



ARCH REINSURANCE EUROPE UNDERWRITING DAC
2019 SOLVENCY AND FINANCIAL CONDITION REPORT

Arch Reinsurance Europe
Underwriting dac
21 April 2020

SOLVENCY AND FINANCIAL CONDITION REPORT

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SUMMARY

Arch Reinsurance Europe Underwriting dac (“ARE” or “the Company”) is an Irish regulated composite reinsurance entity authorized by the Central Bank of Ireland (“CBI”). The Company’s ultimate parent is Arch Capital Group Ltd. (“ACGL” and, together with its subsidiaries, the “Group” or the “Arch Group”), whose common shares are listed and traded on the NASDAQ stock market in the U.S. The Company is a property and casualty reinsurance underwriting company writing a diversified portfolio, both in terms of product mix and geography, in non-commoditised niche areas primarily.

Business, Strategy & Performance

Gross written premium (“GWP”) for 2019 was €331m, in line with the prior year of €332m. Net underwriting profit decreased to €7.2m down from €17.9m in 2018. The reduction in net underwriting profit was driven by a combination of slightly higher net losses incurred, lower net earned premium after a €5.3m (2018 - €0.8m) adjustment from the revaluation UPR for foreign exchange movements and higher operating expenses. Pre-tax profits including investment income amounted to €22.4m which compared to €29.8m for the prior year.

Reinsurance rates largely stabilized from the downward trend experienced in more recent years. Overall capacity in the market remains plentiful in the absence of any major market events in 2019. There are signs, however, of positive rate changes in primary markets across several business lines and this has contributed to the stability in reinsurance rates noted. The insolvency of the Thomas Cook travel group is a noteworthy large claim. Whilst it was meaningful for the Credit & Surety line of business it was not material for the Company either on a gross or net of reinsurance basis. Another meaningful event in 2019 was the publication of the revised Ogden discount rate in the United Kingdom which is used to calculate settlements in certain personal injury claims. The new rate was set to -0.25% which is less than had been anticipated by the industry. This led to some hardening in the primary and reinsurance market. The Company has remained faithful to its underwriting philosophy of writing business that meets our return on equity (ROE) criteria which, despite the nascent signs of better market conditions, has again proven challenging in 2019. The stable level of written premiums compared to 2018 was largely a result of the retention of existing business, and the identification of new opportunities meeting our underwriting and ROE criteria.

The Company purchases reinsurance on the business it writes to protect it against adverse performance and to efficiently manage capital. The Company’s external reinsurance purchases are in the form of both excess of loss and quota share agreements. In addition, the Company cedes 85% of its net retained premium under a quota share agreement with a related group entity, Arch Reinsurance Ltd., a Bermuda domiciled company with \$12.4 billion (2018: \$10.8 billion) of capital, comprised of shareholders’ equity and debt as at 31 December 2019. More details about the Company’s business and performance can be found in [Section A](#).

System of governance

The Company maintains an effective system of governance, which provides for sound and prudent management of its integrated operations.

The Company has designed its system of governance to achieve the following:

- Maintain an adequately transparent organizational 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 that outsourced responsibilities are delegated and managed appropriately, with ultimate responsibility residing with the Board.

The system of governance is based on the principle of proportionality, such that systems and controls are proportionate to the nature, scale and complexity of the integrated Company's operations.

In this regard, the Company's Board of Directors ("Board") monitors key aspects of the business and is assisted where appropriate by the Risk and Audit Committees of the Board.

It is not deemed appropriate or proportionate, given the scale of the business and the governance structure in place to appoint an Investment Committee, Nomination Committee or a Remuneration Committee. In addition, the Board reviews information that would otherwise be addressed by such committees at its meetings.

The principles and requirements of the system of governance, particularly risk management, internal control, internal audit and outsourcing, are the responsibility of the Board. While retaining these responsibilities, the Board has delegated the authority for day-to-day risk management to ARE's Executive team. The Company's Chief Risk Officer ("CRO") monitors the Risk Management Framework for operating effectiveness and reports to the Risk Committee and Board as appropriate.

The Board has approved formal policies, which are a component of the Company's Governance Structure.

The system of governance is assessed via reviews by the Compliance Officer, together with the CRO and periodic evaluation by Internal Audit. All related findings and/or reports are presented to the Audit Committee and the Board. [Section B](#) provides details on the Company's governance system.

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 organization towards the desired level of risk. It not only supports the Company's risk management framework, it also enables the Company to make informed business decisions having regard to the key risks to which it may be exposed by such a decision.

In general, ARE has an appetite for insurance (underwriting) risk and a tolerance for other forms of risk. The risk philosophy of ARE encompasses all major risks and focuses on attaining the following business objectives:

- Underwrite business that meets agreed targeted returns;

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

To meet these objectives and the Company's overall strategy, performance against risk appetites and risk tolerances & limits metrics, as articulated in the Company's Risk Appetite Statement, are monitored by the CRO and reported on to the Risk Committee on a quarterly basis with defined escalation process for breaches of these key metrics.

On March 11th, 2020 the World Health Organization declared a pandemic in relation to the outbreak of the COVID-19 virus. The outbreak is causing unprecedented social disruption, global economic and financial markets volatility, reduced liquidity of capital markets and intervention by various governments around the world. The Company, in the first instance, has taken all necessary steps to protect its employees with the introduction of mandatory working from home and the implementation of its business continuity plans. While the impact on the business remains uncertain, the Company is actively monitoring the impact that COVID-19 is having with particular focus on the valuation of the Company's investments, incurred losses, the recoverability of the Company's reinsurance assets, and premium volume, all of which may be impacted by the increased volatility and uncertainty in the markets. The Board are being kept apprised by Management in relation to the evolving impact assessment on these areas and the general operational impact. At this time, there is no disruption to the business and developments in this fluid situation are being monitored.

The Company's risk profile is detailed in [Section C](#).

Valuation for Solvency II purposes

The Company prepares its financial statements in accordance with Generally Accepted Accounting Practice ("GAAP") in Ireland comprised of accounting standards issued by the Financial Reporting Council of the UK, including Financial Reporting Standard 102. The Financial Reporting Standard is applicable in the UK and Republic of Ireland and promulgated by the Institute of Chartered Accountants in Ireland and Irish Companies Act 2014.

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 the balance sheet on a GAAP basis arise from;

- the valuation of technical provisions and reinsurer's share of technical provisions;
- the valuation of holdings in related undertakings;
- the valuation of insurance and intermediary balances receivable and reinsurance balances payable;
- the valuation of deferred acquisition costs / deferred ceding commissions; and
- the valuation of deferred tax asset / deferred tax liability.

[Section D](#) provides reconciliation between the valuation of assets and liabilities under GAAP and under Solvency II along with further details on valuation for Solvency II purposes.

Capital Management

The Company's Solvency Capital Requirement ("SCR") coverage ratio as at 31 December 2019 was 197.9% with Eligible Own Funds of €666.9m and a Solvency Capital Requirement (SCR) of €336.9m. ARE derives its SCR from the Standard Formula approach. There was one change of note that had an impact on SCR arising from a change, implemented at year-end, to restrict the asset recognized in respect of the loss absorbing capacity for deferred tax, in line with new EIOPA guidelines. There were, however, no material changes in the SCR calculation during the year. The Company's Minimum Capital Requirement ("MCR") coverage ratio as at 31 December 2019 was 791.1% with Eligible Own Funds of €666.3m. The Company has a strong capital base enabling it to meet its solvency requirements and to facilitate the level of activity anticipated throughout the planning period and within the Company's Own Risk and Solvency Assessment ("ORSA"). [Section E](#) provides details about the Company's Capital Management.

SECTION A – BUSINESS AND PERFORMANCE

A.1 Business

A.1.1 Name and Legal Form of the Undertaking

ARE is incorporated in Ireland as a designated activity company (“dac”). A dac is a corporate form for a private company limited by shares, which activities are limited by its objects clause, and its constitution comprises a memorandum and articles of association. The address of the registered office of the Company is:

Arch Reinsurance Europe Underwriting dac
Level 2, Block 3, The Oval
160 Shelbourne Road, Ballsbridge
Dublin 4, Ireland

This Solvency and Financial Condition Report (“SFCR”) covers ARE on a solo basis.

A.1.2 Insurance Supervisor and Group Supervisor

Insurance Supervisor

Central Bank of Ireland (“CBI”)
PO Box 559
Dublin 1, Ireland

Group Supervisor

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

A.1.3 External Auditor

Deloitte Ireland LLP
29 Earlsfort Terrace D02 AY28
Dublin, Ireland

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

Arch Financial Holdings Europe II Limited, a private company limited by shares and incorporated in Ireland, owns 100% of the equity share capital of the Company.

A.1.5 Group Structure

The Company’s ultimate parent and ultimate controlling party is ACGL, a Bermuda public limited liability 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.

An organization chart illustrating ARE's position in the Group is included as [Appendix 1](#).

A.1.6 Material Lines of Business and Geographical areas where business is conducted

The following tables set forth summary information regarding Gross premiums written, by major business line and geographical region for the year to December 31 2019;

Gross Written Premium ('000 EUR)		
Major Line of business	2019	2018
Casualty	118,141	106,267
Other Property	24,552	18,534
Other Specialty	184,698	205,311
Property CAT	3,327	1,433
Marine & Other	411	267
Total	331,128	331,812

Gross Written Premium ('000 EUR)		
Geographic Region	2019	2018
Europe	234,423	253,731
Asia Pacific	56,270	43,243
Southern & Central America	18,883	21,918
Middle East & Africa	7,802	5,059
North America	5,081	3,746
Other	8,669	3,115
Total	331,128	331,812

A.1.7 Significant Business or Other Events

No significant business or other events occurred during 2019 that had a material impact on the Company. Noteworthy was the renewal rights agreement entered into with Aspen Reinsurance in November 2019 who decided to exit the Credit and Surety line of business. This allowed us to further diversify our book.

The Company is impacted by Brexit by virtue of its UK Branch presence. The PRA has introduced a Temporary Permissions Regime ("TPR") which enables existing Freedom of Establishment ("FOE")

operations, such as the Company's branch, to apply to continue to operate on an FOE basis whilst making an application to establish a Third Country branch. The Company has availed of the TPR and will be making an application for the approval of a Third Country branch. The timing of this application is determined by the PRA. The TPR and ultimately the Third Country branch allows the Company to mitigate the impact of Brexit on its existing FOE operation into the UK. Otherwise the impact of Brexit has been assessed and is not considered significant or material to the Company's operations.

A.2 Underwriting Performance

Since the Company prepares its financial statements in accordance with Generally Accepted Accounting Practice in Ireland¹, the underwriting performance information given in this section is on a GAAP (Ireland) basis. The following table summarizes the performance, by major line of business in Euro '000, for the technical account for year ended 31 December 2019.

	Casualty	Other Property	Other Specialty	Property Cat	Marine & Other	Total YTD
	€'000	€'000	€'000	€'000	€'000	€'000
Gross premiums written	118,141	24,552	184,698	3,327	411	331,128
Net premiums written	14,655	3,336	20,307	191	48	38,536
Net premiums earned	13,994	2,992	16,109	167	55	33,316
Other underwriting-related fee income	-	-	(2,268)	-	-	(2,268)
Losses and LAE	11,323	1,356	15,584	15	76	28,354
Acquisition expenses – GAAP	(18,096)	(1,746)	(7,920)	(411)	(35)	(28,208)
Other operating expenses - GAAP	7,383	4,534	11,542	208	26	23,692
GAAP underwriting profit (loss)	13,384	(1,151)	(5,366)	355	(13)	7,210
GAAP ratios:						
Losses and LAE	80.9%	45.3%	96.7%	8.8%	139.6%	85.1%
Acquisition expenses	-129.3%	-58.4%	-49.2%	-246.0%	-63.6%	-84.7%
Other operating expenses (Incl DKK fee)	52.8%	151.5%	85.7%	124.4%	46.9%	77.9%
Combined ratio	4.4%	138.5%	133.3%	-112.8%	122.8%	78.4%

Footnote 1: Net earned premium includes revaluation FX G/L of €5.2m in UPR. Excluding this adjustment, the net loss ratio was 73.7%. The equivalent adjustment in 2018 impacted the loss ratio by 0.40%.

The equivalent table for year ended 31 December 2018 is provided in the following table.

	Casualty	Other Property	Other Specialty	Property Cat	Marine & Other	Total YTD
	€'000	€'000	€'000	€'000	€'000	€'000
Gross premiums written	106,267	18,534	205,311	1,433	268	331,812
Net premiums written	13,895	2,681	24,032	61	35	40,702
Net premiums earned	12,569	2,722	23,552	63	43	38,950
Other underwriting-related fee income	-	-	(2,099)	-	-	(2,099)
Losses and LAE	10,229	1,625	15,654	(125)	12	27,394
Acquisition expenses – GAAP	(16,512)	(2,368)	(8,573)	(160)	5	(27,608)
Other operating expenses - GAAP	5,279	3,035	10,776	71	13	19,175
GAAP underwriting profit (loss)	13,573	430	3,596	277	13	17,890
GAAP net ratios:						
Losses and LAE	81.4%	59.7%	66.5%	-197.4%	27.9%	70.3%
Acquisition expenses	-131.4%	-87.0%	-36.4%	-251.9%	11.0%	-70.9%
Other operating expenses (Incl DKK fee)	42.0%	111.5%	54.7%	112.2%	30.9%	54.6%
Combined ratio	-8.0%	84.2%	84.7%	-337.0%	69.7%	54.1%

¹ Generally Accepted Accounting Practice in Ireland - accounting standards issued by the Financial Reporting Council of the UK, including Financial Reporting Standard 102 the Standard applicable in the UK and Republic of Ireland and promulgated by the Institute of Chartered Accountants in Ireland and companies Act 2014.

The above tables do not include items such as investment income, realized and unrealized gains and losses including those relating to foreign exchange.

The negative combined ratios in the table above arise due to the commission structure in place in our inter-company quota share agreement with Arch Reinsurance Ltd. ("ARL"). A flat fee commission is paid by ARL to cover costs incurred by the Company in writing the business. The actual expenses on contracts will vary however, leading to some contracts where the commission received is lower than net costs incurred, and other contracts where the commission is higher than the net costs (including losses) incurred. The negative combined ratios above arise in Lines of Business with a high proportion of contracts where the commission is higher than the combination of net loss expense, original acquisition costs and other expenses incurred.

Qualitative discussion – major lines of business:

2019 to 2018 comparison

GWP for 2019 were €331m, prior to cessions to the Company's retrocessionaires. This is virtually unchanged compared to €331.8m in 2018. The net decrease in GWP was just €0.7m however within this net figure Casualty increased by €10.5m driven primarily by continued positive rate changes in UK Motor while Other Specialty reduced by a €20.6m reflecting a disciplined approach to underwriting in response to conditions in that segment. Property treaty and facultative reinsurance premium, excluding catastrophe business, increased by €6m to €24.6m as we saw our criteria being met increasingly. Other lines of business were flat year on year, on a net basis.

The reported loss ratio increased meaningfully in 2019 at 85.1% compared to 70.3% for 2018. Much of this increase is driven by an Irish GAAP adjustment requiring the revaluation of Unearned Premium Reserve (UPR) for foreign exchange rate changes. This adjustment reduced Net Earned Premium by €5.2m (2018 - €0.8m) to €33.5m. As most of the Company's retrocession purchased, including the 85% intercompany quota share agreement, are denominated in Euro this revaluation adjustment had a broadly similar impact on a gross and net basis. Excluding this accounting adjustment, the net loss ratio for 2019 was 73.7%.

Before the accounting adjustment referred to above, the net loss ratio increased by 3.2%. This increase came primarily from the Other Specialty segment and in particular the Credit and Surety line of business. The insolvency of the Thomas Cook travel group in September 2019 was the main driver of that. Whilst a significant industry event in the line of business this was not material to the Company. The loss ratio in Other Property worsened somewhat in 2019 which was driven by a small number of mid-size losses. Other segments such as Property Cat and Marine are immaterial, and their loss ratios disproportionately impacted by very small movements in losses.

The net underwriting profit for 2019 was €7.2m, excluding investment income and realized gains and losses and other non-underwriting items. The equivalent result for 2017 was a profit of €17.9m. The worsening in the underwriting result of €11.8m, is explained by negative UPR revaluation movement of €4.4m, increased net losses incurred of €1m and a combined increase in net expenses of €4m (i.e., decreased net negative expenses after allowing for lower original assumed acquisition expenses and ceding commissions received).

Casualty

In the Casualty segment the Company's focus is on providing coverage to ceding company clients on third party liability products like motor, employers', general and/or professional liability, primarily on a treaty

basis. Our main markets are in Continental Europe, United Kingdom and Ireland. We are active in exploring other European territories as well.

The Casualty segment saw an 11% increase in GWP due to favourable conditions in certain lines, particularly in UK motor resulting from combination of new business and positive rate changes.

The overall performance across the Company's Casualty book is well within expectations.

Other Property

The Company provides coverage for both personal lines and commercial property exposures and principally covers buildings, structures, equipment and contents. On the treaty side we have seen meaningful growth relatively speaking with premium increase from €7.5m to €12.3m. This growth was derived from a small number of new accounts combined with some rate growth in the Company's existing business. Most of our existing business comes from multiline bouquet covers in Europe.

The Company's Property Facultative business is written by two teams based in London and Zurich. The Company has seen an increased submission flow in this line as due to more demand from specific needs of clients as well as following increased loss activity in certain markets. Risk selection remains critical to the underwriting of the Company. Overall GWP was slightly increased in 2019, relative to levels in 2018.

Other Specialty

Within the Other Specialty unit, the Company provides coverage to ceding company clients for surety, accident and health, workers' compensation catastrophe, agriculture, trade credit & political risk and proportional motor liability. Geographically we run most of those lines on a highly diversified world-wide basis excluding the United States.

In trade credit & surety the reinsurance market continues to be competitive due to ample capacity as other reinsurers continue to seek more diversification into specialty lines. The Company's strategy in this line of business has been to defend its portfolio for the most part whilst maintaining underwriting discipline. The performance of this line meets our expectations and was in line with this strategy. GWP in credit & surety was slightly up by 5% compared to 2018. As mentioned above the collapse of the Thomas Cook travel group impacted our results. GWP from the renewal rights transaction with Aspen Re (mentioned above) will be impacted from 2020 onwards.

The agriculture unit contracted its GWP in comparison to 2017 reducing by 27%. This reduction reflects specific underwriting decisions taken to reduce exposure to certain geographies. Taking this into account, the performance of the Company's agriculture book meets our expectations.

The accident and health part of Other Specialty again increased GWP modestly in 2019 as price competition and disciplined underwriting resulted in few new opportunities. The supplemental health activity during 2019 continued to focus mainly on a small number of core relationships on the Continent. The combined accident and health portfolio has performed as expected.

GWP in the motor quota share business reduced 27% in 2019 compared to 2018 following a reduction in our participation on renewal of the small number of transactions in this portfolio.

Property CAT

Property CAT remains an incidental line of business for the Company and in general is written in combination with transactions in other lines of business, primarily Casualty.

Marine and other

The Company has Marine activity in some legacy accounts and some ancillary premium relating to terrorism.

A.3 Investment Performance

ARE invests in a diversified portfolio of highly rated securities. Fixed income securities comprise most of the Company's investment assets. In addition to fixed income the Company also holds some short-term cash or cash equivalent securities and an investment in a limited partnership which is value using the equity method. The following table summarizes the invested assets of the Company at year ended 31 December 2019 and 2018.

	2019		2018	
	Amount '000	% of Total	Amount '000	% of Total
Bonds				
Government Bonds	435,124	83.9%	381,771	86.6%
Corporate Bonds	56,903	11.0%	23,536	5.5%
Asset Backed Securities	7,080	1.4%	9,226	2.2%
Subtotal	499,107	96.2%	414,533	97.2%
Short term investments				
Money Market Funds	301	0.1%	2,787	0.7%
Cash & Cash Equivalents	13,722	2.6%	2,335	0.5%
Subtotal	14,023	2.7%	5,122	1.2%
Equity method investment				
Limited Partnership Fund	5,427	1.1%	6,622	1.6%
Total	518,557	100.0%	426,277	100.0%

The components of net investment income included in the statement of income and expenses are as per the table below.

	2019	2018
Investment income	€'000	€'000
Interest income from:		
Government & Supranational Bonds	3,686	3,179
Corporate Bonds	1,148	296
Cash and Deposits	767	559
Total Interest Income	5,550	4,034
Investment return		
Foreign exchange gain/(losses) on investments	12,219	1,749
Unrealised gains/(losses) on investments	3,043	1,337
Realised gains/(losses)/ on investments	8,179	371
Income on investments valued under equity method	1,436	2,766
Total investment income & investment return	30,427	10,256
Investment expenses and charges	(1,059)	(649)
Net investment return	29,456	9,608

A.4 Performance of other activities

The following table summarizes the profit and loss account in Euro for the non-technical account for year ended 31 December 2019 and year ended 31 December 2018.

	Year Ended 31/12/2019 €'000	Year Ended 31/12/2018 €'000
Balance on the technical account	23,335	30,402
Net investment return included in the non-technical account	(971)	(649)
Profit on ordinary activities before taxation	22,364	29,753
Tax on profit on ordinary activities	(1,727)	(4,525)
Profit on ordinary activities after taxation	20,637	25,228

There were no gains or losses recognized directly in equity.

There were no material other income or expenses during the year.

A.5 Any other information

There is no other material information to report as of 31 December 2019.

SECTION B – SYSTEM OF GOVERNANCE

B.1 General information on the system of governance

B.1.1 Overview

The Company is classified as Medium Low Risk under the Central Bank of Ireland's PRISM rating framework and is subject to the Central Bank of Ireland's Corporate Governance Requirements for Insurance Undertakings 2015.

The Company's Board is responsible for overseeing, controlling and directing the activities of the Company. The Board retains primary responsibility for corporate governance within the Company at all times. Senior Management also plays an important role in ensuring effective governance.

The terms of reference of the Board require the Board be made up of at least five directors, the majority of whom must be non-executive directors or independent directors. At least two members of the Board must be independent non-executive directors.

The Board of Directors as at 31 December 2019 is as follows:

- Ian Britchfield, Chairman (INED, Chairman of the Board and Risk Committee);
- Gerald König (INED, Audit committee chair, Risk committee member);
- Anthony Asquith (INED, Risk committee member, Audit committee member);
- Maamoun Rajeh (NED);
- Soren Scheuer (NED, Risk committee member);
- Jason Kittinger (NED, Audit committee member); and
- Michael Hammer, CEO (Executive Director, Risk committee member)

The company secretary is Mark Nolan.

The presence of independent non-executive directors ensures that there is an appropriate element of independent challenge and oversight. The presence of AGL executive management on the Board ensures that the Company's strategic direction remains aligned with the wider Group and ensures there is continuous feedback between, and interaction with, the Company and its parent. This structure enables the Group to retain an appropriate oversight of the Company's operations and to ensure that the business is aligned with the Group's long-term goals.

The Board is responsible for overseeing the business of the Company and supervising management. The Board sets the standards of conduct of the Company, provides direction and oversight, and promotes a culture of integrity. While the Board delegates certain function to Sub-Committees and Management, this does not absolve the Directors of their responsibility for the Company.

The Board operates under agreed terms of reference and has the following key responsibilities:

- To comply with any obligations for the Board prescribed by the Code, the Companies Acts 1963 – 2014 and all other rules, regulation, guidelines and laws applicable;
- The effective, prudent and ethical oversight of the Company;
- Setting the business strategy for the Company; and
- Ensuring that the Company complies with its constitution as well as relevant legal, regulatory, and governance requirements.

The Board reserves the following matters specifically to the Board unless, where permitted by applicable Irish law and regulatory requirements, such matters are expressly delegated in writing to management, the Audit Committee, the Risk Committee of the Company, or otherwise. These matters are also subject, where appropriate, to the direction/decision of the shareholder.

- All matters prescribed as being specifically reserved to the Board by the Company's Memorandum and Articles of Association, company law, and regulatory requirements;
- Appointment of Members of the Board, subject to regulatory approval;
- Approval of minutes of meetings of the Board and acknowledgement of the content of any minutes of any Committee of the Board or management/operational committee;
- Approval or ratification of any recommendation from or action taken by management or any Committee of the Board or management/operational committee, to the extent that any such recommendation or action requires approval or ratification;
- Recommendation and approval of distributions or dividends to the shareholders;
- Approval of Annual Financial Statements and Regulatory Returns, including approval of content of, and signing, the annual directors' compliance certificate and the annual compliance statement with respect to the Code;
- Appointment of Auditors;
- Appointment of Bankers and/or Investment Managers or Advisors;
- Approval of any changes in the structure of the Board;
- Approval of the business plan, including but not limited to corporate strategy, goals and structure;
- Establishment, appointment to and/or dissolution of, as the case may be, Committees of the Board and management/operational committees, including prescribing and approving charters and/or terms of reference for such committees;
- Determining the Risk Appetite of the Company;
- Self-assessment of the Board, including in relation to composition, performance, conflicts of interest and any other matter specified in the Code. In relation to performance, the Board shall document the fact and results of its review;
- Waiver of any actual or apparent conflict of interest, if legally appropriate, involving the Company;
- Final approval of litigation or arbitration activities, including compromises and settlements of disputed litigation claims (other than ordinary course insurance claims);
- Approval of the removal from office of any head of a Control Function as defined in the Code;
- Dealings with (including disposal or acquisition of, or change of use of) any material asset of the Company;
- Approval of any appointments to Executive Management;
- Assess performance of the Board, and monitor the Board committees;
- Approval of matters outside of Company Policies (e.g., limits, products, investments);
- Approval of material agreements; and
- Any other matters not delegated to management or otherwise delegated by the Board.

The Board has an Audit Committee and a Risk Committee. Both are governed by their respective Terms of Reference.

The duties of the Audit Committee are:

- to liaise with the external and internal auditor particularly in relation to their audit findings;
- to oversee the relationship with the external auditors;
- to review the integrity of the Company's financial statements and to ensure that they give a "true and fair view" of the financial status of the Company;
- to review any financial announcements and reports and to recommend to the Board whether to approve the Company's annual accounts;
- to assess auditor independence and the effectiveness of the audit process;
- to monitor the effectiveness and adequacy of the Company's internal control, internal audit and IT systems;
- to review all reports on the Company from the auditors and management's responsiveness;
- to review and assess the annual audit plan including adequacy of resources and ensure that it is consistent with the scope of the audit engagement;
- to check quarterly the developments under the Annual Compliance Plan;
- to review the Annual Plan for the Compliance function;
- to ensure the Compliance function has adequate resources and independence; and
- to review and challenge, where necessary:
 - the consistency of, and any changes to, accounting policies;
 - the methods used to account for significant or unusual transactions where different approaches are possible; and
 - whether the Company has followed appropriate accounting standards and made appropriate estimates and judgments, taking into account the views of the external auditor.

The duties of the Risk Committee are:

- to liaise at least quarterly with the Chief Risk Officer to discuss the quarterly Risk report and other matters under these Terms of Reference;
- to oversee the risk management function and to check quarterly the developments under the Annual Risk Plan;
- to review updated or new Risk Policies and make a recommendation to the Board;
- to review the Annual Plan for the Risk Function including a review of adequacy of resources;
- to review at least annually the Risk Management Framework and advise the Board accordingly;
- to ensure that the risk appetite is clearly articulated and reflected within the Risk Appetite Statement and that the Risk Appetite Statement is reviewed at least annually;
- to review at least annually the Risk Register and advise the Board accordingly;
- to review quarterly the Risk Matrix and advise the Board on the current risk exposures;
- to keep under review the Company's overall risk assessment processes ensuring both qualitative and quantitative metrics are used;
- to review the Company's capability to identify and manage new risk types;

- to advise the Board, before a decision is taken to proceed with a proposed strategic transactions including acquisitions or disposals, on risk aspects of such transaction(s) and any implications for the risk appetite and tolerance of the Company;
- to review reports on any material breaches of risk limits and the adequacy of proposed action;
- to ensure the Risk Function has appropriate access to information to enable it to perform its function effectively;
- to ensure the Risk Function has adequate independence and unfettered access to the Board and Chairman of the Risk Committee;
- to consider other risk management topics, as defined by the Board;
- to monitor the effectiveness and adequacy of the Company's risk management processes;
- to advise the Board on the effectiveness of strategies and policies with respect to maintaining, on an on-going basis, amounts, types and distribution of both internal capital and own funds adequate to cover the risks of the institution;
- to review, challenge and advise on the inputs to and outputs from the (at least) annual ORSA process and report;
- to oversee the Compliance management function in relation to its policies, advising, reporting and training activities and to check quarterly the developments under the Annual Compliance Plan; and
- to review updated or new Compliance and Governance Policies and make a recommendation to the Board.

B.1.2 Code of Business Conduct

The Company has adopted the Group Code of Business Conduct ("Ethics Code"), which describes our ethical principles for the conduct of our business. The full text of the Ethics Code and our Corporate Governance Guidelines are available on the Group's website located at www.archcapgroup.com.

B.1.3 Independent Control Functions

The Company has in place four key independent control functions as required under the Corporate Governance Requirements for Insurance Undertakings 2015. These are:

- Risk Management (See Section B3)
- Compliance (See Section B4.2)
- Actuarial (see Section B6)
- Internal Audit (see Section B5)

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. Each function has the necessary authority, resources and operational independence to meet their responsibilities.

B.1.4 Material Changes

There have been no material changes in the memberships of the Board and Committees over the period. In 2018, the Company has implemented an Executive Management Meeting and added two Governance policies, Board Charter and Board Manual, to further enhance Company's Governance structure.

B.1.5 Remuneration Policy and Practices

The AGL Compensation Committee, in its capacity as a committee of the Board of Directors, has overall responsibility for approving and evaluating, and making recommendations to the Board regarding compensation plans, policies and programs of the Company for senior executives, as well as compensation parameters for all other employees of the Company and its controlled subsidiaries.

The Company has a Remuneration Policy in place which is guided by principles which are embedded in the Company's risk management framework and in Ethics Code. The Ethics Code embodies the Group's goal of promoting an organisational culture that encourages the highest standards of ethical business conduct. The Remuneration Policy follows compensation parameters established and approved by AGL Compensation Committee.

The Board of the Company is responsible for the implementation and administration of the Policy. It is not deemed appropriate or proportionate, given the scale of the business and the governance structure in place in Ireland and within the Arch Group, to appoint a Remuneration Committee. At least annually, the Risk Committee of the Company will review the Policy against the Company's risk framework and provide recommendations to the Board. The Board will review the Risk Committee's recommendations and ultimately approve the Policy for implementation if appropriate.

The CEO is responsible for reporting to the Board on the implementation and operation of this Policy, and consequent controls and processes. The Compliance Officer ("CO") is responsible for providing advice, implementing a monitoring program and reviewing the Policy at least on an annual basis as part of the Compliance Plan. The CO and CEO will present recommendations for changes to the Policy to the Risk Committee.

The CO will monitor the implementation of the Policy, then conferring with the CEO and, if needed, Group Human Resources staff, confirm that the Policy is being implemented appropriately. Reasonable evidence of the implementation shall be provided to the CO.

Responsibility for the determination of fixed salary levels rests with the CEO. For departmental staff, consultation is undertaken with department heads. The remuneration of the CEO is set at the Group level.

The principal features of our compensation programs and policies are summarized below.

Key Principles

Remuneration decisions are meant to encourage employees to meet the strategic aims and objectives of the Company within a framework of prudent and effective risk management and system of internal controls. Remuneration decisions should also take into account financial and non-financial considerations, as well as an employee's functions, responsibilities and experience.

Material Risk Takers

With respect to Material Risk Takers, who are defined as those employees who are permitted to commit or bind the Company to reinsurance transactions and to accept risk on behalf of the Company, the Policy also embodies the Group's guiding principles to emphasize long-term compensation tied to Group performance in order to mitigate excessive risk-taking. Arch philosophy requires exercise of judgment in making compensation decisions for employees after reviewing the Group's and Company's overall performance and long-term interests and evaluating an employee's performance during the year against established objectives, leadership qualities, scope of responsibilities and current compensation. Specific

factors affecting compensation decisions include key financial metrics, such as growth in book value, return on capital, after-tax operating income, combined ratio and investment performance, as well as achieving strategic objectives and supporting Arch's values by promoting a culture of integrity through compliance with law and its ethic policies. Fixed (base salary) and variable (bonus) components of remuneration may be adjusted upwards or downwards based on these considerations. The Group can modify or terminate elements of the compensation program for Material Risk Takers which create a fully flexible bonus policy, including the possibility of no payout of the variable cash component and no issuance of new equity awards. In addition, senior management, who are not within the definition of Risk Takers, also participate in this long-term compensation plans linked to Group performance.

Formula Approach

Material Risk Takers and some senior non-Material Risk Takers who perform an underwriting support function and who are eligible to receive cash bonuses will be granted them based on a "Formula Approach", which is determined by ACG. Under the Formula Approach, a bonus pool is established for each business segment based on underwriting performance during a given underwriting year. Further, individual performance is factored using a modifier to the target which becomes the basis for future payouts for that specific underwriting year. For each underwriting year, the bonus pool will be recalculated annually as actual underwriting results emerge, and any resultant payments will be made to the employees over a 10-year development period. A deferral period of three years is in place for a substantial portion of the bonus in that the bonus is paid out over ten years. The Group adopts this approach because it believes that much of its business requires multiple years to determine whether the business written has been successful (in terms of return on capital). The Group believes that making payments to employees over a period of years as actual results become known effectively aligns pay with performance. Thus, performance-based remuneration is awarded in a manner which promotes sound risk management does not induce excessive risk-taking and encourages the highest standards of ethical business conduct.

Risk Management

We believe our approach to evaluation of performance and the design of our compensation programs assists in mitigating excessive risk-taking that could harm our Company. We emphasize variable compensation that is tied to Company performance. For senior management, we emphasize long-term compensation that vests over a multi-year period. Furthermore, and as discussed above, the Formula Approach is based on underwriting performance during a given underwriting year. For each underwriting year, the bonus pool will be recalculated annually as actual underwriting results emerge, and any resultant payments will be made to the participants over a 10-year development period. Since much of our business requires multiple years to determine whether we have been successful in our assessment of risk, we have structured our plan in this manner so that incentive payments are made to employees as actual results become known. In addition, senior management is subject to our clawback policy and share ownership guidelines with hedging/pledging restrictions.

B.1.6 Supplementary Pension / Early Retirement Schemes

The Company operates a defined contribution plan for certain employees. A defined contribution plan is a pension plan under which the Company pays fixed contributions into a separate entity and has no legal or constructive obligation to pay further contributions or to make direct benefit payments to employees if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods. The assets of the plan are held separately from the Company in independently administered funds. The contributions to the defined contribution plan are recognised as an expense when they are due. Amounts not paid are shown in accruals in the balance sheet.

B.1.7 Material Transactions

The Company did not enter into any material insurance or other business transaction with its shareholder controllers, persons who exercise significant influence, the Board or senior executive during the reporting period.

B.2 Fit and proper requirements

B.2.1 Fit and Proper Process

The Company's Fitness & Probity policy sets out the guidelines to ensure that employees meet the fit and proper standards, both on entry and throughout their employment at the Company. The CEO is responsible for implementing this policy, while the Compliance Officer is responsible for providing advice, implementing a monitoring program and reviewing the policy at least annually.

The Compliance Officer identifies and maintains a record of Pre-Approved Controlled Function ("PCF") and Controlled Function ("CF") holders. Before the Company can appoint a person to a PCF, the CBI must have approved the appointment in writing.

The Fitness & Probity policy sets out a number of steps that must be carried out before proposal of a PCF to the CBI. These include, but are not limited to:

- a competency interview to establish evidence of the required competencies;
- a full chronological interview to establish patterns and trends in behaviour that should indicate integrity and competency;
- a full and thorough screening by an independent third-party company with a recognized reputation for pre-employment screening, where necessary; and
- pre-employment screening including identity verification, credit and bankruptcy checks, self-certification on conflicts of interests, directorship checks, education and professional qualifications validation, employment reference checks, compliance and regulatory checks.

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 repute and integrity.

As described above, the Fitness and Probity policy sets out the due diligence that must be performed before a candidate is proposed to the CBI to a PCF role, or appointed to a senior management position. The process aims to ensure that key function holders and decision makers have the requisite employment experience, technical skills, professional qualifications and key competencies to perform their duties to the highest standard.

All employees are monitored on an on-going basis through a formal performance appraisal process and continuing professional development. Specific requirements include:

- Appraisal meetings are conducted in the third month of employment;
- The appraisal meeting focuses on development by reviewing the employee against a set of competencies specific to their role and on setting objectives for the next year and measurement

of goals during the first three months of employment. Competency also is reviewed at this meeting;

- Formal appraisal meetings are held annually to ensure that staff continues to meet their goals and to set new objectives for the year ahead;
- Appraisal meetings and development requirements are documented and training needs are actioned via the appropriate training methods;
- Employees are encouraged to maintain an on-going record of their continuous professional development/training;
- Employees are required to attend a minimum level of training courses and maintain a minimum standard of competency. Examples of areas covered by on-going training are work specific roles; general insurance; legal issues and regulations; and
- Employees also are required to complete in-house training, including code of conduct training, anti-harassment training and anti-money laundering.

B.3 Risk management system including the own risk and solvency assessment

B.3.1 Chief Risk Officer (“CRO”)

The Board has approved the CRO, who is responsible for the Risk Management Function. The Board has approved a Risk Management Charter and terms of reference for the CRO / Risk Management Function and reviews the terms of reference annually. The Risk Committee has approved the annual risk plan and reviews the plan annually.

The Risk Management Function is defined as a “Key Function” in Solvency II. The CRO has responsibility for the Risk Management Function and is the Key Function Holder for Risk Management.

The CRO’s primary responsibility is to the Board, and reports to the Board periodically with direct access to the Chairman of the Board. The CRO also reports to the Risk Committee, at least quarterly. The CRO is a member of the Executive Management Meeting.

The Risk Management Function and CRO carry out the following duties:

- ensure that ARE has and maintains effective processes to identify, monitor, manage and report on the risks to which ARE is or might be exposed;
- measure and assess the controls of material risks;
- implement the risk management framework and risk policies;
- prepare a regular risk report including a view of all current and future material risks;
- provide comprehensive and timely information on ARE’s material risks which enables management and the Board of Directors (the Board) to understand the overall risk profile;
- be the central point for risk reporting;
- maintain a Risk Function calendar of activities;
- report on the effectiveness of the risk management system;
- provide advice on risk management to all Stakeholders;
- provide education and training on risk matters to colleagues and staff in related companies;
- promote a strong risk culture;
- co-ordinate the annual refresh of the risk policies;
- maintain the risk register;
- lead the ORSA process; and
- facilitate the setting of the risk appetite by the Board.

B.3.2 Risk Management Process and Procedures

As described above, the CRO produces regular risk reports, including the quarterly CRO report. This reporting aims to provide the Board, Risk and Audit Committees with sufficient oversight of the Risk Management Framework and the risks to which the company is exposed.

The ORSA process is carried out throughout the year, which facilitates integration with decision making, culminating in the annual ORSA report which is owned and shaped by the Board.

The Company has a Risk Management Framework in place which is designed to support the Company’s decision-making procedures by providing consistent, reliable and timely risk information and protecting capital from risks that exceed established risk tolerances.

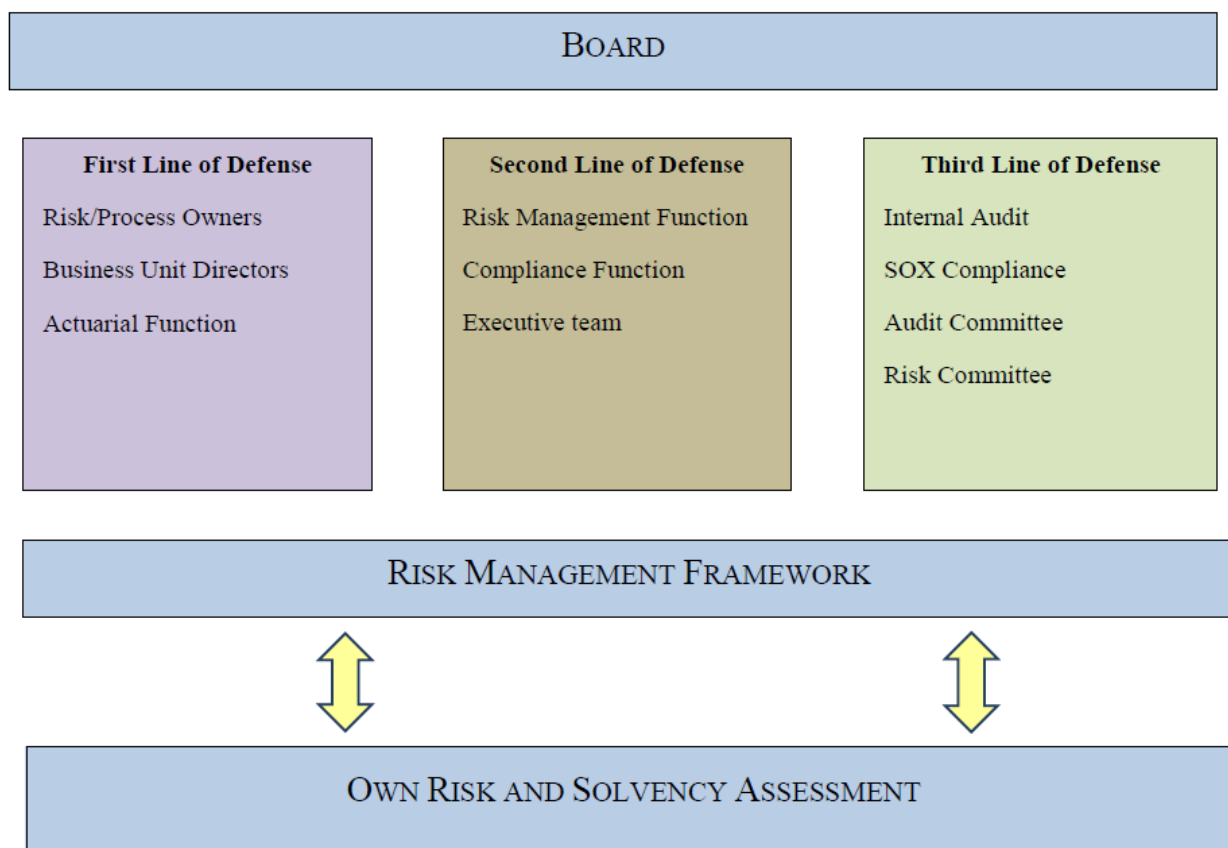
The following narrative provides an overview of the Risk Management Framework, which sets out the Company's methodology for identifying, measuring, managing and reporting on the key risks affecting ARE. It outlines ARE's approach to risk identification and assessment and provides an overview of ARE's risk appetite and tolerance for each of the following major risks:

- Underwriting Risk;
- Market risk;
- Counterparty credit risk; and
- Operational, including governance, regulatory, business/strategic, investor relations (reputational), rating agency and outsourcing risks.

The framework includes details of the Company's:

- Risk philosophy and policies to address the material risks confronting the Company; and
- Compliance approach and procedures to control and or mitigate these risks.

The Risk Management Framework follows the Three Lines of Defence model, and fits into the overall governance structure as follows:



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.

Risk Identification and Assessment

The Risk Committee of the Board oversee the top-down and bottom-up review of the Company's risks. Given the nature and scale of the Company, the committee considers underwriting, investments and operational risks within the scope of the assessment. The CRO assists the committee in the identification and assessment of all key risks.

The CRO is responsible for maintaining the Risk Register and continually reviewing and challenging risk assessments, including the impact of emerging risks and significant business developments. Board approval is required for any new high-level risks or change in inherent / residual designations.

Risk Monitoring and Control

ARE's Risk Management Framework requires risk owners to monitor key risks on a continuous basis. The highest residual risks are actively managed by the Risk Committee. The remaining risks are managed and monitored at a process level by the risk owners and/or CRO.

Risk owners have ultimate responsibility for the day-to-day management of each designated risk, reporting to the CRO on the satisfactory management and control of the risk and timely escalation of significant issues that may arise in relation to that risk.

The CRO is responsible for overseeing the monitoring of all risks across the business and for communicating to the relevant risk owners if he becomes aware of issues, or potential and actual breaches of risk appetite, relevant to the assigned risks.

A key element of these monitoring activities is the evaluation of the Company's position relative to risk tolerances and limits approved by the Board.

Risk Reporting

Quarterly, the CRO compiles the results of the key risk review process into a report to the Risk Committee for review and discussion at their quarterly meeting. The report includes:

- An overview of selected key risks (e.g., Underwriting, Market, Credit);
- Changes in the rating of high-level risks in the Risk Register;
- A risk dashboard that depicts the status of risk limit and tolerance metrics;
- Summary of largest exposures and concentration risks; and
- Reinsurance arrangements, including outstanding and uncollectible recoveries.

If necessary, risk management matters reviewed at the Risk Committee meeting are presented for discussion by the Board. The CRO is responsible for immediately escalating any significant risk matters to ARE executive management, the Risk Committee and/or the Board for approval of the required remediation.

B.3.3 Implementation and Integration of ORSA

The Company believes an integrated approach to developing, measuring and reporting its ORSA is an integral part of the Risk Management Framework. 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.

The ORSA is the entirety of the processes and procedures employed to identify, assess, monitor, manage, and report the short- and long-term risks the Company faces – or may face – and to determine the capital necessary to ensure that overall solvency needs are met at all times. The ORSA also makes the link between actual reported results and the capital assessment.

The ORSA process and reporting are integral parts of ARE's business strategy, tailored specifically to fit into ARE's organisational structure and risk management system with the appropriate techniques in place to assess its overall solvency needs, taking into consideration the nature, scale and complexity of the risks inherent in the business.

The Company also takes the results of the ORSA into account for its system of governance, including long-term capital management, business planning and new product development. It also contributes to various strategic decision-making including how best to optimise capital management, establishing the most appropriate premium levels and deciding whether to retain or transfer risks.

The ORSA is the basis for risk reporting to the Board and its committees and acts as a mechanism to embed the Risk Management Framework within the Company's decision-making processes and operations. The Board has delegated responsibility for supervision and oversight of the ORSA to the Risk Committee. This oversight includes regular reviews of the ORSA process and output.

An ORSA Report is produced at least annually and the results of each assessment are reported to the Board. 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.3.4 Performance, Documentation and Review of the ORSA

A full ORSA cycle is performed at least annually and reported to the Risk Committee of the Board.

The ORSA process is a circular process that relies on key elements of the business:

- **The Board outputs** – Strategy / Capital Management Plan / The Board Risk Appetite/ORSA Policy;
- **Business planning** – providing the basis for the base case projections;
- **The Solvency II Pillar I standard formula** – 5 year outputs & base assumptions used;
- **The Risk Committee** – who review, challenge & approve the test scenarios, and ORSA process and output;
- **The Actuarial Function** – who quantify technical provisions and provide other input into the Pillar I model;
- **The Risk Function and Management** – who quantify the Pillar I capital requirements, assess the outputs and prepare the reports;
- **The Risk Committee & Board** – who provide an assessment of the output and resultant capital, strategy & risk appetite review; and
- **ORSA Reporting to the all stakeholders.**

The Key Activities in the ORSA Process are:

- Strategy & Planning;

- Pillar I base outputs and assumptions;
- Risk identification & assessment;
- Scenario setting;
- Scenario testing through the Pillar I model & production of test output;
- Review of test output & report preparation; and
- Risk Committee & Board review & reporting.

Each run of the ORSA process will be appropriately documented to evidence each of its constituent parts, and this record will be retained for any later scrutiny.

The documentation shall contain:

- A summary of the Board strategy for the Company;
- The Risk Appetite Statement;
- The Pillar I standard assumptions & output;
- The schedule of scenarios to be tested, cross-referenced to the Risk categories in the Board's risk appetite, and quantification of deviations from the base assumptions;
- The scenario test results;
- The ORSA report;
- Any Audit and Risk Committee Minutes relating to scrutiny & challenge of the ORSA process & outputs;
- Any Board minutes relating to ORSA output review & challenge – resultant strategy decisions and risk appetite review; and
- A record of the report to the CBI.

B.3.5 Relationship between the ORSA, Solvency Needs, and Capital and Risk Management Systems

The Company has both a Capital Management Policy and Capital Management Plan in place. The Risk Management Function is responsible for developing and maintaining the Capital Management Plan. The Risk Committee reviews and monitors the plan and presents it to the Board for approval. The Audit Committee is responsible for monitoring the alignment of the investment strategy with the plan.

The Capital Management Plan incorporates the output from the ORSA and associated reporting. The plan also sets out triggers for corrective capital actions relative to the Company's Solvency Ratios, both in terms of Solvency Capital Requirement ("SCR") and Minimum Capital Requirement ("MCR").

ARE's capital planning process aims to be dynamic and forward-looking in relation to ARE's risk profile and shall take into account the output from ARE's risk management activities and the ORSA process and associated reporting as part of capital planning activities.

As such, capital planning activities take into account any current or anticipated changes in ARE's risk profile, such as those reflected in its business plan, and forecasting the related impact on capital. In addition, as part of its capital planning, the Company integrates projected capital needs with its business planning and financial forecasting processes.

The Capital Management Plan identifies a number of potential sources of capital and associated corrective actions that may be utilised to restore sufficient capitalisation, depending on the severity of the capital requirements placed upon ARE.

When considering the sources of capital and corrective actions, ARE will have regard to the Solvency II Own Fund requirements.

Any material changes in the underlying risks, such as changes in business mix, reinsurance strategy and investment strategy, are modelled for potential impact upon ARE's capital requirements. The result of this process is to ensure that all material risks feed into the capital requirements analysis, and in some cases also trigger further investigation through stress testing.

B.3.6 Approval Process

The Company records the actual performance of the overall capital assessment and the assessment of any deviations in its risk profile from the assumptions underlying the capital requirements analysis to a level of detail that enables a third party to evaluate the assessments performed.

The CRO prepares a quarterly report for the Risk Committee covering risk management in general, including relevant ORSA topics, for discussion in the Risk Committee meetings. The Risk Register is presented to the Risk Committee on an annual basis for review, followed by Board approval. Any material changes in the risk management strategy, policies, processes, procedures and/or capital requirements analysis are presented to the Board for approval.

The ORSA policy and the ORSA report are reviewed by the Risk Committee and recommended to the Board for approval.

B.4 Internal control system

B.4.1 Internal Control System

ARE maintains an effective internal control system, which includes administrative and accounting procedures, an internal control framework, appropriate reporting arrangements and a compliance function.

The Board is responsible for monitoring the establishment and maintenance of the system of controls used to assess and manage exposure to all areas of risk. The objectives of these controls are to ensure that ARE's risk strategy is maintained and risk remains within the appetite and tolerances set by the Board.

ARE is part of Group-wide compliance activities, including management's assessment to confirm the design and operating effectiveness of internal controls over financial reporting and the identification and testing of key internal controls, including any required remediation.

The Board has delegated management and oversight of certain controls to appropriate forums within the Group. ARE's internal control framework provides an appropriate level of reporting on the control environment to the Board.

Controls are detailed in the Risk Register, which associates elements within the category of risk to one or more mitigating controls. ARE's internal control framework includes reviews of both the design and effectiveness of key controls, with results of this periodic evaluation regularly reported to the Board. Key controls are verified using a compliance monitoring system and the output is reported to the Audit Committee Chair.

The Group's Sarbanes-Oxley (SOX) compliance function's testing of internal control over financial reporting (ICFR) is a major element of the Company's monitoring activities. The focus of testing is to provide auditable evidence regarding the design and operating effectiveness of ICFR. A major component of this process is the identification, tracking and disposition of internal control deficiencies that are

assessed individually and in the aggregate. The results of the testing are continually communicated to stakeholders who include senior management, process/control owners and the Group Audit Committee.

B.4.2 Compliance Function

Implementation of the Compliance Function

The Board has approved a Compliance Officer, who is responsible for the Compliance Function. In addition, the Board approved a Compliance Function Terms of Reference and Charter (Compliance Charter) and a Compliance Plan. Both have to be reviewed on an annual basis. Changes have to be approved by the ARE Board.

The Compliance Charter contains among others Mission Statement, Guiding Principles, Authority, Accountability, Activities, Planning and Reporting of the Compliance Function.

While the Board retains primary responsibility for compliance and governance within ARE at all times, senior management plays an important part in ensuring effective governance and compliance and hence is responsible for operating effective oversight consistent with board policy. The role of the Compliance Function is to assist and advise the Board and management with their responsibilities. In addition, senior management and all staff members are responsible for their own regulated activities and for complying with relevant rules, legislation, standards, contracts, policies and procedures relevant to their work.

The high-level goals of the Compliance Function are:

- To ensure that a proportionate compliance infrastructure is in place;
- To identify and manage Compliance risks;
- To implement a review and monitoring program; and
- To help the business to meet requirements with applicable legislation and regulation.

The Compliance Officer has to produce and submit an Annual Compliance Plan to the Board for approval. The Compliance Plan ensures that the Compliance Function's work has a focus with measurable output that is understood by and aligns with expectations of the business. It determines the actions that the Compliance Function needs to achieve in the next 12 months.

The Compliance Plan shall cover at least the following:

- Compliance Objectives;
- Compliance Resources;
- Provision of regulatory staff training;
- Revision of existing policies and procedures;
- Preparation of new policies and procedures;
- Monitoring – details of a risk based monitoring review program; and
- Projects – on-going and planned business or regulatory projects.

The Compliance Officer is required to make following internal reports:

- Quarterly to the Audit and Risk Committees;
- Monthly to the CEO;
- Promptly report any material or major compliance issues identified to the relevant person and the CEO; and

- Provide update to management team at the bi-weekly management call hosted by the CEO.

Independence and Authority

At ARE, the Compliance Officer does not hold any other responsibilities besides Compliance. The Compliance Officer attends Committee and Board meetings and reports to the Audit and Risk Committee and the Board on all relevant matters. The Compliance Officer attends the Executive Management Meetings.

The Compliance Function is authorized to review all areas of the Company and has full, free, and unrestricted access to all Company activities, records, property and personnel. Compliance has full and direct access to ARE's Board and the authority to escalate matters to ACGL where required.

B.5 Internal audit function

Arch Capital Services Inc. ("ACSI") provides internal audit services to all Group entities through Internal Audit Services ("IAS") which is led by the Director of Internal Audit Services. ARE and its subsidiaries are included within the scope of IAS's responsibilities. As such, it is deemed by ARE management that the internal audit function is effectively outsourced to ACSI.

IAS is an independent, objective, assurance and consulting activity designed to add value and improve the Companies' operations. It helps management and the Audit Committee accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

IAS is adequately staffed by competent individuals and is objective and independent of ARE's day-to-day activities. Where necessary, IAS utilizes external resources to support its work. Appropriate budgets are set to support IAS.

IAS has appropriate access to all staff, Senior Management and records, including those relating to third party service providers. No restrictions are placed on the scope of IAS's work.

IAS's scope encompasses, but is not limited to, the examination and evaluation of the adequacy and effectiveness of the Companies' procedures and internal controls related to its business processes, governance and risk management functions. In addition, IAS may perform special examinations and tasks at the request of management, the Board, or the Audit Committee.

B.5.1 *Internal Audit Reporting*

The Director of IAS reports to the Chairman of the ACGL Audit Committee and administratively to the ACGL Chief Financial Officer. The Director of IAS also reports to the Company's Audit Committee for ARE related activities and has direct access to all members of the Audit Committee.

An Annual Internal Audit Plan ("Audit Plan") is produced and submitted to the Company's Audit Committee prior to the start of the year to which the Audit Plan pertains. It summarizes IAS's risk assessment of the business, the scope of its work, the competencies of the team, and the resources, both internal and external, required to accomplish the Audit Plan. The Plan takes into consideration management's view of key and emerging risks per the Risk Register, as well as IAS's assessment of the Company's key and emerging risks and related controls and their linkage to historical and planned audits. IAS also performs a process-based risk assessment in which we analyse risks within each of the business process to assess the impact on the Audit Plan. The rationale for internal audit activity for the coming year is also detailed within the Audit Plan and is based on a number of factors which include, but is not limited

to our assessed level of risk associated with each business process, planned operational changes, new or expanding lines of business, consideration of the work performed by other assurance providers, etc.

IAS maintains communication with other assurance providers in order to identify potential issues and also to leverage where applicable upon the work they perform. The Audit Plan includes an overview of the various other assurance activities performed upon which IAS places partial reliance and which provides additional rationale for our areas of focus.

IAS issues a planning and scoping memo prior to each audit which details the scope of the audit including any specific exclusions, as well as resources and timing of fieldwork and reporting. During fieldwork, audit procedures will include both substantive testing and control testing (including inspection and/ or re-performance) where appropriate. Audit evidence is retained for all audit work performed.

Subsequent to completion of fieldwork and discussion of findings with management, IAS issues a report (or memo where appropriate) for all audit engagements and reviews performed. These reports or memos include response from management for all recommendations along with a target date for remediation. The progress of all recommendations is monitored by IAS and periodically reported to the Audit Committee.

In addition to the annual Audit Plan, IAS presents an Internal Audit Status Report at the quarterly Audit Committee meetings. The report includes (but is not limited to):

- Changes to the original Audit Plan presented to the Audit Committee;
- Status of the audits included on the Audit Plan;
- Results of recently issued audit reports;
- Status of prior audit findings and recommendations; and
- Any other matters which in the Director of IAS's opinion requires reporting to the Audit Committee.

B.5.2 Maintaining Independence

A key feature that ensures the independence of the Internal Audit function is its positioning outside of functional roles and responsibilities. IAS staff are employees of Arch Capital Group and may not carry out operational roles for ARE.

The Internal Audit policy sets out the following specific measures aimed at ensuring independence;

- The Internal Audit function is managed and run by personnel separate to ARE management;
- The director of IAS has the authority to inform the CBI of any issues should they deem it necessary;
- The staff in the IAS function have no involvement in the day to day operations of the Company;
- IAS has access to all staff, management and records and no restriction may be placed on this access or the scope of IAS's work and;
- IAS reports directly to the Audit Committee, not to operational management.

B.6 Actuarial function

The Board has approved the Head of Actuarial Function ("HoAF"), who is responsible for the Actuarial Function. The Board has approved terms of reference for the Actuarial Function and reviews the terms of

reference annually. The terms of reference state that the Actuarial Function must be free from influence from other functions and the Board.

The HoAF has been assigned responsibility for the ARE Actuarial Function. 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 role of HoAF is outsourced to the Chief Actuary of ARL. The Board provides oversight to ensure the HoAF has adequate resources and authority to operate effectively.

The main activities of the Actuarial Function in a Solvency II environment shall include the requirements of the Solvency II Directive, the Society of Actuary in Ireland's Domestic Actuarial Regime and the CBI Guidance for (Re) Insurance Undertakings on the Head of Actuarial Function Role including:

- Coordinate the calculation of technical provisions;
- Ensure the appropriateness of the methodologies and underlying models used as well as the assumptions made in the calculation of technical provisions;
- Assess the sufficiency and quality of the data used in the calculation of technical provisions;
- Compare best estimates against experience;
- Inform the Board of the reliability and adequacy of the calculation of technical provisions;
- Oversee the calculation of technical provisions in the cases set out in the regulations;
- Express an opinion on the overall underwriting policy;
- Express an opinion on the adequacy of reinsurance arrangements;
- Contribute to the effective implementation of the risk management system;
- Provide an Actuarial Opinion on Technical Provisions;
- Provide Actuarial Report on Technical Provisions; and
- Express an opinion on each ORSA process.

On an annual basis the Head of Actuarial Function will prepare an Actuarial Opinion on Technical Provisions ("AOTP") and present the Actuarial Report on Technical Provisions ("ARTP") to the Board of Directors. The ARTP will be prepared in line with relevant regulatory and Actuarial Standards of Practice.

The Actuarial Function comprises experienced, fully qualified, individuals with in-depth knowledge of actuarial and financial mathematics. The function is staffed appropriately given the nature, scale and complexity of the risks inherent in the integrated operations.

ACGL's Chief Actuary oversees actuarial policies throughout the Group, as well as development of Group-wide actuarial techniques and education. This individual provides an independent assessment of the Group's reserves to the ACGL Audit Committee each quarter.

B.7 Outsourcing

B.7.1 Outsourcing Policy

ARE defines outsourcing as contracting out part or all of an internal business process to a third-party provider (either outside or inside the Arch Group of companies). In this regard ARE may use the external service provider's processes and controls to perform the agreed upon services. However, ARE will retain all decision making and ultimate responsibility over the business function and maintain the appropriate monitoring mechanisms to ensure adherence to a service level agreement.

The Company has an Outsourcing Policy in place which sets out the following:

- The definition of outsourcing;
- Responsibility for implementation and operation of the policy and consequent controls and processes;
- The criteria for outsourcing;
- The approval process;
- Contract and legal requirements;
- Risk assessment and risk mitigation measures; and
- Monitoring and on-going requirements.

Key functions that have been outsourced (within the Arch Group) include:

- Head of Actuarial Function role (to the Chief Actuary of ARL);
- Investment Management Services (to Arch Investment Management Ltd.); and
- Head of Internal Audit (to Director of Internal Audit Services at ACSI).

B.8 Assessment

Given the nature, scale and complexity of the risks inherent in our business, we conclude that the Company's system of governance is adequate and appropriate.

B.9 Any other information

No other material information to report as of 31 December 2019.

SECTION C – RISK PROFILE

Overview

ARE'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 organization towards the desired level of risk. It not only supports the Company's risk management framework, it also enables ARE to make informed business decisions having regard to the key risks to which it may be exposed by such a decision.

In general, ARE has an appetite for insurance (underwriting) risk and a tolerance for other forms of risk. The risk philosophy of ARE encompasses all major risks and focuses on attaining the following business objectives:

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

The following table shows the composition by sub-module of the SCR as at 31 December 2019, along with the composition as at 31 December 2018 for comparison purposes.

		SCR as at 31-Dec-19	SCR as at 31-Dec-18
Underwriting Risk	Risk of losses from business already written or planned to be written over the next year	18.0%	20.5%
Market Risk	Risk of losses from market movements, including exchange rates and investment returns	70.9%	68.7%
Credit Risk	Risk of losses from counterparty defaults, including reinsurers and other counterparties	5.6%	5.7%
Operational Risk	Risk of operational losses	5.4%	5.1%

C.1 Underwriting risk

C.1.1 Key Underwriting Risks

Underwriting risk refers to the risk of loss, or of adverse change in the value of insurance/reinsurance liabilities, due to inadequate pricing or risk quantification assumptions, which includes the fluctuations in the timing, frequency and severity of insured events. At a risk policy level, we consider underwriting risk is linked to reserving risk. Reserving risk refers to the risk of loss, or of adverse change in the value of insurance liabilities, due to inadequate reserving assumptions, which includes the fluctuations in the timing, frequency and severity of insured events.

As already mentioned in the Section A, the reinsurance industry is very competitive in many parts and will likely remain so unless there are further substantial market loss events. Competition is especially intense

as the market is currently experiencing overcapacity, a trend which we expect to continue for at least the next 12 months. Furthermore, the nature and breadth of the business we write means we are exposed to regulatory, legislative and fiscal changes, economic factors and changes in behaviour, as well as catastrophe events.

The resulting key underwriting and reserving risks identified by management are:

- Reserve Risk: The risk of loss, or adverse change, in the value of insurance liabilities due to the occurrence, amount, and timing of claims, inadequate pricing and provisioning assumptions;
- Pricing Risk: The risk of loss due to inadequate pricing of business pre-claim; and
- Catastrophic Risk: The risk of loss from infrequent high severity claims from natural or man-made disasters.

C.1.2 Material Risk Concentrations

An identified risk to the Company is an inappropriate concentration of underwriting risks, through over-exposure to a particular geographic region, line of business / peril or cedant. The risk is monitored in the Risk Register and is managed through a number of controls, including the setting of exposure limits, modelling of CAT exposure and quarterly measurement and reporting of accumulations. Credit and Surety concentrations are limited at the portfolio level through monitoring of the maximum probable maximum loss per counterparty group. Single Realistic Disaster Scenario events at a 1 in-250-year return period are limited to less than 25% of shareholders' equity (net of expected reinsurance recoverables). After controls, the risk is considered low impact; therefore, there is not considered to be material underwriting risk concentration.

C.1.3 Underwriting Risk Mitigations

ARE purchases Excess of Loss retrocession protection on particular programmes to mitigate the impact of catastrophic claims and/or to manage accumulations of risk. In addition, inter-company Quota Share reinsurance is in place to mitigate the impact of attritional losses. An inter-company Stop Loss agreement is also in place to help protect the overall underwriting result against pre-deterioration beyond a determined level.

In addition, underwriting risk is further mitigated through a number of controls and practices, which include the following:

- Business performance is monitored regularly, including consideration of market factors, pricing trends and strategic challenges;
- Actual performance is compared against expected each quarter;
- Treaties are subject to the four-eye review principle – peer underwriter review ensures that guidelines are being adhered to;
- Pricing is processed by a pricing actuary, independent from the underwriting function;
- ARL's CAT modelling group assist with the validation of the models and assumptions used for pricing and to analyse CAT exposures;
- Audits are performed in respect of selected cedents/contracts periodically to review underwriting standards and claims files to ensure accuracy of cedents reporting to ARE and adherence to treaty terms and conditions;

- Bi-annual European underwriting meetings occur in ARE, attended by all key underwriting staff, senior executives from ARE and representatives from ARL to review risk, claims and underwriting performance at contract level, movements and aggregation. Market conditions are also discussed;
- Quarterly Change Report (“QCR”) meetings are held between the Underwriting, Finance and Actuarial teams to review development of treaties relative to expectations;
- A quarterly IBNR memo from the HoAF documents known issues and underlying assumptions around loss reserves and is sent out to Executive Management; and
- An independent actuarial firm provide an annual review of ARE reserves.

C.1.4 Stress and Sensitivity Testing

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

We considered a number of scenarios in the ORSA which aim to reflect the underwriting and reserving risk to which the company is exposed.

Numerous Realistic Disaster Scenarios (“RDS”) were devised in conjunction with underwriting teams across the various lines of business; these represent very adverse scenarios to which the company could be exposed. We also devised a scenario in which reserves are not adequate to meet the liabilities that arise, and therefore must be increased by 20%. In addition, a scenario stresses the Company with 10% persistent adverse loss experience. The projected SCR and Own Funds were then calculated under each of these scenarios, allowing the Company to assess the capital impact and profit metric of each scenario.

Due to the Company’s capital strength, while the stresses showed deterioration in the Company’s capital position, none of the modelled scenarios were considered likely to result in a breach of the SCR. The Company’s underwriting risk profile is therefore considered to be resilient to most shocks.

C.2 Market risk

C.2.1 Key Market Risks

Market Risk is the risk of changes in income or values of assets arising from fluctuations in political and economic variables (systemic), including interest rates, currency exchange rates, equity markets, commodity markets and real estate markets. It is the risk of loss, or adverse change, resulting directly or indirectly from fluctuations in the prices of assets. Market Risk at ARE includes the following specific components:

- Currency Risk;
- Interest Rate Risk;
- Spread Risk;
- Equity Risk; and
- Property Risk.

Market Risk is also affected by:

- **Concentration Risk:** The risk that the Company will suffer losses from lack of diversification with regards to a particular sector, industry, geographic region, security, or asset class in the investment portfolio. Concentration Risk also includes the risk of failure to identify and manage correlation risk between insurance/reinsurance operations and invested assets.
- **Investment Credit Risk:** The risk of loss, or adverse change in financial condition, resulting from fluctuations in the credit standing of issuers of securities and counterparties to which undertakings are exposed, in the form of counterparty default risk, or spread risk, or market risk concentration risk.

The Company's primary investment objective is to preserve capital and ensure adequate liquidity for policyholder / cedant claims, while supplementing the return on equity ("ROE") generated by the reinsurance underwriting operations. The key market risks identified by management are:

- Failure or impairment of investment counterparty; and
- Exposure to foreign currency fluctuations.

C.2.2 Material Risk Concentrations

ARE has a diversified portfolio of assets with no material risk concentrations in non-government securities. The Company's investment guidelines have specific single issuer limits, including sovereign and supranational single issuer limits, to prevent asset risk concentrations.

C.2.3 Market Risk Mitigations

ARE mitigates investment risk through the implementation of appropriate controls. These include:

- Regular Board and Senior Management oversight;
- Formal agreements which delegate investment authority to AIM;
- Investment Guidelines which are structured to ensure sufficient liquidity and prevent over-exposure to any one risk sector;
- Analysis of quarterly Investment Guideline compliance confirmations issued by Investment Managers, as summarized by ACSI personnel and reviewed by ARE;
- Quarterly review of investment portfolios with ARE Senior Management;
- Appropriate trade due diligence and guideline compliance;
- Utilisation of company approved brokers, investment managers and 3rd party service providers;
- Quarterly testing of Investment Guideline compliance and subsequent review with ARE Senior Management;
- Investment portfolio reporting from AIM to ARE Senior Management and the Board. This reporting includes performance and risk summaries, and includes duration analysis;
- Accounting reconciliations across holdings and risk data; and
- Linkage between ALM ("asset liability matching") and the limits for asset classes, as approved by the Board and set out in this Investment Risk Policy.

C.2.4 Stress and Sensitivity Testing

A number of ORSA stress tests were performed to reflect the Company's exposure to Market Risk. Two economic crisis scenarios were devised – one reflecting an economic crisis centred in Europe, and another centred in the US.

In the Europe-centric scenario, we consider the impact of such a scenario on Trade Credit & Surety claims and exchange rate movements, along with the impact of interest rate movements on bond prices and technical provisions.

The US-centric scenario also considers Trade & Credit losses, interest rate movements and exchange rate movements. It also specifically models the effect of a US-crisis on the Company's holding in a US-based subsidiary of the Group.

Due to the Company's capital strength, while the modelled stresses would result in some deterioration in the Company's capital position, none of the scenarios were considered likely to result in a breach of the SCR. The Company's market risk profile is therefore considered to be resilient to most shocks.

C.2.5 Prudent Person Principle

ARE seeks to manage investment assets subject to the Prudent Person Principle which states that the Board must discharge its duties with the care, skill, prudence and diligence that a prudent person acting in a similar capacity would use in the conduct of an enterprise of similar character and objectives.

The Board of ARE has outlined the following risk management objectives in order to minimise its exposure to Investment Risk in line with the overall ARE Risk Appetite:

- ARE shall adopt a conservative approach to investments and seek to safeguard the assets of shareholders;
- ARE shall hold sufficient investment values and investment liquidity to ensure all liabilities are met as they fall due; and
- ARE shall ensure that there are appropriate policies, strategies and procedures in place to meet these objectives.

ARE adopts a conservative approach to investments and, as articulated in the Company risk management philosophy, limits Investment Risk such that the overall portfolio will consist of high quality fixed income securities and bank deposits, and limits the proportion of total investments that may be represented by other investments. New investment products initiatives fall into the category of other investments and include investments such as equities and all alternative investments. Participation in new investment products are subject to Board approval. In circumstances where new products are being considered by the Company, the following steps will be undertaken:

- Detailed information will be provided describing the nature of the investment such that the Board has full information to properly evaluate the risk;
- The finance function will document the impact of the new product, including an assessment of whether it complies with the prudent person principle;
- A presentation will be made to the Board to explain the rationale for the proposed investment; and
- The Risk Committee will separately review the material and consider the impact on ARE's risk appetite and risk profile.

If the proposed investment is approved, ARE's finance and compliance functions will liaise with AIM to revise or develop bespoke Investment Guidelines for the new product where appropriate. In certain circumstances, such as in the case of an investment in a fund, this may not be required.

C.3 Credit risk

C.3.1 Key Credit Risks

ARE has a low appetite for investment credit risk, which is recommended by ARE management and approved by the Board.

ARE is exposed to credit risk from the following sources:

- Investments in fixed income securities;
- Deposits with banking counterparties;
- Reinsurance counterparties; and
- Premiums collectable from cedants.

The key risk is that one or more of these counterparties fail.

The exposure to counterparty default risk includes banks where the Company has short term deposits, insured and insurance intermediary receivable balances and reinsurance agreements including the 85% quota share reinsurance agreement with ARL.

C.3.2 Material Risk Concentrations

As at December 31, 2019, the reinsurance recoverable from the quota share reinsurance agreement with ARL is significant however this mitigated by assets in trust to partially collateralise the net recoverable.

C.3.3 Credit Risk Mitigations

ARE mitigates credit risk through the implementation of appropriate controls, processes and procedures.

At purchase, securities must be rated investment grade by at least two of the following ratings agencies (if rated by all three): Moody's, Standard & Poor's or Fitch. If only two of the three agencies rate the security, the lower rating is used to determine eligibility. If only one of the three agencies rates a security, the rating must be Aa3/AA- or higher.

For the placement of time deposits, banks must be rated at least A+ or equivalent by Standard & Poor's or Fitch and P-1 or equivalent by Moody's at the time of purchase.

Reinsurance and premium receivables are closely monitored and controlled, with short credit periods mitigating any risk exposure. Furthermore, other than the inter-group Quota Share reinsurance, other reinsurance arrangements are split across a number of counterparties, thereby reducing single name exposure.

In addition, ARE requires many counterparties, including ARL, to post significant collateral against reinsurance balances, further mitigating this risk. The collateral posted by ARL is held in a trust account for the benefit of the Company and invested in accordance with investment guidelines agreed with the Company. These guidelines restrict the assets invested into highly rated fixed income government and corporate bonds and limited single name concentrations. Collateral is required to be maintained at a minimum level of the net amount recoverables by the Company from ARL. In the event that ARL's rating

were to be downgraded this minimum percentage would be subject to graduated increase with the increased percentage being a function of the rating following any such downgrade.

C.3.4 Stress and Sensitivity Testing

Due to the high level of reinsurance ceded, ARE is exposed to a material amount of counterparty default (credit risk). As one of the Company's most material risks, a downgrade of the Company's immediate parent, ARL, was considered as a scenario. In this scenario it is assumed ARL's rating is downgraded to B++ from A+ and that ARL does not post additional capital following its downgrade. Under this stress scenario, which has ARL's downgrade as the sole stress factor, the Company is able to withstand the shock of the downgrade whilst maintaining its SCR ratio above the risk appetite requirement of 120% SCR coverage ratio.

In addition, this ARL downgrade scenario has been selected as part of a Reverse Stress Test carried out in the ORSA, in conjunction with several other adverse scenarios occurring simultaneously. The aim of a reverse stress test is to devise an extreme scenario which would result in the Company's available capital falling below the SCR requirement.

C.4 Liquidity risk

Liquidity risk is the risk of the Company's inability to realise investments and other assets in order to settle its financial obligations when they fall due. Liquidity risk has low materiality for the Company. One of the objectives of the investment risk policy of the Company is that the Company shall hold sufficient investment values and investment liquidity to ensure all liabilities are met as they fall due. To achieve this objective, the investment risk appetite permits only highly rated securities to be purchased. Risk limits and tolerances have been also set in respect of (i) asset-liability duration matching and (ii) availability of liquid assets. These risk appetites, risk limits and tolerances are monitored by the risk function and reported to the Board and Risk Committee. The Company considers that the composition of its assets in terms of their nature, duration and liquidity are appropriate in order to meet its obligations as they fall due.

C.4.1 Risk Exposure and Material Risk Concentrations

The Company considers its exposure to this risk as low. The Company monitors its liquidity in compliance with its investment risk policy and stated limits and tolerances in respect of the percentage of assets which are invested in liquid investments.

C.4.2 Risk Mitigation

Liquidity risk is mitigated by the cash held in investments and bank accounts. There are no planned changes to risk mitigation over the business planning horizon.

C.4.3 Expected Profit in Future Premium

As of December 31, 2019, the expected profit in future premium is €37.9m.

C.5 Operational risk

C.5.1 *Key Operational Risks*

Operational Risk means the risk of loss arising from inadequate or failed internal processes, or from personnel and systems, or from external events.

It also includes the risk of loss resulting from failure to comply with laws as well as prudent ethical standards and contractual obligations, and the exposure to litigation from all aspects of business activities.

Within Operational Risk, ARE also includes:

- Group Risk: Risks related to unregulated entities within the Group, implicit or explicit exposure to losses throughout the group (“contagion risk”), risks related to inter-company transactions and double gearing, the extent to which practical, legal, or regulatory barriers to the transfer of capital between group members exist, and other additional risks which individual members of a group face by virtue of their group membership;
- Strategic Risk: Risk that strategic business decisions prove to be ill-founded or poorly executed. Examples of such risk include mergers and acquisitions, moving into new markets, business lines, or regions, changes to the operating model, or failing to anticipate or react to a more general shift in the economic environment, demographics, etc; and
- Reputational Risk: The potential adverse impact of an economic loss through deterioration of reputation, credibility or standing with coinsurance and MGA partners, other customers, brokers and the investor community.

ARE’s management has identified the following key operational risks:

- Financial and/or non-financial (e.g. reputational) loss arising from over reliance on outsourced service providers;
- Legal, litigation, regulatory, political and reputational risk;
- Reliance on key individuals (including directors and staff at outsourced service providers)
- Reliance on key brokers;
- Inappropriate overall business strategy or inadequate monitoring of strategic decisions; and
- Risks external to ARE but internal to ACGL.

Those risks classified under the Operational Risk profile have been identified, assessed and articulated in the ARE Risk Register. Relevant risk and control owners report to the Chief Risk Officer, who in turn reports to the Risk Committee, and are responsible for identifying new, emergent or changing risks and any consequent control changes required to realign the risks with the risk appetite.

With respect to Legal Risk, ARE’s Compliance Officer has the responsibility for monitoring new and pending legislation from the CBI or Irish Government, the European Insurance and Occupational Pensions Authority (“EIOPA”) 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.5.2 Material Risk Concentrations

There is no material Operational Risk concentration.

C.5.3 Operational Risk Mitigations

ARE has put in place a strong internal control framework which mitigates operational risk. In particular, the following are key controls in managing this risk:

- Appropriate segregation of duties across all functions;
- Systems access controls;
- Four-eyes oversight of all key areas;
- Regular management accounting process including reconciliations and checks;
- Business Continuity and Disaster Recovery Plans;
- All outsourced arrangements conducted under formal agreements and in accordance with the Outsourcing Policy;
- Ongoing oversight and regular audits of outsourced service providers;
- All material contracts reviewed by the ARL General Counsel on behalf of ARE;
- Appropriate reporting to ACGL on all relevant matters to enable oversight;
- Business plans and budgets reviewed quarterly; and
- Appropriate governance structures, including quarterly Board meetings.

C.5.4 Stress and Sensitivity Testing

Operational risk is included in the Standard Formula.

As part of its ORSA process, ARE considers those areas of operational risk which may not be adequately covered, such as implementation and compliance with Solvency II and other relevant regulation, investment in subsidiaries and other group risks. In addition, operational risk is stress tested through some of the scenarios:

- the risk of a credit down-grade of Arch Group (and its impact on the inter-company Quota Share); and
- the risk of inappropriate business strategy resulting in loss ratio deviation.

Operational risk comprises a moderate part of ARE's risk profile and the stress tests prove the company's capital buffer to be sufficiently resilient to withstand this risk.

C.6 Other material risks

A number of other risks are considered to be relevant for the Company, namely group risk, strategic risk, regulatory risk and compliance risk. These risks have not been quantified but are included within the Own Risk and Solvency Assessment.

Risk Exposure and Material Risk Concentrations

The Company considers the most material exposures in this category of risk are (i) the potential for inappropriate business strategy and (ii) the potential for regulatory breaches.

Risk Mitigation

Risk controls, risk monitoring and reporting are considered to be the main method of risk mitigation. There are no planned changes to risk mitigation over the business planning horizon.

C.7 Any other information

On March 11th, 2020 the World Health Organization declared a pandemic in relation to the outbreak of the COVID-19 virus. The outbreak is causing unprecedented social disruption, global economic and financial markets volatility, reduced liquidity of capital markets and intervention by various governments around the world. The Company, in the first instance, has taken all necessary steps to protect its employees with the introduction of mandatory working from home and the implementation of its business continuity plans. While the impact on the business remains uncertain, the Company is actively monitoring the impact that COVID-19 is having with particular focus on the valuation of the Company's investments, incurred losses, the recoverability of the Company's reinsurance assets, and premium volume, all of which may be impacted by the increased volatility and uncertainty in the markets. The Board are being kept apprised by Management in relation to the evolving impact assessment on these areas and the general operational impact. At this time, there is no disruption to the business and developments in this fluid situation are being monitored.

SECTION D – VALUATION FOR SOLVENCY PURPOSES

D.1 Assets

The table below sets out the value of the assets of the Company as at 31 December 2019 under Solvency II and Irish GAAP, along with equivalent values as at 31 December 2018.

Assets	2019 Solvency II €'000	2019 Irish GAAP €'000	2018 Solvency II €'000	2018 Irish GAAP €'000
Reinsurer's Share of Technical Provisions	675,718	849,307	552,761	753,211
Deferred Tax Asset	564	668	4,121	588
Investments (including accrued interest & cash)	531,049	531,049	436,417	428,600
Holdings in related undertakings	509,738	479,866	410,974	396,945
Insurance and intermediaries receivable	24,548	124,494	17,007	127,140
Deposits to Cedants	28,337	28,337	26,566	26,566
Other assets and non-insurance receivables	22,265	22,265	15,202	15,105
Deferred Acquisition Costs	-	35,044	-	35,804

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

D.1.1 *Deferred tax assets*

Deferred tax assets are the temporary differences arising between the tax bases of assets and liabilities and their carrying amounts under Solvency II. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the balance sheet date and that are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. Deferred income tax assets and liabilities are offset if there is a legally enforceable right to set off current tax assets against current tax liabilities and if they relate to income taxes levied by the same taxation authority on the same taxable entity.

D.1.2 *Holdings in related undertakings*

As at December 2019, the Company has two holdings in related undertakings; a 10% holding in Arch Capital Group (U.S.) Inc. ("ACGI"), valued at €420.4, and a wholly owned subsidiary, Arch Insurance (UK) Limited ("AIUK") (formerly Arch Insurance Company (Europe) Limited ("AICE")), valued at €89.4m.

These valuations are based, in the case of AIUK, on their solvency II excess of assets over liabilities whilst for ACGI the valuation is based on their economic balance sheet prepared on a Solvency II equivalent basis

for Bermuda Monetary Authority (“BMA”) statutory reporting purposes. The BMA regime has been accepted as Solvency II equivalent by EIOPA.

D.1.3 Investments (other than holdings in related undertakings)

Investments have been valued in accordance with Irish GAAP’s fair value model. The Company’s investments are managed by Arch Investment Management Limited. The Company receives quarterly report detailing the underlying securities held in the fund. The quarterly reports are reviewed to ensure average financial strength ratings and durations have not moved significantly since the previous quarter. Any unusual movements or discrepancies are discussed with the fund managers. This information is presented to the Group Investment Committee every quarter.

The investments are valued at fair value under Irish GAAP and Solvency II based on market prices at the reporting date, which are quoted prices in active markets for identical assets. Where there are no quoted prices available, the fair value is determined using inputs that are observable for the assets.

There is an amount of €4m for an unlisted equity that has been valued using the alternative valuation method in accordance with Solvency II. The Directors have used the equity valuation method, being the closest to the fair value of this equity.

The valuation of investments is consistent with the accounting valuation under Irish GAAP.

D.1.4 Deposits to Cedants

These balances are valued at fair value reflecting the amount held at 31 December 2019, translated at the closing exchange rate for balances not denominated in the reporting currency. No estimates or judgements are required in the valuation.

There has been no change in the recognition and valuation basis during the period and there are no differences between the valuation for Solvency II and the GAAP valuation.

D.1.5 Insurance and intermediaries receivables

Insurance and intermediaries receivables balance represents premiums owed by cedants. Outstanding premiums are valued at 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 accounting valuation under Irish GAAP except that the share of insurance and intermediaries balances which are not yet due at the valuation date are deducted from the balance and included in the technical provisions cashflow.

D.1.6 Cash and cash equivalents

The Company’s cash holdings are held in major currencies, which are EUR, GBP, USD and TRY, comprising a mix of bank deposits and cash funds. The non-EUR balances are translated into EUR at the balance sheet closing rate.

Cash and cash equivalents are valued at fair value by the relevant financial institution, and the Company receives monthly statements at the period end to confirm the balances held. There are no significant estimates or judgements used in valuing cash holdings due to the nature of the asset.

There has been no change in the recognition and valuation basis during the period and the valuation of cash and cash equivalents under Solvency II is consistent with the accounting valuation under Irish GAAP.

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 Irish GAAP, apart from goodwill which is recognised on an Irish GAAP basis, but not on a Solvency II basis.

The following are the material differences in valuation of assets between Solvency II and financial statements prepared in accordance with Irish GAAP that are not already explained in the previous sections.

D.1.8 Deferred acquisition costs / Goodwill

In the financial statements, acquisition costs which represent commission and other related expenses are deferred over the year in which the related premiums are earned. To the extent that acquisition costs are deferred and considered irrecoverable against the related unearned premiums, they are written off to net operating expenses as incurred.

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

Goodwill recognized under Irish GAAP is similarly excluded from the Solvency II balance sheet.

D.2 Technical provisions

D.2.1 Results summary

The following table sets out the Solvency II technical provisions by grouping as at 31 December 2019.

31 December 2019	Claims	Premium	Risk Margin	Solvency II
Net of Retrocession and inter-company	Provisions	Provisions	Margin	Technical Provisions
Quota Share	(€'000)	(€'000)	(€'000)	(€'000)
Accident & Health Reinsurance	2,219	(1,374)	462	1,307
Property Reinsurance	9,545	(4,615)	11,293	16,223
Liability Reinsurance	7,743	(622)	2,275	9,396
Credit & Surety Reinsurance	14,563	9,031	7,976	31,571
Non-Proportional Reinsurance	75,723	(27,928)	29,478	77,273
Grand Total	109,793	(25,508)	51,483	135,769

For comparison purposes, the following table sets out the Solvency II technical provisions by grouping as at 31 December 2018.

31 December 2018	Claims	Premium	Risk Margin	Solvency II
Net of Retrocession and inter-company	Provisions	Provisions	Margin	Technical Provisions
Quota Share	(€'000)	(€'000)	(€'000)	(€'000)
Accident & Health Reinsurance	2,219	(1,513)	11,295	12,001
Property Reinsurance	7,028	(1,406)	11,684	17,306
Liability Reinsurance	6,299	(4,696)	1,379	2,982
Credit & Surety Reinsurance	10,011	3,824	5,161	18,996
Non-Proportional Reinsurance	50,534	(23,659)	34,332	61,207
Grand Total	76,092	(27,450)	63,851	112,493

The groupings above are made up of the following Solvency II Lines of Business ("LoB").

Line of Business grouping	Solvency II line of business
Accident & Health Reinsurance	Medical expense Income protection Workers' compensation
Property Reinsurance	Other motor Marine, aviation and transport Fire and other damage to property
Liability Reinsurance	Motor vehicle liability General liability
Credit & Surety Reinsurance	Credit and suretyship
Non-Proportional Reinsurance	Non-proportional health reinsurance Non-proportional casualty reinsurance Non-proportional marine, aviation and transport reinsurance Non-proportional property reinsurance

The decrease of overall Risk Margin is due to a higher increase of the Net BEL than the SCR. Consequence is that the SCR projections are smaller. This is driven by an increase of business bound but not incepted

at 31st December 2019. The movement of Risk Margin for Accident & Health Reinsurance is driven by a change in the risk mitigation allocation by line of business.

D.2.2 Calculation Methodology

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

The starting point for valuing the Company's Technical Provisions (TPs) is the Company's Irish GAAP basis reserves for loss and allocated loss adjustment expenses (Loss Reserves). Cash flows associated with those Loss Reserves, along with unearned premium reserves and provisions for other components of economic basis TPs, are calculated for each homogenous risk group using the approach outlined below.

(a) Best Estimate Liability

The best estimate liability ("BEL") is calculated from the cashflows in respect of the claims provisions and premium provisions. The best estimate liability represents the present value of future cashflows. The present value is calculated based on the timing of cashflows and on yield curves provided by EIOPA. The best estimate liability is determined on a gross, ceded and net basis for both the claims provisions and the premium provisions.

(b) Premium Receivable

Premium receivable in respect of the portion of the GAAP premium receivable not yet due on the valuation date is included in the premium provisions cashflows. A consistent approach is applied to calculation of ceded premium payable.

(c) Premium in respect of Bound But Not Yet Incepted Business

The Company's technical provision calculation allow for business that is bound but not yet incepted ("BBNI") at the valuation date.

The premium provisions include the future premium cashflows in respect of the BBNI business up to the relevant contract boundary.

(d) Future loss and allocated loss adjustment expense

Future loss and allocated loss adjustment expense cashflows are projected in respect of the GAAP Loss Reserves in order to calculate claims provisions. The Company does not consider that there are any implicit or explicit margins in the GAAP Loss Reserves.

Future loss and allocated loss adjustment expense cashflows are projected in respect of the GAAP unearned premium reserves and BBNI premium in order to calculate premium provisions. The projection uses business planning assumptions in respect of future loss ratios on unearned premium reserves and not yet incepted business.

(e) ENIDs

The Solvency II technical provisions must allow for events not in data ("ENIDs"). This identifies that the Company has potential exposure to an extreme loss arising from severe liability catastrophe. An ENID loading has been derived by the Company using a truncated distribution approach and is applied to future claim cashflows in both the claims provisions and premium provisions.

(f) Expenses

Acquisition costs directly attributable to the future premium receivable are determined based on the terms of the contracts which generate the premium receivable.

In addition, an allowance for unallocated loss adjustment expenses, administrative expenses and investment management expenses associated with the settlement of the best estimate liabilities is included in the technical provisions.

(g) Adjustment for counterparty default

An adjustment for counterparty default is applied to the ceded technical provisions. The adjustment for counterparty default uses the Probability of Default ("PD") consistent with the Credit Quality Steps specified in EIOPA guidance in respect of the AM Best financial strength rating for reinsurance counterparties.

(h) Risk Margin

The Risk Margin is calculated based on the Level 3 of Simplifications in the EIOPA guidance which projects future SCR values based on the assumption that the SCR to Net BEL ratio is constant through time. A ratio of SCR to Net BEL is determined as of the valuation date. This ratio is applied to future BEL estimates at each 1-year interval until liabilities are fully runoff to estimate future SCR requirements. A 6% cost of capital is applied to all SCR estimates through time to estimate the cost of capital to support the liabilities. The resulting series of costs of capital requirements are present valued to the valuation date using the yield curve for the reporting currency of the company with a 1-year lag per the EIOPA guidance material.

D.2.3 Material Changes since Last Reporting Period

There has been no material change in the calculation methodology for technical provisions since the last reporting period. Some minor changes were made to the process and assumptions used for technical provisions. The source system for the data used to define the business that was Bound But Not Incepted (BBNI) was revised to ensure this data was available earlier in the process. In addition, the assumption used to apply a loading to minimum premiums on non-proportional contracts and applied to GAAP reserves (on an earned basis) was reviewed and modified following this review.

There were some changes in the SCR calculation as detailed in [section E.2.1](#).

D.2.4 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, as set out in the next section.

D.2.5 Level of Uncertainty

Uncertainty in technical provisions arises from a number of sources:

- The estimates for outstanding losses are based on known information at the balance sheet date. Ultimate settlement of these claims may differ from these estimates;
- The estimates for future losses on both expired and unexpired business are based on actuarial assumptions reflecting past performance and anticipated future changes. These assumptions may ultimately prove to differ from actual experience;
- The estimates for expenses are based on reasonable judgement reflecting past experience and on assumptions as to the run-off period. Either of these factors may differ from ultimate experience; and
- Events not in data are, by their nature unpredictable and any allowance made could prove to be over-prudent or insufficient.

The Company follows a robust process in setting appropriate assumptions underlying the calculation of technical provisions. Actual performance is monitored against expectations on an ongoing basis to ensure assumptions are updated as required.

Stress testing was performed on the Solvency II Technical Provisions as at 31st December 2019 in order to give an indication of sensitivity around loss ratio assumptions.

The following table shows net Best Estimate of Liabilities (i.e. the claims provision and premium provision, but not including the Risk Margin) in stressed scenarios (losses 5% and 10% higher than expected).

	Base Case (€'000)	Losses +5% (€'000)	Losses +10% (€'000)
Net Best Estimate Liabilities	84,297	91,729	99,161
Impact		7,432	14,864

The above results of sensitivity testing should be considered in the context of the Company's solvency profile. As at December 31st, 2019, the Company's SCR was €336.9m, against which it held eligible own funds of €666.9m, equating to SCR coverage of 197.9%. Without considering the impact on SCR, the more extreme of the scenarios above (losses 10% higher than expected), would reduce the SCR coverage ratio to 193.5%.

D.2.6 Material Differences between Irish GAAP and Solvency II

Whilst some of the approaches and techniques applied under Solvency II are similar to those followed under the existing Irish GAAP 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, leading to increased volatility in reserves;
- Introduction of the principle of a market consistent basis and calculation of a “risk margin”; and
- Valuation of liabilities segmented by at least Solvency II lines of business.

D.2.7 Other Comments

The Company does not apply the matching adjustment referred to in Article 77 b of Directive 2009/138/EC, the volatility adjustment referred to in Article 77 d of Directive 2009/138/EC, the transitional adjustment to the risk-free interest rate term structure referred to in Article 308 c of Directive 2009/138/EC, or the transitional deduction referred to in Article 308 d of Directive 2009/138/EC.

Due to the nature of the business and the low level of materiality in respect of policyholders opting to lapse, no lapse assumption has been applied to future premium in the calculation of technical provisions.

Future management actions are not considered relevant for this business.

D.2.8 Irish GAAP to Solvency II Comparison

The table below sets out the movement analysis between Irish GAAP and Solvency II for the Company as at 31 December 2019.

2019 Technical Provisions GAAP to Solvency II	Gross €'000	Ceded €'000	Net €'000
Claims Provisions	802,190	692,357	109,834
Premium Provisions	(42,175)	(16,639)	(25,537)
Risk Margin	51,492	-	51,492
Solvency II Technical Provisions	811,507	675,718	135,790
GAAP Reserves (including ULAE)	808,605	712,220	96,385
Remove margins	-	-	-
Allowance for ENID	10,885	9,472	1,413
Change of Expense Basis	16,114	-	16,114
Adjustment for Counterparty Default	-	(301)	301
Reinsurance Receivables/Payables	-	-	-
Discounting impact	(33,414)	(29,034)	(4,379)
Currency Revaluation	-	-	-
Solvency II Claims Provisions	802,190	692,357	109,834
GAAP Reserves (Unearned Premium)	157,469	137,087	20,382
Remove Unearned Premium Reserve	(157,469)	(137,087)	(20,382)
Future Premium (net of Acquisition Costs)	(220,302)	(171,016)	(49,285)
Future Losses and ALAE	280,055	245,180	34,875
Remove margins	-	-	-
Allowance for ENID	3,997	3,497	501
Change of Expense Basis	5,601	-	5,601
Adjustment for Counterparty Default	-	(97)	97
Premium Receivables	(99,946)	(83,829)	(16,117)
Reinsurance Receivables/Payables	-	-	-
Discounting impact	(11,581)	(10,374)	(1,207)
Solvency II Premium Provision	(42,175)	(16,639)	(25,537)

The movement from Irish GAAP basis reserves and Solvency II Technical Provisions applies in the same manner for each Line of Business.

For comparison purpose, the table below sets out the GAAP to Solvency II movement as at 31 December 2018.

2018 Technical Provisions GAAP to Solvency II	Gross €'000	Ceded €'000	Net €'000
Claims Provisions	659,232	583,141	76,092
Premium Provisions	(57,829)	(30,379)	(27,450)
Risk Margin	63,851	-	63,851
Solvency II Technical Provisions	665,254	552,761	112,493
GAAP Reserves (including ULAE)	679,024	613,081	65,943
Remove margins	-	-	-
Allowance for ENID	8,942	7,766	1,176
Change of Expense Basis	13,534	-	13,534
Adjustment for Counterparty Default	-	(248)	248
Reinsurance Receivables/Payables	-	-	-
Discounting impact	(42,268)	(37,459)	(4,809)
Currency Revaluation	-	-	-
Solvency II Claims Provisions	659,232	583,141	76,092
GAAP Reserves (Unearned Premium)	155,289	140,130	15,158
Remove Unearned Premium Reserve	(155,289)	(140,130)	(15,158)
Future Premium (net of Acquisition Costs)	(147,615)	(110,290)	(37,325)
Future Losses and ALAE	229,090	201,109	27,981
Remove margins	-	-	-
Allowance for ENID	3,248	2,846	402
Change of Expense Basis	3,144	-	3,144
Adjustment for Counterparty Default	-	(197)	197
Premium Receivables	(110,133)	(92,017)	(18,116)
Reinsurance Receivables/Payables	-	-	-
Discounting impact	(35,562)	(31,830)	(3,732)
Solvency II Premium Provision	(57,829)	(30,379)	(27,450)

D.3 Other liabilities

The table below sets out liabilities other than technical provisions on the Solvency II balance sheet as at year-end 2019 and 2018:

Other Liabilities	2019 Solvency II €'000	2019 Irish GAAP €'000	2018 Solvency II €'000	2018 Irish GAAP €'000
Deposits from Reinsurers	10	10	22	22
Insurance & intermediaries payables	9,116	9,116	11,720	11,720
Reinsurance payables	297,280	381,108	229,114	321,130
Payables (trade, not insurance)	7,177	7,162	7,350	7,350
Ceded deferred excess commission	-	12,193	-	12,464
Ceded deferred acquisition costs	-	28,945	-	30,551
Payables (securities)	-	2	-	-
Any Other Liabilities, not elsewhere shown	256	271	-	-
Total Other Liabilities	313,839	438,808	248,205	383,237

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 Reinsurance payables

Reinsurance payables balance represents amounts payable to reinsurers in respect of ceded premiums. Reinsurance payables are valued at fair value. The valuation of reinsurance payables is consistent with the accounting valuation under Irish GAAP except that the share of reinsurance balances which are not yet due at the valuation date are deducted from the balance and included in the technical provisions cashflow.

D.3.2 Payables (trade, not insurance)

The valuation of payables (trade, not insurance) is consistent with the accounting valuation under Irish GAAP.

D.3.3 Ceded deferred Excess commissions

In the financial statements, ceded deferred excess commissions represent ceding commission received in excess of original acquisition expenses on assumed business, are deferred over the year in which the related reinsurers' share of premiums are earned.

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

D.3.4 Ceded deferred acquisition costs

In the financial statements, ceded acquisition costs which represent commission and other related expenses, are deferred over the year in which the related reinsurers' share of premiums are earned. To the extent that ceded deferred acquisition costs are deferred and considered irrecoverable against the related reinsurers' share of unearned premiums, they are written off to net operating expenses as incurred.

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.3.5 Insurance and Intermediaries Payables

The valuation of Insurance and Intermediaries payables is consistent with the accounting valuation under Irish GAAP.

D.4 Alternative methods for valuation

As previously stated, (i) unlisted equities in the investment portfolio and (ii) other assets and non-insurance receivables have been valued using the alternative valuation method in accordance with Solvency II.

D.5 Any other information

The Company has a number of risk management policies in place that aim to protect the balance sheet against various risks. These include the investment risk policy and underwriting and reserving risk policy. Further information on the Company's risk management is provided in Section B above.

No other material information to report as of 31 December 2019.

E.1 Own Funds**E.1.1 Management of Own Funds**

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 reached 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 plan and makes recommendations to the Board. Reviews and monitors the key capital management metrics and tolerances and presents key capital management information to the Board on an ongoing basis;
- Audit 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 and developing the capital management policy and plan, and for maintaining the SCR and MCR calculations.

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.

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 realization of relief from the management actions is six months.

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

- Additional capital sourced from Group through contributed capital, capital loan or additional reinsurance arrangements; and
- Capital sourced from outside parties, e.g. merger, private equity.

Estimated timeframe for realization of relief from the potential sources of capital from the Group is 1 month. Estimated timeframe for realization of relief from outside parties is three months to one year.

There have been no material changes to capital management during 2019.

E.1.2 Classification of Own Funds

The Company's own funds consist mostly of Tier 1 own funds, along with a small amount of Tier 3 own funds (deferred tax asset). Tier 1 funds are comprised of paid-in ordinary share capital, share premium account related to ordinary share capital, reconciliation reserve and other own funds (investments in related undertakings).

Composition of Own Funds	Year Ended 31/12/2019				Year Ended 31/12/2018			
	Total	Tier 1	Tier 2	Tier 3	Total	Tier 1	Tier 2	Tier 3
Own Funds (€'000)								
Paid-in ordinary share capital	50,000	50,000			50,000	50,000		
Share premium account related to ordinary share capital	24,341	24,341			24,341	24,341		
Reconciliation Reserve:	427,218	427,218			305,986	305,986		
Net Deferred Tax Assets	564			564	4,121			4,121
Other Own Fund items approved by the CBI	164,748	164,748			164,748	164,748		
Total Own Funds	666,872	666,308		564	549,197	545,076		4,121

The reconciliation reserve equals the excess of assets over liabilities less other own funds items as at the reporting date and represents retained earnings less adjustments from GAAP to Solvency II valuation.

The difference between the equity shown in the Company's financial statements and the excess of the assets over liabilities as calculated for solvency purposes arises due to differences in valuation of technical provisions and other items outlined in the subsections below.

E.1.3 Terms and Conditions of Own Funds

There is no restriction on the availability or transferability of the own funds.

E.1.4 Differences in Own Funds between Financial Statements and Solvency II Valuation

The difference between the equity shown in the Company's Financial Statements and the Excess of the Assets over Liabilities as calculated for solvency purposes arises due to the valuation of technical provisions, the ineligibility of the deferred acquisition costs (and deferred ceded acquisition costs) and goodwill, the adjustment to the deferred tax asset, the valuation of payables and receivables and differences in the valuation of investments in related undertakings.

Differences in Own Funds (Euro in thousands)	Year Ended 31/12/2019	Year Ended 31/12/2018
Equity shown in Financial Statements	666,147	573,930
Technical Provisions Valuation	(19,023)	(31,391)
Payables & Receivables	(16,117)	(18,116)
Economic Valuation of Investments in Subsidiaries	29,873	14,029
Goodwill	0	0
Deferred Acquisition Costs Eligibility	6,095	7,212
Deferred Tax Asset Adjustment	(103)	3,533
Deferred Tax Liabilities	0	0
Other	0	0
Excess of Assets over Liabilities for solvency purposes	666,872	549,197

E.2 Solvency Capital Requirement and Minimum Capital Requirement

E.2.1 Calculation of SCR and MCR

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 Commission Delegated Regulation (EU) 2015/35 apply to the Counterparty default risk sub-module;
- No simplifications have been used in the other risk sub-modules; and
- The MCR is calculated based on the Linear MCR based on the net of reinsurance 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 €3.6m also applied to derive the final MCR requirement.

As at 31 December 2019, the SCR is €336.9m. A breakdown of SCR by risk category is set out in the following table.

Risk Category	2019 SCR (€'000)	2018 SCR (€'000)
Market risk	302,006	243,213
Counterparty default risk	22,699	20,244
Life underwriting risk	-	-
Health underwriting risk	8,580	9,805
Non-life underwriting risk	67,950	62,617
Diversification	(65,025)	(59,808)
Basic Solvency Capital Requirement	336,211	276,071
Operational risk	22,800	18,042
Loss-absorbing capacity of deferred taxes	(22,095)	(36,764)
Solvency Capital Requirement	336,916	257,349

Following the standard formula review by EIOPA amending Delegated Regulation (EU) 2015/35 supplementing Directive 2009/138/EC, there has been a change in the evaluation of the loss absorbing capacity for deferred tax during 2019 impacting Company's SCR. The evaluation of loss absorbing capacity for deferred tax is aligned with the Company strategic plan.

Market risk is driven by company strategic participations in Arch US and UK which are increasing the currency risk (USD and GBP). This is also driving the increase of the own funds.

As at 31 December 2019, the MCR is €84.2m. The calculation of MCR is set out in the following table:

MCR Calculation		
Line of Business	Net of Reinsurance Best Estimate TPs	Net written premiums last 12 months
Medical expense	845	3,045
Income protection	-	-
Workers' compensation	11	106
Motor vehicle liability	-	202
Other motor	688	2,643
Marine, aviation and transport	224	24
Fire and other damage to property	4,018	4,266
General liability	7,215	420
Credit and suretyship	23,594	7,346
Non-proportional health reinsurance	5,313	3,606
Non-proportional casualty reinsurance	38,768	13,435
Non-proportional marine, aviation and transport reinsurance	2	19
Non-proportional property reinsurance	3,722	4,184
Linear MCR		19,259
SCR		336,916
Combined MCR		84,229
Absolute Floor of the MCR		3,600
Minimum Capital Requirement		84,229

E.2.2 SCR ratio and MCR ratio

As at 31 December 2019, the ratio of eligible own funds to SCR and MCR are outlined in the table below.

Solvency Coverage	2019 (€'000)	2018 (€'000)
Total eligible own funds to meet the SCR	666,872	549,197
Total eligible own funds to meet the MCR	666,308	545,076
SCR	336,916	257,349
MCR	84,229	64,337
Ratio of Eligible own funds to SCR	198%	213%
Ratio of Eligible own funds to MCR	791%	847%

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 model used

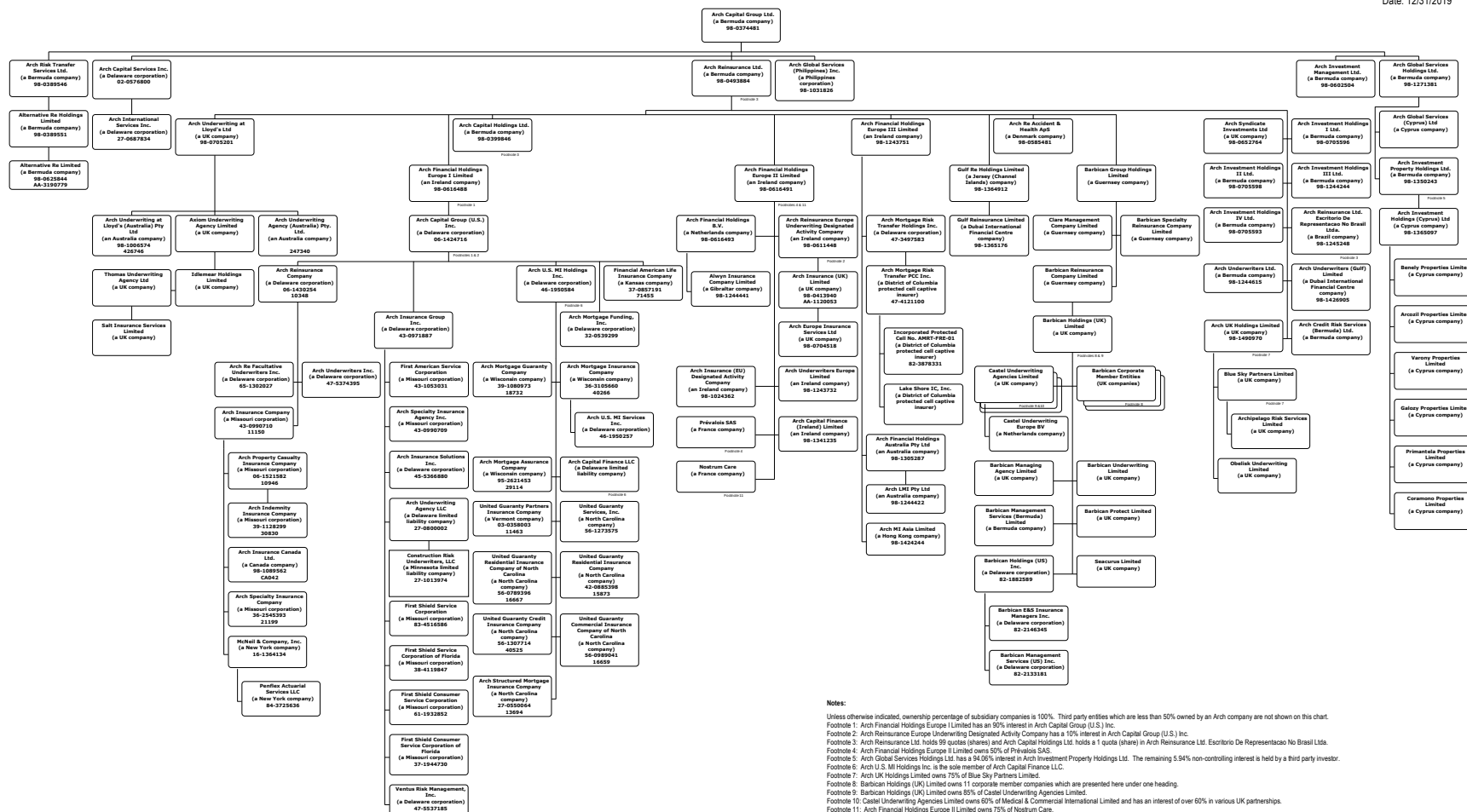
Not applicable.

E.5 Non-compliance with the MCR and non-compliance with the SCR

The Company complies with the Solvency Capital Requirement and Minimum Capital Requirement during 2019.

E.6 Any other information

No other material information to report as of 31 December 2019.



Notes:

Unless otherwise indicated, ownership percentage of subsidiary companies is 100%. Third party entities which are less than 50% owned by an Arch company are not shown on this chart.

Footnote 1: Arch Financial Holdings Europe I Limited has an 90% interest in Arch Capital Group (U.S.) Inc.

Footnote 3: Arch Reinsurance Ltd. holds 99 quotas (shares) and Arch Capital Holdings Ltd. holds a 1 quota (share) in Arch Reinsurance Ltd. Escritório De Representação No Brasil Ltda.

Footnote 4: Arch Financial Holdings Europe II Limited owns 50% of Prévailois SAS.

Footnote 6: Arch U.S. MII Holdings Inc. is the sole member of Arch Capital Finance LLC.

Footnote 7: Arch UK Holdings Limited owns 75% of Blue Sky Partners Limited.

Footnote 9: Barbican Holdings (UK) Limited owns 85% of Castel Underwriting Agencies Limited

Footnote 10: Castel Underwriting Agencies Limited owns 60% of Medical & Commercial International Limited and has an interest of over 60% in various UK partnerships.

Footnote 11: Arch Financial Holdings Europe III Limited owns 75% of Nostrum Care

Key: For each entity, the company name (jurisdiction), FEIN # (where applicable) and NAIC # (or equivalent number if applicable) are listed.

AF

Actuarial Function.

Allocated Loss Adjustment Expenses (ALAE)

A provision to cover the estimated expenses relating to the handling of outstanding claims (including IBNR claims), which are allocated directly to case estimates. It usually includes external expenses such as legal expenses and claims assessors' fees.

ARE

Arch Reinsurance Underwriting Europe dac.

BEL

Best Estimate Liability.

CBI

Central Bank of Ireland.

Data Integration Layer (DIL)

An automated ETL process implemented in 2016 that takes data from various sources and formats it correctly for use in the RiskIntegrity platform. Developed externally by consultant Genpact with expertise hired at a Group level for on-going maintenance and development.

Extract, Transform & Load (ETL)

Refers to a process in database usage and especially in data warehousing that performs:

1. Data extraction – extracts data from homogeneous or heterogeneous data sources
2. Data transformation – transforms the data for storing it in the proper format or structure for the purposes of querying and analysis

Data loading – loads it into the final target database

EPI

Estimated Premium Income.

Excess of loss

A generic term describing reinsurance which, subject to a specified limit, indemnifies the reinsured company against all or a portion of the amount of loss in excess of the reinsured's specified loss retention. The term is generic in describing various types of excess of loss reinsurance, such as per risk (or per policy), per occurrence (property catastrophe or casualty clash), and annual aggregate. The loss retention in excess of loss reinsurance should not be confused with the policy retention in surplus share re-insurance, which always refers to a pro rata form of reinsurance in which, once a cession of insurance is made, the reinsured and reinsurer share insurance liability, premium and losses, beginning with the first dollar of loss. Also known as Non-proportional Reinsurance.

GWP

Gross Written Premium.

HoAF

Head of Actuarial Function.

Incurred Claims

The sum of the paid claims and outstanding notified claims (or case estimates or case reserves) at any point in time.

Incurred But Not Reported Reserve (IBNR)

Amount of reserves required for claims in respect of claim events that have occurred before the accounting date but have not yet been reported to the insurer by that date. Within this report, IBNR includes IBNER.

Initial Expected Loss Ratio (IELR)

The claim ratio expected on a book of business at inception.

Outstanding

Unless specifically stated otherwise the term outstanding is used in this report to denote the amount of notified case reserves.

REGIS

Reinsurance Group Information System – The Company's Underwriting, Accounting and Claims system.

RI

RiskIntegrity - A Solvency II platform created by Moody's and purchased by the Company in 2016, used for pillar 1 and pillar 3 reporting. Produces QRTs and generates the XBRL required by the CBI.

ROE

Return on Equity (profit divided by capital).

QCR

Quarterly Change Report.

QRTs

Quantitative Reporting Templates.

SII

Solvency II.

Quota-share

A form of pro rata reinsurance (proportional) in which the reinsurer assumes an agreed percentage of each insurance being reinsured and shares all premiums and losses accordingly with the reinsured. Quota share reinsurance is usually arranged to apply to the insurer's net retained account (i.e., after deducting all other reinsurance except perhaps excess of loss catastrophe reinsurance), but practice varies. A quota share reinsurer may be asked to assume a quota share of a gross account, paying its share of premium for other reinsurance protecting that gross account.

Ultimate Loss Ratio (ULR)

The ratio of the ultimate cost of claims in a period to the corresponding ultimate premiums from that period either gross or net of reinsurance.

Unallocated Loss Adjustment Expenses (ULAE)

A provision to cover the estimated expenses relating to the handling of outstanding claims (including IBNR claims) which are not allocated directly to case estimates. It usually includes such expenses as salaries of claims department staff.

Underwriting Year / UWY

Describes written premium and claims data that is grouped according to the year in which the business is written irrespective of when they are actually reported or paid and irrespective of the month in which the claim event occurs.

Unearned Premium Reserve (UPR)

The amount set aside from premiums written before the accounting date to cover risks incurred after that date.

Written Premium

Amount of premium, either gross or net of reinsurance, for which cover commenced in an accounting period.

APPENDIX 3 – QUANTITATIVE REPORTING TEMPLATES.

Attached are the public QRTs required as part of the report. We note in some cases totals do not match the sum of individual fields due to rounding.

There are nominal differences between Paid claims in S.19.01 and paid claims under GAAP due to difference in the recognition of the effect of exchange rates.

Annex I**S.02.01.02****Balance sheet****Assets**

Goodwill
Deferred acquisition costs
Intangible assets
Deferred tax assets
Pension benefit surplus
Property, plant & equipment held for own use
Investments (other than assets held for index-linked and unit-linked contracts)
Property (other than for own use)
Holdings in related undertakings, including participations
Equities
Equities - listed
Equities - unlisted
Bonds
Government Bonds
Corporate Bonds
Structured notes
Collateralised securities
Collective Investments Undertakings
Derivatives
Deposits other than cash equivalents
Other investments
Assets held for index-linked and unit-linked contracts
Loans and mortgages
Loans on policies
Loans and mortgages to individuals
Other loans and mortgages
Reinsurance recoverables from:
Non-life and health similar to non-life
Non-life excluding health
Health similar to non-life
Life and health similar to life, excluding health and index-linked and unit-linked
Health similar to life
Life excluding health and index-linked and unit-linked
Life index-linked and unit-linked
Deposits to cedants
Insurance and intermediaries receivables
Reinsurance receivables
Receivables (trade, not insurance)
Own shares (held directly)
Amounts due in respect of own fund items or initial fund called up but not yet paid in
Cash and cash equivalents
Any other assets, not elsewhere shown
Total assets

	Solvency II value
	C0010
R0010	
R0020	
R0030	
R0040	564
R0050	
R0060	494
R0070	1,016,849
R0080	
R0090	509,738
R0100	
R0110	
R0120	
R0130	501,382
R0140	436,970
R0150	57,324
R0160	
R0170	7,088
R0180	5,729
R0190	
R0200	
R0210	
R0220	
R0230	
R0240	
R0250	
R0260	
R0270	675,718
R0280	675,718
R0290	630,427
R0300	45,291
R0310	
R0320	
R0330	
R0340	
R0350	28,337
R0360	24,548
R0370	
R0380	439
R0390	
R0400	
R0410	23,938
R0420	21,332
R0500	1,792,219

		Solvency II value
		C0010
Liabilities	R0510	811,507
Technical provisions – non-life	R0520	756,418
Technical provisions – non-life (excluding health)	R0530	
Technical provisions calculated as a whole	R0540	708,565
Best Estimate	R0550	47,853
Risk margin	R0560	55,089
Technical provisions - health (similar to non-life)	R0570	
Technical provisions calculated as a whole	R0580	51,450
Best Estimate	R0590	3,639
Risk margin	R0600	-
Technical provisions - life (excluding index-linked and unit-linked)	R0610	-
Technical provisions - health (similar to life)	R0620	
Technical provisions calculated as a whole	R0630	
Best Estimate	R0640	
Risk margin	R0650	-
Technical provisions – life (excluding health and index-linked and unit-linked)	R0660	
Technical provisions calculated as a whole	R0670	
Best Estimate	R0680	
Risk margin	R0690	-
Technical provisions – index-linked and unit-linked	R0700	
Technical provisions calculated as a whole	R0710	
Best Estimate	R0720	
Risk margin	R0730	
Other technical provisions	R0740	
Contingent liabilities	R0750	
Provisions other than technical provisions	R0760	
Pension benefit obligations	R0770	10
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	9,116
Insurance & intermediaries payables	R0830	297,280
Reinsurance payables	R0840	7,177
Payables (trade, not insurance)	R0850	
Subordinated liabilities	R0860	
Subordinated liabilities not in Basic Own Funds	R0870	
Subordinated liabilities in Basic Own Funds	R0880	256
Any other liabilities, not elsewhere shown	R0900	1,125,346
Total liabilities	R1000	666,873
Excess of assets over liabilities		

S.05.01.02

[illegible]

Premiums, claims and expenses by country

		Home Country	Top 5 countries (by amount of gross premiums written) - non-life obligations					Total Top 5 and home country
		C0010						C0070
	R0010	C0080	FR	IN	NL	GB	GI	C0140
Premiums written								
Gross - Direct Business	R0110							
Gross - Proportional reinsurance accepted	R0120	-	24,286	14,953	27,232	544	573	67,587
Gross - Non-proportional reinsurance accepted	R0130	2,832	29,864	12,078	1,453	73,423	18,068	137,718
Reinsurers' share	R0140	2,446	47,457	24,481	26,332	65,312	16,414	182,442
Net	R0200	385	6,693	2,550	2,353	8,655	2,227	22,863
Premiums earned								
Gross - Direct Business	R0210							
Gross - Proportional reinsurance accepted	R0220	-	22,577	16,531	28,342	703	563	68,717
Gross - Non-proportional reinsurance accepted	R0230	2,208	29,573	11,398	1,377	67,923	15,862	128,341
Reinsurers' share	R0240	1,947	46,436	25,935	27,618	61,574	14,554	178,064
Net	R0300	261	5,714	1,994	2,102	7,052	1,870	18,994
Claims incurred								
Gross - Direct Business	R0310							
Gross - Proportional reinsurance accepted	R0320	79	11,396	17,037	15,180	300	141	44,133
Gross - Non-proportional reinsurance accepted	R0330	1,710	18,159	785	922	52,024	21,723	95,322
Reinsurers' share	R0340	1,537	25,911	16,342	14,732	46,727	18,720	123,969
Net	R0400	252	3,644	1,480	1,369	5,597	3,144	15,486
Changes in other technical provisions								
Gross - Direct Business	R0410							
Gross - Proportional reinsurance accepted	R0420	-	-	-	-	-	-	-
Gross - Non-proportional reinsurance accepted	R0430	-	-	-	-	-	-	-
Reinsurers' share	R0440	-	-	-	-	-	-	-
Net	R0500	-	-	-	-	-	-	-
Expenses incurred	R0550	3	69	353	382	229	1	1,030
Other expenses	R1200							-
Total expenses	R1300							1,030

Annex I
S.17.01.02
Non-life Technical Provisions

Technical provisions calculated as a whole

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

Technical provisions calculated as a sum of BE and RM

Best estimate

Premium provisions

Gross

Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default

Net Best Estimate of Premium Provisions

Claims provisions

Gross

Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default

Net Best Estimate of Claims Provisions

Total Best estimate - gross

Total Best estimate - net

Risk margin

Amount of the transitional on Technical Provisions

Technical Provisions calculated as a whole

Best estimate

Risk margin

Technical provisions - total

Technical provisions - total

Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected

losses due to counterparty default - total

Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total

	Direct business and accepted proportional reinsurance								Accepted non-proportional reinsurance				Total Non-Life obligation
	Medical expense 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	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	
	C0020	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0140	C0150	C0160	C0170	C0180
R0010													
R0050													
R0060	- 8,435	- 21	- 804	2,833	7	395	- 6	- 17,202	- 3,776	- 11,820	22	- 3,368	- 42,175
R0140	- 7,061	8	- 167	6,374	- 21	1,497	- 22	- 26,233	- 1,521	10,725	27	- 245	- 16,639
R0150	- 1,374	- 29	- 637	- 3,541	28	1,102	16	9,031	- 2,255	- 22,545	- 5	- 3,123	- 25,536
R0160	14,392	262	3,532	27,440	1,406	47,479	50,485	106,165	49,028	452,193	61	49,748	802,190
R0240	12,173	222	2,988	23,211	1,210	42,359	43,286	91,602	41,470	390,880	53	42,903	692,357
R0250	2,219	40	544	4,229	196	5,120	7,199	14,563	7,558	61,313	8	6,845	109,834
R0260	5,957	241	2,728	30,273	1,413	47,875	50,479	88,963	45,252	440,372	82	46,380	760,015
R0270	845	11	93	688	224	4,018	7,215	23,594	5,303	38,768	3	3,722	84,298
R0280	463	9	1,209	7,936	35	3,320	1,066	7,976	3,167	20,783	764	4,763	51,492
R0290													
R0300													
R0310													
R0320	6,420	250	3,937	38,209	1,448	51,195	51,545	96,939	48,419	461,155	846	51,143	811,507
R0330	5,112	230	2,821	29,585	1,189	43,856	43,264	65,369	39,949	401,605	80	42,658	675,718
R0340	1,308	20	1,116	8,624	259	7,338	8,281	31,570	8,470	59,551	767	8,485	135,790

Annex I

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

		C0010			
MCRNL Result	R0010	19,259		Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance) written premiums in the last 12 months
				C0020	C0030
Medical expense insurance and proportional reinsurance	R0020	845		3,045	
Income protection insurance and proportional reinsurance	R0030	-		-	
Workers' compensation insurance and proportional reinsurance	R0040	11		106	
Motor vehicle liability insurance and proportional reinsurance	R0050	-		202	
Other motor insurance and proportional reinsurance	R0060	688		2,643	
Marine, aviation and transport insurance and proportional reinsurance	R0070	224		24	
Fire and other damage to property insurance and proportional reinsurance	R0080	4,018		4,266	
General liability insurance and proportional reinsurance	R0090	7,215		420	
Credit and suretyship insurance and proportional reinsurance	R0100	23,594		7,346	
Legal expenses insurance and proportional reinsurance	R0110				
Assistance and proportional reinsurance	R0120				
Miscellaneous financial loss insurance and proportional reinsurance	R0130				
Non-proportional health reinsurance	R0140	5,313		3,606	
Non-proportional casualty reinsurance	R0150	38,768		13,435	
Non-proportional marine, aviation and transport reinsurance	R0160	2		19	
Non-proportional property reinsurance	R0170	3,722		4,184	

Linear formula component for life insurance and reinsurance obligations

		C0040			
MCRL Result	R0200	-		Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance/SPV) total capital at risk
				C0050	C0060
Obligations with profit participation - guaranteed benefits	R0210				
Obligations with profit participation - future discretionary benefits	R0220				
Index-linked and unit-linked insurance obligations	R0230				
Other life (re)insurance and health (re)insurance obligations	R0240				
Total capital at risk for all life (re)insurance obligations	R0250				

Overall MCR calculation

		C0070
Linear MCR	R0300	19,259
SCR	R0310	336,916
MCR cap	R0320	151,612
MCR floor	R0330	84,229
Combined MCR	R0340	84,229
Absolute floor of the MCR	R0350	3,600
		C0070
Minimum Capital Requirement	R0400	84,229

Annex I

S.25.01.21

Solvency Capital Requirement - for undertakings on Standard Formula

Market risk
Counterparty default risk
Life underwriting risk
Health underwriting risk
Non-life underwriting risk
Diversification
Intangible asset risk
Basic Solvency Capital Requirement

Calculation of Solvency Capital Requirement

Operational risk
Loss-absorbing capacity of technical provisions
Loss-absorbing capacity of deferred taxes
Capital requirement for business operated in accordance with Art. 4 of Directive

Solvency capital requirement excluding capital add-on

Capital add-on already set

Solvency capital requirement

Other information on SCR

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

Approach to tax rate

Approach based on average tax rate

Calculation of loss absorbing capacity of deferred taxes

LAC DT

LAC DT justified by reversion of deferred tax liabilities
LAC DT justified by reference to probable future taxable profit
LAC DT justified by carry back, current year
LAC DT justified by carry back, future years
Maximum LAC DT

	Gross solvency capital requirement	USP	Simplifications
	C0110	C0090	C0120
R0010	302,006		
R0020	22,699		
R0030	-	None	
R0040	8,580	None	
R0050	67,950	None	
R0060	- 65,025		
R0070	-		
R0100	336,211		

	C0100
R0130	22,800
R0140	-
R0150	- 22,095
R0160	-
R0200	336,916
R0210	-
R0220	336,916
R0400	
R0410	
R0420	
R0430	
R0440	

	Yes/No
	C0109
R0590	1

	LAC DT
	C0130
R0640	- 22,095
R0650	
R0660	- 22,095
R0670	
R0680	
R0690	

Annex I
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

Ordinary share capital (gross of own shares)
Share premium account related to ordinary share capital
Initial funds, members' contributions or the equivalent basic own - fund item for mutual and mutual-type undertakings
Subordinated mutual member accounts
Surplus funds
Preference shares
Share premium account related to preference shares
Reconciliation reserve
Subordinated liabilities
An amount equal to the value of net deferred tax assets
Other own fund items approved by the supervisory authority as basic own funds not specified above

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

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

Deductions

Deductions for participations in financial and credit institutions

Total basic own funds after deductions

Ancillary own funds

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

Total ancillary own funds

Available and eligible own funds

Total available own funds to meet the SCR
Total available own funds to meet the MCR
Total eligible own funds to meet the SCR
Total eligible own funds to meet the MCR

SCR

MCR

Ratio of Eligible own funds to SCR

Ratio of Eligible own funds to MCR

Reconciliation reserve

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

Reconciliation reserve

Expected profits

Expected profits included in future premiums (EPIFP) - Life business
Expected profits included in future premiums (EPIFP) - Non- life business

Total Expected profits included in future premiums (EPIFP)

	Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
	C0010	C0020	C0030	C0040	C0050
R0010	50,000	50,000			
R0030	24,341	24,341			
R0040					
R0050					
R0070					
R0090					
R0110					
R0130	427,220	427,220			
R0140					
R0160	564				564
R0180	164,748	164,748			
R0220					
R0230					
R0290	666,873	666,309	-	-	564
R0300					
R0310					
R0320					
R0330					
R0340					
R0350					
R0360					
R0370					
R0390	-				

	Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
	C0010	C0020	C0030	C0040	C0050
R0400				-	-
R0500	666,873	666,309	-	-	564
R0510	666,309	666,309	-	-	
R0540	666,873	666,309	-	-	564
R0550	666,309	666,309	-	-	
R0580	336,916				
R0600	84,229				
R0620	2				
R0640	8				

	C0060
R0700	666,873
R0710	-
R0720	
R0730	239,653
R0740	
R0760	427,220
R0770	
R0780	37,862
R0790	37,862

Annex I
S.19.01.21
Non-life Insurance Claims Information

Total Non-Life Business

Accident year / Underwriting year	Z0020	2
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Gross Claims Paid (non-cumulative)
(absolute amount)

Year	Development year										
	0	1	2	3	4	5	6	7	8	9	10 & +
	C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110
Prior	R0100										1,393
N-9	R0160	- 4,124	8,550	2,382	920	1,015	1,070	1,454	1,607	885	707
N-8	R0170	799	7,471	3,807	846	1,796	1,251	2,927	1,168	944	
N-7	R0180	16,179	34,179	18,450	10,117	6,383	- 411	5,849	3,926		
N-6	R0190	47,923	70,412	51,601	28,895	5,387	6,885	7,468			
N-5	R0200	8,144	39,379	21,405	11,614	10,256	6,824				
N-4	R0210	4,204	41,148	21,221	6,974	5,910					
N-3	R0220	8,820	47,902	50,107	18,234						
N-2	R0230	5,347	28,152	31,562							
N-1	R0240	5,511	43,783								
N	R0250	6,245									

	In Current year	Sum of years (cumulative)
	C0170	C0180
R0100	1,393	1,393
R0160	707	14,465
R0170	944	21,009
R0180	3,926	94,673
R0190	7,468	218,570
R0200	6,824	97,623
R0210	5,910	79,457
R0220	18,234	125,063
R0230	31,562	65,062
R0240	43,783	49,294
R0250	6,245	6,245
Total	R0260	126,996
		772,853

Gross undiscounted Best Estimate Claims Provisions
(absolute amount)

Year	Development year										
	0	1	2	3	4	5	6	7	8	9	10 & +
	C0200	C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0290	C0300
Prior	R0100										11,201
N-9	R0160						23,388	20,607	18,177	14,983	
N-8	R0170					28,627	24,812	23,288	21,633		
N-7	R0180				52,842	46,622	46,656	48,671			
N-6	R0190			62,047	55,027	47,221	41,194				
N-5	R0200		101,916	96,936	88,444	79,438					
N-4	R0210	111,244	97,751	92,553	96,565						
N-3	R0220	82,938	155,398	126,899	117,248						
N-2	R0230	90,435	147,631	126,051							
N-1	R0240	98,004	161,028								
N	R0250	117,590									

	Year end (discounted data)
	C0360
R0100	11,236
R0160	15,019
R0170	21,671
R0180	47,940
R0190	40,515
R0200	76,706
R0210	91,999
R0220	112,396
R0230	120,626
R0240	151,587
R0250	112,495
Total	R0260
	802,190