



ASPEN

SOLVENCY AND FINANCIAL
CONDITION REPORT

ASPEN INSURANCE UK
LIMITED
31 DECEMBER 2019



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Directors' responsibility statement

We acknowledge our responsibility for preparing the SFCR in all material respects in accordance with the requirements of the PRA Rules and the Solvency II Regulations.

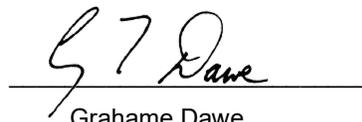
We are satisfied that:

- a) Throughout the financial year in question, the insurer has complied in all material respects with the requirements of the PRA Rules and Solvency II Regulations as applicable to the insurer, and
- b) It is reasonable to believe that the insurer has continued to comply subsequently and will continue to comply in the future.

By order of the Board



Michael Cain
Chief Executive Officer
21st May 2020



Grahame Dawe
Chief Financial Officer
21st May 2020

Plantation Place
30 Fenchurch Street
London
EC3M 3BD

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

Report on the Audit of the Relevant Elements of the Solvency and Financial Condition Report Opinion

Except as stated below, we have audited the following documents prepared by Aspen Insurance UK Limited as at 31 December 2019:

- The 'Valuation for solvency purposes' and 'Capital Management' sections of the Solvency and Financial Condition Report of Aspen Insurance UK Limited as at 31 December 2019, (**the Narrative Disclosures subject to audit**); and
- Company templates S02.01.02, S17.01.02, S23.01.01, S28.01.01, (**the Templates subject to audit**).

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

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

- information contained within the Relevant Elements of the Solvency and Financial Condition Report set out above which are, or derive from the Solvency Capital Requirement, as identified in the Appendix to this report;
- The 'Business and performance', 'System of governance' and 'Risk profile' sections of the Solvency and Financial Condition Report;
- Company templates S05.01.02, S05.02.01, S19.01.21, S.25.02.21, S.25.03.21;
- the written acknowledgement by the Directors of their responsibilities, including for the preparation of the Solvency and Financial Condition Report (**the Responsibility Statement**).

To the extent the information subject to audit in the Relevant Elements of the Solvency and Financial Condition Report includes amounts that are totals, sub-totals or calculations derived from the Other Information, we have relied without verification on the Other Information.

In our opinion, the information subject to audit in the Relevant Elements of the Solvency and Financial Condition Report of Aspen Insurance UK Limited as at 31 December 2019 is prepared, in all material respects, in accordance with the financial reporting provisions of the PRA Rules and Solvency II regulations on which they are based, as modified by relevant supervisory modifications, and as supplemented by supervisory approvals and determinations.

Basis for opinion

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

Emphasis of Matter – special purpose basis of accounting

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

Going concern

The Directors have prepared the Solvency and Financial Condition Report on the going concern basis as they do not intend to liquidate the Company or to cease its operations, and as they have concluded that the Company's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over its ability to continue as a going concern for at least a year from the date of approval of the Solvency and Financial Condition Report ("the going concern period").

We are required to report to you if we have concluded that the use of the going concern basis of accounting is inappropriate or there is an undisclosed material uncertainty that may cast significant doubt over the use of that basis for a period of at least a year from the date of approval of the Solvency and Financial Condition Report. In our evaluation of the Directors' conclusions, we considered the inherent risks to the Company's business model, and analysed how those risks might affect the Company's financial resources or ability to continue operations over the going concern period. We have nothing to report in these respects.

However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the company will continue in operation.

Other Information

The Directors are responsible for the Other Information.

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

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

Responsibilities of Directors for the Solvency and Financial Condition Report

The Directors are responsible for the preparation of the Solvency and Financial Condition Report in accordance with the financial reporting provisions of the PRA rules and Solvency II regulations which have been modified by the modifications, and supplemented by the approvals and determinations made by the PRA under section 138A of FSMA, the PRA Rules and Solvency II regulations on which they are based.

The Directors are also responsible for such internal control as they determine is necessary to enable the preparation of a Solvency and Financial Condition Report that is free from material misstatement, whether due to fraud or error; assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Relevant Elements of the Solvency and Financial Condition Report

It is our responsibility to form an independent opinion as to whether the Relevant Elements of the Solvency and Financial Condition Report are prepared, in all material respects, with financial reporting provisions of the PRA Rules and Solvency II regulations on which it they based, as modified by relevant supervisory modifications, and as supplemented by supervisory approvals and determinations.

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

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities.

Other Matter

The Company has authority to calculate its Solvency Capital Requirement using an internal model ("the Model") approved by the Prudential Regulation Authority in accordance with the Solvency II Regulations. In forming our opinion (and in accordance with PRA Rules), we are not required to audit the inputs to, design of, operating effectiveness of and outputs from the Model, or whether the Model is being applied in accordance with the Company's application or approval order.

Report on Other Legal and Regulatory Requirements

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

The purpose of our audit work and to whom we owe our responsibilities

This report of the external auditor is made solely to the company's directors, as its governing body, in accordance with the requirement in Rule 4.1 (2) of the External Audit Part of the PRA Rulebook for Solvency II firms and the terms of our engagement. We acknowledge that the directors are required to submit the report to the PRA, to enable the PRA to verify that an auditor's report has been commissioned by the company's directors and issued in accordance with the requirement set out in Rule 4.1 (2) of the External Audit Part of the PRA Rulebook for Solvency II firms and to facilitate the discharge by the PRA of its regulatory functions in respect of the company, conferred on the PRA by or under the Financial Services and Markets Act 2000.

Our audit has been undertaken so that we might state to the company's directors those matters we are required to state to them in an auditor's report issued pursuant to Rule 4.1 (2) and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company through its governing body, for our audit, for this report, or for the opinions we have formed.

Kushan Tikkoo

Kushan Tikkoo

for and on behalf of KPMG LLP

15 Canada Square

Canary Wharf

London

E14 5GL

21st May 2020

Appendix – relevant elements of the Solvency and Financial Condition Report that are not subject to audit

Solo internal model

The relevant elements of the Solvency and Financial Condition Report that are not subject to audit comprise:

- The following elements of template S.02.01.02:
 - Row R0550: Technical provisions - non-life (excluding health) - risk margin
 - Row R0590: Technical provisions - health (similar to non-life) - risk margin
- The following elements of template S.17.01.02
 - Row R0280: Technical provisions calculated as a sum of best estimate and risk margin
- The following elements of template S.23.01.01
 - Row R0580: Solvency capital requirement
 - Row R0740: Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds
- The following elements of template S.28.01.01
 - Row R0310: Solvency capital requirement
- Elements of the Narrative Disclosures subject to audit identified as ‘unaudited’.
- The maintenance and integrity of Aspen Insurance UK Limited’s website is the responsibility of the directors; the work carried out by the auditor does not involve consideration of these matters and, accordingly, the auditor accepts no responsibility for any changes that may have occurred to the Solvency and Financial Condition Report since it was initially presented on the website.
- Legislation in the United Kingdom governing the preparation and dissemination of Solvency and Financial Condition Reports may differ from legislation in other jurisdictions.

Solvency and Financial Condition Report (“SFCR”)

Explanatory note

References in this report to the “Group” the “Aspen Group,” refer to Aspen Insurance Holdings Limited (“Aspen Holdings”) or Aspen Holdings and its consolidated subsidiaries, as the context requires. References in this report to the “Company” or “AIUK,” refer to Aspen Insurance U.K. Limited.

On February 15, 2019, Aspen Holdings completed its merger with Highlands Merger Sub, Ltd. (“Merger Sub”), a wholly owned subsidiary of Highlands Holdings, Ltd. (“Parent”). Merger Sub merged with and into Aspen Holdings (the “Merger”), with the Aspen Holdings. The largest and smallest group in which the results of the Company are consolidated is that headed by AIHL. The largest and smallest group in which the results of the Company are consolidated is that headed by AIHL, continuing as the surviving company and as a wholly owned subsidiary of Parent. Parent, a Bermuda exempted company, is an affiliate of certain investment funds managed by affiliates of Apollo Global Management, Inc., a leading global investment manager (collectively with its subsidiaries, “Apollo”).

Forward looking statements

All forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or will be important factors that could cause actual results to differ materially from those indicated in these statements.

In addition, any estimates relating to loss events involve the exercise of considerable judgment in the setting of reserves and reflect a combination of ground-up evaluations, information available to date

from brokers and cedants, market intelligence, initial tentative loss reports and other sources. The actuarial range of reserves provided, if any, is based on Aspen Insurance UK Limited's ("AIUK's") current state of knowledge and explicit and implicit assumptions relating to the incurred pattern of claims, the expected ultimate settlement amount, inflation and dependencies between lines of business. Due to the complexity of factors contributing to losses and the preliminary nature of the information used to prepare estimates, there can be no assurance that AIUK's ultimate losses will remain within stated amounts.

Summary

Summary of Business and Performance

The objective of AIUK is to provide an efficient platform for the Group to offer specialty insurance and reinsurance products to policyholders who seek capacity in the London market and to commercial policyholders in the UK domestic market. In addition, AIUK uses its capital base to offer capacity via branches and binding authorities in other markets, including the USA, Australia, Canada, Latin America and Singapore.

On 15 February 2019, in accordance with the merger agreement between Apollo Global Management and AIHL, AIHL merged with Highlands Merger Sub, Limited, a company incorporated in Bermuda and wholly owned subsidiary of Highlands Holdings, Limited, a company incorporated in Bermuda. As a result, from 15 February 2019, Highlands Holdings, Limited is the new ultimate parent company of AIUK.

This was a transitional year for AIUK. Following the Group merger we undertook a number of actions to strengthen the fundamentals of the company and better position the business to create value over the long term.

In 2019, AIUK ceased underwriting U.K. regional business through an agency agreement with Aspen Risk Management Limited ("ARML"), a managing general agency. The ARML business consisted of professional liability and property and casualty coverages for small to medium sized U.K.-based businesses. The ARML business was placed into runoff in August 2019. AIUK has assumed ARML's underwriting administration and claims handling obligations for the run-off business.

In November 2019 Arch Reinsurance and the Company jointly announced that Arch Re has entered into a renewal rights agreement with the Company on its global credit and surety reinsurance business after our decision to exit the line.

In 2020 we have placed both marine and energy liability and accident and health lines of business into runoff in February 2020 and March 2020, respectively.

Aspen Bermuda established a branch in Zurich, Switzerland in 2019 to write property and casualty reinsurance with inception dates of 1 January 2020 and later. This business has previously been written in AIUK. Gross written premium for 2019 was \$94.7m.

The financial results for the Company reflect a profit before tax for the year of \$8.6m (2018: loss of \$39.2m). This comprised:

- an underwriting loss before investment income of \$85.0m (2018: \$89.2m loss);
- other expenses of \$21.8m (2018: other income of \$51.9m); offset by
- an investment return of \$115.4m (2018: investment loss of \$1.9m).

The underwriting loss of \$85.0m (2018: \$89.2m loss) reflected a \$79.0m loss in the Company's reinsurance segment and a \$6.0m loss in the insurance segment.

The reinsurance segment loss included Catastrophe losses associated with Typhoons Hagibis and Faxai (\$16.8m and \$9.9m respectively) and a \$13.9m loss in Credit & Surety from the failure of Thomas Cook. There was additional prior year deterioration on Typhoon Jebi and on the US Casualty, satellite and bloodstock books, which was partially offset by favourable development on International Casualty. The \$79.0m reinsurance segment underwriting loss in 2019 increased from a loss of \$73.5m in 2018. The prior year saw a number of material Cat events.

The \$6.0m insurance segment loss in 2019 reflected adverse prior year development on Marine & Energy Liability and Accident & Health lines. Due to this deterioration, we ceased underwriting Marine & Energy Liability in February 2020 and Accident & Health lines in March 2020. The overall insurance segment loss in 2018 was \$15.7m.

Other expenses of \$21.8m related principally to foreign exchange losses.

The investment return of \$115.4m (2018: \$1.9m loss), included income from government and corporate bonds and other investments of \$60.0m (2018: \$62.1m). The main reason for the significant increase in the overall return in 2019 was unrealised gains in the value of financial instruments (principally government and corporate bonds) of \$55.9m, compared to an unrealised loss in 2018 of \$25.2m. The gains were driven by movements in US interest rates.

The Company met its ratings agency and regulatory capital requirements throughout 2019 and remains adequately capitalised for the future (see note on recent rating agency actions on page 18). As at 31 December 2019, the Company was a direct subsidiary undertaking of Aspen European Holdings Limited (“AEHL”), a wholly owned subsidiary of Aspen Insurance Holdings Limited (“AIHL”). AEHL’s registered office is 30 Fenchurch Street, London, EC3M 3BD.

For 2020, AIUK will continue to focus on its chosen markets, seeking a positive return through focused underwriting and client service.

Summary of Systems of Governance

AIUK is governed by its Board of Directors (the “AIUK Board”), and two sub-committees of the Board: the Audit Committee and the Risk Committee. Other committees may be established on an ad hoc basis for administrative purposes. These include the Remuneration Standing Committee and the Special Referral Committee. AIUK’s Chief Executive Officer (“CEO”) chairs an Executive Committee, which provides support to the CEO in dealing with the day to day executive management of AIUK.

The AIUK Board is responsible for ensuring that the principles of good governance are observed.

AIUK has an Internal Control and Risk Management Framework and employs the Three Lines of Defence model to manage risk. The integration of the risk management process, business strategy, business planning, and capital management is defined through AIUK’s approach to its Own Risk and Solvency Assessment (“ORSA”).

The governance structure of AIUK did not change materially in the twelve months ended 31 December 2019.

Summary of Risk Profile

Risk management has been embedded in the management and culture of the Aspen Group since its formation in 2002. The Company, as an operating entity within the Aspen Group, operates within the Group’s established risk management practices.

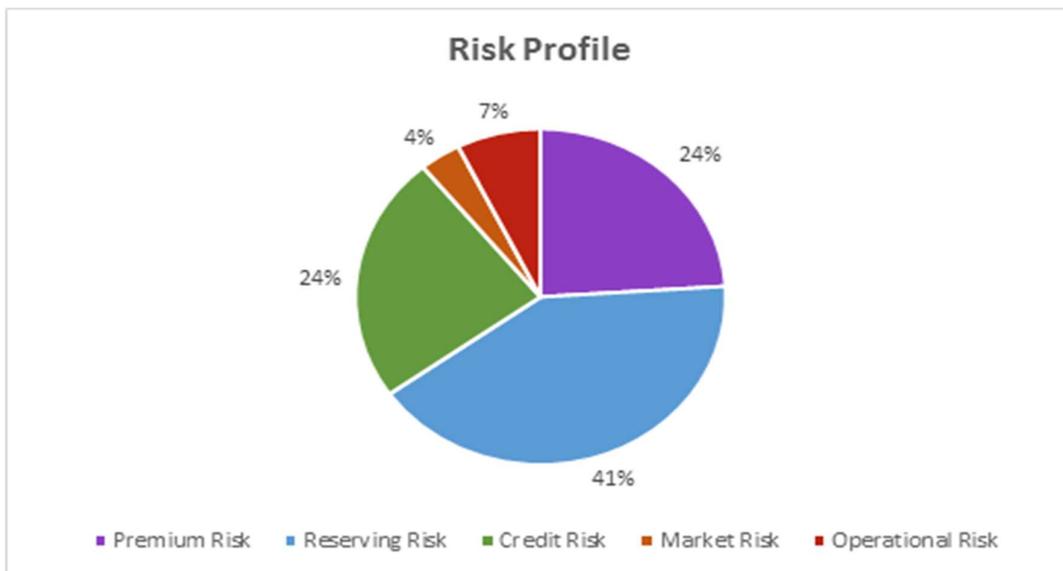
The key risks for the Company are:

- Impact of COVID19 on our underwriting exposures, investment portfolio and operations (see significant events)
- Underwriting performance. Although market conditions are improving losses in 2019 highlight that achievement of appropriate underwriting performance remains a key risk to the company. Portfolio management and risk selection remain the key mitigant to this risk.
- Expense management. A number of initiatives to reduce expenses were implemented in 2017 and 2018 and the benefits of this work are starting to come through. However, it is worth emphasising the decision to exit lines (Aspen Risk Management Limited, Marine and Energy Liability, Accident and Health, Marine Hull, Aviation and the Credit and Surety reinsurance business) and the associated loss of premium income places greater pressure on the expense ratio of the business. The decision to exit lines of business and the recent rating agency actions detailed on page 18 mean that expense management remains a key focus for the Company,

and the business will review whether the same resources in support and operational areas are still required.

- Prior Year reserve deterioration – AIUK has historically and continues to write significant volumes of long tail business e.g. Casualty Reinsurance and therefore has significant levels of reserves on its balance sheet including estimations of the Incurred But Not Reported (IBNR) claims which we will become aware of in future years. For long tail business the uncertainties are significant and factors like social inflation and specific uncertainties e.g. OPIOID exposures mean that the future costs of IBNR claims may be greater than our current estimates.
- Impacts of organisational change. Following the takeover of the Aspen Group by Apollo there has been and continues to be a significant level of organisational change. The level of organisational change means that the company continues to face a heightened exposure to operational risk.

The following chart shows the diversified contribution of the Internal Model risk category components to AIUK's SCR capital requirement reflecting the 2019 year end position and 2020 plan approved by the AIUK Board:



Insurance risk has two components Premium Risk and Reserving Risk. Premium Risk is defined as the risk that losses arise in the forthcoming year from both underwriting business written in that year and policies from prior years which remain in force for the forthcoming year. Reserving Risk is defined as the risk that reserves established in respect of prior periods are understated.

Market risk is defined as the risk of variation in the income generated by, and the fair value of, AIUK's investment portfolio, cash and cash equivalents and derivative contracts, including the effect of changes in foreign currency exchange rates.

Credit risk is the risk of loss to AIUK if the counterparty to a financial instrument or reinsurance agreement fails to meet its contractual obligations. AIUK is also exposed to credit risk through its investment holdings (cash and fixed income securities) which is part of Market risk within the Internal Model.

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, personnel or systems, or from external events.

The diagram above does not show Emerging risk, Liquidity risk, Regulatory and Taxation risk as these are not included in the Internal Model. These are discussed in further detail in section C.

Summary of Valuation for Solvency Purposes

An analysis of the valuation of assets and liabilities on a Solvency II basis is shown in Section D. Assets and liabilities have been valued at the amount for which they could be exchanged between knowledgeable willing parties in an arm's length transaction and Technical Provisions have been estimated as the sum of a best estimate and a Risk Margin. The best estimate corresponds to the probability-weighted average of future cashflows, taking account of the time value of money (expected present value of future cashflows), using the relevant risk-free interest rate term structure.

Summary of Capital Management

As part of its Board approved risk appetite statement, AIUK defines the amount of capital required to meet its internal risk appetite, regulatory and rating agency requirements and commercial constraints. To support its objective AIUK maintains sufficient Own Funds to cover the Minimum Capital Requirement ("MCR") and the Solvency Capital Requirement ("SCR") with an appropriate buffer. The MCR coverage ratio at 31 December 2019 was 292% (2018: 268%) and the SCR coverage ratio was 146% (2018: 125%).

A Business and Performance

A1 Business

A1.1 Business

AIUK is a private company limited by shares, incorporated in England & Wales and domiciled in the United Kingdom. It is a wholly owned subsidiary of Aspen European Holdings Limited (“AEHL”), a company incorporated in England & Wales, whose ultimate parent company at 31 December 2018 was Aspen Insurance Holdings Limited (“AIHL”), which is incorporated in Bermuda. On 15 February 2019, in accordance with the merger agreement between Apollo Global Management and AIHL (see page 19), AIHL merged with Highlands Merger Sub, Ltd., a company incorporated in Bermuda and wholly owned subsidiary of Highlands Holdings, Ltd., a company incorporated in Bermuda. As a result, from 15 February 2019, Highlands Holdings, Ltd. is the new ultimate parent company of AIUK.

The supervisory authority responsible for financial supervision of AIUK is the United Kingdom Prudential Regulation Authority (“PRA”), whose contact details are:

Prudential Regulation Authority
20 Moorgate
London, EC2R 6DA

The supervisory authority responsible for conduct supervision of AIUK is the United Kingdom Financial Conduct Authority (“FCA”), whose contact details are:

Financial Conduct Authority
12 Endeavour Square
London, E20 1JN

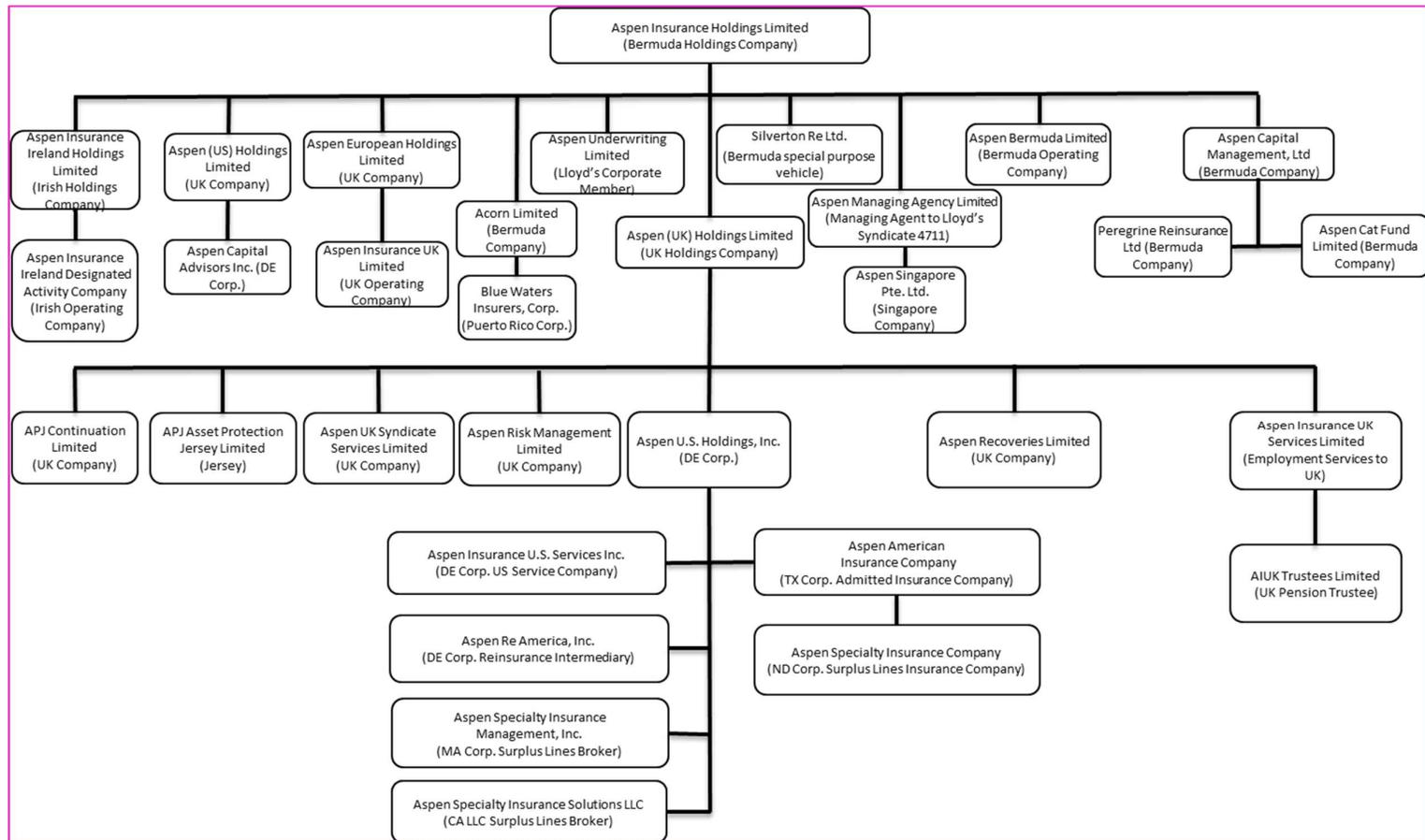
The Group supervisor is the Bermuda Monetary Authority, whose address is:

43 Victoria Street
Hamilton, PO Box 2447
Bermuda

KPMG LLP is the external auditor of AIUK, and their contact details are:

KPMG LLP
15 Canada Square
London, E14 5GL.

AIUK is part of a group that conducts global insurance and reinsurance business. The position of AIUK within the legal structure of the Group at 31 December 2019 is set out below. The ultimate parent company of the Group as at 31 December 2019 was Highlands Holdings Limited incorporated in Bermuda. The largest and smallest group in which the results of the Company are consolidated is that headed by AIHL.



AIUK writes business through the London Market and operates in the United Kingdom (directly and through affiliated company underwriting agents) and the United States and through branches in Australia, Canada, Singapore and Switzerland. AIUK is authorised to underwrite all eighteen classes of insurance and reinsurance business. Its business is managed as two distinct underwriting segments, Aspen Re and Aspen Insurance.

A1.1.1 Reinsurance Segment

The reinsurance segment consists of property, casualty and specialty reinsurance. A more detailed analysis of the business written within these classes is as follows:

Property Catastrophe Reinsurance

Property catastrophe reinsurance is generally written on a treaty excess of loss basis where the Company provides protection to an insurer for an agreed portion of the total losses from a single event in excess of a specified loss amount. In the event of a loss, most contracts provide for coverage of a second occurrence following the payment of a premium to reinstate the coverage under the contract, which is referred to as a reinstatement premium. The coverage provided under excess of loss reinsurance contracts may be on a worldwide basis or limited in scope to selected regions or geographical areas.

Other Property Reinsurance

Other property reinsurance includes property risks written on excess of loss and proportional treaties, facultative or single risk reinsurance. Risk excess of loss reinsurance provides coverage to a reinsured where it experiences a loss in excess of its retention level on a single "risk" basis. A "risk" in this context might mean the insurance coverage on one building or a group of buildings or the insurance coverage under a single policy which the reinsured treats as a single risk. This line of business is generally less exposed to accumulations of exposures and losses but can still be impacted by natural catastrophes, such as earthquakes and hurricanes.

Proportional treaty reinsurance provides proportional coverage to the reinsured, meaning that, subject to event limits where applicable and ceding commissions, the Company pays the same share of the covered original losses as it receives in premiums charged for the covered risks. Proportional contracts typically involve close client relationships which often include regular audits of the cedants' data.

Casualty Reinsurance

Casualty reinsurance is written on an excess of loss, proportional and facultative basis and consists of U.S. treaty, international treaty and casualty facultative reinsurance. The Company's U.S. treaty business comprises exposures to workers' compensation (including catastrophe), medical malpractice, general liability, auto liability, professional liability and excess liability including umbrella liability. The Company's international treaty business reinsures exposures mainly with respect to general liability, auto liability, professional liability, workers' compensation and excess liability.

Specialty Reinsurance

Specialty reinsurance is written on an excess of loss and proportional basis and consisted of credit and surety reinsurance, agriculture reinsurance, mortgage reinsurance and insurance, marine, aviation, terrorism, engineering, cyber and other specialty lines. The Company's credit and surety reinsurance business consists of trade credit, surety (mainly European, Japanese and Latin American risks) and mortgage reinsurance and insurance and political risks. The Company's agricultural reinsurance business covers crop and multi-peril business. Other specialty lines include reinsurance treaties and some insurance policies covering policyholders' interests in marine, energy, aviation liability, space, contingency, engineering, terrorism, nuclear and personal accident. In October 2019, we ceased writing credit and surety reinsurance and sold our renewal rights to that book of business to a third party.

A1.1.2 Insurance Segment

The Company's insurance segment consists of property and casualty, marine and energy and financial and professional lines insurance. A more detailed analysis of the business written within these classes is as follows:

Property and Casualty insurance

The Company's property and casualty insurance line comprises commercial property, commercial liability, primary casualty, excess casualty, environmental liability and railroad liability, written on a primary, excess, quota share, program and facultative basis.

- Property insurance provides physical damage and business interruption coverage for losses arising from weather, fire, theft and other causes. The commercial team's client base is predominantly U.K. institutional property owners, small and middle market corporates and public sector clients.
- Commercial liability provides employers' liability coverage and public liability coverage for insureds domiciled in the U.K. and Ireland. The team also covers directors' and officers' ("D&O") and professional indemnity, predominantly to small and medium corporates.
- Primary casualty consists primarily of lines written within the primary insurance sectors, focusing on insureds in hospitality, real estate, construction and products liability.
- Excess casualty line comprises large, sophisticated and risk-managed insureds worldwide and covers broad-based risks at lead/high excess attachment points, including general liability, commercial and residential construction liability, life science, railroads, trucking, product and public liability and associated types of cover found in general liability policies in the global insurance market.
- Environmental liability primarily provides both primary and excess coverages for contractors' pollution liability and pollution legal liability across industry segments that have environmental regulatory drivers and contractual requirements including: real estate and public entities, contractors and engineers, energy contractors and environmental contractors and consultants.
- The majority of the U.K. regional D&O and professional indemnity coverage was bound through an agency agreement with Aspen Risk Management Limited ("ARML"). In August 2019, we placed the ARML business into runoff.

Marine and Energy Insurance

The Company's marine and energy insurance line comprised marine and energy liability, onshore energy physical damage, offshore energy physical damage, marine hull, specie and aviation written on a primary, excess, quota share, program and facultative basis.

- The marine and energy liability business includes marine liability cover mainly related to the liabilities of ship-owners and port operators, including reinsurance of Protection and Indemnity Clubs ("P&I Clubs"). It also provides liability cover globally for companies in the oil and gas sector, both onshore and offshore and in the power generation sector. This line of business was discontinued in February 2020.
- Onshore energy physical damage provides onshore energy and construction sector classes of business with a focus on property covers.
- Offshore energy physical damage (also known as Upstream Energy) provides coverage for property damage in addition to operators' extra expenses for companies operating in the oil and gas exploration and production sector.
- Marine Hull insures physical damage to ships (including war and associated perils) and related marine assets. This line of business was discontinued in 2018 and placed into run-off.
- The specie line of business focuses on the insurance of high value property items on an all risks basis including fine art, general and bank related specie, jewellers' block and cash in transit coverages.
- Aviation writes physical damage insurance on airline hulls, aviation hull deductible covers and comprehensive legal liability for airlines, smaller operators or airline equipment, airports and associated business and non-critical component part manufacturers. This line of business was discontinued in 2018 and placed into run-off.

Financial and Professional Lines Insurance

The Company's financial and professional lines comprised financial and corporate risks, accident and health, professional liability, management liability, credit and political risks, crisis management, surety risks and technology liability (cyber risks) written on a primary, excess, quota share, program and facultative basis.

- The Financial and Corporate risks account comprises financial institutions business written on a primary and excess of loss basis and consists of professional liability, crime insurance and D&O covers for commercial and investment banks, asset managers, insurance companies, stockbrokers and the like. This account includes a book of D&O insurance for commercial insureds located outside of the U.S and a worldwide book of representations and warranties and tax indemnity business.
- The Company's professional liability business is written on both a primary and an excess of loss basis, focusing on risks in the U.K., Europe, Australia and Canada. The Company insures a wide range of

professions including lawyers, accountants, architects, engineers, doctors and medical technicians. This account also includes a portfolio of technology liability and data protection insurance. The data protection insurance covers firms for first party costs and third party liabilities associated with their breach of contractual or statutory data protection obligations.

- Management Liability insures a diverse group of commercial and financial institutions primarily on an excess basis, with coverages including D&O liability, fiduciary liability, employment practices liability, fidelity insurance and blended liability programs including E&O liability with a focus on risks predominantly headquartered in the U.S. or risks with material U.S. exposure.
- The credit and political risks team writes business covering the credit and contract frustration risks on a variety of trade and non-trade related transactions, as well as political risks (including multi-year war on land cover) and surety risks. The Company provides credit and political risks cover worldwide.
- The accident and health team focuses on insurance and reinsurance products which help protect individuals, groups and companies from the consequences of accidental death or disability whether resulting from accident or sickness. Cover written includes whole account treaty and facultative reinsurance protection for insurance companies. This line of business was discontinued in March 2020.
- The crisis management team writes insurance designed to protect individuals and corporations operating in high-risk areas around the world, including covering the shipping industry's exposure to acts of piracy. It also writes terrorism and political violence insurance, providing coverage for damage to property (largely fixed assets such as buildings) resulting from acts of terrorism, strikes, riots, civil commotion or political violence, in addition to product recall business.
- The surety team writes commercial surety risks, admiralty bonds and similar maritime undertakings including, but not limited to, federal and public official bonds, license and permits and fiduciary and miscellaneous bonds, focused on Fortune 1000 companies and large, privately owned companies in the United States.
- Technology liability (also known as Cyber insurance) is written globally and provides coverage for technology, media and telecommunications firms offering protection for damages and legal defence expenses associated with financial loss claims from third parties and various forms of intellectual property breaches.

A1.1.3 Significant Events for the twelve months ended 31 December 2019

The following events are considered significant by the management of AIUK:

The U.K.'s decision to leave the European Union ("EU"):

The Company faces new regulatory costs and challenges as a result United Kingdom's decision to leave the European Union (commonly known as "Brexit"). The U.K. left the E.U. as of 31 January 2020. A transitional arrangement, under which E.U. law will broadly remain in force in the U.K. is in place until 31 December 2020.

The uncertainty surrounding the implementation and effect of Brexit, the terms and conditions of such exit, the legal and regulatory framework that will apply to the U.K. and its relationship with the remaining members of the E.U. (including in relation to trade and services) upon expiration of the transitional arrangement has caused, and is likely to cause, increased economic volatility and market uncertainty globally, in particular volatility of currency exchange rates, interest rates and credit spreads. As well as short-term issues, the long-term effect of Brexit on the value of our investment portfolio at this time is uncertain, and such volatility and uncertainty will likely continue as negotiations progress to determine the future terms of the U.K.'s relationship with the E.U.

Brexit could lead to potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. We may have to review our underwriting platforms and incur additional regulatory costs as a result. AIUK will lose its EEA financial services passport which provides it the license to operate across borders within the single EEA market without obtaining local regulatory approval where insurers and cedants are located. In addition, depending on the terms agreed with the E.U. following the conclusion of the transitional arrangement, the U.K.'s regulatory regime in terms of Solvency II regulation and governance could also diverge and no longer be equivalent.

Coronavirus:

We continue to closely monitor developments related to the outbreak of COVID-19, also known as coronavirus, to assess any potential impact on our business. Like many property and casualty (re)insurers, some of our products offer coverage for business interruption, event cancellation and other potential consequential events of the outbreak. Whether the virus could trigger coverage is dependent on policy language, exclusions and conditions. In addition, legislative, regulatory, judicial or social influences may extend coverage beyond our underwriting intent or result in an increase in the frequency or severity of claims. The volatility in the financial markets resulting from the outbreak may also impact our investment portfolio. Our investment portfolio comprises primarily government and other fixed income securities and we are not significantly exposed to equity markets. However, our corporate bond portfolio

could be subject to valuation risk as a result of movements in corporate spreads and default risk in the event of extended disruption to trade. Our strategic asset allocation includes middle market loans, commercial and other mortgage loan arrangements which may be adversely affected by the outbreak and we have therefore decided to defer any investment in these asset classes. We also write credit and political risk insurance and the volatility in the financial markets may also result in an increase in the frequency or severity of claims for this line of business.

In addition, existing and potential future travel bans, preventative or government mandated closures of our offices or the offices of our outsource providers may affect our ability to conduct our business. A prolonged period of commercial disruption, reduced economic activity and other consequences of the outbreak could have a material impact on our results of operations, financial condition or liquidity.

The Board has undertaken an assessment to determine the impact of COVID-19 on the company and its future viability. This assessment has included a review of potential insurance and investment exposures under moderate and severe scenarios and regular monitoring of current and projected solvency levels. This analysis has concluded that although the impact from COVID-19 is likely to be material it does not adversely affect the company's ability to continue as a going concern or reduce its capital and solvency levels to below regulatory requirements. Our priority remains to support our staff and honour our client's needs. The estimated impact on the Company's capital and solvency is expected to be limited to an erosion of the internal target buffer that the Company maintains over and above its Solvency Capital Requirement, for 1 in 20 year events. It is not expected to impact upon the SCR itself. We do not anticipate that the pandemic to have a material effect on our ability to service our customers or assess or settle claims.

Other significant events

- On 28 August 2018, the Aspen Group announced its agreement to sell its business to Apollo Global Management. The merger agreement that was signed imposed operating restrictions on Aspen Insurance Holdings Limited and its subsidiaries until the agreement and sale were finalised on 15 February 2019.
- On 26 October 2018, AIUK applied to the PRA for approval of \$100m of Ancillary Own Funds to improve its capital position. The PRA approved this application on 28 January 2019 and National Australia Bank issued a \$100m Letter of Credit on 11 February 2019 to provide these funds.
- On 2 March 2020, the Aspen Group, with AIUK as a named party, entered into an adverse development reinsurance agreement with Cavello Bay Reinsurance Limited ("Cavello"), a Bermuda insurance company and a wholly-owned subsidiary of Enstar Group Limited ("Enstar"). Under this agreement, the Group will cede to Cavello losses incurred on or prior to 31 December 2019 on a diversified mix of property, liability and specialty lines across the U.S., U.K. and Europe. Enstar's subsidiary will provide \$770 million of cover in excess of \$3.805 billion retention up to an aggregate limit of \$4.575 billion, and an additional \$250 million of cover in excess of \$4.815 billion. The consideration for this agreement is \$0.8 billion plus interest at 3.75% per annum, compounding daily, from the effective date January 1, 2020 to the closing date. The premium payable under this contract will be allocated across the various operating subsidiaries within the Aspen Group based on risk adjusted reserve run off projections. Completion of the transaction is subject to Board approvals and satisfaction of various other closing conditions. The transaction is expected to close in the first half of 2020.
- On 26 March 2020, Standard & Poor's announced that they had downgraded their ratings on AIUK to A-outlook stable from A outlook negative. The Company has taken clear steps to improve performance, strengthen the balance sheet and capital position, and insulate itself from future losses on older accident years through the adverse development reinsurance cover referred to above. S&P have acknowledged these changes and simultaneously upgraded the Aspen Group's financial risk profile from 'satisfactory' to 'strong' and its capital and earnings from 'very strong' to 'excellent'. On 1 May 2020, A.M. Best affirmed the financial strength rating of "A" (Excellent) for AIUK but revised its outlook to negative from stable. The Company does not believe that these rating actions will in any way compromise our ability to service the needs of our customers and trading partners or our obligations to them.

A1.1.4 Material Related Undertakings

AIUK has no related undertakings as defined under Solvency II.

A2 Underwriting performance

A2.1 Underwriting Performance

Overview

The financial results for Aspen Insurance UK Limited (“the Company” or “AIUK”) reflect a profit before tax for the year of \$8.6m (2018: loss of \$39.2m). The Company made an underwriting loss before investment income of \$85.0m (2018: loss of \$89.2m).

A2.1.1 Underwriting performance in aggregate

Year ended 31 December 2019	Direct and proportional business	Non-proportional business	Total
	\$'m	\$'m	\$'m
Gross written premiums	943.2	384.3	1,327.5
Gross earned premiums	987.4	401.9	1,389.3
Net earned premium	430.9	204.8	635.7
Net incurred claims	(328.2)	(102.2)	(430.4)
Expenses	(217.3)	(73.0)	(290.3)
Underwriting loss before investment income	(114.6)	29.6	(85.0)
Net Claims Ratio	76.2%	49.9%	67.7%
Expense Ratio	50.4%	35.7%	46.2%
Combined Ratio	126.6%	85.6%	113.9%

Year ended 31 December 2018	Direct and proportional business	Non-proportional business	Total
	\$'m	\$'m	\$'m
Gross written premiums	980.2	495.0	1,475.2
Gross earned premiums	1,011.2	503.3	1,514.5
Net earned premium	355.7	192.4	548.1
Net incurred claims	(299.9)	(82.3)	(382.2)
Expenses	(167.9)	(87.2)	(255.1)
Underwriting loss before investment income	(112.1)	22.9	(89.2)
Net Claims Ratio	84.3%	42.8%	69.7%
Expense Ratio	47.2%	45.3%	46.6%
Combined Ratio	131.5%	88.1%	116.3%

Gross written premiums were \$1,327.5m, which represented a decrease of \$147.7m compared to the prior year (2018: \$1,475.2m). \$83.3m of the fall related to premiums written in the Company’s Zurich branch, which transferred to Aspen Bermuda, which established its own branch to write property and casualty reinsurance during 2019. The remainder of the reduction was largely due to changes in underwriting appetite and focus based on market conditions and historic performance.

Net earned premiums increased to \$635.7m (2018: \$548.1m) due to the Company restructuring certain reinsurance arrangements from quota share to excess of loss. This primarily affected the casualty, financial & professional lines and property programs in the insurance segment and the property catastrophe, other property, specialty and casualty lines in the reinsurance segment.

Gross incurred claims decreased to \$1,010.5m (2018: \$1,052.6m) due in part to the impact of exposure management decisions in Catastrophe-exposed reinsurance lines. The reinsurance segment loss included Catastrophe losses associated with Typhoons Hagibis and Faxai (\$16.8m and \$9.9m respectively) and a \$13.9m

loss in Credit & Surety from the failure of Thomas Cook. There was additional prior year deterioration on Typhoon Jebi and on the US Casualty, satellite and bloodstock books, which was partially offset by favourable development on International Casualty. The insurance segment loss predominantly reflected adverse prior year development on Marine & Energy Liability and Accident & Health lines. Due to this deterioration, we ceased underwriting these lines of business in February 2020 and March 2020, respectively.

Reinsurance recoveries decreased to \$580.1m (2018: \$670.4m) owing to the changes in reinsurance arrangements discussed above.

Net operating expenses increased to \$290.3m (2018: \$255.1m). The key drivers of the increase are deal related bonuses; severance and other Aspen 2.0 costs; and increased IT operating and depreciation costs.

The prior year underwriting loss before investment income of \$89.2m has improved to a loss of \$85.0m in the current year as a result of the reasons given above.

A2.1.2 Underwriting performance by Solvency II Line of Business

AIUK cedes a fixed quota share portion of its business to a fellow subsidiary, Aspen Bermuda Limited (“ABL”). In addition to reducing net premiums and claims by the amounts ceded this also reduces expenses by the ceding commission earned under the contract, which is a fixed percentage of total premium ceded.

AIUK reviews the results for individual lines of business on a pre-quota share basis, i.e. before the application of the internal quota share. For the purpose of presenting line of business results after the application of the quota share as shown below, the ceding commission is allocated to lines of business pro-rata to the (earned) premium for each line of business regardless of the actual and allocated acquisition and operating expenses for that line. This means that a Solvency II line of business with an expenses ratio lower than the amount of the reinsurance commission ‘override’ will benefit from the quota share with ABL on a net expenses basis and a Solvency II line of business with an expenses ratio higher than the amount of the reinsurance commission ‘override’ will be adversely affected by the quota share with ABL on a net expenses basis. This needs to be considered when reviewing performance.

Solvency II requires business to be categorised into standardised lines of business. In practice, the business is managed and performance is reviewed by management and the Board along the management reporting lines, which differ to the presentation below.

Direct and proportional business	Motor vehicle liability	Marine, aviation and transport	Fire and other damage to property	General liability	Credit and suretyship	Misc Financial Loss	Total
2019	\$'m	\$'m	\$'m	\$'m	\$'m	\$'m	\$'m
Gross written premiums	26.5	71.7	415.3	298.2	131.0	0.5	943.2
Gross earned premiums	26.2	75.4	417.5	339.0	128.0	1.3	987.4
Net earned premium	10.9	32.4	227.6	110.7	48.7	0.6	430.9
Net incurred claims	(10.7)	(41.3)	(172.8)	(83.5)	(20.2)	0.3	(328.2)
Expenses	(2.6)	(14.3)	(111.2)	(57.9)	(29.3)	(2.0)	(217.3)
Underwriting profit/(loss) before investment income	(2.4)	(23.2)	(56.4)	(30.7)	(0.8)	(1.1)	(114.6)
Net Claims Ratio	97.9%	127.4%	75.9%	75.4%	41.6%		76.2%
Expense Ratio	23.6%	44.1%	48.9%	52.3%	60.2%		50.4%
Combined Ratio	121.5%	171.5%	124.8%	127.7%	101.8%		126.6%

Non-proportional business	Health	Casualty	Marine, aviation and transport	Property	Total
2019	\$'m	\$'m	\$'m	\$'m	\$'m
Gross written premiums	31.5	129.1	83.0	140.7	384.3
Gross earned premiums	33.3	145.0	83.6	140.0	401.9
Net earned premium	15.0	85.5	26.7	77.6	204.8
Net incurred claims	(10.1)	(59.5)	(22.1)	(10.5)	(102.2)
Expenses	(3.3)	(27.0)	(5.3)	(37.4)	(73.0)
Underwriting profit/(loss) before investment income	1.6	(1.0)	(0.7)	29.7	29.6
Net Claims Ratio	67.3%	69.6%	82.9%	13.5%	49.9%
Expense Ratio	22.1%	31.6%	20.0%	48.2%	35.7%
Combined Ratio	89.4%	101.2%	102.9%	61.7%	85.6%

The underwriting result by Solvency II line of business for the previous year is shown below:

Direct and proportional business	Motor vehicle liability	Marine, aviation and transport	Fire and other damage to property	General liability	Credit and suretyship	Misc Financial Loss	Total
2018	\$'m	\$'m	\$'m	\$'m	\$'m	\$'m	\$'m
Gross written premiums	20.4	93.3	410.8	329.9	126.2	(0.4)	980.2
Gross earned premiums	20.7	86.5	412.2	328.8	162.3	0.7	1,011.2
Net earned premium	9.0	33.7	159.3	91.7	61.7	0.3	355.7
Net incurred claims	(4.7)	(23.8)	(183.3)	(57.4)	(30.8)	0.1	(299.9)
Expenses	(3.8)	(15.1)	(71.9)	(49.0)	(28.0)	(0.1)	(167.9)
Underwriting profit/(loss) before investment income	0.5	(5.2)	(95.9)	(14.7)	2.9	0.3	(112.1)
Net Claims Ratio	52.8%	70.5%	115.0%	62.6%	49.9%		84.3%
Expense Ratio	42.8%	44.9%	45.1%	53.4%	45.4%		47.2%
Combined Ratio	95.6%	115.4%	160.1%	116.0%	95.3%		131.5%

Non-proportional business	Health	Casualty	Marine, aviation and transport	Property	Total
2018	\$'m	\$'m	\$'m	\$'m	\$'m
Gross written premiums	39.9	183.5	91.0	180.6	495.0
Gross earned premiums	41.9	185.0	92.3	184.1	503.3
Net earned premium	18.6	79.7	35.3	58.8	192.4
Net incurred claims	6.3	(23.4)	(5.9)	(59.3)	(82.3)
Expenses	(7.9)	(34.2)	(16.0)	(29.1)	(87.2)
Underwriting profit/(loss) before investment income	17.0	22.1	13.4	(29.6)	22.9
Net Claims Ratio	-33.8%	29.4%	16.8%	100.9%	42.8%
Expense Ratio	42.3%	42.9%	45.3%	49.6%	45.3%
Combined Ratio	8.5%	72.3%	62.1%	150.5%	88.1%

A narrative explanation of the result by Solvency II line of business is shown below:

Motor vehicle liability

Motor vehicle liability net earned premium was \$10.9m in 2019 compared to \$9.0m in 2018. The underwriting result was a loss of \$2.4m in 2019 compared to a profit of \$0.5m in 2018, driven by higher attritional claims.

Marine, aviation & transport

Marine, aviation and transport net earned premium was \$32.4m in 2019 compared to \$33.7m in 2018.

The underwriting loss for 2019 saw an increase to \$23.2m compared to a loss of \$5.2m in 2018. The 2019 result was impacted by strengthening of prior year reserves following higher than expected claims development and actuarial assumption changes.

Fire & other damage to property

Fire and other damage to property net earned premium was \$227.6m in 2019 compared to \$159.3m in 2018. The increase in net earned premiums was driven by ceded earned premiums, which decreased in line with the overall AIUK strategy to reduce its outwards cessions.

The underwriting loss of \$56.4m in 2019 is lower than the loss of \$95.9m in 2018. The improvement is due to 2018 being impacted by a number of large and mid-sized fire losses, which did not reoccur to the same extent in the current year. The 2019 losses relates mainly to reserve strengthening on prior accident years.

General liability

General liability net earned premium was \$110.7m in 2019 compared to \$91.7m in 2018. The increase in net earned premiums was driven by a decrease in ceded earned premiums.

The underwriting loss of \$30.7m compares to a loss of \$14.7m in 2018. The current year result is impacted by reserve strengthening in US Casualty lines due to adverse loss experience and actuarial assumption changes.

Credit & suretyship

Credit & suretyship net earned premium was \$48.7m compared to \$61.7m in 2018 due to a transfer of business to Aspen Bermuda Ltd. (ABL). There was a small underwriting loss of (\$0.8m) compared to a profit of \$2.9m in the prior year. The underwriting loss in 2019 was due to losses associated with the failure of Thomas Cook partially offset by prior year reserve releases.

Non-proportional health

Non-proportional health net earned premium of \$15.0m in 2019 compared to \$18.6m in 2018. The underwriting profit of \$1.6m in 2019 fell compared to \$17.0m in 2018. The 2018 result was materially impacted by favourable development on prior year losses.

Non-proportional casualty

Non-proportional casualty net earned premium was \$85.5m in 2019 compared to \$79.7m in 2018. The increase was driven by a reduction in ceded premiums, in line with the overall AIUK strategy to reduce its outwards cessions.

Non-proportional casualty recorded an underwriting loss of \$1.0m in 2019, compared to a \$22.1m profit in 2018. The negative movement is driven by reserve strengthening in US Casualty lines due to adverse loss experience and actuarial assumption changes.

Non-proportional marine, aviation and transport

Non-proportional marine, aviation and transport net earned premium was \$26.7m in 2019 compared to \$35.3m in 2018. The decrease was driven by lower gross written premiums following the decision to exit certain lines in 2018.

The underwriting loss of \$0.7m compares to a profit of \$13.4m in 2018, driven by the reductions in business written and higher net incurred claims.

Non-proportional property

Non-proportional property net earned premium was \$77.6m in 2019 compared to \$58.8m in 2018. This was primarily driven by reductions in ceded premiums, in line with the overall AIUK strategy to reduce its outwards cessions.

The non-proportional property underwriting profit of \$29.7m in 2019 compared to a loss of \$29.6m in 2018. There were material Catastrophe losses in the prior year.

A2.1.3 Underwriting performance by material geographical locations

The UK GAAP underwriting performance split by geographical locations (on the basis of the country where AIUK had operations writing the business) is as follows:

Year ended 31 December 2019

	Gross written premiums	Gross earned premiums	Net earned premium	Net incurred claims	Expenses	Underwriting result
	\$'m	\$'m	\$'m	\$'m	\$'m	\$'m
United Kingdom	662.1	705.3	239.0	(192.0)	(117.9)	(70.9)
USA	395.0	377.8	300.3	(179.3)	(131.1)	(10.1)
Switzerland	94.7	109.8	39.3	(26.8)	(22.6)	(10.1)
Republic of Ireland	16.7	32.4	6.3	(8.2)	0.0	(1.9)
Canada	24.6	25.3	5.1	1.2	(0.2)	6.1
Australia	51.9	49.9	16.4	(4.1)	(4.1)	8.2
Singapore	43.0	45.5	13.8	(7.8)	(7.6)	(1.6)
United Arab Emirates	39.4	43.2	15.4	(13.2)	(6.8)	(4.6)
France	0.0	0.0	0.0	(0.1)	0.0	(0.1)
Germany	0.1	0.1	0.1	(0.1)	0.0	0.0
	1,327.5	1,389.3	635.7	(430.4)	(290.3)	(85.0)

Year ended 31 December 2018

	Gross written premiums	Gross earned premiums	Net earned premium	Net incurred claims	Expenses	Underwriting result
	\$'m	\$'m	\$'m	\$'m	\$'m	\$'m
United Kingdom	747.0	736.2	147.7	(84.9)	(65.2)	(2.4)
USA	356.7	399.6	305.9	(218.8)	(131.9)	(44.8)
Switzerland	178.0	177.5	52.1	(40.0)	(35.5)	(23.4)
Republic of Ireland	36.0	42.9	2.7	(10.2)	(3.5)	(11.0)
Canada	25.3	21.2	2.0	(4.1)	(1.9)	(4.0)
Australia	42.5	42.6	7.6	(9.2)	(1.8)	(3.4)
Singapore	48.7	51.4	14.8	(8.8)	(7.0)	(1.0)
United Arab Emirates	38.7	40.0	14.3	(8.6)	(5.5)	0.2
France	1.2	1.6	0.5	0.1	(2.0)	(1.4)
Germany	1.1	1.5	0.5	2.3	(0.8)	2.0
	1,475.2	1,514.5	548.1	(382.2)	(255.1)	(89.2)

The material variances are explained in more detail below:

United Kingdom

The current year underwriting loss in the United Kingdom of (\$70.9m) was significantly higher than in 2018 (\$2.4m). This was driven by the losses in the Company's reinsurance segment, described on page 21 and higher operating expenses. The key drivers of the increase in expenses are deal related bonuses; severance and other Aspen 2.0 costs and increased IT operating and depreciation costs.

United States

The prior year underwriting loss of (\$44.8m) in the United States was driven by material Catastrophe events, as referenced in section A 2.1.1. There were significantly fewer such events in 2019, which led to the overall loss decreasing to (\$10.1m).

Switzerland

The 2019 underwriting loss of (\$10.1m) for Switzerland compares to (\$23.4m) in 2018. Although there was a material individual claim of \$27.0m in the Zurich branch from the failure of Thomas Cook, the effect of this on reported profit was somewhat mitigated by prior year reserve releases. In 2019 a significant proportion of business that was previously written through AIUK's Zurich branch began to be written through Aspen Bermuda Ltd. (ABL). The business which was transferred in 2019 was primarily European business, with cedants preferring Aspen to use ABL's balance sheet rather than AIUK due to uncertainties around Brexit. The vast majority of this business will be written through a new Zurich branch of ABL in 2020.

Republic of Ireland

The 2019 underwriting loss of (\$1.9m) for the Republic of Ireland compares to (\$11.0m) for 2018. A strategic decision was made to stop writing new business through AIUK's Dublin Branch, which was closed midway through 2019. During 2019 a significant portion of the business previously written through AIUK's Dublin branch was written through AIUK London. No business is planned to be written in the Republic of Ireland in 2020.

A3 Investment performance

The Company's investment return for 2019 was \$115.4m, which compared to a loss of \$1.9m in 2018. The main reason for the significant variance in the overall return was unrealised gains in the value of financial instruments (principally government and corporate bonds) of \$63.0m, compared to an unrealised loss in 2018 of \$32.5m. The gains were driven by movements in US interest rates.

The components of investment income by asset category are presented below.

Year ended 31 December 2019						
\$'m	Government bonds	Corporate bonds	Equities	Derivatives	Other Investments	Total
Investment income	21.3	23.6	-	-	15.1	60.0
Realised gains or (losses) on investments	5.0	4.0	-	(11.7)	0.0	(2.7)
Unrealised gains or (losses) on investments	17.8	30.9	-	7.1	7.2	63.0
Investment expenses and charges	(1.7)	(1.9)	-	-	(1.3)	(4.9)
TOTAL	42.4	56.6	-	(4.6)	21.0	115.4

Year ended 31 December 2018						
\$'m	Government bonds	Corporate bonds	Equities	Derivatives	Other Investments	Total
Investment income	22.8	24.3	0.2	-	14.8	62.1
Realised gains or (losses) on investments	(0.2)	(2.6)	1.6	(26.3)	(0.8)	(28.3)
Unrealised gains or (losses) on investments	(5.0)	(16.9)	-	(7.3)	(3.3)	(32.5)
Investment expenses and charges	(1.2)	(1.3)	-	-	(0.7)	(3.2)
TOTAL	16.4	3.5	1.8	(33.6)	10.0	(1.9)

Other investments include collateralised securities, investment funds, loans, deposits, cash and cash equivalents.

There were no gains or losses recognised directly in equity for UK GAAP reporting purposes. Financial instruments are either held at fair value through profit or loss or amortised cost, with changes reflected directly in the income statement.

A3.1 Information about investments in securitisations

A securitisation is a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranching, having both of the following characteristics:

- a) payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures; and
- b) The subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme.

AIUK invests in mortgage-backed securities that meet the definition of securitisations. The valuation of these items is explained in section D.

A split of securitisations by category is shown in the table below:

Market Value	TOTAL
31 December 2019	\$'m
Collateralised Mortgage Obligations	6.5
Mortgage-backed Securities	281.4
TOTAL	287.9

Mortgage-backed securities are securities that represent ownership in a pool of mortgages. Both principal and income are backed by the group of mortgages in the pool. They include bonds issued by U.S. government-sponsored enterprises such as Federal National Mortgage Association, Federal Home Loan Mortgage Corporation and Government National Mortgage Association. AIUK's mortgage-backed portfolio is supported by loans diversified across a number of geographical and economic sectors.

A4 Performance of other activities

All income and expenses arise from the conclusion of contracts of insurance and associated investment and foreign exchange gains or losses. AIUK had no other material sources of income and expenses during the reporting period.

A5 Any other information

AIUK has nothing to report under other information.

B System of Governance

B1 General information on the system of governance

B1.1 Aspen Insurance UK Limited

AIUK is governed by the AIUK Board, and two principal committees of the Board: the Audit Committee and the Risk Committee. The Board may establish additional committees ad hoc for administrative purposes and for the consideration of matters properly delegated to the Non-executive Directors (“NEDs”). These include the Remuneration Standing Committee and the Special Referral Committee.

The Board holds a minimum of four meetings per year. A ‘Matters reserved to the Board’ document is approved and maintained by the Board. It prescribes those aspects of AIUK’s operations which must be referred to and approved by the Board in order to satisfy the requirements for sound and prudent management of AIUK’s business. These include business planning (both underwriting and investments); the setting of reserves and approval of accounts and regulatory returns; approval of AIUK’s ORSA report; the paying of dividends; and the approval of material transactions.

AIUK’s Chief Executive Officer (“CEO”) chairs an Executive Committee to support the CEO in dealing with the day to day executive management of AIUK. The Executive Committee comprises the Executive Directors and other senior managers.

The AIUK Audit, Risk and Executive Committee each maintain Terms of Reference setting out their function, membership and operating procedures. There are also Terms of Reference for the Remuneration Standing Committee and the Special Referral Committee, contained in the ‘Matters reserved to the Board’ document.

B1.2 Main roles and responsibilities of the Audit Committee

The Audit Committee of AIUK is responsible for assisting the Board in its oversight of:

- the statutory audit process and annual financial statements;
- the performance of AIUK’s compliance function;
- the reserving process for risks underwritten by or on behalf of AIUK;
- the performance of AIUK’s internal audit function;
- AIUK’s financial returns and reports to the PRA and FCA and any other relevant regulator; and
- resolving any conflicts of interest which the Chairman of the Board is unable to resolve.

In fulfilling its purpose, the Audit Committee maintains free and open communication with AIUK’s independent auditor, internal auditors and management.

B1.3 Main roles and responsibilities of the Risk Committee

The purpose of the Risk Committee is to assist the Board in its oversight duties in respect of the identification and control by management of material risks to the objectives of AIUK.

B1.4 Main roles and responsibilities of the Remuneration Standing Committee

The purpose of this Committee is to assist the Board in discharging its obligations (in accordance with Article 275 of the Commission Delegated Regulation (EU) 2015/35) (“Article 275”) to oversee the probity of the compensation arrangements relating to “Covered Individuals” i.e. those employees in a position to exercise significant influence over AIUK. This include arrangements applicable on termination of employment.

B1.5 Main roles and responsibilities of the Special Referral Committee

The purpose of this Committee is to consider business opportunities that arise and may need to be dealt with quickly. It can increase gross (re)insurance limits stated in the business plan to a level not exceeding 125% of those originally delegated to management. It can also extend the policy term, without limit (that is to say that it has the full power of the Board in this regard) beyond the 24 month extension to the maximum terms defined for each line of business which is already in the gift of the co-Chief Underwriting Officers.

B1.6 Material changes to systems of governance in the period

There were no material changes to systems of governance in the period during 2019.

Changes in directors during 2019 and up to the date of this report are as follows:

	<u>Date of appointment</u>	<u>Date of resignation</u>
Hannah Purves	22 October 2019	
Grahame Dawe	04 December 2019	
Natalie Waller	30 January 2020	
Theresa Froehlich	25 February 2020	
Jonathan Price		28 February 2019
Emil Issavi		30 May 2019
Dr. Karl Mayr		30 June 2019
Julian Cusack		11 September 2019

B1.7 Key Functions

AIUK's system of governance includes the following key functions that are important to its sound and prudent management:

- Risk Management;
- Compliance;
- Internal Audit;
- Actuarial;
- Underwriting;
- Operations;
- Claims;
- IT;
- Finance and Investments; and
- Outwards Reinsurance.

B1.7.1 Authority and Independence of the Key Functions

AIUK has an Internal Control and Risk Management Framework in place to ensure that:

- there is clear management responsibility for key functions;
- the Board has appropriate line-of-sight over AIUK's operations; and
- Material matters are brought to the Board's attention.

The CEO has apportioned responsibility for key tasks to suitably qualified and experienced staff. The appointed individuals are accountable to the CEO for their respective functions and report to the Board on their performance and service.

B1.8 Information on Remuneration policies and practices

B1.8.1 Policy

The Group's overall approach to compensation is set out in the Group Compensation Policy. A Solvency II Appendix to this policy has been developed to address the additional remuneration and governance requirements that have been put in place to meet the requirements of Article 275.

The Group Compensation Policy and the Solvency II Appendix state that AIUK's remuneration arrangements should not promote inappropriate risk taking and link compensation to achievement of financial and strategic goals. The Group Chief Risk Officer reports annually to the Group Compensation Committee that the compensation framework in place does not encourage overt risk taking.

The Group Compensation policy states that the elements of total compensation; base salary and variable remuneration (annual bonus and long-term incentive awards), should be balanced such that each executive has the appropriate amount of pay that is contingent on longer-term performance.

For Covered Individuals, a minimum of 40% of variable remuneration must (i) be deferred for a minimum period of three years and (ii) vest no faster than pro rata from year one. A review is undertaken to ensure that the proportion of compensation delivered in the form of performance related long-term incentive awards vesting over not less than three years represents at least 40% of total variable remuneration.

B1.8.2 Cash remuneration

Annual cash bonuses are intended to reward executives and employees for Aspen's consolidated annual performance and for individual and team achievements contributing to the success of the business over the previous financial year.

The Group Compensation Committee approves the bonus pool formula, following recommendations from management. Executives and employees are allocated bonuses based on the performance of the Aspen Group, the performance of their teams and their individual contribution to the business. Bonus determinations take into account compliance with AIUK's governance and risk control requirements to ensure non- excessive risk-taking.

For risk-taking functions, factors considered in the allocation of bonuses include internal audit reviews, underwriting reviews and any reports of non-compliance with Aspen's Risk Controls.

B1.8.3 Long-Term Incentive Schemes

Aspen may operate a Long-Term Incentive Plan ('LTIP') for its senior executives and other nominated employees across the Group in order to reinforce the alignment of the participants in achieving the common objectives and the creation of value over the long term. The LTIP also acts as a retention tool. With all awards, continued participation in the program is dependent upon on individual performance. There were no share-based compensation plans in place as at 31 December 2019.

B1.8.4 Governance

Central to the governance of compensation is Aspen's Group Compensation Committee, a committee of the AIHL Board. The Group Compensation Committee oversees compensation and benefits policies and programs, including administration of the annual bonus awards and long-term incentive plans ("LTIPs"). It also determines compensation of the Group CEO, Named Executive Officers ("NEOs") and other relevant members of senior management.

Details of the role and responsibilities of the Group Compensation Committee are set out in its Charter, which is reviewed by the Group Compensation Committee and approved by the AIHL Board.

In accordance with para 1(d), (e) and (f) of Article 275 , the Board is responsible for overseeing the local implementation of the Group Compensation Policy, establishment and oversight of the Solvency II requirements and ensuring compliance with any local regulatory requirements.

In order for the Board to provide oversight:

- the Board approves the Solvency II Appendix of the Group Compensation Policy as applicable to AIUK which gives assurance that the Policy and Appendix satisfy local regulatory requirements including Solvency II;

- the Remuneration Standing Committee has been established with the authority to approve proposed compensation arrangements, including if necessary those arising in conjunction with new business opportunities and those applicable on the termination of employment for Covered Individuals; and
- AIUK NEDs receive an annual report on the application of the Group Compensation Policy and specifically its application to Covered Individuals. The report will be provided prior to awarding annual bonuses and LTIP awards. The report allows AIUK NEDs to confirm or otherwise, prior to awards of variable remuneration, that they remain satisfied that the remuneration of Covered Individuals meets local regulatory requirements, including Solvency II. It is not necessary for AIUK NEDs to approve specific remuneration packages for Covered Individuals. Awards proposed for Covered Individuals outside of the Group Compensation Policy require pre-approval by the AIUK Board NEDs so as to ensure that any such proposed package is consistent with the Board's aim not to promote adverse risk-taking in AIUK.

B1.8.5 Share-based payments

In prior years AIHL, the Company's former ultimate parent, issued options, performance shares, phantom shares and restricted share units under the 2003 and 2013 Share Incentive Plans. In addition, AIHL approved the 2008 Sharesave Scheme as part of AIHL's Employee Share Purchase Plan. All of the equity-based award plans were terminated following the accelerated vesting and cancellation of restricted share units, performance shares and phantom shares immediately prior to the consummation of the Group merger. There are currently no equity compensation plans under which equity securities of the Group are authorised for issuance.

B1.9 Supplementary pension and early retirement schemes for members of the Board

Aspen offers all staff the choice of making contributions into a defined contribution pension plan. There are no defined benefit pension liabilities.

B1.10 Information about material transactions during the reporting period with shareholders and with members of the AMS (Administrative, Management or Supervisory body)

As a result of the Group merger in 2019, the existing share based long term incentive schemes vested in full. In 2019, the Group implemented a new long-term incentive scheme, under which annual awards are split equally between Performance Units and Exit Units. Performance Units vest after two years subject to the Group achieving predetermined growth in book value per share targets. Exit Units vest upon change of control (Sale or IPO) and achieving predetermined multiples of invested capital return targets. Both Performance Units and Exit Units are cash-based awards.

B2 Fit and proper requirements

B2.1 Fit and Proper Guidelines

There are two aspects to fitness and propriety:

- corporate – ensuring that AIUK operates to appropriate standards of corporate governance; and
- individual – ensuring that those individuals responsible for Senior Manager Functions, Key Functions and those in Certified Positions have the necessary qualities to perform their duties to an appropriate standard and carry out the responsibilities of the position which they hold. These qualities relate to the integrity demonstrated in personal behaviour and business conduct, soundness of judgement and a degree of knowledge, experience and professional qualifications commensurate with their role.

Corporate

AIUK ensures that the collective knowledge, competence and experience of its management bodies includes competency in the following areas:

- market knowledge;
- business strategy and business model;
- system of governance (including risk management);
- financial and actuarial analysis (including capital modelling); and
- Regulatory framework and requirements.

In addition, AIUK will regularly assess whether the board composition has sufficient diversity of qualifications, knowledge and relevant experience to ensure thorough review and robust challenge.

Individual

AIUK ensures that background checks are conducted on all staff at the point of recruitment and will utilise third party suppliers to perform such checks as appropriate. Additional checks will be conducted throughout an individual's employment where deemed necessary, such as on appointment to a Senior Manager role. As a minimum, a background check will address the following areas:

- criminal records check;
- credit check;
- confirmation of qualifications;
- confirmation of employment history; and
- Regulatory References

AIUK considers whether any additional matters should also be addressed when recruiting individuals to perform any key business activities, including the following:

- more extensive criminal record checks;
- checks on current and past directorships; and
- compliance and sanctions checks

B2.1.1 Ongoing assessment of fitness and propriety

AIUK uses an annual appraisal process to provide confirmation that the fitness and propriety standards established for a role remain appropriate and that the person undertaking that role remains suitably qualified through a review of required knowledge, competence, qualifications and where necessary development requirements.

In addition the Board performs Board and Committee effectiveness reviews annually and Compliance has an annual fitness and propriety attestation process for all senior insurance managers, key function holders and certified persons.

B3 Risk management system including own risk and solvency assessment

B3.1 Description of the risk management system

The risk management strategy for AIUK is set out in the Group Internal Control and Risk Management Framework and AIUK Internal Control and Risk Management Framework context document (which explain the application of the Framework to AIUK, together these constitute the "Framework" document). Note in late 2019 the AIUK Board commissioned a third party consultancy firm to undertake a review of its Risk Management Framework and Risk Function. The findings of that review have been presented to the AIUK Board and a Project is underway to address the actions during 2020. This will result in changes to AIUK's risk management framework and function. The key focus areas from the review's findings and the actions to address them are summarised below:

- **Three lines of defence:** Enhance and clarify accountabilities, strengthen independence of the 2nd Line of Defence.
- **Risk operating model:** Codify risk function mandate, update risk strategy and appetite, enhance UK entities risk function capacity and capability to reduce key person dependency
- **Risk management framework:** Clarify approval and review processes, enhance risk MI, additional focus on operational risks
- **Risk culture:** Build on the positive tone from the top with more structured use of desired management behaviours built into objective setting and performance management supported by surveys, feedback and training

The current Internal Control and Risk Management Framework is defined by the Framework document and three tiers of key documentation. The purpose of the documents is as follows:

- **Tier 1** – the Framework document is supported by three documents dealing with risk identification and categorisation (the "Risk Universe"), Risk Appetite and Risk Limits and provides a high level overview of the internal control and risk management systems. Ownership of the Tier 1 Documents lies with the Group Chief Risk Officer ("Group CRO") and for AIUK the UK Chief Risk Officer (the "UK CRO").

- **Tier 2** – a series of nine documents intended to serve as user guides for employees and directors (the “Tier 2 documents” or “User Guides”). These provide more detailed information on Aspen’s policies in relation to a particular area of activity including an overview of related policies.

Ownership of Tier 2 documents, as at 31 December 31, 2019 is allocated as shown in the following table. Ownership of these policies going forward is being reevaluated as part of the review of Aspen’s Risk Management Framework and three lines of defence operating model:

User Guide	Group Ownership	AIUK Ownership
Insurance Risk	Deputy Group CRO	AIUK CRO
Other Risk Management	Deputy Group CRO	
Internal Model	Head of Risk Capital	
Compliance	Group Compliance Director	AIUK Compliance Director
The Governance Framework		
Human Resources	Chief People Officer	Chief People Officer
Investment and Treasury Risks	Deputy Group CRO	AIUK CRO and AIUK CFO
Finance	Group CFO	AIUK CFO
Data Quality Management	Group Chief Operations Officer	AIUK Chief Operations Officer

- **Tier 3** – the individual policy and procedure documents (the “Tier 3 documents”), which follow on from the User Guides and provide the details of the day-to-day operations and controls.

For AIUK the owners ensure the applicability and appropriateness of these documents for AIUK. All Tier 1 documents and Tier 2 user guides and any major changes to them are subject to approval by the AIUK Board, AIUK Risk Committee or AIUK Audit Committee. Minor changes are subject to approval by the Group and AIUK owners. Tier 3 documents are the specific policies that are summarised in the user guides. The user guides define ownership and approval responsibilities for the underlying Tier 3 policies. Therefore the AIUK Board, AIUK Risk Committee or AIUK Audit Committee approves the responsibilities for approval of these underlying Tier 3 policies.

All three levels of risk and internal control policies are available to all staff through Aspen’s intranet. Details of specific risk management processes and their day to day operation are included in Tier 2 and 3 documents:

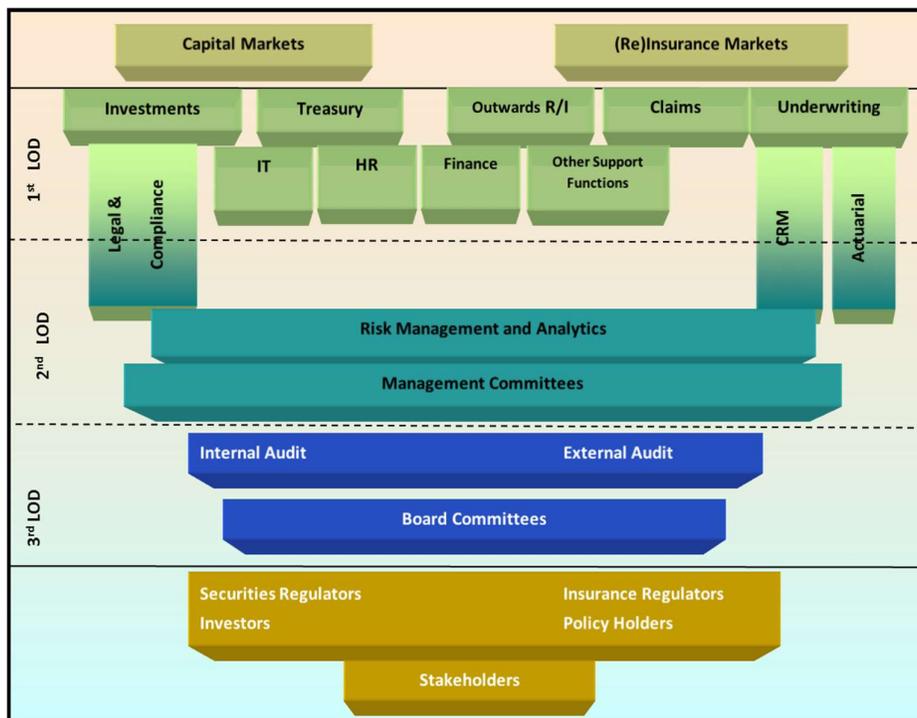
- **Identify** – Aspen records all the risks to which it is exposed in the Risk Universe, with additional detail relating to operational risk recorded in the Operational Risk Register. Maintenance of the Risk Universe and the Operational Risk Register is the responsibility of the Risk Management Department.

Emerging risks are assessed and added to the Risk Universe and Operational Risk Register, if appropriate.

- **Measure** – Aspen has developed and implemented a series of risk management tools, such as the Internal Model and the Stress and Scenario Testing programme to aid its quantification of risk. The Tier 1 Risk Limits document outlines the key risk limits at a Group and AIUK level. Risk that is not quantifiable in this way, such as operational risk, are measured by a process of enquiry, supported by empirical evidence where possible and assigned estimates of probability and severity based on judgement.
- **Monitor** – Aspen uses a wide range of processes and measurement systems to monitor material risks. These are overseen in the first instance, by the relevant risk owners in the 1st line of defence and additionally by subject-matter experts within the Risk Management Department.
- **Manage** – A variety of approaches are used to manage and optimise core risks. These include limits on the acceptance of risk by AIUK’s underwriting teams and the investment and treasury function and risk mitigation by ceded reinsurance and hedging strategies. Operational risks are managed by segregation of duties, systems of internal control and contingency plans as appropriate. The management of risk is a key objective of the Three Lines of Defence model.
- **Report** – An overall report assessing compliance with the AIUK Risk Appetite and Key Risk Limits is prepared quarterly by the AIUK CRO and presented to the AIUK Risk Committee. An equivalent report is produced by the Group CRO for the Group Risk Committee. These reports also present analysis of other

risk and capital-related matters. Many other reports containing risk information are prepared and presented to various other governance and decision making bodies including the AIUK Risk Committee as described in the Tier 2 User Guides and Tier 3 policy documents.

The Internal Control and Risk Management Framework document itself defines and explains the Three Lines of Defence model operated by Aspen as illustrated by the following diagram:



Reporting of risks is divided between the Three Lines of Defence.

B3.1.1 Risk Management Function

Throughout 2019 the Aspen Group Risk Management department comprised a team of Risk Subject matter experts operating on a shared service basis to support the Aspen Group and its legal entities. An AIUK chief Risk Officer agreed the work required of this department Group Risk Management department to implement the Risk Management system for AIUK and to provide second line of defence assurance over the identification, monitoring, management and reporting of those risks to the AIUK Risk Committee and Board.

B3.2 Implementation of the risk management system

B3.2.1 Risk Appetite and Risk Limits

The Risk Appetite Statement is approved by the AIUK Board. It articulates the Risk Appetite in terms of the following components:

Risk Preferences	A high level description of the types of risks Aspen prefer to assume and avoid within the context of its objectives
Capital Constraint	A minimum level of risk adjusted capital
Volatility	An assessment of the volatility of the business plan in comparison to the plan for the preceding year

B3.2.2 Risk preferences

The primary objective of AIUK is to provide an efficient platform for the Group to offer specialty insurance and reinsurance products to policyholders who seek capacity in the London market and to commercial policyholders in the UK domestic market. In addition, AIUK uses its capital base to offer capacity via branches and binding authorities in other markets, including the USA, Australia, Canada, Latin America and Singapore.

AIUK expects to comply with the requirements of all the regulators in the jurisdictions in which it operates.

In order to meet the expectations of its equity stakeholder, AIUK aims to maintain a level of profitability consistent with the Group return targets set out in the Group Risk Appetite statement, taking into account the contributions of other subsidiaries.

AIUK also aims to generate sufficient distributable income to allow it to contribute its share of funding for the debt and dividend obligations of the Group.

The AIUK risk appetite and risk management process is aimed at ensuring that these objectives are met.

As part of providing an efficient platform AIUK may use intra group reinsurance to help balance and diversify its retained risk such that it makes efficient use of its capital base.

Within the AIUK Risk Preferences Aspen distinguishes between core risks and non-core risks. Core risks are risks that it is prepared to assume because they are part of AIUK's value creation strategy. Non-core risks are risks that are not part of AIUK's value creation strategy and which the AIUK seeks to avoid or minimise.

B3.2.3 Capital constraint

AIUK's risk appetite statement capital constraint is that AIUK will seek at all times to maintain a level of qualifying capital that:

1. meets the Internal Model SCR regulatory requirement based on the latest version of the Internal Model approved by the PRA;
2. limits the probability of capital falling below the Internal Model SCR regulatory requirement to less than 1 in 20 years or 5% over a 1 year horizon based on the latest version of the Internal Model incorporating:
 - "Major" changes that have been reviewed and approved by the AIUK Board (even if not yet approved by the PRA) and
 - Subsequent "Minor" changes that have been approved in line with AIUK's model change policy and communicated to the AIUK Risk Committee for challenge on behalf of the Board; and
3. Is at least equal to the level required to meet all rating agency capital requirements.

Note the Board will also consider the impact of any commercial constraints of the capital position.

For the internal capital measure the available capital is Solvency II Own funds. For both the rating agency and the commercial measure the available capital is calculated using the US GAAP balance sheet for AIUK.

B3.2.4 Volatility Measure

The capital constraint above already includes a limit on the probability of falling below the Internal Model SCR which is the regulatory capital requirement.

The volatility measure assesses the relative comparison of the volatility of the proposed plan with the previous year's plan on a number of bases:

- The aggregate modelled SCR distribution at 1 in 5, 1 in 10 and 1 in 20 return periods
- The probability in percentage terms of an adverse movement in the mean profit of >\$10m, >\$50m, >\$100m and >\$200m
- The aggregate Catastrophe Loss distribution at 1 in 5, 1 in 10 and 1 in 20 return periods

The aim of reviewing volatility is to reduce the chance of unplanned recapitalisations of AIUK. At a broader level, AIUK volatility must be consistent with the volatility constraints for the Group. The Group reviews the standard deviation and downside standard deviation of its operating return on equity from the Internal Model.

Total comprehensive income for Group reporting purposes includes unrealised investment losses, but is stated before deduction of any dividends. Therefore, the Group volatility constraint limits the number of occasions on which the Group could be called on to recapitalise in excess of any amounts paid in dividends during the year.

B3.2.5 Key Risk Limits

Key Risk Limits are reviewed each year to take account of changes to the business plan so that the limits reflect the prospective analysis of risk exposures completed through the planning process and taking into account other factors such as changes in the external environment.

There have been two changes to the Key Risk Limits since the last SFCR:

1. The annual update of AIUK's liquidity risk limit was agreed at the April 2019 AIUK Board on the recommendation of AIUK's Risk committee. This updated the limit to reflect the latest assessment of the highest cashflow and collateralisation requirements over a 12 month time horizon arising from AIUK's annual Stress and Scenario Testing exercise reflecting changes to the basis of measurement:
 - a. As well as allowing for collateralised reinsurance, allowing for receipt of recoveries from third party reinsurers with a rating of A+ or higher with a 1 quarter lag
 - b. For those Trust funds required for collateral with a demonstrated track record of surplus releases, assume that assets are released promptly once gross claims are paid, as above assuming that these cashflows are 1 quarter in arrears of gross payments.

Note a further update to the limit with no change in the basis of measurement was agreed by the March 2020 AIUK Board on the recommendation of its Risk Committee to reflect the 2020 AIUK Stress and Scenario Testing results.

2. A series of changes to AIUK's Market risk limits were agreed to reflect AIUK Board approval to invest US\$150m in new private asset classes (Short Term Secured loans, Commercial Mortgage Loans and Middle Market Loans) as part of the Aspen Group's Strategic Asset Allocation (SAA). Note AIUK has not yet invested in the SAA assets and any decision to invest is on hold as a result of the COVID19 events.

B3.2.6 Risk Universe

The Risk Universe divides risks into 'Core' and 'Non-Core' risks.

- Core risks comprise those risks inherent in the running of Aspen's business:
 - Insurance risk – for both underwriting and reserving;
 - Market risk – in relation to the investment portfolio.

These risks are quantified, accepted, monitored, and managed in accordance with Aspen's risk management processes as set out in the Insurance and Investment and Treasury User Guides.

Non-core risks:

- Credit risk (where not insurance-related or market-related);
- Emerging risk;
- Liquidity risk;
- Operational risk (people, process, data, system failures and other external events);
- Group Risk (i.e. Contagion Risk);
- Regulatory risk;
- Strategic risk; and
- Taxation Risk.

These are quantified as far as possible and, wherever practical, minimised or avoided.

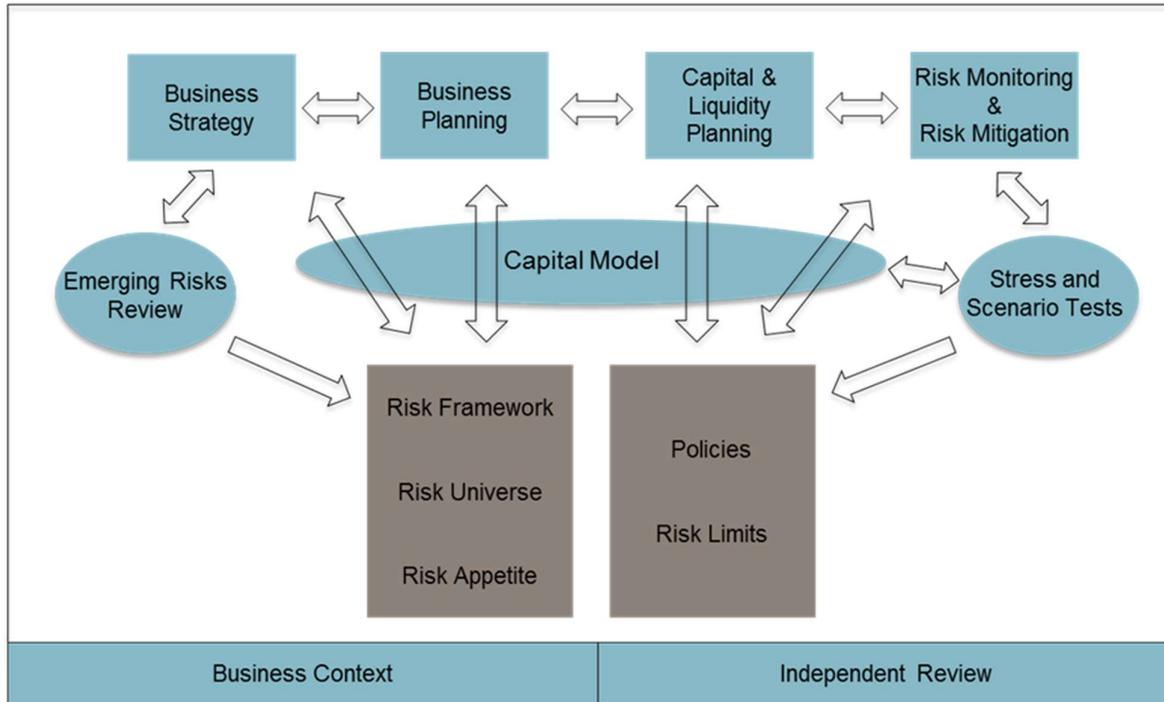
B3.2.7 Risk Appetite and Key Risk Limit Breaches

In presenting the assessment of risk to the AIUK Risk Committee, the UK CRO will give consideration as to whether any of the risk appetite constraints and/or key risk limits have been breached; if so, risk mitigating actions will be presented to the AIUK Board for approval following review by the AIUK Risk Committee.

B3.3 Aspen’s Own Risk and Solvency Assessment (“ORSA”) Process

A visual representation of how AIUK’s ORSA works and is embedded into the business is shown below:

Figure 1 – ORSA Process



AIUK’s approach to ORSA is documented in the UK ORSA policy, which is applicable to AIUK.

The UK ORSA policy defines the ORSA as:

The integration of business strategy, business planning, capital and risk management processes to effectively identify, assess, monitor, manage, and report the short and long term risks faced by the Group and ensure that its overall solvency needs are met at all times.

It sets out how the ORSA is embedded as a series of ‘business as usual’ processes and how these in aggregate address the full range of expected ORSA considerations and outcomes over the course of a business year. It is illustrated visually in Figure 1 above.

The policy explains that ORSA outcomes are communicated internally via those business-as-usual processes with which they are aligned, in a context that allows stakeholders at all levels to act effectively on them in their day-to-day management and decision making.

AIUK is required to report on the ORSA process and its outcomes at least once a year to the PRA.

The ORSA report is approved by the AIUK Board as providing an accurate account of the AIUK Internal Control and Risk Management Framework and the ORSA processes conducted during the year.

The individual components of the Internal Control and Risk Management framework and the outputs of the ORSA process upon which the ORSA report relies are subject to approval, review and challenge by the AIUK Risk Committee with changes and actions agreed by the AIUK Board.

An important aspect of the ORSA is the inter-linkages among the processes in Figure 1 above. The two boxes at the bottom of Figure 1 represent the framework for the management and control of risk:

- The **Internal Control and Risk Management Framework** (the “Framework”) is the over-arching control mechanism that defines the controls in place and the processes AIUK will follow within Aspen to manage risk. The first two key documents within the overall Framework are the **Risk Universe** and the **Risk Appetite Statement**. The first of these two documents defines and categorises the risks that AIUK are currently exposed to and is termed the “Risk Universe”, while the second defines how much risk AIUK is willing to take and this is termed the “Risk Appetite”.

To assist the embedding of the Framework into the business, AIUK use Risk Policies and Risk Limits. **Risk Policies** define the processes AIUK will follow in managing the different categories of risk on a day-to-day basis. They also describe the internal control processes.

- In order for AIUK to translate the Risk Appetite Statement into more meaningful variables which it can monitor in terms of key areas of its risk (key here being those which are most impactful on the variability of its results and its required capital), it uses a series of **Risk Limits**. In totality these risk limits are a translation of AIUK's risk appetite into more detailed limits, which can be easily cascaded down to lines of business (where applicable) and then monitored and managed by underwriting teams or support teams and reported to governance bodies as required.
- The overall Risk Framework is a fluid set of documents which are adapted as the business evolves. For example, if AIUK discover the business faces additional risks through its **Emerging Risks Review** processes then it will add the risks to the Risk Universe and adapt its Risk Appetite and Risk Limits depending on the impact they could have on the business. As another example, AIUK's Stress and Scenario Testing may uncover other aspects which were previously unknown, or not well understood, and the Framework will be adapted accordingly.
- **Business Strategy** is reviewed on a periodic basis. It is informed by inter alia, the previous strategy, results and performance against business plans, the latest understanding of current and prospective risks and a quantitative assessment of its strategies using its Internal Model. Any review of business strategy will consider in particular, whether strategy options are consistent with or require changes to the Risk Universe or Risk Appetite. A strategy review may introduce new categories of risk which would mean the Risk Universe would need to be updated and policies defined for the management of those new risks. Similarly any revisions to strategy may require a change in risk appetite.
- **Business Plans** Aspen's Group business planning process is an annual process (subject to any changes considered material enough to warrant a full update in the interim) that produces updated 3 year projections for the Group and its component entities including AIUK. The business plans will take into account the agreed strategy and a further assessment of the current and prospective risks that AIUK considers need to be taken into account and a quantitative assessment of the plans using the Internal Model. The three year plans for AIUK and the associated capital requirement projections are reviewed by the AIUK Board annually as part of the ORSA process and reflected in the ORSA report.
- **Capital & Liquidity Planning** outlines the available capital for both AIUK and contingency options in the event that additional capital is required. It also describes fungibility issues which impact liquidity.
- Alongside the annual business plan, there are regular **Risk Monitoring** processes in place to provide management, the AIUK Risk Committee and the AIUK Board with an assessment of the current risk environment and to ensure AIUK are adhering to its risk policies. These processes take into account output from the latest update of the Internal Model and other risk monitoring processes to ensure the Risk Appetite Statement and all Risk Limits are being met. The key report to the AIUK Risk Committee is the quarterly Chief Risk Officer report but there are also specific reports on risk matters e.g. Stress and Scenario Testing. As part of the risk monitoring process, any breaches of risk limits are discussed. In the quarterly UK CRO report, the UK CRO will put forward any **Risk Mitigation** to address any risk limit breaches identified. This may include reducing risk exposure, a recommendation for further capital to be raised or the recommendation for new or amended risk limits. The mitigating actions will then be discussed, at the AIUK Risk Committee and any action agreed by the Board. In addition, the potential for any additional Stress and Scenario Testing will be considered.

Independent Review describes the various assurance processes in place over the framework and processes included within the ORSA. A critical component of AIUK's ORSA process, as can be seen from Figure 1, is its **Internal Model**. This is a core component of many decision making processes and is used to model AIUK's Capital Requirement and is demonstrated in the ORSA. As well as being an integral part of the management process, both in terms of general decision making and the risk management framework, AIUK recognise that from time to time independent processes should be used to ensure the Internal Model output is reasonable. AIUK use the Stress and Scenario Testing process as a check on the Internal Model output, particularly in the tail of the distribution.

B3.4 Internal Model

The Economic Capital Model (“ECM”) is integral to Aspen’s ORSA process. The ECM is used to measure and monitor AIUK’s Risk Appetite Statement through calculation of the Solvency Capital Requirement (“SCR”) and the required 1-in-20 buffer above the SCR, in satisfaction of the capital constraint within AIUK’s Risk Appetite. The SCR and buffer are evaluated using the ECM as part of the annual business planning process and for the ongoing measurement and monitoring of certain key risks reported within the UK CRO reports and many other risks identified within AIUK’s Risk Universe. Section E2 of this document shows the SCR for AIUK’s 2020 business plan as modelled via the ECM

B3.4.1 Outline of the Internal Model

The scope of Aspen’s Internal Model comprises:

- the ECM – also referred to as the Calculation Kernel;
- the Economic Scenario Generator (“ESG”);
- catastrophe risk management processes (including third party vendor catastrophe models) that are material to the calculation of the SCR;
- all spreadsheets which carry assumptions, parameters or standing data into the ECM;
- all other data sources which feed the spreadsheets; and
- Policies and processes in relation to Internal Model change, data, documentation, expert judgement, operational control and validation.

The scope of the Internal Model excludes:

- separate multi-year projection models and other bespoke simulation-based models built for strategic purposes;
- the business planning system;
- stress & scenario testing; and
- The reserving process.

The purpose of the model is to provide a quantification of those risks included in the scope of the model. The ECM is a simulation-based model and allows the business to focus on the tail of the distribution (i.e. the most severe downside scenarios) and, in particular, what are the key drivers of losses in the tail.

B3.5 Internal Model Governance

In order to satisfy the requirements of Solvency II it is important to demonstrate that appropriate governance surrounds the Internal Model and any proposed changes thereto.

Management maintains a three tier structure for the governance of Aspen’s Internal Model as follows:

- **High Level Governance** covers the approval of any application to regulators for approval to use the Internal Model to calculate a company’s solvency capital requirements; approval of major changes or extensions to the model; deciding roles and responsibilities for the Internal Model governance; aligning the model design and operations with the undertaking’s risk profile and operations; ensuring there are sufficient resources to develop, monitor and maintain the Internal Model, and monitoring on-going compliance with the requirements for Internal Model approval. High Level Governance is the responsibility of the AIHL and AIUK Board, with responsibility for some AIHL and AIUK functions being delegated to their Risk Committees.
- **Low Level Governance** covers design and implementation of the Internal Model; testing and validation of the model; documentation of the Internal Model and any changes to it; analysing the performance of the Internal Model, and reporting on the performance to the high-level governance body, including compliance with the Internal Model approval requirements. Low Level Governance is the responsibility of the Group and UK CRO and Group Head of Capital Modelling, through the Governance and Technical Executive Committee (“GATE”).
- **Day-to-day operations and change** are the responsibility of the Capital Modelling Team.

Feedback between the high level and low level governance functions are provided by the Group CRO to the AIHL Board/Risk Committee and by the UK CRO to the AIUK Board/Risk Committee.

The deep integration of the Internal Model into the wider business results in continuous challenge of its outputs by stakeholders, for instance during the business planning process, when model outputs feed directly into the formulation of the business plan. Likewise, capital allocations produced by the Internal Model during business

planning are used in performance measurement and are therefore subject to robust challenge by senior management and underwriters.

B3.5.1 Model Change

The purpose of the UK Internal Model Change Policy is to ensure that appropriate and robust governance controls exist in relation to any proposed changes to the Internal Model, as well as to satisfy the requirements of Solvency II. The UK Internal Model Change Policy applies to any change for any element within the scope of the Internal Model.

The reporting and assessment of Internal Model changes is a key Solvency II requirement. The quantitative impact of changes is assessed against a baseline model representing the last version of the model approved by the PRA via a "Major" change application as updated for "Minor changes approved internally in line with the governance process set out in our Internal Model Change policy. The baseline model against which the quantitative impact is assessed is further updated annually to be the model used to assess the capital requirement presented to the AIUK Board as part of the annual approval of the AIUK business plan. Changes are categorised into one of six types (Data Updates, Model Design & Methodology, Model Governance & Controls, Model Performance, Operations & Reporting, Model Platform and Underlying Risk Profile).

The Internal Model Change Policy defines qualitative and quantitative criteria to determine whether changes are 'Major' or 'Minor'. The quantitative criteria for a major change is defined as a movement in economic capital of 10% or more from an individual change, or 15% or more from an accumulated set of changes. The types of change that accumulate against this threshold are Model Design & Methodology and Underlying Risk Profile changes and Model Platform changes with a quantitative impact. Major changes require approval by the AIUK Board and the PRA. Minor changes are reported quarterly to the AIUK Risk Committee and the PRA via the quarterly UK CRO report to the AIUK Risk Committee.

B3.5.2 Capital Modelling Team Review and Verification Processes

The controls and detailed checks operated by the Capital Modelling team as defined in the ECM Operational Control Framework are undertaken every time there is a reported update of the capital requirement for AIUK. The Capital Modelling team processes include the assessment of the quality of data and the review and challenge of parameterisation including expert judgement. The detailed checks vary by risk type and typically include:

- reconciliations of input data (including understanding reasons for changes in data);
- comparisons of parameters to historical data;
- documentation of the rationale for parameterisation;
- review of parameterisation; and
- Explanation of changes between model runs.

The Operational Risk Management team provide assurance that these controls have operated effectively as part of the annual Internal Model Validation exercise.

B3.5.3 Internal Model Validation

AIUK has a validation policy which requires an annual independent validation of the Internal Model for AIUK. The annual validation exercise is co-ordinated by an independent actuary. Some elements of that validation are undertaken by Internal Audit and Risk Management.

As part of the validation activity, Stress and Scenario Testing acts as a check on the modelling by allowing comparison of the assessment of stress scenarios with the distributions produced by the Internal Model to ensure they are not out of line.

Validation reports are presented annually to the AIUK Risk Committee in line with the AIUK Validation Policy. The most recent full report was presented in June 2019 and a further report on the validation of the dependency between asset risk and insurance risk was presented in January 2020.

Independent third party validation of the model (either of the calculation kernel or the associated processes) is intended to be commissioned approximately every 3 years. During 2019 a third party consultancy firm completed three external reviews of AIUK's internal model:

1. Validation of our overall internal modelling methodology against market and best practice. There were no material findings that required action.
2. Benchmarking of our modelling against peers. There were no material findings that required action.

3. Validation of the approach defined for new asset classes that AIUK proposes to invest in as part of the Aspen Group Strategic Asset Allocation. There were no material findings although some adjustments were made to our modelling approach to address other findings.

In July 2019 the PRA approved a “Major” change to AIUK’s internal model. The PRA review process resulted in a number of actions for Aspen to ensure that the model and its associated documentation and governance and validation processes were fit for purpose. Many of these actions have already been completed and the remainder will be addressed during 2020.

B4 Internal control system

B4.1 Internal Control

An overview of the Internal Control and Risk Management Framework is provided in Section B3 above. The section below sets out the additional controls in place for AIUK.

B4.2 Internal Control functions

The additional controls in place for AIUK cover:

- compliance;
- Sarbanes Oxley and other internal controls; and
- Business continuity and disaster recovery.

B4.3 Compliance

The UK Compliance function is a level 1/2 Hybrid function in the Three Lines of Defence model. In addition to its second line duties, it performs first line functions relating to the maintenance of AIUK’s authorisations and licenses. As part of the actions in response to the recent third party consultancy review of the Risk Management function a review of 1st and 2nd line responsibilities is being undertaken to provide a clearer distinction between the 1st and 2nd line of defence.

The role of UK Compliance team is to provide assurance to AIUK management and the AIUK Board that AIUK’s business operations meet all applicable regulatory requirements and are reflective of relevant guidance and best practice standards. In doing so, the UK Compliance function seek to ensure that the risks to AIUK’s overall strategy and local business plans resulting from local regulatory intervention or reputational risk are minimised.

The UK Compliance team is part of the Group Compliance function which is led by the Group and UK Compliance Director who reports to the UK CEO.

B4.4 Other Systems of Internal Control

Other significant elements of Aspen’s internal control complimentary to the Three Lines of Defence model and which have an AIUK dimension are discussed below.

B4.4.1 Sarbanes-Oxley

As a Group with common and preference shares and debt listed on the New York Stock Exchange at 31 December 2019 (only preference shares and debt are listed from 15 February 2019 onwards), Aspen is subject to the Sarbanes-Oxley Act of 2002 (“S-Ox”). This is a U.S. federal law intended to give comfort to investors in relation to the quality of financial information by requiring senior executives to take individual responsibility for its accuracy and completeness. S-Ox also requires an effective internal control structure and procedures.

Aspen has detailed processes in place in parallel with the Three Lines of Defence model to ensure that it fulfils the comprehensive S-Ox requirements. These include:

- the identification of control owners who are accountable for specific controls, their operation and documentation and the implementation of any remedial action which may be identified;
- a reporting and attestation process by the control owners (including oversight of remedial action) managed by the Operational Risk team;
- process assurance through an annual programme of testing which is undertaken on behalf of the business by Internal Audit; and

- a S-Ox Steering Group which supports the Group Chief Executive Officer and the Group Chief Financial Officer in their attestations as to the effectiveness of the internal controls over financial reporting, and provides assurance to the AIUK Audit Committee.

B4.4.2 Employee Standards

Controls are exercised by the Human Resources function for employer and employee protection and to fulfil statutory and regulatory requirements. These include pre-contract screening of all new employees and regulatory “fit and proper” procedures where required. These are more fully explained in Section B2 above.

B4.4.3 Business Continuity

AIUK has appropriate business continuity management processes and internal control mechanisms to assess and manage the exposure to the risk of business interruption.

The following high level minimum standards have been defined to mitigate the risk of business interruption:

1. Sources of business continuity risk and critical processes are identified by each Platform and assessed to determine the extent of exposure;
2. Aspen has a formal business continuity plan covering identified critical processes that has been approved by the local Board and is tested on an annual basis; and
3. Aspen has a documented escalation and invocation process for disaster scenario planning.

Aspen has documented these procedures including necessary arrangements to ensure continuity of the core business activities and management of a disruptive incident.

B5 Internal audit function

B5.1 Internal Audit

B5.1.1 Mission

The primary role of Internal Audit is to help the AIUK Board and Executive Management protect the assets and reputation of AIUK, and to help management improve the effectiveness or risk management, control and governance processes in a maintainable manner. Internal Audit achieves this in its capacity as the Third Line of Defence by:

- providing an independent and objective assessment that all significant risks are identified and appropriately reported by management and the risk function to the AIUK Board and Executive Management;
- assessing whether they are adequately controlled; and
- Challenging Executive Management to improve the effectiveness of governance, risk management and internal controls.

B5.1.2 Reporting Lines

The Head of Internal Audit reports functionally to the Aspen Group (AIHL) Audit Committee and administratively to the Group CEO/Chairman; and operates at all times with independence and objectivity.

The administrative role of the Group Chief Executive Officer, in relation to the Head of Internal Audit, includes primary responsibility for recruitment, goal setting, performance appraisal and remuneration recommendations. The AIUK Audit Committee may provide input to performance appraisals and remuneration decisions will be made by the Group Compensation Committee in consultation with the Chair of the AIUK Audit Committee.

The AIHL Audit Committee will review and concur in the appointment, replacement or dismissal of the Head of Internal Audit, having taken input from the AIUK Audit Committee members.

B5.1.3 Authority

Internal Audit derives its authority from the Boards of Aspen through the Aspen Group Audit Committees. Internal Audit is authorised to:

- Have unrestricted access to all functions, property, records and staff.

- Have full and free access to the Audit Committee. The Head of Internal Audit is authorised to call a meeting with the Chairman of the Audit Committee at any time. At least once each year, the Head of Internal Audit will have a private session with the Aspen Audit Committee.
- Obtain necessary assistance of personnel in business units or departments where they perform audits, as well as other specialised services from within or outside the organisation.
- Allocate resources and apply such techniques as may be required to fulfil the requirements of the annual plan and any additional audit activities that may be agreed, subject to any changes agreed with Management and, where necessary, with the Audit Committee.

Any attempts to limit the scope of work, information restrictions, or any other impediment limiting the ability of Internal Audit to perform its role will be reported to the Chairman of the Group and AIUK Audit Committees as appropriate.

The Head of Internal Audit and the staff of the Internal Audit department are not authorised to perform any operational duties for AIUK, initiate or approve accounting transactions external to the internal audit department or direct the activities of any organisation employee not employed by the Internal Audit department except to the extent such employees have been appropriately assigned to auditing teams or to otherwise assist the internal auditors.

B5.1.4 Audit Coverage and Universe

Internal Audit coverage is broad, encompassing all of AIUK's business activities. It is the responsibility of Internal Audit to identify all auditable areas within the audit universe. The audit universe is dynamic in nature, and requires annual monitoring to ensure that new and evolving auditable areas are appropriately included.

Auditable areas are analysed on a case by case basis using a risk based methodology to determine appropriate audit coverage and efficient and effective use of resources. Based on this analysis, a rolling three year audit plan is developed and updated annually.

Auditable areas that have been identified as having a higher degree of significance and/or risk will generally be audited more frequently than those areas with lower significance or risk. The Audit plan is reviewed and approved by the AIUK Audit Committee (at least) annually.

B5.1.5 Objective of work

The objective of Internal Audits work is to determine whether AIUK's network of risk management, control and governance processes, as designed and represented by management, is adequate and functioning appropriately.

B5.1.6 Communication of results

Internal Audit provides individual reports and periodic reports to the AIUK Audit Committee.

B5.1.7 Independence

To preserve both the perception and reality of its independence and objectivity, Internal Audit will not:

- Be responsible for the implementation of corrective measures;
- Second staff, or provide consultancy services to business functions, if this is in any way likely to conflict with Internal Audit independence;
- Allow Internal Auditors who are seconded, or undertake consultancy assignments, to be involved in subsequent audits of the areas involved for 12 months following their return to audit or the completion of the consultancy assignment;
- Delegate their judgement on audit matters to others, unless otherwise agreed with the AIUK Audit Committee; and
- Have any direct authority over, or responsibility for, any system, procedure, or activity, which they may be responsible for auditing or reviewing.

When undertaking consultancy activities, Internal Auditors shall seek to maintain their objectivity when drawing conclusions and offering advice to management. Internal auditors must have an impartial, unbiased attitude and avoid any conflicts of interest. If impairments to independence or objectivity exist prior to commencement of the consulting engagement, or subsequently develop during the engagement, disclosure shall be made immediately to management.

Annually, the Head of Internal Audit will confirm to the Group and AIUK Audit Committees, the continuing independence of the Internal Audit activity.

B6 Actuarial function

B6.1 Actuarial Function

B6.1.1 Scope of Actuarial Function

Within the Actuarial Function are the following teams:

- Insurance Actuarial Team;
- Reinsurance Actuarial Team; and
- Independent Assurance Team (whose role is to assess the work of the pricing and reserving teams and ensure sufficient independence as well as to co-ordinate and complete significant elements of the internal validation of the Internal Model).

The Insurance and Reinsurance Actuarial Teams report to the Group Chief Actuary and both teams cover pricing and reserving for the respective segment. The Independent Assurance Team reports to the Group CRO.

In February 2020 it was agreed that the Actuarial function would take over responsibility for Data Analytics (including exposure management) and as part of that move the following teams became part of the Actuarial Function:

- Capital Modelling (although the Risk function continues to chair the Internal Model Governance and Technical Executive which governs changes to the Model)
- Catastrophe Risk Management – who operate, maintain and validate the third party vendor models used to model natural catastrophe risk (for material perils) and US terrorism.

The Reserve Committee comprises a core membership who attend all meetings (the “Core Reserve Committee”), together with senior individuals representing Insurance and Reinsurance divisions who attend the relevant sub-committee meetings dealing with the reserves of the division. A wrap-up meeting is held to confirm the reserves to be booked on a US and UK GAAP basis which is attended by just the Core Reserve Committee.

The Core Reserve Committee membership consists of Group Chief Risk Officer, Group Chief Financial Officer, Group Chief Actuary, Insurance Chief Executive Officer, Reinsurance Chief Underwriting Officer, Group Chief Strategy Officer, Chief Accounting Officer/UK CFO and Insurance Global Performance and Strategy Head. It may call upon representatives from claims and underwriting teams in addition to the external consulting actuaries as appropriate.

B6.1.2 Key Responsibilities of the Actuarial Function

The key responsibilities of the Actuarial Function are as follows:

- performing the reserving calculations, facilitating the reserve setting process and coordinating the calculation of Technical Provisions on a Solvency II basis;
- ensuring the appropriateness of underlying methodologies, models and data;
- back testing reserving best estimates and held reserves against experience;
- assessing the reliability and adequacy of the Technical Provisions calculation and associated uncertainties;
- expressing an opinion on the overall underwriting policy;
- expressing an opinion on the adequacy of outwards reinsurance arrangements;
- contributing to the effective implementation of the risk-management system;
- maintaining actuarial pricing and reserving standards across Aspen’s portfolios; and
- in the case of the Independent Assurance Team, ensuring actuarial pricing and reserving standards are maintained across Aspen’s portfolios.

B6.1.3 Identification of the Users of the Actuarial Function’s Work

The key internal users of the Actuarial Function’s reserving work include:

- UK Finance;
- Insurance and Reinsurance Reserve Committees;
- the Group Audit Committee; and
- the AIUK Audit Committee and AIUK Board.

The key external users of the Actuarial Function's reserving work include:

- the PRA;
- Lloyds
- And rating agencies.

B6.1.4 Independence of the Actuarial Function

The AIUK Board ensures that the Actuarial Function is appropriately segregated, has unrestricted access to relevant information and is not constrained, controlled or unduly influenced by management in the setting of reserves. This is evidenced by internal review meetings with the relevant underwriters, claims and finance staff on an ad hoc basis. More formally, representatives of both the Insurance and the Reinsurance Reserving Teams attend the Insurance and Reinsurance Reserve Committee meetings.

The level of reserves selected by management for each reserving class is finalised by the Core Reserve Committee, following the meetings with underwriters, claims and finance and also the Insurance and Reinsurance Reserve Committee meetings, as part of a formal sign-off process. The management best estimates, together with a report highlighting the main findings, are then presented to the AIUK and Group Audit Committee for review and approval. The Group and AIUK Audit Committees monitor and review the management best estimates and the associated systems and controls. There are no outstanding action points or recommendations for the Actuarial Function that have not been implemented.

Furthermore, reserves are reviewed on an annual basis by our external auditor and by another independent external party who present their findings to the AIUK and Group Audit Committee. To conclude, the Actuarial Function is considered sufficiently independent.

B7 Outsourcing

B7.1 Outsourcing Policy

The Group has adopted an Outsourcing Policy, which is applicable to AIUK that is intended to establish a prudent risk management framework in relation to the management of the outsourcing arrangements and ensure compliance with the relevant regulatory requirements. The Outsourcing Policy covers the entire outsourcing lifecycle, from identifying the need for outsourcing through relationship management and oversight and provides processes to effectively manage risk associated with outsourcing relationships.

Consistent with regulatory requirements, the Outsourcing Policy covers any form of agreement between AIUK and a service provider which performs an insurance or reinsurance activity or undertakes a key function on behalf of AIUK. All outsourcing arrangements are classified as either 'Critical or Important' or 'Non-Critical', and the requirements set out in the Outsourcing Policy differ based on this classification. The basis and responsibilities for determining the classification are detailed in this policy.

On 20 April 2018, Aspen Insurance UK Services Limited, Aspen Insurance U.S. Services Inc. and Aspen Bermuda Limited entered into an Outsourcing Agreement (the "Agreement") with Genpact International, Inc., a company incorporated in Delaware, United States ("Genpact US"). On 29 June 2018, the Agreement was novated from Genpact US to Genpact (UK) Limited ("Genpact"). ("Genpact"). Pursuant to the Agreement, Genpact provides AIUK with a range of operational business processes, primarily from their offshore service centre in Gurgaon, India, to enable Aspen to deliver greater operating effectiveness and efficiencies. The Agreement is effective 1 April 2018 and shall have an initial term period of five years. Aspen has the right to extend the Agreement for three additional one year terms.

In addition, Aspen Insurance UK Services Limited, Aspen Insurance U.S. Services Inc. and Aspen Bermuda Limited entered into an outsourcing agreement with Cognizant Worldwide Limited, a company registered in England, on August 31, 2018. Pursuant to the agreement, Cognizant provides AIUK with information technology services.

B7.1.1 Activities that represent critical or important outsourcing agreements

The table below illustrates the various outsource providers for critical or important activities and the jurisdiction in which the service providers of such functions or activities:

Outsourced function	Provider	Nature of service	Jurisdiction
Underwriting Operations	Xchanging Ins-sure Services ("XIS")	London Premium Processing & Settlement Bureau; Access to Insurance Market Repository	UK
Claims Operations	Xchanging Claims Services ("XCS")	Lloyd's Claims Handling (Note: Legacy only supported by XCS) and Volumetrix	UK
IT	NIIT Technologies	Provision of IT Support & Development	UK
IT	Cognizant Technology Solutions Corporation	Provision of IT Support & Development	UK
Various	Genpact Limited	Provision of various back and middle office functions, including underwriting operations, claims operations, catastrophe risk modelling, legal services, compliance services, actuarial services and finance	UK, India
Treasury	Intra-group	Provision of treasury services to the business	Not applicable - these are Group services
Actuarial	Intra-group	Provision of actuarial services to the business	Not applicable - these are Group services
Risk Management	Intra-group	Provision of risk management services to the business	Not applicable - these are Group services
Compliance	Intra-group	Provision of compliance services to the business	Not applicable - these are Group services
Internal Audit	Intra-group	Provision of internal audit services to the business	Not applicable - these are Group services
Other Services (not listed above)	Intra-group	Provision of other business services to the business	Not applicable - these are Group services

B8 Any other information

AIUK has nothing to report under other information.

c Risk Profile

AIUK is exposed to a range of financial risks through its financial assets, financial liabilities, reinsurance assets and policyholder liabilities. In particular, the key financial risk is that the proceeds from financial assets are not sufficient to fund the obligations arising from insurance policies as they fall due. The most important components of this financial risk are insurance risk, market risk (including interest rate risk and currency risk) credit risk, and liquidity risk.

C1 Underwriting risk

C1.1 Insurance Risk

C1.1.1 Insurance Risk

Insurance risk is defined as the risk that underwriting results vary from their expected amounts, including the risk that reserves established in respect of prior periods are understated.

Insurance risk includes the following:

1. Underwriting risk (referred to as Premium Risk in the Internal Model): The variation of accident year technical result from its expected value. Underwriting risk can be further split into sub-categories including:
 - a. Catastrophe accumulation risk: The risk that losses from natural catastrophes exceed expected levels.
 - b. Pricing calibration risk: The risk that actual technical results differ from expected values as a result of invalid assumptions, methodology or parameters used in the pricing process.
 - c. Large claims risk: The risk that losses from a single man-made event, or group of related events, exceed the expected levels.
 - d. Attritional risk: The risk that the total of all losses other than catastrophe and large losses exceeds the expected level.
 - e. Reinsurance mitigation risk: The risk that gross losses are not reduced by reinsurance recoveries to the extent expected.
2. Reserving risk: The variation in policyholder reserves for prior accident years.

Processes for addressing and monitoring risk

AIUK models its exposure to underwriting and reserving risks using the Internal Model to measure the associated capital requirements on both the Solvency II SCR regulatory basis and an internal basis. The internal basis uses a US GAAP balance sheet and measures the capital required to write one year's business to ultimate. Modelling of insurance risk exposure is the key process for monitoring and managing insurance risk.

The Reserving Policy and Group Underwriting Risk Policy evidence how Aspen manages the risk of loss or of adverse change in the values of insurance and reinsurance liabilities, resulting from inadequate pricing and provisioning assumptions.

The Underwriting Risk Policy requires and defines the use of Aspen Underwriting Principles ("AUPs") or underwriting guidelines for each underwriting team, and similarly the Group Pricing Standard establishes the requirements that must be addressed by the Pricing Policy Document ("PPD") for each portfolio. AUPs set out a series of key principles translated into specific guidelines, requirements, processes and management controls, the compliance of which is mandatory for all Underwriters. The PPDs set out a series of standards and principles to apply to all business underwritten.

The Group Claims risk policy sets out the core risk management requirements for the Claims process. The UK Platform Claims Procedures apply to claims handling in respect of AIUK claims. It covers the full claims cycle and is supported by a range of detailed procedures. It includes specific considerations in respect of the handling of AIUK claims.

The Reinsurance Mitigation Risk Policy defines Aspen's approach to managing the risk that gross losses are not reduced by reinsurance recoveries to the extent expected. The Insurance Accumulation Risk Policy defines Aspen's approach to management of material risk concentrations by categorising those risks, setting tolerances and limit, measuring, monitoring, reporting and escalating Natural Catastrophe and Non Natural Catastrophe accumulations.

The Key Risk limits are monitored and reported in the UK CRO report to the AIUK Risk Committee.

Material Risk Concentrations

AIUK has limited its exposure to material risk concentrations by imposing maximum claim amounts on certain contracts as well as the use of reinsurance arrangements in order to limit exposures so they are managed within key risk limits.

The material risk concentrations managed via Key Risk limits include catastrophe risks (such as hurricanes, earthquakes and flood damage), clash losses (large losses from single events through exposure via multiple contracts) and exposure to future man made catastrophic events (such as acts of war, acts of terrorism and losses resulting from political instability).

The effectiveness of these risk mitigation techniques is assessed through continual monitoring of the underlying risk profile and escalation of deviations from plan.

C1.2 Sensitivity analysis

Net claims incurred sensitivity

The liabilities established could be significantly lower or higher than the ultimate cost of settling the claims arising. This level of uncertainty varies between the classes of business and the nature of the risk being written and can arise from developments in case reserving for large losses and catastrophes, or from changes in estimates of claims incurred but not reported. The following analysis shows the impact on profit or loss from a 5% increase or decrease in total claims liabilities. The analysis is performed on the basis that that all other assumptions have been held constant:

Year ended 31 December \$'m	2019		2018	
	5% Increase	5% Decrease	5% Increase	5% Decrease
TOTAL	(60.8)	60.8	(74.9)	74.9

For 2020 the levels of both premium receipts and therefore exposures and the level of claims incurred could be impacted by COVID19.

C2 Market risk

C2.1 Market Risk

Market risk is defined as the risk of variation in the income generated by, and the fair value of, AIUK's investment portfolio, cash and cash equivalents and derivative contracts including the effect of changes in foreign currency exchange rates.

Within our Risk Universe we define six categories of market risk:

- 1) Foreign currency risk: The risk of adverse variation in the US dollar value of net assets in foreign currencies as a result of currency rate movements.
- 2) Fixed income security risk: The risk of variation in the market value of fixed income securities or their derivatives. Fixed income security risk can be further split into sub-categories including:

Interest rate risk: The risk of variation in the market value of fixed income securities as a result of changes in prevailing interest rates. We classify reinvestment risk as the risk of lower yields on the reinvestment of the proceeds from coupons payments, maturities and prepayments, which is a sub-category of interest rate risk.

Spread risk (including default risk): The yield of a non-government fixed income security can be divided into two parts:

- 1) The 'risk free' rate, being the yield of the treasury security issued by the country in which the issuer operates which is closest to it in maturity; and
- 2) The 'spread' of the yield over the risk free rate (= total yield - risk free rate).

The spread is normally positive because it represents the extra consideration required by the market to compensate for the greater risk (compared to the Government issuer) of default on interest or redemption. The spread may also be influenced by the actual or perceived liquidity or marketability of the security.

The spread of a bond also adjusts over time to reflect the spread required on similar new issues. This movement up or down in spread therefore also contributes to overall market risk and AIUK calls this 'spread risk'. AIUK also includes within spread risk the risk that a security falls in value as a result of being downgraded by a rating agency as this will also cause the spread to increase. The risk of actual default on interest or redemption as a special case of spread risk is also included. This default risk is actually a type of credit risk but it is appropriate to deal with it here under market risk because of the way it is modelled in the Internal Model as an extreme case of downgrade risk.

Spread risk is managed by limiting the overall credit quality of the investment portfolio and the concentrations of investments with specific issuers of investments. This risk is mitigated by limiting exposure to any single counterparty.

- 3) Equity risk: AIUK defines Equity risk as the risk of adverse movements in the market price of investments (or their derivatives) other than fixed income securities. Unlike Fixed Income Securities the value of equities is not directly linked to interest rates and spreads, there are many factors that affect the value of investments. The Company does not invest in equities so this risk is not currently relevant to the Company.
- 4) Market risk mitigation risk: The risk of variation in the value or effectiveness of hedging positions.
- 5) Asset concentration risk: The aggregate value of AIUK's investment portfolio may be at greater risk if it is over exposed to the same asset or a group of similar assets with similar risk dynamics. Concentrations which AIUK seek to manage include types of asset (e.g. mortgage backed securities), economic sector of issuer and securities of the same issuer.
- 6) Valuation Risk: Some assets within AIUK's investment portfolio can be "private assets" for which there are no readily available market prices. There is a risk that the approaches used to value these "private assets" result in incorrect values. As at 31 December 2019 AIUK did not have any investments in "private assets".

Concentrations which AIUK seek to manage for this reason include types of asset (e.g. mortgage backed securities), economic sector of issuer and securities of the same issuer.

Processes for addressing and monitoring risk

As with Insurance risk, Aspen monitors and manages exposure to market risk using the Internal Model to measure the associated capital requirements on both an internal basis and the Solvency II SCR regulatory basis.

The Investment Risk Policy and Guidelines describe:

- the investment strategy in the context of the annual business plan;
- asset allocation and concentration limits at Group and AIUK levels.
- the measurement of market risks,
- Portfolio duration and interest rate risk in the investment portfolio.

The Investment Risk Policy specifically describes what is permissible with regards to the use of derivatives in order to manage currency positions:

- Use of derivatives is limited to interest rate swaps, forward rate transactions, bond options, interest rate futures, foreign exchange spot and forward transactions and currency swaps and options.
- During 2019, AIUK only entered into foreign exchange forward transactions.
- AIUK has no off balance sheet exposures.

The Asset and Liability Management (“ALM”) Policy defines Aspen’s approach to duration and currency matching. The Risk Management, Treasury and Investments functions monitor the value, currency and duration of cash and investments held by AIUK to ensure that it is able to meet the insurance and other liabilities as they become due. The following components of both cash matching and duration matching are employed to manage the investment portfolio:

- the average duration of liabilities;
- the outlook for interest rates and the yield curve;
- the need for cash to pay claims; and
- total return.

Material Risk Concentrations

As with Insurance Risks as well as modelling exposures and the capital required to address potential market risks using the Internal Model, AIUK has also limited its exposure to material risk concentrations through the use of Key Risk Limits.

These material risk concentrations include foreign currency risk, interest rate risk, equity risk and private asset classes (Short Term Secured loans, Commercial Mortgage Loans and Middle Market Loans).

Key Risk limits regarding asset allocation, overall credit rating and volatility of AIUK’s investment portfolio have been defined by management and approved by the AIUK Board. The AIUK Annual Investment Plan is reviewed and approved by the AIUK Board.

In order that AIUK can manage its currency risks within the regulatory parameters required, a Key Risk Limit approved by the AIUK Board limits the mismatch between assets and liabilities where there are material positions in currencies other than the functional currency of AIUK (i.e. US Dollars).

The Key Risk limits are monitored and reported in the UK CRO report to the AIUK Risk Committee.

The effectiveness of risk mitigation techniques is assessed through continual monitoring of the underlying risk profile and escalation of any deviations from plan.

C2.1.1 Prudent Person Principle

Aspen’s Investment Risk Policy and Guidelines refers specifically to the prudent person principle and describes how it ensures that it properly identifies, measures, monitors, manages and controls, as well as appropriately takes into account in the assessment of its overall solvency needs, the risks originating from its investments. The Investment Risk Policy and Guidelines works in conjunction with the Investment Policy, the latter providing a framework for a strategy consistent with the overall business strategy and risk tolerances.

C2.2 Sensitivity analysis

For 2020 AIUK faces more risk in relation to in its investment portfolio as a result of the impacts on market volatility of COVID19. In addition to the sensitivity analysis on Foreign Currency and interest rate risk included in the last SFCR we have added an assessment of the sensitivity of AIUK’s investment portfolio to changes in corporate spread requirements.

Foreign currency risk sensitivity

As at 31 December 2019, if the U.S. Dollar had weakened / strengthened by 10% with all other variables held constant, profit for the year would have been \$1.8m (2018: \$6.8m) higher / lower, mainly as a

result of foreign exchange gains / losses on the translation of non U.S. Dollar denominated financial assets and liabilities.

Interest rate risk sensitivity

The table below depicts interest rate change scenarios and the effect on profit or loss from AIUK's interest rate sensitive invested assets:

Movement in basis points	-100	-50	+50	+100
31 December 2019				
Fixed income portfolio effect - gain/(loss)	74.1	37.1	(37.1)	(74.1)
31 December 2018				
Fixed income portfolio effect - gain/(loss)	75.3	37.6	(37.6)	(75.3)

On a Solvency II basis the impact of interest rates on the value of the investment portfolio will be offset, to a material but not complete extent, by the impact on the valuation of the future liabilities within the technical provisions, which are discounted on a Solvency II basis.

Spread risk Sensitivity

The table below depicts spread change scenarios and the effect on profit or loss from AIUK's spread sensitive invested assets:

Corporate bond spreads	-44	+50	+100	+200
31 December 2019				
Fixed income portfolio effect - gain/(loss)	13.0	(14.8)	(29.5)	(59.0)

Equity Risk sensitivity

AIUK does not invest in equities so this risk is not currently relevant.

C3 Credit Risk

C3.1 Credit Risk

Credit risk is the risk of loss to AIUK if the counterparty to a financial instrument or reinsurance agreement fails to meet its contractual obligations. AIUK is exposed to credit risk through its investment holdings (cash, equities and fixed income securities). AIUK treats credit risk relating to its fixed income security investments as part of market risk. This is because as part of spread risk, AIUK includes the risk that a security falls in value as a result of being downgraded by a rating agency as this will also cause the spread to increase. AIUK includes the risk of actual default on interest payments or redemption proceeds as a special case of spread risk. Whilst this default risk is actually a type of credit risk, it is convenient to deal with it within market risk because of the way AIUK models it in the Internal Model as an extreme case of downgrade risk.

AIUK is also exposed to credit risk through the diminution in the value of insurance receivables as a result of counterparty default. This principally comprises default and concentration risks relating to amounts receivable from intermediaries, policyholders and reinsurers. The credit risk in relation to reinsurers covers both its reinsurers' shares of insurance liabilities and amounts due from reinsurers in respect of claims already paid. Reinsurance and retrocession does not isolate AIUK from its obligations to policyholders. In the event that a reinsurer or retrocessionaire fails to meet its obligation, AIUK's obligations remain.

Processes for addressing and monitoring risk

As with insurance risk, AIUK models exposure to credit risks using the Internal Model to measure the associated capital requirements on both an internal basis and the Solvency II SCR regulatory basis. Modelling of credit risk exposures is the key process for monitoring and managing credit risk.

The processes for addressing credit risk in relation to financial Instruments has already been dealt with as part of the explanation of the processes to address Market risk. The Group Insurance Credit Risk policy defines the processes for assessing, monitoring and managing credit exposure to intermediaries, policyholders and reinsurance counterparties.

Material Risk Concentrations

AIUK limits its exposure to material risk concentrations through the use of Key Risk Limits. AIUK is potentially exposed to concentrations of credit risk in respect of amounts recoverable from reinsurers, and insurance and reinsurance balances owed by the brokers with whom it transacts business. AIUK manages the levels of credit risk by placing limits on its exposure to a single counterparty, or groups of counterparty. Such risks are subject to regular review. The creditworthiness of reinsurers is considered on an annual basis by reviewing their financial strength prior to finalisation of any contract. In addition, management assesses the creditworthiness of all reinsurers and intermediaries by reviewing credit grades provided by rating agencies and other publicly available financial information. The recent payment history of reinsurers is also used to update the reinsurance purchasing strategy. AIUK has risk limits for the amount of exposure to both third party and intragroup related reinsurers and any breaches of those limits are reported to the AIUK Risk Committee and Board. The effectiveness of these risk mitigation techniques is assessed through continual monitoring of the underlying risk profile.

C3.2 Sensitivity analysis

The assets bearing credit risk are summarised below, with analysis by credit rating issued by Standard and Poor's:

Year ended 31 December	2019	2018
	\$'m	\$'m
Reinsurers' share of claims outstanding	2,565.4	2,366.7
Debtors arising out of direct insurance operations	47.2	93.5
Debtors arising out of direct reinsurance operations	749.1	675.0
Cash at bank and in hand	103.2	142.1
Deposits with ceding undertakings	32.4	34.8
Loans and receivables	75.8	73.5
<i>Other financial investments</i>		
Fixed income investments	2,138.7	2,214.5
Short term investments	297.1	216.8
Derivative financial assets	6.9	6.2
Total assets bearing credit risk	6,015.8	5,823.1

Year ended 31 December	2019	2018
	\$'m	\$'m
AAA	279.9	339.7
AA	1,378.5	1,319.0
A	546.4	567.0
BBB	60.8	72.3
Below BBB or non-rated	-	0.5
Other assets	3,750.2	3,524.6
Total assets bearing credit risk	6,015.8	5,823.1

To date, AIUK has not experienced any material losses related to such credit risk.

C4 Liquidity risk

C4.1 Liquidity Risk

Liquidity risk is defined as the risk of failing to maintain sufficient liquid financial resources to meet liabilities as they fall due or to provide collateral as required for commercial or regulatory purposes.

Liquidity risk includes the following:

1. Payment default risk: The risk that there is insufficient cash to make payments when due and that no additional cash can be made available by borrowing, sale of assets or capital raising.
2. Risk of unplanned asset realisation losses: The risk that securities are required to be sold at a loss to meet liquidity requirements.
3. Risk of failure of credit facility: The risk that advances from the credit facility are unavailable.
4. Group liquidity risk: The risk that liquidity cannot be secured for a Group company from elsewhere in the Group.
5. Collateral risk: The risk that AIUK is unable to provide collateral to a third party when contractually required to do so.

Processes for addressing and monitoring risk

Unlike insurance, market and credit risk, AIUK does not model and manage liquidity risk using its Internal Model as it is not a risk that is mitigated by holding capital against it.

AIUK's annual Stress & Scenario Testing ("SST") process is used to determine the basis of the Key Liquidity risk limit. The Liquidity Risk policy provides further details of how Liquidity risks are identified, monitored, managed and modelled. This includes details of an escalation process for a breach of the minimum free funds limit.

Material Risk Concentrations

AIUK limits its exposure to material risk concentrations through the operation of the Liquidity Risk Policy. This highlights the measures that Aspen has put in place in order to maintain an agreed amount of unencumbered assets in cash and cash equivalents. These measures include concentration limits to ensure the diversification and liquidity of assets, appropriateness of the marketability or ability to realise assets and a liquidity contingency funding plan.

Liquidity stress testing is carried out against AIUK's and the Group's risk profiles at least annually by the Risk Management department as part of the SST programme. This allows management to identify the potential strains on AIUK's liquidity as a result of the scenarios assessed as well as gaining understanding of the Group's ability to support the liquidity needs of entities such as AIUK as the need arises. Cash-flow forecasting is also used to reduce liquidity risk.

The effectiveness of these risk mitigation techniques is assessed through continual monitoring of the underlying risk profile.

C4.2 Duration analysis

The table below analyses AIUK's monetary liabilities into their relevant maturity groups based on the period remaining at the year end to their contractual maturities or expected settlement dates:

\$'m 2019	Up to 1 year	1-3 years	3-5 years	Over 5 years	Total
Outstanding claims liabilities	933.7	1,047.7	572.3	1,280.8	3,834.5
Provision for unearned premium	486.0	157.0	60.6	54.4	758.0
Amounts due to group undertakings	749.0	-	-	-	749.0
Other creditors	264.6	-	-	-	264.6
Accruals and deferred income	54.2	-	-	-	54.2
Total	2,487.5	1,204.7	632.9	1,335.2	5,660.3

\$'m 2018	Up to 1 year	1-3 years	3-5 years	Over 5 years	Total
Outstanding claims liabilities	956.7	1,230.3	589.0	1,011.2	3,787.2
Provision for unearned premium	545.4	158.7	48.4	41.3	793.8
Amounts due to group undertakings	603.4	-	-	-	603.4
Other creditors	218.7	-	-	-	218.7
Accruals and deferred income	3.0	-	-	-	3.0
Total	2,327.2	1,389.0	637.4	1,052.5	5,406.1

C4.3 Expected Profit Included in Future Premium (“EPIFP”)

As reported on R0790 of template S.23.01 as shown in Appendix 1, the total of Expected Profit In Future Premiums (EPIFP) as at 31 December 2019 amounted to \$53.3m (2018: \$86.8m). The prior year is presented on a net basis and the current year is on a gross basis. The change in presentation from net to gross was to align the QRT with the latest EIOPA guidance that was issued in 2019.

C5 Operational risk

C5.1 Operational Risk

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, personnel or systems, or from external events.

Processes for addressing and monitoring risk

The Operational Risk Policy articulates the management of operational risk encompassing the processes for identification, assessment, mitigation and communication.

The Risk Universe categorises operational risk as a ‘non-core’ risk, and as such AIUK’s appetite for operational risk is severely limited. Where considered material, AIUK seeks to minimise it through control or avoidance where possible.

Operational Risk is managed via a collaborative approach between the first and second lines of defence which combines:

- Identification, assessment of Operational Risks and definition of the mitigating controls by the 1st Line of Defence (LOD) Risk owners.
- Advice and independent challenge of the identification and assessment of the operational risks and the appropriateness of the controls defined to mitigate those risks by 2nd LOD the Risk Management team;
- discussion and approval of documented operational risk assessment and controls within the Operational Risk Register with executive risk owners and annual ratification of the appropriateness and completeness of the overall AIUK Operational Risk Register (including the risk assessments) with the AIUK Risk Committee and AIUK Board;
- regular review of the operational risk assessments and the appropriateness and completeness of controls with executive risk owners and assessment (via attestations and testing) of the design and operation of controls with the day to day control owners in the business; and
- process for identifying emerging operational risk

Key control gaps and control failures are reported through the Quarterly UK CRO report.

We consider conduct risk as part of operational risk and have specific processes to address it including a conduct risk forum and a specific quarterly conduct risk report to the AIUK Risk Committee.

The effectiveness of these risk mitigation techniques is assessed through continual monitoring of the underlying risk profile.

C6 Other material risks

C6.1 Group Risk

The risk that events or circumstances affecting one or more other companies in the Aspen Group threaten the solvency, liquidity or reputation of the Company. The Aspen Group has a number of regulated entities within its holding company structure. As such it is exposed to risks arising from events primarily affecting other Group companies and to the risk of adverse circumstances existing in respect of one or more of those companies.

The main Group risks to the entities arise from the following relationships:

- ABL is a major reinsurer of both AIUK and other Group companies and AIUK is a major reinsurer of ABL. Both companies are therefore exposed to adverse underwriting results of the companies in the group they reinsure.
- ABL's, AIUK's, AAIC's and ASIC's financial strength ratings with certain rating agencies, depend on those agencies overall assessment of the Aspen Group
- The Aspen Group is subject to group regulation by the BMA and EEA sub-group regulation by the PRA whose conclusions could impact its entities regulatory status or reputation
- All Aspen entities have a dependence on AIHL for the provision of capital and may also be called upon to pay dividends to AIHL
- All entities may participate in inter-company lending between itself and other group companies.

C6.2 Emerging Risk

Other material risks are identified via the emerging risk process. Emerging risk is defined as the risk that events or issues not previously identified or fully understood impacts the operations or financial results of AIUK.

Processes for addressing and monitoring risk

This is defined in the Strategic and Emerging Risk policy. Emerging Risks are evaluated through the Group Emerging Risk Forum ("ERF"). Any key issues or actions arising from the emerging risk process are reported by exception in the quarterly CRO report. In addition to this escalation of relevant matters, the CRO produces a more detailed annual report on the activities of the Emerging Risk Forum.

C6.2.1 Climate Change

A key emerging risk is Climate Change the impacts of which are managed primarily via our emerging risk process.

Global climate change may have a material adverse effect on our operating results and financial condition if we do not adequately assess and price for any increased frequency and severity of catastrophes resulting from these environmental factors.

There is widespread consensus in the scientific community that there is a long-term upward trend in global air and sea temperatures which is likely to increase the severity and frequency of severe weather events over the coming decades. Rising sea levels are also expected to add to the risks associated with coastal flooding in many geographical areas. Large scale climate change could also increase both the frequency and severity of natural catastrophes and our loss costs associated with property damage and business interruption due to storms, floods and other weather-related events. In addition, global climate change could impair our ability to predict the costs associated with future weather events and could also give rise to new environmental liability claims in the energy, manufacturing and other industries we serve.

Given the scientific uncertainty of predicting the effect of climate cycles and climate change on the frequency and severity of catastrophes and the lack of adequate predictive tools, we may not be able to adequately model the associated exposures and potential losses in connection with such catastrophes which could have a material adverse effect on our business, financial condition or operating results.

Our investment portfolio and our credit and political risk underwriting exposures may be materially adversely affected by global climate change regulation.

World leaders met at the 2015 United Nations Climate Change Conference in December 2015 in Paris and agreed to limit global greenhouse gas emissions in the atmosphere to a level which would not increase the average global temperature by more than 2°Celsius, with an aspiration of limiting such increase to 1.5° Celsius (the "Paris Agreement"). In order for governments to achieve their existing and future international commitments to limit the concentration of greenhouse gases under the Paris Agreement, there is widespread consensus in the scientific community that a significant percentage of existing proven fossil fuel reserves may not be consumed. In addition, divestment campaigns, which call on asset owners to divest from direct ownership of commingled funds that include fossil fuel equities and bonds, likewise signals a change in society's attitude towards the social and environmental externalities of doing business.

As a result of the above, energy companies and other companies engaged in the production or storage of fossil fuels may experience unexpected or premature devaluations or write-offs of their fossil fuel reserves. As at 31 December 2019, we had \$42 million, or 1.6% of our Managed Portfolio, invested in the energy sector. Government policies to slow global climate change by, for example, setting limits on carbon emissions may also have an adverse impact on other sectors, such as utilities, transportation and manufacturing. A material change in the asset value of fossil fuels or the securities of energy companies and companies in these other sectors may therefore materially adversely affect our investment portfolio and our results of operations and financial condition.

We provide credit and political risk insurance to banks and other institutions providing lending to government and private organisations. In some cases the lending relates to private organisations involved in the energy sector or governments or government agencies which are dependent on fossil fuels for their revenue. A material change in the asset value of fossil fuels may therefore materially adversely affect our exposures to credit and political risk.

C6.2.1 Environmental and Social Governance (ESG) Risk

Climate change is one component of the risk of society's attitude to environmental and social responsibility governance which is an emerging risk. AIUK's clients, suppliers, regulators, rating agencies, and staff will have expectations that AIUK's will take its ESG responsibilities. In 2019 the Aspen Group appointed a Corporate Social Responsibility Director to develop and implement a plan to address this risk.

C6.3 Regulatory Risk

The risk of non-compliance with regulatory requirements, including ensuring AIUK understands and complies with changes to those requirements, is managed as an operational risk. There is a residual risk that changes in regulation impact AIUK's ability to operate profitably in some jurisdictions or some lines of business.

C6.4 Taxation Risk

The risk that AIUK does not understand, plan for and manage AIUK's tax obligations is addressed as an operational risk. There is a residual risk that changes in taxation impacts AIUK's ability to operate profitably in some jurisdictions or some lines of business.

C7 Any other information

C7.1 Stress and Scenario Testing

Each year a Group wide SST and Reverse Stress Testing ("RST") exercise is conducted to assess the impact of stressed scenarios on the Group and each legal entity, including AIUK.

Aspen undertakes both stochastic and deterministic stress testing. Varying time horizons and severities are used in the scenarios which, in aggregate, cover all classes of risk, including underwriting, reserving, market, credit, liquidity, operational, Group and reputational risks.

The Risk Management team, in conjunction with relevant business stakeholders reviews and revises the scenarios to be tested each year. The AIUK CRO represents AIUK to ensure that the scenarios are defined considering stresses relevant to AIUK. Proposed Scenarios are presented for review by the AIUK Risk Committee before being finalised.

These include:

- natural catastrophes;
- terrorism events;
- man-made disasters;
- economic and political events; and
- reserving scenarios.

The most recent update of the identified SST scenarios shows no breaches of the regulatory capital requirement.

D Valuation for solvency purposes

The section that follows sets out information on valuation for solvency purposes. In accordance with Article 75 of the Solvency II Directive 2009/138/EC, assets, liabilities and Technical Provisions have been valued on the following basis:

- Assets have been valued at the amount for which they could be exchanged between knowledgeable willing parties in an arm's length transaction;
- Liabilities have been valued at the amount for which they could be transferred, or settled, between knowledgeable willing parties in an arm's length transaction;
- Technical Provisions have been estimated as the sum of a best estimate and a Risk Margin. The best estimate corresponds to the probability-weighted average of future cashflows, taking account of the time value of money (expected present value of future cashflows), using the relevant risk-free interest rate term structure; and
- The cash flow projection used in the calculation of the best estimate take account of all the cash inflows and outflows required to settle the insurance and reinsurance obligations over the lifetime thereof.

The following table shows a summary of the impact of the valuation adjustments of moving from UK GAAP to Solvency II valuation basis.

Some adjustments have no impact on net assets/own funds, such as the transfer of UK GAAP debtors and creditors to the Solvency II balance sheet, and therefore are not shown in the table below.

Own Funds - USD (\$'m)	Balance Sheet as at 31 December 2019
Closing balance - UK GAAP	841.9
Technical Provision adjustments:	
Profit in Written but not Incepted (WBNI) & Unearned Premium Reserve (UPR)	311.6
Legally obliged external reinsurance expenditure	(100.8)
Change in reserving basis (removal of management margin)	64.0
Events not in data (ENID)	(38.5)
Discounting	103.8
Counterparty default	(10.8)
Expense provision	(134.1)
Risk margin	(154.7)
Subtotal	40.5
Other Solvency II adjustments:	
Removal of DAC	(152.3)
Deferred Tax	20.5
Revaluation of Intercompany loan	1.7
Subtotal	(130.1)
Ancillary Own Funds	100.0
Closing balance - Solvency II	852.3

AIUK deducts non material Ring Fenced Funds in the calculation of available Own Funds.

Closing balance - Solvency II	852.3
Ring Fenced Funds	(65.6)
Own Funds	786.7

These adjustments are combined into three sections for the purpose of the SFCR and are summarised in the table below:

\$'m	UK GAAP value	Differences relating to Technical Provisions	Other differences	Solvency II value
Assets other than Technical Provisions [Section D1.1]	4,029.1	(675.8)	(92.3)	3,261.0
Liabilities other than Technical Provisions [Section D3.1]	(1,122.3)	701.1	(37.8)	(459.0)
Technical Provisions [Section D2.1]	(2,064.9)	15.2	-	(2,049.7)
Ancillary Own Funds	-	-	100.0	100.0
Net Assets/Own Funds	841.9	40.5	(30.1)	852.3

The adjustments between UK GAAP and Solvency II relate to the following:

Differences relating to technical provisions

- Assets of \$675.8m (consisting of insurance and reinsurance receivables) are transferred to Solvency II technical provisions
- Liabilities of \$701.1m (primarily relating to funds withheld) are transferred to Solvency II technical provisions
- Technical provisions overall are \$40.6m higher compared to UK GAAP when prepared under Solvency II requirements (see table on page 57 for a summary of the differences).

Other differences

- Deferred acquisition costs of \$152.3m are not recognised under Solvency II.
- The deferred tax asset is \$20.5m higher under Solvency II due to timing differences.
- For Solvency II, AIUK has valued its existing lease agreements and capitalised these on the balance sheet. This has the effect of increasing assets and other liabilities by \$37.8m.
- The PRA approved the application for \$100.0m of Ancillary Own Funds on 28 January 2019, which were issued by National Australia Bank in the form of a Letter of Credit on 11 February 2019.

Further details of these adjustments are provided overleaf.

D1 Assets

D1.1 Valuation of Assets

Class of Assets	UK GAAP value \$'m	Differences relating to Technical Provisions \$'m	Other valuation differences \$'m	Reclassifications \$'m	Solvency II value \$'m
Deferred acquisition costs [1.1a]	152.3		(152.3)		-
Property, plant and equipment held for own use [1.1b]	0.5		37.7		38.2
Investments and cash and cash equivalents [1.1c]	2,544.4			12.0	2,556.4
Other Loans and Mortgages [1.1d]	74.1		1.7		75.8
Deposits to cedants [1.1e]	32.4				32.4
Insurance and intermediaries receivable [1.1f]	66.2	(40.0)			26.2
Reinsurance receivables [1.1f]	1,051.8	(635.8)		0.1	416.1
Receivables (trade not insurance) [1.1g]	78.8				78.8
Deferred tax asset [1.1h]	8.6		20.5		29.1
Any other assets, not elsewhere shown [1.1i]	20.0			(12.0)	8.0
TOTAL ASSETS	4,029.1	(675.8)	(92.4)	0.1	3,261.0

The UK GAAP figures are shown above using the Solvency II balance sheet presentation, and agree to the Solvency II QRT S.02.01.01. These figures do not tie directly to the AIUK statutory accounts at a financial line item level. The reason for this is the different presentation methods required for statutory accounts and Solvency II reporting. Most notably, a portion of the reinsurers' share of technical provisions in the Solvency II balance sheet is shown within assets in the UK GAAP balance sheet but in technical provisions for Solvency II. Additionally, amounts due from group undertakings are shown as a separate line item in the UK GAAP balance sheet, whereas for Solvency II they are shown across different receivable and payable lines to correspond to the nature of the balances. The effect of these differences is that total assets as disclosed in the statutory accounts are \$6,502.2m in the financial statements, compared to \$4,029.1m in the table above. However, the Company's UK GAAP net assets are \$841.9m in both returns.

Reinsurance Technical Provisions are included in section D2.1.

D1.2 Narrative explanation of Assets (other than Technical Provisions)

Class of assets	Details
Deferred acquisition costs ("DAC") [1.1a]	DAC are not permissible under Solvency II, therefore the deferred acquisition costs and deferred ceding commissions balances have been removed from the balance sheet.
Property, plant and equipment ("PPE") held for own use	Under IFRS 16 Leases, AIUK has valued its existing lease agreements and capitalised those on its balance sheet. UK GAAP does not currently incorporate IFRS 16.

[1.1b]	
Investments and cash and cash equivalents [1.1c]	<p>Financial instruments are measured at fair value for Solvency II purposes. The fair value measurement principles of AIUK's shares and other variable-yield securities and units in unit trusts are consistent with this Solvency II valuation policy.</p> <p>Cost and amortised cost as valuation methods are explicitly not allowed under Solvency II. For deposits with credit institutions, whilst AIUK's UK GAAP policy states that these are valued at amortised cost, this valuation policy is deemed to be equivalent to Solvency II fair value methodology because this basis of valuation is viewed by AIUK's directors as having regard to the likely realisable values, and also due to the short term and highly liquid nature of these investments.</p> <p>All financial assets are valued based on the valuation hierarchy as defined under Solvency II:</p> <ol style="list-style-type: none"> 1. quoted market prices in active markets for the same assets or liabilities; 2. where the use of quoted market prices in active markets for the same assets or liabilities is not possible, quoted market prices in active markets for similar assets and liabilities with adjustments to reflect differences (where required). <p>For assets falling into (2) above, no adjustments to reflect differences have been recognised. This is due to the fact that these assets are held on an exchange for which there is a liquid secondary market.</p> <p>The only difference in valuation for Solvency II for investments and cash equivalents relates to a reclassification of accrued interest of \$12.0m.</p>
Other Loans and Mortgages [1.1d]	<p>Because the other loans and mortgages are not traded in an active market, a discounted cash flow analysis valuation technique is used to approximate fair value. The future interest payment and bonds redemption cash flows are discounted using interest rates based on US Government bonds, with maturities which reflect the timing of bond redemptions.</p>
Deposits to cedants [1.1e]	<p>Deposits with ceding undertakings is valued at the net realisable cash value within the financial statements and therefore represents the fair value under a Solvency II basis.</p>
Insurance and intermediaries receivables, Reinsurance receivables [1.1f]	<p>The full balance of the insurance and intermediaries receivables and reinsurance receivables is reflected under UK GAAP (at carrying value). Under Solvency II, \$675.8m of the receivables (amounts that are not-yet-due at the balance sheet date) are transferred to Solvency II Technical Provisions and form part of the valuation of Technical Provisions in section D 2 below.</p> <p>The remaining debtor balances totalling \$442.3m of Insurance and Reinsurance receivables represent the net realisable value (undiscounted amortised cost less any adjustment for expected default) of these debtors, which are considered to be due. This is the alternative valuation method permitted under Solvency II.</p>
Receivables (trade, not insurance)	<p>Receivables (trade, not insurance) are measured at fair value for Solvency II purposes. AIUK values other assets at undiscounted amortized cost less any</p>

[1.1g]	adjustment for expected default. Given the short term maturity of these assets, this is considered to be a close approximation to fair value.
Deferred tax asset [1.1h]	<p>Deferred tax is calculated on the differences between the value of assets and liabilities on a Solvency II basis and the value of those same assets and liabilities on the tax basis balance sheet. The valuation of deferred tax assets and liabilities is based on the principles prescribed by section 29 of FRS102, whereby a deferred tax asset or liability are recognised on timing differences reversing in future periods. The subsequent deferred tax asset or liability is included on the Solvency II balance sheet on an undiscounted basis.</p> <p>AIUK approximates a Solvency II deferred tax adjustment on the increase/decrease in shareholders' funds from UK GAAP to Solvency II.</p> <p>In accordance with section 29 of FRS102, AIUK nets deferred tax assets and liabilities from balances from the same tax regime which are expected to reverse in the same period.</p> <p>The Management plan indicates that there are sufficient profits over the planning cycle to justify including the deferred tax asset on the balance sheet.</p>
Other assets [1.1i]	<p>Other assets are measured at fair value for Solvency II purposes. AIUK values other assets at undiscounted amortized cost less any adjustment for expected default. Given the short term maturity of these assets, this is considered to be a close approximation to fair value.</p> <p>Other assets do not represent a significant balance for AIUK.</p>

D1.2.1 Intangible Assets

AIUK does not hold any intangible assets.

D1.2.2 Active and inactive markets and valuation methods

An active market is one in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. AIUK's assets have been analysed to determine whether the markets they are traded in are consistent with this definition.

Investments other than cash

AIUK holds bonds and does not invest in hedge funds, private equity or other investments that requires potentially subjective valuation. Fair values are based on quoted market prices and other data provided by third-party pricing services and index providers. There are no significant estimates used in valuing these due to the nature of corporate and government bonds held which are listed on an exchange for which there is a liquid secondary market.

The fair values of equity investments are based on quoted market prices in active markets from independent pricing sources.

Cash and cash equivalents

The valuation of cash does not rely on market valuation as they are cash deposits. Cash equivalents are traded with sufficient frequency and volume that AIUK considers there is an active market for these assets. There is little judgement involved in the valuation of these items.

Other Loans and Mortgages

Other loans and mortgages are not traded in an active market, a discounted cash flow analysis valuation technique is used to approximate fair value. The future interest payment and bonds redemption cash

flows are discounted using interest rates based on US Government bonds, with maturities which reflect the timing of bond redemptions.

Other assets

By their nature, most other assets are unique or specific to AIUK. Although contracts could be negotiated for the sale of receivables (debt factoring), these transactions are not frequent and, in addition, the price of one transaction would not provide sufficient evidence of the fair value of another. For other assets, AIUK has concluded that there is no active market, and as a result the amortised cost basis under UK GAAP is used as a reasonable approximation of the realisable amount.

AIUK monitors the receivables balance to determine whether using the amortised cost basis under UK GAAP would no longer be a reasonable approximation of fair value, using discounted cash flow valuation techniques.

D1.2.3 Material deferred tax assets

The following table shows the breakdown of the Solvency II deferred tax asset at 31 December 2019:

	UK GAAP \$'m	Solvency II adjustment \$'m	TOTAL \$'m
Temporary differences related to overseas branches	4.0	-	4.0
Temporary differences related to FRS 102 transitional adjustments	(0.3)	-	(0.3)
Losses carried forward	4.9	-	4.9
Temporary differences related to Solvency II adjustments	-	20.5	20.5
TOTAL	8.6	20.5	29.1

Deductible temporary difference	Explanation and expiry
Temporary differences related to foreign tax	<p>At 31 December 2019, the only deferred tax asset AIUK holds is in relation to 2010 US tax and 2018 Australian tax. Credits for 2018 Irish tax expire in 2021.</p> <p>Technically, deferred tax credits in respect of 2010 US tax have expired, but AIUK is entitled to use these if a provision for a potential UK tax liability materialises.</p>
Temporary differences related to overseas branches	<p>This comprises a US branch deferred tax asset and Australian branch deferred tax asset. The Australian DTA can be carried forward indefinitely.</p> <p>In respect of the United States, deferred acquisition costs and claims discounting are deferred tax liabilities. It is the unearned premium reserve ("UPR") and net operating losses ("NOLs") carried forward from 2015 through 2019 for which a deferred tax asset is recognised.</p> <p>2015 NOLs expire in 2035, 2016 NOLs expire in 2036 and 2018 NOLs expire in 2037 and 2019 NOLs expire in 2038. It is considered more likely than not that the losses will be utilised before the expiry date.</p> <p>There is no restriction in respect of the UPR although if it were to contribute to a loss, which couldn't then be utilised within 20 years, the asset expires.</p>

Temporary differences related to FRS 102 transitional adjustments	This is a liability arising from the requirement to spread re-valuation of unearned premium reserve and deferred acquisition costs balances over 10 years (starting from 2015).
Losses carried forward	This relates to UK tax losses, which have no expiry date.
Temporary differences related to Solvency II adjustments	To the extent these relate to US taxation, a deferred tax asset could give rise to US NOLs. These have an expiry period of 20 years.

D1.2.4 Related Undertakings

AIUK has no related undertakings as defined under Solvency II at 31 December 2019.

D1.2.5 Changes to valuation of assets in the period

There have been no changes to AIUK's methodology for valuing other assets in the twelve months ended 31 December 2019.

D1.2.6 Major sources of estimation uncertainty

Insurance contracts

The main source of estimation uncertainty for AIUK concerns the valuation of Technical Provisions, which are discussed in section D2 below. Estimates have to be made for expected future claims. It can take a significant amount of time before the claims cost can be established with certainty. For some contracts premium is initially written based on estimates of ultimate premiums. Estimates might be derived from underwriter experience, historical data and broker estimation. These estimates are judgemental and could result in misstatements if they differ materially to expectations.

Taxation

AIUK establishes provisions based on reasonable estimates for possible consequences of audits by the tax authorities of the countries in which it operates. The amount of such provisions is based on various factors, such as experience with previous tax audits and differing interpretations of tax regulations by the tax authority.

Management estimation is required to determine the amount of deferred taxes that can be recognised, based upon likely timing and level of future taxable profits together with an assessment of the effect of future tax planning strategies.

D2 Technical Provisions ('TP')

D2.1 Valuation of Gross Technical Provisions

In accordance with Article 77 of the Solvency II Directive the value of AIUK's Technical Provisions consists of the best estimate of all future cash flows required to settle its insurance and reinsurance obligations, discounted at the risk-free rate of interest, with the addition of a Risk Margin.

The calculation of Solvency II Technical Provisions requires a number of adjustments to the UK GAAP reserve calculations. A summary of the adjustments on Technical Provisions between UK GAAP and Solvency II are set out below.

These are split between:

- Gross Technical Provisions;
- Reinsurers share of Technical Provisions; and
- Net Technical Provisions.

There have been no material changes in assumptions for the calculation of the Technical Provisions from the previous period.

Gross Technical Provisions \$'m

Line of Business	UK GAAP TP	Solvency II Claims adj [2.1a]	Removal of UPR [2.1b]	Future Premium Cash flow [2.1c]	ENID [2.1d]	Expense Provision [2.1e]	RI Default [2.1f]	Discount [2.1g]	Risk Margin [2.1h]	Solvency II TP
Credit and suretyship insurance	(346.1)	(129.1)	202.4	230.3	(6.0)	(10.2)	0.0	10.9	(32.2)	(80.0)
Fire and other damage to property insurance	(685.6)	(175.8)	183.0	235.9	(10.1)	(21.6)	0.0	17.7	(15.4)	(471.9)
General liability insurance	(1,133.2)	(69.3)	124.9	140.9	(25.9)	(30.7)	0.0	65.5	(21.0)	(948.8)
Marine, aviation and transport insurance	(449.1)	(50.8)	61.9	88.9	(5.9)	(15.2)	0.0	20.8	(12.6)	(362.0)
Miscellaneous financial loss	(0.4)	(0.6)	0.0	0.4	(0.0)	(0.0)	0.0	0.0	0.0	(0.6)
Motor vehicle liability insurance	(49.2)	(17.1)	13.4	33.4	(1.2)	(1.7)	0.0	6.3	(6.4)	(22.5)
Non-proportional casualty reinsurance	(1,108.3)	(37.0)	75.1	142.7	(23.1)	(32.4)	0.0	107.7	(44.4)	(919.7)
Non-proportional health reinsurance	(231.5)	(2.0)	11.0	32.5	(5.0)	(6.5)	0.0	30.2	(11.1)	(182.4)
Non-proportional marine, aviation and transport reinsurance	(261.8)	(29.6)	38.6	54.9	(3.4)	(8.0)	0.0	10.3	(4.2)	(203.2)
Non-proportional property reinsurance	(242.9)	(57.7)	47.8	84.8	(5.1)	(7.9)	0.0	8.5	(7.4)	(179.9)
TOTAL	(4,508.1)	(569.0)	758.1	1,044.7	(85.7)	(134.2)	0.0	277.9	(154.7)	(3,371.0)

RI Share Technical Provisions \$'m

Line of business	UK GAAP TP	Solvency II Claims adj [2.1a]	Removal of UPR [2.1b]	Future Premium Cash flow [2.1c]	ENID [2.1d]	Expense Provision [2.1e]	RI Default [2.1f]	Discount [2.1g]	Risk Margin [2.1h]	Solvency II TP
Credit and suretyship insurance	140.0	72.3	(42.7)	(227.0)	3.3	0.0	(0.6)	(7.6)	0.0	(62.3)
Fire and other damage to property insurance	250.1	65.3	(22.4)	(173.2)	4.3	0.0	(0.7)	(9.8)	0.0	113.6
General liability insurance	720.3	48.3	(46.0)	(224.0)	17.1	0.0	(3.3)	(43.8)	0.0	468.6
Marine, aviation and transport insurance	256.7	3.7	(5.5)	(35.3)	5.4	0.0	(1.1)	(20.3)	0.0	203.6
Miscellaneous financial loss	0.3	0.4	0.0	(3.9)	0.0	0.0	(0.0)	(0.0)	0.0	(3.2)
Motor vehicle liability insurance	19.7	11.6	0.1	(24.8)	0.6	0.0	(0.2)	(3.7)	0.0	3.3
Non-proportional casualty reinsurance	621.0	(0.3)	(0.9)	(218.1)	11.4	0.0	(3.6)	(63.3)	0.0	346.2
Non-proportional health reinsurance	141.1	0.3	(0.1)	(58.1)	2.8	0.0	(0.9)	(20.3)	0.0	64.8
Non-proportional marine, aviation and transport reinsurance	171.6	41.4	(7.3)	(93.9)	0.0	0.0	0.0	0.3	0.0	112.1
Non-proportional property reinsurance	122.4	17.5	(6.0)	(55.3)	2.1	0.0	(0.4)	(5.7)	0.0	74.6
TOTAL	2,443.2	260.5	(130.8)	(1,113.6)	47.0	0.0	(10.8)	(174.2)	0.0	1,321.3

Net Technical Provisions \$'m

Line of business	UK GAAP TP	Solvency II Claims adj [2.1a]	Removal of UPR [2.1b]	Future Premium Cash flow [2.1c]	ENID [2.1d]	Expense Provision [2.1e]	RI Default [2.1f]	Discount [2.1g]	Risk Margin [2.1h]	Solvency II TP
Credit and suretyship insurance	(206.1)	(56.8)	159.7	3.3	(2.7)	(10.2)	(0.6)	3.3	(32.2)	(142.3)
Fire and other damage to property insurance	(435.5)	(110.5)	160.6	62.7	(5.8)	(21.6)	(0.7)	7.9	(15.4)	(358.3)
General liability insurance	(412.9)	(21.0)	78.9	(83.1)	(8.8)	(30.7)	(3.3)	21.7	(21.0)	(480.2)
Marine, aviation and transport insurance	(192.4)	(47.1)	56.4	53.6	(0.5)	(15.2)	(1.1)	0.5	(12.6)	(158.4)
Miscellaneous financial loss	(0.1)	(0.2)	0.0	(3.5)	0.0	0.0	0.0	0.0	0.0	(3.8)
Motor vehicle liability insurance	(29.5)	(5.5)	13.5	8.6	(0.6)	(1.7)	(0.2)	2.6	(6.4)	(19.2)
Non-proportional casualty reinsurance	(487.3)	(37.3)	74.2	(75.4)	(11.7)	(32.4)	(3.6)	44.4	(44.4)	(573.5)
Non-proportional health reinsurance	(90.4)	(1.7)	10.9	(25.6)	(2.2)	(6.5)	(0.9)	9.9	(11.1)	(117.6)
Non-proportional marine, aviation and transport reinsurance	(90.2)	11.8	31.3	(39.0)	(3.4)	(8.0)	0.0	10.6	(4.2)	(91.1)
Non-proportional property reinsurance	(120.5)	(40.2)	41.8	29.5	(3.0)	(7.9)	(0.4)	2.8	(7.4)	(105.3)
TOTAL	(2,064.9)	(308.5)	627.3	(68.9)	(38.7)	(134.2)	(10.8)	103.7	(154.7)	(2,049.7)

D2.2 Narrative explanation of Technical Provisions

Adjustment	Explanation
UK GAAP Technical Provisions	<p data-bbox="493 331 683 359"><u>Claims Provision</u></p> <p data-bbox="493 390 1370 590">AIUK adopts multiple techniques to estimate the required level of provisions. This assists in giving greater understanding of the trends inherent in the data being projected. The projections given by the various methodologies also assist in setting the range of possible outcomes. The most appropriate estimation technique is selected taking into account the characteristics of the class and the extent of the development of each accident year. The main projection methodologies that are used are:</p> <ul data-bbox="542 621 1370 1083" style="list-style-type: none"> <li data-bbox="542 621 1370 705">• Initial expected loss ratio (“IELR”) method: This method calculates an estimate of ultimate losses by applying an estimated loss ratio to an estimate of ultimate earned premium for each accident year. <li data-bbox="542 709 1370 852">• Bornhuetter-Ferguson (“BF”) method: The BF method uses as a starting point an assumed IELR and blends in the loss ratio implied by the claims experience to date by using benchmark loss development patterns on paid claims data (“Paid BF”) or reported claims data (“Reported BF”). <li data-bbox="542 856 1370 940">• Loss development (“Chain Ladder”): This method uses actual loss data and the historical development profiles on older accident years to project more recent, less developed years to their ultimate position. <li data-bbox="542 945 1370 1083">• Exposure-based method: This method is used for specific large typically catastrophic events such as a major hurricane. AIUK exposure is identified and AIUK work with known market information and information from our cedants to determine a percentage of the exposure to be taken as the ultimate loss. <p data-bbox="493 1115 854 1142"><u>Provision for unearned premium</u></p> <p data-bbox="493 1173 1370 1341">Unearned premiums are those proportions of premiums written in a year that relate to periods of risk after the reporting date computed separately for each insurance contract. Written premiums are recognised as earned over the period of the policy on a time apportionment basis having regard where appropriate, to the incidence of risk. The proportion attributable to subsequent periods is deferred as a provision for unearned premiums.</p> <p data-bbox="493 1373 1370 1520">Unearned outwards reinsurance premiums are those proportions of premiums written in a year that relate to periods of risk after the reporting date. Unearned reinsurance premiums are deferred over the term of the underlying direct insurance policies for risks-attaching contracts and over the term of the reinsurance contract for losses-occurring contracts.</p> <p data-bbox="493 1551 786 1579"><u>Deferred acquisition costs</u></p> <p data-bbox="493 1610 1370 1663">Acquisition costs arising from the conclusion of insurance contracts are deferred commensurate with the unearned premium provision.</p>
Solvency II Claims adj [2.1a]	<p data-bbox="493 1717 1097 1745">Solvency II Claims adjustments include two elements :</p> <p data-bbox="493 1776 854 1803"><u>Removal of margin for prudence</u></p> <p data-bbox="493 1835 1370 1911">UK GAAP reserves include a management margin for prudence or conservatism. For Solvency II reporting, any amounts in excess of the mean best estimate are excluded from the Technical Provision calculations.</p>

	<p><u>Future loss provision</u></p> <p>Future losses are accounted for on a best estimate basis. In order to do this, planned gross loss ratios are applied to gross unearned and written but not incepted (“WBNI”) policies to calculate gross expected losses.</p> <p>Reinsurance recoveries are calculated on a similar basis.</p>
<p>Removal of Unearned Premium Reserve (“UPR”) [2.1b]</p>	<p>UPR is eliminated from the balance sheet and replaced with a provision accounted for on a best estimate basis taking account of all the cash flows (i.e. losses and premium debtors) relating to unearned business.</p> <p>When considering which cashflows to include in the calculation of outwards reinsurance premium and recoveries in the best estimate underlying Technical Provisions AIUK’s key principle is to ensure these are consistent with the inwards policies included in the same valuation subject to certain specific rules on recognising legally obliged reinsurance contracts.</p>
<p>Future Premium Cashflow [2.1c]</p>	<p>The Solvency II guidance requires that the best estimate calculation should take account of projections for all potential cash inflows and outflows required to settle insurance / reinsurance obligations. This includes premiums paid in instalments and due in the future (not-yet-due premiums).</p> <p>Under Solvency II, insurance contracts are recognised when AIUK becomes legally obliged to provide cover, whether the contracts have incepted or not. This differs from premium recognition under UK GAAP where contracts are recognised on inception and results in the inclusion of Written But Not Incepted (WBNI) business.</p> <p>The same principle is applied for outwards reinsurance – with reinsurance creditors payable with a due date post the balance sheet date recognised in the reinsurance claims provision to the extent they relate to an earned exposure and the premium provision where they relate to unearned exposure.</p> <p>In addition, future outwards reinsurance premium is estimated on unearned business and WBNI. Specifically for reinsurance, AIUK considers whether the reinsurance contract is an existing or legally obliged arrangement, or is to be purchased in future.</p>
<p>Events not in Data (“ENID”) [2.1d]</p>	<p>Solvency II best estimates should make an allowance for “all possible events” – this should include high severity, low probability claims.</p> <p>Events Not In Data (ENIDs) are not explicitly modelled as part of the reserving process. AIUK performs a separate analysis once a year to derive an ENID event load. A truncated distribution methodology is used to estimate ENIDs.</p>
<p>Expense Provision [2.1e]</p>	<p>The Solvency II expense provision includes more costs than the UK GAAP current unallocated loss adjustment expenses provision as it specifically includes overheads/ admin/ investment management expenses.</p> <p>The Solvency II guidance requires that the best estimate includes all cash flows arising from expenses that will be incurred servicing existing policies during their lifetime. Allocated loss adjustment expenses directly assignable to individual claims are included in the claims and premium provision.</p>

	<p>Solvency II guidance details the following examples of expenses that will be incurred servicing all obligations from existing insurance and reinsurance contracts:</p> <ul style="list-style-type: none"> • administrative expenses; • investment management expenses; • claims management expenses / handling expenses; and • acquisition expenses including commissions. <p>Expenses include both overhead expenses and expenses which are directly assignable to individual claims, policies or transactions.</p> <p>AIUK's approach has been to allocate planned expenses for the following year removing expenses directly related to the acquisition of premiums (as these are considered as part of premium cash flows). Expenses are then allocated to lines of business using the mean best estimate reserves and ENID. The year on year indirect expense cash flows are then decreased in line with the run off of claims reserves using actuarial claims payment patterns. This is done on an on-going business basis so that new business is expected to support an increasing share of the overheads into the future based on the percentage reduction in claims reserves implied by the claims payment patterns. An allowance for expense inflation is included. All UK expenses are assumed to be in Pounds Sterling.</p> <p>Non-commission related acquisition costs on incepted contracts (e.g. underwriters' salaries) will have by definition occurred by the balance sheet date and hence are already accounted for.</p>
<p>RI Default [2.1f]</p>	<p>Solvency II requires inclusion of a provision for non-receipt of reinsurance recoveries whether caused by default or dispute.</p> <p>The probability of counterparty default is set to the rate used in the internal model dependent on the rating of the counterparty.</p> <p>A recovery rate (in the event of default) of 50% is used (this is mandated by EIOPA). The calculation is applied to the recoveries cash flows. For discounting purposes, the cash flows are deemed to be in proportion to the recovery cash flows and in the same currencies.</p>
<p>Discounting [2.1g]</p>	<p>The best estimate cash flows are the probability weighted average cash flows, taking into account the time value of money using the relevant risk free interest rate term structure. A blended yield curve approach to discounting is followed.</p> <p>AIUK begins with the yield curves published by EIOPA for the reporting date, for each of the six major currencies, at the 50% illiquidity premium level, as advised by EIOPA for general insurance companies.</p> <p>AIUK uses a blended yield curve approach to discounting, taking the split into the 6 major currencies for each accident year for inwards and outwards business separately and for each reserving class separately, and multiplies the percentage list of currencies by the six yield curves to create a blended yield curve at that level of detail.</p> <p>Each type of provision (inwards or outwards, premiums or claims or expenses), is multiplied by its payment pattern for the accident year for the reserving class, and by the blended yield curve applying to give a discounted provision.</p>

Risk Margin [2.1h]	The Risk Margin is a component of the Solvency II Technical Provisions that does not exist under UK GAAP accounting, which is intended to capture the difference between the best estimate of Technical Provisions and its theoretical market value. The theoretical market value is estimated using cost-of-capital principles, based on the principle of a notional portfolio transfer to a third party insurer with no insurance obligations of its own.
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D2.3 Level of Uncertainty associated with Technical Provisions

The AIUK Actuarial Function ensures management receives appropriate and complete information on the extent and nature of uncertainties associated with the calculation of mean best estimates and policyholder reserves. In general terms, there are limitations on the accuracy of the estimates of Technical Provisions, on both a UK GAAP and Solvency II basis, as there is inherent uncertainty in any evaluation of loss reserves. This is because the ultimate liability for claims is subject to the outcome of processes yet to occur, for example, the attitude of claimants to the settlement of their claims, changes in the standards of liability, and the size of court awards.

There are specific areas of AIUK's current UK GAAP reserves that have additional uncertainty associated with them. There is uncertainty in property reinsurance relating to the ultimate settlement of losses related to Hurricanes Harvey, Irma and Maria that occurred in the third quarter of 2017, Hurricane Florence that occurred in the third quarter of 2018 and Hurricane Michael that occurred in the fourth quarter of 2018, Hurricane Dorian from third quarter 2019 and the California Wildfires that occurred in the fourth quarter of 2017 and 2018. Some of these events have also impacted specialty reinsurance, marine and energy insurance and, to a lesser degree, there is a risk of litigation associated with the hurricanes which may affect casualty reinsurance. In casualty reinsurance, there are additional uncertainties associated with claims emanating from the 2008 global financial crisis and subsequent market events, and the potential for new types of claim to arise given the long-tail nature of many of the reinsurance risks. In particular a key uncertainty is the potential implication to our clients from the increasing Opioid litigation in the US.

In US casualty business, we have been seeing an increasing trend of large losses/adverse judgements which also appears to be in line with the market. This leads to additional uncertainty in the quantum of future claims settlements of cases in litigation.

In the insurance segment, AIUK wrote a book of financial institutions risks which have a number of notifications relating to the financial crisis in 2008 and subsequent market events. The marine and energy liability account, which is a long-tail class, experienced higher than anticipated claims development during 2013 and in 2014 experienced higher than anticipated claims development in the construction liability account. Some adverse experience again emerged during 2019 in the energy liability account which provides some risk into the future although this is in part mitigated by increased reinsurance purchasing on more recent years. Furthermore, Aspen has now decided to exit this line of business.

These factors can impact the claims adjustment processes which are dependent on the gathering of the necessary information on which to assess coverage, liability, causation and quantum.

D2.3.1 Ultimate Premium

Ultimate premium income is subject to uncertainty arising from, for example, changes in premium receipt patterns and adjustments relating to future claims experience.

D2.3.2 Loss Ratios

For unearned exposures there is a risk that the loss ratio applied to the underlying exposure may prove to be inappropriate. In certain classes of business, such as specialty and niche segments, AIUK has a limited number of years of its own experience on which to base its analysis. This leads to greater uncertainty in the selection of both the initial expected loss ratios and the development patterns. To mitigate this, AIUK makes use of publicly available information in addition to more specific advice obtained from external actuarial consultants.

D2.3.3 Discount Rate

Other factors such as risk free discount rates may change over time which would change the value of AIUK's reserves even if all other assumptions remained the same.

D2.3.4 ENID

By their very nature, Events Not In Data are difficult to determine by type, frequency and severity. Whilst this has been allowed for within the assumptions, the risk remains that this may prove to be inadequate.

D2.3.5 Expense Provisions

Expense provisions are calculated on a going concern basis and make a number of assumptions which may also prove to be inappropriate. However, this is considered a minor risk in relation to premium and claim provisions.

D2.4 Recoverable from reinsurance contracts and special purpose vehicles

The value of recoverable from reinsurance contracts and special purpose vehicles is \$1,321.3m. This is shown in section D2.1 above. Other than fully collateralized reinsurance, the substantial majority of AIUK's reinsurers have a rating of "A" (Excellent), the third highest of fifteen rating levels, or better by A.M. Best and the minimum rating of any of AIUK's material reinsurers is "A-" (Excellent), the fourth highest rating, by A.M. Best.

D2.5 Risk Margin Calculation (unaudited)

The precise formula to be used in the calculation of the Risk Margin is as follows:

$$RM = CoC \cdot \sum_{t \geq 0} \frac{SCR(t)}{(1 + r(t+1))^{t+1}}$$

CoC = Cost-of-Capital rate in excess of risk-free = **6%** (by prescription)

r(t) = Risk-free interest rate applicable at maturity t (i.e. risk-free spot rate)

SCR(t) = Notional "SCR" of third party at time t to run off the obligations included within the Technical Provisions.

The following notes are made in relation to the Risk Margin:

- the SCR used allows for insurance, credit and operational risks of the third party in running off the business¹;
- diversification credit between risks (e.g. between classes, between reserve years of account and between risk types) is allowable in estimating this particular SCR;
- operational risks of the third party are assumed to be the same as for Aspen, and include the full amount of operational risk (consistent with the standard formula approach);
- the Risk Margin is subsequently allocated to class of business, as it is required to be disclosed ultimately by "Solvency II Class of Business".

The Cost-of-Capital rate is fixed at 6% under the Solvency II Regulations. The key component of the calculation is the projection of future SCRs.

¹ Additionally, "unavoidable market risk" is allowed for, if there are any assets that cannot be de-risked (e.g. converted to cash) in the hypothetical event of a portfolio transfer, though it is generally understood that this ought to be nil for the non-life insurance industry.

D2.5.1 Risks Considered within the Risk Margin SCR

The initial SCR (i.e. SCR(0)) considers the capital required for a third party to run off all legally bound business within the Technical Provisions. The risks considered within the Risk Margin SCR for AIUK include:

- the full amount of Reserving Risk (since all earned claims provisions are legally bound);
- a portion of the Underwriting Risk (to include the capital in respect of unexpired exposures and “written but not incepted” (“WBNI”) business, which are legally bound, but excluding the risk associated with any other new business to be written that wasn’t legally bound at t=0);
- credit risk arising from counterparties in relation to the above insurance risk calculations, including reinsurance counterparties and premium debtors;
- operational risks associated with the third party; and
- diversification credit between the risks described above.

In order to avoid circularity, the SCR component in relation to the movement in the Risk Margin is deliberately excluded.

D2.5.2 Capital Runoff Patterns

As indicated by the Risk Margin formula, a full runoff profile of the SCR is required. Without using a nested stochastic approach (which is computationally intensive), this is not something that can be calculated directly from AIUK’s ECM. AIUK therefore uses a simplification to select capital runoff patterns in order to project the future SCRs.

AIUK does not consider it appropriate to apply a single capital runoff pattern for the full amount of the SCR. In particular, underwriting risk capital is, to a large extent, held in relation to ‘event risk’ (i.e. the risk associated with the occurrence (or not) of loss events). At the end of the year, the occurrence of any event is generally known, and any residual risk associated with claims estimates (i.e. reserve risk) is generally of a smaller magnitude.

AIUK therefore expects the capital runoff pattern in respect of underwriting risk to be considerably shorter, and weighted significantly to the first year, in which the majority of the event risk lies.

In light of the above, AIUK’s approach is to use two different capital runoff patterns: a single pattern for all the risks other than underwriting risk and a shorter capital runoff pattern for the underwriting risk.

AIUK’s approach effectively results in the calculation of two separate Risk Margins, which are eventually aggregated to produce a single Risk Margin.

D2.5.3 Justification of Simplification of Risk Margin – Capital Runoff Patterns

In using reserve runoff patterns as a proxy for capital runoff patterns, AIUK makes use of the “square root method”. Under this approach, capital is assumed to run off more slowly than the runoff of the underlying claims provisions. The general form of this simplification assumes that the runoff pattern for the SCR used in the Risk Margin calculation is identical to the square root of the runoff pattern of the claims provisions. Specifically, AIUK selects the runoff pattern to be the square root of the reserve runoff patterns, rather than based on the full Technical Provisions, which include premiums and expenses.

By way of example, if the claims provisions reduced after a period to 64% of their starting levels, the capital associated with those provisions would reduce to 80% of the initial capital requirement.

The exclusion of expenses is for simplicity (and these are small, so unlikely to materially change the pattern used), and the exclusion of premiums is because the claims runoff provides a better representation of the runoff of risk. It is possible, if premiums were included to have negative items within the runoff pattern, which AIUK does not consider appropriate as a feature of a capital runoff pattern.

Under Articles 56 and 57 of the European Commission’s Level 2 Implementing Measures, such a simplification is allowable, subject to justification, which includes considerations of proportionality and appropriateness to risk profile.

The square root simplification was selected for the following reasons:

- Parsimony – it is a simple approach that, in AIUK’s view, appropriately captures the desired risk characteristics.
- Industry standard – the square root method is a common approach adopted across the market and is consistent with both PRA and Lloyd’s recommendations (Supervisory Statement issued by the PRA in April 2014 and Technical Provisions under Solvency II – Lloyd’s guidance issued July 2015). While AIUK do not see the market practice as sufficient justification in itself, in light of the other considerations, this gives us assurance that the approach is not unreasonable.

AIUK acknowledges that there are some limitations to this approach (e.g. it has been suggested the square root method may misestimate the rate of decay in the tail of the pattern). However, any theoretical limitations of the Risk Margin estimation method are considered in light of the fact that the overall Risk Margin methodology is predicated on a number of much greater theoretical assumptions and limitations of the approach prescribed by the Solvency II regulations.

D2.5.4 Allocation to line of business

The Risk Margin calculation is carried out at legal entity level, followed by allocation to class of business, this allows for diversification benefit between risk types and lines of business

D2.6 Volatility adjustment

The volatility adjustment is not used by AIUK.

D2.7 Transitional risk –free interest rate term structure

The transitional risk-free interest rate term structure is not used by AIUK.

D2.8 Transitional deduction on Technical Provisions

This transitional deduction on Technical Provisions is not used by AIUK.

D3 Other liabilities

D3.1 Valuation of Liabilities (other than Technical Provisions)

Class of other liabilities	UK GAAP value	Differences relating to Technical Provisions	Other differences	Solvency II value
	\$'m	\$'m	\$'m	\$'m
Derivatives [3.1a]	(4.0)			(4.0)
Reinsurance payables [3.1b]	(944.2)	701.1		(243.1)
Payables (trade, not insurance) [3.1c]	(133.1)			(133.1)
Financial liabilities other than debts owed to financial institutions [3.1d]	-	-	(37.8)	(37.8)
Any other liabilities, not elsewhere shown [3.1e]	(41.0)		-	(41.0)
TOTAL LIABILITIES	(1,122.3)	701.1	(37.8)	(459.0)

The UK GAAP figures are shown above using the Solvency II balance sheet presentation, and agree to the Solvency II QRT S.02.01.01. These figures do not tie directly to the AIUK statutory accounts at a financial line item level. The reason for this is the different presentation methods required for statutory accounts and Solvency II reporting. Most notably, a portion of reinsurers' share of technical provisions for Solvency II is shown within assets for statutory accounts. Additionally, amounts due from group undertakings are shown as a separate line item in the financial statements, whereas for Solvency II they are shown across the different receivable and payable lines. However, the Company's UK GAAP net assets are \$841.9m in both returns.

D3.2 Narrative explanation of Liabilities

Class of liabilities	Details
Derivatives [3.1a]	Financial instruments are measured at fair value for Solvency II purposes. The fair value measurement principles of AIUK's derivatives are consistent with the Solvency II valuation policy.
Reinsurance payables [3.1b]	For Solvency II purposes \$701.1m of insurance and reinsurance payables comprising the funds withheld balance with ABL are transferred to Technical Provisions and form part of the valuation of Technical Provisions in D2 above. This leaves \$243.1m of Reinsurance payables that have been measured at initial recognition value in the Financial Statements. This amount is what they are expected to be settled at and therefore represents the fair value on a Solvency II basis.
Payables (trade, not insurance) [3.1c]	AIUK values payables at undiscounted amortized cost less any adjustment for expected default. Given the short term maturity of these liabilities, the UK GAAP valuation policy is considered to be a close approximation to fair value, and therefore sufficient for Solvency II purposes.
Financial liabilities other than debts owed to financial institutions [3.1d]	AIUK has valued its existing lease agreements and capitalised those on its balance sheet in line with IFRS 16 for Solvency II reporting, however UK GAAP does not currently incorporate IFRS 16. The effect of this is to increase the lease liability balance by \$37.8m.
Any other liabilities, not elsewhere shown [3.1e]	AIUK uses book value as per UK GAAP. These mostly consist of accrued expenses for short term employee benefits recharged to AIUK. These are valued in accordance with section 28 of FRS 102. When an employee has rendered service during an accounting period, AIUK recognise the undiscounted amount of short-term employee benefits as a liability (accrued expense), after deducting the amounts already paid. The valuation of these under UK GAAP is consistent with Article 75 of the Solvency II Directive.

D3.2.1 Financial and operating leases

AIUK leases its office space, both within the UK and internationally through its branch network. These leases are accounted for in line with IFRS 16 and are recognised on the Balance Sheet.

D3.2.2 Material deferred tax liabilities

The deferred tax liability on a Solvency II basis for AIUK at 31 December 2019 is nil (2018: nil).

D3.2.3 Expected timing of outflows of economic benefits

Payables and other liabilities have a mean term for payment of less than two years. As these are expected to be settled in the short term no deviation risk has been applied.

D3.2.4 Employee benefits

AIUK does not have a defined benefit pension plan.

D3.2.5 Changes to valuation of liabilities in the period

There have been no changes to AIUK's methodology for valuing other liabilities in the reporting period.

D3.2.6 Major sources of estimation uncertainty

See section D1.2.6 above.

D4 Alternative methods for valuation

With the exception of Insurance and intermediaries receivables, Reinsurance receivables, Receivables (trade, not insurance), Property, plant and equipment held for own use, Financial liabilities other than debts owed to financial institutions and other loans and mortgages, no other assets or liabilities have been valued using any alternative valuation methods as referred to in Article 10(5) of Solvency II Delegated Regulation.

D4.1 Financial statements valuation

AIUK uses the valuation principles of UK GAAP to prepare its financial statements. With the exception of IFRS 16 lease adjustments. There is no-re-measurement to international accounting standards as this is not necessary to meet the criteria outlined above.

For Solvency II reporting the valuation principles presented by Article 75 of Directive 2009/138/EC are used.

D5 Going Concern

The Directors have prepared the Solvency and Financial Condition Report on the going concern basis. The Directors confirm that they are satisfied that the Company has adequate resources to continue in operation and meet its liabilities as they fall due for a period of at least 12 months from the date that the Solvency and Financial Condition Report is approved.

In arriving at this conclusion, the Directors have undertaken an assessment to determine the impact of COVID-19 on the company and its future viability, taking into account the likely impact on the Company's insured loss exposures, investments and solvency capital position under moderate and severe scenarios, and the associated sensitivities where relevant. This is supplemented as appropriate, by reverse stress testing to determine the extent to which capital erosion would have to occur to result in an adverse impact on the Company's ability to meet certain regulatory capital requirements. The analysis performed, including the monitoring of the solvency and capital position post year end by the Directors on a frequent basis, demonstrates that the Company remains solvent and retains sufficient headroom above regulatory capital requirements under moderate and severe scenarios; the reverse stress test indicates that the likelihood of there being capital erosion to such an extent as to breach the company's regulatory capital requirements is sufficiently remote.

D6 Any other information

AIUK has nothing to report under other information.

E Capital Management

E1 Own funds

E1.1 Objectives for managing Own Funds

The primary objective and positioning of AIUK is to provide an efficient platform to offer specialty insurance and reinsurance products while providing a high level of security to policyholders. To support this objective, AIUK maintains sufficient Own Funds to cover the MCR and SCR with an appropriate buffer. There have been no changes to the objectives in 2019.

E1.2 Policies and Process

As described in section B3.1, capital management is defined through AIUK's approach to its Own Risk and Solvency Assessment ("ORSA"). The ORSA report is an accurate account of the AIUK Internal Control and Risk Management Framework which is the over-arching control mechanism that defines the controls in place and the processes AIUK will follow within Aspen to manage risk. To assist the embedding of the Framework into the business, AIUK use Risk Policies and Risk Limits. Risk Policies define the processes AIUK will follow in managing the different categories of risk on a day-to-day basis. They also describe the internal control processes.

E1.3 Capital and Liquidity Plan

E1.3.1 Solvency II Own Funds

The regulatory capital is the Solvency II Own Funds. The Solvency II Own Funds based on the closing balance sheet as at 31 December 2019 consists of the following:

AIUK Solvency II Own Funds (31 December 2019):

	\$'m
Ordinary Shares	614.9
Deferred Tax asset	29.1
Reconciliation Reserve (Note 1)	42.7
Ancillary Own Funds	100.0
Total Solvency II Own Funds to meet SCR	786.7

Note 1

	\$'m
Solvency II excess of assets over liabilities (after deduction of Ordinary Shares, Paid in Capital and Deferred Tax asset)	108.3
Ring fenced funds deduction	(65.6)
Reconciliation Reserve	42.7

E1.3.2 Capital requirements for 2019 and 2018

The solvency assessment of AIUK compares projected held capital measured on both a Solvency II basis and under US GAAP with AIUK's Risk Appetite over the next three years. Three years is the time horizon used for AIUK's business planning.

E1.4 Quantitative Explanation of Own Funds

Please refer to section D Valuation for Solvency Purposes which includes a chart showing the adjustments between UK GAAP and Solvency II Own Funds along with a qualitative explanation for the adjustments.

E1.5 Structure, amount and quality of basic Own Funds

Under Solvency II, Own Funds are classed as 'Basic' or 'Ancillary'. Basic Own Funds are defined as the excess of assets over liabilities, while Ancillary Own Funds are defined as any capital resources that could be called up to absorb losses.

Own Funds are further divided into three tiers. A list of own fund items which falls into these three categories as well as an explanation of the features which determine classification are contained in the Solvency II Delegated Acts. The material own fund items that make up Own Funds in AIUK (i.e. paid-in ordinary share capital and paid-in members' contributions) have been assessed against the criteria of Article 71 of the Solvency II Delegated Acts and are classified as Tier 1 based on the following fact pattern:

- they rank after all other claims in the event of winding-up proceedings regarding the insurance or reinsurance undertaking;
- they do not include features which may cause the insolvency of the insurance or reinsurance undertaking or may accelerate the process of the undertaking becoming insolvent;
- they are immediately available to absorb losses and do not hinder any recapitalisation;
- the nominal or principal are written down in such a way that all of the following are reduced: the claim of the holder of that item in the event of winding-up proceedings; the amount required to be paid on repayment or redemption of that item; the distributions on that item;
- they are undated;
- they are only repayable or redeemable at the option of the insurance or reinsurance undertaking and shall not include any incentives to repay or redeem that item;
- they provide for the suspension of repayment or redemption of that item in the event that there is non-compliance with the SCR or repayment or redemption would lead to such non-compliance until the undertaking complies with the SCR and the repayment or redemption would not lead to non-compliance with the SCR;
- they allow for the distributions in relation to that item to be cancelled, either under the legal or contractual arrangements governing the item or under national legislation, in the event that there is non-compliance with the SCR or the distribution would lead to such non-compliance until the undertaking complies with the SCR and the distribution would not lead to non-compliance with the SCR;
- they may only allow for a distribution to be made where there is non-compliance with the SCR or where distribution would lead to such non-compliance where all the following conditions are met: the supervisory authority has exceptionally waived the cancellation of dividends, the distribution does not further weaken the solvency position of the insurance or reinsurance undertaking; the MCR is complied with after the distribution is made;
- the insurance or reinsurance undertaking has full flexibility over the distributions on the basic own-fund item; and
- the basic own-fund item is free from encumbrances and is not connected with any other transaction.

AIUK has agreed that it will have access to \$100m in the form of an unsecured letter of credit from National Australia Bank (issued by its parent Aspen European Holdings Limited and guaranteed by AIHL, its former ultimate parent). AIUK applied to the Prudential Regulatory Authority ("PRA") for approval of this arrangement to be treated as Tier 2 Ancillary Own Funds on 26 October 2018, the PRA approved this application on 28 January 2019 and the Letter of Credit was issued on 11 February 2019. Historically, AIUK has held Tier 1 Capital with a minimal amount of Tier 3 Capital. The introduction of the \$100m of Ancillary Own Funds (unaudited) brings AIUK into line with peers in terms of the proportion of Tier 2 Capital on its balance sheet.

The structure, amount and quality of AIUK's Own Funds as at 31 December 2019 and as at 31 December 2018 is set out below:

	2019 Tier 1 – Unrestricted \$'m	2019 Tier 2 \$'m	2019 Tier 3 \$'m	2019 Total \$'m	2018 Tier 1 – Unrestricted \$'m	2018 Tier 3 \$'m	2018 Total \$'m
Basic Own funds							
Ordinary Shares	614.9	-	-	614.9	614.9	-	614.9
Additional Paid in Capital	-	-	-	-	-	-	-
Deferred Tax asset	-	-	29.1	29.1	-	23.7	23.7
Reconciliation reserve	42.7	-	-	42.7	94.1	-	94.1
Total basic Own Funds	657.6	-	29.1	686.7	709.0	23.7	732.7
Ancillary Own Funds	-	100.0	-	100.0	-	-	-
Total available Own Funds	657.6	100.0	29.1	786.7	709.0	23.7	732.7

Movements in the period relate to the reconciliation reserve and the deferred tax asset.

E1.5.1 Reconciliation Reserve

The reconciliation reserve equals the total of assets less liabilities under Solvency II reduced by the following items:

- own shares included as assets on the balance sheet;
- foreseeable dividends, distributions and charges;
- the basic own fund items included in Tier 1-3; and
- restricted own fund items due to ring fencing (as described in section E 1.7.1 below).

Reconciliation reserve	2019 \$'m	2018 \$'m
Excess of assets over liabilities from Solvency II Balance Sheet	752.3	795.7
Less: Other basic own fund items	644.0	638.6
Less: Ring fenced funds restriction	65.6	63.0
RECONCILIATION RESERVE	42.7	94.1

There are no foreseeable dividends at 31 December 2019.

Foreseeable dividends are recognised at the latest when they are declared or approved by the AIUK Board, or other persons who effectively run the undertaking, regardless of any requirement for approval at the annual general meeting.

E1.6 Amount of Own Funds to cover the SCR and MCR

The amount of Own Funds available to cover the SCR and the MCR is summarised in the table below:

31 December 2019	Total \$'m	Tier 1 – Unrestricted \$'m	Tier 2 \$'m	Tier 3 \$'m
Total available Own Funds to meet the SCR	786.7	657.6	100.0	29.1
Total available Own Funds to meet the MCR	706.1	657.6	48.5	-
Total eligible Own Funds to meet the SCR	786.7	657.6	100.0	29.1
Total eligible Own Funds to meet the MCR	706.1	657.6	48.5	-
SCR	539.3			
MCR	242.7			
Ratio of Eligible Own Funds to SCR	146%			
Ratio of Eligible Own Funds to MCR	291%			

E1.7 A description of any item deducted from own funds and a brief description of any significant restriction affecting the availability and transferability of own funds within the undertaking

E1.7.1 Restricted capital

Solvency II introduced the concept of Ring Fenced Funds (“RFFs”). The main characteristic of a RFF is the existence of a restriction on assets in relation to certain liabilities on a going concern basis.

In certain cases local regulators require AIUK’s overseas branches in that country to hold assets greater than the total amount of its liabilities. As a result, any excess assets from that branch are not available to meet liabilities elsewhere in the business and are restricted under Solvency II.

AIUK reviewed all of its restrictions and determined that the regulatory capital required by local branch regulators (over and above that required to meet branch liabilities) represent RFFs. This resulted in the following RFFs at the end of 2019:

RFF	Description	Restricted Surplus \$'000
Australian Branch	The Australian branch of AIUK is required to localise assets equal to the value of its technical liabilities plus an amount equal to the regulatory capital requirement. AIUK have agreed with the Australian Regulator ("APRA") to maintain within the trust an amount equal to its technical liabilities plus an agreed Regulatory Capital amount.	42.5
Canadian Branch	The Canadian branch of AIUK is required to localise assets equal to the value of its technical liabilities plus an 'Internal Target % x Minimum Capital Margin' within the Canadian trust fund.	18.8
Singapore Branch	The Singapore branch of AIUK is required to localise assets equal to the value of its technical liabilities plus the greater of SGD 5m or 120% of the total risk requirements. This is set out in the Singapore Insurance Act Section 18 and in the Insurance (Valuation and Capital) Regulations.	4.1
Zurich Insurance Branch	The Zurich insurance branch of AIUK is required to localise assets equal to the value of its technical liabilities plus a small margin of 4%.	0.2
Total		65.6

As part of its review, AIUK assessed whether these RFFs were material either individually or in aggregate and concluded they were not.

The materiality assessment considered a number of factors including the assets as a proportion of AIUK's assets and an assessment of the impact on the SCR requirement for AIUK as a whole if these risks were excluded and the SCRs of the two more significant branches (Australia and Canada) on a standalone basis. While the RFFs in each branch are ring fenced for each branch, the remaining AIUK funds remain available to meet any capital requirements of those branches. The approach of deducting the RFFs from the available Solvency II Own Funds is prudent as it does not allow for any reduction in the SCR requirement arising from liabilities in those branches

If AIUK deems any of the RFFs to be material it will calculate and report separate SCR requirements in relation to those branches.

E2 SCR and MCR

E2.1 SCR (unaudited)

Risk type (\$m)	2020 SCR	2019 SCR	Movement	%
Premium Risk excluding Risk Margin	184	273	(89)	(33%)
Reserving Risk excluding Risk Margin	321	280	41	15%
Change in Risk Margin	5	18	(13)	(72%)
Credit Risk	304	118	186	158%
Market Risk	145	119	26	22%
Operational Risk	95	92	3	3%
Total (without diversification)	1,054	900	154	17%
Diversification benefit	(515)	(313)		
Diversification Benefit %	(48.9%)	(34.8%)	(14.1%)	
Solvency Capital Requirement	539	587	(48)	-8%

The Solvency Capital Requirement has reduced from the previous year. The movements in the individual risk categories are explained in more detail below.

E2.1.1 Reasons for change in the SCR

Premium Risk

Premium risk has reduced by \$89m due to:

- Several lines of business have been exited including Credit, Bond and Political Risk Reinsurance, UK Regional Property & Liability business (“ARML”), Accident and Health, and Marine & Energy Liability.
- Reduction in non-recurring expenses arising from the wind-up of the Aspen Efficiency & Effectiveness programme, as well as in other one-off costs associated with the acquisition of Aspen by Apollo Global Management and changes in management.
- There has been a reduction in Catastrophe risk due to a decrease in exposure for the Catastrophe-exposed lines where we have reduced growth expectations. There has also been a reduction in planned catastrophe exposure for the UK Regional Property class (“ARML”) which is now in run-off.
- There has been an increase in outwards reinsurance protection for casualty lines due to the placement of a capital markets risk transfer solution, with the effect of a 25% quota share contract covering all Casualty Reinsurance lines of business. However this is partially offset by a reduction in outwards reinsurance cover purchased across other lines of business, in particular: the non-renewal of several ACM contracts covering Pro Rata, Specialty Reinsurance and Asia Pacific business; reduction in the Catastrophe covers purchased for the Group; non-renewal of the aggregate Stop Loss cover.

A correction was made to the means by which outwards reinsurance premium is accounted for at the end of the projection year. This leads to a further reduction in risk.

Reserving Risk

Reserving risk has increased by \$41m.

Updating the reserves to the 2019 year-end position leads to an increase in risk due to:

- The intragroup quota share for the Aspen Reinsurance America classes has been replaced with a high attaching aggregate excess of loss cover from accident year 2018. This provides a lower amount of reinsurance cover. We now have an additional accident year (2019) of

reserves for these classes covered by a lower level of reinsurance protection than previously and as such reserving risk increases.

- There is an increase in the net reserves for the Casualty Reinsurance lines. As these classes are the main drivers of reserving risk, these increases in reserves increase reserving risk.

There is a further increase in risk due to updating reserve risk assumptions:

- The annual recalibration of reserving risk volatility parameters across all lines of business resulted in an increase in the assessment of risk for a number of classes, including US Casualty Treaty lines. The volatility parameter for the Marine Energy Liability line was also increased following a large deterioration in 2019.
- The payment patterns have been lengthened across a number of lines including Casualty Reinsurance, Specialty Reinsurance and Marine & Energy lines of business. As claims are assumed to take longer to be settled, this gives risk to an increase in risk arising from inflationary impacts.

Change in Risk Margin

Change in Risk Margin has decreased by \$13m.

This is primarily due to premium risk decreasing, in particular exiting several lines of business results in a lower level of unexpired risk in one year's time.

Credit risk

Credit risk has increased by \$186m.

This is primarily due to a model change whereby Aspen Bermuda Limited is now treated as an external 'A' rated reinsurer for the purposes of the intragroup credit risk calculation.

Market Risk

Market risk has increased by \$26m. This is driven by a reallocation of \$150m of core investments into private assets including middle market loans, commercial real estate and trade & receivable finance.

Operational Risk

Operational risk has remained broadly flat.

Diversification Benefit

Diversification benefit has increased by 14%. This is primarily due to the increase in Credit Risk diversifying well with other risk types.

E2.2 MCR

The MCR is calculated using inputs for the net (of reinsurance/SPV) Solvency II best estimate and the net (of reinsurance/SPV) written premium in the last twelve months. Factors are applied to these inputs based on the Solvency II regulations. This is used to calculate a pre-corridor MCR. A corridor of 25-45% of the SCR is then applied to calculate a post-corridor MCR. The post-corridor MCR is shown below:

Year ended 31 December	2019	2018
	\$m	\$m
'Post-corridor' MCR	242.7	264.1

E2.2.1 Reasons for changes in the MCR

The post corridor MCR is capped at 45% of the SCR. Therefore the change in the MCR in the period can be explained with reference to the change in the SCR in section E 2.1.1 above.

E3 Use of duration-based equity risk sub-module in the calculation of the SCR (unaudited)

E3.1 Duration based equity risk sub-module

This is only relevant to life insurance undertakings and therefore this section is not applicable.

E4 Differences between the standard formula and the Internal Model used (unaudited)

E4.1 Main differences in the methodologies and underlying assumptions used in the standard formula and in the Internal Model

The overall capital requirement for the standard formula is higher than for the Internal Model.

This is mainly driven by the standard formula having greater charges for Non-Life Underwriting risk and Market Risk. This is discussed in more detail below.

Non-Life Underwriting Risk

A key driver of the difference between the standard formula and the internal model is due to the high capital charges given within the standard formula to the Non-proportional Casualty RI and Non-proportional Property RI Solvency II lines of business.

This is due to it being not quite so clear cut that this is the main driver of the differences any more with Cat Risk also being a larger driver of the difference.

Within the Internal model these lines are modelled at a greater level of granularity than the standard formula. The diversification between these more detailed class splits is not sufficiently allowed for within the standard formula calculation which only allows for within class diversification benefit using:

- Reserve to Premium risk correlations
- Geographical diversification factors

No credit is given for geographical diversification for Non-proportional lines within the standard formula.

Non-proportional Casualty RI

The claims provisions for the non-proportional casualty reinsurance class are large, making up a significant proportion of AIUK's reserves. Within the internal model the Non-Proportional Casualty Reinsurance class is modelled as seven separate classes. For example, this includes US Med Mal, Canadian PI and International Motor classes. These lines of business are very distinct from each other, writing different products as well as in different territories. As such, they are not perfectly correlated with each other and there is diversification benefit between them. As the standard formula allows no geographical diversification for this line, little credit is given for diversification between the distinct classes that make up this SII line of business.

Furthermore, the non-proportional casualty RI class is subject to the highest volatility factors for both premium and reserve risk under the standard formula calculation. This also leads to a high charge for this class.

Non-proportional Property RI

Similarly, non-proportional property RI is also modelled more granularly within the internal model with seven separate classes. These include Cat Treaty, Risk XS, Pro-Rata and Specialty RI. The risks written within these classes are geographically diverse with property risks written in different parts of the globe. This is not recognised within the standard formula calculation, which does not allow any geographical diversification for this class.

As for Non proportional casualty RI, this SII line of business is subject to the highest volatility factors which also serve to increase the capital charge given.

Catastrophe Risk

Catastrophe Risk for the standard formula is higher than for the internal model.

Both Man-Made Catastrophe and Natural Catastrophe risk are captured within the standard formula and the internal model calculations, but using very different methodologies. The standard formula results in a higher charge for both Natural catastrophe risk and Man-made catastrophe risk. For both methods natural catastrophe is the larger of the two risks.

For Natural catastrophe risk the standard formula focusses in more detail on EU-Perils. For non-EU perils a simple factor based approach is used, which significantly stresses total exposure with limited geographical diversification. Although AIUK is exposed to EU perils, the majority of AIUK's exposure is outside of the EU with large exposures in particular to US perils. As such the standard formula results in a higher risk charge for non-EU perils. For the internal model we use proprietary vendor models such as RMS and AIR with detailed modelling of AIUK's exposures. This approach leads to a lower natural catastrophe risk using the internal model compared with the standard formula.

For Man-Made catastrophes, both the standard formula and the internal model use a scenario based approach. However, there are significant differences between the scenarios modelled and the methodology employed.

For both Natural and Man-Made catastrophe risk the calculation of reinsurance recoveries is more accurate within the internal model. The internal model generates gross individual losses at class level. Each loss can be explicitly netted down using the reinsurance programme. As such there are fewer approximations needed than for the standard formula calculation.

Market Risk

Market risk is also higher for the standard formula driven by a higher currency risk charge and lower diversification benefit.

Currency Risk

Currency risk for the standard formula is higher than for the internal model.

Currency risk in the standard formula is calculated simplistically, by applying a shock of 25% to AIUK's net opening asset value position for non-USD currencies. As such mismatches due to fluctuations in the net asset value position in the following years are not taken into account.

For the internal model, currency risk is measured by the impact of currency exchange rate movements on AIUK's balance sheet, capturing the level of mismatch between assets and liabilities by currency. Currency risk in the Internal Model includes modelled future fluctuations in the value of both assets and liabilities. As such there will be some scenarios where liabilities in non-USD currencies are projected to move differently to assets. Currency exchange rate movements are obtained from the ESG.

The difference between the standard formula and internal model reflects the differences in the calculation approach.

Diversification

Diversification for the standard formula is lower than for the internal model.

Diversification in the internal model is captured by the ESG. Correlation between the different economic variables driving each market risk type is calibrated based on historical data and expert judgement about future economic trends. The cascade structure of the ESG allows significant diversification between credit and interest rate risk which is in-line with history.

The Internal Model is further explained below.

E4.2 Uses of the Internal Model

The uses of the Internal Model are as follows:

- **Core use:** Any use of the Internal Model relating to measurement or monitoring of the overall capital or solvency position of the entities in scope.
- **Ancillary use:** Any use of the Internal Model not directly relating to measurement or monitoring of overall capital or solvency, but nonetheless informing and optimising business decision-making as part of a defined and ongoing business process.
- **Ad-hoc use:** Same as ancillary, except as and when required (i.e. not as part of a defined, ongoing process).

Aspen defines each use in terms of whether the Internal Model is critical to the process, enhances the process or is related to the process as follows:

- **Model critical:** The process could not function effectively without use of the model
- **Model enhanced:** The process may be enhanced by use of the model from time to time, but the model is neither the core driver nor critical to the majority of the process
- **Model related:** The process is relied upon in use test evidence but does not consume model outputs, rather supports their usage

The following table summarises the various uses of the Internal Model, together with their importance and reliance on the outputs of the Internal Model.

Use Test Process	Importance	Reliance on model
Business and Multi-year Planning	Core use	Model critical
CRO Reporting	Core use	Model critical
Own Risk & Solvency Assessment ('ORSA')	Core use	Model critical
Regulatory Reporting	Core use	Model critical
Insurance Counterparty Risk Management	Ancillary use	Model critical
Reinsurance Optimisation & Management	Ancillary use	Model critical
Reserve Setting and Monitoring	Ancillary use	Model critical
Investment / Asset Allocation	Ancillary use	Model enhanced
Performance Management	Ancillary use	Model enhanced
Pricing Calibration	Ancillary use	Model enhanced
Model Validation	Ancillary use	Model related
Mergers & Acquisitions	Ad-hoc use	Model enhanced
Embedding Understanding	Ad-hoc use	Model related

Links to decision making

Output from the ECM is supplied to senior management and this output is used to support the decision making in each of the processes listed above, with the importance of and the reliance on the model as shown.

E4.3 Scope of the Internal Model

E4.3.1 Risk Categories

The ECM models the following major risk categories:

- insurance risk (termed “Non-Life Underwriting Risk” under Solvency II, and includes reserving risk);
- market risk (currency risk and asset risk components);
- counterparty default risk (broker and outwards reinsurance credit risk components as well as intragroup credit risk); and
- operational risk (the operational risk category includes certain other key risk scenarios identified by Aspen’s risk management team including aspects of Group risk and liquidity risk).

The main unmodelled risk categories are:

- liquidity risk;
- strategic risk;
- emerging risk;
- regulatory risk; and
- taxation risk.

AIUK does not quantify liquidity risk within the ECM as liquidity risk tends not to impact the level of capital needed (which is what the ECM seeks to quantify). Liquidity risk is however carefully managed by the Group Chief Financial Officer and AIUK uses Stress and Scenario Testing to assess its exposure to liquidity risks and to assist in determining the minimum levels of cash and cash equivalents to hold.

Strategic risk is not believed to be sufficiently quantifiable to estimate within the ECM. It is, however, evaluated qualitatively as part of the strategic planning process.

As emerging risk inherently relates to risks that are largely unknown at a point in time, it is extremely difficult to quantify within the ECM. Any risk initially identified as emerging would, if material and quantifiable, be included in a new or existing risk classification and quantified within the ECM. This is also true in relation to the potential impact of future changes in regulation or taxation which are residual risks beyond those covered by operational risk.

E4.3.2 Business Units

The Internal Model covers all business units of AIUK.

E4.4 Calculation of the probability distribution

The Internal Model is used to derive a probability distribution for economic capital.

The ECM uses stochastic “Monte Carlo” techniques to generate 250,000 independent scenarios (“simulations”) that consider all risk types and entities holistically within the same model, and allowing for realistic interactions between variables within the model.

In AIUK’s judgement, the chosen number of simulations gives a sufficient number of modelled data points to capture a wide range of outcomes representative of the entire probability distribution, whilst also providing a good degree of stability in the tail of the distribution, from which the extreme modelled scenarios that drive economic and regulatory capital requirements are simulated. Increasing the number of scenarios (for example, to twice the current number) may result in a slight increase in the stability of the simulated values in the tail of the distribution, but the benefits would be disproportionately outweighed by the increase in run-time.

For each simulation, as much detail as possible is retained to allow a deep and detailed drill-down into the drivers of risk across the risk distribution (e.g. full sets of large loss detail, catastrophe losses, clash losses, reserving changes by class and accident year). Mathematically speaking, the 250,000 resulting

scenarios can be used to generate a probability distribution, from which various risk metrics can be inferred.

E4.5 Risk measure and time period used in the Internal Model

The Internal Model SCR captures the risk to AIUK's available Own Funds, calibrated to a 1-in-200 level of confidence, over a 1-year time horizon, based on an 'economic' balance sheet and on valuation principles prescribed by Solvency II. This is consistent with Article 101(3) of Directive 2009/138/EC.

E4.6 Nature and appropriateness of the data used in the Internal Model

The majority of internal inputs are from spreadsheets used as part of the parameterisation process, which are maintained and controlled by the Capital Modelling Team in line with Aspen's Operational Control Policy. Key data include business plan inputs from the outputs of the financial plans and forecasts. These plans and forecasts include, for example, the forecasted expected value of gross and net (of reinsurance) premiums, claims, expenses and other financial data for a given line of business. Further important internal data sources include the projected reserves provided by the reserving actuaries and the details of the outwards reinsurance programme provided by the outwards reinsurance team.

To ensure that the quality of data is sufficient to meet Aspen's requirements, the key controls are identified and documented within the Data Directory. These controls are a combination of financial and procedural controls, implemented specifically to meet the data quality requirements. This includes controls to ensure the risks associated with the flow of data are mitigated. The controls are mapped to the requirements in the Data Directory, allowing for any gaps or risks to be immediately identified. Controls are broadly categorised as:

- Preventive controls: Access / Security Control, Input Validation, Analytical Controls;
- Detective Controls: Reconciliation, Expert Review, Accuracy, Appropriateness, Completeness, Consistency, Timelines.

There are a number of inputs to the Internal Model from external models or data sources. The most significant external models are the ESG and the vendor catastrophe models used for material natural catastrophe perils to which AIUK is exposed. The outputs from these models undergo extensive validation before being deemed fit for use in the Internal Model. The ESG Working Party (which has representatives from the investment team, the market risk team and the capital modelling team) is responsible for assessing the appropriateness of the latest version of the ESG and for providing a recommendation regarding the use of the ESG in the model to the Internal Model Governance and Technical Executive Committee. Validation of vendor catastrophe models is performed by the Catastrophe Risk Management team.

To provide further independent model validation, AIUK additionally commissions an external third party review of its Internal Model approximately every three years, and as and when deemed necessary by the AIUK Risk Committee or AIUK Board.

E5 Non-compliance with the SCR and non-compliance with the MCR

AIUK has complied with the SCR and MCR throughout the period and therefore this section is not applicable.

E6 Any other information

AIUK has nothing to report under other information.

Annex 1

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Balance Sheet (\$000)

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	29,080
R0050	
R0060	38,200
R0070	2,453,271
R0080	
R0090	
R0100	-
R0110	-
R0120	
R0130	2,281,441
R0140	1,176,254
R0150	816,419
R0160	
R0170	288,768
R0180	67,573
R0190	6,895
R0200	97,362
R0210	
R0220	
R0230	75,778
R0240	
R0250	
R0260	75,778
R0270	1,321,287
R0280	1,321,287
R0290	1,256,512
R0300	64,776
R0310	
R0320	
R0330	
R0340	
R0350	32,374
R0360	26,196
R0370	416,124
R0380	78,764
R0390	
R0400	
R0410	103,170
R0420	9,354
R0500	4,583,598

Annex 1

S.05.01.02

Premiums, claims and expenses by line of business (\$000)

		Line of Business for: accepted non-proportional reinsurance				Total
		Health C0130	Casualty C0140	Marine, aviation, transport C0150	Property C0160	C0200
Premiums written						
Gross - Direct Business	R0110					355,071
Gross - Proportional reinsurance accepted	R0120					587,823
Gross - Non-proportional reinsurance accepted	R0130	31,499	129,389	83,042	140,659	384,590
Reinsurers' share	R0140	18,200	58,821	55,614	60,692	722,693
Net	R0200	13,299	70,569	27,428	79,967	604,790
Premiums earned						
Gross - Direct Business	R0210					387,327
Gross - Proportional reinsurance accepted	R0220					599,935
Gross - Non-proportional reinsurance accepted	R0230	33,274	145,176	83,613	139,935	401,998
Reinsurers' share	R0240	18,287	59,646	56,961	62,254	753,585
Net	R0300	14,987	85,530	26,651	77,681	635,675
Claims incurred						
Gross - Direct Business	R0310					310,189
Gross - Proportional reinsurance accepted	R0320					425,168
Gross - Non-proportional reinsurance accepted	R0330	19,798	108,754	40,065	26,178	194,794
Reinsurers' share	R0340	10,118	54,316	15,713	15,642	579,908
Net	R0400	9,680	54,437	24,352	10,536	350,243
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	3,809	32,364	3,299	37,743	374,010
Other expenses	R1200					-
Total expenses	R1300					374,010

Annex 1
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Non-life Technical Provisions (\$000)

		Direct business and accepted proportional reinsurance											
		Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance	Legal expenses insurance	Assistance	Miscellaneous financial loss
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110	C0120	C0130
Technical provisions calculated as a whole	R0010	-	-	-	-	-	-	-	-	-	-	-	-
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	R0050	-	-	-	-	-	-	-	-	-	-	-	-
Technical Provisions calculated as a sum of BE and RM													
Best estimate													
Premium provisions													
Gross - Total	R0060	-	-	-	(1,987)	-	20,055	32,571	42,873	(43,814)	-	-	109
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0140	-	-	-	(808)	-	1,504	(9,680)	22,106	(45,122)	-	-	(156)
Net Best Estimate of Premium Provisions	R0150	-	-	-	(1,179)	-	18,551	42,251	20,767	1,307	-	-	265
Claims provisions													
Gross - Total	R0160	-	-	-	18,142	-	329,346	423,882	884,970	91,550	-	-	451
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0240	-	-	-	4,071	-	202,120	123,280	446,535	(17,193)	-	-	(3,090)
Net Best Estimate of Claims Provisions	R0250	-	-	-	14,072	-	127,226	300,601	438,435	108,743	-	-	3,542
Total Best estimate - gross	R0260	-	-	-	16,155	-	349,401	456,452	927,844	47,736	-	-	560
Total Best estimate - net	R0270	-	-	-	12,893	-	145,777	342,852	459,202	110,051	-	-	3,806
Risk margin	R0280	-	-	-	6,388	-	12,573	15,398	21,049	32,214	-	-	-
Amount of the transitional on Technical Provisions													
TP as a whole	R0290	-	-	-	-	-	-	-	-	-	-	-	-
Best estimate	R0300	-	-	-	-	-	-	-	-	-	-	-	-
Risk margin	R0310	-	-	-	-	-	-	-	-	-	-	-	-
Technical provisions - total													
Technical provisions - total	R0320	-	-	-	22,543	-	361,974	471,851	948,893	79,950	-	-	560
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	R0330	-	-	-	3,262	-	203,624	113,600	468,641	(62,314)	-	-	(3,246)
Technical provisions minus recoverables from reinsurance/SPV and Finite Re- total	R0340	-	-	-	19,280	-	158,350	358,250	480,252	142,265	-	-	3,806

Annex 1
S.17.01.02

Non-life Technical Provisions (\$000)

		Accepted non-proportional reinsurance:				Total Non-Life obligations
		Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	
		C0140	C0150	C0160	C0170	C0180
Technical provisions calculated as a whole	R0010	-	-	-	-	-
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	R0050	-	-	-	-	-
Technical Provisions calculated as a sum of BE and RM						
Best estimate						
Premium provisions						
Gross - Total	R0060	443	11,541	(3,225)	960	59,524
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0140	(685)	(2,704)	(7,494)	(12,603)	(55,642)
Net Best Estimate of Premium Provisions	R0150	1,128	14,245	4,269	13,563	115,167
Claims provisions						
Gross - Total	R0160	170,857	863,802	202,185	171,569	3,156,755
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0240	65,460	348,920	119,578	87,248	1,376,930
Net Best Estimate of Claims Provisions	R0250	105,397	514,882	82,607	84,321	1,779,825
Total Best estimate - gross	R0260	171,300	875,343	198,959	172,529	3,216,279
Total Best estimate - net	R0270	106,524	529,126	86,876	97,884	1,894,991
Risk margin	R0280	11,111	44,357	4,197	7,368	154,655
Amount of the transitional on Technical Provisions						
TP as a whole	R0290	-	-	-	-	-
Best estimate	R0300	-	-	-	-	-
Risk margin	R0310	-	-	-	-	-
Technical provisions - total						
Technical provisions - total	R0320	182,411	919,699	203,156	179,896	3,370,934
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	R0330	64,776	346,217	112,083	74,645	1,321,287
Technical provisions minus recoverables from reinsurance/SPV and Finite Re- total	R0340	117,636	573,483	91,073	105,252	2,049,646

Annex 1
 5.19.01.21
 Non-life Insurance Claims Information (\$000)

Accident year / Underwriting year

20010	1-Accident year
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Development year

Gross Claims Paid (non-cumulative)		Development year															15 & +
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
		C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110	C0120	C0130	C0140	C0150	C0160
Pror	R0100																
2005	R0110	78,297	422,953	302,230	159,664	108,266	54,053	18,162	19,963	23,923	17,265	15,028	9,801	4,317	618	2,775	-2,554
2006	R0120	108,509	92,181	87,789	65,325	42,514	34,549	17,768	14,017	11,361	16,332	12,391	3,944	6,377	4,625		
2007	R0130	82,656	174,065	148,222	94,104	56,635	37,563	28,997	20,039	17,262	18,394	13,409	17,111	17,091			
2008	R0140	83,292	156,827	141,517	101,774	94,611	66,657	71,264	22,608	14,900	19,437	20,590	28,121				
2009	R0150	46,088	122,781	98,187	108,734	67,498	51,783	41,030	28,735	27,728	21,104						
2010	R0160	64,802	158,796	131,540	112,870	78,014	58,640	45,649	28,826	14,963	16,750						
2011	R0170	96,525	235,027	209,187	116,977	49,636	49,696	32,231	16,435	17,485							
2012	R0180	61,638	185,787	166,440	72,047	68,833	47,735	31,779	25,375								
2013	R0190	54,200	164,169	136,040	73,773	67,975	34,883	30,859									
2014	R0200	51,680	142,089	121,361	66,301	63,357	65,301										
2015	R0210	53,971	173,010	176,199	55,590	74,824											
2016	R0220	102,669	253,993	142,275	96,322												
2017	R0230	75,147	307,530	159,726													
2018	R0240	143,934	332,254														
2019	R0250	102,138															

	In Current year	Sum of years (cumulative)
	C0170	C0180
R0100	-2,554	-2,554
R0110	2,775	1,220,696
R0120	4,625	512,684
R0130	17,091	726,547
R0140	28,121	829,698
R0150	7,674	621,341
R0160	16,750	710,851
R0170	17,485	823,189
R0180	25,375	659,634
R0190	30,859	551,899
R0200	65,301	510,418
R0210	74,824	529,596
R0220	96,322	595,259
R0230	159,726	622,404
R0240	332,254	476,187
R0250	102,138	102,138
Total	976,968	9,511,382

Annex 1
S.23.01.01

Own funds (\$000)

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
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)	R0010	614,900	614,900			
Share premium account related to ordinary share capital	R0030					
Initial funds, members' contributions or the equivalent basic own - fund item for mutual and mutual-type undertakings	R0040					
Subordinated mutual member accounts	R0050					
Surplus funds	R0070					
Preference shares	R0090					
Share premium account related to preference shares	R0110					
Reconciliation reserve	R0130	42,778	42,778			
Subordinated liabilities	R0140					
An amount equal to the value of net deferred tax assets	R0160	29,080				29,080
Other own fund items approved by the supervisory authority as basic own funds not specified above	R0180					
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	R0220					
Deductions						
Deductions for participations in financial and credit institutions	R0230					
Total basic own funds after deductions	R0290	686,758	657,678			29,080

Ancillary own funds						
Unpaid and uncalled ordinary share capital callable on demand	R0300					
Unpaid and uncalled initial funds, members' contributions or the equivalent basic own fund item for mutual and mutual - type undertakings, callable on demand	R0310					
Unpaid and uncalled preference shares callable on demand	R0320					
A legally binding commitment to subscribe and pay for subordinated liabilities on demand	R0330					
Letters of credit and guarantees under Article 96(2) of the Directive 2009/138/EC	R0340	100,000			100,000	
Letters of credit and guarantees other than under Article 96(2) of the Directive 2009/138/EC	R0350					
Supplementary members calls under first subparagraph of Article 96(3) of the Directive 2009/138/EC	R0360					
Supplementary members calls - other than under first subparagraph of Article 96(3) of the Directive 2009/138/EC	R0370					
Other ancillary own funds	R0390					
Total ancillary own funds	R0400	100,000			100,000	

Available and eligible own funds						
Total available own funds to meet the SCR	R0500	786,758	657,678		100,000	29,080
Total available own funds to meet the MCR	R0510	757,678	657,678		100,000	
Total eligible own funds to meet the SCR	R0540	786,758	657,678		100,000	29,080
Total eligible own funds to meet the MCR	R0550	706,218	657,678		48,541	
SCR	R0580	539,342				
MCR	R0600	242,704				
Ratio of Eligible own funds to SCR	R0620	145.87%				
Ratio of Eligible own funds to MCR	R0640	290.98%				

C0060						
Reconciliation reserve						
Excess of assets over liabilities	R0700	752,342				
Own shares (held directly and indirectly)	R0710					
Foreseeable dividends, distributions and charges	R0720					
Other basic own fund items	R0730	643,980				
Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds	R0740	65,585				
Reconciliation reserve	R0760	42,778				
Expected profits						
Expected profits included in future premiums (EPIFP) - Life Business	R0770					
Expected profits included in future premiums (EPIFP) - Non- life business	R0780	53,333				
Total Expected profits included in future premiums (EPIFP)	R0790	53,333				

Annex 1

S.25.03.21

Solvency Capital Requirement -for undertakings on Full Internal Models (\$000)

Unique number of component	components description	Calculation of the Solvency Capital Requirement
C0010	C0020	C0030
10300I	Interest rates risk	(9,301)
10400I	Equity risk	-
10700I	Spread risk	88,819
10800I	Concentration risk	82,034
10900I	Currency risk	164,801
19900I	Diversification within market risk	(181,505)
20100I	Type 1 counterparty risk	301,529
20200I	Type 2 counterparty risk	25,983
29900I	Diversification within counterparty risk	(23,410)
41000I	Health NSLT worker's compensation	49,646
41600I	Other health underwriting risk	3,476
49900I	Diversification within health underwriting risk	(92)
50150I	Premium risk	129,362
50210I	Reserve risk	292,208
50300I	Non-life catastrophe risk	186,965
50500I	Other non-life underwriting risk	3,119
59900I	Diversification within non-life underwriting risk	(259,821)
70100I	Operational risk	95,365
80400I	Other adjustments	(1,504)

Calculation of Solvency Capital Requirement

		C0100
Total undiversified components	R0110	947,676
Diversification	R0060	(408,334)
Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC	R0160	
Solvency capital requirement excluding capital add-on	R0200	539,342
Capital add-ons already set	R0210	
Solvency capital requirement	R0220	539,342
Other information on SCR		
Amount/estimate of the overall loss-absorbing capacity of technical provisions	R0300	
Amount/estimate of the overall loss-absorbing capacity of deferred taxes	R0310	
Total amount of Notional Solvency Capital Requirements for remaining part	R0410	
Total amount of Notional Solvency Capital Requirements for ring fenced funds (other than those related to business operated in accordance with Art. 4 of Directive 2003/41/EC (transitional))	R0420	
Total amount of Notional Solvency Capital Requirement for matching adjustment portfolios	R0430	
Diversification effects due to RFF nSCR aggregation for article 304	R0440	
Net future discretionary benefits	R0460	

Approach to tax rate

		Yes/No
		C0109
Approach based on average tax rate - Yes/No	R0590	

Calculation of loss absorbing capacity of deferred taxes

		Before the shock
		C0110
DTA	R0600	
DTA carry forward	R0610	
DTA due to deductible temporary differences	R0620	
DTL	R0630	
LAC DT	R0640	
LAC DT justified by reversion of deferred tax liabilities	R0650	
LAC DT justified by reference to probable future taxable economic profit	R0660	
LAC DT justified by carry back, current year	R0670	
LAC DT justified by carry back, future years	R0680	
Maximum LAC DT	R0690	

Calculation of loss absorbing capacity of deferred taxes

		LAC DT
		C0130
DTA	R0600	
DTA carry forward	R0610	
DTA due to deductible temporary differences	R0620	
DTL	R0630	
LAC DT	R0640	
LAC DT justified by reversion of deferred tax liabilities	R0650	
LAC DT justified by reference to probable future taxable profit	R0660	
LAC DT justified by carry back, current year	R0670	
LAC DT justified by carry back, future years	R0680	
Maximum LAC DT	R0690	

Annex 1
 S.28.01.01
 Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity(\$000)

Linear formula component for non-life insurance and reinsurance obligations

		C0010
MCR _{NL} Result	R0010	334,379

MCR calculation Non Life		Non-life activities	
		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		
Income protection insurance and proportional reinsurance	R0030		
Workers' compensation insurance and proportional reinsurance	R0040		
Motor vehicle liability insurance and proportional reinsurance	R0050	12,893	11,976
Other motor insurance and proportional reinsurance	R0060		
Marine, aviation and transport insurance and proportional reinsurance	R0070	145,777	39,610
Fire and other damage to property insurance and proportional reinsurance	R0080	342,852	287,324
General liability insurance and proportional reinsurance	R0090	459,202	75,012
Credit and suretyship insurance and proportional reinsurance	R0100	110,051	53,995
Legal expenses insurance and proportional reinsurance	R0110		
Assistance and proportional reinsurance	R0120		
Miscellaneous financial loss insurance and proportional reinsurance	R0130	3,806	0
Non-proportional health reinsurance	R0140	106,524	13,435
Non-proportional casualty reinsurance	R0150	529,126	48,619
Non-proportional marine, aviation and transport reinsurance	R0160	86,876	26,369
Non-proportional property reinsurance	R0170	97,884	48,751

Linear formula component for life insurance and reinsurance obligations

		C0040
MCR _L Result	R0200	0

MCR calculation Life		Life activities	
		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		

		C0070
Linear MCR	R0300	334,379
SCR	R0310	539,342
MCR cap	R0320	242,704
MCR floor	R0330	134,835
Combined MCR	R0340	242,704
Absolute floor of the MCR	R0350	4,050
		C0070
Minimum Capital Requirement	R0400	242,704