham
HCC International Insurance Company PLC	HCC International
Highway Insurance Company Ltd	Highway

Survey constituents and other notes (continued)

Insurance company name	Report name
Hiscox Insurance Company Ltd	Hiscox
International General Insurance Company (UK) Ltd	IGI
Lancashire Insurance Company (UK) Ltd	Lancashire
Legal and General Assurance Society	Legal and General
Liverpool Victoria Insurance Company Ltd	LV=
Lloyds Bank General Insurance Ltd	Lloyds Bank GI
Markel International Insurance Company Ltd	Markel International
Medicash Health Benefits Ltd	Medicash Health Benefits
Mitsui Sumitomo Insurance Company (Europe) Ltd	Mitsui Sumitomo
Motors Insurance Company Ltd	Motors
National House Building Council	NHBC
QBE UK Ltd	QBE UK
RiverStone Insurance (UK) Ltd	RiverStone
Royal & Sun Alliance Insurance Ltd	RSA
Royal & Sun Alliance Reinsurance Ltd	RSA Reinsurance
Sabre Insurance Company Ltd	Sabre
Samsung Fire & Marine Insurance Company of Europe Ltd	Samsung Fire & Marine

Insurance company name	Report name
SCOR UK Company Ltd	SCOR UK
Simplyhealth Access	Simplyhealth Access
Soteria Insurance Ltd	Soteria
St. Andrew's Insurance PLC	St. Andrew's
Starr International (Europe) Ltd	Starr
The Association of Underwriters known as Lloyd's	Lloyd's
The Equine and Livestock Insurance Company Ltd	Equine and Livestock
The Marine Insurance Company Ltd	Marine Insurance
The National Farmers Union Mutual Insurance Society Ltd	NFU Mutual
Tradex Insurance Company Ltd	Tradex
TransRe London Ltd	TransRe
Travelers Insurance Company Ltd	Travelers
U K Insurance Ltd	Direct Line
Vitality Health Ltd	Vitality Health
Western Provident Association Ltd	WPA

Survey constituents and other notes (continued)

Irish insurers

Insurance company name	Report name
ALD Re DAC	ALD Re
Allianz PLC	Allianz Ireland
Allianz Re Dublin Designated Activity Company	Allianz Re
Allied World Assurance Company (Europe) DAC	Allied World
Amtrust International Underwriters DAC	AIU
Atradius Reinsurance DAC	Atradius Re
Aviva Insurance Ireland DAC	Aviva Ireland
AXA Insurance DAC	AXA Ireland
AXIS Re SE	AXIS Re
AXIS Specialty Europe SE	AXIS Specialty
Beazley Insurance DAC	Beazley
Berkshire Hathaway European Insurance DAC	Berkshire Hathaway Europe
Bupa Global DAC	Bupa Global
CACI Non-Life DAC	CACI Non-Life
Chaucer Insurance Company DAC	Chaucer
CNP Santander Insurance Europe DAC	CNP
Everest Insurance (Ireland) DAC	Everest
FBD Insurance PLC	FBD

Insurance company name	Report name
Greenlight Reinsurance Ireland DAC	Greenlight Reinsurance
Greenval Insurance Company Ltd	Greenval
Hamilton Insurance DAC	Hamilton
Hannover Re (Ireland) DAC	Hannover Re
IPB Insurance CLG	Irish Public Bodies
Irish Life Health DAC	Irish Life Health
Metlife Europe DAC	Metlife
Partner Reinsurance Europe SE	Partner Reinsurance
PartnerRe Ireland Insurance DAC	PartnerRe
RGA International Reinsurance Company DAC	RGA
RSA Insurance Ireland DAC	RSA Ireland
Travelers Insurance DAC	Travelers DAC
UnipolRe DAC	UnipolRe
VHI Insurance DAC	VHI
Volkswagen Insurance Company DAC	Volkswagen
XL Insurance Company SE	XL Insurance
XL Re Europe SE	XL Re
Zurich Insurance PLC	Zurich

Survey constituents and other notes (continued)

Summary of insurers analysed

The firms we analysed wrote £148bn of non-life gross premiums during 2022 and held £186bn of gross best estimate technical provisions on their Solvency II balance sheets at their 2022 year-end. 73% of the firms we analysed use the standard formula, 7% use partial internal models and the remaining 20% use full internal models to calculate their SCRs.

Groups vs solo entities

Some of the entities listed above are part of a larger group. When analysing the QRTs, we have considered only the QRTs of the solo entities listed. Where a firm has produced an SFCR at a group level for multiple solo entities, we have applied their comments to all entities within the group unless they explicitly disclosed otherwise.

Year ends and aggregating figures

A small proportion of firms analysed had a financial year end that was not 31 December 2022. When we have aggregated figures within this report, we have done so for all companies, including those with other year end dates during 2022.

Exchange rates

For those firms that do not report in Sterling, we have taken all of their reported figures and converted them to Sterling using the prevailing exchange rate as at 31 December 2022.

Data

The data analysed in this report was sourced from Solvency II Wire Data and the company disclosures. Solvency II Wire Data provides detailed information about the Solvency II figures, enabling users to build reports and view changes over time to better understand the impact of Solvency II. The data is available via subscription [here](#).

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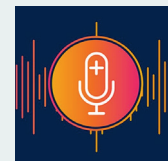
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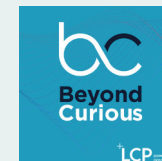
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Contact one of our experts below to discuss the key findings from our report and what this means for your company, or to discuss options for how we can benchmark you against your peers.



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