



Arch Insurance (UK) Limited
Solvency and Financial Condition Report
31 December 2022

Arch Insurance (UK) Limited
31 March 2023

SOLVENCY AND FINANCIAL CONDITION REPORT

Table of Contents

SUMMARY	1
SECTION A Business and Performance.....	6
SECTION B Governance Framework.....	17
SECTION C Risk Profile.....	39
SECTION D Valuation for Solvency Purpose	55
SECTION E Capital Management.....	67
Appendix 1 ACGL Organisational Structure.....	72
Appendix 2 Quantitative Reporting Templates.....	74
Appendix 3 PwC Audit Opinion	86

SUMMARY

Arch Insurance (UK) Limited (“**AIUK**,” the “**Company**,” “us,” or “our”) sets out in this report the solvency and financial condition of the Company as at 31 December 2022, as required by Solvency II Regulations and the Solvency II Directive (as implemented in the UK in the Prudential Regulation Authority (the “**PRA**”) rulebook for Solvency II firms). The purpose of the Solvency and Financial Condition Report for the year ended 31 December 2022 (this “**SFCR**”) is to provide stakeholders with qualitative and quantitative information relating to AIUK’s business and performance, governance framework, risk profile, valuation for solvency purposes and capital management that is not contained in AIUK’s annual financial statements.

AIUK is a UK authorised insurer and part of Arch Capital Group Ltd. (“**ACGL**” or together with its subsidiaries, “**ACGL Group**” or the “**Group**”), a publicly listed Bermuda exempted company. ACGL provides insurance, reinsurance and mortgage insurance on a worldwide basis through its operations in Bermuda, the United States of America, Europe, Canada, and Australia. ACGL is listed on the NASDAQ Stock Market. AIUK is a wholly owned subsidiary of Arch Reinsurance Europe Underwriting Designated Activity Company (“**ARE**”), an Ireland-based company.

The principal activity of the Company is to underwrite Energy, Property and Casualty insurance business, including but not limited to, Specialty lines of insurance. The Company operates from its head office in London and its UK regional offices. We classify our business into the following Solvency II lines of business: Medical Expense, Income Protection, Motor Vehicle Liability, Other Motor, General Liability, Credit and Suretyship, Marine, Aviation and Transport, Fire and other damage to Property insurance.

All amounts in this SFCR are presented in thousands of Sterling (£’000).

Business, Strategy and Performance

Our insurance underwriting strategy is to operate in lines of business in which our underwriting expertise can make a meaningful difference to operating results. Our insurance business focuses on talent-intensive rather than labour-intensive business and seeks to operate profitably across all the product lines. This means that we underwrite predominantly in the London wholesale insurance markets and in regional markets, both directly and on a selective delegated underwriting authority basis. To achieve our objectives, our insurance operating principles are to:

- Capitalise on profitable underwriting opportunities;
- Centralise responsibility for underwriting;
- Maintain a disciplined underwriting philosophy;
- Focus on providing superior claims management; and
- Utilise a brokerage distribution system.

Our underwriting philosophy is to generate an underwriting profit through prudent risk selection and proper pricing across the underwriting cycle. To achieve this, we encourage adherence to uniform underwriting standards across each product line focusing on risk selection; desired attachment point; limits and retention management; due diligence, including financial condition, claims history,

management and exposure; underwriting authority and approval limits; and collaborative decision-making.

The rating environment continued to improve during 2022, with firmer pricing for many lines of business including Casualty, Public Liability, Cyber and Property. Reflecting the strengthened rating environment, the Company's underwriting strategy for 2022 was more offensive. The Company actively sought to increase the amount of business written in our regional and speciality lines of business and to maximise the opportunities for growth while maintaining its underwriting discipline and executing its philosophy on superior risk selection.

The Company continues to benefit from a financial strength rating of "A2" from Moody's and "A+" from each of Standard & Poor's, Fitch and A.M. Best.

System of Governance

The Company's board of directors (the "Board") is responsible for the governance and oversight of all aspects of the Company's business. The Board has delegated broad executive powers to the Chief Executive Officer (the "CEO") to manage and operate the Company's business on a day-to-day basis.

To support the Board and the CEO in dispensing their responsibilities, the Company has established a number of Board Committees and functional committees, including the Management Committee, which meet regularly to discuss and escalate matters, as appropriate, in accordance with clearly defined Terms of Reference.

The Company maintains an effective governance framework which is designed to achieve the following:

- Maintain an adequately transparent organisational structure that has well-defined, clear, consistent and documented lines of responsibility across the integrated operations;
- Ensure staff have the skills, knowledge and expertise necessary to properly discharge their assigned responsibilities;
- Establish and maintain processes to achieve effective internal reporting and communication of information at all relevant levels within the integrated operations;
- Maintain information systems that produce sufficient, reliable, consistent, timely and relevant information concerning all business activities, the commitments assumed and the risks to which the integrated operations are exposed;
- Safeguard the security, integrity and confidentiality of information, taking into account the nature of the information in question; and
- Ensure outsourced responsibilities are delegated and managed appropriately, with ultimate responsibility residing with the Company's Board of Directors (the "Board").

The Company's corporate governance framework is based on the principle of proportionality, such that systems and controls are proportionate to the nature, scale and complexity of the business. The Company manages its business in accordance with a number of policies and strategies that underpin the Risk Management Framework.

The Company's corporate governance framework is regularly assessed by the Legal & Governance, Risk and Compliance functions and all material findings are presented to the Board.

Risk Profile

The Company's Risk Appetite Framework provides an expression of the level of risk it is willing to accept in pursuit of its strategic objectives. The Risk Appetite Framework provides quantitative and qualitative statements which are used to define the general attitude within the organisation towards the desired level of risk. Risk Appetites are a key component of the Company's Risk Management Framework, enabling the Company to make informed business decisions having regard to the key risks to which it may be exposed by such a decision.

The risk philosophy of the Company encompasses all major risks and focuses on attaining the following business objectives:

- Underwrite business that meets agreed targeted returns
- Underwrite business with selected insureds
- Underwrite only carefully selected business lines
- Manage underwriting volumes in line with the business cycle
- Limit the downside risk such that the Company maintains a sufficient solvency margin

To meet these objectives and the Company's overall strategy, metrics for the performance against risk appetites and risk tolerances and limits, as articulated in the Company's Risk Appetite Statements, are monitored by the Risk Management function and reported to the Risk Committees on a quarterly basis with a defined escalation process where breaches occur.

Valuation for Solvency II Purposes

The Company's Solvency II balance sheet is prepared on an economic or fair value basis. The most significant differences between the Solvency II balance sheet and that on an FRS 102 (UK GAAP) basis arise from:

- the valuation of technical provisions and reinsurer's share of technical provisions including the removal of an implicit margin of prudence;
- the valuation of holdings in related undertakings; and
- the valuation of deferred acquisition costs and deferred ceding commission.

No volatility or matching adjustments are included and therefore no transitional measures are used.

Capital Management

The Company has adopted a capital management policy and plan setting out the methodology and procedures to provide oversight of the Company's own funds and compliance with regulatory capital requirements.

The Company's own funds are summarised in the table below:

				2022	2022	2021	2021
	Tier 1	Tier 2	Tier 3	Total Own Funds	Adjusted net asset Approach *	Total Own Funds	Adjusted net asset Approach *
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Paid-In Ordinary Share Capital	50,000	-	-	50,000	50,000	50,000	50,000
Other capital contribution	87,500	-	-	87,500	58,771	67,500	36,500
Reconciliation Reserve	923	-	-	923	923	(14,561)	(14,561)
Subordinated liabilities	-	15,500	-	15,500	15,500	15,500	15,500
Net deferred tax assets	-	-	8,632	8,632	8,632	-	-
Total Own Funds After Deductions	138,423	15,500	8,632	162,555	133,826	118,439	87,439
Total Eligible Own Funds to Meet the SCR				162,555	133,826	118,439	87,439
Total Eligible Own Funds to Meet the MCR				142,600	117,398	105,879	78,167
SCR				83,555	81,012	58,802	55,043
MCR				20,889	20,253	14,700	14,700
Ratio of Eligible Own Funds to SCR				194.5%	165.2%	201.4%	158.9%
Ratio of Eligible Own Funds to MCR				682.7%	579.7%	720.2%	531.7%

**The "adjusted net asset basis" is reviewed as part of the Company's internal governance processes but is not independently audited.*

The own funds consist of Tier 1 capital made up of £50.0 million issued and fully paid up ordinary shares, £87.5 million other capital contribution, and a gain of £0.9 million in the reconciliation reserve alongside Tier 2 subordinated loans of £15.5 million and Tier 3 capital consisting of net deferred tax assets of £8.6 million.

The Company had an existing capital contribution of £67.5 million and in 2022 the Company received £20.0 million capital contribution from its parent company, ARE, to support the business planned growth, bringing the total contributions to £87.5 million. This capital increased by £0.9 million in the reconciliation reserve under Solvency II. The Company holds two loans from Arch Capital Finance (Ireland) Limited ("ACFI"), an affiliate and subsidiary of ACGL, to support growth for the UK Regional business. The loans were included in the Tier 2 capital which totals £15.5 million. These loans meet the required PRA guidelines to classify as a subordinated loan. AIUK holds net deferred tax assets of £8.6 million as Tier 3 capital as at 31 December 2022.

The Company uses the standard formula for determining its regulatory capital and follows a risk-based approach to determine the amount of capital required to support its activities. Following the acquisition of the UK regional business, an "adjusted net asset basis" was introduced and reported internally to manage the Company's solvency position, taking into account the Company's current capital structure. The "adjusted net asset basis" is an additional, internally applied and more prudent measure that the Board uses to monitor solvency and is not part of the requirement of Solvency II. It is reviewed as part of the Company's internal governance processes but is unaudited.

Under the "adjusted net asset basis", the Company's own funds available is £133.8 million as at December 2022 against the SCR of £81.0 million, with a surplus of £52.8 million or 165.2%. The "adjusted net asset basis" excludes the loan balance with Arch Intermediaries Group Ltd ("AIGL"), formerly known as Arch (UK) Holdings Limited, within the available own funds and the SCR excludes the equity invested as part of UK Regional acquisition.

Directors' Responsibilities

The directors are responsible for ensuring that this SFCR is properly prepared in all material respects in accordance with the PRA rules and the Solvency II Regulations.

The directors are satisfied that:

- a) throughout the financial year in question, the Company has complied in all material respects with the requirements of the PRA rules and the Solvency II Regulations as applicable to the Company;
- b) it is reasonable to believe that, at the date of the publication of this SFCR, the Company has continued so to comply and will continue so to comply in the future.

On behalf of the Board,



Jason Kittinger

Chief Financial Officer, Chief Operating Officer and Director

31 March 2023

SECTION A Business and Performance

A.1 Business

A.1.1 Name and Legal Form of the Undertaking

Arch Insurance (UK) Limited is incorporated in the United Kingdom. The address of the registered office of the Company is:

60 Great Tower Street, 5th Floor
London, EC3R 5AZ
United Kingdom

This SFCR covers the Company on a solo basis.

A.1.2 Insurance Supervisors

Prudential Regulations Supervisor

Prudential Regulation Authority ("PRA")
20 Moorgate
London, EC2R 6DA
United Kingdom

Financial Conduct Supervisor

Financial Conduct Authority ("FCA")
12 Endeavour Square
London
E20 1JN
United Kingdom

Group Supervisor

Bermuda Monetary Authority ("BMA")
BMA House
43 Victoria Street
Hamilton HM 12 Bermuda

A.1.3 External Auditor

PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
7 More London Riverside
London, SE1 2RT
United Kingdom

A.1.4 Description of the ownership details including proportion of ownership interest

Arch Reinsurance Europe Underwriting DAC (“ARE”), a private company incorporated in Ireland, owns 100% of the equity share capital of the Company. The Company’s ultimate parent and ultimate controlling party is ACGL.

A.1.5 Group Structure

The Company’s ultimate parent and ultimate controlling party is ACGL, a publicly listed Bermuda exempted company. ACGL prepares group financial statements and is the largest Group for which group financial statements are drawn up and of which the Company is a member. Copies of the ACGL group financial statements are available on ACGL’s website located at www.archcapgroup.com or on the website of the U.S. Securities and Exchange Commission located at www.sec.gov.

The smallest group of undertakings for which group financial statements are drawn up, and of which the Company is a member, is Arch Reinsurance Limited (“ARL”), a Bermuda company.

Below is a summary view of the Company’s organisational chart, with all entities having 100% shareholding and voting rights. A complete organisation chart of ACGL and AIUK’s position in the Group as at 31 December 2022 is included in **Appendix 1**.



A.1.6 Material related undertakings

The Company owns 100% of Arch Europe Insurance Services Ltd. ("AEIS"), a company incorporated in United Kingdom that provides services in the form of staff and facilities to the Company.

A.1.7 Outlook and Future Developments

During the hard market, the Company will continue to look for opportunities to grow existing books of business and underwrite new lines of business, while maintaining our underwriting discipline.

The Company is fully cognisant of the emerging importance of climate change as a fundamental societal issue and is actively investigating opportunities in underwriting, investments and its operational organisation and supply chains to act responsibly and to support the trend towards a sustainable transition to the post-carbon society.

In line with the PRA's expectations in SS3/19 and PS11/19, an initial approach to managing the financial risks from climate change has been embedded in our standard risk management framework. This approach includes governance, risk management, scenario analysis and disclosure. This approach will continue to evolve as market practice develops in this area.

Risks arising from climate change

The directors have assessed the specific risk of climate change to the Company and have identified potential risks relating to underwriting and investment risks, each of which has been set out in further detail below. The Company has embedded management of climate change risks into its standard approach for risk management. This is a fast-changing area and the Company, along with the insurance market, will continue to develop approaches to better understand and manage potential risks from climate change.

The Company manages the financial risks from climate change under the following categories, which are described further below:

1. Physical risks
2. Transition risks
3. Liability risks
4. Investment risks (which are a subset of transition risks)

Underwriting risks from climate change

The Company is looking at all aspects of the potential new underwriting environment that may emerge with the advent of various aspects of climate change. Both first and third party underwriters are working to continually assess the impact of various climate change scenarios on the existing and future portfolio, including but not limited to, changing weather pattern and changing sea levels and their impact on risk selection and aggregation; novel litigation against companies or their directors and officers for their alleged fault in enabling such change, which may impact risk selection and policy structure; and the opportunities generated by a changing economy.

Physical risks

The Company has a well-established exposure management framework which we use to measure and manage catastrophe loss probability. The exposed policies are modelled by country and peril to estimate loss probabilities from natural catastrophe events, such as cyclones, windstorms, earthquakes, floods, bushfires and other hazards.

The whole portfolio is reassessed on a quarterly basis and the assessment includes modelling of historic events and probabilistic extremes of events across relevant geographic regions. Climate change signals, such as warming of sea surface temperatures, are incorporated into the parameterisation of the model used.

The Company's models are tested for sensitivity and stress tested against the Company's historic claims experience. The key metric used is the 1 in 250-year stress test performed on a gross and net basis, which are tracked quarterly.

The Company uses Stress and Scenario tests to assess potential impacts from changing weather patterns. A number of scenarios have been considered, which show that there could be a long-term impact to modelled losses relating to US Windstorm exposures, UK Flood and Windstorm exposures and Wildfire exposures. It is noted that the trends in these loss costs are relatively small year-on-year, and we update our underwriting approach in light of changing risk exposures. We anticipate that the Company would remain within current risk appetites even in scenarios with increasing underlying hazard from natural perils.

As part of ACGL, the Company benefits from extensive investment into research and validation of climate and hazard models that allows informed risk assessments using the latest scientific views.

Transition Risks

The Company recognises that the transition away from fossil fuels will require large social and economic shifts, which may have a material impact on the insurance market and our insureds. The Company has identified the most likely sectors to be negatively impacted and operates a referral process to ensure that exposure in these sectors is limited (e.g., Thermal Coal).

The Company further recognises the potential for future opportunities in supporting the energy transition, is a writer of renewable energy business of companies developing and manufacturing electric vehicles and insurers of various projects and research which both enable and profit from a new economy; this develops as the opportunity itself develops and has in itself challenges around pricing and policy form, in which we invest our own intellectual property.

Liability Risks

The Company recognises the potential for new types of insurance loss to emerge as novel legal challenges are brought against companies, including our insureds (e.g., liability claims relating to the attribution of responsibility for climate change, or D&O claims relating to insured companies approach to energy transition and new disclosure requirements). The Company includes consideration of these risk factors in its underwriting approach for relevant individual risks and lines of business and we will continue to develop our approach to examining these specific exposures.

Investment risks

The Company has an investment portfolio worth £149.1m as at 31 December 2022 consisting mainly of shares, debt securities, fixed-income securities and other variable-yield securities. Investments are managed by Arch Investment Management Ltd, a member of the ACGL Group.

The Company's investment portfolio is well diversified across economic sectors and individual counterparties and consists predominantly of short duration, highly rated fixed income, all of which limit overall exposure to climate change risks.

The Investment Committee, which has been delegated oversight of the Company's investment portfolio by the Board, is aware of the importance of stewardship and sustainability alongside integrating environmental, social and governance ("ESG") factors into its investment analysis. At the ACGL level, ESG scores are incorporated into the overall portfolio analysis on a regular basis, the outcome of which is made available to the Company's Investment Committee.

The Company has conducted analysis to investigate the potential materiality of investment losses under adverse climate change scenarios and has concluded that the exposures to this risk are not material – reflecting the diversified, low risk and short duration nature of the Company's investments.

In line with the PRA's expectations in SS3/19 and PS11/19, a framework has been put in place to consider governance, risk management, scenario analysis and disclosure of financial risks arising from climate change. This framework continues to develop and evolve with advances in scientific understanding and changes in insurance market practice.

Significant regulatory and legal matters

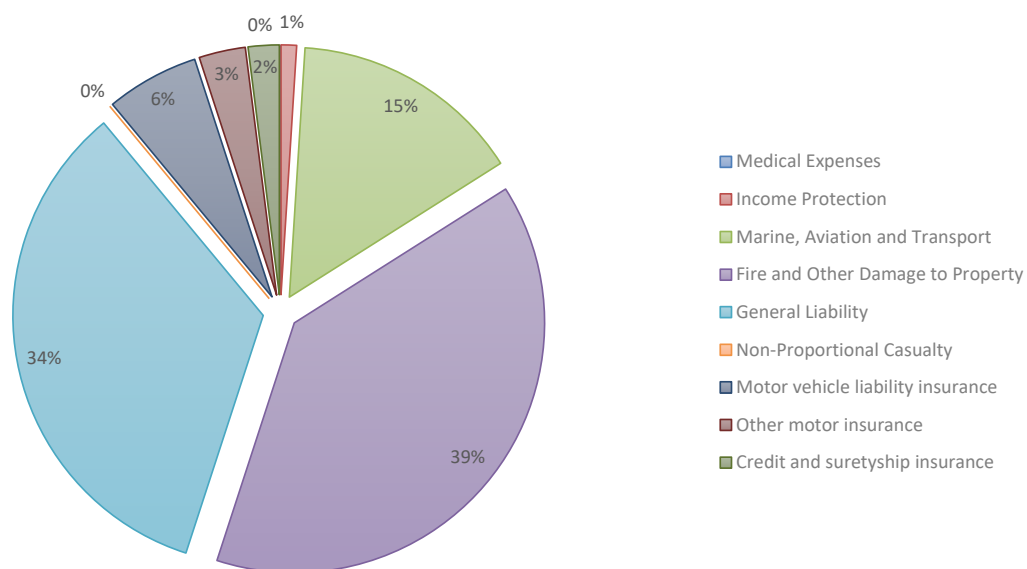
The Company is not currently subject to any significant regulatory intervention or litigation outside the ordinary course of business.

A.1.8 Material Lines of Business and Geographical areas where business is conducted

The principal activity of the Company is to underwrite Energy, Property and Casualty insurance business, including but not limited to, Specialty lines of insurance. The Company operates from its head office in London and its UK Regional offices.

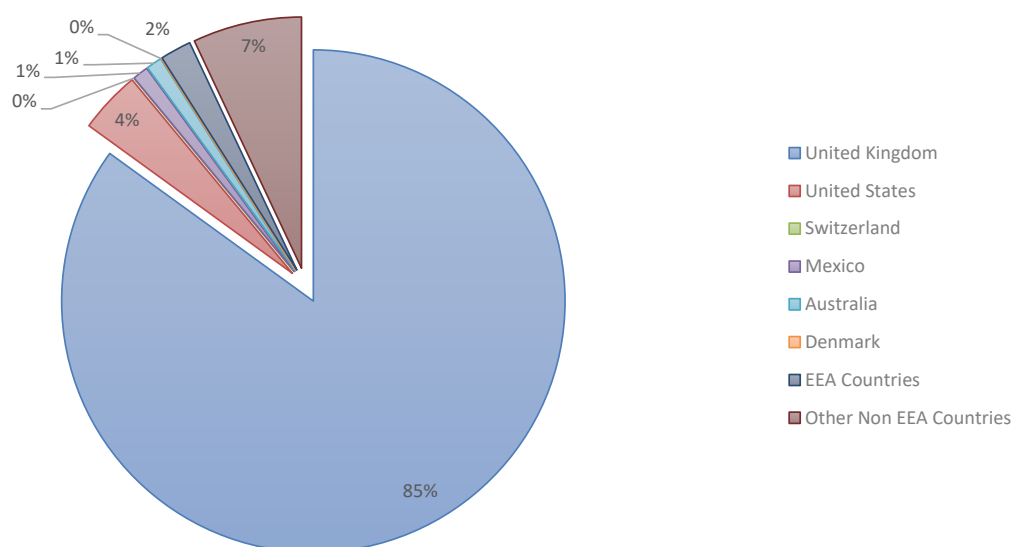
The following diagram shows the total gross written premiums for each of the Company's lines of business and the location of the risk. The Company wrote £562.7m of gross written premium at the year ended 31 December 2022 (2021: £405.7m million).

Gross Written Premium By Line of Business



	2022		2021	
	£'000	% of Total	£'000	% of Total
Gross Premiums Written				
Medical Expenses	1,710	0%	(210)	0%
Income Protection	7,301	1%	8,454	2%
Marine, Aviation and Transport	84,588	15%	43,448	11%
Fire and Other Damage to Property	221,949	39%	185,417	46%
General Liability	188,697	34%	144,815	36%
Non-Proportional Casualty	-	0%	11	0%
Motor vehicle liability insurance	33,819	6%	13,167	3%
Other motor insurance	14,494	3%	5,643	1%
Credit and suretyship insurance	10,122	2%	4,939	1%
Total	562,680	100%	405,684	100%

Gross Written Premium By Location



	2022		2021	
	£'000	% of Total	£'000	% of Total
Gross Premiums Written by Risk Location				
United Kingdom	475,854	83%	335,897	83%
United States	22,403	4%	14,569	4%
Switzerland	4,352	1%	1,766	0%
Mexico	2,897	1%	3,018	1%
Australia	2,832	1%	3,638	1%
Denmark	2,892	1%	61	0%
EEA Countries	9,546	2%	7,674	2%
Other Non EEA Countries	41,904	7%	39,061	10%
Total	562,680	100%	405,684	100%

A.1.9 Significant Business or Other Events

No other information to report as of 31 December 2022.

A.2 Underwriting Performance

The Company's results for the year ended 31 December 2022 show a profit for the financial year of £37.2m (2021 loss: £8.4m). The 2022 underwriting gain pre intra-group reinsurance treaty of £25.2m (2021: £6.1m) was largely driven by an increase in earned premium as business grew as well as an improved expense ratio compared to the prior year.

The impact from the intra-group quota share and stop loss agreements in 2022 resulted in a post quota share underwriting profit of £28.2m (2021 loss: £5.1m). The 2022 underwriting year intercompany quota share contract changed from a 39% ceding commission in the previous year to a 'follow the fortunes' contract in which acquisition and operating expenses are ceded at 85%. This has

resulted in a timing impact in the 2022 financial year due to the ceding commission earnings under the respective quota share contracts, which creates a gain in the 2022 financial year.

The following table summarises the underwriting results for year ended 31 December 2022 and year ended 31 December 2021.

	2022 (excl. intra-group reinsurance) £'000	2022 (incl. intra-group reinsurance) £'000	2021 (excl. intra-group reinsurance) £'000	2021 (incl. intra-group reinsurance) £'000
Gross Premiums Written	562,680	562,680	405,684	405,684
Net Premiums Written	492,557	72,502	336,551	49,014
Net Premiums Earned	416,588	60,719	306,628	44,526
Net Claims Incurred	(235,357)	(35,304)	(175,720)	(26,154)
Net underwriting (expense) / income	(156,045)	2,856	(124,809)	(23,469)
Net underwriting results	25,186	28,270	6,099	(5,097)
Investment return and foreign exchange	2,593	2,593	(3,281)	(3,281)
Profit/(Loss) before taxation	27,779	30,863	2,818	(8,378)
Taxation	6,381	6,381	(6)	(6)
Profit/(Loss) for the year	34,160	37,244	2,812	(8,384)
Claims ratio	56.5%	58.1%	57.3%	58.7%
Expense ratio	37.5%	-4.7%	40.7%	52.7%
Combined ratio	94.0%	53.4%	98.0%	111.4%

The Directors of the Company measure performance excluding the intra-group reinsurance arrangements. Therefore, the commentary in the sections below is based on the pre-intra-group reinsurance result of the Company.

Premiums written

Gross written premium increased by £157.0m to £562.7m (2021: £405.7m) for the year ended 31 December 2022. The increase compared to prior year was primarily driven by the continuing hardening London market rates, new open market contracts and increased binder premiums. In particular the UK Regional business generated £63.9m additional premium compared to 2021. In addition, the Aviation business continued to grow with an increase of £18.7m in premium as well as Marine Hull with an increase of £20.5m premium.

Claims incurred

Pre intra-group reinsurance, there was slight improvement in the loss ratio which was 0.8 points lower than 2021 at 56.5% (2021: 57.3%).

Underwriting expenses

The expense ratio decreased by 3.2% to 37.5% (2021: 40.7%) this was mainly due to premium growth outstripping growth in operating expenses, as well as a change in business mix resulting in lower commission rates.

Investment returns

The net investment loss excluding foreign exchange difference was £3.9m in 2022 (2021 loss: £1.2m).

Intra-group reinsurance

The Company has the benefit of a whole account proportional (85%) intra-group reinsurance treaty and a stop loss reinsurance protection with ARL. Arch Re is a Bermuda-domiciled company with \$15.6 billion of capital as at 31 December 2022 (2021: \$16.3bn). This reinsurance protection enables capital to be provided from Bermuda to support the business written through the Company and achieve an A+ Standard & Poor's rating for the Company. The net income on the whole account intra-group reinsurance treaty and stop loss, before consideration given to the capital benefit, was £3.0m (2021: £11.2m loss).

	2022		2021	
	£'000	% of Total	£'000	% of Total
Net Underwriting Result*				
Medical Expenses	202	1%	(448)	8%
Income Protection	1,145	4%	571	-11%
Marine, Aviation and Transport	5,799	21%	(1,978)	37%
Fire and Other Damage to Property	12,151	43%	(883)	17%
General Liability	10,341	38%	(1,379)	27%
Non-Proportional Casualty	20	0%	(11)	0%
Motor vehicle liability insurance	(1,025)	-4%	(708)	13%
Other motor insurance	(1,001)	-4%	(296)	6%
Credit and suretyship insurance	363	1%	(148)	3%
Total	27,995	100%	(5,280)	100%
Net Underwriting Result by Risk Location				
United Kingdom	13,101	47%	(9,312)	176%
United States	352	1%	(1,543)	29%
Switzerland	(87)	0%	(352)	7%
Mexico	(82)	0%	(303)	6%
Australia	204	1%	(241)	5%
Denmark	105	0%	(19)	0%
EEA Countries	2,672	10%	1,151	-22%
Other Non EEA Countries	11,730	41%	5,338	-101%
Total	27,995	100%	(5,280)	100%

*The table above excludes investment income expense.

A.3 Investment Performance

The Company's investment portfolio primarily consists of highly rated fixed income securities and cash, with an average S&P rating of AA+. These are available to settle insurance and reinsurance liabilities to third parties. Our aggregate invested assets as at 31 December 2022 totalled £149.7 million (2021: £120.4 million).

The distribution of our fixed income and other investments by type is shown in the table below, excluding holdings in related undertakings:

Asset Type	2022		2021	
	£'000	%	£'000	%
Government Bonds	98,601	66%	72,400	60%
Corporate Bonds	34,892	23%	29,331	24%
Collateralised Securities	1,192	1%	2,167	2%
Collective Investment Undertakings	15,038	10%	16,461	14%
Other	-	0%	-	0%
Total	149,723	100%	120,359	100%

The components of net investment income included in the statement of income and expenses are as per the table below: Based on S.09.01

	2022		2021	
	£'000	%	£'000	%
Government Bonds	932	109%	11	1%
Corporate Bonds	(160)	-19%	166	23%
Collateralised Securities	28	3%	12	2%
Collective Investment Undertakings	58	7%	544	74%
Other	-	0%	-	0%
Total Investment income	858	100%	733	100%
Net investment expenses	(274)		(183)	
Net investment return	584		550	

The net investment return, excluding foreign exchange difference, was £0.6 million in 2022 (2021: £0.6 million). The net investment return includes investment charges and unrealised gains and losses recognised in other comprehensive income. Effective net investment return was 0.4% (2021: (0.5%)).

A.4 Performance of Other Activities

The following table summarises the other income and expenses for the year ended 31 December 2022 and year ended 31 December 2021.

	2022	2021
	£'000	£'000
Gain / (loss) on foreign exchange	6,910	(1,638)
Other expense	(379)	(414)
Total	6,531	(2,052)

The Company's foreign exchange gains and losses are from the translation of subordinated currency positions that are different to the functional currency of the Company. The main subordinated trading currencies are Euros, United States Dollars, and Australian Dollars.

Though the Company's policy is to match the assets and liabilities of these subordinated currency positions, in most cases there is a small surplus held at balance sheet date due to timing of movement in assets and liabilities and the timing of actions taken to remediate the matching positions.

The Company has no lease arrangements as at 31 December 2022. All services are recharged to the Company from AEIS.

A.5 Any Other Information

No other information to report as of 31 December 2022.

SECTION B Governance Framework

B.1 General Information on The System of Governance

B.1.1 Overview

The Board is responsible for the governance and oversight of all aspects of the Company's business. The Board operates in accordance with clearly defined terms of reference. Among other matters, the Board:

- Approves the corporate objectives and the strategy to achieve them;
- Ensures that the Company conducts its affairs in an ethical, legal and responsible manner;
- Sets and oversees an effective internal control framework that includes well-functioning risk management, actuarial, compliance and internal audit functions as well as an appropriate financial reporting and accounting framework;
- Determines policies on key areas, including risk, reserving, compliance, internal audit, outsourcing, fitness and probity, business continuity, accounting, remuneration, and board diversity;
- Sets risk appetite and overall risk tolerance levels;

Given the nature, scale and complexity of the risks inherent in our business, the Board of the Company considers the Company's corporate governance framework to be adequate for the Company which is classified as a Category 4 firm under the PRA's framework.

The Board operates as an effective, balanced body of qualified persons, with appropriate skill sets, collectively guiding the performance with the best interests of the Company and its wider stakeholders under the leadership of the Chair of the Board.

On 8 September 2022, the Board approved the appointment of Patrick Storey as Chair of the Board, with Nicholas Denniston, the former Chair of the Board, remaining as a non-executive director. Also in 2022, the Board appointed an independent non-executive director (Ms. Joanne Hine) while two executive directors (Messrs. Steve Bashford and Pasquale Leoni) resigned from the Board. In the first quarter of 2023, Ms. Kirsten Valder was appointed as an executive director to the Board while John Mentz, a Group executive director, resigned from the Board. As of the date of this SFCR, the Board consisted of the following members:

S. Bashford	Chief Underwriting Officer	(resigned 23.09.2022)
N. Denniston	Non-Executive Director	
K. Felisky	Independent Non-Executive Director	
M. Hammer-Dahinden	Group Non-Executive Director	
J. Hine	Independent Non-Executive Director	(appointed 01.10.2022)
J. Kittinger	Chief Financial Officer	
P. Leoni	Chief Underwriting Officer	(resigned 09.11.2022)
J. Mentz	Group Non-Executive Director	(resigned 21.03.2023)
P. Storey	Independent Non-Executive Director and Chair	
H. Sturgess	President and Chief Executive Officer	
K. Valder	Chief Administrative Officer	(appointed 10.03.2023)

B.1.2 Board Committees

As at 31 December 2022, the Board was supported by the following Board Committees, each operating under their own clearly defined Terms of Reference and reporting directly to the Board:

Audit Committee: The Audit Committee assists the Board in controlling, overseeing and coordinating the Company's internal and external audit activities and processes. It oversees financial reporting and the control environment and reviews the annual financial statements and regulatory filings.

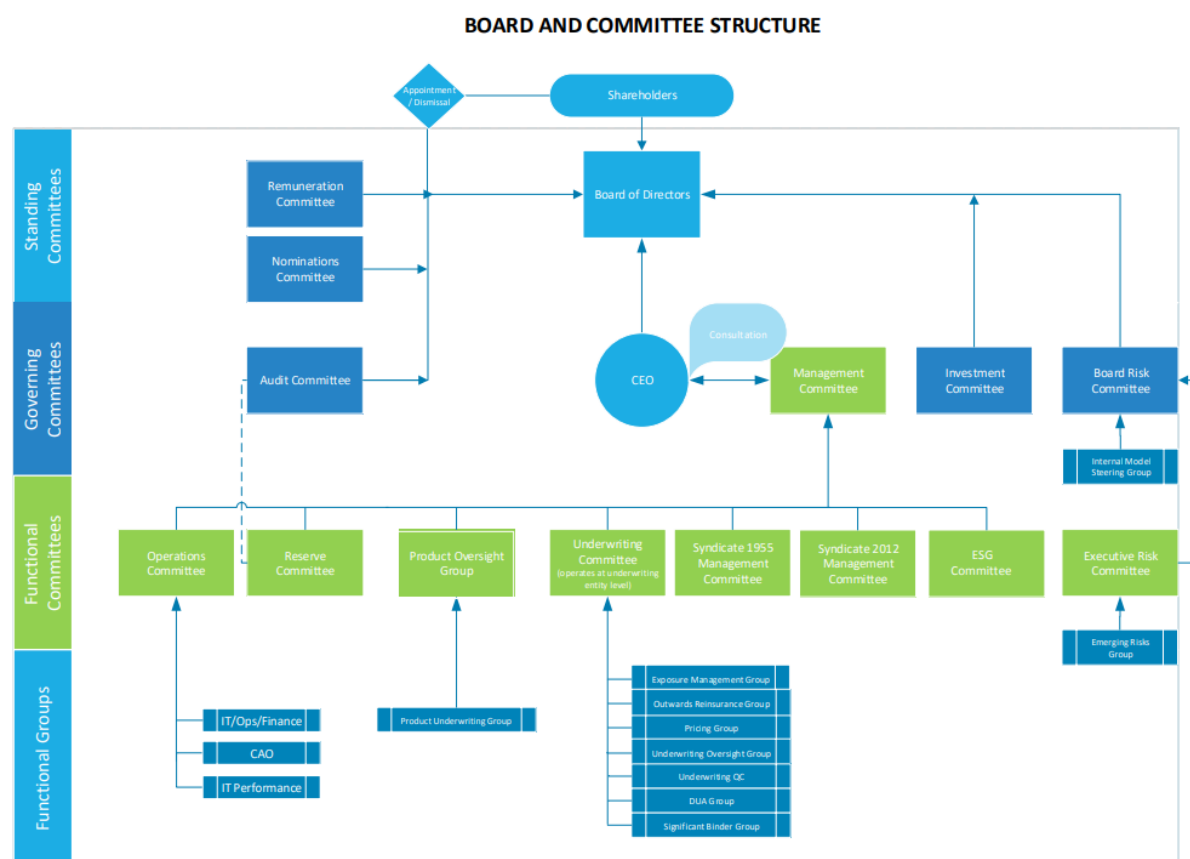
Risk Committee: The Board Risk Committee serves as a focal point for oversight of risk management. It reviews current exposures and makes recommendations to the Board on the Company's risk appetite and future risk strategy as well as overseeing the Risk Management function. The Risk Committee assists the Board in fulfilling its oversight responsibilities with regard to the identification of and control by the management of material risks to the objectives of the Company. This encompasses the processes undertaken by management to identify, evaluate and mitigate the material risks to the objectives including, but not limited to, strategic risk, insurance risk, investment risk, credit risks, liquidity risk, operational risk and regulatory risk.

Nominations Committee: The Nomination Committee assists and supports the Board on matters relating to the composition and membership of the Board and senior appointments within the Company. Among other things, it oversees succession planning and compliance with corporate governance requirements in relation to the composition and membership of the Board. The Nomination Committee also plays an active role in diversity and inclusion, including setting and monitoring targets for Board diversity, and overseeing the self-evaluation of the performance of the Board and its Committees.

Remuneration Committee: The Remuneration Committee assists and supports the Board on matters relating to the Company's remuneration programs and policies to ensure they are appropriate, fairly administered and support the Company's culture. The Remuneration Committee is responsible for reviewing the overall compensation remuneration paid to the CEO and our other senior management, establishing overall remuneration policies for employees, and overseeing the administration of executive compensation plans.

Investment Committee: The Investment Committee oversee the Company's investment strategy and risk, the investment manager selection, investment performance, and investment risk management policies and guidelines.

The Company's governance reporting structure is summarised in the table below:



B.1.3 Management Committees

The following key management committees have been established to assist and support the Chief Executive Officer and other senior management in fulfilling their responsibilities:

Management Committee

The purpose of the Management Committee is to support the Chief Executive Officer as the core management team to develop and implement the Company's strategy as approved by the Board of Directors, monitor and evaluate performance across all areas of the business, and manage the day-to-day activities of the business. As at 23 March 2022, the members of the Management Committee consisted of the President and Chief Executive Officer (Chair), Chief Financial Officer/Chief Operations Officer, Chief Underwriting Officers, Chief Executive of UK Regional, Chief Risk Officer, Chief Administrative Officer, Chief Actuary, Chief Reinsurance and Exposure Officer, Chief Strategy & Distribution Officer, Managing Director of Managing Agency, Chief Compliance Officer, General Counsel, Chief HR Officer and Chief Information Officer.

Underwriting Committee

The purpose of the Underwriting Committee is to assist the Management Committee with oversight of the Company's underwriting activity and reinsurance management programme, including reviewing and recommending the Company's underwriting and reinsurance purchasing strategy, reviewing and

recommending the annual underwriting business plan to the Management Committee, and overseeing the Company's underwriting performance.

ESG Committee

The purpose of the Committee is to assist the Management Committee with promoting the long-term sustainable success of the Company with regard to environmental, social and governance ("ESG") matters. Among other matters, the ESG Committee is charged with overseeing the development of the Company's strategy, policies and procedures relating to ESG matters and monitoring current and emerging ESG trends and relevant legislative and regulatory requirements. The ESG Committee is also responsible for approving any products and initiatives developed in response to Arch's ESG strategy, including sustainable product offerings/green products and partnerships.

Reserve Committee

The purpose of the Reserve Committee is to provide oversight on the status of the reserves of the Company, and to make recommendations to the Audit Committee (in line with all actuarial function requirements) regarding the Reserves to be set by the Board for forecasting the result of the underwriting accounts and for the financial statements according to GAAP and the Solvency II and/or unearned reserves.

Operations Committee

The purpose of the Operations Committee is to provide oversight, challenge and advice to the Management Committee on the operating functions to ensure that, individually and collectively, they are aligned with the Company's strategic objectives and provide an efficient and effective service to all relevant stakeholders.

Product Oversight Group

The purpose of the Product Oversight Group is to review and oversee conduct risk appetite, assess new, renewing or significant changes to products (exclusive of contracts of large risk or reinsurance), approve new lead high risk binders, oversee product and conduct management information to pursue the delivery of good customer outcomes, oversee actions to remediate risk to the business and customers, and oversee compliance with the Company's policies and applicable rules and regulations.

Material changes in the system of governance

With the exception of the creation of the ESG Committee, there were no material changes to the system of governance in 2022.

B.1.4 Code of Business Conduct

The Company is committed to integrity in the conduct of its business and requires that all employees, directors and other representatives perform their duties in a manner which is legally, ethically and morally irreproachable. To that end, the Company has adopted ACGL Group's Code of Business Conduct, which describes standards, policies and expectations for ethical conduct. The full text of our Code of Business Conduct, as well as ACGL's Corporate Governance Guidelines, are available at www.archcapgroup.com.

B.1.5 Independent Control Functions

The Company has in place the following four key independent control functions as required under the Solvency II Directive: Risk Management, Compliance, Actuarial and Internal Audit.

These functions are responsible for providing oversight of and challenge to the business and for providing assurance to the Board in relation to the Company's control framework. These functions have the authority, independence and resources to carry out their tasks and details of the committees are contained within **Sections B.1.2 & B.5**.

B.1.6 Risk Management Function

The CRO is the Key Function Holder for the Risk Management function. The CRO has a direct reporting line to the CEO and the Chair of the Board Risk Committee.

The key responsibilities of the Risk Management function are:

- Ensure that the Company has and maintains effective processes to identify, monitor, manage and report on the risks to which it is or might be exposed;
- Run the ORSA Process and produce the ORSA Report;
- Advise on Risk Strategy and recommend Risk Appetites in relation to the Business Strategy;
- Provide an effective Risk Management Framework including Policies on the main categories of risk;
- Operate an effective Risk Governance system to embed risk consideration in decision making;
- Ensure that concentrations and accumulation of risk are well identified, analysed and monitored;
- Coordinate Emerging Risk Policy and use of Stress and Scenario Testing;
- Maintain the Risk Register, including internal controls;
- Provide effective integrated risk monitoring reporting to confirm position relative to appetite;
- Complete the validation of the internal capital model;
- Advise on risk implications of new business or business change; and
- Promote Risk Management culture.

B.1.7 Actuarial Function

The Chief Actuary is the Key Function Holder for the Actuarial function and reports to Chief Executive Officer. The key responsibilities of the Actuarial function are:

- Analytical support for Business Plan performance monitoring by management;
- Design and operate pricing framework, monitor pricing adequacy and provide opinion on overall underwriting policy;
- Assess and recommend appropriate reserves, comparing best estimates against experience and reconciling booked reserves and movements with the financial reserving process;
- Coordinate the calculation of technical provisions (Solvency II) and opine on their appropriateness;

- Ensure integrity of the reserving process (data, methodologies and assumptions); and
- Evaluate and report with opinion on the adequacy of reinsurance arrangements.

B.1.8 Internal Audit Function

The purpose of Internal Audit is to provide independent, objective assurance and consulting services designed to add value and improve Company operations.

Internal Audit is covered further in Section B.5.

B.1.9 Remuneration Policy and Practices

The Board has adopted a Remuneration Policy whose main principles include the following:

- Aligning remuneration with the corporate strategy to deliver long-term value creation;
- Encouraging employees to meet the strategic objectives of the Company within a framework of prudent and effective risk management;
- Attracting and retaining employees who will contribute to the long-term success of the business;
- Adherence to the Company's standards of compliance, ethical behaviour, whistleblowing and good conduct in building and retaining the reputation of the Company;
- Ensuring compensation decisions take into account overall long-term collective performance; and
- Ensuring there is an appropriate balance between fixed and variable remuneration.

Our compensation program includes both fixed and variable compensation, with an emphasis on long-term compensation that is tied to the Company's performance. Although we do not apply rigid apportionment goals in our compensation decisions, our philosophy is that variable pay, in the form of annual cash incentive bonuses and share-based awards, should constitute a significant portion of total direct compensation and be suitably deferred.

A component of variable compensation is granted in the form of annual multi-year vesting share-based awards, which make stock price appreciation over an extended period of time fundamental in realising a compensation benefit. By emphasising long-term performance through using long-term incentives, we align our executives' interests with our shareholders' interests and create a strong retention tool. The Company provides awards in the form of restricted share/unit grants and stock options and share-settled stock appreciation rights, which typically provide for vesting over three years.

The Remuneration Committee considers both financial performance and strategic objectives in its evaluation process, and generally does not use pre-set performance goals. Instead, the Remuneration Committee reviews performance on an annual basis and applies its business judgment to review bonuses and the overall amount and mix of compensation elements. The Remuneration Committee believes this structured and disciplined evaluation process in administering the Company's compensation programs enables us to respond more flexibly to changes in the business environment as well as the Company's operations.

B.1.10 Supplementary Pension / Early Retirement Schemes

The Company contributes to a defined contribution Group Personal Pension Plan. The assets of the scheme are held separately from those of the Company in an independently administered fund.

The Company does not maintain any defined benefit retirement or pension plans.

B.1.11 Material Transactions

No other information to report as of 31 December 2022.

B.2 Fit and Proper Requirements

B.2.1 Fit and Proper Process

The Company's Fit and Proper policy sets out the guidelines to ensure that employees meet the Fit and Proper regulatory standards as set out in the Senior Managers and Certification Regime (SMCR), both on entry and throughout their employment at the Company. The CEO is responsible for implementing this policy through the Human Resources function, while the Chief Compliance Officer is responsible for providing advice, implementing a monitoring program and reviewing the policy at least annually.

Individuals performing certain Senior Manager Functions ("SMF") are subject to regulatory pre-approval. These roles receive Prescribed Responsibilities and Expected Responsibilities which are specified by the regulator and recorded in the Responsibilities Map. The Chief Compliance Officer identifies and maintains a record of these functions and individuals as well as other employees subject to Certification.

Key Function Holders, including non-executive Directors not otherwise preapproved, are required to be notified to the regulator once the firm has satisfied its own Fit and Proper procedures.

In accordance with its obligations under the SMCR, the Company has identified those employees who are considered to be "Certified Persons" and need to be certified as being Fit and Proper for the role on an annual basis. These are people who owing to the nature of their role is one that involves or may involve a risk of significant harm to the firm or its customers. This population of people includes both Significant Management Functions and Material Risk Takers.

B.2.2 Professional Qualifications, Skills and Expertise

The Company ensures that all persons who hold key positions or functions are fit to provide sound and prudent management through their professional qualifications, knowledge and experience and are proper by being of good reputation and integrity. All employees are monitored on an on-going basis through a formal performance appraisal process.

The Company assesses the professional competence of its managers and employees, specifically focusing on management competence and technical competence (including previous experience, knowledge and professional qualifications) by:

- Following a thorough and robust recruitment process including specification of responsibility, considering competency and suitability, with review and discussion by the Nominations Committee of the Board for senior appointments;

- Completing screening of successful candidates comprising various checks which vary according to the level of the role and include criminal record, financial soundness checks and employer references addressing a candidate's regulatory professional and disciplinary track record;
- Ongoing monitoring of managers' and employees' professional competence through performance appraisals. Formal performance appraisals are performed annually, and records maintained on file. Non-executive Board members undergo periodic individual and collective self-appraisal; and
- Ongoing training and development to ensure competency and ethical propriety is maintained. This includes in-house training such as code of conduct training, anti-harassment training and anti-money laundering. Training and development needs are formally assessed at least annually, and records are maintained on file.

B.3 Risk Management System including the Own Risk and Solvency Assessment ("ORSA")

The Risk Management Function aims to provide practical guidance on the implementation of the Framework on a day-to-day basis bearing in mind that Arch and the businesses under its management are risk taking organisations and that risk management capability is a fundamental part of the business. Within the 'Three Lines of Defence Framework' all types of risk are managed and controlled on a day-to-day basis by the business.

Risks faced across the company and their respective controls are documented within the Risk Register. Furthermore, the controls identified in the Risk Register to monitor and manage the risks facing Arch are also regularly reviewed for continued relevance. Compliance with the components of these controls is assessed via the ongoing Internal Audit, External Audit, Sox, Compliance and regulatory reviews undertaken at Arch alongside the quarterly control attestations performed by the Risk Management Function. Updates on both the risk and control assessments are reported to the Executive and Board Risk Committees, Underwriting Committee, Investment Committee and Reserve Committee meetings, and where required to the Audit Committee, and documented within the minutes.

The Risk Management Function designs and facilitates the implementation and operation of the Risk Management Framework across the organization.

Arch's Risk Management Framework consists of:

- A clear, defined and documented risk management strategy that is consistent with Arch's business strategy and includes: risk management objectives, key principles, risk appetite and assignment of risk management responsibilities across all activities.
- Written policies that implement the risk strategy and facilitate control mechanisms. They include a definition and categorisation of the material risks faced, by type and the levels of acceptable risk for each risk type. These policies reflect the nature, scope and time horizon of the business and the risks associated with it.
- Processes and procedures to enable identification, assessment, management, monitoring and reporting of risks Arch is, or may be, exposed to.
- Reporting procedures and feedback loops to ensure that information on the risk management system is coordinated and challenged by the Risk Management Function and actively monitored and managed by all relevant staff and the company's managing agent's Board.

- Reports by the Risk Management Function submitted to the Executive and Board Risk Committees, covering the material risks faced by the business and the effectiveness of its risk management system.

Arch's risk management strategy operates in parallel with its business strategy. To achieve its strategy:

- Arch seeks out 'core' risks with adequate risk / return characteristics which are assumed subject to stated limits.
- Arch is exposed to other 'non-core' risks as a by-product of executing this strategy, which are controlled to an acceptable level subject to the cost of mitigation.

Arch's Risk Strategy is to only take risks that are:

Consistent

- Risks are only assumed to the extent they are consistent with, and contribute to, the achievement of Arch's business strategy and the execution of its business plan.
- Risks are only assumed where they are consistent with the expectations of our key stakeholders. Primarily this is our capital providers (Arch Group and Third-Party Capital providers for S1955), but also including reinsurance partners, regulators, brokers, and customers.

Controlled

- Assumed risks must have an acceptable level of potential down-side, considering the following:
 - Protecting capital
 - Managing earnings volatility
 - Limiting exposure to operational, reputational, regulatory, and other non-financial risks

Understood

- Arch must have appropriate skill and expertise to manage assumed risks.
- Processes exist for risk identification and assessment that are proportionate to the nature, scale, and complexity of risks.

Profitable

- All risks assumed must have an associated expected return that is commensurate with the down-side exposure, and accretive to value when viewed over the long term.
- Arch has no appetite for unprofitable risks.
- Where 'non-core' risks arise as an unavoidable consequence of executing the business plan (rather than being actively targeted) – for example operational risks – a balance is struck between the potential down-side and the cost of mitigation.

Arch has a set of risk appetite statements that are appropriate for its business model and strategy. The Risk Appetite Statements set out clear descriptions, detailing appropriate levels of risk for each material area of risk. Each of these statements is supported by Key Risk Indicators for detailed monitoring which are regularly reviewed and escalated through the governance structure.

Key Risk Indicator thresholds are set at levels at which they are intended to be triggered when the risk level nears the tolerance, this ensures that sufficient remedial actions are put in place to ensure Arch responds early to heightened risks. Risk appetites are reviewed, at a minimum, annually by the BRC to ensure that Arch retains full coverage over its risks.

B.3.1 Risk Management Process and Procedures

The following narrative provides an overview of the Company's Risk Management Framework, which describes the Company's methodology for identifying, measuring, managing, monitoring and reporting on the key risks affecting the Company. The framework provides a disciplined and structured process that integrates risk management activities into the whole organisation through the Risk Management Function. It outlines the Company's approach to risk identification and assessment and provides an overview of its risk appetite and tolerance for each of the following major risks:

- Insurance risk;
- Market risk;
- Credit risk;
- Liquidity risk;
- Operational risk (including Regulatory and Legal risk);
- Group risk;
- Strategic risk;
- Capital risk and
- Emerging risk.

The framework includes details of the Company's:

- Risk methodology and policies to address the material risks confronting the Company; and
- Treatments to control and/or mitigate these risks.

The actions and policies implemented to meet the Company's business management and regulatory obligations form the core of this framework. The Company has adopted a holistic approach to risk management by analysing risk from both a top-down and bottom-up perspective.

The Company's risk appetite is a fundamental component of its business strategy and business plan. To achieve its business strategy, the Company recognises that it is necessary to assume insurance and investment risks through the products it sells and the investments it makes with available funds, throughout the underwriting cycle. The business strategy also necessitates assuming operational risks, for example through people, process and technology. In addition, the Company is exposed to and seeks to mitigate credit and liquidity risks and to minimise downside risk.

Risk Identification

Risk Owners are accountable for risk identification and communicating them through the governance structure and to relevant individuals and departments.

Internal and external events can affect AUKGB achieving its objectives. Until a risk has been identified it is difficult to know or demonstrate that it is being adequately managed to within an acceptable level. Risk identification is therefore a vital first step in the process.

Some risks provide the business with opportunities, which should be captured, assessed, and harnessed.

There are several ways to identify risk, the most appropriate of which may differ according to the type or nature of the risk involved. This document does not set out the different techniques in detail but aims to explain that each type may require a particular approach or combination of approaches.

AUKGB has a Risk Model that provides categories and elements of risk with definitions and examples of the types of risk that we may experience. This model helps the business to identify the types of risk they are exposed to and to support consistent capture at a high level of risks across the business. The ability to compare one business or function to another helps us in our risk management approach.

Our primary approach entails identifying significant functions or processes across the business and analysing these to identify the key risks within each business area. In turn this allows related controls to be identified and mapped to those risks.

Risks may also be identified by focusing on individual functions, uncovering the risks through a variety of other means such as risk workshops, questionnaires, targeted deep dives, and regular meetings with key stakeholders.

AUKGB uses a hybrid approach, using whatever techniques are relevant in identifying risk in a particular area. The Risk Function works with Compliance in assisting management, not only with the technical and specialist detail, but in providing challenge and assurance as appropriate.

Risk management, however, is not simply a matter of identifying individual risks in isolation. It is essential to also think about the risks in aggregation since several minor risks may combine to cause something more significant when viewed together. Operational risk is a risk type that flows across the business, where gaps in processes may not be apparent to the individuals responsible. There is significant value to understanding the inter-relationship between different business areas and processes. This is a particular area of focus within our operational resilience assessment process.

Risk Assessment

Risk assessment is the process of risk analysis and risk evaluation and covers the following areas:

- Risk Scoring (Quantitative and Qualitative Risk Impact and Probability Scoring)
- Inherent Risk vs Residual Risk
- Risk Evaluation
- Risk Target

The methods used to assess risk are consistent across AUKGB. In this way, the scoring of risks becomes familiar and the status of the risks become familiar and is better understood and can be reported consistently to the ERC, BRC and the Board.

1. Risk Rating

The Risk Owners assess and score their respective risks on two bases – ‘Inherent’ and ‘Residual’. For most Risks, each basis is scored using 1:10 return period (10% probability of occurrence in the next 12 months). However, there are some exceptions to this, notably the Catastrophe Risks which are assessed using a longer return period.

- Inherent Risk Rating: The level of risk when risk treatments that would prevent the risk event from occurring are not applied systematically.
- Residual Risk Rating: The level of risk following the systematic application of risk treatments.

2. Risk Target

This is the level of risk that management has determined the entity can accept. It is measured using the same six bandings that are used to measure Inherent and Residual Risk.

3. Risk Evaluation

As part of the evaluation process, decisions need to be made on how best to manage an inherent risk to within the Risk Target.

4. Risk Status

The status of a Risk is used to denote whether it is currently assessed as being within or outside the Risk Target after consideration of existing controls. For Risks that have a Residual Risk that exceeds its Risk Target, an action plan should be put in place to ensure the Residual Risk is reduced to below the Risk Target within an acceptable timeframe.

Risk Mitigation and Control

The risk treatment options include:

- Accept – take no action, as it is not cost effective to mitigate the inherent risk
- Transfer – transfer the risk or a proportion of the risk to another party (e.g., by (re) insurance agreement or derivative instrument)
- Avoid – decide not to accept the risk by not becoming involved in certain activities
- Reduce – through applying one or more controls to reduce the inherent risk to an acceptable level

- Mitigate – by changing business practices. Mitigation is the process of reducing the inherent risk exposure through implementing controls and performing management actions.

Controls help to ensure the successful execution of processes and therefore increase the probability that the functions and therefore AUKGB's objectives are met. The implementation of effective controls is one of the principal means by which risk is managed and consequently the mechanism by which risks are managed to within Risk Appetites.

The controls operating in a business area include all the measures and practices used to mitigate exposures for all types of risk that could prevent AUKGB achieving its objectives. The main objectives of our control framework include:

- Safeguarding our assets
- Maintaining an effective and efficient operation
- Providing reliable financial reporting
- Maintaining compliance with applicable laws and regulations
- Enabling the business to demonstrate that the control framework is operating effectively.

Risk Reporting

The Risk Function is responsible for compiling and disseminating risk and control information to the key governance forums of the AUKGB entities. The main elements of this reporting are summarised below along with the key procedures that are undertaken in their compilation.

Providing pertinent, accurate, appropriate and timely risk information to relevant forums assists them in making informed decisions and supports AUKGB in achieving its objectives. Such information assists senior management to:

- Gain assurance on the effectiveness of risk management and the internal control environment
- Determine whether risk exposures are being managed in accordance with the risk appetite and policy set by the Board
- Understand the AUKGB entities' risk profiles and how these change over time
- Discuss new challenges and opportunities including emerging risks
- Strengthen controls where losses occur and /or weaknesses in the effectiveness are identified
- Monitor actions to manage risk to an acceptable level
- Demonstrate externally that risks and controls are being appropriately managed by the business

Risk Monitoring

- Risk Monitoring is carried out by risk owners and the RMF utilises risk appetites and other metrics or information (from internal and external sources) which provides a view on exposure to risk
- Takes account of any risk tolerances, limits or thresholds which are in place

- Includes monitoring of the control environment to detect situations where a weakness in systems and controls exposes the business to increased risk
- Identifies incidents and near misses

B.3.2 Implementation and Integration of ORSA

The ORSA Process considers risk, capital, performance and strategy processes and provides management with information required to make key decisions regarding the overall risk and capital profile of the Company. The ORSA Process provides the link between the Company's risk profile, its Board-approved risk appetite including approved risk tolerances and limits, its business strategy and its overall solvency requirements.

These processes are undertaken by the Company's management and reported to the Board periodically through the course of the year and are used to inform decision making.

ORSA Reports bring those outputs together to assess the future risk profile and solvency position of the Company, as well as assessing the potential impact of adverse events, and are prepared in accordance with the ORSA Policy which sets out the governance arrangements, the process for risk quantification and calculation of the capital requirements and the various roles and responsibilities, including the Board.

An ORSA Report is produced at least annually and the results of each assessment are reported to the AIUK Board which is ultimately responsible for the ORSA Process and for approving ORSA Reports. Oversight responsibility is delegated to the Board Risk Committee. Day-to-day responsibility for the underlying ORSA processes lies with the Company's executive management.

The Board actively participates in the ORSA process by steering how the assessment is performed and challenging its results, including suggesting and challenging stress scenarios. This assessment is also taken into account when formulating strategic decisions for the Company.

B.3.3 Relationship between the ORSA, Solvency Needs, and Capital and Risk Management Systems

Comparison Between Standard Formula and Internal Model SCR

The Capital Management team performs a comparison between the Standard Formula SCR and the Internal Model SCR on a one-year basis.

The comparison is carried out at risk category level and at total level. Explanations are sought for areas where the results of the calculations are materially different; variances are typically due to differences in calculation methodologies.

Projected Capital and Solvency Requirements

Financial and capital projections are carried out for a three-year period. The assumptions used to carry out these projections are based on discussions between the internal teams at Arch, including the Finance and Actuarial teams. A number of scenarios are generated based on these discussions, and

the capital model is then used to generate expected profitability and capital requirements under these scenarios. Assumptions are generally based on a best estimate view, and where possible use existing information from the capital calculations. For example, the Economic Scenario Generator provides a view of expected movements in interest rates, exchange rates and inflation. Other assumptions are consistent with the business plan used, allowing for expected future changes to the risk profile, and both internal and external factors are considered.

The capital requirements are generally calculated for projected years using sensitivity testing in the capital model. Where sensitivity runs have not been calculated, the capital figures are estimated using similar stress and sensitivity tests based on movements in the projected profitability of the company and changes in planned premium.

The projections are also carried out on a number of different bases to give a range of potential scenarios, including:

- Best Estimate
- Market Upturn
- Market Downturn
- Significant Loss Scenario (selected based on stress testing)

The impact on the capital requirements is assessed for each of these scenarios. The projected financials are then compared to Arch's risk appetite to assess whether there are any breaches. This may then have implications for the amount or type of own funds held. Any action plans required to ensure that solvency needs are fully met are then considered and documented.

B.3.4 ORSA Approval Process

The AIUK Board is ultimately responsible for the ORSA process and for approving this ORSA report. Oversight responsibility is delegated to the Board Risk Committee. Day-to-day responsibility for the underlying ORSA processes lies with AIUK's executive management.

The ORSA report is circulated so that the Board Risk Committee has adequate time to review it ahead of a meeting to formally approve it. Feedback from the meeting is incorporated within the final report, and once the report has been approved, the final version is circulated again.

B.4 Internal Control System

B.4.1 Internal Control System

The Company maintains a strong and robust control culture that underpins all aspects of its operations. This is embedded in the Company's philosophy and approach that complies with best practice and with applicable laws and regulations.

As part of this culture, the Company has established an Internal Control Framework and Risk Management System. The Risk Management System comprises administrative and accounting procedures as well as appropriate reporting arrangements at all levels of its operations, which are

supported by actuarial, internal audit and compliance functions. All of these form part of an effective internal control environment.

The Internal Control Framework is adopted by the Board. The product of analysis within the Internal Control Framework serves to provide the Board and management with relevant confirmations in terms of specific regimes related to the financial environment (Sarbanes-Oxley Act of 2002 (“SOX”), financial reporting, reporting of “economic” condition for Solvency II and Pillar 3), Enterprise Risk Management and regulatory compliance standards.

B.4.2 Internal Control Framework

All employees within the Company are responsible for managing risk and controls and as a result a large number of individuals are directly involved in the risk management process. The Company has adopted a ‘three lines of defence’ approach to manage risks.

Under the oversight and direction of senior management and the Board, each of the three lines plays a distinctive role within an organisation’s wider governance framework as follows:

First Line of Defence

The First Line of Defence consists of the risk-taking functions, underwriting and investment management, and the operational functions that support them such as Claims, Ceded Re, Finance and IT. As the subject experts, the personnel in these functions are best placed to ensure that the identification, assessment and management of Arch’s risk exposures are executed in line with Arch’s appetites. The First Line of Defence:

- Owns the entity’s risks and controls
- Identifies risks and the appropriate controls to manage and mitigate such risks
- Monitors and reports on the risk profile and control effectiveness
- Regularly reports the status of Key Risk Indicators
- Reports and tracks Risk Events

Second Line of Defence

The Second Line of Defence uses data and their own knowledge and experience to opine on, and challenge, the perceived range and level of risk to which Arch is exposed. The Risk Management and Compliance Functions are within the second Line of Defence and help facilitate the risk taking and management activities of the first line, whilst ensuring other second line stakeholders receive appropriate management information upon which to base their review, challenge and decision making. The Executive Risk Committee and Board Risk Committee are the oversight forums for the Second Line of Defence functions.

Third Line of Defence

The Third Line of Defence is the Internal Audit Function overseen by the Audit Committee.

The Internal Audit Function performs independent reviews across AIE, detailed within its annual plan, and reports on the extent to which risks are being managed and the operational effectiveness of the system of internal controls. Formal reports are submitted to the Audit Committee and ACGL, agreed action points relating to observations recorded in the reports are monitored by Internal Audit and marked as closed when completed by management.

All audit findings are fed back to the Risk Function on a timely basis, and in our opinion, there are no outstanding audit issues that would have a material impact on the risk assessments underlying this ORSA.

Furthermore, the Risk Function is reviewed by the Internal Audit Function in its regular cycle of reviews.

B.4.3 Key Procedures within the Internal Control System

The internal control system is built on a strong culture which emphasises and demonstrates to all levels of personnel, through policies, procedures and training the importance of internal control. Internal control breaches may also be conduct risk failures.

Internal control consists of a number of interrelated components (based on the COSO Internal Control Framework of Treadway Commission). The model derives the way management manages its controls and outlines the components, principles and factors necessary for designing, implementing and conducting internal control. The five components are Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring.

The processes and procedures should encapsulate the following specific principles of the Internal Control Framework which are exercised in the operation of the Company's day-to-day activities:

- **Performance reviews** – Management perform regular analysis of actual activities and results, for example, against:
 - approved underwriting authorities;
 - business plans;
 - periodic and regular operational reviews; and
 - key metrics.
- **Segregation of duties** – The authorisation, execution and record keeping for transactions is segregated between personnel.
- **Authorisations** – Any activity resulting in additional obligations by the Company must be authorised by an appropriate person. The authority for individuals or roles to bind or approve specific transactions, are set out in a Delegation of Authority approved by the Board.
- **Reporting** – Establishing and maintaining clear reporting lines that ensure the prompt transfer of information to all people who need it in a way that enables them to recognise its importance.

- **Reconciliations** – This is the act of matching or balancing one system with another, this is applied to all systems that have an association in terms of data from one relating to data from another.
- **Financial systems** – Controls over basic payments, income, sales, purchasing, inventory and other financial-based systems are firmly in place.
- **Fraud detection** – Staff assessments and procedures to minimise the risk of fraud and maximise the probability of early detection.
- **Information security** – Established and sound information systems are maintained resulting in sufficient, reliable, timely, consistent and relevant information concerning business activities.
- **Physical access restrictions** – Where appropriate, physical barriers and other access controls are maintained to protect assets and property. These include password access restrictions to desktop computers, laptops and tablets, together with download restrictions and an overall policy covering buildings security.
- **Retention of records** – Documentation substantiating all transactions is maintained for a required period of time as set out within the Retention Policy in line with statutory obligations.
- **Staff recruitment, appraisal and training** – HR is responsible for controlling recruitment policies and procedures. These include:
 - Assessment of skills, knowledge and experience;
 - Professional qualifications;
 - Annual performance reviews;
 - Independent checks performed for all new joiners;
 - Job descriptions for all staff reviewed annually; and
 - Ownership and administration of the Fit and Proper process.

The Company is included within ACGL Group Assurance Processes including reviews performed by the ACGL's Corporate Underwriting Services Department and local assessment of Internal Control Over Financial Reporting under the methodologies set out in the U.S. Sarbanes-Oxley Act of 2002.

B.4.4 Compliance Function

The primary purpose of the Company's Compliance function is to ensure that integrated operations continue to adhere to the best practice standards for ACGL Group requirements, Prudential Regulation Authority ("PRA"), Financial Conduct Authority ("FCA"), Lloyd's of London ("Lloyd's"), the European Insurance and Occupational Pensions Authority ("EIOPA") and other regulatory requirements and applicable laws. This is achieved by formulating best practice and monitoring adherence to internal strategies, policies, processes and reporting procedures. The key responsibilities of the Compliance function are set out in **Section B.1.5** above.

The Compliance function is an integral element of the Company's risk management and internal control framework. The purpose of the Compliance function is to assist the Board in achieving its overall strategic objectives by promoting a culture of integrity, ethical conduct and compliance with the laws, regulations and administrative provisions that affect AIUK. It also monitors adherence to certain elements of the risk management framework and the reporting thereon to the appropriate forums.

B.5 Internal Audit ("IA") Function

The mission of IA is to enhance and protect organizational value by providing risk-based and objective assurance, advice, and insight. IA helps the Company accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management, and control processes.

The Company's Head of IA functionally reports to the Chair of the Audit Committee and administratively through Arch's Chief Audit Executive (CAE).

B.5.1 Internal Audit Practices

IA governs itself by adherence to the mandatory elements of The Institute of Internal Auditors' International Professional Practices Framework. IA practices are summarised in the ACGL Charter ("the Charter"). The Charter outlines the role, responsibilities and requirements of the function, including the requirement for independence and objectivity. The Charter is annually reviewed and updated, as necessary, by the CAE, and approved by the ACGL Audit Committee.

B.5.2 Internal Audit Reporting

The Head of IA reports periodically to senior management and the Audit Committee regarding the following:

- IA's Plan and performance relative to its Plan.
- Significant risk exposures and control issues, including fraud risks, governance issues, deficiencies with respect to Sarbanes-Oxley controls (including whether the deficiencies rise to the level of a Significant Deficiency or Material Weakness), and other matters requiring the attention of, or requested by, the Audit Committee.
- Results of engagements or other activities.
- Resource requirements.
- Any response to risk by management that may be unacceptable to the Company (e.g., recommendations not accepted by management, repeat findings).

B.5.3 Maintaining Independence

The CAE and Head of IA ensure IA remains free from all conditions that threaten the ability of internal auditors to carry out their responsibilities in an unbiased manner, including matters of engagement selection, scope, procedures, frequency, timing, and report content. If the CAE or Head of IA determines independence or objectivity may be impaired in fact or appearance, the details of impairment will be disclosed to appropriate parties.

Internal auditors will maintain an unbiased mental attitude that allows them to perform engagements objectively and in such a manner that they believe in their work product, that no

quality compromises are made, and that they do not subordinate their judgment on engagement matters to others.

Internal auditors will have no direct operational responsibility or authority over any of the activities audited. Accordingly, internal auditors will not implement internal controls, develop procedures, install systems, prepare records, or engage in any other activity that may impair their judgment, including:

- Assessing specific operations for which they had responsibility within the previous year.
- Performing any operational duties for the Company or its affiliates.
- Initiating or approving transactions external to IA.
- Directing the activities of any Company employee not employed by IA, except to the extent that such employees have been appropriately assigned to engagement teams or to otherwise assist internal auditors.

B.6 Actuarial Function

The Actuarial function is an integral part of the Company's Risk Management System. The team, which is separate from the Risk Management function, is led by the Chief Actuary. Actuarial Terms of Reference are in place which state that the Actuarial function must be free from influence from other functions and the Board.

The governance of the Actuarial function (reporting lines, remuneration structure, professional requirements) is such that:

- the Actuarial function is able to function independently and objectively while being sufficiently proximate to enable relevant comment to be made on actuarial matters; and
- conflicts of interest are considered, and appropriate mitigating measures are adopted and documented.

The Actuarial function comprises experienced individuals with in-depth knowledge of and professional qualifications in actuarial and financial mathematics. The Chief Actuary is responsible for the function being staffed appropriately given the nature, scale and complexity of the risks inherent in the integrated operations. The team has appropriate access to all resources and information systems required to discharge its responsibilities.

An integral part of the Actuarial function is the responsibility for supporting the capital planning, reserving, reinsurance, and underwriting performance reporting of the Company.

The main activities of the Actuarial function include:

- providing the senior management with the analytical tools and timely management information to empower them to manage and plan the business effectively;
- providing the Actuarial Function Report to the Board at least annually documenting the tasks undertaken and highlighting any shortcomings identified along with how such deficiencies could be remedied.
- The Actuarial Function Report addresses the activities performed by the Actuarial function in the following areas:
 - Coordinating the calculation of technical provisions;

- Assessing the sufficiency and quality of the data used in the calculation of technical provisions;
- Comparing best estimates against experience;
- Informing the administrative, management or supervisory body of the reliability and adequacy of the calculation of technical provisions;
- Expressing an opinion on the underwriting policy with sufficient involvement around the policy;
- Overseeing the calculation of technical provisions in the cases set out in the regulations;
- Rating models, rate adequacy, benchmarking, profitability studies and underwriting strategy;
- Expressing an opinion on the reinsurance policy with sufficient involvement on capital modelling, profitability studies and reinsurance strategy;
- Providing sound FRS 102 reserves and reserving volatility measures as input into standard formula SCR and Solvency II technical provisions;
- Ensuring consistency between Return on Capital measures and Pricing;
- Assisting in the independent validation of the calculation kernel;
- Providing accurate and timely management information;
- Providing plan loss ratios via a bridging analysis; and
- Assessing output that feeds into the ORSA, such as technical provisions, business plan and reinsurance arrangements.

B.7 Outsourcing

B.7.1 Outsourcing and Third-Party Risk Management

The Company uses a variety of external and intragroup providers to perform agreed services.

The Company continues to enhance its third party and outsourcing approach to manage the risk associated with the use of all third parties, ensure expected service levels are being met and to meet regulatory requirements.

A program consisting of policy, standards, procedures, systems, and controls are used to assess and manage the risk of using each service.

The Company has recently developed a comprehensive assessment methodology for potential third parties, to determine segmentation category, risk tier, and financial status. This assessment also identifies the type of data it may hold or gather for the Company, whether the service supports Important Business Services and any arrangements that need pre-notifying to regulators.

The Company identifies and monitors qualitative and quantitative performance targets to assess the adequacy of service provision, including to its policyholders, where appropriate.

Each third-party service provider is expected to re-attest to meeting the minimum controls requirements, to ensure the effective provision of services and that the arrangement remains fit for purpose.

Delegated underwriting and administration of claims is subject to enhanced due diligence, monitoring and audit procedures.

B.8 Any Other Information

No other information to report as of 31 December 2022.

SECTION C Risk Profile

C.1.1 Overview

The Company's Risk Appetite Framework provides an expression of the level of risk the Company is willing to accept in pursuit of its strategic objectives. The Risk Appetite Framework provides quantitative and qualitative statements which are used to define the general attitude within the organisation towards the desired level of risk. It complements the Risk Management Framework and enables the Company to make informed business decisions having regard to the key risks to which it may be exposed by such a decision.

All risks are regularly reviewed at Board committee meetings. The risks can be broadly split into the following categories:

Risk Category	Adjusted net asset Basis *			
	SCR £'000	SCR %	SCR £'000	SCR %
Insurance Risk	54,490	56%	54,490	60%
Market Risk	13,299	14%	7,199	8%
Credit Risk	11,669	12%	11,669	12%
Operational Risk	18,035	18%	18,035	20%
Liquidity Risk	-	0%	-	0%
Group Risk	-	0%	-	0%
Undiversified SCR	97,493	100%	91,393	100%
Diversification Credit	(13,938)		(10,381)	
Total SCR	83,555		81,012	

The "adjusted net asset basis" is an additional, internally applied, more prudent measure, that the Board use to monitor solvency, and is not part of the requirements of Solvency II. It is reviewed as part of the Company's internal governance processes but is unaudited.

Further details of these risk categories, including the key risk exposures, concentrations, mitigation techniques and sensitivities, are set out below.

C.2 Insurance Risk

C.2.1 Key Risk Exposure

Insurance risk is the risk of loss arising from the inherent uncertainties about the occurrence, amount and timing of insurance liabilities and premiums. This includes the potential for catastrophic losses, cost of reinstatement premiums and any possible reinsurance exhaustion, claims reserve deterioration and adequacy of the firm's pricing. Insurance risk incorporates underwriting, reserving and reinsurance risks. It forms the largest proportion of the SCR at 56% (2021: 55%).

The key insurance risks identified by management are:

Underwriting Risk

The risk that the unearned reserves and future premiums are insufficient to cover their run-off and future claims and expenses. The reserves considered in these calculations are the unearned elements

of the technical provisions and are modelled in a similar way to reserve risk. In addition, one future year of planned business is included within the calculations, and this is modelled by splitting out claims between attritional, large and catastrophe claims. Catastrophe losses in respect of the future year of planned business are considered separately within Catastrophe Risk. Attritional and large losses are parameterised by considering the planned loss ratios and using historical data, and benchmarks to determine the volatility assumptions.

Underwriting risk is the largest risk category facing the company. The prime drivers are our large losses including those relating to Casualty classes (natural catastrophe exposures are considered within the Catastrophe Risk category).

Catastrophe Risk

The risk of losses due to natural catastrophes relating to unearned business. Natural catastrophes in this context refer to natural disasters namely earthquakes, windstorms and flooding. This is modelled using AIR, an external catastrophe modelling tool. Catastrophe risk is managed by our Exposure Management function.

As with underwriting risk, catastrophe risk is heightened in the current economic climate with rates showing little signs of improving other than in selected catastrophe affected areas, and our underwriting controls remain as tight as ever as we navigate through these difficult economic conditions. We also use reinsurance as a method of risk mitigation. The controls in place for catastrophe risk are consistent with those for underwriting risk.

Reserve Risk

The risk that the current reserves are insufficient to cover their run-off. The reserves considered in these calculations are the earned elements of the technical provisions. Reserve risk is modelled by considering the size and volatility of earned reserves (split by line of business and currency) and the dependencies between each modelled variable. Volatilities and dependencies are derived using historical information. Reserve risk is the second largest risk category and is managed by the Actuarial function.

The company operates to a best estimate reserving philosophy. Reserve estimates are derived by the Chief Actuary after consultation with individual underwriters and claims teams, actuarial analysis of the loss reserve development and comparison with market / Lloyd's benchmarks. The objective is to produce reliable and appropriate estimates that are consistent over time and across classes of business. Generally, reserves are established without regard to whether the claim may subsequently be contested, and Solvency II reserves are discounted for the time value of money.

C.2.2 Material Risk Concentrations

Realistic Disaster Scenarios ("RDS") are in place for all classes of business and are monitored regularly at a number of groups and committees, including the Exposure Management Group, the Underwriting Committee and the Risk Committee.

There are generally no material anticipated changes to risk concentrations over the coming year. However, the UK regional book of business, which is being written by the Company following the

acquisition from Geo Underwriting at the beginning of 2019 and growth in this portfolio, increased the concentration of risk within the UK, including risks relating to UK windstorm and flood exposures.

C.2.3 Material Risk Mitigations

Reinsurance is considered to be the main method of insurance risk mitigation. This consists of a number of arrangements with external reinsurers, including a catastrophe treaty to mitigate UK flood aggregations. The Company also has an 85% intercompany whole-account quota share arrangement with ARL.

The Company does not make use of any complex arrangements, such as catastrophe bonds or any other methods of alternative risk transfer.

In addition, insurance risk is further mitigated through the following key controls:

Underwriting Risk

Arch has a number of key controls in place for managing Underwriting risk, centered around robust underwriting controls. In addition to underwriting controls, we also use reinsurance as a method of risk mitigation. Key controls include:

- AIUK Regional Executive Committee – meeting monthly and is Chaired by the Regional CEO and other senior AIUK executives, it focuses on overseeing underwriting and operational performance across AIUK.
- Digital Underwriting Strategy – automation of underwriting with feedback loop to improve performance and rapid change employment.
- Business Planning Process – business planning is an interactive process whereby underwriters and management agree the premium and loss ratios required to achieve a target rate of return set by the Board. The Chief Underwriting Officers are responsible for the process on behalf of the Board with the assistance of the Management Committee and Underwriting Committee.
- Underwriting Authorities – approved written and signed underwriting authorities in place for all underwriters that are aligned to the syndicates' and company's business plans and individuals experience.
- Regional UW Quality Assurance Reviews – on a monthly basis, QA Team performs data and risk quality reviews to check that policy data and any subsequent MTAs are entered into UW systems completely and accurately.
- Formal independent peer review process in place for underwriting – independent reviewers take a sample size of all risks written within a month. A quarterly review meeting is held with the CUOs and any findings are reported to UWC and Risk Committee.

Catastrophe Risk

Arch employs a number of techniques to ensure that catastrophe exposure is managed and controlled within defined limits.

- Risk Appetites – with defined limits on exposure to material perils.
- Catastrophe reinsurance programmes to control retained risk.

- Underwriting guidelines to specify controls for individuals writing catastrophe exposed business (e.g., limits on geographical exposures).
- Catastrophe modelling (using the AIR system) to generate and analyse loss distributions at a granular level. This is supported by additional controls, such as:
 - Reconciliation between AIR and underwriting systems
 - Validation of Cat Models to ensure appropriateness of output for Arch's risk profile
 - Data checks to ensure that all exposures are appropriately included in estimates
- The Exposure Management Group reviews detailed exposure information each month where they receive further challenge, focusing on changes which have taken place, and access checks and validation carried out.
- Review by Committees – Executive Summaries are presented to the Underwriting Committee and the Executive Risk Committee each quarter.

Reserve Risk

Key risk management controls include:

- Independent External Review of actuarial reserves - External Actuaries conduct a review of the level of reserves based on data forwarded by the Chief Actuary at least annually for Q4 reserves.
- Adherence to Reserving Policy (GAAP IBNR Reserves) - Arch documents its reserving philosophy and methodologies in the Reserving Policy.
- Chief Actuary Review of GAAP Reserves - A quarterly review of the loss reserves is performed by the Reserving Actuary and the Chief Actuary.
- Review of quarterly reserving data - On a quarterly basis, the Reserve Committee reviews suggested reserves for each line of business presented by the Reserving Actuary and proposes the reserves to be posted for the Underwriting Result to check if reserves are reasonable.
- Board review of reserves - The Board reviews reserves as part of the Quarterly Board pack. The Board reviews the annual Actuarial Function Report.
- Audit Committee review of reserves - On a quarterly basis the Audit Committee reviews the reserve adequacy as part of the Quarterly Audit pack.
- Quarterly Reserving Report - Internal actuaries perform detailed analysis and make the first cut Ultimate Loss Ratio selections. The UK Chief Actuary reviews all selections, and the reserve report is completed and signed by the Reserving Actuary.

C.2.4 Stress and Sensitivity Testing

Stress and scenario testing is performed as part of the ORSA process and is conducted at least annually. These tests consider moderate as well as extreme but plausible stresses and assess the impact on the Company's capital position.

In addition, sensitivity tests are run by changing a single assumption in the capital model while keeping other assumptions consistent. These sensitivity tests have been carried out using the internal capital model as an approximation to both regulatory and economic capital requirements (both use the standard formula). The below assumptions only impact the solvency capital requirement for both regulatory and economic capital, and the solvency ratio has been calculated with the current level of own funds.

Sensitivity Test	Total Own Funds		Net Adjusted Assets	
	Impact on SCR	Impact on Solvency Ratio	Impact on SCR	Impact on Solvency Ratio
Reserve volatility - pessimistic view	0.85%	-1.64%	0.85%	-1.37%
Cat Losses increased by 25% on largest exposure (European Windstorm)	6.35%	-11.62%	6.35%	-9.70%
Estimated earned and written premium in next 12 months - both down by 10%	-0.85%	1.68%	-0.85%	1.40%

The impact of above sensitivity tests is in line with the expectations due to the underwriting risk being the largest component of the SCR.

C.3 Market Risk

C.3.1 Key Risk Exposure

Market risk is the risk of changes in income from or values of assets arising from fluctuation in economic variables, including interest rates and exchange rates. It is the risk of loss, or of adverse change in the financial situation, resulting directly or indirectly from fluctuations in the level and in the volatility of market prices of assets, liabilities and or financial instruments. Also includes defaults against issuers of securities.

The risk from limited diversification in the asset portfolio or from default of issuers of securities is also included within market risk.

The company's investment strategy is designed to limit market risk through investments which are considered to be conservative high-quality assets that reduce exposure. The current investment guidelines and approach focus on total return, preservation of capital and market liquidity. The duration of assets is designed to match the duration of liabilities which is around 2.5 years on average. The company does not invest in hedging or derivative financial instruments. The performance of investment managers is regularly reviewed to confirm adherence to these guidelines.

Exposure to interest rate risk arises from the investments in fixed interest securities. The company monitors interest rate risk by calculating the mean duration of the investment portfolio and of the policyholder liabilities. Any gap between the mean duration of the assets and the estimated mean duration of the liabilities is minimised by buying and selling fixed interest securities of different durations.

The company seeks to mitigate the currency risk by matching the estimated foreign currency denominated liabilities with assets denominated in the same currency. The company reviews currency asset and liability positions on a quarterly basis. This process is designed to align currency matching. In addition, as part of this process, currency trades may be made to maintain the desired currency net asset allocations.

C.3.2 Material Risk Concentrations

The material concentrations of securities are monitored regularly at Investment Committee meetings.

The Company's largest exposures as at 31 December 2022 are Blackrock money market fund (£14.0 million or 8.6% of capital), UK GILTs (£55.2 million or 34.0% of capital) and Other Government Bonds (£31.0 million or 19.1% of capital).

There are no material anticipated changes to risk concentrations over the coming year. However, it is recognised that the markets continue to be volatile, and the Investment Committee continues to monitor the exposures and investment strategy accordingly.

C.3.3 Market Risk Mitigations

A low-risk investment strategy which closely matches liabilities by currency and duration is considered to be the main method of market risk mitigation. The Company does not use exotic or alternative arrangements such as derivatives to minimise market risk.

Arch outsources investment management to the Arch Group. This allows the Arch to benefit from economies of scale by being part of a substantially larger portfolio. Oversight is provided by the CFO, Investment Committee and the Arch Board.

Key risk management controls include:

- Investment Risk Appetite – Overall limits are put in place on the level of investment risk, and also on key (such as duration, credit quality and liquidity).
- Investment Risk Policy - The Investment Risk Policy sets out the sources of investment risk, investment objectives, function and committee oversight, appetites, controls, and the process for evaluation of new investment products.
- Triparty reconciliation investment - On a quarterly basis, Management Accountant performs a three-way reconciliation of investment data which covers quantity and market values for all investment assets held by the Investment Account Service Provider, Custodian and Arch's Investment Accounting records.
- Formal Investment Strategy and Guidelines - The Investment Strategy sets out the high-level objectives and is supported by detailed guidelines which Investment Managers operate under and approved by the Board.
- Investment Committee review and oversight of investment portfolio - The Investment Committee is the oversight Committee that ensures that Arch Europe's Investment Risk Policy is being applied and monitored.
- Reconciliation of investment journal to General Ledger - On a monthly basis, the Management Accountant/Head of Finance Operations verifies the accuracy of the posting of the monthly Investment Accounting journal.

C.4 Credit Risk

C.4.1 Key Risk Exposure

Credit risk is the risk of loss, or of adverse change in the financial situation resulting from fluctuations in the credit standing of counterparties and any debtors to which insurance and reinsurance undertakings are exposed, in the form of counterparty default risk. For AUKGB, key counterparties include reinsurers, brokers, coverholders and banking counterparties.

Exposure to credit risk arises from financial transactions with counterparties including debtors, borrowers, brokers, policyholders, reinsurers, banks and guarantors. The company uses the credit ratings assigned to particular counterparties to measure credit risk. Credit risk is managed by our finance function.

Note: Credit risk associated with our investments is included within the market risk category.

C.4.2 Material Risk Concentrations

With regard to premium debtor risk, the company ensures that all brokers are subject to a due diligence protocol and that they have terms of business agreements in place. An approval system also exists for new brokers, and broker performance is regularly reviewed. System exception reports highlight trading with non-approved brokers, and the company's credit control team regularly monitors the ageing and collectability of debtor balances. Large and aged items are prioritised.

To lessen the risk of the company's exposure to any particular reinsurer, exposure limits by class of business are approved. On behalf of AIUK, ACGL has developed processes to formally examine all reinsurers before entering into new business arrangements, which are also considered at the company level. New reinsurers are approved by the Reinsurance Security Committee, which also reviews arrangements with all existing reinsurers at least annually. Vulnerable or slow paying reinsurers are examined more frequently.

In addition to the external reinsurance arrangements, there is also an inter-company quota share arrangement with 85% of the business written by AIUK ceded to Arch Re Ltd (Bermuda). Arch Re Ltd (Bermuda) holds collateral of at least 100% of the reinsurer obligations at any given time.

The collateral held by Arch Re Ltd (Bermuda) means that if it were to default, AIUK would be expected to be able to recover the owed recoveries. However, there remains credit risk due to possibility of Arch Re Ltd (Bermuda) defaulting and the reinsurer obligations increasing afterwards.

As noted in the earlier sections, the Company has in place an 85% quota share arrangement with ARL, which potentially exposes the business to a significant level of credit risk. This is mitigated through the use of a collateralised trust fund set up by ARL, with the Company being the sole beneficiary of the trust. Collateral of 100% of the reinsurer obligations is required at any given time, which means that if ARL were to default, the Company would be expected to be able to recover any outstanding balances through the trust. The trust fund deed's guidelines state the fund should have a surplus of 5% at all times.

We expect ARL to remain strongly capitalised, and the level of collateral held as well as the security of ARL is discussed quarterly by the Board.

The external ratings of ARL have been stable over the year in respect of Moody's at A2 (Outlook Stable) and have improved for S&P at A+ (Outlook Stable) and AM Best at A+ (Outlook Stable).

The material concentration of other reinsurers and other counterparty balances held are consistent with the risk exposure above and are monitored regularly at the Risk Committee meeting.

C.4.3 Credit Risk Mitigations

Key risk management controls include:

- Approval of Bank Payments - All payments go through a two-tiered approval process.
- Monthly credit control report - The Credit Control Projects and Reporting manager produces a monthly credit control report, including all entities in the business.

- Monthly credit control report meetings with CFO - aged debt reports are prepared by the Head of Finance Operations. These reports are reviewed by CFO during the monthly credit control review meeting to discuss aged debt and unallocated cash.
- Aged Payables Review - On a monthly basis, the Head of Finance Operations reviews and approves the AP Aging report.
- Vendor monitoring - A quarterly review of all payees and total amounts paid is undertaken by the CFO.
- Quarterly Review of KPI Report and Unallocated Cash - On a quarterly basis, the Group Credit Control Manager reviews the unallocated cash position.

C.4.4 Stress and Sensitivity Testing

Stress and scenario testing of credit risk is carried out as part of the ORSA process and is conducted at least annually. These tests consider moderate as well as extreme but plausible stresses and assess the impact on the Company's capital position.

A sensitivity test is run by changing a single assumption in the capital model while keeping other assumptions consistent. The below assumptions only impact the solvency capital requirement for regulatory and economic capital, and the solvency ratio has been calculated with the current level of own funds.

Sensitivity Test	Total Own Funds		Net Adjusted Assets	
	Impact on SCR	Impact on Solvency Ratio	Impact on SCR	Impact on Solvency Ratio
50% increase in currency mismatch	0.03%	-0.06%	0.03%	-0.05%
All assets held in corporate bonds	0.77%	-1.49%	0.77%	-1.24%
1 notch decrease to all corporate bond ratings	0.11%	-0.21%	0.11%	-0.17%

The impact of above sensitivity test is in line with the expectations and is not believed to have a material impact on the Company's solvency.

Sensitivity Test	Total Own Funds		Net Adjusted Assets	
	Impact on SCR	Impact on Solvency Ratio	Impact on SCR	Impact on Solvency Ratio
10% increase in Reinsurance balances	0.62%	-1.20%	0.62%	-1.00%
1 notch decrease to ARL credit rating	0.49%	-0.94%	0.49%	-0.79%
Intercompany quota share collateral reduced by 10% to 90% of reinsurer obligation	0.68%	-1.32%	0.68%	-1.10%

The sensitivities demonstrate that key variations in assumptions around the intercompany quota share arrangement, including the level of collateral held, do not have a material impact to the Company's solvency.

C.5 Liquidity Risk

C.5.1 Material Risk Exposure

Liquidity risk is the risk that sufficient financial resources are not maintained to meet liabilities as they fall due. This includes the extent of mismatch between assets and liabilities (by nature, term, and

currency) and the amount of assets held in highly liquid, marketable forms should unexpected cash flows lead to a liquidity problem.

AIUK is exposed to daily calls on its available cash resources, principally from claims arising from its insurance business. Liquidity risk arises where cash may not be available to pay obligations when due, at a reasonable cost. The company's approach is to manage its liquidity position so that it can reasonably survive a significant loss event. This means that AIUK maintains sufficient liquid assets, or assets that can be translated into liquid assets at short notice and without capital loss, to meet expected cash flow requirements. These liquid funds are regularly monitored using cash flow forecasting to ensure that surplus funds are invested to achieve a higher rate of return. Regular cash flow monitoring ensures that maturing deposits are sufficient to meet cash calls.

C.5.2 Risk Mitigation

Key risk management controls include:

- Cash flow forecast - Weekly cash flow projections are performed, matching income and outgoings in settlement currency to ensure short-term liquidity by currency.
- Trust fund review - the trust fund positions in relation to the inter-company quota share with ARL are reviewed by the financial controller. The trust funds must run at a 5% surplus as per internal benchmarks. If a shortfall is noted, ARL are informed that a top up is required.
- Intercompany Quota Share - The company controls liquidity through the 85% quota share reinsurance arrangement with Arch Re Ltd (Bermuda) that is settled quarterly, net and in arrears.

C.5.3 Expected Future Profit

Expected profits included in future premiums ("EPIFP") are profits which result from the inclusion in technical provisions of premiums on existing (in force) business that will be received in the future, but that have not yet been received.

The table below shows the expected profit in future premiums ("EPIFP") at 31 December 2022 were £30.4million (2021: £17.8 million). This represents the future profits expected.

	2022	2021
Expected profit in future premium	£'000	£'000
Medical expenses	-	-
Income protection	1,645	-
Marine, aviation and transport	3,721	1,496
Fire and other damage to property	14,933	10,886
General liability	6,785	4,174
Motor other	1,984	722
Motor liability	472	-
Credit and Surety	782	507
Casualty Reinsurance	53	11
Total	30,375	17,796

C.6 Operational Risk

C.6.1 Key Risk Exposure

Operational risk is defined to be the risk of loss arising from inadequate or failed internal processes, or from personnel and systems, or from external events. Operational risk includes legal and regulatory risks but excludes risks arising from strategic decisions, as well as reputation risks. The key driver of regulatory risk is an insufficient understanding of legislative and regulatory requirements/mandates. Our assumption is that potential changes in legislative and regulatory requirements are effectively communicated by the governing bodies.

The Company considers regulatory breaches and cyber events to be the most material operational risks, which is consistent with management's view and reflects the current regulatory environment.

The Company applies significant endeavours to avoid legal, regulatory or compliance failure or impairment which may lead to regulatory censure and/or financial penalty and/or harm to its reputation or franchise.

Management has also identified the following other key operational risks:

- Inadequate claims handling;
- Legal, litigation, political and reputational risk and
- Reliance on key individuals (including Directors and staff at outsourced service providers).

The risks classified under the Operational Risk profile have been identified, assessed and articulated in the Risk Register. Relevant risk and control owners report to the Executive and Board Risk Committee and are responsible for identifying new, emerging or changing risks and any consequent control changes required to realign the risks within risk tolerances.

With respect to Legal Risk, the General Counsel has responsibility for monitoring new and pending legislation in the UK and relevant bodies in other applicable jurisdictions for items that could potentially impact the Company.

In addition, applicable international risks are identified through discussions, meetings and memos with/from law and accounting firms within the jurisdiction of all ACGL entities.

C.6.2 Material Risk Concentrations

It is noted that we have a number of third party vendors including Global Services in the Philippines. We do not consider any one of these individual third parties to lead to a material level of operational risk concentration.

C.6.3 Operational Risk Mitigations

Key risk management controls include:

- Operational Risk Processes and procedures – There are various monitoring processes and procedures in place that provide oversight on adherence to internal policies and regulatory

requirements. These include internal control certification on controls, risk management oversight via risk reviews and assessments, monitoring of key metrics, compliance oversight and monitoring alongside independent reviews performed by the Internal Audit function.

- **Management Oversight** – There are a number of management oversight committees in place that oversee the matters relating to operational risk.
- **Regulatory Compliance** – An independent and dedicated Compliance function is in place which is responsible for ensuring Arch remains compliant with its regulatory requirements. In addition, the function analyses regulatory developments and trends that may impact Arch and are communicated to the business. The function also performs regular thematic reviews.
- **Internal Audit** – Provides independent assurance across the risk and control framework.

The Risk Function also maintain Arch's Risk Events Log. An incident can be an occurrence, several occurrences or even a non-occurrence where there is an actual consequence to the company. These usually have causes which could be from a control not operating effectively, lack of control or a cause which cannot be managed or foreseen.

An efficient Risk Events process that identifies, assesses, reports and monitors incidents and near misses across the organisation allows Arch to continuously refine processes, strengthen the Risk Management Framework, potentially reduce costs and limit any reputational damage. Reported Risk Events are presented to the Executive and Board Risk Committees.

C.6.4 Stress and Sensitivity Testing

Operational Risk is included in the Standard Formula. However, as part of its ORSA process, the Company also considers the following:

A sensitivity test is run by changing a single assumption in the capital model in isolation while keeping other assumptions consistent. The below assumptions only impact the solvency capital requirement for both regulatory and economic capital, and the solvency ratio has been calculated with the current level of own funds.

Sensitivity Test	Total Own Funds		Net Adjusted Assets	
	Impact on SCR	Impact on Solvency Ratio	Impact on SCR	Impact on Solvency Ratio
10% increase in largest operational stress tests	0.10%	-0.19%	0.10%	-0.16%

The impact of above sensitivity test is in line with the expectations and is not believed to have a material impact on the Company's solvency.

C.7 Group Risk

C.7.1 Key Risk Exposure

Group Risk is the the risk of loss arising from other companies within Arch Group and other related parties.

The key drivers of Group Risk are:

- **Downgrade of Arch Group**

- Occurrence of an adverse reputational event in another Arch group company
- Failure to implement adequate governance.

C.7.2 Material Risk Concentrations

The Company has a dependence on ACGL as its sole capital provider so any adverse financial or reputational event impacting ACGL will have a knock-on effect to the Company.

C.7.3 Group Risk Mitigations

Key risk management controls include:

- Regular dialogue with Group Executives
- Relevant attendance at Group Committees / Management Forums
- Crisis Management Plan and Procedures
- Monitoring of ACGL financial strength

C.8 Strategic Risk

C.8.1 Key Risk Exposure

Strategic Risk is the risk of losses arising from adverse effect of management decisions on both business strategies and their implementation. This also includes the failure to adopt a business strategy following changes in the internal or external environment.

The individual risks constituting strategic risk, and their definitions, key drivers and key mitigations are outlined below.

Strategic Decisions

This is an inability to set value creating strategic objectives and execute on them in a timely manner leading to inadequate profitability, financial loss or reputational damage.

The key drivers of this risk are:

- Failure to define and document Arch's strategy
- Failure to appropriately respond/position to changes in demand patterns (client buying behavior, distribution channels)
- Failure to appropriately respond/position to changes in supply patterns (new entrants, business model, consolidation)
- Inadequate or inappropriate due diligence and governance around new initiatives (including acquisitions/dispositions, expansions/closures, restructuring)
- Inadequate governance around business planning (including RORAC) and the strategic asset allocation process resulting in misinformed underwriting strategy

The key mitigations of this risk are:

- Assigning strategic risk responsibility
- Formal process in place for developing the business strategy
- Review and approval of AIE business strategy
- Formal M&A management process in place
- Board approval of M&A transactions
- Management Committee in place
- Regular review of competitors' activity
- Formal business planning process in place
- Review and approval of Business Plan

Strategy Execution

This is the risk of the business plan not being designed to make progress towards achieving the company's strategic objectives leading to inadequate profitability, financial loss or reputational damage.

The key drivers of this risk are:

- Failure to translate strategy into operational plans
- Failure to execute business plans
- M&A: Poor integration planning and execution including cultural alignment
- M&A: Loss of key personnel from the newly acquired entity
- Failure to adequately manage a crisis event that may lead to a loss of confidence amongst stakeholders
- Failure to implement adequate governance

The key mitigations of this risk are:

- Formal process in place for developing the business strategy
- Formal M&A management process in place
- M&A integration management process
- Business plan monitoring and reporting
- Management Committee in place
- Monthly business performance status report
- Board of Directors oversight
- Group review and approval of business plan
- Communication of business plan objectives to all staff
- Crisis Management Plan and Procedures
- Formal business planning process in place

- Review and approval of Business Plan

Culture

The Risk arising from the dilution of culture or a mismatch between culture and governance leading to a diminished Arch identity and loss of business or reputational damage.

The key drivers of this risk are:

- Failure to define, communicate or regularly review Arch's culture
- Major change leading to conflicts in culture
- Failure to implement adequate governance
- Failure to complete internal and external culture related reporting

The key mitigations of this risk are:

- M&A integration management process
- Management Committee review of culture assessments
- ACT Culture dashboard metrics reporting
- Background verification for all new joiners including contractors
- Code of conduct
- Anti-Bullying and Harassment, Equal Opportunities, Recruitment and Disciplinary policies
- Employee engagement survey
- Mental Health First Aiders training
- FCA Code of Conduct return (non-financial misconduct content)
- Gender pay gap reporting

Reputation

The consequential impact on reputation from the manifestation of a scenario identified in another risk event or an emerging risk not yet captured in the risk register.

The key drivers of this risk are:

- Underwriting sensitive insurance products
- Details of high-profile claims disclosed
- Failure to implement adequate governance

The key mitigations of this risk are:

- Formal approach to claims management including processes and controls is set out within the Claims Manual.

- Management of reputational risk
- ESG Committee
- ESG Framework
- Sensitive Underwriting Committee
- Sensitive Underwriting Review Criteria and Referral Process
- A formal underwriting committee established to review all matters relating to underwriting activities
- Formal business planning process in place
- Review and approval of Business Plan

Strategic Broker Management

The risk that Arch does not design, manage or monitor its strategic broker arrangements effectively and appropriately resulting in a financial and/or reputational impact.

The key drivers of this risk are:

- Not having a documented Broker Strategy and/or communicating this to all underwriters
- Not having a documented Broker Remuneration Policy and/or not communicating this to all underwriters
- Over dependence on a concentrated number of brokers
- Not monitoring and/or having inadequate resource to monitor Broker Service Agreements using appropriate management information
- Lack of effective governance and oversight in ensuring the Broker Strategy is effectively executed.

The key mitigations of this risk are:

- Annual review of the documented Broker Strategy
- Underwriting Committee oversight
- Annual review of the documented Acquisition Cost Policy
- Monthly business development meeting
- Review of Brokers metrics
- Broker Service Agreement Progress Review
- Legal review of Broker Service Agreements

Biannual Broker Service Agreements review meetings.

C.9 Emerging Risks

Identifying, planning for and controlling emerging risks is an important part of our risk management activity across all aspects of our business, including core insurance activities, investments, operations and strategy. We make a significant effort to identify potential material emerging threats to Arch. It is a core responsibility of each committee, and we believe all reasonable steps are taken to minimise the likelihood and impact of potential emerging risks and to prepare for them in the event they occur.

The Risk Function collates emerging risks from a number of sources, including the quarterly risk assessments, and then reports these to the Underwriting Committee, Reserving Committee, Investment Committee, and the Risk Committees.

In addition, the Emerging Risks Group meets quarterly to discuss emerging risks with escalation to the Underwriting Committee and the Risk Committees. The Emerging Risks Group also shares content with Arch Group's Emerging Risks Committee.

This year, following the departure of the incumbent ERG chair, new co-chairs were appointed, a Senior Casualty Underwriter and the Head of Enterprise Risk Management. The membership of the Emerging Risks Group was also refreshed during 2022 in order to provide a balanced and diverse view of emerging risks. This has ensured emerging insurance risks remain the focus of the ERG, with the Risk Function facilitating the process and ensuring these emerging risks are added to the Emerging Risks Log.

A number of new emerging risks have been identified, discussed, investigated and reported during 2022 including, climate change, inflation, Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), pesticide and herbicide exposure, natural catastrophe impact on renewable energy farms, plastics pollution, and the China/Taiwan situation.

SECTION D Valuation for Solvency Purpose

The table below shows the balance sheet as at 31 December 2022 on a FRS 102 basis, Solvency II basis and the adjustments to each line.

Details of the valuation changes are contained in the sections **D.1 to D.5**.

Balance Sheet as at 31 December 2022 - £'000s	UK GAAP	Adjustments	Solvency II
Deferred acquisition costs	74,043	(74,043)	- D1.8
Deferred tax assets	8,632	0	8,632 D1.1
Holdings in related undertakings, including participations	40,500	13,372	53,872 D1.2
Equities - unlisted	-	-	-
Government Bonds	98,261	340	98,601 D1.3
Corporate Bonds	34,613	279	34,892 D1.3
Collateralised securities	1,188	4	1,192 D1.3
Collective Investments Undertakings	15,038	0	15,038 D1.3
Reinsurance recoverables from: Non-life and health similar to non-life	796,921	(280,654)	516,267 D2
Insurance and intermediaries receivables	125,432	(95,324)	30,108 D1.4
Reinsurance receivables	20,325	9,704	30,029 D1.5
Receivables (trade, not insurance)	3,119	-	3,119
Cash and cash equivalents	9,789	(0)	9,789 D1.6
Any other assets, not elsewhere shown	9,977	(624)	9,353 D1.7
Total assets	1,237,838	(426,946)	810,892
Technical provisions - non-life	893,194	(281,045)	612,149 D2
Reinsurance payables	79,546	(79,546)	- D3.2
Payables (trade, not insurance)	30,131	-	30,131 D3.1
Subordinated liabilities	15,500	-	15,500 D4
Any other liabilities, not elsewhere shown	74,233	(68,175)	6,058 D3.1 / D3.3
Total liabilities	1,092,604	(428,766)	663,838
Net Assets	145,234	1,820	147,054

D.1 Assets

The following are the bases, methods and main assumptions used for valuation of each material class of assets for Solvency II purposes.

D.1.1 Deferred tax assets

As at 31 December 2022, the Company has recognised £8.6 million (2021: £nil) deferred tax assets being the temporary differences arising between the tax bases of assets and liabilities and their carrying amounts under Solvency II. The recognition was based on the forecast that there will be future taxable profits against which the losses can be utilised.

The measurement principles for deferred taxes are consistent between UK GAAP and Solvency II. Deferred tax assets are recognised to the extent that it is probable that future taxable profits will be available against which temporary differences can be utilised. The valuation difference relates to the change in the value of deferred tax, caused by the impact of adjustments made to balance sheet items in compliance with Solvency II regulations.

D.1.2 Holdings in related undertaking

As at 31 December 2022, the Company valued its investment in its wholly owned subsidiary, AEIS, at £53.9 million (2021: £47.9 million) on a Solvency II basis. The valuation is based on adjusted equity method where the value of the investment is determined as the Company's share of AEIS' net assets. The value of AEIS comprises of a loan to AIGL and the remaining net assets of the entity excluding intangibles. The valuation of the adjusted equity method is consistent with Solvency II rules, where an intangible asset has been excluded from the net assets.

The value of the holdings in the related undertaking is different from the FRS 102 valuation, where the value was stated at the lower of cost less impairment or recoverable amount, which is £31.0 million.

In addition to the investment in its wholly owned subsidiary, the Company is party to a licensing agreement with AIGL permitting the Company to renew the UK commercial lines business acquired by AIGL from the Ardonagh Group in 2019.

AEIS hold a £28.7 million (2021: £30.1 million) loan receivable, that was issued to AIGL to provide funding for the above-mentioned acquisition.

D.1.3 Investments (other than holding in related undertaking)

As at 31 December 2022, the Company has a total of £149.7 million (2021: £120.4 million) investment assets that were valued in accordance with FRS 102 fair value model. The Company's investments are externally managed. The Company receives quarterly reports detailing the underlying securities held in the investment funds. The quarterly reports are reviewed to ensure average credit ratings and durations have not moved significantly since the previous quarter. Any unusual movements or discrepancies are discussed with the fund managers and is presented to the Investment Committee on a quarterly basis.

The investments are valued at fair value under FRS 102 and Solvency II based on market prices at the reporting date, which are quoted prices in active markets for identical assets. The investments under Solvency II include accrued interest which under FRS 102 is reported under other assets.

The valuation of investments is consistent with the accounting valuation under FRS 102.

D.1.4 Insurance and intermediaries receivables

Insurance and intermediaries receivables balance represents premiums owed from policyholders. As at 31 December 2022, the Company has a total of £30.1 million (2021: £13.2 million) of outstanding premiums. Outstanding premiums are valued at amortised cost as an approximation to fair value and due to the short-term nature of the receivable no adjustments to valuation are required. The valuation of insurance and intermediaries receivables is consistent with the FRS 102. The deferred premiums held under FRS 102 are transferred from insurance and intermediaries to the technical provisions in the calculation of the Solvency II balance sheet.

D.1.5 Reinsurance receivables

The reinsurance receivables balance represents recoverables from reinsurers on settled claims. As at 31 December 2022, the Company had a total of £30.0 million (2021: £21.5 million) of reinsurance receivable. Reinsurance receivables are valued at amortised cost as an approximation to fair value and

due to the short-term nature of the receivable no adjustments to valuation are required. The valuation of reinsurance receivables is consistent with the accounting valuation under FRS 102.

D.1.6 Cash and cash equivalents

As at 31 December 2022, the Company had £9.8 million (2021: £14.7 million) held as cash and cash equivalents with £0.6 million (2021: £7.0 million) in the UK. The UK bank accounts are held in major currencies which are GBP, USD, EUR and AUD. The monies held in Germany, Italy and Spain bank accounts are denominated in EUR. The non-GBP balances are translated into GBP at the balance sheet closing rate.

There is no valuation difference between FRS102 and Solvency II for cash and cash equivalents.

D.1.7 Other assets and non-insurance receivables

Other assets and non-insurance receivables have been valued using the alternative valuation method in accordance with Solvency II. The Directors have used the cost approach or current replacement cost approach, being the closest to the fair value of these assets.

The valuation of other assets and non-insurance receivables is consistent with the accounting valuation under FRS 102.

D.1.8 Deferred acquisition costs

In the financial statements, acquisition costs, which represent commission and other related expenses, are deferred over the years in which the related premiums are earned. The deferred expenses relate to commissions, underwriter salaries, office costs, and marketing which are deferred based on a ratio between bound and quoted policies by line of business.

The Solvency II balance sheet is prepared on the basis that best estimate future cash flows on servicing (re)insurance contracts are included in the calculation of SII Technical Provisions. Therefore, deferred acquisition costs are excluded from the Solvency II balance sheet.

D.2 Technical Provisions

D.2.1 Results summary

A summary of the technical provisions for the Company as at 31 December 2022 is set out below, split by material lines of business:

	Net Best Estimate Claims Provision £'000	Net Best Estimate Premium Provision £'000	Risk Margin £'000	Net Technical Provisions £'000	% Of Net TP %
Medical Expenses	(24)	22	-	(2)	0%
Income Protection	880	(61)	101	920	1%
Motor Vehicle Liability	-	(271)	12	(259)	0%
Other Motor	3,567	883	547	4,997	5%
Marine, Aviation and Transport	9,860	2,644	1,540	14,044	15%
Fire and Other Damage to Property	14,703	5,830	2,702	23,236	24%
General Liability	39,666	6,069	5,959	51,695	54%
Non-Proportional Casualty	82	459	65	606	1%
Credit and suretyship insurance	232	344	71	646	1%
Total	68,966	15,919	10,997	95,883	100%

The total technical provisions were £95.9 million as at 31 December 2022, consisting of £69.0 million in respect of the claims provision (earned business), £15.9 million in respect of the premium provision (unearned business), and £11.0 million in respect of the risk margin.

The process of valuing AIUK's Technical Provisions ("TPs") begins with actuarial valuation of our FRS 102 basis reserves for loss and loss adjustment expenses ("Loss Reserves"). Cash flows associated with those Loss Reserves, along with unearned premium reserves and provisions for other components of TPs, are converted to an economic basis using the approach outlined below.

D.2.2 Calculation Methodology

Under Solvency II an economic balance sheet is required to be prepared – which involves inclusion of a market valuation of technical provisions. The overarching principle for valuing technical provisions under Solvency II is the current balance insurance undertakings would have to pay if they were to transfer their (re)insurance obligations immediately to another undertaking.

The calculations for the Solvency II technical provisions are based on the existing FRS 102 valuation, which in itself contain key sources of estimation uncertainty. The most significant of these involves the valuation of outstanding claims and, in particular, the provision for claims incurred but not reported.

The processes used to determine the assumptions on which the measurement of insurance contract provisions is based, actual assumptions used, the effects of changes in assumptions, and an analysis of sensitivity to changes in assumptions are described below.

(i) Process used to determine the assumptions for measuring insurance contracts

Loss Reserves are established to provide for loss adjustment expenses and represent the estimated expense of settling claims, including legal and other fees and the general expenses of administering the claims adjustment process. Periodically, adjustments to the reported or case reserves may be made as additional information regarding the claims is reported or payments are made. IBNR reserves are established to provide for incurred claims which have not yet been reported to an insurer or reinsurer at the balance sheet date as well as to adjust for any projected variance in case reserving. IBNR reserves are derived by subtracting paid losses and loss adjustment expenses and case reserves from estimates of ultimate losses and loss adjustment expenses. Actuaries estimate ultimate losses and loss adjustment expenses using various generally accepted actuarial methods applied to known losses and other relevant information. Like case reserves, IBNR reserves are adjusted as additional information becomes known or payments are made. The process of estimating reserves involves a considerable degree of judgement by management and, as of any given date, is inherently uncertain.

Ultimate losses and loss adjustment expenses are generally determined by extrapolation of claim emergence and settlement patterns observed in the past that can reasonably be expected to persist into the future. The Company uses several methods for determining its reserves. These methods generally fall into one of the following categories or are hybrids of one or more of the following categories:

Expected loss methods – these methods are based on the assumption that ultimate losses vary proportionately with premiums. Expected loss and loss adjustment expense ratios are typically developed based upon the information derived by underwriters and actuaries during the initial pricing of the business, supplemented by industry data available from organisations, such as statistical bureau and consulting firms, where appropriate. These ratios consider, among other things, rate increases and changes in terms and conditions that have been observed in the market. Expected loss methods are useful for estimating ultimate losses and loss adjustment expenses in the early years of long-tailed lines of business, when little or no paid or incurred loss information is available and is commonly applied when limited loss experience exists for a company.

Historical incurred loss development methods – these methods assume that the ratio of losses in one period to losses in an earlier period will remain constant in the future. These methods use incurred losses (i.e., the sum of cumulative historical loss payments plus outstanding case reserves) over discrete periods of time to estimate future losses. Historical incurred loss development methods may be preferable to historical paid loss development methods because they explicitly take into account open cases and the claims adjusters' evaluations of the cost to settle all known claims. However, historical incurred loss development methods necessarily assume that case reserving practices are consistently applied over time. Therefore, when there have been significant changes in how case reserves are established, using incurred loss data to project ultimate losses may be less reliable than other methods.

Bornhuetter-Ferguson ("B-F") paid and incurred loss methods – these methods utilise actual paid and incurred losses and expected patterns of paid and incurred losses, taking the initial expected ultimate losses into account to determine an estimate of expected ultimate losses. The B-F paid and incurred loss methods are useful when there are few reported claims and a relatively less stable pattern of reported losses.

Inflation – We assess the expected impact of inflation on the booked reserves using a multi-year cash flow approach. Our approach estimates the impact of economic inflation on the expected claims frequency and severity of the in-force business, recognising that different insurance classes are affected differently by economic inflation. The expected impact on reserves is compared to an independent actuarial review to ensure our reserve surplus versus said independent actuarial remains within our risk appetite. No adjustments have been made to the financial statements for the impact of inflation.

Additional analyses – other methodologies are often used in the reserving process for specific types of claims or events, such as catastrophic or other specific major events including COVID-19. These include vendor catastrophe models, which are typically used in the estimation of Loss Reserves at the early stage of known catastrophic events before information has been reported to an insurer or reinsurer, and analyses of specific industry events, such as large lawsuits or claims.

The selection of a method to determine the Company's reserves is driven by not only the characteristics of the lines of business, but also by the development stage of the years of account and the availability, credibility and relevance (for future projection) of in-house or benchmark data. For short-tail lines of business, such as Property and Offshore Operating, reserves will mostly be calculated using the expected loss ratio method for the most recent year of account, unless early loss experience necessitates an upward deviation, before moving to the more data-driven methods for more mature years. For long-tail lines of business, typically the Casualty and D&O classes, reflecting slower loss emergence and settlement, the expected loss ratio method is usually applied for longer than 1 year, unless early loss experience necessitates an upward deviation, before allowing for benign claims experience using more data-driven methods.

To convert the reserves calculated under FRS 102 methodology set out above, the same methodology is applied to each homogeneous risk group and follows the steps laid out below:

- Gross and net best estimates are estimated separately for each underwriting year. Each underwriting year is then split into earned or unearned business. Relevant payment patterns are applied to these different blocks according to the respective state of their development. The outputs are gross and net outflows for claims payments, separately for claims provision and premium provision;
- Premiums receivable are derived from the analysis of debtor cash flows, i.e., looking at the not yet due debt collectables. Estimates of not yet due debt collectables are used directly as cash inflows. The output are gross cash inflows for premiums receivable for both the claims and premium provision. It is worth noting that debt due but not received is excluded from the technical provisions and is instead included within insurance receivables on the balance sheet. In addition, the calculations also allow for future reinsurance costs which correspond to recoveries being made in respect of claims;
- A number of adjustments are allowed for in the steps above:
 - The business contractually agreed before the balance sheet date but incepting after the balance sheet date. This is referred to as Written But Not Incepted ("WBNI") business; and
 - Events Not In Data ("ENIDs"): Solvency II requires the Best Estimate to include allowance for "all possible outcomes", e.g., latent claims or extreme high severity, low probability claims. An ENID provision is calculated to allow for all possible scenarios where historical data may be lacking
 - Removal of margins: Removal of FRS103 prudent margins.

- Cash outflows for reinsurance premiums payable/net premiums receivable are based on gross cash flows to which net or ceded ratios are applied to both premiums and claims. These net /ceded ratios are based on the ratios derived in the FRS 102 reserve exercise and follow the principle of correspondence as set out in **Section D.2.6**;
- Different types of expenses (acquisition costs, unallocated loss adjustor expenses, and administration expenses) are projected and future cash flows are derived from this analysis. The output is expense cash outflows separately for claims provision and premium provision;
- An allowance for cash inflows stemming from ceded reinsurance income is also made;
- An adjustment is carried out to allow for reinsurance counterparty default. The output is cash outflows for reinsurance counterparty default, separately for claims provision and premium provision;
- The risk margin is calculated at a total level by running off the one-year SCR over future years and multiplying the cash flows by a cost of capital of 6% per annum as prescribed by Article 39 of the Commission Delegated Regulations (EU) 2015/35; and
- All future cash flow series above are discounted using payment patterns derived from the reserving process and the sum of these discounted cash flows is calculated for each series. These sums are then added together to derive the net best estimate liabilities. The discount rates used are those prescribed by EIOPA.

Key Simplifications

The key simplifications made in the technical provision calculations are set out below:

- **Risk margin methodology** – Uses an approximation for the whole SCR for each future year, with a decayed run-off method. This method is used because a proportionate approach does not adequately capture the run-off, so a longer pattern is used to reflect relative reserve risk increasing as the size of the portfolio reduces; and
- **Calculation of recoverables** – as the timings of gross claim payments and corresponding recoveries are not markedly different, it is assumed that they correspond and projections use the timing of direct payments.

Whilst there are a number of limitations identified in the calculations of the technical provisions, there were no material uncertainties identified in the technical provisions process. All expert judgments are supported by relevant and appropriate data and exercised by recognised experts within the Company.

D.2.3 Impact of Reinsurance

The held provisions for Solvency II correspond to the probability-weighted average of all future cash flows including cash flows recoverable from reinsurance contracts and special purpose vehicles. This takes account of the time value of money, using the relevant risk-free interest rate, and the adjustment for the expected losses due to the default of the counterparty (i.e., bad debt).

Recoverables from reinsurance contracts are shown separately on the asset side of the balance sheet (as “recoverables from reinsurance contracts”). Recoveries due on settled claims do not sit within the technical provisions, i.e., those where collection notes have been sent out but not received – reinsurance receivables.

Calculation of amounts recoverable from reinsurance contracts are performed under the same principles as for calculation of the gross best estimate. Risk margins are not required in respect of reinsurance and special purpose vehicle recoverables, as risk margins are calculated at a net level.

Gross and net best estimate reserves are estimated separately for each underwriting year. Reinsurance cash flows are then derived as the difference between gross and net cash flows.

Reserves are calculated on both gross and net (post internal quota share) bases. The net figures are produced in two stages:

- Firstly applying all external reinsurance; and
- Secondly applying the intercompany quota share (85% placement).

Cash inflows stemming from ceded reinsurance income are calculated as a factor of net premiums.

In addition, the principle of correspondence underlying the calculation of reinsurance recoveries is also considered.

D.2.4 Pre-Intercompany Quota Share

All cash flows which are calculated pre-intercompany quota share (i.e., after applying only the external reinsurance) are based on those in the net FRS 102 reserves. The calculations are consistent with net to gross ratios used in the FRS 102 reserving exercise (i.e., historical ratios), with different ratios applied to claims and premiums.

The pre-intercompany quota share cash flows are adjusted for the following:

- Ceded percentages of the quota share are applied for claims and premium cash flows. The ceded percentages are based on the actual percentages defined by the quota share; and
- Ceding commission cash flows are based on the ceded premium for the quota share. The cash flows are calculated by applying the current ceding commission percentage to the ceded premium amounts.

Counterparty Default

The expected loss due to the default of reinsurance counterparties is a small element within the technical provision calculations relating to bad debt. Reinsurance recoverables are calculated assuming no counterparty default. An adjustment for counterparty default is then explicitly calculated using S&P default rates and applied separately.

D.2.5 Treatment of Future Premiums

Future premiums, not yet due, are excluded explicitly from the Solvency II economic balance sheet and are instead included within the technical provisions. These premiums consist of four components:

- Premiums receivable for incepted policies included in the actuarial dataset;
- Premiums receivable for incepted policies not included in the actuarial dataset;
- WBNI premiums receivable; and
- Premiums receivable allowing for future reinsurance costs which relate to unearned business written to date.

Incepted future premiums included in the actuarial dataset are taken from aged debt reports which include splits of earned and unearned premiums. Where splits between earned and unearned premiums are unavailable, the uncertainty is addressed by applying average percentages instead.

Future premiums receivable are not required to be fully allocated to premium provisions, as premium cash flows can also relate to earned business. These premiums are also allocated to underwriting years and lines of business based on the information in the aged debt reports.

Incepted future premiums not included in the actuarial dataset are taken from a financial data report showing the premiums written in the one month. WBNI premiums receivable are calculated using the WBNI uplift percentage against the expected annual premium as set out in the business plan for the following year. The WBNI uplift percentage is an uncertain amount and is estimated using historical data analysis.

Ceded future premium is included as a direct input, rather than calculated using gross premiums and net to gross ratios. This is because premium receivable amounts do not necessarily correspond with premium payable balances. Within the economic balance sheet, an adjustment is also made for reinsurance balance payable not yet due. Without this adjustment, reinsurance liabilities would be double counted.

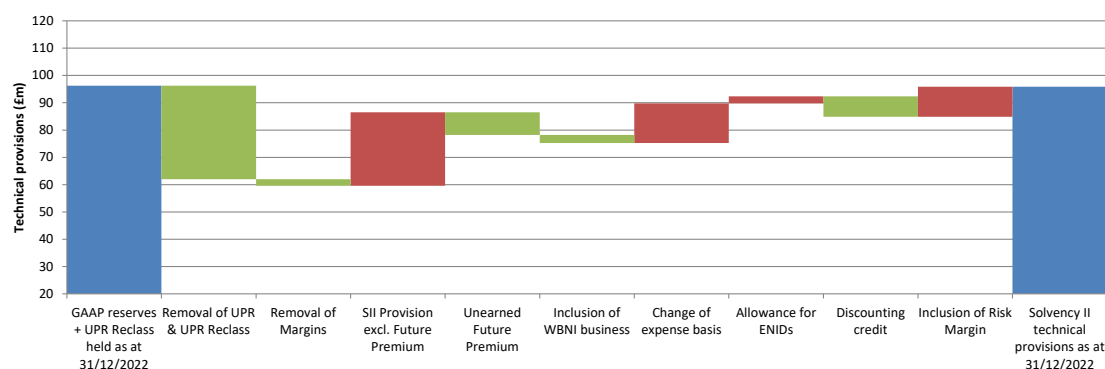
In addition, the principle of correspondence is considered when carrying out the calculation of reinsurance recoveries. When considering the contracts to be included, there should be correspondence between the gross inwards claims and the reinsurance recoveries included within the valuation. This includes the cost of future reinsurance cover not yet bought that will cover existing inwards contracts (e.g. losses occurring cover incepting in the following year). The additional reinsurance costs calculated for each line of business are allowed for by adjusting the ceded future premium amounts in respect of unearned business subject to minimum deposit premium terms per contract.

D.2.6 Material Differences between FRS 102 and Solvency II

Whilst some of the approaches and techniques applied under Solvency II are similar to those followed under the existing FRS 102 rules, there are other rules where there will be significant changes. These include:

- Movement to a cash flow basis for valuation of both gross business and reinsurance;
- Removal of any implicit or explicit margins within technical provisions to give a “true best estimate” for solvency purposes, defined as the mean of the full range of possible future outcomes;
- Introduction of the valuation of very low probability extreme events including latent claims, referred to as an allowance for “events not in data” or ENIDs;
- Removal of the requirements to hold an unearned premium reserve and to allow for other non-monetary items. These are replaced by “premium provisions”, valued on a best estimate basis. This also includes a requirement to take account of all future premium cash inflows;
- Movement to recognising contracts on a “legal obligation basis”. This will mean the inclusion of business currently not valued as part of technical provisions – for example 1 January renewals entered into prior to a 31 December valuation;
- Introduction of discounting of cash flows;
- Introduction of the principle of a market consistent basis and calculation of a “risk margin”; and
- Valuation of liabilities segmented by Solvency II lines of business.

The waterfall chart below sets out the movement analysis between FRS 102 and Solvency II for the Company as at 31 December 2022:



Each of the above Solvency II adjustments are independent and discreet in the calculations.

- (i) Removal of 100% UPR & UPR reclass (-£34.3 million).
- (ii) Removal of margins (-£2.4 million). This is removal of any implicit margin.
- (iii) Solvency II provisions on unearned exposures (+£26.9 million). These are expected claims coming from unearned premiums.
- (iv) Unearned Future Premium (-£8.3 million)
- (v) Inclusion of unaccepted business (-£3.0 million). A decrease to the technical provisions which corresponds to a small profit on the WBNI business.
- (vi) Change of expense basis (+£14.6 million). The adjustment reflects the additional expenses that would be incurred to service existing insurance liabilities.
- (vii) Allowance for ENIDs (+£2.6 million). A small increase to the technical provisions due to an allowance for events not in data.
- (viii) Discounting credit (-£7.5 million). Application of risk free discount rates, which leads to a decrease in the technical provisions.
- (ix) Inclusion of risk margin (+£11.0 million). An amount equivalent to a theoretical level needed to transfer the obligations to another insurance undertaking.

D.2.7 Assumptions and uncertainty

The most material sources of uncertainty arise from the FRS 102 calculation. The main assumptions used in the technical provisions other than those in the GAAP reserves include Events Not In Data (ENIDs) and Written But Not Incepted business (WBNI).

Removal of Margins

The TPs, include a removal of implicit margin. The rationale for removing the implicit margin is to move from a Prudent Best Estimate (“PBE”) TP reserving methodology to a True Best Estimate (“TBE”) TP reserving methodology.

To quantify the implicit margin, standard market practice would be to equate the implicit margin to the margin over the Statement of Actuarial Opinion (“SAO”) reserves. The benefit of applying this approach is that the quantum of the implicit margin is based on estimations performed by an independent third party. The key draw-back of this approach is that the third-party actuaries will be

less familiar with the business, apply a more mechanical approach to reserving and would usually react quite significantly to large losses, which can result in an estimate that is too volatile to reflect in Solvency II Technical Provisions.

Therefore, instead of quantifying the implicit margin by equating it to the margin over the SAO, the Company has adopted a different approach. The Company's reserving actuaries have completed a separate reserving exercise, which in comparison to the UK GAAP reserving process uses the same data, same level of information and the same personnel. However, rather than projecting a PBE, the actuaries project a TBE, a less conservative estimate, with a guiding principle that by reserving at that level, favourable and unfavourable PYD would be expected with equal probability. Fixing as many variables as possible, i.e., data, detailed knowledge of the business and personnel, and only changing the level of prudence applied, the quantification of the implicit margin as the difference between the two approaches is considered to create a significantly more accurate result than using the margin over the SAO.

Events Not In Data

ENIDs are low frequency/high severity claims not captured in the data. We add an explicit amount, or load, to the calculations to take account of ENIDs. The ENID loadings for each line of business are derived using a truncated distribution approach. This methodology is based on the true mean of a reserve distribution being underestimated as it will only include information which is realistically foreseeable. If an assumption is made about the level at which events are realistically foreseeable then derived uplifts can be applied to estimate a mean allowing for incomplete information.

Using stochastic reserving techniques and appropriate fitting algorithms, we determine that the Company's best estimate reserves are log-normally distributed.

The calculated uplifts are then validated using expert judgement from the risk management and underwriting teams to ensure appropriateness of the assumptions. Uplifts can be adjusted based on this expert judgement, e.g., if there has been significant experience of tail events or relatively benign experience for a particular class of business.

We validate our selection by comparing them to benchmark market data and make adjustment if our selections are believed to be materially out of line with the market. In addition, we perform sensitivity tests to gauge the materiality of this assumption. The current sensitivity test shows that removing the ENIDS would approximately reduce the TPs by 2.5%.

Written But Not Incepted business

WBNI relates to the business contractually agreed before the balance sheet date but incepting after the balance sheet date. This is also referred to as unaccepted business. Unaccepted uplifts are calculated separately for each line of business using historical Company data. Historical policy data is used to calculate what the previous unaccepted uplifts have been for previous years.

The unaccepted business sensitivities are applied to understand the materiality of the assumptions and to validate the application of unaccepted business uplifts in the calculations. Removing the calculations for unaccepted business decreases the premium provision by approximately 11% because the unaccepted business is believed to be profitable.

D.3 Other Liabilities

The following are the bases, methods and main assumptions used for valuation of each material class of other liabilities for Solvency II purpose.

D.3.1 Other liabilities and non-insurance payables

Other liabilities and non-insurance payables have been valued using the alternative valuation method in accordance with Solvency II. The Directors have used the cost approach or current replacement cost approach, being the closest to the fair value of these assets.

The valuation of other assets and non-insurance receivables is consistent with the accounting valuation under FRS 102.

D.3.2 Reinsurance Payables

Under Solvency II the reinsurance payables are transferred from the FRS 102 balance sheet and reported as part of the technical provisions. The reinsurance payables under Solvency II are reported as nil. (See section D.2 for information on TPs).

D.3.3 Deferred ceded acquisition costs

In the financial statements, ceded acquisition costs, which represent commission and other related expenses, are deferred over the years in which the related reinsurers' share of premiums are earned.

The Solvency II balance sheet is prepared based on the best estimate of future cash flow basis. Therefore, deferred ceded acquisition costs are being excluded from the Solvency II balance sheet.

D.4 Subordinated liabilities

The subordinated liabilities are in respect of the subordinated loan between ACFI and AIUK. The total subordinated liabilities are now £15.5 million (2021: £15.5 million). Under Solvency II subordinated liabilities are measured on a fair value basis whilst under FRS102 they are measured at amortised cost.

Subordinated liabilities	Lender	Issue date	Maturity date	2022	2021
				£'000	£'000
Dated subordinated liabilities	Arch Capital Finance (Ireland) Limited	15/06/2019	15/06/2029	8,000	8,000
Dated subordinated liabilities	Arch Capital Finance (Ireland) Limited	29/12/2020	29/12/2030	7,500	7,500
				15,500	15,500

D.5 Alternative Methods of Valuation

No alternative methods for valuation were used in 2022.

D.6 Any Other Information

No other information to report as of 31 December 2022.

SECTION E Capital Management

Overview

The Company has adopted a capital management policy setting out the methodology and procedures to provide oversight of the Company's own funds. The strategic objectives articulated in the capital management policy are (i) to ensure compliance with the Company's regulatory capital requirements, (ii) to manage and allocate capital efficiently to achieve sustainable returns and facilitate growth objectives as articulated in the Company's business plans; and (iii) to ensure access to capital markets on competitive terms, so that the Company's overall cost of capital is minimised. To achieve these objectives, the Company strives to maintain capital levels that are consistent with its risk appetite, corporate strategy and statutory minimum requirements, at both a point in time and on a forward looking basis. The Company's time horizon for business planning is one year, however the capital planning horizon spans three years.

The Company has adopted a capital management plan which is reviewed annually and sets out the methodology and procedures to provide oversight of the Company's own funds. The capital management plan articulates solvency capital thresholds, corrective actions to be taken if the thresholds are breached and potential sources of capital for the Company and their estimated timeframe of realisation.

High level roles and responsibilities in relation to capital management activities are outlined below.

- **Board:** Sole responsibility for approving the capital management policy and plan. Overall responsibility for monitoring capital management;
- **Risk Committee:** Reviews the capital management policy and makes recommendations to the Board. Responsible for reviewing and monitoring the key capital management metrics and tolerances and presenting key capital management information to the Board on an ongoing basis;
- **Investment Committee:** Responsible for aligning the investment strategy with the capital management policy and plan, and ensuring an appropriate level of funds are available to meet the Company's obligations in a timely manner and at a reasonable cost;
- **Finance Function:** Responsible for producing the reports necessary for appropriate monitoring that the capital management policy is being followed and monitoring execution of the capital management plan; and
- **Risk Management Function:** Responsible for maintaining the internal capital models and Standard Formula calculation, which amongst other uses, produce the economic and solvency capital requirements for AIUK.

In the event that the ongoing monitoring indicates that Company's capital position is outside of risk appetite, corrective actions shall, as deemed appropriate, be taken. Proposed corrective actions shall be initiated by the Finance function, after receiving approval from the Board on the appropriate corrective action to be taken. In the event that the Company's capital is below the SCR, the Company will communicate to the PRA immediately together with a proposed remediation plan.

The Company has identified management actions which would provide capital relief if required:

- Restricting line sizes / product redesign / repricing; and
- Discontinue / Run-off certain lines of business.

Estimated timeframe for realisation of relief from the management actions is six months.

Other potential sources of capital which the Company has identified are:

- Additional capital sourced from ACGL Group through contributed capital, capital loan or additional reinsurance arrangements;
- Purchasing external reinsurance;
- Changing mix to less capital intensive lines of business;
- Merging with cash rich partner;
- Sale of business / blocks of business; and
- Management buyout by current management team with corporate finance support to raise new third party capital.

Estimated timeframe for realisation of relief from the potential sources of capital from the Group is one month. Estimated timeframe for realisation of relief from outside parties is three months to one year.

It should be noted that the estimated timeframes above would be expected to be longer in a stressed scenario. The provision of additional capital by ACGL and capital relief by means of intragroup reinsurance is not guaranteed. The current quota share contract provides for a continuous contract terminable on 12 months' notice. As notice is customarily given to ensure that the terms of the reinsurance are agreed on a commercial and arm's length basis, it has been agreed that the Company may exercise an option to extend the period of the reinsurance by one year in the event of unsuccessful renegotiation, in order to enable an orderly transition to alternative funding.

During 2022 the definition of the economic capital requirement continued to use "adjusted net assets basis" using the Standard Formula SCR, in line with the commentary in Section E.1. Previously in 2018 economic capital requirements were based on a tail value at risk calculation using the internal capital model ultimate SCR.

The "adjusted net asset basis" is an additional, internally applied, more prudent measure, that the Board use to monitor solvency, and is not part of the requirement of Solvency II. It is reviewed as part of the Company's internal governance processes but is unaudited.

E.1 Own Funds

The Company's own funds are summarised in the table below:

	Tier 1	Tier 2	Tier 3	2022 Total Own Funds	2022 Adjusted net asset Approach *	2021 Total Own Funds	2021 Adjusted net asset Approach *
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Paid-In Ordinary Share Capital	50,000	-	-	50,000	50,000	50,000	50,000
Other capital contribution	87,500	-	-	87,500	58,771	67,500	36,500
Reconciliation Reserve	923	-	-	923	923	(14,561)	(14,561)
Subordinated liabilities	-	15,500	-	15,500	15,500	15,500	15,500
Net deferred tax assets	-	-	8,632	8,632	8,632	-	-
Total Own Funds After Deductions	138,423	15,500	8,632	162,555	133,826	118,439	87,439
Total Eligible Own Funds to Meet the SCR				162,555	133,826	118,439	87,439
Total Eligible Own Funds to Meet the MCR				142,600	117,398	105,879	78,167
SCR				83,555	81,012	58,802	55,043
MCR				20,889	20,253	14,700	14,700
Ratio of Eligible Own Funds to SCR				194.5%	165.2%	201.4%	158.9%
Ratio of Eligible Own Funds to MCR				682.7%	579.7%	720.2%	531.7%

Tier 1 capital is made up of £50.0 million issued and fully paid up ordinary shares, a gain of £0.9 million in the reconciliation reserve which is comprised of the excess of assets over liabilities on a Solvency II valuation basis, less other basic own fund items between UK GAAP and Solvency II and £87.5 million other capital contribution. The Company had an existing capital contribution of £67.5 million and in 2022 the Company received £20.0 million capital contribution from its parent company, ARE to support the continued growth following the UK Regional growth, bringing the total additional capital contribution to £87.5 million which has increased the level of Tier 1 capital.

Tier 2 capital is made of £15.5 million subordinated loan from ACFI, to support growth from the new UK Regional business. These loans meet the required PRA guidelines to classify as a subordinated loan.

Tier 3 capital is made of £8.6 million of deferred tax assets.

“Adjusted net asset basis (unaudited)”

Although the Company uses the Standard Formula for Solvency II in determining its regulatory capital, it has an Internal Capital Model that it has previously used for setting economic capital and continues to use for a number of other purposes. Following the acquisition of UK regional business in 2019, the economic capital definition was revised to an “adjusted net asset basis” to ensure that the solvency position is adequately taking into account the Company’s current capital structure. The purpose of this “adjusted net asset basis”, using the standard formula as the starting point, is to recognise a solvency position where the underlying intangible assets held in respect of the acquisition in a fellow ACGL group company are treated as intangible assets on a look through basis, thereby reducing the value of own funds accordingly and also reducing the SCR relating to the market risk of these assets.

The Company follows a risk-based approach to determine the amount of capital required to support its activities. Recognised stochastic modelling techniques are used to measure risk exposures, and capital to support business activities is allocated according to risk profile. Stress and scenario analysis is regularly performed, and the results are documented and reconciled to the Board’s risk appetite where necessary.

Under the “adjusted net asset basis”, the Company’s own funds available is £133.8 million as at December 2022 against the SCR of £81.0 million, with a surplus of £52.8 million or 165.2%. The “adjusted net asset basis” excludes the loan balance with Arch Intermediaries Group Ltd (“AIGL”), formerly known as Arch (UK) Holdings Limited, within the available own funds and the SCR excludes the equity invested as part of UK Regional acquisition.

The Company remains above the target risk appetite of 120.0% against SCR on an “adjusted net asset basis”.

The “adjusted net asset basis” is an additional, internally applied, more prudent measure, that the Board use to monitor solvency, and is not part of the requirement of Solvency II. It is reviewed as part of the Company’s internal governance processes but is unaudited.

On an adjusted net asset basis, the economic surplus increased during 2022 due to an additional £20 million of capital contribution.

Dividends & Valuation Differences

There are no foreseeable dividend distributions by the Company.

The Company's financial statements are prepared in accordance with FRS 102. The key differences between the net assets under FRS 102 and the excess of assets over liabilities under Solvency II are summarised in the table below:

	2022
	£'000
Net Assets per Financial Statements in Accordance with UK GAAP	145,234
Valuation Difference on Technical Provision	(11,551)
Valuation Difference on Investment in Subsidiary	13,372
Subordinated loan	15,500
Total Own Funds Under Solvency II	162,555

E.2 Solvency Capital Requirement and Minimum Capital Requirement

In respect of the calculation of the SCR and MCR:

- The Company uses the Standard Formula;
- Undertaking specific parameters are not used;
- No capital add-ons are applied to the SCR figures;
- The simplifications outlined in Articles 107, 108, 110, 111 and 112 of the Commission Delegated Regulation (EU) 2015/35 apply to the counterparty default risk sub-module;
- Simplifications have been used in the market, counterparty and underwriting risk sub-modules, as follows:
 - Interest Rate Risk on assets has been calculated using accumulated cash flows at currency level rather than individual asset level.
 - Counterparty default risk is in line with Article 107 of the Delegated Acts, AIUK has applied the simplification for Risk Mitigating Effects of reinsurance to simplify the calculation and inputs required for the calculation. This derives a Gross underwriting Risk SCR from which the Net Underwriting Risk SCR is deducted to estimate the allowance of reinsurance on the SCR. This amount is then apportioned across the current reinsurance exposures in line with the outstanding recoverables.
 - Non-life underwriting risk within the Delegated Acts allow for a 20% reduction in the premium risk standard deviation for Fire and Property, General Liability and proportional classes due to XOL recoveries. It has been assumed that this reduction applies in all classes.
- The MCR is initially based on the calculation of the Linear MCR using the best estimate technical provisions and the net written premiums in the last 12 months. Then a floor of 25% of the SCR and a cap of 45% of the SCR is applied with an absolute floor of £3.1 million also applied to derive the final MCR requirement; and
- The Company has no material exposure to equity, hence the duration-based equity risk sub-module is not used.

As at 31 December 2022, the SCR is £83.6 million and the MCR is £20.9 million. A breakdown of SCR by risk category is set out in the following table:

	2022	2021	Variance
Risk category	£'000	£'000	£'000
Insurance risk	54,490	37,755	16,735
Market risk	13,299	12,013	1,286
Credit risk	11,669	5,776	5,893
Operational risk	18,035	13,570	4,465
Undiversified Basic SCR	97,493	69,114	28,379
Diversification credit	(13,938)	(10,312)	(3,626)
Total SCR	83,555	58,802	24,753

The Company's SCR has increased by £24.8 million during 2022. Main driver being insurance risk due to the higher premiums written in 2022 and the future planned growth.

E.2.1 SCR ratio and MCR ratio

As of 31 December 2022, the ratio of eligible own funds to SCR was 194.5% (2021: 201.4%) and the ratio of eligible own funds to MCR was 682.7% (2021: 720.2%) on a standard Solvency II basis.

The Company uses the Standard Formula for determining its regulatory capital and also uses the Standard Formula on an "adjusted net asset basis" for setting economic capital. Under the "adjusted net asset basis", the Company's own funds available are £133.8 million as at December 2022 against the SCR of £81.0 million, with a surplus of £52.8 million or 165.2%.

The Company complied with the Solvency Capital Requirement and Minimum Capital Requirement during 2022.

E.3 Use Of the Duration-Based Equity Risk Sub-Module in The Calculation Of The SCR

The duration-based equity risk sub-module is not used in the calculation of the SCR.

E.4 Differences Between the Standard Formula and Any Internal Capital Model Used

Only the standard formula was used in the calculation of the SCR.

E.5 Non-Compliance with The MCR and Non-Compliance with the SCR

The Company complied with the SCR and MCR during 2022 and as at the date of this report.

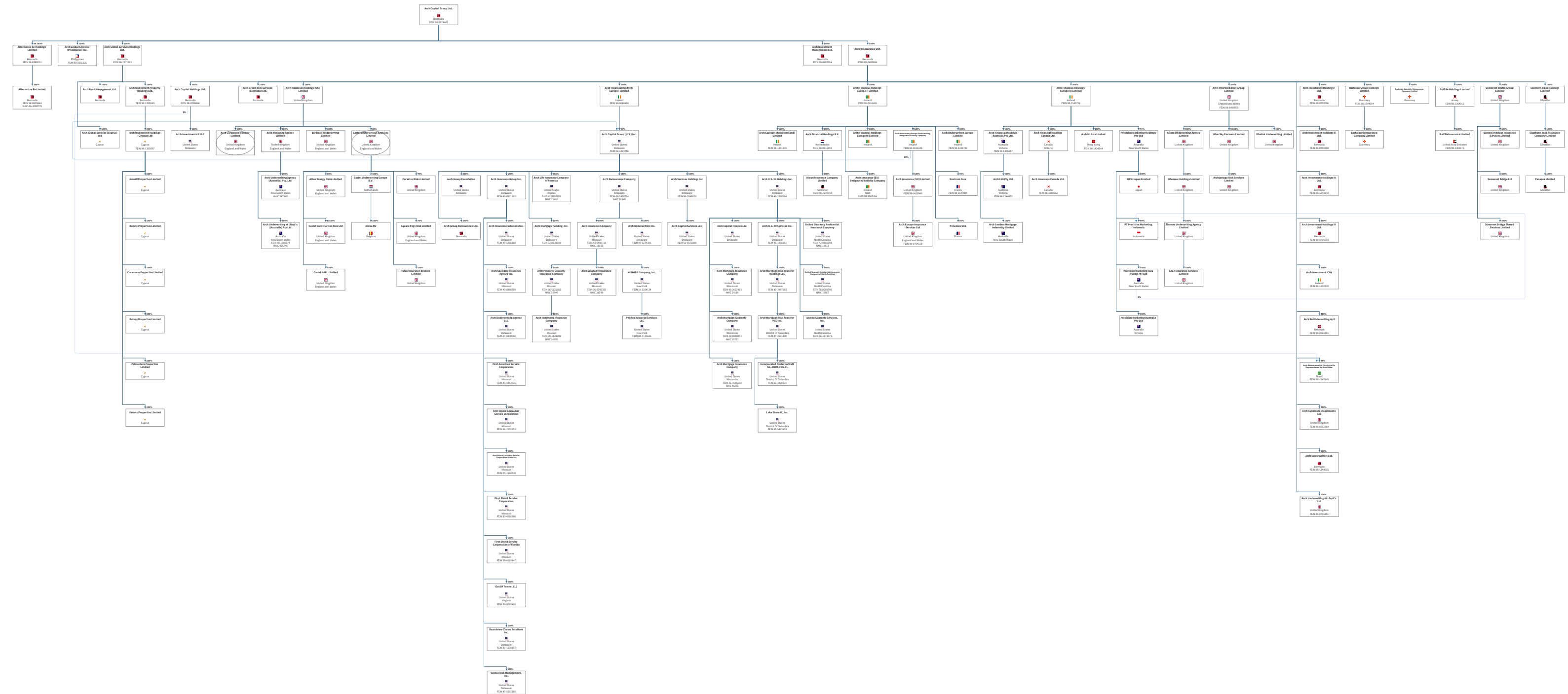
E.6 Any other information

Climate Change

Please refer to Section A1.7

Appendix 1

ACGL Organisational Structure



*Third party entities which are less than 50% owned by an Arch company are not shown on this chart

-ownership percentage	-company name	
-country flag	-jurisdiction	-region/state
-FEIN # (where applicable)	-NAIC # (or equivalent number if applicable)	

Note 3: Arch Capital Group (U.S.) Inc. is the sole member of Arch Group Foundation which is a non-profit corporation that is in the process of applying for 501(c)(3) status

Note 4: Barbican Holdings (UK) Limited changed its name to Arch Financial Holdings (UK) Limited effective January 3, 2023

Arch Insurance (UK) Limited

Solvency and Financial Condition Report

Disclosures

31 December
2022

(Monetary amounts in GBP thousands)

General information

Undertaking name	Arch Insurance (UK) Limited
Undertaking identification code	213800GLG1B1FI4VN881
Type of code of undertaking	LEI
Type of undertaking	Non-life undertakings
Country of authorisation	GB
Language of reporting	en
Reporting reference date	31 December 2022
Currency used for reporting	GBP
Accounting standards	Local GAAP
Method of Calculation of the SCR	Standard formula
Matching adjustment	No use of matching adjustment
Volatility adjustment	No use of volatility adjustment
Transitional measure on the risk-free interest rate	No use of transitional measure on the risk-free interest rate
Transitional measure on technical provisions	No use of transitional measure on technical provisions

List of reported templates

S.02.01.02 - Balance sheet
S.05.01.02 - Premiums, claims and expenses by line of business
S.05.02.01 - Premiums, claims and expenses by country
S.17.01.02 - Non-Life Technical Provisions
S.19.01.21 - Non-Life insurance claims
S.23.01.01 - Own Funds
S.25.01.21 - Solvency Capital Requirement - for undertakings on Standard Formula
S.28.01.01 - Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity

S.02.01.02

Balance sheet

Solvency II value	
C0010	
	8,632
	0
	203,595
	0
	53,872
	0
	134,685
	98,601
	34,892
	0
	1,192
	15,038
	0
	0
	0
	0
	516,267
	516,267
	509,887
	6,379
	0
	0
	30,108
	30,029
	3,119
	0
	9,789
	9,354
	810,892

Assets

R0030	Intangible assets
R0040	Deferred tax assets
R0050	Pension benefit surplus
R0060	Property, plant & equipment held for own use
R0070	Investments (other than assets held for index-linked and unit-linked contracts)
R0080	<i>Property (other than for own use)</i>
R0090	<i>Holdings in related undertakings, including participations</i>
R0100	<i>Equities</i>
R0110	<i>Equities - listed</i>
R0120	<i>Equities - unlisted</i>
R0130	<i>Bonds</i>
R0140	<i>Government Bonds</i>
R0150	<i>Corporate Bonds</i>
R0160	<i>Structured notes</i>
R0170	<i>Collateralised securities</i>
R0180	<i>Collective Investments Undertakings</i>
R0190	<i>Derivatives</i>
R0200	<i>Deposits other than cash equivalents</i>
R0210	<i>Other investments</i>
R0220	Assets held for index-linked and unit-linked contracts
R0230	Loans and mortgages
R0240	<i>Loans on policies</i>
R0250	<i>Loans and mortgages to individuals</i>
R0260	<i>Other loans and mortgages</i>
R0270	Reinsurance recoverables from:
R0280	<i>Non-life and health similar to non-life</i>
R0290	<i>Non-life excluding health</i>
R0300	<i>Health similar to non-life</i>
R0310	<i>Life and health similar to life, excluding index-linked and unit-linked</i>
R0320	<i>Health similar to life</i>
R0330	<i>Life excluding health and index-linked and unit-linked</i>
R0340	<i>Life index-linked and unit-linked</i>
R0350	Deposits to cedants
R0360	Insurance and intermediaries receivables
R0370	Reinsurance receivables
R0380	Receivables (trade, not insurance)
R0390	Own shares (held directly)
R0400	Amounts due in respect of own fund items or initial fund called up but not yet paid in
R0410	Cash and cash equivalents
R0420	Any other assets, not elsewhere shown
R0500	Total assets

S.02.01.02

Balance sheet

		Solvency II value
		C0010
Liabilities		
R0510	Technical provisions - non-life	612,149
R0520	<i>Technical provisions - non-life (excluding health)</i>	604,852
R0530	<i>TP calculated as a whole</i>	0
R0540	<i>Best Estimate</i>	593,955
R0550	<i>Risk margin</i>	10,896
R0560	<i>Technical provisions - health (similar to non-life)</i>	7,297
R0570	<i>TP calculated as a whole</i>	0
R0580	<i>Best Estimate</i>	7,197
R0590	<i>Risk margin</i>	101
R0600	Technical provisions - life (excluding index-linked and unit-linked)	0
R0610	<i>Technical provisions - health (similar to life)</i>	0
R0620	<i>TP calculated as a whole</i>	
R0630	<i>Best Estimate</i>	
R0640	<i>Risk margin</i>	
R0650	<i>Technical provisions - life (excluding health and index-linked and unit-linked)</i>	0
R0660	<i>TP calculated as a whole</i>	
R0670	<i>Best Estimate</i>	
R0680	<i>Risk margin</i>	
R0690	Technical provisions - index-linked and unit-linked	0
R0700	<i>TP calculated as a whole</i>	
R0710	<i>Best Estimate</i>	
R0720	<i>Risk margin</i>	
R0740	Contingent liabilities	0
R0750	Provisions other than technical provisions	
R0760	Pension benefit obligations	
R0770	Deposits from reinsurers	
R0780	Deferred tax liabilities	
R0790	Derivatives	
R0800	Debts owed to credit institutions	
R0810	Financial liabilities other than debts owed to credit institutions	
R0820	Insurance & intermediaries payables	
R0830	Reinsurance payables	
R0840	Payables (trade, not insurance)	30,131
R0850	Subordinated liabilities	15,500
R0860	<i>Subordinated liabilities not in BOF</i>	
R0870	<i>Subordinated liabilities in BOF</i>	15,500
R0880	Any other liabilities, not elsewhere shown	6,058
R0900	Total liabilities	663,838
R1000	Excess of assets over liabilities	147,054

Premiums, claims and expenses by line of business

Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)												Line of business for: accepted non-proportional reinsurance				Total
Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance	Legal expenses insurance	Assistance	Misc. financial loss	Health	Casualty	Marine, aviation and transport	Property	
C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110	C0120	C0130	C0140	C0150	C0160	C0200
Premiums written																
Gross - Direct Business	1,710	7,301	33,819	14,494	84,588	221,949	188,698	10,122								562,680
Gross - Proportional reinsurance accepted																0
Gross - Non-proportional reinsurance accepted													0			0
Reinsurers' share	1,479	6,669	28,856	13,172	73,609	193,860	163,151	9,382					0			490,179
Net	230	631	4,963	1,322	10,978	28,089	25,547	740					0			72,502
Premiums earned																
Gross - Direct Business	1,395	7,397	23,326	9,997	66,821	199,892	170,547	7,144								486,519
Gross - Proportional reinsurance accepted																0
Gross - Non-proportional reinsurance accepted													0			0
Reinsurers' share	1,077	6,318	20,019	9,109	58,573	175,554	148,490	6,660					0			425,801
Net	317	1,079	3,307	888	8,248	24,338	22,056	484					0			60,718
Claims incurred																
Gross - Direct Business	42	4,209	17,778	7,619	35,372	94,399	105,636	3,068								268,124
Gross - Proportional reinsurance accepted																0
Gross - Non-proportional reinsurance accepted													-137			-137
Reinsurers' share	35	3,528	15,174	6,904	30,758	82,150	92,208	2,774					-116			233,415
Net	8	681	2,603	715	4,614	12,249	13,428	294					-21			34,572
Changes in other technical provisions																
Gross - Direct Business																0
Gross - Proportional reinsurance accepted																0
Gross - Non-proportional reinsurance accepted																0
Reinsurers' share																0
Net	0	0	0	0	0	0	0	0					0			0
Expenses incurred																
108	-747		1,729	1,175	-2,162	-64	-1,714	-174					0			-1,849
Other expenses																
Total expenses																-1,849

S.05.02.01

Premiums, claims and expenses by country

Non-life

R0010

C0010	C0020	C0030	C0040	C0050	C0060	C0070
Home Country	Top 5 countries (by amount of gross premiums written) - non-life obligations			Top 5 countries (by amount of gross premiums written) - non-life obligations		Total Top 5 and home country
	US	CH	MX	AU	DK	
C0080	C0090	C0100	C0110	C0120	C0130	C0140

Premiums written

R0110	Gross - Direct Business	475,853	22,403	4,352	2,897	2,832	2,892	511,230
R0120	Gross - Proportional reinsurance accepted							0
R0130	Gross - Non-proportional reinsurance accepted	0						0
R0140	Reinsurers' share	414,539	19,516	3,791	2,524	2,467	2,520	445,358
R0200	Net	61,314	2,887	561	373	365	373	65,872

Premiums earned

R0210	Gross - Direct Business	412,125	18,349	2,850	2,779	2,786	1,175	440,064
R0220	Gross - Proportional reinsurance accepted							0
R0230	Gross - Non-proportional reinsurance accepted	0						0
R0240	Reinsurers' share	360,692	16,059	2,494	2,432	2,438	1,029	385,144
R0300	Net	51,433	2,290	356	347	348	147	54,920

Claims incurred

R0310	Gross - Direct Business	233,314	15,587	3,518	3,406	1,200	361	257,385
R0320	Gross - Proportional reinsurance accepted							0
R0330	Gross - Non-proportional reinsurance accepted	-137						-137
R0340	Reinsurers' share	203,111	13,569	3,063	2,965	1,045	314	224,067
R0400	Net	30,066	2,018	455	441	155	47	33,182

Changes in other technical provisions

R0410	Gross - Direct Business							0
R0420	Gross - Proportional reinsurance accepted							0
R0430	Gross - Non-proportional reinsurance accepted							0
R0440	Reinsurers' share							0
R0500	Net	0	0	0	0	0	0	0

R0550	Expenses incurred	-1,728	-80	-12	-12	-12	-5	-1,849
R1200	Other expenses							
R1300	Total expenses							-1,849

S.17.01.02

Non-Life Technical Provisions

		Direct business and accepted proportional reinsurance											Accepted non-proportional reinsurance				Total Non-Life obligation	
		Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance	Legal expenses insurance	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance		Non-proportional property reinsurance
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180
R0010	Technical provisions calculated as a whole	0	0		0	0	0	0	0	0					0			0
R0050	Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole																	0
Technical provisions calculated as a sum of BE and RM																		
Best estimate																		
Premium provisions																		
R0060	Gross	-136	2,154		-577	8,023	14,509	23,401	36,214	8,352					1,012			92,953
R0140	Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	-158	2,215		-307	7,140	11,865	17,571	30,145	8,008					553			77,033
R0150	Net Best Estimate of Premium Provisions	22	-61		-271	883	2,644	5,830	6,069	344					459			15,919
Claims provisions																		
R0160	Gross	-159	5,338		0	25,034	64,712	119,880	289,640	3,723					32			508,199
R0240	Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	-135	4,458		0	21,467	54,852	105,176	249,973	3,493					-50			439,233
R0250	Net Best Estimate of Claims Provisions	-24	880		0	3,567	9,860	14,703	39,666	230					82			68,966
R0260	Total best estimate - gross	-295	7,492		-577	33,057	79,221	143,281	325,854	12,075					1,044			601,152
R0270	Total best estimate - net	-2	819		-271	4,450	12,504	20,534	45,736	575					541			84,885
R0280	Risk margin	0	101		12	547	1,540	2,702	5,959	71					65			10,997
Amount of the transitional on Technical Provisions																		
R0290	Technical Provisions calculated as a whole																	0
R0300	Best estimate																	0
R0310	Risk margin																	0
R0320	Technical provisions - total	-295	7,593		-565	33,604	80,761	145,983	331,813	12,147					1,109			612,149
R0330	Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	-293	6,673		-307	28,607	66,717	122,747	280,118	11,501					503			516,267
R0340	Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	-2	920		-259	4,997	14,044	23,236	51,695	646					606			95,882

Non-Life insurance claims

Z0020	Accident year / underwriting year	Underwriting Year
-------	-----------------------------------	-------------------

	Gross Claims Paid (non-cumulative)													
	(absolute amount)													
	Year	C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110	C0170	C0180
		Development year										In Current year	Sum of years (cumulative)	
	0	1	2	3	4	5	6	7	8	9	10 & +			
R0100	Prior											10,246	10,246	10,246
R0160	2013	1,132	6,710	12,282	11,971	3,459	891	873	11,707	2,561	85	85	51,672	
R0170	2014	1,043	16,808	21,800	17,444	2,714	1,207	13,881	612	2,370		2,370	77,879	
R0180	2015	2,366	16,476	13,600	10,723	6,110	25,984	687	5,853			5,853	81,799	
R0190	2016	3,044	21,632	14,096	15,124	24,776	2,083	9,948				9,948	90,702	
R0200	2017	2,242	17,098	14,233	48,992	8,838	9,008					9,008	100,411	
R0210	2018	1,981	23,376	43,491	10,487	8,371						8,371	87,707	
R0220	2019	6,302	50,420	39,275	23,535							23,535	119,533	
R0230	2020	8,271	42,194	34,774								34,774	85,238	
R0240	2021	10,828	64,176									64,176	75,004	
R0250	2022	7,551										7,551	7,551	
R0260												Total	175,918	787,743

[illegible]

S.23.01.01

Own Funds

Basic own funds before deduction for participations in other financial sector as foreseen in article 68 of Delegated Regulation 2015/35

R0010	Ordinary share capital (gross of own shares)
R0030	Share premium account related to ordinary share capital
R0040	Initial funds, members' contributions or the equivalent basic own-fund item for mutual and mutual-type undertakings
R0050	Subordinated mutual member accounts
R0070	Surplus funds
R0090	Preference shares
R0110	Share premium account related to preference shares
R0130	Reconciliation reserve
R0140	Subordinated liabilities
R0160	An amount equal to the value of net deferred tax assets
R0180	Other own fund items approved by the supervisory authority as basic own funds not specified above
R0220	Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds
R0230	Deductions for participations in financial and credit institutions
R0290	Total basic own funds after deductions

Ancillary own funds

R0300	Unpaid and uncalled ordinary share capital callable on demand
R0310	Unpaid and uncalled initial funds, members' contributions or the equivalent basic own fund item for mutual and mutual - type undertakings, callable on demand
R0320	Unpaid and uncalled preference shares callable on demand
R0330	A legally binding commitment to subscribe and pay for subordinated liabilities on demand
R0340	Letters of credit and guarantees under Article 96(2) of the Directive 2009/138/EC
R0350	Letters of credit and guarantees other than under Article 96(2) of the Directive 2009/138/EC
R0360	Supplementary members calls under first subparagraph of Article 96(3) of the Directive 2009/138/EC
R0370	Supplementary members calls - other than under first subparagraph of Article 96(3) of the Directive 2009/138/EC
R0390	Other ancillary own funds
R0400	Total ancillary own funds

Available and eligible own funds

R0500	Total available own funds to meet the SCR
R0510	Total available own funds to meet the MCR
R0540	Total eligible own funds to meet the SCR
R0550	Total eligible own funds to meet the MCR

R0580	SCR
R0600	MCR
R0620	Ratio of Eligible own funds to SCR
R0640	Ratio of Eligible own funds to MCR

Reconciliation reserve

R0700	Excess of assets over liabilities
R0710	Own shares (held directly and indirectly)
R0720	Foreseeable dividends, distributions and charges
R0730	Other basic own fund items
R0740	Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds
R0760	Reconciliation reserve

Expected profits

R0770	Expected profits included in future premiums (EIPFP) - Life business
R0780	Expected profits included in future premiums (EIPFP) - Non- life business
R0790	Total Expected profits included in future premiums (EIPFP)

Total	Tier 1 unrestricted	Tier 1 restricted	Tier 2	Tier 3
C0010	C0020	C0030	C0040	C0050
50,000	50,000		0	
0	0		0	
87,500	87,500		0	
0		0	0	0
0	0			
0		0	0	0
0		0	0	0
923	923			
15,500		0	15,500	0
8,632				8,632
0	0	0	0	0
0				
0	0	0	0	
162,554	138,423	0	15,500	8,632

0			
0			
0			
0			
0			
0			
0			
0			
0			
0			
0		0	0

162,554	138,423	0	15,500	8,632
153,923	138,423	0	15,500	
162,554	138,423	0	15,500	8,632
142,600	138,423	0	4,178	

83,555
20,889
194.55%
682.66%

C0060
147,054
0
146,132
0
923

30,374
30,374

S.25.01.21

Solvency Capital Requirement - for undertakings on Standard Formula

R0010 Market risk
 R0020 Counterparty default risk
 R0030 Life underwriting risk
 R0040 Health underwriting risk
 R0050 Non-life underwriting risk
 R0060 Diversification

R0070 Intangible asset risk

R0100 **Basic Solvency Capital Requirement**

Calculation of Solvency Capital Requirement

R0130 Operational risk
 R0140 Loss-absorbing capacity of technical provisions
 R0150 Loss-absorbing capacity of deferred taxes
 R0160 Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC
 R0200 **Solvency Capital Requirement excluding capital add-on**
 R0210 Capital add-ons already set
 R0220 **Solvency capital requirement**

Other information on SCR

R0400 Capital requirement for duration-based equity risk sub-module
 R0410 Total amount of Notional Solvency Capital Requirements for remaining part
 R0420 Total amount of Notional Solvency Capital Requirements for ring fenced funds
 R0430 Total amount of Notional Solvency Capital Requirements for matching adjustment portfolios
 R0440 Diversification effects due to RFF nSCR aggregation for article 304

Approach to tax rate

R0590 Approach based on average tax rate

Calculation of loss absorbing capacity of deferred taxes

R0640 LAC DT
 R0650 LAC DT justified by reversion of deferred tax liabilities
 R0660 LAC DT justified by reference to probable future taxable economic profit
 R0670 LAC DT justified by carry back, current year
 R0680 LAC DT justified by carry back, future years
 R0690 Maximum LAC DT

Gross solvency capital requirement	USP	Simplifications
C0110	C0090	C0120
13,299		
11,669		
0		
571		
53,918		
-13,937		

USP Key

For life underwriting risk:
 1 - Increase in the amount of annuity benefits
 9 - None

For health underwriting risk:
 1 - Increase in the amount of annuity benefits
 2 - Standard deviation for NSLT health premium risk
 3 - Standard deviation for NSLT health gross premium risk
 4 - Adjustment factor for non-proportional reinsurance
 5 - Standard deviation for NSLT health reserve risk
 9 - None

For non-life underwriting risk:
 4 - Adjustment factor for non-proportional reinsurance
 6 - Standard deviation for non-life premium risk
 7 - Standard deviation for non-life gross premium risk
 8 - Standard deviation for non-life reserve risk
 9 - None

C0100
18,035
0
0
0
83,555
0
83,555

0
0
0
0
0

C0109
Yes

LAC DT

C0130
0
0
0
0
0
0

S.28.01.01

Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity

Linear formula component for non-life insurance and reinsurance obligations

R0010 MCR_{NL} Result

C0010

16,968

Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance) written premiums in the last 12 months
C0020	C0030
0	257
819	672
0	
0	5,862
4,450	1,322
12,504	10,978
20,534	28,089
45,736	28,995
575	740
0	
0	
0	
0	
541	946
0	
0	

R0020	Medical expense insurance and proportional reinsurance
R0030	Income protection insurance and proportional reinsurance
R0040	Workers' compensation insurance and proportional reinsurance
R0050	Motor vehicle liability insurance and proportional reinsurance
R0060	Other motor insurance and proportional reinsurance
R0070	Marine, aviation and transport insurance and proportional reinsurance
R0080	Fire and other damage to property insurance and proportional reinsurance
R0090	General liability insurance and proportional reinsurance
R0100	Credit and suretyship insurance and proportional reinsurance
R0110	Legal expenses insurance and proportional reinsurance
R0120	Assistance and proportional reinsurance
R0130	Miscellaneous financial loss insurance and proportional reinsurance
R0140	Non-proportional health reinsurance
R0150	Non-proportional casualty reinsurance
R0160	Non-proportional marine, aviation and transport reinsurance
R0170	Non-proportional property reinsurance

Linear formula component for life insurance and reinsurance obligations

R0200 MCR_L Result

C0040

0

Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance/SPV) total capital at risk
C0050	C0060

R0210	Obligations with profit participation - guaranteed benefits
R0220	Obligations with profit participation - future discretionary benefits
R0230	Index-linked and unit-linked insurance obligations
R0240	Other life (re)insurance and health (re)insurance obligations
R0250	Total capital at risk for all life (re)insurance obligations

Overall MCR calculation

C0070

R0300	Linear MCR	16,968
R0310	SCR	83,555
R0320	MCR cap	37,600
R0330	MCR floor	20,889
R0340	Combined MCR	20,889
R0350	Absolute floor of the MCR	3,445
R0400	Minimum Capital Requirement	20,889

Report of the external independent auditors to the Directors of Arch Insurance (UK) Limited ('the Company') pursuant to Rule 4.1 (2) of the External Audit Part of the PRA Rulebook applicable to Solvency II firms

Report on the Audit of the relevant elements of the Solvency and Financial Condition Report

Opinion

We have audited the following documents prepared by the Company as at 31 December 2022:

- The 'Valuation for solvency purposes' and 'Capital Management' sections of the Solvency and Financial Condition Report of the Company as at 31 December 2022, (**the Narrative Disclosures subject to audit**); and
- Company templates S.02.01.02, S.17.01.02, S.23.01.01, S.25.01.21 and S.28.01.01 (**the Templates subject to audit**).

The Narrative Disclosures subject to audit and the Templates subject to audit are collectively referred to as the '**relevant elements of the Solvency and Financial Condition Report**'.

The '**relevant elements of the Solvency and Financial Condition Report**' include information contained within the 'Capital Management' section of the Solvency and Financial Condition Report which has not been audited - this information is clearly marked as 'unaudited' and relates to the 'adjusted net asset basis' used by the company as part of its internal capital governance.

We are not required to audit, nor have we audited, and as a consequence do not express an opinion on the **Other Information** which comprises:

- The 'Summary', 'Business and performance', 'System of governance' and 'Risk profile' elements of the Solvency and Financial Condition Report;
- Company templates S.05.01.02, S.05.02.01 and S.19.01.21;
- The written acknowledgement by management of their responsibilities, including for the preparation of the Solvency and Financial Condition Report (**the Responsibility Statement**).

In our opinion, the information subject to audit in the relevant elements of the Solvency and Financial Condition Report of the Company as at 31 December 2022 is prepared, in all material respects, in accordance with the financial reporting provisions of the PRA Rules and Solvency II regulations on which they are based.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) including ISA (UK) 800 and ISA (UK) 805, and applicable law. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the relevant elements of the Solvency and Financial Condition Report* section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the Solvency and Financial Condition Report in the UK, including the FRC's Ethical Standard as applied to public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

Our evaluation of the Directors' assessment of the Company's ability to continue to adopt the going concern basis of accounting included:

- Obtaining management's going concern assessment which considered the company's financial condition and liquidity position;
- Agreeing management's analysis to supporting documentation; and
- Assessing the reasonableness of management's analysis given our understanding of the company and challenging it accordingly.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Company's ability to continue as a going concern for a period of at least twelve months from the date on which the Solvency and Financial Condition Report is authorised for issue.

In auditing the Solvency and Financial Condition Report, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the Solvency and Financial Condition Report is appropriate.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the Company's ability to continue as a going concern.

Our responsibilities and the responsibilities of the Directors with respect to going concern are described in the relevant sections of this report.

Emphasis of Matter - Basis of Accounting

We draw attention to the 'Valuation for solvency purposes' and 'Capital Management' sections of the Solvency and Financial Condition Report, which describe the basis of accounting. The Solvency and Financial Condition Report is prepared in compliance with the financial reporting provisions of the PRA Rules and Solvency II regulations, and therefore in accordance with a special purpose financial reporting framework. The Solvency and Financial Condition Report is required to be published, and intended users include but are not limited to the Prudential Regulation Authority. As a result, the Solvency and Financial Condition Report may not be suitable for another purpose. Our opinion is not modified in respect of this matter.

Other Information

The Directors are responsible for the Other Information.

Our opinion on the relevant elements of the Solvency and Financial Condition Report does not cover the Other Information and we do not express an audit opinion or any form of assurance conclusion thereon.

In connection with our audit of the Solvency and Financial Condition Report, our responsibility is to read the Other Information and, in doing so, consider whether the Other Information is materially inconsistent with the relevant elements of the Solvency and Financial Condition Report, or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the relevant elements of the Solvency and Financial Condition Report or a material misstatement of the Other Information. If, based on the work we have performed, we conclude that there is a material misstatement of this Other Information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Directors for the Solvency and Financial Condition Report

The Directors are responsible for the preparation of the Solvency and Financial Condition Report in accordance with the financial reporting provisions of the PRA rules and Solvency II regulations.

The Directors are also responsible for such internal control as they determine is necessary to enable the preparation of a Solvency and Financial Condition Report that is free from material misstatement, whether due to fraud or error.

Auditors' Responsibilities for the Audit of the relevant elements of the Solvency and Financial Condition Report

It is our responsibility to form an independent opinion as to whether the information subject to audit in the relevant elements of the Solvency and Financial Condition Report is prepared, in all material respects, in accordance with financial reporting provisions of the PRA Rules and Solvency II regulations on which they are based.

Our objectives are to obtain reasonable assurance about whether the relevant elements of the Solvency and Financial Condition Report are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but it is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decision making or the judgement of the users taken on the basis of the Solvency and Financial Condition Report.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

Based on our understanding of the Company/industry, we identified that the principal risks of non-compliance with laws and regulations related to breaches of insurance regulations, such as those issued by the Prudential Regulation Authority and the Financial Conduct Authority, and we considered the extent to which non-compliance might have a material effect on the Solvency and Financial Condition Report. We also considered those laws and regulations that have a direct impact on the Solvency and Financial Condition Report such as Solvency II Regulations and the Solvency II Directive. We evaluated management's incentives and opportunities for fraudulent manipulation of the Solvency and Financial Condition Report (including the risk of override of controls), and determined that the principal risks were related to posting of inappropriate journals and management bias in accounting estimates. Audit procedures performed included:

- discussions with the Audit Committee, management and internal audit, including consideration of known or suspected instances of non-compliance with laws and regulation and fraud;
- evaluation and testing of the operating effectiveness of management's controls designed to prevent and detect irregularities;
- reviewing, and challenging where appropriate, the assumptions and judgements made by management in their significant accounting estimates, in particular in relation to technical provisions, including the estimation of future premiums within those provisions;
- testing material Solvency II adjustments applied to the Templates subject to audit;

- identifying and testing journal entries based on selected fraud risk criteria, in particular journal entries with unusual account combinations or posted by unexpected users;
- evaluating the business rationale for any significant transactions identified outside the normal course of business; and
- designing audit procedures to incorporate unpredictability around the nature, timing or extent of our testing.

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the Solvency and Financial Condition Report. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

A further description of our responsibilities for the audit is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinion, has been prepared for the Board of Directors of the Company in accordance with External Audit rule 2.1 of the Solvency II firms Sector of the PRA Rulebook and for no other purpose. We do not, in providing this report, accept or assume responsibility for any other purpose or to any other party save where expressly agreed by our prior consent in writing.

Report on Other Legal and Regulatory Requirements

In accordance with Rule 4.1 (3) of the External Audit Part of the PRA Rulebook for Solvency II firms we are also required to consider whether the Other Information is materially inconsistent with our knowledge obtained in the audit of the Company's statutory financial statements. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Chartered Accountants

7 More London Riverside

London

SE1 2RT

31 March 2023