Aviva Life & Pensions UK Limited

2016 Solvency and Financial Condition Report

Contents

Executive Summary

Executive Summary

The purpose of the Solvency and Financial Condition Report ("SFCR") is to provide information about the capital position at 31 December 2016 of Aviva Life & Pensions UK Limited ("the Company") based on Solvency II requirements.

The report sets out different aspects of the Company's business and performance, system of governance, risk profile, valuation methods used for solvency purposes and its capital management practices.

Business and Performance

The Company is a limited company incorporated and domiciled in the United Kingdom ("UK") which transacts life assurance and long-term savings business. The Company has both non-profit and with-profits funds and writes primarily pensions, bonds and protection business. The Company predominantly carries out its business in the UK and the Republic of Ireland.

The Company reports to its chief operating decision makers using a non-GAAP financial performance measure referred to as 'operating profit'. The Company regards operating profit as an appropriate measure of underwriting performance. Operating profit for the Company in 2016 was £557 million. The operating profit includes the impacts of Quota Share reinsurance arrangements with a fellow Group company, Aviva International Insurance Limited ("AII"), and a subsidiary company, Aviva Annuity UK Limited ("UKA"). Under the Quota Share reinsurance arrangements, 50% of a subset of the Company's non-profit business is reinsured to AII and 22.5% of the Long Term fund of UKA is reinsured to the Company.

Section A of this report sets out further details about the Company's business structure, key operations, market position and financial performance over the reporting period, split by underwriting performance and investment performance.

System of Governance

The Board's responsibility includes ensuring that an appropriate system of governance is in place throughout the Company. To discharge this responsibility, the Board has established frameworks for risk management and internal control using a 'three lines of defence' model and reserves to itself the setting of the Company's risk appetite. A strong system of governance throughout the Company aids effective decision-making and supports the achievement of the Company's objectives for the benefit of customers, shareholders and regulators.

Section B of this report describes the system of governance in place throughout the Company by which the operations of the Company are overseen, directed, managed and controlled, and explains how it complies with the requirements of Solvency II. It describes the following key features:

- The roles and responsibilities of the Board, its sub-committees and key management committees, and delegation of authority to senior management;
- The remuneration policy, skills requirements and procedures for assessing fitness and propriety for senior management and key function holders;
- The Company's Risk Management Framework ("RMF") and its codification through risk policies and business standards, which set out the risk strategy, appetite and framework and minimum requirements for the Company's operations. This includes the Company's approach to its Own Risk and Solvency Assessment ("ORSA") and governance over its internal capital model for Solvency II;
- How the Company's business standards set out mandated control objectives and controls that mitigate operational risks faced by the Company, collectively providing the Company's framework of internal control;
- The role and responsibilities of the four key control functions – Risk Management, Actuarial, Compliance and Internal Audit – and how they are implemented within the Company;
- The Company's outsourcing policy and information on important outsourced operational functions.

Risk Profile

As a long-term insurer, the Company accepts the risks inherent to its core business line of life insurance. Risks are diversified through the Company's scale, geographic spread, the variety of the products and services offered and the channels through which they are sold.

The Company receives premiums which are invested in order to maximise risk-adjusted returns, so that the Company can fulfil its promises to customers while providing a return to its shareholders. In doing so, the Company has a preference for retaining those risks which it believes it is capable of managing to generate a return.

The types of risk to which the Company is exposed have not changed significantly over the year and remain credit, market, underwriting, liquidity and operational risks.

Section C of this report further describes the risks to which the Company is exposed and how it measures, monitors, manages and mitigates these risks, including any changes in the year to the Company's risk exposures and specific risk mitigation actions taken.

Valuation for Solvency Purposes

Assets, technical provisions and other liabilities are valued in the Company's Solvency II Balance Sheet according to the Solvency II regulations. Assets and liabilities are valued at an amount for which they could be exchanged, transferred or settled by knowledgeable and willing third parties in an arms length transaction.

The value of technical provisions under Solvency II is equal to the sum of a best estimate liability and a risk margin. Under Solvency II, the Company applies the transitional deduction to technical provisions. The transitional deduction has been approved by the PRA.

The Company also applies a matching adjustment ("MA") to its non-profit fund. The MA is an increase applied to the risk-free rate used to value insurance liabilities where the cash flows are relatively fixed (e.g. no future premiums or surrender risk) and are well matched to assets that are intended to be held to maturity and have cash flows that are also relatively fixed.

At 31 December 2016, the Company's excess of assets over liabilities was £8,531 million on a Solvency II basis which is £4,153 million higher than the value under International Financial Reporting Standards ("IFRS"). The difference is primarily driven by the value of technical provisions.

Section D of this report provides further description of the bases, methods and main assumptions used in the valuation of assets, technical provisions and other liabilities for each material asset/liability class. In addition, it also provides an explanation of the material differences between the IFRS and Solvency II bases of valuation.

Capital Management

The Company manages Own Funds in conjunction with solvency capital requirements. In the calculation of the SCR, the Company has chosen to implement a Partial Internal Model, defined as using a combination of Internal Model and Standard Formula approaches to calculate solvency capital requirements for different components of its business.

In managing capital, the Company seeks on a consistent basis to:

- Match the profile of its assets and liabilities, taking into account the risks inherent in the business;
- Maintain sufficient, but not excessive, financial strength in accordance with risk appetite, to support new business growth and satisfy the requirements of the Company's regulators and other stakeholders giving the Company's customers assurance of its financial strength;
- Retain financial flexibility by maintaining strong liquidity;
- Allocate capital rigorously to support value adding growth and repatriate excess capital where appropriate.

At 31 December 2016, the total eligible Own Funds to meet the Solvency Capital Requirement ("SCR") was £7,099 million, consisting of excess of assets over liabilities of £8,531 million offset by a restriction in respect of the Company's ring fenced funds ("RFFs") of £1,432 million. All of the Company's eligible Own Funds are represented by unrestricted tier 1 capital. The Company's SCR, which is calculated using a Partial Internal Model, at 31 December 2016 was £4,682 million. The overall surplus position was £2,417 million which translates to a regulatory cover ratio of 152%.

Section E of this report further describes the objectives, policies and procedures employed by the Company for managing its Own Funds. The section also covers information on structure and quality of Own Funds and calculation of SCR, including information about the Company's Internal Model.

Section A
Business and Performance

In this chapter

A.1 Business

A.2 Underwriting performance

A.3 Investment performance

A.4 Any other information

Section A: Business and Performance

The 'Business and Performance' section of the report sets out the Company's business structure, key operations and financial performance over the reporting period.

A.1 Business

A.1.1 Business overview

The Company, a limited company incorporated and domiciled in the UK, transacts life assurance and long-term savings business. The Company has both non-profit and with-profits funds and writes primarily pensions, bonds and protection business. The Company predominantly carries out its business in the UK and the Republic of Ireland.

A.1.2 Organisational structure

The following chart shows, in simplified form, the position of the Company within the legal organisational structure of the Aviva plc Group ("the Group") as at 31 December 2016. Aviva plc is the holding company of the Group and is the ultimate parent undertaking of the Company. The immediate parent undertaking of the Company is Aviva Life Holdings UK Limited ("UKLH"), a company incorporated in England.

A complete list of participations in subsidiary undertakings and other related undertakings of the Company is shown in section F.3.

Refer to section B for a detailed description of the system of governance in place within the Company and the Group.

A.1.3 Significant events in the reporting period

On 1 January 2016 the company entered into a Quota Share reinsurance agreement with AII to reinsure 50% of insurance liabilities in its non-profit fund, excluding the Irish branch and reinsurance accepted. The company's main insurance subsidiary, UKA, has a similar agreement with AII, and increased its reinsurance from 25% to 50% of its insurance liabilities on the same date.

On 14 March 2016, 30 August 2016 and 28 November 2016 the Company subscribed for and was allotted 10 million, 5 million and 15 million ordinary shares of £1 each in the share capital of its subsidiary, Aviva Pension Trustees UK Limited fully paid at par, for consideration of £10 million, £5 million and £15 million respectively.

On 9 November 2016 the Board approved the transfer of the whole of the long-term insurance business of UKA, to the Company through an insurance business transfer scheme under Part VII of the Financial Services and Markets Act 2000 (the "Part VII Transfer"). The UK Court approved the scheme on 6 December 2016, with the transfer effected on 1 January 2017.

A.1.4 Other information

Qualifying holdings

Qualifying holdings in the Company are held by UKLH, a limited company incorporated and domiciled in the UK, which holds 100% of the Company's share capital.

Supervisor

The Group's and Company's Supervisor is the Prudential Regulation Authority ("PRA"), which is part of the Bank of England. Contact details for the PRA are as follows:

Address	20 Moorgate, London, EC2R 6DA.
Telephone number	+44 (0) 20 7601 4444

External auditor

The Company's external auditor is PricewaterhouseCoopers LLP. Contact details are as follows:

Address	Central Square, 29 Wellington Street, Leeds, LS1 4DL.
Telephone number	+44 (0) 113 289 4000

A.2 Underwriting Performance

Operating profit – measurement of performance from underwriting and other activities

The Group reports to its chief operating decision makers using a financial performance measure referred to as 'operating profit'. The Group and the Company regard operating profit as an appropriate measure of underwriting performance.

Operating profit is defined across the Group as IFRS profit before income taxes, excluding the following items: investment return variances and economic assumption changes on long-term business (included within non-operating costs in the table in section A.2.1), impairment of goodwill, associates, and joint ventures and other amounts expensed, amortisation and impairment of acquired value of in-force business, amortisation and impairment of other intangibles, profit or loss on the disposal and remeasurement of subsidiaries, joint ventures and associates, integration and restructuring costs and other items.

Section A.2.1 shows a reconciliation of the operating profit to the income statement included in the Company's financial statements.

While these excluded items are significant components in understanding and assessing the Company's financial performance, presentation of operating profit enhances the understanding and comparability of the underlying performance of the business by highlighting net income attributable to ongoing operations.

A.2.1 Performance from underwriting and other activities

The table below presents the operating profit for the Company for the year ended 31 December 2016, as well as the reconciliation of operating profit to IFRS profit before tax as included in the Company's financial statements.

	FY16 £m
Gross written premiums	2,295
Premiums ceded to reinsurers	(4,227)
Net earned premiums	(1,932)
Fee and commission income	359
	(1,573)
Net investment income/(expense)	10,712
Income	**9,139**
Claims and benefits paid, net of recoveries from reinsurers	(4,858)
Change in insurance liabilities, net of reinsurance	6,052
Expenses attributed to investment contract provisions	(5,681)
Change in unallocated divisible surplus	(238)
Fee and commission expense	(864)
Other expenses	(97)
Finance costs	(2,953)
IFRS Profit before tax	**500**
Tax attributable to policyholders' returns	(334)
IFRS Profit before tax attributable to shareholders	**166**
Adjusted for non-operating items:	
Revaluation of investment in subsidiaries	722
Dividends received from subsidiaries	(350)
Other non-operating costs	19
Operating profit before tax attributable to shareholders	**557**

The Company's operating profit is primarily driven by the profit recognised on two Quota Share reinsurance arrangements:

- On 1 January 2016 the company entered into a Quota Share reinsurance arrangement with a fellow Group company, AII. Under the terms of this Quota Share reinsurance 50% of a subset of the Company's non-profit fund is reinsured to AII. Operating profit of £181 million has been recognised in respect of this arrangement during 2016. Further details of the impact on individual line items within the financial statements is provided in note 39 of the Company's financial statements.
- The Company also has a Quota Share reinsurance arrangement in place with its fully owned insurance subsidiary undertaking UKA. Under the terms of the Quota Share reinsurance, 22.5% of the Long Term Fund of UKA is reinsured to the Company. Operating profit of £282 million has been recognised in respect of this arrangement during 2016. Further details of the impact on individual line items within the financial statements is provided in note 39 of the Company's financial statements.

Items of income and expenses that do not directly relate to the Group's underwriting and investment activities are disclosed outside of operating profit. These are collectively referred to as 'adjusting items'. The adjusting items are shown in the reconciliation from IFRS profit before tax to the operating profit in the table above. Further information on these items is provided in section A.4.

A.2.2 Solvency II lines of business and products

Detailed information on premiums, claims, expenses and changes in technical provisions by Solvency II line of business is presented in Quantitative Reporting Templates ("QRTs") S.05.01.02 and S.05.02.01 (included in the Appendices in Section F.1). A summary of the information presented in these QRTs is shown below.

	Health insurance	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Life Reinsurance	Total
	£m	£m	£m	£m	£m	£m
Gross premiums written	*124*	*265*	*205*	*1,370*	*331*	***2,295***
Premiums ceded to reinsurers	*(189)*	*(9)*	*(3,026)*	*(1,002)*	*(1)*	***(4,227)***
Net premiums written	(65)	256	(2,821)	368	330	**(1,932)**
Net claims incurred	(29)	(3,416)	(419)	(460)	(534)	**(4,858)**
Changes in other technical provisions	160	252	3,149	(16)	(611)	**2,934**
Direct expenses incurred	(15)	(120)	(794)	(194)	(58)	**(1,181)**

The Company sells a diverse range of products through its business. The principal products sold include pensions, annuities, protection and investment products. Some of the Company's insurance and investments products contain a discretionary participation feature, which is a contractual right to receive additional benefits as a supplement to guaranteed benefits. These are referred to as 'participating' contracts.

For business classified as non-participating investment business under IFRS the amounts received are treated as deposits under IFRS and an investment management fee is earned on the funds deposited. Consequently this business is not captured within IFRS net written premiums and therefore not included on the QRTs S.05.01.02 'Premiums, claims and expenses by line of business' and S.05.02.01 'Premiums, claims and expenses by country'. Non-participating investment business primarily consists of unit linked life and pensions business.

A.3 Investment performance

A.3.1 Measurement of investment performance

Net investment income as disclosed in the Company's financial statements represents the Company's overall investment performance for both policyholders and shareholders. Net investment income consists of dividends, interest and rents receivable for the year, realised gains and losses and unrealised gains and losses on investments held at fair value.

The Company's exposure to investment return varies according to the characteristics of the liability that the assets are held to support. For many types of long-term business, including unit-linked and participating funds, net investment income is broadly offset by corresponding changes in liabilities, limiting the net impact on profit. Therefore returns on policyholder, participating funds and shareholder investments are distinguished from one another:

- Policyholder assets are connected to unit-linked business, where the policyholder bears the investment risk on the assets in the unit-linked funds. Shareholder exposure to loss on policyholder assets is limited to the extent that income arising from asset management charges is based on the value of assets in the funds.
- Participating fund assets relate to a subset of insurance and investment contracts which contain a discretionary participation feature, which is a contractual right to receive additional benefits as a supplement to guaranteed benefits. Shareholder exposure to investment losses on participating funds is generally limited to the shareholder's participation in the fund.
- Shareholder assets are other assets held within the Company's business that are not backing unit-linked liabilities or participating funds.

Operating profit includes an expected investment return on financial investments backing shareholder funds and policyholder funds, with a consistent allowance for the corresponding expected movements in liabilities.

Assets are invested in order to generate a return for both policyholders and shareholders. The financial strength of the Company and both current and future operating results and financial performance are, therefore, in part dependent on the quality and performance of the investment portfolios held by the Company.

The aim is to match appropriate investments to the nature of the underlying liabilities, whilst at the same time considering regulatory requirements, the level of risk inherent within different investments, and the desire to generate superior investment returns, where compatible with the stated strategy and risk appetite.

A.3.2 Investment performance by asset class

The following section summarises the Company's net investment income and provides an analysis of net investment income by fund type.

Net Investment Income - Total	Debt Securities £m	Equity Securities £m	Loans £m	Other financial investment £m	Investment property £m	Other £m	Total £m
Dividends	-	999	-	187	-	350	1,536
Interest	396	-	11	92	-	102	601
Net realised gains/(losses)	531	1,055	-	430	11	5	2,032
Net unrealised gains/(losses)	1,050	3,328	114	1,833	(149)	326	6,502
Rental income less expenses					206	-	206
Other income less management charges	-	-	-	20	-	(185)	(165)
Total	**1,977**	**5,382**	**125**	**2,562**	**68**	**598**	**10,712**

The Company's expense for the year in respect of investment management fees amounted to £49 million.

The following table provides an analysis of the Company's net investment income by policyholder, participating and shareholder exposures.

Net Investment Income - Total	Debt Securities £m	Equity Securities £m	Loans £m	Other financial investments £m	Investment property £m	Other £m	Total £m
Policyholder assets	602	4,177	14	1,017	17	28	5,855
Participating assets	1,233	1,177	66	1,207	29	40	3,752
Shareholder assets	142	28	45	338	22	530	1,105
Total	**1,977**	**5,382**	**125**	**2,562**	**68**	**598**	**10,712**

Net investment income primarily consists of realised and unrealised gains on debt securities, equity securities and unit trusts (included within other financial investments).

- Gains on debt securities reflect the returns on underlying indices (Government all stock indices of 7.0% and Corporate bond indices of 6.0%). The return reflects falling yields on gilts and investment grade bonds during 2016.
- Gains on equity securities reflect the returns on underlying indices (FTSE all share indices of 12%, S&P Europe indices of 16% and S&P World indices of 26%).
- Unit trusts are primarily invested in debt and equity funds. Consequently, gains on unit trusts reflect the returns on both debt and equity.

Items within 'Other' primarily consist of investment income in respect of participations and other subsidiaries.

A.3.3 Investment performance: Other information – Investments in securitisations

Securitisation means a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched, having both of the following characteristics:

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

The Company holds investments in securitisation vehicles that are not originated by the Company in the form of debt securities. These securities consist of residential mortgage backed securities, commercial mortgage backed securities, asset backed securities, wrapped credit securities and collateralised loan obligation securities.

Net investment income in the Company for the year in respect of these securitisations was £49 million.

The key risks the Company's securitisations are exposed to are market risk and credit risk. The Company's risk management procedures in respect of market risk and credit risk are described in sections C.2.2. and C.3.2.

A.4 Any other information

The Company's operating profit for the period was £557 million. The adjusting items reported below operating profit are outlined below.

Operating profit for the Company is based on expected investment returns on financial investments backing shareholder and policyholder funds over the period, with consistent allowance for the corresponding expected movements in liabilities. The expected rate of return is determined having regard to long term economic and market forecasts of investment return and asset classification.

Operating profit includes the effect of variances in experience for non-economic items, such as mortality, persistency and expenses, and the effect of changes in non-economic assumptions. Changes due to economic items, such as market value movement and interest rate changes which give rise to variances between actual and expected investment returns, and the impact of changes in economic assumptions on liabilities, are disclosed as non-operating items.

Net investment income, as discussed in section A.3 'Investment performance', includes both the operating and non-operating component of investment return.

Other non-operating items primarily consist of fair value movements on the valuation of subsidiaries and dividends receivable from subsidiaries.

Operating profit is not a substitute for profit before income taxes or net income as determined in accordance with IFRS. The Company's definition of operating profit may differ from similar measures used by other companies, and may change over time.

Section B
System of Governance

In this chapter

Section B: System of Governance

This section of the report sets out information regarding the 'System of Governance' in place within the Company.

Details of the structure of the Company's "administrative, management or supervisory body" (defined as including the Board, subsidiary boards and Board sub-committees) are provided. The roles, responsibilities and governance of key functions (defined as the Risk, Compliance, Internal Audit and Actuarial functions) are also provided. Other components of the system of governance are also outlined, including the risk management system and internal control system implemented across the business.

B.1 General information on the system of governance

B.1.1 Overview of the Company's system of governance

Role and responsibilities of the Board

The Board's role is to be responsible for promoting the long-term success of the Company and for setting the strategy, against which management's performance is monitored. It sets the risk appetite and satisfies itself that financial controls and risk management systems are robust, whilst ensuring the business is adequately resourced. The Board is also responsible for setting the values and supporting the culture of the Company, and ensures appropriate dialogue with shareholders on strategy and remuneration.

The Board's responsibility includes ensuring that an appropriate system of governance is in place. To discharge this responsibility, the Board has established frameworks for risk management and internal control using a 'three lines of defence' model.

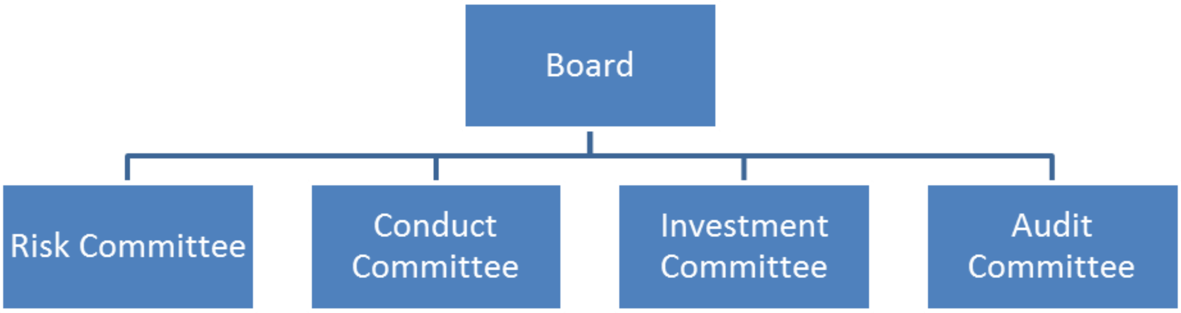
A strong system of governance aids effective decision-making and supports the achievement of business objectives for the benefit of customers, shareholders and regulators.

The Board comprises the Chairman, Chief Executive Officer, Chief Financial Officer and Independent Non-Executive Directors ("NEDs"). The Board's policy is to appoint and retain NEDs, who can apply their wider business knowledge and experiences to their oversight of the Company, and to review and refresh regularly the skills on the Board.

The Board has established and delegated responsibilities to various committees to assist in its oversight of risk management and the approach to internal controls. There is alignment and communication between these committees and there is regular reporting to the Board.

The full duties of the Board and of each of its committees are set out in each respective Terms of Reference. The Terms of Reference list both those items that are specifically reserved for decision by the Board and those matters that must be reported to the Board.

The diagram illustrates the governance structure and a brief description of the main roles and responsibilities of each committee follows:



The ***Risk Committee*** is responsible for assisting the Board in its oversight of risk, reviewing the Company's risk appetite and risk profile in relation to capital, liquidity and franchise, reviewing the effectiveness of the Company's Risk Management Framework, reviewing the methodology used in determining the Company's capital requirements, stress testing, ensuring due diligence appraisals are carried out on strategic or significant transactions, and monitoring the Company's regulatory requirements in relation to prudential matters, as appropriate.

The ***Conduct Committee*** is responsible for assisting the Board in its oversight of conduct issues. This oversight includes oversight of the Company's conduct framework including product design, live selling practices, claims practices, conduct oversight of third parties, the achievement of an appropriate conduct focused culture and the management of good and influential relationships with the regulators. It also sets and reviews the conduct and financial crime risk appetites and ensures that the reputational risk is consistent with the risk preference approved by the Board.

The ***Investment Committee*** is responsible for assessing and approving investment strategy consistent with the risk appetite approved by the Board; considering investment matters that require Board approval (for example the investment into a new asset class); overseeing the relationship between the Company and its investment managers and monitoring investment performance.

The ***Audit Committee*** is responsible for monitoring the integrity of the Company's financial statements and the effectiveness of the systems of internal control and for monitoring the effectiveness, performance, independence and objectivity of the internal and external auditors.

There are also two other Board committees with specific purposes:

- ***With Profits Committee*** provides independent oversight and challenge to ensure that fairness and with-profits customers' interests are appropriately considered in governance structures and decision making processes.
- ***Independent Governance Committee*** provides independent challenge in respect of the interests of relevant scheme members of workplace pensions.

An effective delegated authority framework is an important part of good business governance. A set of transaction categories provide a comprehensive framework for assigning financial authorities to certain individuals consistently across the Company, with limits within each category to ensure they support effective and appropriate decision making.

The 'three lines of defence model', and roles and responsibilities of key functions

Roles and responsibilities for risk management are based around the 'three lines of defence model' where employees are involved in the management and mitigation of risk. The roles of the three lines of defence each contribute to embedded risk management.

The first line: management monitoring

Management are responsible for the application of the RMF, for implementing and monitoring the operation of the system of internal control and for providing assurance to the Risk, Conduct, Investment and Audit Committees, and the Board.

The second line: Risk Management, Compliance and Actuarial functions

The Risk Management function is accountable for developing the RMF and for the quantitative and qualitative oversight and challenge of the identify, measure, manage, monitor and report ("IMMMR") process. As the business responds to changing market conditions and customer needs, the Risk Management function regularly monitors the appropriateness of the Company's risk policies and the RMF to ensure they remain up to date.

The Actuarial function is accountable for actuarial methodology, reporting to the relevant governing body on the adequacy of reserves and capital requirements, as well as underwriting and reinsurance arrangements.

The Compliance function supports and advises the business on the identification, measurement and management of its regulatory, financial crime and conduct risks. It is also accountable for monitoring and reporting on the compliance risk profile.

Refer to sections B.3.2, B.4.2 and B.6 for further details on the roles, responsibilities, authority, resources, independence and reporting lines of the Risk Management, Compliance and Actuarial functions respectively, and how their independence is ensured.

The third line: Internal Audit

This function provides independent and objective assessment on the robustness of the RMF and the appropriateness and effectiveness of internal control to the Audit, Conduct, Risk and Investment Committees, and the Board.

Refer to section B.5 of this report for details on the roles, responsibilities, authority, resources, independence and reporting lines of the Internal Audit Function.

Implementation and assessment of adequacy of the system of governance

The Company implements its RMF and system of internal controls and associated reporting procedures consistently throughout, via group-wide risk policies and business standards. To support an assessment of the effectiveness of the governance, internal control and risk management requirements, the Chief Executive Officer is required to certify annually that:

- there are sound risk management and internal control systems that are effective and fit for purpose in place across the business; and
- material existing or emerging risks within the business have been identified and assessed and the business operates in a manner which conforms to the minimum requirements outlined in the risk policies and business standards.

Linked to this, the Chief Risk Officer must certify that:

- the Risk function has reviewed and challenged the process supporting the Chief Executive Officer's certification and is satisfied that it can provide reasonable assurance of the material accuracy and completeness of the Chief Executive Officer's assessment; and
- no material gaps exist in the RMF as it applies to the Company.

Any material risks not previously identified, control weaknesses or non-compliance with the risk policies and business standards or local delegations of authority, must be highlighted as part of this process.

Changes in the system of governance during 2016

There have been no material changes in the system of governance during the year.

Terms of reference for all Board Committees were updated during 2016 and changes were approved by the Board.

B.1.2 Remuneration Policy

All staff are employed by a fellow subsidiary undertaking of Aviva plc, Aviva Employment Services Limited, who make a management charge for services, including the provision of staff to the Company. The Group's reward principles and arrangements are designed to incentivise and reward employees for achieving stated business goals in a manner that is consistent with the Company's approach to sound and effective risk management. The Group's remuneration philosophy is based on four key principles which are outlined below:

- Align to the Group's purpose and strategy;
- Incentivise achievement of the Group's annual business plan and longer term strategic objectives of the business;
- Recognise leaders who achieve the required business results through living the Group values and behaviours; and
- Ensure risk based decision making and good governance.

B.1.2.1 Executive directors ("EDs")

The group-wide Remuneration Committee considers alignment between the strategy and the remuneration of its EDs to be critical. The Remuneration Policy provides market competitive remuneration, and incentivises EDs to achieve both the annual business plan and the longer-term strategic objectives of the business. Significant levels of deferral and an aggregate shareholding requirement align EDs' interests with those of shareholders and aid retention of key personnel. As well as rewarding the achievement of objectives, variable remuneration can be zero if performance thresholds are not met.

Remuneration of EDs includes a basic salary, variable components, a pension, benefits (including relocation and mobility) and a shareholding requirement.

The variable components include an annual bonus and Long Term Incentive Plan ("LTIP"). The annual bonus is based on performance in the year. Targets are set annually and pay-out levels are determined by the Remuneration Committee based on performance against those targets. A significant proportion of any bonus awarded is deferred into shares which vest after three years.

The LTIP vests subject to performance against two equally weighted performance measures, absolute return on equity ("ROE") and relative total shareholder return ("TSR") performance, which have been chosen to reflect shareholders' long-term interests. Half of the LTIP vests if ROE exceeds 30% over the three-year performance period. The other half vests if the TSR is in the upper quintile when compared to a number of other external companies over the three year period. The proportion of shares vested is lower if these performance measures are not met, and falls to zero when performance measures fall below pre-set targets.

The Group did not operate any enhanced pension arrangements or early retirement schemes for key management during the reporting period.

B.1.2.2 NEDs

NEDs receive a basic annual fee in respect of their Board duties. Further fees are paid for membership and, where appropriate, chairmanship of Board committees. The Chairman receives a fixed annual fee. Fees are reviewed annually taking into account market data and trends and the scope of specific Board duties. The Chairman and NEDs do not participate in any incentive or performance plans or pension arrangements and do not receive an expense allowance.

B.1.2.3 Employees

Remuneration arrangements for employees that are not EDs take account of the seniority and nature of the role, individual performance and local market practice. The aim is to provide employees with remuneration packages that are clear and simple to understand, transparent, consistent and fair. Remuneration includes a basic salary, variable components and a pension.

Variable payments are discretionary and fully flexible as opposed to a contractual entitlement, and there is a possibility of zero awards being made should the performance of the Group and/or individuals require this. Individual awards are based on a calibrated assessment of performance of individuals relative to peers.

The remuneration of employees in the Risk Management function (including Compliance and the Actuarial function) and Internal Audit is determined independently of the financial results of the business areas they oversee. This reinforces the independence of these functions.

B.1.2.4 Material transactions with shareholders and persons exercising significant influence during the period

Key management personnel may from time to time purchase insurance, savings, asset management or annuity products marketed by Group companies on equivalent terms to all employees of the Group. Any transactions with key management personnel deemed to be significant either by size or in the context of their individual financial positions have been conducted on an arms-length basis.

Additional information on the material transactions with the Company's shareholder is included within Note 38 – 'Related party transactions' of the Company's financial statements.

B.2 Fit and Proper policy

The Group has the following policies in place to ensure that individuals acting on behalf of the Company are both "fit" and "proper" in line with the PRA's Fit and Proper requirements for individuals subject to the Senior Insurance Manager Regime and the Financial Conduct Authority's ("FCA"'s) requirements for Approved Persons:

- Fit - As part of recruitment and employee screening, an individual's career history will be assessed and validated to establish whether an individual's skills and knowledge are appropriately matched to the role.
- Proper – checks are in place to ensure that an individual is honest, of good reputation, has integrity and is financially sound.

The governance over the fitness and propriety of individuals spans across the employee lifecycle including recruitment, performance management and training. To ensure the Group protects itself against employing individuals who potentially could threaten its people, customers, properties, facilities or reputation, the majority of Fit and Proper activities take place within recruitment and more specifically in pre-employment screening.

To support the recruitment activity for all staff across the Group, a policy to apply a minimum set of basic screening requirements has been agreed and implemented. Additional enhanced screening requirements and ongoing Fit and Proper requirements are also applied for individuals who fall within the following categories, as required by Solvency II requirements:

- Persons running the undertaking;
- Administrative, management or supervisory body; and
- Persons responsible for key functions.

For persons responsible for running the undertaking or responsible for key functions this assessment must consider their allocated responsibilities and skills and experience across a skills matrix covering the following areas:

- Insurance and financial markets;
- Business strategy and business models;
- System of governance;
- Financial and actuarial analysis; and
- Regulatory framework and requirements.

The group-wide Nomination Committee identifies the skills and experience that it would like to have at Board level. These requirements are set out in a comprehensive skills matrix where Board members are asked via an online questionnaire to self-assess their experience and skills each year. The Skills Matrix is integral to the Committee's planning, discussions for developing further the Board's succession plans and commitment to Board diversity. Additionally, it is an essential tool to review and reflect on the skills that individual directors' currently possess and ascertain areas in which training and development can be strengthened.

Prior to appointing an individual into a key function role, checks take place to ensure that the relevant skills and experience have been identified and agreed for the role. This is achieved by engaging with both internal and external subject matter experts in each specialism to define the skills and experience required for each key function role.

In all cases local business subject matter experts are engaged to ensure that all skills and experience requirements have been identified, including any specific qualifications required to carry out the role. These individual key function role skills and experience requirements and qualifications, where applicable, are captured within individual role descriptions for each role.

Compliance with the initial and ongoing Fit and Proper minimum requirements is reported as part of the People Business Standard attestation by the People Director on behalf of the Chief Executive Officer to the Group People function.

B.3 Risk management system including the ORSA

B.3.1 Overall risk management system: strategies, processes and reporting procedures

The RMF forms an integral part of the management and Board processes and decision-making framework across the Company. The key elements of this framework comprise risk appetite; risk governance, including risk policies and business standards; and the processes used to IMMMR risks, including the use of the Company's risk models and stress and scenario testing.

To promote a consistent and rigorous approach to risk management across all parts of the business, there is a set of risk policies and business standards which set out the risk strategy, appetite, and minimum requirements for the Company's operations. On a semi-annual basis the Chief Executive Officer and Chief Risk Officer sign-off compliance with these policies and standards, providing assurance to the relevant oversight committees that there is a consistent framework for managing the business and the associated risks.

For the purposes of risk identification and measurement, risks are usually grouped by risk type: credit, market, liquidity, underwriting and operational risk. Risks falling within these types may affect a number of metrics including those relating to balance sheet strength, liquidity and profit. They may also affect the performance of the products delivered to customers and the service to customers and distributors, which can be categorised as risks to the brand and reputation or as conduct risk.

A regular top-down risk assessment and reporting process is facilitated by the Risk Management function. This includes the consideration of emerging risks and is supported by deeper thematic reviews. This, together with the risk and control self assessment ("RCSA") process, are the main processes used to IMMMR risks. They are run separately but are complementary. The RCSA process is run by the first line, with challenge by the Risk Management function. It focuses on operational risks, which are recorded on 'iCARE', the Company's risk management system.

Risk models are an important tool in the measurement of risks and are used to support the monitoring of the risk profile and in the consideration of the risk management actions available. A range of stress tests are carried out (where one risk factor, such as equity returns, is assumed to vary) and scenario tests (where combinations of risk factors are assumed to vary) to evaluate their impact on the business and the management actions available to respond to the conditions envisaged.

The Risk Management function is accountable for quantitative and qualitative oversight and challenge of the IMMMR process and for developing the RMF. Internal Audit provides an independent assessment of the risk framework and internal control processes.

Board oversight of risk and risk management across the Company is maintained on a regular basis through the Risk, Conduct and Investment Committees.

The Board has overall responsibility for determining risk appetite, which is an expression of the risk the business is willing to take. Risk appetite is set for capital and liquidity. Economic capital risk appetites are also set for each risk type, calculated on the basis of the Solvency II balance sheet. The position against risk appetite is monitored and reported to the Board on a regular basis.

Risk preferences, being qualitative statements that express the risks that the Company seeks to avoid or minimize, are also set by the Board. Long-term sustainability depends upon the protection of franchise value and good customer relationships. As such, there is a risk preference that the Company will not accept risks that materially impair its reputation and requires that customers are always treated with integrity.

Reporting of risks is provided to Board Committees and the Board by management, alongside Risk and Audit opinions. The Board has set clear expectations that reporting must present an accurate, clear and timely picture of existing and emerging issues, risk exposures and risk management activities and provide demonstrable evidence that the Company is managing its risks.

Under Solvency II, the Internal Model must be embedded at the heart of risk and capital evaluation and its outputs must be used as a key part of a wide range of business and strategic decisions. As well as being a Solvency II requirement, this makes sense from a business perspective – using a model which reflects the actual risk profile of the business drives more informed decisions. An annual Business Use Assessment process takes place which facilitates embedding and evidencing of the use of risk management and economic capital in decision making.

It is recognised that it is important to have an appropriate risk culture ("tone from the top"). An appropriate culture includes the effective management of exposures, adequate resourcing, effective communication, malpractice reporting, a business ethics code that is annually signed up to by employees, and a commitment to integrity, ethical behaviour and compliance.

A risk and control goal is set for senior management as part of the annual bonus plan to help drive and reward effective risk management and a robust control environment. This is assessed on an annual basis by the Group Risk Management function.

B.3.2 Risk management function

The Risk Management function is responsible for the design and implementation of the risk management system, and the design and independent validation of economic capital models requiring regulatory approval. The Risk Management function reports to the board on material risks identified, together with any other specific areas of risk requested by the board, and assists the board and management in the effective operation of the risk management system through the provision of specialist analysis and quality reviews, an aggregated view of the risk profile, and an assessment of the key risks associated with the business's strategy, major projects, strategic investments and other key decisions.

The Risk Management function has authority to review all areas of the business and has full, free and unrestricted access to all activities, records, property and personnel necessary to complete its work. The scope of Risk's activities extends to all legal entities, joint ventures, partnerships, outsourcing and reinsurance arrangements.

The Risk Management function operates as part of the Global Risk function, which includes the Actuarial and Compliance functions as well as Risk Management. Further information on the Actuarial and Compliance functions is set out in sections B.6 and B.4.2 respectively.

B.3.3 Integration of risk management into the decision making processes

Under Solvency II, the Internal Model must be embedded at the heart of risk and capital evaluation and its outputs must be used as a key part of a wide range of business and strategic decisions. As well as being a Solvency II requirement, this makes sense from a business perspective - using a model which reflects the actual risk profile of the business drives more informed decisions. An annual Business Use Assessment process takes place which facilitates embedding and evidencing of the use of risk management and economic capital in decision making.

All key decisions must have the support of the Risk Management function before proceeding and the Chief Risk Officer has the power of veto.

B.3.4 ORSA

The ORSA Report is the outcome of the combined processes and procedures (collectively ORSA processes) in place to manage and assess the risk and solvency position of the Company. The goal of the ORSA is to provide a continuous and forward-looking assessment of the short-term and long-term risks that the Company faces, or may face, ensuring that solvency requirements are met at all times.

The ORSA processes comprise a number of elements of the RMF which are embedded in the business through the requirements of supporting risk policies and business standards around strategy, planning, capital management, stress and scenario testing and use of economic capital in decision making.

In combination, these elements create a holistic overview of the elements of risk that may impact the Company, and which should be taken into account by management in day-to-day decision-making, in particular through the use of economic capital, and ensures risk and capital management are connected.

The ORSA Report articulates the Board's formal view of the capital the Company needs to hold, given the risks currently faced by the business and how these might evolve over time, in line with delivery of the business strategy. It summarises a high level description of the key components of the underlying ORSA processes and the key outcomes from these processes.

Consistent with the three lines of defence model, first-line management is responsible for the implementation of the majority of the underlying ORSA processes.

The output from the ORSA processes is reported to the Board and the Board Risk Committee regularly during the year. The ORSA (Supervisory) Report is produced annually, as well as an interim ORSA update following the strategy refresh. The Chief Risk Officer is responsible for producing the ORSA Report which is reviewed and approved by the Risk Committee and the Board.

The Board has approved that for the purpose of ORSA, capital resources and requirements are measured on the basis of Solvency II requirements for determining Solvency II Own Funds and SCR.

Economic capital (as a risk based capital measure) is embedded at the heart of the Company's risk and capital evaluation and is used as a key input to a wide range of business and strategic decisions. The RMF, supported by risk policies and business standards, sets out the areas where businesses are expected to use economic capital management information as part of their decision-making and risk management processes. This ensures that requirements to use economic capital are embedded within the instructions of how the relevant processes (for example asset liability management or strategy and planning) are to be performed. Economic capital is calculated using the Company's Partial Internal Model.

B.3.5 Governance over the Internal Model

The Solvency II Internal Model Governance and Data Governance business standards and associated guidance, manuals, logs and reports are part of the overall RMF. These combine to ensure that the Company's businesses operate within a controlled environment when developing methodologies and assumptions, and when running processes and systems.

The appropriateness of the Company's Internal Model is tested and confirmed by model validation, review and challenge, weakness and limitation management and general change control processes. In aggregate, these tests ensure there is a robust governance framework to support the use of the Internal Model in both a production environment and during model development or change.

The Board is responsible for approving any Internal Model changes before submission to the College of Supervisors for approval. It is anticipated that there will be one model change application a year (around June each year). The quarterly model change reports and supporting evidence provide the required information to support Board Risk Committee and the College of Supervisors approval.

The Chief Risk Officer is the ultimate Internal Model Owner. In practice the day to day responsibilities are delegated to the Chief Risk Actuary, as he has the accountability to give assurance to the Board that the Internal Model is appropriate for use on an ongoing basis; adequately reflects the business's risk profile; takes into account new information as it becomes available and works effectively. This enables the Board to conclude whether the Internal Model is fit for purpose whilst also ensuring it is used to provide information for important strategic and business decisions; capital management; business planning; risk mitigation; investment allocation and product development.

The Internal Model Independent Validation Review (refer to the section below for further details) also provides an opinion to the Board on whether the Internal Model is suitably accurate and fit for purpose, and whether or not its approval is recommended. Since approval of the Company's Internal Model Application, work has continued to refine the model change process and update the Solvency II Model Governance Business Standard in accordance with PRA feedback. This Business Standard clarifies how changes or updates to the Internal Model should be treated to ensure appropriate documentation, validation and governance can be applied before implementation for regulatory reporting.

Validation processes

As a key part of capital assessment and capital management, the Internal Model is rigorously validated using a series of tests. This suite of tests includes both validation of the individual calibrations and methodologies underlying the model, and validation of the model using its results.

The validation tests applied comprise both mathematically defined tests and those based on qualitative judgment, to ensure that the model and its components are both accurate and reflect management opinion. Key tests include benchmarking (the results of the Internal Model and its components are compared against external benchmarks), back-testing (historic experience is compared against the results produced by the model) and sensitivity testing (the analysis of the change in results due to changes in its inputs). The validation tests are run, documented and assessed against criteria set by the Actuarial function, and are designed to draw conclusions on the appropriateness of the Internal Model. The results of this analysis are made available to the Risk Committee and Board.

In addition, separate and independent validation of the Internal Model is performed to give assurance to the Board that the model is appropriate for use on an ongoing basis, adequately reflects the business's risk profile and takes into account new information as it becomes available, and is accurate and works effectively. This informs whether the Internal Model is fit for purpose, including informing important strategic and business decisions, capital management, business planning, risk mitigation, investment allocation and product development.

The Board approves the scope and approach proposed by the Enterprise Risk Director (who reports into the Chief Risk Officer) for each independent validation exercise, as required by the Internal Model Independent Validation Business Standard. The Enterprise Risk Director performs the independent validation and provides an opinion to the Board whether the Internal Model is materially fit for purpose.

The independent validation to support year end 2016 concluded that the Internal Model is materially compliant with Solvency II requirements and is appropriate for calculating solvency capital requirements on an ongoing basis.

B.4 Internal control system

B.4.1 Description of the internal control system

Internal controls facilitate effective and efficient business operations, the development of robust and reliable internal reporting and compliance with laws and regulations.

The Internal Control Business Standard sets out required controls for effective internal control across the Group. It comprises five key principles.

- The Company sets an appropriate culture, including "tone from the top". This ensures the effective management of exposures, adequate resourcing, effective communication, malpractice reporting, a business ethics code that is annually signed up to by employees, and a commitment to integrity, ethical behaviour and compliance.
- The Company has an organisational structure that supports the system of internal control. This includes the effective operation of an adequately resourced three lines of defence model, appropriate and proportionate segregation of duties, a clear system of delegated authorities, clearly defined roles and responsibilities for staff, and the consideration of risk management and control responsibilities when setting objectives for and reviewing the performance of all staff.
- The Company has a RMF (see section B.3.1).
- The Company has effective controls for each core business process and that these are monitored and reported upon regularly.
- The Company has a risk oversight process that provides adequate challenge to the completeness and openness of internal control and risk assessment.

B.4.2 Compliance function

The primary purpose of the Compliance function is to assess and manage the business's exposure to regulatory risk. In the UK, where a dual regulatory system exists, this activity has been divided between prudential and conduct regulatory risk.

The Compliance function is an integral part of the RMF and constitutes a key part of corporate governance. The function is a critical contributor to the safe and sound operation of the business and underpins the achievement of strategic and business goals. The Compliance function is lead by the Compliance Director, who reports to the Chief Risk Officer and has delegated authority to manage compliance related risk across the business.

The Compliance function is required to monitor and assess the impact of changes in the legal environment on the operations of the business. Given the highly specialised nature of the work, the Legal function is responsible for this activity. The Compliance Function, with support from the legal function is required to provide input to regulatory developments through consultations and representation to industry bodies.

The Compliance function has authority to review all areas of the business and has full, free and unrestricted access to all activities, records, property and personnel necessary to complete its work.

B.5 Internal Audit function

The Internal Audit function provides independent and objective assessment of the robustness of the RMF and the appropriateness and effectiveness of internal control to the Board, primarily via the Audit Committee. The Audit Committee receives quarterly control reports from Internal Audit and reviews and challenges management on the actions being taken to improve the quality of the overall control environment and the control culture across the Company.

B.5.1 Independence and objectivity of the Internal Audit function

Internal Audit must be independent from management at all times in order to be effective in performing its activities. The Internal Audit Function maintains its independence and objectivity by reporting directly to the Group Chief Audit Officer and the Chairman of the Company's Audit Committee.

The Audit Committee has a duty to recommend the appointment or dismissal of the Internal Audit Director to the Board and to participate, jointly with the Chief Audit Officer or designee, in the determination of the objectives of the Internal Audit Director and the evaluation of his levels of achievement, including consultation with the Chief Executive Officer.

Internal Audit staff have no direct responsibility or authority over any operational activities reviewed and may not relieve others of such responsibilities. Internal Audit staff previously working on behalf of the Company, but outside of the Internal Audit function, may not perform or manage reviews of the Company for a period of at least one year after the end of their previous role. Internal Audit operates a formal policy of rotating staff to ensure that independence is maintained.

Internal Audit provides the Audit Committee with an annual confirmation of its independence, supported by an independence declaration form signed by all members of Internal Audit staff.

Internal Audit is authorised to review all areas of the Company and has full, free, and unrestricted access to all activities, records, property, and personnel necessary to complete their work.

B.6 Actuarial function

The Actuarial function is accountable for actuarial methodology, reporting to the Board on the adequacy of reserves and capital requirements, and on the adequacy of underwriting and reinsurance arrangements.

The independence of the Actuarial function is derived through its membership in the wider Global Risk function. The Actuarial function is lead by the Chief Risk Actuary, who reports to the Company's Chief Risk Officer.

The Actuarial function has authority to review all areas of the business and has full, free and unrestricted access to all activities, records, property and personnel necessary to complete its work.

B.7 Outsourcing

The Group Procurement and Outsourcing Standard is the Company's Outsourcing Policy which sets out the relevant responsibilities, objectives, process, and monitoring arrangements to be applied in cases of outsourcing, all of which shall be consistent with the overall business strategy. The standard applies equally to any externally or internally (intra-group) outsourced activity. The objective of this standard is to ensure that minimum control objectives and controls for Supplier related activities are followed by the Company, to ensure that supply risk is managed effectively, customers are being treated fairly and continue to receive good outcomes, as well as mitigating potential financial, operational, contractual, and brand damage caused by inadequate management.

The standard is benchmarked against UK regulatory expectations, FCA, PRA, Solvency II framework and Global Systemically Important Insurer requirements, and where appropriate, regulatory guidance will be applied as a requirement. Any local regulation that exceeds the UK expectations must supplement this.

The standard applies to all staff involved in supplier related activities and provides direction to staff on their roles and responsibilities in effectively managing supplier activity. It provides clarity to businesses on the definition of outsourcing, including where activity is delegated to an intermediary, and whether a function or activity outsourced is critical or important. All staff have a responsibility to comply with this standard if they are involved with supplier related activity.

The Group's Board Risk Committee approves the control objectives and controls in the standard which cover the following areas:

- Supply governance – business oversight of operational performance for sourcing and supply management activities;
- Sourcing – how a service provider of suitable quality is selected;
- Supplier contracting and approvals – financial, commercial and legal approval of contracts; and
- Supplier management and business continuity – risk based approach to management of supply contracts.

B.7.1 Outsourced functions and activities

The Group outsources a wide range of operational functions and activities, including policy administration, claims handling, customer contact centres and IT services. The Procurement and Outsourcing Standard requires a global Supplier Landscape document to be produced bi-annually to capture details of all critical or important outsourced operational functions and activities.

The Company has outsourced the following critical and important functions:

Supplier Name	Jurisdiction	Services provided
Delta Lloyd Life NV	Belgium	Administration of the Company's Belgian branch business
FNZ (Singapore)	Hong Kong	Provision of a platform and trading services
FNZ (UK) Limited	United Kingdom	Provision of a platform and trading services
HSBC Bank plc	United Kingdom	Registration and recording of securities, settlement, income, corporate actions and other custody operations
JP Morgan	United Kingdom	Providing custodial, settlement and other associated services
Paymentshield Limited	United Kingdom	Policy administration for a closed book of business

In addition, the Company has outsourced the following functions to other companies within the Group.

Supplier Name	Jurisdiction	Services provided
Aviva Central Services Limited	United Kingdom	Provision of Finance, People and Information Technology functions
Aviva Employment Services Limited	United Kingdom	Employment of the Company’s staff
Aviva Investors Global Services Limited	United Kingdom	Investment management services
Aviva UK Life Services Limited	United Kingdom	Expenses management

Section C
Risk Profile

In this chapter

Section C: Risk Profile

The 'Risk Profile' section of this report provides information on the key risks encountered by the Company as well as the corresponding processes for monitoring the risk exposures and the techniques in place for mitigating these risks.

Overview of the Company's risk profile

For the purposes of risk identification and measurement, and aligned to the Company's risk policies, risks are usually grouped by the following principal risk types: underwriting risk (including life and long-term health), market, credit, liquidity and operational risk.

An overview of the Company's process for identifying, measuring, managing and monitoring the risks it faces is set out below, with further detail provided in sections C.1 to C.5.

Risk identification

The ultimate parent company, Aviva plc, and its related undertakings comprising the Group (including the Company) operate a risk framework which defines the enterprise-wide approach to managing risk, including how the Group identifies, measures, manages, monitors and reports on the risks to which it is, or could be, exposed. The Group has a variety of tools and processes to support the identification and measurement of the material risks the Group is (or could be) exposed to in the short, medium and long term. The risk framework has been adopted by the boards of the legal entities within the business collectively referred to as "UK Life" (principally consisting of this Company, UKA, Friends Life Limited and Friends Life and Pensions Limited).

Primary sources for identifying risks include risk events analysis, external and internal trends analysis and management information, as well as other risk governance processes and input from executive teams and internal committees. The key risk identification and measurement processes are set out below.

Exposure measurement and monitoring

The primary basis used by the Company to measure and assess risks is the Solvency II SCR which is calculated as Solvency II Own Funds at risk in a 1-in-200 year loss event over a 1 year time horizon. Solvency II SCR is the basis on which the Company sets solvency (economic capital) risk appetite and is used to assess the significance of risks and to appropriately direct resources to their management. Refer to section E.2 of this report for details of the methodology and assumptions used in the calculation of the Company's Solvency II SCR.

The primary risk types measured in the Company's Solvency II SCR calculation are:

- Underwriting risk – Life and health risk (refer to section C.1);
- Market risk (refer to section C.2);
- Credit risk (refer to section C.3); and
- Operational risk (refer to section C.5).

Some categories of risk are not managed by holding capital, principally liquidity risk, which is measured through the liquidity coverage ratio (see section C.4).

The Company also assesses risks on the basis of their potential impact on the value of the Company's franchise, which is supported by the Company's reputation, brand and good customer relationships. Operational risks, in particular, have the potential to significantly impact the franchise value (see section C.5) compared to other risk types which are relatively more significant measured on the basis of Solvency II SCR.

The Company also measures and assesses risk in terms of its total gross exposure and sum at risk, as well as monitoring risk indicators that might indicate changes in the risk exposure and act as a trigger for management action. These are generally risk type specific and are considered in sections C.1 to C.5.

Changes in the period to risk profile

Sections C.1 to C.5 include details on the key changes to the Group's risk profile in the reporting period.

Risk mitigation

Risks arising across the Group are mitigated through application of elements of the Group's RMF, and in particular business standards in respect of financial risk mitigation and reinsurance. Risk mitigation techniques applied are explained in greater detail by risk type in sections C.1 to C.6.

Monitoring the effectiveness of risk mitigation techniques

Annually the Group Risk function undertakes an assessment, presented to the Group Board Risk Committee, of the effectiveness of the Group's and business units' overall risk management, including specifically the robustness of their control environments in mitigating operational risk. The Group's major business units have dedicated risk monitoring teams which monitor the effectiveness of risk management in the business including risk mitigation. How the effectiveness of specific risk mitigation techniques is monitored is considered in sections C.1 to C.6.

Risk concentration

The Company writes a diverse mix of business that is subject to similar risks (mortality, persistency etc.). The Company assesses the relative costs and concentrations of each type of risk through the Internal Model. This analysis enables the Company to assess whether accumulations of risk exceed risk appetite.

The main concentrations of underwriting risk for the Company are longevity, persistency, mortality and morbidity. The Company continually monitors these risks and the opportunities for mitigating actions through reinsurance, improved asset liability matching, or innovative solutions that emerge in the market.

Sensitivity analyses

The Company performs sensitivity analyses and stress and scenario testing in order to understand the impact that changes would have on the Company's risk profile, capital generation and SCR. Refer to section C.6.1 for details on the methodology employed, the assumptions and limitations in performing these analyses and the results obtained.

Prudent Person Principle

The Company ensures that its assets are invested in accordance with the prudent person principle as set out in Article 132 (Directive 2009/138/EC) through the collective application of its risk policies and business standards. These ensure the Company invests in assets whose risks it can properly identify, measure, monitor, manage, control and report, and appropriately take into account in the assessment of its overall solvency needs. The Company's asset liability management business standard and certain provisions of the investment management business standard contain mandatory requirements to ensure that the Company develops its own set of key risk indicators and takes into account the risks associated with its investments without relying solely on the risk being adequately captured by the capital requirements. Risk appetites by risk type are also set and monitored by the Company. Other business standards set requirements for the quality of investment assets (including setting risk limits to control the market and credit risk within a portfolio), matching of assets to liabilities, diversification of invested assets, use of derivatives, assets not admitted for trading and the consistency of investment mandates with the way the investment proposition is described and marketed to customers of unit-linked contracts.

C.1 Underwriting risk

C.1.1 Exposure

Underwriting risk is the risk of loss on underwriting activity caused by an adverse change in the value of liabilities. The principal life and health underwriting risks that the Company is exposed to are described below:

- Longevity risk: The risk that annuitants may live longer than expected.
- Mortality risk: The risk that more policyholders die than expected, either due to general trends or due to pandemics or other specific events e.g. terrorism. This risk impacts claims on life insurance products.
- Morbidity risk: The risk that either more customers fall sick than expected or customers recover at a slower rate than expected. This risk impacts claims on critical illness and income protection products.
- Persistency risk: The risk that fewer customers retain existing policies and continue to pay premiums up to their maturity dates compared to expectations.
- Expense risk: The risk that the future costs of managing and administering customer policies are higher than expected.

- Policyholder behaviour: The risk that the number and timing of customers exercising various choices e.g. paying additional premiums or extending the length of their policy, differs from expectations.

The Company chooses to take measured amounts of underwriting risk provided it has the appropriate core skills to assess and price the risk, and adequate returns are available.

The Company is exposed to the risks of changes in policyholder behaviour due to the exercise of options, guarantees and other product features embedded in its long-term savings products. These product features offer policyholders varying degrees of guaranteed benefits at maturity or on early surrender, along with options to convert their benefits into different products on pre-agreed terms.

Measurement

The following measurement and analysis of underwriting risks is undertaken by the Company with appropriate frequency to support management and monitoring of risk exposures:

- High-level analysis of actual experience against expected experience to support ongoing monitoring of the appropriateness of assumptions.
- Economic capital calculations, consistent with Solvency II SCR methodology, for principal underwriting risk types. The impact of policyholder behaviour linked to the take-up of insurance options and guarantees risk is captured in the capital requirements for underwriting risk. An allowance for basis risk in risk transfer arrangements is included, where appropriate, in the capital requirements for the underlying underwriting risks.
- Standard stresses for mortality, morbidity, longevity, expense, lapse and policyholder behaviour risks. This output is also used to inform liquidity risk analysis.
- Combined scenarios considering interest rate falls or rises where adverse experience has the potential to increase or decrease the duration of the liability and financial market falls where there is a likelihood of significantly higher lapses. This output is also used to inform liquidity risk analysis.

The following analysis is undertaken on an annual basis, or more frequently if required, as part of the planning process to support management and monitoring of risk exposures:

- Business mix sensitivities to determine how economic capital requirements would move under different plan scenarios;
- Stress and scenario tests for assumptions that are identified as critical to the profitability and risk profile of the business based on standard stresses;
- An in-force risk profile analysis to understand the guarantee profile of the business looking at minimum interest rate guarantees and other financial and non-financial guarantees; and
- Liability adequacy/reserve coverage analysis is used to identify potential liquidity risks.

At 31 December 2016, the underwriting component of the SCR amounted to £3,408 million before diversification and tax.

Changes to risk profile in the reporting period

The main changes in underwriting risk profile during 2016 are:

- A general reduction in risk due to the changes in reinsurance arrangements with AII described in section A.1.3
- A general increase in exposure due to both falls in interest rates (which have increased liabilities on the balance sheet) and increases in equity markets.

C.1.2 Risk mitigation

The individual underwriting risks are mitigated and managed as follows:

- Mortality and morbidity risks are mitigated by use of reinsurance and by the existence of life concentration limits. The Company selects reinsurers from those approved by the Group, based on local factors, and monitors that the aggregation of risk ceded is within credit risk appetite.
- Longevity risk is mitigated by use of reinsurance and monitored against the latest external industry data, emerging trends and likely or possible future trends. The Company monitors exposure to longevity risk and any associated capital implications for its annuity business.

- Persistency risk is managed through frequent monitoring of Company experience, and benchmarked against local market information. Generally, persistency risk arises from customers lapsing their policies earlier than has been assumed or more customers ceasing to pay regular premiums than has been assumed. The Company also implements specific initiatives to improve the retention of policies which may otherwise lapse.
- Expense risk is primarily managed through the assessment of profitability and frequent monitoring of expense levels.

Monitoring the effectiveness of risk mitigation techniques

Implementation of the risk mitigation techniques are discussed and then approved via the Company's governance forums (e.g. the Asset and Liability Committee ("ALCO")), with ongoing effectiveness being monitored as part of 'business as usual' management information, the Group-wide Business Standards attestation process, and periodic Internal Audit reviews, significant findings from which are reported to the Audit Committee.

C.1.3 Risk concentration

The Company's policy on underwriting risks is to avoid concentrations of risk exposure. Underwriting concentration risk is a reflection of too little diversification within or across underwriting risk types. The Company avoids significant concentrations of underwriting risk through its scale, diversity of product lines and concentration risk limits. Risk transfer solutions, primarily through reinsurance, are employed to transfer risks that the Company does not wish to retain due to the presence of single large exposures, accumulations, or limited internal expertise to the external market

Controls are in place to ensure accumulations of risk can be evaluated properly. Counterparty concentration as a result of underwriting activities and reinsurance arrangements and their management and monitoring are considered in section C.3.3.

C.2 Market risk

C.2.1 Exposure

Market risk is the risk of adverse financial impact resulting from changes in fair values or future cash flows of financial instruments due to fluctuations in interest rates, equity prices and property prices. Market risk arises within the Company due to fluctuations in the relationship between the values of liabilities and the value of investments held.

The principal market risk types that the Company is exposed to are described below:

- Equity price risk. The Company is subject to equity price risk arising from changes in the market values of its equity securities portfolio. The most material exposures are to policyholder with-profits and unit-linked funds, which are exposed to a fall in the value of the funds due to increasing costs of policyholder guarantees and falls in the value of annual management charges respectively.
- Property price risk: The Company is subject to property price risk directly due to holdings of investment properties and indirectly through property collateral on commercial mortgage and equity release mortgage loans held in its subsidiary UKA.
- Interest rate risk: Interest rate risk arises primarily from the Company's nominal and real yield curve exposure within both assets and liabilities. Interest rate risk also exists for policies that carry investment guarantees on early surrender or at maturity, where claim values can become higher than the value of backing assets when interest rates rise or fall.
- Foreign currency exchange rate risk: The Company is subject to currency risk from financial instruments held in currencies other than Sterling. The Company has branches in other jurisdictions where assets and liabilities are denominated in currencies other than Sterling.
- Derivative risk: The Company is exposed to market risk through its derivative portfolio. Derivatives are used for efficient investment management, risk hedging purposes or to structure specific retail-savings products.
- Correlation risk: The Company recognises that lapse behaviour and potential increases in consumer expectations are sensitive to and interdependent with market movements and interest rates. These interdependencies are taken into consideration in the SCR and in scenario analysis.

Measurement

For each of the major components of market risk the Company has put in place additional policies and procedures to set out how each risk should be managed and monitored and the approach to setting appropriate risk limits and tolerances.

The management of market risk is undertaken by the Asset And Liability Management ("ALM") team, which is responsible for monitoring market risk, including the matching of assets and liabilities. Exposures by individual market risk types is monitored through economic capital modelling, sensitivity testing and stress and scenario testing, as well as specific measures for different risk types (for example, duration matching for interest rate risk). Derivative investment activity is overseen by the ALM and Risk teams, which monitor exposure levels and approval of large or complex transactions.

The principal basis used to measure the Company's exposure to market risks is the Solvency II SCR. The sensitivity of the Solvency II Balance sheet surplus and coverage ratio are also key measures of exposure, particularly to interest rate movements (as the SCR, risk margin and transitional measures on technical provisions are themselves sensitive to movements in interest rates). In addition for each risk category, management is responsible for identifying key parameters to be used for risk measurement. For example:

- Shifts in key interest rate-/currency-related parameters relevant to market risk profile (for example term structure shifts, interest rate volatility, drift and correlation, slope and convexity);
- Changes in price level of individual assets or specific asset classes, e.g. equity or property;
- Changes in price volatility of individual assets or specific asset classes;
- Changes in realised and/or implied inflation; and
- Portfolio sensitivities (for example duration).

These parameters are monitored regularly and significant changes included in management information reported to the ALCO.

At 31 December 2016, the market risk component of the SCR amounted to £3,486 million before diversification and tax, and inclusive of the SCR related to credit risk from corporate and government bond holdings.

Changes to risk profile in the reporting period

The main changes in market risk profile during 2016 are:

- A general reduction in risk due to the changes in reinsurance arrangements with AII described in section A1.3
- A general increase in risk due to higher asset values on the balance sheet

C.2.2. Risk mitigation

Risk mitigation actions by principal market risk types are described below.

- Equity price risk: Direct equity exposures are limited in line with risk preferences. Investment limits require that the Company holds diversified portfolios of assets thereby reducing exposure to individual entities. The Company actively models the performance of equities through the use of stochastic models, in particular to understand the impact of equity performance on guarantees, options and bonus rates. In the principal with-profits funds, a dynamic hedging strategy is in place which aims to protect the surplus within the funds from adverse changes in asset values, in particular equities. In unit-linked funds hedging is in place to protect the surplus from falls in equity reducing the value of annual management charges.
- Property price risk: Investment in property is subject to investment limits, liquidity requirements and the expectations of policyholders. The financial impact from changes in property values is examined through stress and scenario analysis. Exposure to property risk on equity release mortgages from sustained underperformance in the House Price Index ("HPI") is mitigated by capping loan to value on origination at low levels and regularly monitoring the performance of the mortgage portfolio.
- Interest rate risk: The Company typically manages interest rate risk by adopting asset liability matching techniques, including the use of a variety of derivative instruments, to minimise the impact of mismatches between the value of assets and liabilities from interest rate movements. However where any mismatch is within the Company's risk appetite, the impact is monitored through economic capital measures.
- Foreign currency exchange risk: Currency risk from financial instruments held in currencies other than Sterling is limited as nearly all such holdings are backing either unit-linked or with-profits contract liabilities or mitigated by matching liabilities in local currency or hedging.

- Derivatives risk: Collateral is held against derivative transactions. Speculative derivative activity is prohibited. Over the counter ("OTC") derivative contracts are entered into only with approved counterparties, in accordance with the Company's policies. The Company applies strict requirements to derivative administration and valuation processes, and has a control framework that is consistent with market and industry practice.

Monitoring the effectiveness of risk mitigation techniques

In accordance with the Group Financial Risk Mitigation business standard, the Company assesses and documents the effectiveness of arrangements in place to mitigate market and credit risks (financial risks). This assessment is initially undertaken when structuring arrangements and prior to execution. The assessment considers impacts on key metrics including measures of risk (primarily economic capital) and financial measures, including cash flow, IFRS operating profit and expenses. Where the initial assessment indicates that the impact on key metrics is material, further assessment is carried out at appropriately regular intervals throughout the life of the arrangement. These assessments typically include stress testing and sensitivity analysis. Transactions aimed at mitigating risk may be considered in aggregate with the relevant risks.

The Company's ALM team is responsible for monitoring the Company's market risk, including the effectiveness of risk mitigation techniques in place. The Company prepares regular management information on hedging arrangements to ensure appropriate oversight.

C.2.3 Risk Concentration

The Company monitors its investment exposures, in aggregate across all classes of financial instruments (debt securities, equities and other investments), to individual issuers, geographies, sectors, and asset classes to ensure the Company is not individually exposed to significant risk concentrations. This includes look-through, where information is available, to the underlying investments held within investment funds. Further information on how the Company manages, monitors and limits investment exposures is included in C.3.3.

C.3 Credit risk

C.3.1 Exposure

Credit risk is the risk of financial loss as a result of the default or failure of third parties to meet their payment obligations to the Company, or variations in market values as a result of changes in expectations related to these risks. Credit risk can provide the returns required to satisfy policyholder liabilities and generate returns for the Company's shareholders. Therefore the Company is prepared to accept a degree of credit risk based on its credit risk analysis capability and the structural investment advantages conferred to insurers with long-dated, relatively illiquid liabilities.

The principal credit risk categories that the Company is exposed to are as follows:

- Spread risk is the risk that credit spreads over risk-free interest rates change. Credit concerns (improving or worsening) with respect to the issuer and market factors such as risk appetite and liquidity within the market can give rise to a change in credit spread.
- Default risk is the risk that a counterparty is unable or unwilling to meet its financial obligations when they fall due.
- Rating migration risk is the risk that a change in the external credit rating of a counterparty adversely impacts the Company.

Exposure of the Company to credit risk arises principally through the following asset holdings:

- Debt securities, including investments in sovereign and corporate bonds.
- Loans including policy loans, loans and advances to banks and mortgage loans.
- Reinsurance assets. Where the Company has reinsurance arrangements in place, credit risk arises in relation to the reinsurance counterparties.
- Other assets. Credit risk arises in relation to other assets, including structured investments, bank deposits and derivative counterparties.

Measurement

The principal basis used to measure the Company's exposure to credit risk is the Solvency II SCR. In addition, the following factors are used by the Company when measuring credit risk exposure.

- Maximum exposure: The Company's maximum exposure to credit risk of financial assets and reinsurance assets, without taking collateral, credit hedges or reinvestment risk into account, is represented by the carrying value of the financial assets and reinsurance assets recognised in the Solvency II balance sheet.
- Credit ratings: Credit ratings (both internal and external) are used as indicators of credit risk to help determine risk management actions, investment decisions and asset allocation.
- Loan specific factors: The Company uses loan to value, interest and debt service cover, and diversity and quality of the tenant base metrics to monitor exposures to commercial mortgage loans. The risk characteristics of commercial mortgage loans are assessed before acquisition and are monitored thereafter.

The majority of the Company's credit risk arises from corporate and government bond holdings. This credit risk is reported within the market risk component of the SCR. In addition to this, at 31 December 2016, the counterparty default risk component of the SCR amounted to £371 million before diversification and tax.

Changes to risk profile in the reporting period

The main changes in credit risk profile during 2016 are:

- A general reduction in risk due to the changes in reinsurance arrangements with AII described in section A1.3.
- An increase in counterparty default risk exposure to AII relating to the increased reinsurance.
- A general increase in risk due to higher asset values on the balance sheet.

C.3.2. Risk mitigation

The Company's approach to managing credit risk recognises that there is a risk of adverse financial impact resulting from fluctuations in the credit quality of third parties including default, rating transition and credit spread movements. The Company implements credit risk management processes including a limit framework (section C.3.3), operates specific risk management committees, and ensures detailed reporting and monitoring of its exposures against pre-established risk criteria.

The Company may also impose ad-hoc restrictions to control exposures. The Company also uses ad-hoc restrictions to reserve certain counterparties for a particular business activity. For example direct investment in the securities of principal reinsurance counterparties is restricted.

In addition to the risk mitigation techniques described above, specific credit risk mitigation techniques apply to certain portfolios of assets.

Mortgages are secured by property assets. Further credit risk mitigation is provided by maintaining a diversified portfolio in terms of property type, location, tenants and the spread of loans written over time.

The Company has significant securities financing operations. The credit risks within this activity are mitigated by over-collateralisation and minimum counterparty credit quality requirements which are designed to minimise residual risk. The Company operates strict standards around counterparty quality, collateral management, margin calls and controls.

The Company is also exposed to counterparty credit risk through derivative trades. This risk is mitigated through collateralising almost all trades (the exception being certain FX trades where it has historically been the market norm not to collateralise, exchange traded positions and certain swaps with PFI counterparties). Residual exposures are captured within the Company's credit management framework.

For unit-linked business the policyholder bears the direct market risk and credit risk on investment assets in the unit funds and the shareholders' exposure to credit risk is limited to the extent of the income arising from asset management charges based on the value of assets in the fund. The exception to this is credit risk on certain reinsured unit-linked business which is borne by the Company.

Monitoring of the effectiveness of risk mitigation techniques

The processes for monitoring the effectiveness of risk mitigation techniques in respect of credit risk and market risk are set out in section C.2.2.

C.3.3. Risk concentration

The Company operates a credit limit framework, which limits investments in individual issuers, geographies, sectors, and asset classes to ensure it is not exposed to significant concentrations of credit risk. Credit concentrations are monitored as part of the regular credit monitoring process and are reported to the ALCO.

Credit limit framework

The credit limit framework is based on three different layers (counterparty, sector and country) and is supported by a number of escalation frameworks which seek to ensure larger and/or higher risk transactions and activities are escalated appropriately. Specific escalation frameworks exist for ALM and investment decisions, and for derivative transactions.

The counterparty limit framework aims to avoid concentrations to single counterparties and to encourage issuer diversification within the portfolio. The limits combine to restrict the total exposure to a single counterparty, both in terms of balance-sheet exposure and shareholder exposure, and within that restrict the amount of high risk assets or exposures that can be held.

Concentration risk is further managed by sector concentration limits which are used to mitigate against, or manage, concentrations to specific sectors, and geographical areas to ensure appropriate geographical diversification and appropriate exposure limits depending on the risk profile of the country.

Significant concentrations

The Company holds a diversified portfolio of assets subject to credit risk due to its internal credit limit framework which limits exposure to individual concentrations of risk.

The Company is exposed to concentrations of risk with individual reinsurers, due to the nature of the reinsurance market. The Company places reinsurance with those reinsurers that have acceptable credit ratings. The Company has a significant reinsurance asset as a result of the Quota Share reinsurance ceded to AII, as detailed in section A.2.1, which is considered to be an acceptable exposure to a fellow group undertaking. The Company operates a policy to manage its reinsurance counterparty exposures and the impact from reinsurer default is measured regularly, in particular through Solvency II stress and scenario testing.

C.4 Liquidity risk

C.4.1 Exposure

Liquidity risk is the risk that financial obligations to policyholders and other relevant external and internal parties cannot be met in a timely and cost-effective manner as they fall due. Liquidity issues may arise from uncertainty in the value and timing of liabilities as well as uncertainty in the ability to realise assets as cash to meet obligations.

Sources of liquidity risk are those activities or external factors that could alter the liquidity needs and liquidity resources in a stress scenario. The Company is responsible for identifying where liquidity risk exists and the factors that may increase the liquidity risks it faces at either the Company or specific fund level when setting risk appetite. Some examples of sources of liquidity risk are:

- Higher than expected claims. An increase in surrenders (for example a mass lapse event for unit linked business) could increase the claims paid in the short term but reduce those in the longer term. In addition, increases in the level of annuity claims (for example through fewer deaths than expected) would also increase the claims paid over the medium term.
- Collateral and margin calls on derivatives following movements in underlying market values.
- Timing mismatches in cash inflows and outflows including delays in reinsurance settlements and reinsurance defaults, and mismatches between annuity claims and expenses versus investment income and redemption proceeds.

The non profit fund is particularly susceptible to spikes in liquidity needs, although these spikes are recognised and actively managed to limit their impact on the Company.

Measurement

Liquidity risk appetite is expressed and measured through both absolute level targets and the Liquidity Coverage Ratio ("LCR") which measures the extent to which liquid assets held and stressed inflows are sufficient to meet liquidity requirements over a specified time horizon. The Company has short and long term risk appetites for legal entities and ring-fenced funds.

Changes to risk profile in the reporting period

There were no material changes in the Company's liquidity risk profile during 2016, as liquidity is managed gross of the reinsurance arrangement with AII.

Sensitivity analysis

Stress and scenario testing, including reverse stress tests, is undertaken by the Company for the purpose of recovery planning and to test the resilience of the business plan. This testing specifically considers impacts on the Company's liquidity position.

C.4.2 Risk mitigation

The Company manages and mitigates its exposure to liquidity risk as follows:

- A liquidity risk appetite is set which requires that sufficient liquid resources be maintained to cover net outflows in a stress scenario.
- Maintenance of undrawn committed borrowing facilities.
- Asset liability matching methodology which optimises asset portfolio maturity structures to ensure cash flows are sufficient to meet liabilities when they fall due.
- Stock-lending of assets, in particular sale and repurchase agreements.

In addition the Company has access to a contingent funding plan that permits limited borrowing from other companies within UK Life, and may also request additional borrowing from other Group companies (subject to relevant approvals). To pre-empt the need to initiate the contingent funding plan, the Company sets liquidity buffers and triggers to enable action to be taken before target levels are breached.

Monitoring the effectiveness of risk mitigation techniques

In addition to the overall monitoring of the risk mitigation techniques described in the Overview section, the Company monitors the effectiveness of its liquidity risk mitigation as follows:

- Assurance work (e.g. testing) to ensure that controls that enable effective risk management are in place and work effectively.
- Continual monitoring of actual and projected liquid resources and cash inflows and outflows against liquidity risk appetites and liquidity buffers.

C.4.3 Risk concentration

Concentration of liquidity risk can occur if the Company's assets are invested in a limited number of issuers, asset classes and sectors and, in the event of an external shock, market liquidity for these investments disappears and the assets can not be realised for cash. The measures taken to avoid such risk concentrations are set out in section C.3.3.

The diversity of sources of liquidity available to the Company helps reduce concentration of liquidity risk.

C.4.4 Additional information on liquidity risk: Expected Profit in Future Premiums ("EPIFP")

EPIFP is the expected present value of future cash flows which result from the inclusion in technical provisions of premiums relating to existing insurance and reinsurance contracts that are expected to be received in the future. It is calculated as the difference between:

- The net of reinsurance best estimate liabilities of the contract.
- An alternative scenario for the contract under which no future premiums are paid. Excluding the premiums is likely to have an impact on the benefit to be paid. Relevant benefit and expense cash flows are therefore assumed to be on a paid up or lapse basis. Where 'unearned' commission could be clawed back on a paid-up basis, this is also allowed for. However, any penalties on the contract associated with the policyholder making the policy paid up are not taken into account.

The amount of EPIFP was £814 million as at 31 December 2016.

C.5. Operational risk

C.5.1 Exposure

Operational risk is the risk of loss, arising from inadequate or failed internal processes, people and systems, or external events including changes in the regulatory environment. There is a limited tolerance for operational risk and the aim is to reduce this risk as far as is commercially sensible.

Conduct risk is an aspect of operational risk and is the risk that positive customer outcomes are not achieved. It arises throughout the whole product lifecycle from the development of products, from the sales process to servicing policies and handling claims.

Reputational risk can result from operational risk. This is the risk that litigation, employee misconduct, operational failures, the outcome of regulatory investigations, media speculation and negative publicity, disclosure of confidential client information, and inadequate services (whether or not founded) could impact the Company's brands or reputation. Any of either the Company's brands or reputation could also be affected if products or services recommended by it (or any of its intermediaries) do not perform as expected (whether or not the expectations are well founded) or if customers' expectations for the product change.

Measurement and monitoring

The RCSA process, as described in section B.3.1, is used to identify operational risks. The process involves the mapping of identified operational risks to operational processes, the identification of mitigating controls and an assessment of the effectiveness of these controls. A residual risk impact and probability assessment is then performed. Residual impact is assessed quantitatively on the basis of financial loss and misstatement, and qualitatively for reputational and conduct considerations.

To the extent that operational risks cannot be fully mitigated and in recognition of the risk of control failure (i.e. due to ineffectiveness in design or performance), the Company holds economic capital to cover these risks within the Solvency II SCR.

Changes to risk profile in the reporting period

The Company's exposure to risk such as data theft, conduct regulatory breaches and customer service interruption due to IT systems failure increased in 2016 as a result of the following factors:

- The increasing importance to the Company's strategy of digital interaction with its customers and advanced data analytics.
- The conduct agenda of the European Insurance and Occupational Pensions Authority ("EIOPA"), the FCA and other regulators.
- The increasing cyber security threat, as evidenced by a number of high profile cyber security breaches for corporates in the UK and elsewhere.

The exposure is expected to continue to increase into the future.

C.5.2 Risk mitigation

Most operational risks are considered preventable and are managed through business controls. The Company's preference is to improve its business processes through reduction of errors and rework, in order to achieve:

- Reduced operational risk and associated losses, hence improving cost to income ratio and lessening variability in financial performance;
- Improved customer outcomes and employee satisfaction;
- Sustained customer confidence; and
- A positive regulatory reputation.

The Group's business standards set out the minimum control objectives and controls that each business area is expected to have in place. Operational risk limits and tolerances act as quantitative boundaries that constrain specific risk-taking activities at an operational level.

The Company records and analyses operational risk events, arising from inadequate or failed processes, people or systems or external events, to ensure remedial action is taken, lessons are learnt and where the event impacts customers they are treated fairly. As well as events that result in losses, this includes risk events which do not give rise to a financial loss, such as near misses or fortuitous gains and also reputational and customer impacts. The lessons learned enable business areas to highlight areas for improvement, implement corrective actions to avoid recurrence, and improve the Company's risk assessment and understanding of operational risk, feeding into the RCSA process.

Monitoring of the effectiveness of risk mitigation techniques

All of the three lines of defence have an important role to play in monitoring the effectiveness of the controls that are in place in respect of operational risk. More details on these three lines of defence are included in section B.1.1.

C.5.3 Risk concentration

Concentrations of operational risk arise when there is dependency on a single supplier to provide a product or service supporting a business critical function. The Company is required to identify such business critical outsourced functions (internal and external) and for each have exit and termination plans and business continuity and disaster recovery plans in the event of supplier failure. These plans are required to be reviewed at least annually.

The Company's operations are spread across a number of geographical office locations helping to ensure continuity of service if a catastrophic event results in an office being out of action. Additionally, the Company has a series of business continuity plans in place for critical functions which should ensure continuity of service to its customers without significant interruption.

Most of the Company's products are sold under the 'Aviva' brand, enabling the Company to leverage the strength of the brand and supporting delivery of the 'True Customer Composite' anchor to its business strategy. The Company is therefore particularly vulnerable to any operational failures that could adversely impact public perception of the 'Aviva' brand.

C.6 Any other information

C.6.1 Sensitivity analyses

As set out in the Risk Profile Overview section, the primary basis used by the Company to measure risks is the Solvency II SCR. The Company performs sensitivity analysis and stress and scenario testing in order to understand the impact that changes in underlying risk calibrations (and correlations of those risks) would have on the Company's risk profile and Solvency II coverage ratio. This section describes the sensitivity analyses performed, and section C.6.2 describes the Company's stress and scenario testing.

The sensitivity analyses performed by the Company include consideration of the sensitivity of the Company's Solvency II cover ratio to a range of economic and non-economic assumptions as follows:

Economic assumptions

- 25 and 100 basis point increases and 25 and 50 basis point decreases in the risk-free rate, including all consequential changes (including assumed investment returns for all asset classes, market values of fixed interest assets and risk discount rates).
- 50 and 100 basis point increases and 50 basis point decrease in credit spreads for corporate bonds with credit rating A at 10 year duration, with the other ratings and durations stressed by the same proportion relative to a stressed capital requirement.
- 10% increase and 10% and 25% decreases in market values of equity assets.

Non-Economic assumptions

- 10% increase in maintenance expenses and investment expenses.
- 10% increase in lapse rates.
- 5% increase in both mortality and morbidity rates for life assurance.
- 5% decrease in mortality rates for annuity business.

All other assumptions remain unchanged for each sensitivity, except where these are directly affected by the revised economic conditions or where a management action that is allowed for in the SCR calculation is applicable for that sensitivity. For example, future bonus rates on with-profits policies are typically adjusted to reflect changes to future investment returns.

Transitional relief on technical provisions is assumed to be recalculated in the interest rate and annuitant mortality sensitivities. For business where an MA applies, the MA is assumed to change by 77.5% of the change in credit spread.

The table below shows the absolute change in cover ratio under each sensitivity:

Sensitivities (net of tax and gross of non-controlling interests)		**Absolute change in solvency cover ratio excluding RFFs**
Changes in Economic assumptions	25 bps increase in interest rate	3%
	100 bps increase in interest rate	13%
	25 bps decrease in interest rate	(3)%
	50 bps decrease in interest rate	(6)%
	50bps increase in corporate bond spread	4%
	100bps increase in corporate bond spread	7%
	50 bps decrease in corporate bond spread	(4)%
	10% increase in market value of equity	2%
	10% decrease in market value of equity	(1)%
	25% decrease in market value of equity	(2)%
Changes in Non-Economic assumptions	10% increase in maintenance and investment expenses	(6)%
	10% increase in lapse rates	(1)%
	5% increase in mortality/morbidity rates - Life assurance	(1)%
	5% decrease in mortality rates - annuity business	(16)%

Limitations of sensitivity analysis

The table above demonstrates the effect of a change in a key assumption while other assumptions remain unchanged. In reality, there is a correlation between the assumptions and other factors. It should also be noted that these sensitivities are non-linear, and larger or smaller impacts should not be interpolated or extrapolated from these results.

The sensitivity analysis does not take into consideration that the Company's assets and liabilities are actively managed. Additionally, the Solvency II position of the Company may vary at the time that any actual market movement occurs. For example, the Company's financial risk management strategy aims to manage the exposure to market fluctuations.

As investment markets move past various trigger levels, management actions could include selling investments, changing investment portfolio allocation, adjusting bonuses credited to policyholders, and taking other protective action. Other limitations in the above sensitivity analysis include the use of hypothetical market movements to demonstrate potential risk that only represent the Company's view of possible near-term market changes that cannot be predicted with any certainty, and the assumption that all interest rates move in identical fashion.

C.6.2 Stress and scenario testing

Stress and scenario testing (including reverse stress testing) is used to test the resilience of business plans and strategic projects (including material portfolio changes such as those related to products, customers and distributors) and inform decision-making. A series of stress tests are performed to analyse their impact on the Company's solvency. These tests include the Company 1-in-X reference stresses driven by the Company's risk profile as well as several scenarios as part of the Company's Recovery Planning and Liquidity Risk management planning processes

Section D
Valuation for Solvency Purposes

In this chapter

Section D: Valuation for Solvency Purposes

The 'Valuation for Solvency Purposes' section of the report provides a description of the bases, methods and main assumptions used in the valuation of assets, technical provisions and other liabilities for each material asset and liability class.

Assets and liabilities under Solvency II are valued in accordance with the Company's accounting policies under IFRS as adopted by the European Union (EU), unless stated otherwise in sections D.1 'Assets', D.2 'Technical provisions' and D.3 'Other liabilities'. A summary of the Company's accounting policies can be found in the accounting policies note of the Company's 2016 financial statements.

The table below sets out a summarised balance sheet as at 31 December 2016. It compares assets and liabilities as reported in the financial statements (column a), a reclassified IFRS balance sheet as presented in the balance sheet QRT (column b) and the Solvency II balance sheet (column d).

Where differences are present either in respect of the classification or measurement of assets or liabilities between IFRS and Solvency II, they have been presented in the table below, in columns (c) and (e), and a qualitative description provided for all material items in sections D.1 'Assets', D.2 'Technical provisions' or D.3 'Other liabilities'.

Balance Sheet – IFRS and Solvency II

As at 31 December 2016	Note from financial statements	Note	IFRS (a) £m	IFRS Reclassified (b) £m	Variance (b-a) (c) £m	Solvency II (d) £m	Variance (d-b) (e) £m
Assets							
Intangible assets	L & 7	D.1.1	73	73	-	-	(73)
Deferred acquisition costs	X & 18	D.1.2	823	823	-	-	(823)
Property, plant and equipment held for own use	O & 10		5	-	(5)	-	-
Investment property	P & 11	D.1.3	3,414	975	(2,439)	975	-
Participations	M, N, 8 & 9	D.1.4	4,154	13,837	9,683	14,080	243
Financial investments	S & 15	D.1.5	82,535	31,591	(50,944)	31,591	-
Assets held for index-linked and unit-linked funds		D.1.6	-	53,799	53,799	53,799	-
Loans and Mortgages	U & 13	D.1.7	2,995	1,977	(1,018)	1,900	(77)
Reinsurance recoverables	K & 16	D.1.8	33,307	33,307	-	30,165	(3,142)
Cash and cash equivalents	Y & 33(b)	D.1.9	9,853	149	(9,704)	149	-
Deposits to cedants	17	D.1.10	8,960	8,960	-	8,964	4
Receivables (insurance,reinsurance and intermediaries)	17	D.1.11	221	225	4	225	-
Other assets (including prepayments and accrued income)	18(c)	D.1.12	2,932	2,504	(428)	2,504	-
Total assets			**149,272**	**148,220**	**(1,052)**	**144,352**	**(3,868)**
Liabilities							
Technical provisions	I, J, 22 & 23	D.2.1	107,614	106,882	(732)	101,036	(5,846)
Provisions other than technical provisions	29	D.3.1	-	65	65	65	-
Deferred tax liabilities	AA & 27	D.3.2	359	359	-	513	154
Derivatives	29	D.3.3	3,086	3,146	60	3,146	-
Debts owed to credit institutions	AB & 28	D.3.4	325	46	(279)	46	-
Financial liabilities other than debts owed to credit institutions	29	D.3.4	4,685	3,903	(782)	3,777	(126)
Insurance and intermediaries payables	29	D.3.4	514	1,247	733	1,247	-
Deposits from reinsurers and Reinsurance payables	29	D.3.5	25,285	25,287	2	25,287	-
Payables (trade, not insurance)	29	D.3.4	619	695	76	695	-
Other liabilities	30	D.3.6	2,407	2,212	(195)	9	(2,203)
Total liabilities			**144,894**	**143,842**	**(1,052)**	**135,821**	**(8,021)**
Excess of assets over liabilities			4,378	4,378	-	8,531	4,153

There are a number of classification differences between the presentation of the balance sheet in the financial statements and the Solvency II balance sheet which have no material net asset impact and therefore no impact on Solvency II measurement. The impact of these changes is shown in column c above. The key reclassifications are as follows:

- Reclassification of £53.8 billion of assets backing unit-linked and index-linked contracts to the 'Assets held for index-linked and unit-linked funds' category. This includes £47.7 billion shown as financial investments, £2.7 billion classified as cash and cash equivalents, £2.4 billion classified as investment property and £1.0 billion classified as loans and mortgages in the financial statements.
- Reclassification into participations of £6.5 billion of liquidity funds classified within cash and cash equivalents and £3.2 billion of collective investment schemes held within financial investments in the financial statements.

A number of valuation differences exist in respect of the assets and liabilities reported in the Company balance sheet under Solvency II compared to IFRS as at 31 December 2016. The nature of the material differences are set out in section D.1 ‘Assets’, D.2 ‘Technical provisions’ and D.3 ‘Other liabilities’. The net impact of these differences is an increase in net assets of £4.2 billion. This primarily reflects the differences in assumptions and reserving methodology used to value technical provisions under Solvency II compared to IFRS.

D.1 Assets

Assets have been valued according to the requirements of the Solvency II Directive and related guidance; the basis of the Solvency II valuation principle is the amount for which they could be exchanged between knowledgeable willing parties in an arm’s length transaction.

A description of the basis of valuation under Solvency II along with valuation differences between the Solvency II bases and the IFRS financial statements, by asset class, is provided below.

D.1.1 Intangible assets

Intangible assets recognised in accordance with IFRS include software intangibles and acquired value in force (“AVIF”).

For Solvency II purposes software intangibles are restated at their fair value. The fair value of intangible assets is required to be based on a valuation methodology using market observable inputs. If market observable inputs for an intangible asset are not available it has nil value under Solvency II. The Company’s software intangibles are valued at nil in accordance with the Solvency II valuation methodology described above, as no market observable inputs are available.

AVIF is also set to nil in the Solvency II balance sheet and instead the associated cash flows are included in the measurement of Solvency II technical provisions.

D.1.2 Deferred acquisition costs

Deferred acquisition costs valued at £823 million for IFRS purposes are set to nil in the Solvency II balance sheet and instead the associated future profit cash flows supporting the deferred acquisition costs are included in the measurement of Solvency II technical provisions.

D.1.3 Investment property

Investment property is measured at fair value for both Solvency II and IFRS purposes. The fair values are assessed by qualified external valuation specialists or by qualified staff and reflect rental income and other assumptions that market participants would use when pricing the investment property under current market conditions. Further information on the valuation of investment properties is included in section D.4.4.

D.1.4 Participations

The Company’s participations in related undertakings are valued in the Solvency II balance sheet at the Company’s proportionate equity share of the excess of assets over liabilities (valued on a Solvency II basis) of each related undertaking.

Under IFRS, subsidiaries, associates and joint ventures are stated at their fair values, estimated using applicable valuation models.

D.1.5 Financial investments

All financial investments are measured at fair value for both Solvency II and IFRS purposes. Fair value is obtained from quoted market prices or, if these are not available, by using relevant valuation techniques. Further information on financial investments valued using an alternative method to either a quoted market price or a quoted market price for a similar asset is included in section D.4.

D.1.6 Assets held for index-linked and unit-linked funds

Assets held to cover index-linked and unit-linked funds are measured at fair value for both Solvency II and IFRS purposes.

Assets held to cover index-linked and unit-linked funds are classified within their respective individual asset categories in the IFRS balance sheet and combined together as a single total in the Solvency II balance sheet. These balances are therefore reclassified from the individual asset lines to this category for Solvency II reporting purposes.

D.1.7 Loans and mortgages

Under Solvency II loans are measured at fair value. The valuation technique used is an income approach, which reflects the present value of cash flows the loan is expected to generate calibrated as far as possible to market observable parameters.

Under IFRS the majority of loans are recognised at their fair values. Certain loans, however, are carried at amortised cost. There is a valuation difference of £77 million in relation to loans held at amortised cost under IFRS.

D.1.8 Reinsurance Recoverables

Reinsurance recoverables are calculated as a probability-weighted average of discounted future cash flows relating to reinsurance contracts, adjusted for the expected losses due to counterparty default. Only reinsurance cash flows that relate to cash flows included in the best estimate liability are included. The difference in value under Solvency II compared with IFRS is driven by the differences in valuation methodology for technical provisions (refer to section D.2.4). All internal reinsurance is valued in the same way as external reinsurance. There is no business reinsured with an external special purpose vehicle ("SPV").

D.1.9 Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and in hand, deposits held at call with banks, treasury bills and other short term highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value. Such investments are those with less than three months' maturity from the date of acquisition, or which are redeemable on demand only with an insignificant change in their fair values. Under Solvency II cash is valued in accordance with IFRS principles.

D.1.10 Deposits to cedants

Deposits to cedants represent reinsurance premiums received under a Quota Share arrangement with the Company's subsidiary, UKA, which have been deposited back with UKA as collateral. Amounts received are based on a proportionate share of UKA's net assets. The difference between the IFRS value and Solvency II value reflects underlying differences between the IFRS value and Solvency II value in the net assets of UKA.

D.1.11 Receivables (insurance, reinsurance and intermediaries)

Under Solvency II, receivables are held at fair value, being the amount for which they could be exchanged between knowledgeable parties in an arm's length transaction. All the Company's receivables are due within one year. Where receivables are expected to be recovered within one year, the Solvency II fair value is equal to the IFRS carrying value.

D.1.12 Other assets

Other assets consist of prepayments and accrued income which are held at fair value under both Solvency II and IFRS.

D.2 Technical provisions

This section provides a definition of Solvency II technical provisions, the methodology and main assumptions used in the valuation of the Solvency II technical provisions, the total value of Solvency II technical provisions split by material lines of business, a comparison of the valuation of Solvency II technical provisions with IFRS technical provisions and a description of the level of uncertainty in technical provisions.

D.2.1 Definition of Technical Provisions

The value of technical provisions under Solvency II is equal to the sum of a best estimate liability and a risk margin.

The best estimate liability is defined as the probability-weighted average of the present value of future cash flows on a market consistent basis, using the relevant risk-free interest rate term structure after making allowance for the credit risk adjustment ("CRA") and the volatility adjustment ("VA") or MA as required (described in section D.2.2.2).

The risk margin is an allowance for the amount, in addition to the best estimate liability, that a third party (buyer) would expect to receive in order to take over the insurance obligations of an existing entity. It is calculated as the present value of a cost of capital each year in respect of non-hedgeable risks.

Technical provisions also include the transitional measure on technical provisions ("TMTP") which allows firms to transition from the Solvency I liabilities to the Solvency II technical provisions over a period of 16 years for business written prior to the Solvency II implementation date of 1 January 2016. This is described in more detail in section D.2.2.1(c).

The following general principles apply to technical provisions valuation:

- The calculation of technical provisions is performed on a going concern basis. This means a proportion of expected future costs (such as general overheads) will be covered by future new business.
- The definition of a "best estimate" assumption is one that represents the expected outcome from the range of possible outcomes for future experience of that assumption and is reasonable and realistic with no deliberate margins for prudence included.

D.2.2 Technical provisions methodology and assumptions

Technical provisions are calculated in accordance with the Solvency II Directive, Delegated Regulations and regulator guidance. This section describes how the rules and guidance have been applied to the Company. Unless otherwise stated the methodology and assumptions apply to all types of business.

D.2.2.1 Methodology

(a) Valuation methodology

Cash flow modelling

When deriving the probability-weighted average of the present value of future cash flows, a deterministic valuation approach, based on best estimate assumptions, is used for most of the business. The exception is for contracts with embedded options and guarantees, in particular with-profits participation business, where a more sophisticated stochastic approach based on the average of a number of scenarios is used. The best estimate liability is calculated separately for cash flows in different currencies. Reinsurance cash flows are modelled as well as cash flows gross of reinsurance.

Future investment returns are also projected in order to determine the value of such items as annual management charges, investment expenses and the value of investment guarantees on with-profits participation business.

Policy grouping

The cash flow projections used in the calculation of the best estimate liability for life insurance business are made separately for each policy with the exception of some participation business where policies are grouped.

Minimum technical provision per policy

Technical provisions for insurance contracts are allowed to be negative where future cash in-flows are expected to exceed future cash out-flows.

The technical provisions of an insurance or reinsurance contract may be lower than the surrender value available to the policyholder of the underlying contract.

Contract Boundaries

The calculation of the best estimate liability allows for any boundaries of the insurance contract. A boundary exists where the insurance undertaking has a unilateral right to: terminate the contract; reject premiums payable under the contract; or amend the premiums or benefits payable under the contract at a future date in such a way that the premiums fully reflect the risks. Any obligations which relate to cover which may be provided after that date do not belong to the contract, unless the undertaking can compel the policyholder to pay the premium for those obligations.

An immediate contract boundary also applies to unit-linked regular premium savings and pensions policies which do not have material risk benefits or guarantees.

Unit-linked policies invested in charge capped funds are treated as having an extended contract boundary which includes expected future premiums. As a consequence auto-enrolment default funds, stakeholder pensions and products with voluntary charge caps (set at a similar level to stakeholder pensions) are considered to have an extended contract boundary.

This also applies to relevant unitised with-profits business. Due to the material guarantees on unitised with-profits business an immediate contract boundary applies.

Where contract boundaries are applied, these contracts are treated as paid-up at the valuation date. The expense and lapse assumptions are reviewed to ensure that they are appropriate to the restricted contract boundary.

Financial options and guarantees

Where options and guarantees are contract features, a stochastic approach to valuation is used, unless the risk is immaterial or there is insufficient data to calibrate the model. There are a small number of guarantees not modelled within the stochastic model for which the expected cost of guarantees is based on the results for similar products where guarantees are modelled. For some relatively small blocks of business with guaranteed annuity options ("GAOs") that are not modelled stochastically, it is assumed that a high proportion of the guarantee is taken up. Where policy guarantees (e.g. unit-linked Guaranteed Fund investment guarantees) mean that persistency is likely to be higher, a lower assumed lapse rate is used to reflect this, and an additional reserve is determined stochastically to reflect the time value of the investment guarantee. A small additional reserve is held to cover options to renew/convert existing protection policies at normal premium rates.

Management actions

As part of the best estimate assumptions, the actuarial and statistical methods used to calculate the technical provisions take account of future management actions. These actions reflect what management would reasonably expect to carry out in the circumstances of each scenario over the duration of the projection.

A wide range of future management actions is incorporated into the technical provisions. The types of future management actions are not restricted provided they meet the objective, realistic and verifiable standards in Solvency II.

Management actions are typically limited to:

- Changes in asset allocation;
- Changes in regular and final bonus rates; and
- Changes in assumed distributions from the fund.

The impact of any assumed management actions on other assumptions is taken into account within a certain valuation scenario. In particular, the effects of management actions on policyholder behaviour or on the related expenses are taken into account. Future management actions allow for relevant legal or regulatory constraints.

The Company produces, at least annually, a future management action plan, which is updated and signed off by the board or delegated sub-committee. This action plan covers a number of areas including:

- The identification of actions that are relevant to the valuation of the technical provisions.
- The identification of specific circumstances in which the actions would or would not be able to be carried out.
- The order in which the actions would be carried out, and the applicable governance requirements.
- Ongoing work required to ensure that the undertaking is in a position to carry out the actions.
- Description of how the actions have been reflected in the calculation of the best estimate liability including a quantitative impact on the best estimate liability.
- Description of the applicable internal reporting procedures for the actions implemented in the calculation of the best estimate liability.

Basis, methods and assumptions applicable to particular classes of business

Unit-linked business

Unit-linked business is valued as the face value of the units at market bid price, together with allowance for non-unit cash flows, including mortality and other claim benefits, future expenses and policy charges. Allowances are included where appropriate for loyalty bonus and for waiver of premium benefits, permanent health benefits, permanent total disability benefits and guaranteed insurability options.

Non-unit reserves are calculated by projecting cash flows on a monthly basis for each month that the policy is expected to remain in force. Explicit allowance is made for future commission where appropriate. Allowance is also made for the promise that the Company made to policyholders that the charges on certain pensions policies will not exceed 1% p.a. in any future year.

A non-unit reserve is determined along similar lines for unitised with-profits business where the investment liability arises in a with-profits fund, but other policy benefits, charges and expenses arise in the non-profit funds.

Participating business

The best estimate liability for participating business is the sum of the “With Profits Benefit Reserve” (“WPBR”) and “Future Policy Related Liabilities” (“FPRL”). Shareholder transfers do not form part of the technical provisions but are required to determine the amount of restricted Own Funds for RFFs (see section E.1.6).

For the majority of participating business, the WPBR is an “asset share” calculated on an individual policy (or increment) basis. The asset share is generally calculated on a retrospective basis, and represents an accumulation of premiums plus investment return less charges and other sources of profit or loss in line with the fund’s rules.

For a small proportion of business, where asset shares are not currently calculated, or where they are unreliable as a starting point for deriving future bonuses, a prospective method is used, such as the bonus reserve valuation (“BRV”). BRVs are the discounted value of future expected benefits and expenses, using risk-free earned and discount rates along with best-estimate assumptions for other basis items such as lapses and mortality.

The present value of the expected costs of any payments in excess of the WPBR is referred to as the FPRL. For the purposes of valuing the FPRL, a stochastic simulation approach is adopted. This covers all guarantee types in the With-Profits funds, including:

- Maturity guarantees;
- Guarantees on surrender, including no-MVR guarantees and guarantees linked to inflation;
- GAOs;
- Guaranteed minimum pension (“GMP”) underpin on section 32 transfers; and
- Expected payments under the Mortgage Endowment Promise

The same best estimate liability of participating business described above can also be expressed as the sum of the guaranteed benefits plus discretionary benefits. The value of guaranteed benefits represents the value of the minimum benefits that have to be paid out on a contract, whereas the discretionary benefits represent the value of any anticipated future non-guaranteed bonus or final bonus.

Group Protection

For group protection contracts, the total best estimate liability is derived by discounting expected future best estimate cash flows, with no allowance for the unexpired portion of the last annual premium paid. In addition an outstanding claims reserve (consisting of ‘incurred but not reported’ and ‘reported but not paid’ reserves) and a premium deficiency reserve are held.

The incurred but not reported reserve is the claims that have been incurred at the reporting date but have not yet been reported to the insurer. The size of this reserve is estimated based on the past history of claim reporting delays in the portfolio.

The reported but not paid reserve is the claims that have been reported at the reporting date but not yet been paid by the insurer.

A premium deficiency reserve is recognised when the unearned premium reserve is insufficient to cover the risks associated with the unexpired policies.

The liability for current group income protection claims in payment is the discounted value of future claim payments, with any benefit escalation explicitly allowed for. In addition, claim expenses are valued explicitly for all contracts where the policyholder is currently claiming a benefit.

RFFs

The treatment of cash flows between RFFs (e.g. with-profits funds) and other funds is also taken into account. For example:

- Where there is an expense charging arrangement between a with-profits fund and a non-profit fund the technical provisions in the with-profits fund are on a fees basis and a technical provision in relation to the excess of fees over expenses (typically negative) is held outside the with-profits fund in the non-profit fund.
- Where with-profits business is written on 100:0 basis and the shareholder is exposed to annual management charges less expenses (“C-E”) on this business, the C-E cash flows are reflected in the non-profit fund and all other cash flows are reflected in the with-profits fund.

- Where internal reinsurance exists on with-profits policies, which allocate pre-defined sources of surplus between a with-profits fund and a non-profit fund, the cash flows modelled in each fund will follow the pre-defined formula as defined in the with-profits scheme rules.

The technical provisions take into account all payments to policyholders (and beneficiaries) including future discretionary bonuses consistent with paying out the asset share of the policies, whether or not those payments are contractually guaranteed.

Future cash flows are split into guaranteed and discretionary benefits because the loss absorbing capacity of technical provisions is limited by the technical provisions relating to the future discretionary benefits.

In line with Solvency II requirements, technical provisions exclude payments representing surplus funds. As a consequence, for with-profits business, in line with guidance received from the PRA, only future benefits arising from enhancements that are fully consolidated into asset shares have been assumed in the calculation of the technical provisions.

Reinsurance accepted

Reinsurance accepted is valued in the same way as direct written business using a discounted cash flow approach.

The Company has a Quota Share reinsurance arrangement with its fully owned subsidiary undertaking UKA. Under the terms of the Quota Share reinsurance, 22.5% of the Long Term Fund of UKA is reinsured to the Company.

There are also other smaller blocks of reinsurance accepted business.

(b) Valuation components

Cash flows in scope

For life insurance obligations (lines of business 29-32), all cash flows (including any charges related to embedded options) required to settle the insurance liabilities over their lifetime are taken into account.

The table below summarises the main cash flows that are modelled:

Gross cash in-flows	Gross cash out-flows
Future premiums (gross of commissions and policyholder tax). Annual management (and other) charges in Unit Linked Business.	Benefits including: Claims payments, Maturity benefits, Death and critical illness benefits, Disability benefits, Surrender benefits, Annuity payments, Profit sharing bonuses.
	Expenses including administrative expenses, investment management expenses, claims management expenses (direct and indirect), acquisition expenses including commissions which are expected to be incurred in the future, renewal commission. Other items which are charged to policyholders (or required to settle the obligations): Taxation
Reinsurance cash in-flows	**Reinsurance cash out-flows**
Reinsurance recoveries in respect of gross claims/benefit payments. Reinsurance commissions including profit commissions. Floating leg payments in respect of longevity swaps.	Future reinsurance premiums (including adjustment premiums and reinstatement premiums). Commission. Reinsurance refunds. Fixed leg payments in respect of longevity swaps.

Future premiums

Future premiums are projected using persistency assumptions and contract boundaries appropriate to each class of business. Premium levels will also reflect the impact of other decrements such as mortality.

Death and other claim benefits

Death and other claims benefits are projected using decrements appropriate to each class of business, including persistency, mortality and morbidity.

For deferred annuity products, the value of any benefit payable on death during the deferred period is added to the value of the deferred annuity. For deferred annuities continued beyond the normal pension age, the cash available at the normal pension age is accumulated with interest.

For contracts which have fixed benefit increases the valuation provides for these increases within the discounted cash flow method.

Annuity payments

The conventional immediate and deferred annuity business is valued by discounting future benefit payments with an allowance for mortality, including future improvements in mortality. Where the benefits are linked to inflation a market implied inflation curve is used in projecting the future annuity payments, applied in line with policy terms and conditions.

Tax

The best estimate liability includes tax payments charged to policyholders or those which are required to settle the insurance liabilities. This includes the Basic Life Assurance and General Annuity Business ("BLAGAB") tax on investment income less expenses ("I-E") but tax on company profits is not included. Policyholder tax is modelled as a separate cash flow rather than implicitly.

For most lines of business, future tax on I-E is based on a deterministic model. For the with-profits participation business, where a stochastic liability model is used, the tax calculation is based on the average I-E over a range of scenarios.

Reserves are established (or credit is taken) for charges to funds reflecting tax on unrealised gains (or losses) for unit-linked business as part of the unit-linked liabilities.

Options and guarantees

The most material options and guarantees are in the Company's with-profits funds. The valuation methodology for these is covered in section (a) above.

Reinsurance cash flows

The valuation of reinsurance cash flows is not a component of technical provisions. However, the value is included within Reinsurance Recoverables in the balance sheet (see section D1.8).

(c) Transitional arrangements (unaudited)

The TMTP allows firms to transition from the Solvency I liabilities to the Solvency II technical provisions over a period of 16 years for business written prior to the Solvency II implementation date of 1 January 2016. Amortisation of 1/16th of the TMTP occurs on 31 December each year. The TMTP is recalculated at least every 2 years with the first recalculation on these grounds being on 1 January 2018. A recalculation may also be undertaken if a company's risk profile materially changes. The TMTP was last recalculated for the Company at 1 July 2016 reflecting operating conditions at that point.

An unrestricted TMTP is based on the difference between the following two amounts:

- The technical provisions on a Solvency II basis, including the impact of the MA and VA where applicable, and after deduction of amounts recoverable from reinsurance at the valuation date;
- The Solvency I Pillar 2 (ICA) technical provisions, after deduction of the amounts recoverable from reinsurance and allowing for any relevant individual capital guidance ("ICG") at the valuation date.

The TMTP is restricted to ensure that the Solvency II financial resources (defined as the sum of the Solvency II technical provisions and other non technical liabilities after application of transitional relief and the SCR) are no lower than the most onerous of the Solvency I Pillar 1 financial resources and Solvency 1 Pillar 2 financial resources (defined as the sum of the Pillar 2 technical provisions, other non technical liabilities, SCR plus ICG).

The TMTP is calculated at company level and is applied to technical provisions for the relevant funds. Within technical provisions the TMTP is applied to the risk margin first. Where the total TMTP exceeds the total risk margin (in respect of business written prior to the Solvency II implementation), the excess is allocated to the best estimate liability. Within risk margin and best estimate liabilities, TMTP is allocated to each line of business in proportion to its contribution to the total deduction. Where a line of business contributes a negative amount to the TMTP, this is zeroised and allocated to the other lines of business.

The impact of removing the TMTP is set out below:

31 December 2016	Including TMTP (A)	Setting TMTP to zero (B)	Impact of removing TMTP (C) = (B) – (A)
Technical Provisions	101,036	102,675	1,639
Basic Own Funds	7,099	4,611	(2,488)
Eligible Own Funds to meet SCR	7,099	4,611	(2,488)
SCR	4,682	5,050	368
MCR	1,170	1,262	92

The impact on eligible Own Funds to meet SCR includes the loss of the transitional benefit in UKA, a wholly owned subsidiary of the Company.

The impact from the TMTP on SCR arises because the TMTP reduces liabilities, which generates a corresponding deferred tax liability. The SCR represents a 1-in-200 loss scenario, and may be reduced by the deferred tax asset created by the loss to the extent that there are sufficient liabilities to offset the loss. The TMTP deferred tax liability can increase the tax relief on the SCR, and therefore removal of the TMTP may increase the SCR.

D.2.2.2 Assumptions

The definition of a "best estimate" assumption is one that represents the expected outcome from the range of possible outcomes for future experience of that assumption and is reasonable and realistic with no deliberate margins for prudence included.

The table below summarises the main assumptions used in the calculation of the best estimate liability:

Economic Assumptions	Non-Economic Assumptions
Risk-free rates	Assured mortality
CRA	Critical illness (morbidity) rates
MA	Annuitant mortality
VA	Persistency
Reinsurance counterparty default allowances	GAO take-up rates
Expense inflation	Expenses
Tax	Income protection inception and termination rates
Asset volatility and correlations (with-profits business only)	

Economic assumptions are reviewed quarterly while non-economic assumptions are reviewed at least on an annual basis to ensure that these remain appropriate, relevant and realistic. The choice of assumptions is validated through experience analyses and, where available and appropriate, benchmarked against external sources.

Approximations are employed where credible data is unavailable, predominantly for small blocks of business or assumptions considered to be relatively immaterial.

(a) Economic assumptions

The economic assumptions for all lines of business are set out in the sections below. The basic risk-free rate curves used to value the technical provisions reflect the curves, CRA, VA and fundamental spread ("FS") for the MA published by EIOPA.

Risk free discount rates

The GBP and EUR risk-free rates at key durations, used to value the technical provisions at full year 2016 are stated in the table below. The figures shown below allow for a CRA of 17 bps on GBP and 10bps on EUR.

Risk-free rates (bps)	1 year	5 years	10 years	15 years	20 years	40 years
GBP	38	70	108	127	132	117
EUR	(30)	(2)	57	96	112	229

Where swaps do not exist or are not sufficiently liquid or reliable from a certain point, the basic risk-free interest rate is extrapolated in a smooth progression. EIOPA has prescribed by currency the entry points for extrapolation, the duration to convergence and the ultimate forward rate, as shown in the table below.

Currency	Entry point for extrapolation of risk-free rates (years)	Duration to convergence to ultimate forward rate (years)	Ultimate forward rate pa
GBP	50	90	4.20%
EUR	20	60	4.20%

MA

The MA is an increase applied to the risk-free rate used to value insurance liabilities where the cash flows are relatively fixed (e.g. no future premiums or surrender risk) and are well matched to assets that are intended to be held to maturity and have cash flows that are also relatively fixed. The intention is that, if held to maturity, the business can earn the additional yield on these assets that relates to illiquidity risk.

The PRA has approved the application for the MA to be applied in the Company. The MA is applied in the Company to all the annuity business it accepts from UKA under the current Quota Share arrangement. No other business is included in the MA portfolio. However, the Company also benefits from the application of an MA in the fully owned subsidiary undertaking UKA.

The MA used for 31 December 2016 is shown in the table below.

MA (bps)	31 December 2016
GBP	172

The MA is derived from the spread over risk-free on the assigned portfolio of assets, net of an allowance for default and downgrade (the FS). The FSs applied are prescribed by EIOPA.

The table below shows the asset classes that are considered to be eligible for the MA portfolio, with the market value of those assets used for the MA calculation.

The table shows the full value of the assets in UKA, to which UKLAP owns a proportion as part of the Quota Share reinsurance.

31 December 2016 Market Value (£m)	Total eligible assets
UK Government bonds	1,503
Overseas Government and Supranational bonds	2,128
Corporate bonds	13,851
Commercial mortgages	7,337
PFI loans and infrastructure	3,602
Equity release fixed rate note	5,172
Other	880
Total	34,473

Equity release mortgage assets meet the criteria for inclusion within the MA when they are securitised into an internal SPV, which then issues a fixed coupon note (equity release fixed rate note) secured by those assets to the MA portfolio of the Company. The equity release mortgage assets that have been restructured in this way do not meet the IFRS de-recognition criteria and are therefore still presented on the IFRS and Solvency II balance sheets.

Commercial mortgages, PFI and infrastructure loans and the equity release fixed rate notes eligible for inclusion within the MA are assigned an FS based on an internal credit rating set in accordance with the internal rating methodology framework.

The impact of Long Term Guarantees and Transitional measures is disclosed in QRT S.22.01.04 using a step-by-step approach. The quantification of setting the MA to zero is set out below:

31 December 2016 (£m)	Including MA (A)	With MA set to zero (B)	Impact of removing MA (C) = (B) – (A)
Technical Provisions	101,036	102,849	1,813
Basic Own Funds	7,099	3,100	(3,999)
Eligible Own Funds to meet SCR / MCR	7,099	3,100	(3,999)
SCR	4,682	7,072	2,390
MCR	1,170	1,768	598

The impact on eligible Own Funds to meet SCR in the table above includes the loss of MA in the UKA subsidiary of the Company. Note that the quantification of the impact of setting the MA to zero is after the removal of TMTPs and the setting of the VA to zero. In practice the impact may be lower if the Company were able to apply the VA in place of the MA should the latter no longer be available.

VA

The VA is intended to reflect temporary distortions in spreads caused by illiquidity in the market or extreme widening of credit spreads. The VA reduces technical provisions by increasing the discount rate used to calculate the best estimate liability. VAs are prescribed by EIOPA on a currency and country basis.

The PRA has approved the application for the VA to be applied in the Company. The VA is applied to all those liabilities where an MA is not applied with the exception of unit-linked business where no application was made.

The GBP VA used at 31 December 2016 is shown in the table below.

VA (bps)	31 December 2016
GBP	30
EUR	13

The impact of Long Term Guarantees and Transitional measures is disclosed in QRT S.22.01.04 using a step-by-step approach. The impact of setting the VA to zero is set out below:

31 December 2016 (£m)	Including VA (A)	With VA set to zero (B)	Impact of removing VA (C) = (B) – (A)
Technical Provisions	101,036	101,722	686
Basic Own Funds	7,099	6,900	(199)
Eligible Own Funds to meet SCR / MCR	7,099	6,900	(199)
SCR	4,682	4,753	71
MCR	1,170	1,188	18

Note that the quantification of the impact of setting the VA to zero includes the MA but is after the removal of the TMTPs.

Reinsurance counterparty default allowances

Reinsurance counterparty default risk for both internal and external counterparties is allowed for in calculating the best estimate liability. Reinsurance counterparty default in the best estimate liability depends on:

- the probability of default based on the credit rating of the counterparty and the year of projection; and
- the recovery rate which is a constant over time, but varies by reinsurer.

Expense inflation

Future charge inflation for the majority of the business is defined in the Management Service Agreement ("MSA") between the Company and Aviva UK Life Services Limited ("UKLS"), the service company.

For those products not covered by the MSA, an expense inflation assumption of 100% of RPI inflation is used.

Tax

The tax assumptions used at 31 December 2016 are shown in the table below.

Parameter	31 December 2016
Corporation tax (current year)	20%
Corporation tax (future profits)	17%
Policyholder tax	20%

For BLAGAB business, a rate of taxation of 20% has been assumed in respect of income on fixed interest stock and property. Indexation of 2/3rds of the market-implied future RPI rate has been allowed for in projected capital gains before applying the 20% rate for BLAGAB business. No allowance has been made for taxation on UK equity income because income is received net of tax, and there is no allowance for capital gains within the equity yields used. No allowance has been made for policyholder taxation in respect of Gross Roll-up and PHI business because no policyholder tax is charged on this business.

The corporation tax rate for shareholder transfers is set at 20% at 31 December 2016.

Asset volatility and correlations

The following volatility assumptions are required to value the with-profits participation business in the stochastic model:

- Equity volatility - Equity volatility is calibrated to equity implied volatility. The approach to calibration is to capture the volatility of the longest available option term.
- Bond volatility - The model allows for the extra volatility in corporate bonds compared to that in Government bonds as a result of credit risk.
- Property volatility - Property is modelled as an equity type asset using a constant volatility model.

Correlations between asset returns are targeted to best estimate assumptions. These targets have been derived by considering historical behaviour.

(b) Non-economic assumptions

Mortality/morbidity assumptions

The mortality and morbidity assumptions define the proportion of policyholders expected to die or experience a critical illness each year. Assumptions comprise:

- A percentage of base table mortality rates which define the probability of policyholders claiming over the one year period following the start of the model projection.
- Projection factors which determine the change in base rates in future years of the projection. For mortality, this is generally a reduction in future years.

For Accelerated Critical Illness ("ACI") models, a single assumptions set is used for claims due to critical illness or death. For Stand Alone Critical Illness ("SACI"), the assumption is for claims due to critical illness only. For both ACI and SACI a future deterioration factor (rather than an improvement factor) is currently used.

The primary source of data for setting base assumptions is analysis of the Group's own experience. Publicly available data from the Continuous Mortality Investigation ("CMI") on mortality experience across the industry is also considered. The experience analysis compares actual claims over the investigation period with those predicted by the assumptions that applied for that period. The analysis is carried out for sub-divisions of the business and is supplemented by the inclusion of exposure figures to indicate the credibility of the results.

The base tables used are typically the industry standard Txx00 tables for life protection policies, an internally constructed table for critical illness protection policies, industry standard ELT15 tables for funeral plans and industry standard Axx00 tables for savings policies.

For individual income protection, claim inceptions are based on the CIDA 85 standard tables and terminations are based on CMIR 12 tables.

For Group Protection business mortality and morbidity assumptions reflect scheme underwriting.

Annuitant Mortality

Recent mortality experience is regularly reviewed in order to set assumptions. The investigations carried out cover the majority of the Company's annuity business and are performed on both a lives and an amounts basis.

Annuitant mortality assumptions are required for both deferred annuity and in-payment annuity business and fall into three main categories:

- base tables
- adjustments to base tables
- future improvements

Base tables describe the current levels of mortality. The base tables are different for males and females and also include an adjustment for anti-selection that varies by individual year of entry.

Adjustments to base tables include allowances for policyholder or scheme specific factors.

Future improvements are the most material element of longevity assumptions and the most uncertain.

For the main pension annuity business in the Company, the underlying mortality assumptions for males are 99.5% of PCMA00 and for females 92.5% of PCFA00, both with a base year of 2000. Improvements are based on CMI_2015 with a long-term improvement rate of 1.75% pa for males and 1.5% pa for females.

Persistency assumptions

Recent persistency experience is reviewed annually to assist with setting assumptions for the continuation of premiums being paid by policyholders and for the number of policies remaining in force. In addition consideration is given to factors that may cause future experience to differ from past experience such as changes to pensions regulations.

Lapses, transfers and premium cessation are analysed for each policy year duration and the assumptions are set consistently. Assumptions are set by product, and vary based on expected experience, which may vary by duration, age and size of policy.

For the main unit-linked pensions business, the long-term lapse rate assumptions for age under 65 are provided below:

- Individual 5% - 16%
- Group 3% - 17%

Lapse rate assumptions for this business combine transfers and early retirements. Individual business includes personal pensions, executive personal pensions and individual stakeholder. Group business includes group pensions and designer stakeholder.

GAO take-up rates

The GAO take-up rates define the proportion of policyholders expected to exercise the GAO at maturity. The take-up rates are set based on current experience, and are assumed not to change in the light of future economic conditions, as the guarantees are significantly in the money already.

Expense assumptions

The best estimate liability for future expenses is a combination of the following elements:

- Administration charges in line with the MSA between the Company and UKLS;
- Costs charged by UKLS for administering business for those lines of business which are charged on a “cost-plus” basis;
- Reserves for additional (e.g. regulatory and audit fees) and exceptional costs in excess of the above cash flows; and
- Allowances for investment expenses which are expected to be incurred in managing the asset portfolio, calculated as a proportion of assets under management.

Other assumptions

Income Protection

Income protection is modelled using claim inception and termination rates based on CIDA 85 tables and CMIR 12 tables respectively, with adjustments based on the historical experience of the portfolio for appropriate rating factors.

Events not in data (“ENID”)

The term ENID refers to any events not deemed to be captured by the data, which need to be allowed for within the best estimate calculation to allow for the uncertainty in the future cash flows. ENIDs are considered both at line of business level, and at portfolio level with allocations to lines of business, depending on the scenario being considered.

The Company considers ENID through either adjusting the best estimate assumptions to ensure the likely impact of the event is included or using a scenario approach where they are expected to be material. Expert judgement is applied to determine the expected impact on future experience.

(c) Consistency of assumptions

The calculation of the best estimate liability requires a number of projection assumptions to be used. These assumptions are consistently reflected in both the valuation of technical provisions and the calculation of the SCR where necessary.

There are also a number of modelling dimensions across which consistency is ensured. These include using the same asset and liability data for both the SCR calculation and the technical provision valuation and ensuring that the calibrations and calculations used are consistent across the Internal Model. There are a number of specific areas of consistency:

- Insurance risk factor calibrations are often based on estimates of uncertainty, for example predicting future mortality rates for longevity risk. The same methodology is used to calibrate this uncertainty as is used to calculate the best estimate of liabilities – i.e. reflecting the base mortality levels and future mortality improvement factors.
- In order to value the reinsurance recoverables for technical provisions, assumptions are set for the rate of external reinsurer counterparty default. These assumptions are aligned with the counterparty default rates used in the credit portfolio model to calculate the probability of default for credit risk exposures.

D.2.2.3 Risk margin methodology (unaudited)

The risk margin is calculated for the Company using a Cost of Capital ("CoC") approach allowing for diversification between lines of business and is on a net-of-reinsurance basis. The CoC rate is the cost in excess of the risk-free rate, to a third party taking over the liabilities, of raising and holding capital to support the non-hedgeable risks over the lifetime of the business. The same CoC rate is used for all insurance companies and is prescribed by EIOPA at 6% per annum.

The risk margin is underpinned by the non-hedgeable SCR ("nhSCR"). This takes into account the following risks:

- Life underwriting risk.
- Health underwriting risk.
- Counterparty default risk with respect to reinsurance contracts, arrangements with debtors and any other material exposures which are closely related to the insurance obligations.
- Operational risk.

The Company has no material non-hedgeable market risk to include.

The rate used to discount the projected nhSCR is the basic risk-free rate (including CRA), with no allowance for volatility or MAs.

Projection of the SCR

The Company adopts a mix of approaches to non-hedgeable risk projections. For some risks the projected run-off is exact and no approximation is made. For others the Company makes use of risk carriers, where a suitable statistic is chosen which can be readily projected and used as a proxy.

The projected risks are then aggregated using a correlation matrix approach at each future time period to derive the nhSCR. Adjustments are made to reflect the differences between the correlation matrix approach and the Internal Model.

Diversification

The risk margin allows for diversification as follows:

- Diversification is taken into account at the Company level.
- No diversification is assumed between RFFs and the rest of the business.

Loss absorbing capacity

The loss absorbing capacity of technical provisions assumed in the calculation of the nhSCR is consistent with the loss absorbing capacity of technical provisions assumed in the calculation of the SCR. No allowance for the loss absorbency of deferred taxes is included in the risk margin.

Allocation of the risk margin to Solvency II lines of business

The risk margin is allocated to line of business using a matrix approximation for Internal Model business and using nhSCRs for the Irish business within the non-profit fund which is on a Standard Formula basis.

D.2.2.4 Simplified methods

For smaller blocks of business that are not included in the main models on materiality grounds, an approximate approach is used to calculate the best estimate liability.

For options and guarantees that are considered to be immaterial, alternative methods such as closed form approaches or a series of deterministic projections are used to calculate the liability. This is based on the results for similar products where guarantees are modelled stochastically and is a proportionate approach given materiality considerations.

There are no other material simplifications.

D.2.3 Value of Technical Provisions by Line of Business

The following table sets out the technical provisions for the Company, split by Solvency II lines of business, as detailed in Annex I to the Level 2 Delegated Acts. Note that Solvency II line of business numbers 1 to 28 refer to Non-life insurance business and are not applicable to the Company. The best estimate liability and the risk margin are provided separately. These figures are gross of reinsurance and after the impact of transitional measures.

#	Line of Business (YE2016 £m)	Technical provisions	Best Estimate	Risk Margin
29	Health insurance	358	355	3
30	Insurance with profit participation	30,585	30,315	270
31	Index-linked and unit-linked	55,982	56,005	(23)
32	Other life insurance	5,723	5,601	122
33	PPOs health	-	-	-
34	PPOs not health	98	86	12
D	Life insurance obligations	92,746	92,362	384
35	Health reinsurance	-	-	-
36	Life reinsurance	8,290	8,250	40
E	Life reinsurance obligations	8,290	8,250	40
	Total	101,036	100,612	424

The methodology and assumptions used to calculate the technical provisions are set out in section D.2.2 above.

D.2.4 Comparison of Solvency II Technical Provisions to IFRS Technical Provisions

Solvency II technical provisions are comprised of two components – the best estimate liability and the risk margin. By contrast, the IFRS provisions are a single calculation of liabilities, with appropriate margins for risk included within the assumptions and/or methodology. There is also a different approach to discounting.

There are specific differences in the methods used relating to the risk margin, contract boundaries, non-unit reserves and Unallocated Divisible Surplus (“UDS”). The material differences between the assumptions used relate to discount rates, mortality rates, lapse rates and expense assumptions. These differences are outlined in this section.

The following table summarises the Company’s gross technical provisions split by Solvency II line of business. The Solvency II technical provisions are shown gross of reinsurance and include the impact of any transitional measures.

#	Insurance liability As at 31 December 2016	Best Estimate Liability ("BEL") £m	Risk Margin £m	Solvency II technical provisions £m	IFRS technical provisions £m	Difference £m
29	Health insurance	355	3	358	528	(170)
30	Insurance with profit participation	30,315	270	30,585	31,110	(525)
31	Index-linked and unit-linked	56,005	(23)	55,982	57,697	(1,715)
32	Other life insurance	5,601	122	5,723	8,700	(2,977)
33	PPOs health	-	-	-	-	-
34	PPOs not health	86	12	98	99	(1)
D	Life insurance obligations	92,362	384	92,746	98,134	(5,388)
35	Health reinsurance	-	-	-	-	-
36	Life reinsurance	8,250	40	8,290	8,748	(458)
E	Life reinsurance obligations	8,250	40	8,290	8,748	(458)
	Total	100,612	424	101,036	106,882	(5,846)

Key areas of difference between the methods used to calculate Solvency II technical provisions and the methods used to calculate IFRS technical provisions are:

IFRS margins

Under IFRS, explicit margins for uncertainty are added to various best estimate assumptions including discount rates, mortality rates, lapse rates, expense assumptions and reinsurance counterparty default rates. The key exception is participating business. Margins for uncertainty are not included in the Solvency II best estimate liability. This results in a decrease in Solvency II best estimate liabilities relative to IFRS technical provisions in respect of this adjustment.

Treatment of with-profits business

IFRS and Solvency II regulations require different recognition of estate distributions and future shareholder transfers within technical provisions. This results in IFRS technical provisions being higher than Solvency II best estimation liabilities.

Treatment of unit-linked business

Under IFRS, the technical provisions for unit linked business are based on current unit value, plus an allowance for non unit cash flows, but only where this would increase the technical provisions. Under Solvency II, the technical provisions are lower than the unit value reflecting the profits expected to emerge in respect of future management charges expected to be earned from existing business. This results in a decrease in Solvency II best estimate liabilities relative to IFRS technical provisions in respect of this adjustment.

This is most relevant to line of business 31 (Index-linked and unit-linked).

Discount Rates

The Solvency II best estimate liability is valued using a risk-free rate curve with an allowance for credit risk and an MA or VA where applicable.

For non-participating life insurance contracts, IFRS technical provisions are valued using a flat valuation interest rate which reflects the yields available on the underlying assets, with an allowance for credit risk based on internal analysis and an additional margin for adverse deviation.

Contract Boundaries

Solvency II technical provisions are subject to contract boundaries for certain product types, such as unit-linked savings contracts with no (or limited) insurance risk or material financial guarantee. This means that future premiums are ignored for regular premium unit-linked contracts where contract boundary conditions are applied and there is no obligation for the policyholder to pay future premiums. IFRS technical provisions are not subject to the same restrictions. This results in an increase in Solvency II best estimate liabilities relative to IFRS technical provisions in respect of this adjustment.

This is most relevant to line of business 31 – Index-linked and unit-linked

Risk Margin

In addition to the best estimate liability, Solvency II technical provisions include a risk margin. This is analogous to the additional margins held under IFRS to cover uncertainty.

D.2.5 Level of uncertainty in value

Set out below are the main areas of uncertainty over the calculation of liabilities.

Life Insurance Technical Provisions

The best estimate liability corresponds to the probability-weighted average of future cash flows, taking account of the time value of money using the relevant risk-free interest rate term structure. They reflect estimates of how markets and the business might behave in the future given policyholder data, cash flow models and a set of assumptions.

All estimates are based on management's knowledge of current facts and circumstances; assumptions based on that knowledge; and their predictions of future events and actions. Actual results may differ from those estimates, possibly significantly. The list below sets out the estimates and assumptions that are considered particularly susceptible to valuation uncertainty:

- Fluctuation in the amount and/or timing of claims events, e.g. when estimating the length of time for which an annuity will be paid. This requires a projection of annuitant mortality rates in excess of 20 years into the future which cannot be done with certainty.
- Changes in the value of an index/market values used to determine claims amounts, e.g. estimating future market values of the assets backing the with-profits asset share liabilities.
- Uncertainty in policyholder behaviour, e.g. for estimating lapse rates for different policy types and for different durations of a policy.

The best estimate liability assumptions are governed by a rigorous process, underpinned by actuarial judgement and peer review. The scope of assumption review papers includes considering the degree of uncertainty inherent in the assumptions being reviewed.

Data governance and model governance standards are in place, which help to ensure that the cash flow models used to calculate technical provisions, and the data which is used within that calculation, are fit for purpose and are managed under appropriate change control processes.

The cash flow projection models which are used to determine the best estimate liability are subject to a model base-lining exercise, which undertakes to reproduce the model's results from first principles, taking into account any information obtained from policy documents and operational procedures.

Guarantees on long-term savings products

As a normal part of operating activities, the Company has written contracts that provide guarantees and options for policyholders, including interest rate and inflation protection guarantees, in respect of certain long-term insurance and investment products. In providing these guarantees and options, the Company's capital position is sensitive to fluctuations in financial variables including interest rates, inflation, property values and equity prices. Interest rate guaranteed returns, such as those available on GAOs, are sensitive to interest rates falling below the guaranteed level, should they currently be above that level. Other guarantees, such as maturity value guarantees and guarantees in relation to minimum rates of return, are sensitive to fluctuations in the investment return below the level assumed when the guarantee was made.

Regulatory compliance

The Company's insurance business is subject to dual local regulation, directly authorised by both the PRA (for prudential regulation) and the FCA (for conduct regulation). Between them, the PRA and FCA have broad powers including the authority to grant, vary the terms of, or cancel a regulated firm's authorisation; to investigate marketing and sales practices; and to require the maintenance of adequate financial resources.

The Company has compliance resources to respond to regulatory enquiries in a constructive way, and take corrective action when warranted. However, all regulated financial services companies face the risk that their regulator could find that they have failed to comply with applicable regulations or have not undertaken corrective action as required.

The impact of any such finding could have a negative impact on the Company's reported results.

D.3 Other liabilities

Liabilities have been valued according to the requirements of the Solvency II directive and related guidance. The basis of the Solvency II valuation principle is the amount for which the liabilities could be transferred or settled between knowledgeable willing parties in an arm's length transaction.

A description of the basis of valuation under Solvency II along with valuation differences between the Solvency II bases and the IFRS financial statements, by liability class, is provided below.

D.3.1 Provisions other than technical provisions

Under Solvency II and IFRS, provisions are valued using expected cash flows discounted, where the effect of the time value of money is material, using a pre-tax discount rate (or rates) that reflects current market assessments of the time value of money and those risks specific to the liability that have not been reflected in the best estimate cash flows.

D.3.2 Deferred tax liabilities

Deferred tax for Solvency II valuation purposes is determined in accordance with IAS 12 principles on 'temporary differences' between the economic value of assets or liabilities on the Solvency II balance sheet and their tax base. Deferred tax assets are recognised separately on the Solvency II balance sheet to the extent they cannot be offset against corresponding deferred tax liabilities. At 31 December 2016 the Company had no net deferred tax assets.

Deferred tax balances in the Solvency II balance sheet differ from those recognised in the IFRS balance sheet as a result of:

- Differences between the IFRS and Solvency II balance sheet valuation basis (as described in section D.1, section D.2 and the remainder of section D.3) and consequential impact on recognition of deferred tax assets and liabilities, the largest impact being as a result of the revaluation of technical provisions; and
- IFRS assets and liabilities with an associated deferred tax balance treated as having no economic value under Solvency II.

Unused tax losses and credits

The Company has no unrecognised tax losses at 31 December 2016.

D.3.3 Derivatives

Under Solvency II, derivative liabilities are measured at fair value in accordance with IFRS, excluding any adjustments for changes in own credit standing of the Company since issuance. Fair values are obtained from quoted market prices, or if these are not available, by using valuation techniques such as discounted cash flow models or option pricing models. All derivatives are classified as assets when their fair values are positive and as liabilities when their fair values are negative.

D.3.4 Financial liabilities (including payables)

Financial liabilities (including payables) consist of the following headings listed in the Solvency II balance sheet QRT:

- Debts owed to credit institutions
- Financial liabilities other than debts owed to credit institutions
- Insurance and intermediaries payables
- Payables (trade, not insurance)

Deposits received from reinsurers are described in section D.3.5.

Each of these categories is valued according to the methodology described below.

Financial liabilities expected to be paid within one year are valued on the Solvency II and IFRS balance sheets at the amounts expected to be paid.

Under Solvency II, non-current financial liabilities are measured at fair value, adjusted to eliminate movements in fair value due to changes in the own credit standing of the Company. This is achieved by determining the timing and monetary amount of expected outflow of cash or other resources and discounting the projected cash flows using a current risk free rate adjusted for the credit spread at initial recognition of the liability. Under IFRS, non-current financial liabilities are either carried at amortised cost or fair value under the fair value option.

IFRS financial liabilities other than amounts owed to credit institutions include financial reinsurance liabilities of £126 million. For the purposes of Solvency II reporting, amounts owed in respect of financial reinsurance are included within the BEL calculation and classified within technical provisions rather than financial liabilities, as they are under IFRS.

D.3.5 Deposits received from reinsurers and reinsurance payables

Deposits received from reinsurers represent funds withheld by the Company under the terms of a 50% Quota Share reinsurance arrangement entered into with AII. Further information on this arrangement is provided in section A.2.1 of this report and in note 39 of the Company's financial statements. Reinsurance payables are valued in a manner consistent with the method used for financial liabilities described in section D.3.4.

D.3.6 Other liabilities

Other liabilities expected to be paid within one year are valued on the Solvency II and IFRS balance sheets at the amounts expected to be paid.

The IFRS balance sheet includes £2,168 million within other liabilities in respect of the UDS. In certain participating long-term insurance and investment business, the nature of the policy benefits is such that the division between shareholder reserves and policyholder liabilities is uncertain. Amounts whose allocation either to policyholders or shareholders has not been determined by the end of the year are held within liabilities as a UDS. If the aggregate carrying value of liabilities for a particular participating business fund is in excess of the aggregate carrying value of its assets, the difference is held as a negative UDS balance, subject to recoverability from margins in that fund's participating business. Under Solvency II a proportion of the UDS is implicitly included within best estimate liabilities, particularly unrealised gains and losses on participating business as these are considered part of the policyholder share of assets.

Amounts related to deferred income have no value under Solvency II as they are not separable, and their economic value cannot be realised through a disposal.

D.3.7 Contingent liabilities

Under Solvency II reporting, material contingent liabilities are required to be recognised in the balance sheet. The Company has no material contingent liabilities under Solvency II.

D.4 Alternative methods of valuation

D.4.1 Company approach to valuation

The Company applies the Group Asset Valuation Business Standard to the valuation of its assets and liabilities. This sets out a control framework in respect of valuation, including assets and liabilities valued under alternative methods of valuation. This standard defines the following control objectives:

- **Primary valuation –** Parties responsible for primary valuations must ensure that appropriate valuation techniques are selected and justified.
- **Independent price verification –** A party independent of the primary valuation process must have sufficient controls in place to ensure valuations of all asset classes are reasonable. Controls should be commensurate with the materiality of the assets.
- **Valuation uncertainty –** The extent of uncertainty within valuations must be understood, quantified where possible and reported to senior management.
- **Reporting bases –** Where appropriate the valuation must be performed consistently across reporting bases. Where a consistent basis is not used, then a reconciliation of differences should be understood, documented and reported.
- **Client supplied prices –** Client supplied prices should be identified, and sufficient independent price verification ("IPV") controls exercised to provide assurance over the quality of the valuation.

D.4.2 Assets and liabilities to which an alternative valuation approach applies

For the financial year ending 2016, the following classes of assets and liabilities were subject to valuation under alternative valuation methods:

- OTC derivatives.
- Unlisted unit trusts and property funds.
- Investment property and property partnerships.
- Collateralised lending with banks.
- Deposits to cedants.

D.4.3 Justification for use of an alternative valuation approach

The majority of the Company's assets and liabilities are measured at fair value based on quoted market information or observable active market data. Where quoted market information or observable market data is not available, an alternative valuation method is used. This occurs when either:

- The individual nature of the asset means that there is no quoted price available (for example, investment property).
- The asset is not actively traded in a market (such as holdings in unlisted private equity funds).

Alternative valuation methods include the use of estimates and assumptions that are not market observable. Where estimates and assumptions are used by the Company in valuing its assets and liabilities, they are based on a combination of independent third-party evidence and internally developed models, calibrated to market observable data where possible.

D.4.4 Assumptions underlying the valuation approach and assessment of valuation uncertainty

The Company performs an annual exercise to assess valuation uncertainty across its investment portfolio. The main assumptions underlying the valuation approach and assessment of valuation uncertainty for the categories identified in section D.4.2 are described below. Figures shown below represent the total asset value in that category and also include amounts of each category backing unit linked and index linked contracts and which are included within the 'Assets held for index-linked and unit-linked funds' category on the Solvency II balance sheet.

OTC derivatives (£3,020 million)

Although valued using established and accepted valuation methodologies, OTC derivatives are not quoted in an active market and an element of valuation uncertainty may exist in arriving at a fair value. The extent of valuation uncertainty is assessed by comparing valuations against counterparty statements. The contracts are priced using mid-market inputs (such as swap curves and equity volatilities) and the valuation impact of moving from mid to bid is estimated within the wider valuation uncertainty analysis undertaken by the Company.

Valuation uncertainty has been assessed as moderate for this asset class.

Unlisted unit trusts and property funds (£528 million)

Fair values for unlisted private equity funds are based on net asset value statements provided by fund administrators. The valuation of underlying equities is compliant with guidelines published by the British Venture Capital Association, the European Private Equity and Venture Capital association and other international bodies.

The extent of valuation uncertainty is estimated with reference to back testing analysis which involves comparing sale proceeds for individual equities against lagged valuations.

Valuation uncertainty has been assessed as significant for this asset class.

Investment property and property partnerships (£5,476 million)

Investment property is valued at least annually by external chartered surveyors in accordance with guidance issued by The Royal Institution of Chartered Surveyors, and using estimates during the intervening period. Valuations are performed by surveyors in accordance with methodologies described in the RICS "red book". A property gross value is calculated by dividing the expected rental cash flows by an appropriate rental yield. Future cash flows are calculated based on the surveyor's expectation of rental receipts during and after the current tenancy ends, typically based on an assessment of rents charged on comparable properties.

The extent of uncertainty systemic within the valuation of investment properties has been assessed based on ranges of expected rental yields provided by seven independent surveyors, by property type. Back testing analysis is also performed to understand the extent of valuation uncertainty for this asset class. Valuation uncertainty has been assessed as significant for this asset class.

Collateralised lending with banks (£1,932 million)

Collateralised lending with banks comprises loans to banking counterparties that have been collateralised with illiquid securities. Fair values are calculated using valuation models which incorporate a number of assumptions, including probability of counterparty default and expected loss in the event of counterparty default. Expected loss in the event of counterparty default is driven by assumptions describing the expected liquidation period of the collateral, the volatility of the collateral during this liquidation period and the extent to which we believe there is a correlation between the collateral value and counterparty default probability.

Valuation uncertainty arises from variation in the expected range of a number of the key assumptions described above. Valuation uncertainty has been assessed as moderate for this asset class.

Deposits to cedants (£8,960 million)

Deposits to cedants represent reinsurance premiums received under a Quota Share arrangement with the Company's subsidiary, UKA, which have been deposited back with UKA as collateral. Amounts received are based on a proportionate share of UKA's Solvency II net assets. Further information on assumptions underlying the valuation approach and an assessment of the valuation of uncertainty of UKA's assets is included in the UKA SFCR.

D.4.5 Adequacy of the valuation compared to experience

The Company operates IPV controls across all assets. For asset types where a secondary source is available (such as OTC derivatives), this involves comparing the primary valuation to the secondary source, investigating material differences and making valuation adjustments where the Company believes it is appropriate to do so. For illiquid debt securities which are marked to model the IPV process includes a review of the valuation methodology, periodic assessment of both observable and judgemental model inputs as well as reviewing any secondary trading activity in the asset to understand whether anything can be learnt regarding the appropriateness of the valuation methodology.

For asset classes where a secondary source is not available and there is no secondary trading activity (such as investment property and private equity), the Company relies on the implementation of accepted valuation standards by parties independent of the Group as described above (e.g. valuation of investment property in line with the methodologies described in the RICS "red book"). These are asset classes with considerable valuation uncertainty and to assess the reasonableness of the valuations back testing analysis is performed on an annual basis for any assets sold during the year. Results of these back testing analyses are presented in the Company's valuation uncertainty assessments.

Section E
Capital Management

In this chapter

Section E: Capital Management

This section of the report describes the internal operational structures and procedures underlying the Company's capital management process covering structure and quality of Own Funds; SCR and MCR; methodology for calculation of the SCR; differences between Internal Model and Standard Formula and any other material information.

E.1 Own Funds

E.1.1 Management of Own Funds

The primary objective of capital management is to optimise the balance between return and risk, whilst maintaining economic and regulatory capital in accordance with risk appetite. In managing Own Funds, the Company seeks to:

- Match the profile of its assets and liabilities, taking account of the risks inherent in the business;
- Maintain sufficient, but not excessive, financial strength to support new business growth and satisfy the requirements of its policyholders and its regulator, the PRA;
- Retain financial flexibility by maintaining sufficient liquidity; and
- Allocate capital efficiently, applying it to support value adding growth and repatriating excess capital to the Group through dividends.

In order to achieve these objectives, Own Funds are monitored via projections over a three year planning horizon. The Company also uses a number of sensitivity tests to understand the volatility of earnings, the volatility of its capital requirements, and to manage its capital more efficiently. Sensitivities to economic and operating experience are regularly produced on the Company's key financial performance metrics to inform decision making and planning processes, and as part of the framework for identifying and quantifying the risks to which the Company is exposed.

For long-term business in particular, sensitivities of market consistent performance indicators to changes in both economic and non-economic experience are continually used to manage the business and to inform the decision making process.

There have been no material changes to the objectives, policies or processes with respect to the management of Own Funds during the year.

E.1.2 Own Funds by tier

The table below sets out the Company's Own Funds at 31 December 2016:

31 December 2016	Total £m	Tier 1 unrestricted £m	Tier 1 restricted £m	Tier 2 £m	Tier 3 £m
Ordinary share capital	**192**	192	-	-	-
Surplus funds	**4,398**	4,398	-	-	-
Reconciliation reserve	**2,509**	2,509	-	-	-
Total Basic Own Funds after adjustments	**7,099**	7,099	-	-	-
Restrictions	-	-	-	-	-
Total Eligible Own Funds to meet the SCR	**7,099**	7,099	-	-	-
Restrictions to meet the MCR	-	-	-	-	-
Total Eligible Own Funds to meet the MCR	**7,099**	7,099	-	-	-

All of the Company's Own Funds is unrestricted Tier 1 capital, as there are no restrictions on cancellation of the Company's dividends prior to payment, as set out in the Company's Articles of Association. This consists of ordinary share capital, surplus funds and the reconciliation reserve, which reconciles the total excess of assets over liabilities with identifiable Own Funds instruments (refer to section E1.4). At 31 December 2016, total basic Own Funds equalled the total eligible Own Funds to meet the SCR, with no tiering limit restrictions.

E.1.3 Surplus funds

The Company has recognised £4,398 million of surplus funds which meet the criteria for classification as Tier 1 Own Funds. These are with-profits funds, where accumulated profits have not yet been made available for policyholders or beneficiaries. The surplus Own Funds in excess of notional SCR within a with-profits fund is restricted via an adjustment to the reconciliation reserve shown in section E1.4 below (Adjustment for restricted Own Fund items in respect of RFFs).

E.1.4 Reconciliation reserve

The table below sets out the constituents of the reconciliation reserve:

31 December 2016	Total £m
Solvency II excess of assets over liabilities	**8,531**
Other Basic Own Funds items	(4,590)
Adjustment for restricted Own Fund items in respect of RFFs (unaudited)	(1,432)
Reconciliation reserve	**2,509**

The reconciliation reserve equals the total excess of Solvency II assets over liabilities reduced by the following:

- Other Basic Own Funds items that have been separately identified on the Own Funds QRT being share capital and surplus funds.
- The surplus Own Funds over notional SCR held within RFFs (refer to section E.1.6).

E.1.5 Differences between IFRS net assets and the excess of assets over liabilities as calculated for Solvency II

The table below lists the material differences between equity as shown in the financial statements of the Company and the excess of assets over liabilities as calculated under Solvency II.

31 December 2016	Total £m
Total Company equity on an IFRS basis	**4,378**
Elimination of intangible assets, deferred acquisition costs and deferred income reserve	(860)
Technical provision valuation differences (net of transitional deductions)	6,270
Inclusion of risk margin (net of transitional deductions)	(424)
Reinsurance recoverable valuation differences	(3,142)
Elimination of UDS from liabilities	2,168
Net deferred tax adjustments	(154)
Revaluation of participations	243
Other adjustments onto Solvency II basis (including fair value adjustments)	52
Solvency II excess of assets over liabilities	**8,531**

The increase in net assets of £4,153 million results from solvency valuation differences.

The elimination of intangible assets, deferred acquisition costs and deferred income reserve are described in sections D.1.1, D1.2 and D.3.6 respectively.

Technical provision valuation differences and the inclusion of the risk margin are described in section D.2.4.

Reinsurance recoverable valuation differences are described in section D.1.8.

The elimination of UDS from liabilities is described in section D.3.6.

Net deferred tax adjustments are described in section D.3.2.

Revaluation of participations is described in section D.1.4.

Other adjustments onto a Solvency II basis primarily consist of fair value adjustments on loans (described in section D.1.7) and adjustments in respect of financial reinsurance liabilities (described in section D.3.4).

E.1.6 Restricted Own Funds items in respect of RFFs and MA portfolios (unaudited)

As at 31 December 2016, the total of excess of assets and liabilities within RFFs and MA portfolios amounted to £4.4 billion, of which £1.4 billion is restricted from the Company's Own Funds.

- Where a RFF exists, the Own Funds in excess of notional SCR of the RFF are restricted and deducted from the Company's Own Funds. This is reflected as an adjustment to the reconciliation reserve. The with-profits funds in the Company are treated as RFFs.
- In applying Article 80 of the Solvency II Delegated Acts to the Reattributed Inherited Estate External Support Account ("RIEESA"), the surplus of Own Funds over the notional capital requirement, where the capital requirement includes a

buffer in addition to the notional SCR, is not restricted. The objective of this buffer is to ensure the policyholders of the New With-Profits Sub-Fund ("NWPSF") are not exposed to unacceptable risk of failing to meet statutory capital requirements. The headroom test is considered an appropriate indication of the levels of assets in the RIEESA which are available to absorb losses elsewhere in the business and are not part of the RFF.

- The Company's MA portfolio does not have a surplus in excess of its SCR and, as a consequence, no restriction to Own Funds has been applied.

There are no other restrictions on Own Fund items.

E.2 SCR and MCR

E.2.1 SCR (unaudited)

The Company SCR at 31 December 2016 is £4,682 million.

The Company SCR includes the results of the following sub-funds:

- UKLAP NP – non-profit business written in the non-profit sub-fund.
- NWPSF – primarily includes with-profits business.
- OWPSF – primarily includes with-profits business.
- WPSF – primarily includes with-profits business.
- PMSF– primarily includes with-profits business .
- Ireland NP – non-profit Irish Branch business (Ireland NP forms part of the UKLAP NP sub-fund, but is shown separately due to its treatment in the Partial Internal Model as described below).
- IWPSF –with-profits fund of the Irish business.

The contribution of the above sub-funds to the Company SCR is calculated using an Internal Model with the exception of the Ireland NP and IWPSF sub-funds (Irish business) which are valued using the standard formula and aggregated using the Partial Internal Model methodology.

The Company also includes the following material subsidiaries:

- UKA
- Aviva Equity Release UK Limited ("UKER")

UKA and UKER results are calculated using the Internal Model and included in the Company SCR on a full look-through basis.

The table below shows the results of the Company SCR as at 31 December 2016 split by sub-fund/material subsidiaries:

SCR split by sub-fund	£m
UKA	1,019
UKLAP NP	1,823
UKER	131
Ireland NP	117
NWPSF	535
OWPSF	177
WPSF	654
PMSF	146
IWPSF	80
Company SCR	4,682

A more detailed breakdown of the Company SCR by risk module is shown below, including the split of each module between Internal Model and Standard Formula. Each risk module includes the impact of diversification within that module, and the diversification line includes diversification between risk modules and Partial Internal Model diversification. Other risks and adjustments include the loss absorbing capacity of technical provisions and the loss absorbing capacity of deferred tax.

SCR by risk module (£m)	Total	Internal Model	Standard Formula
Market risk	3,486	3,367	119
Counterparty default risk	371	353	18
Life underwriting risk	3,408	3,239	169
Health underwriting risk	6	-	6
Non-life underwriting risk	-	-	-
Operational risk	576	565	11
Other risks and adjustments	(676)	(652)	(24)
Total undiversified modules	7,171	6,872	299
Diversification	(2,489)		
SCR excluding capital add-on	4,682		
Capital add-on already set	-		
SCR	4,682		

The Company's SCR has reduced during the year due chiefly to the changes in reinsurance arrangements with AII described in section A.1.3, offset by the effects of adverse economic changes, particularly interest rate movements.

E.2.2 MCR

The MCR represents the minimum level below which the amount of financial resources of a firm should not fall.

The MCR is calculated using a linear formula that applies prescribed factors to capital-at-risk and the best estimate liability (net of reinsurance). The factors applied to the best estimate liability vary by type (with-profits guaranteed benefits, with-profits discretionary benefits, index/unit-linked and other). The MCR is subject to a floor, equal to 25% of the SCR, and a cap, equal to 45% of the SCR. There is an absolute floor of €3.7 million.

The MCR for the Company at 31 December 2016 is £1,170 million.

E.2.3 Standard Formula simplifications (unaudited)

Where the SCR is calculated using the Standard Formula, the Solvency II regulations specify 23 simplified calculations that may be used across all of the Standard Formula risk modules except operational risk. The use of these simplifications is disclosed in QRT S.25.02.21, where applicable. The Company has not used any of these simplified calculations to calculate the SCR at 31 December 2016.

E.2.4 Standard Formula undertaking specific parameters ("USPs") (unaudited)

Where the SCR is calculated using the Standard Formula, Solvency II regulations specify certain USPs that may be used in place of the standard parameters, subject to regulatory approval. These are available for life and health revision risks, and non-life (including some health) premium and reserve risks. The use of these USPs must be disclosed in QRT S.25.02.21, where applicable. The Company has not used any USPs to calculate the SCR at 31 December 2016.

E.2.5 Transitional measures, disclosure of capital add-ons and USPs (unaudited)

Regulators have the power to impose capital add-ons to the SCR or to require the use of certain USPs in the Standard Formula, where there are significant deficiencies in a firm's Internal Model or Partial Internal Model, or where a Standard Formula firm's risk profile deviates significantly from the assumptions underlying the Standard Formula.

In addition, regulators have the option to specify that any capital add-ons or the SCR impact of any required USPs do not need to be disclosed separately to the total SCR, during a transitional period. The PRA has chosen to exercise this option with a two-year transitional period.

E.3 Use of the duration-based equity risk sub-module in the calculation of the SCR

Insurance firms that have particular types of retirement provision business managed on a ring-fenced basis, for which the SCR is calculated using the Standard Formula, are entitled to calculate the equity risk capital requirement using a specified duration-based approach. The Company does not use the duration-based equity risk sub-module in the calculation of the SCR.

E.4 Differences between the Standard Formula and Internal Model (unaudited)

E.4.1 Use of the Internal Model in the Company's business

The Internal Model provides input to a number of key business processes and activities. Therefore the outputs from the Internal Model are used in day-to-day risk management and business decisions across the Company. "Use" does not imply that the Internal Model is used to directly run the business, but rather that the outputs of the Internal Model and the Internal Model itself are used to support decision-making, whilst acknowledging its limitations and balancing against other elements of the RMF.

The primary purpose of the Internal Model is to calculate the capital metrics required for regulatory reporting under Solvency II. The outputs of the Internal Model are used internally and externally in risk based performance reporting and risk and financial strength reporting to senior management and the Board.

The granular metrics produced by the Internal Model are also used to set strategy and support a series of other activities, including:

- Strategy and business planning: allocating capital between business areas to measure risk-adjusted return and set risk appetites as part of the business planning cycle;
- Pricing: improving pricing and product design by assessing the level of capital required to support different types of products and their inherent risks;
- Transactions: assessing the appropriateness of potential business investments through the impact on surplus capital;
- Reinsurance: identifying the need for targeted reinsurance contracts to mitigate undesirable risk exposures, through modelling potential adverse scenarios;
- Asset and liability management: measuring the impact of market changes on assets and liabilities to drive investment and hedging strategy.

Further details on how the Internal Model is fully integrated into the Company's risk management system are given in section B.3.3.

E.4.2 Undertakings in scope of the Internal Model

The Group is a large multinational insurance organisation operating across a variety of business lines; this drives the risk profile and, by extension, the design and structure of the Internal Model. The Group uses a Partial Internal Model. The Company, as part of the Group, makes use of the Group Partial Internal Model.

The Group Partial Internal Model has been designed to allow each legal entity within the Group to run the business with a focus on risk. This means that the Internal Model has been designed to produce capital figures at a range of levels and granularities, from legal entity to fund level (and in some cases to a product or asset level), allowing for diversification between risk types at each of those levels. Producing and understanding the capital requirements at different levels of granularity is crucial to ensure that the model outputs can be effectively used in the day-to-day running of the business.

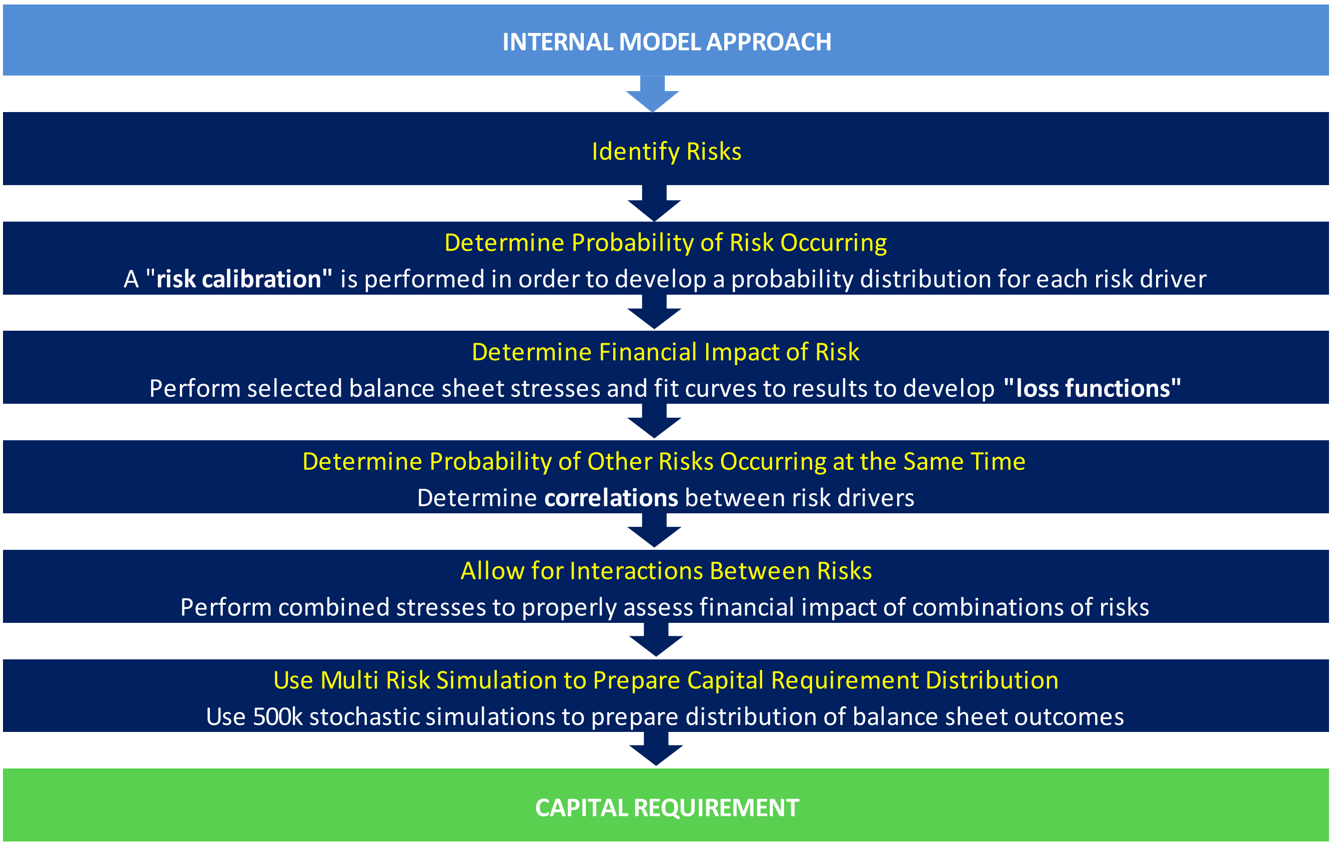
The funds and subsidiaries of the Company included in the Internal Model scope are listed in section E.2.1.

E.4.3 Calculation of the Internal Model

E.4.3.1 Methods used

The purpose of the Internal Model is to identify the risks to which the Group is exposed, model these risks using suitably calibrated inputs and aggregate them to compute the SCR. The Internal Model produces an aggregate distribution of the change in basic Own Funds over a one year time horizon from which the SCR can be directly derived (i.e. the SCR is the 99.5th percentile) in line with Article 101.

An overview of the Company's approach is shown below.



Overview of the Company's modelling approach

The Company's Internal Model allows flexibility in determining which statistical distributions to use to represent risk factors (such as mortality, interest rates or credit risk) including those with heavy tails and empirical distributions. The model is not limited to assuming risks follow normal (or similar) distributions, as is implicit in the standard formula. This flexibility is important to ensure that we accurately model the behaviour of the most important risks to the Company.

For the majority of risk factors, standard statistical distributions fitted via the standard risk factor calibration process are used. However, for some risk types, such as credit risk or operational risk, distributions are derived from further modelling processes. This approach is appropriate given both the materiality of the risk types and the desire to ensure the risk's behaviour is accurately reflected.

A wide range of testing and review processes are used to ensure that the calibrations are appropriate, and the Internal Model outputs are reasonable. These range from bottom-up reviews of the material assumptions used in the modelling process and testing of the calibrations and loss functions (i.e. the mathematical formulae used as a proxy for the calculations in the asset and liability management models for the valuation of the assets and liabilities on the balance sheet), to top-down stress and scenario testing, as well as profit and loss attribution exercises.

Aviva has chosen to implement a Partial Internal Model Group wide, defined as using a combination of Internal Model and Standard Formula approaches to calculate solvency capital requirements for different components of the business. Within the Company, these components are distinct blocks of business, rather than risks. In order to integrate the Internal Model capital calculations with the Standard Formula calculations the Partial Internal Model technique 2 as described in Annex XVIII of Directive 2009/138/EC is used.

E.4.3.2 Data used in the Internal Model

The key data used in the Company's Internal Model is listed below:

- Accounting data (IFRS) – this is used in the valuation of certain liabilities;
- Policy data – this includes claims as well as policies in force and past policies;

- Operational risk data – an external database of information with regards to industry operational risk losses is used. This is provided by the Operational Risk Insurance Consortium;
- Financial market data – the calibration process for market and credit risks often uses external financial market asset data (e.g. FTSE index returns);
- Internal asset data – the valuation of the base Solvency II Balance Sheet relies on the market valuation of assets. The data used is largely taken from the accounting process and, therefore, most data will be included under the heading 'accounting data';
- Other data – data that does not fall under the above five categories.

The Solvency II Data Governance Group Business Standard establishes the control environment and the criteria to be used to assess the quality of the data in terms of appropriateness, completeness, accuracy, and consistency before using it for the SCR calculation.

E.4.3.3 Integration of the Standard Formula into the Partial Internal Model

As described in section E.4.3.1 the Company has chosen to implement a Partial Internal Model using integration Technique 2 to combine results of the Internal Model and Standard Formula as described in Annex XVIII of the Delegated Act.

This technique requires an upper and lower bound to be specified for correlations between the entire Internal Model block and each of the Standard Formula risk modules. A correlation matrix is then constructed with correlations between Standard Formula and Internal Model risk modules within these bounds. The correlations are chosen so that the SCR aggregated using this correlation matrix is maximised.

E.4.4 Differences between Standard Formula and Internal Model methodologies and underlying assumptions

The main difference between the Standard Formula and Internal Model approach is that the methodology and assumptions used in the Internal Model are tailored to the Company's risk profile, whereas the Standard Formula uses a standardised approach.

The Standard Formula prescribes formulae to calculate the capital required driven by exposure to various risks; for the Internal Model the Company calibrates a distribution of losses for each risk and use these, along with a set of correlations between these risks, to derive a joint distribution of losses for the business. The capital requirement is derived from this joint distribution, to ensure the Company holds sufficient capital with 99.5% confidence. Calibrating risks for the Internal Model therefore requires detailed data analysis and use of statistical models to derive the most appropriate distribution.

The two bases also use a different treatment for loss absorbing capacity of technical provisions. Under the Internal Model net loss functions are used, whereas in the Standard Formula an adjustment is made to the gross SCR for the loss absorbing capacity of technical provisions. The calculation of loss absorbing capacity of tax also differs between the two approaches as this is specified by the Standard Formula calculation.

Another key difference is in the modelling approach used to aggregate the results. For the Internal Model, the Company determines an aggregate distribution of losses by combining marginal risk distributions for each risk using a Gaussian Copula and applying loss functions. The Standard Formula uses a hierarchical correlations approach, where explicit correlation matrices are used to combine sub-module losses within each risk module, and then to combine the calculated losses of the different risk modules.

A key feature of the Company's approach compared to the Standard Formula is that fat tailed risks are captured (i.e. risks where the probability of extreme values is higher than using the normal distribution) and non-linear loss profiles. In addition, the Company is able to model diversification more granularly and, in particular, capture important features such as geographical diversification. Another key difference is that the Internal Model reflects all material quantifiable risks to which the Company is exposed, whereas the Standard Formula only considers a subset of risks. These are detailed below.

Market risks module

- The Internal Model considers changes in market volatility, which are not explicitly modelled in the Standard Formula. Equity volatility risk is particularly important for modelling business with guarantees in the Company.
- The Internal Model includes credit risk on sovereign bonds, which is not currently modelled under Standard Formula. The Internal Model also explicitly considers default migration and spread risks including some allowance for diversification between various credit exposures.

- Interest rates are modelled using three principal components, not just the change in the level of interest rates as under the Standard Formula.
- The Internal Model explicitly models inflation risk which is not included in the Standard Formula.
- For equity risk, only exposure to asset price falls is reflected in the Standard Formula, whereas the Internal Model allows for the full distribution of equity returns which allows exposure to equity values rising or falling to be captured.
- Health business written within the Company is modelled separately.

Counterparty default module

- The Standard Formula considers all counterparty default risk under one module, whereas the Internal Model allows for the type of the counterparty and the nature of the exposure.

Life Insurance module

- The Standard Formula assumes standard portfolios, whereas the Internal Model calibrations are tailored to the Company's specific portfolios.

Operational Risk

- The Internal Model models operational risks using a scenario based approach. The Standard Formula uses a formulaic approach.

The aggregation of results of subsidiary companies also differs between the Internal Model and Standard Formula. Under the Standard Formula, UKA is treated as a non-strategic participation of the Company which means that:

- The Own Funds are valued on a Standard Formula basis, but presented as a participation asset of the Company balance sheet, rather than split out on a line-by-line granular basis; and
- The SCR is derived using the transitional measure for standard equity risk under which a 22% stress applies initially (for certain equities), increasing linearly to the relevant full stress at 31 December 2022 with further allowance made for diversification with other Standard Formula risks.

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

The Company did not fail to comply with the MCR or SCR at any time during 2016.

Section F

Appendices

In this chapter

F.1 Public disclosure templates

F.2 Glossary

F.3 Additional information on related undertakings

F.4 Approvals and determinations

F.5 Directors’ statement

F.6 Audit opinion

F.1 Public disclosure templates

The following pages contain the Company's public disclosure templates, as listed below:

- S.02.01.02 Balance Sheet
- S.05.01.02 Premiums, claims and expenses by line of business
- S.05.02.01 Premiums, claims and expenses by Country
- S.12.01.02 Life and health SLT technical provisions
- S.22.01.21 Impact of long term guarantees and transitional measures
- S.23.01.01 Own Funds
- S.25.02.21 Solvency Capital Requirement – For undertakings using the standard formula and partial internal model
- S.28.01.01 Minimum Capital Requirement – Only life or only non-life insurance or re-insurance activity

Annex I
S.02.01.02
Balance Sheet
Amounts in 000s

		Solvency II Value
		C0010
Assets		
Intangible assets	R0030	
Deferred tax assets	R0040	0
Pension benefit surplus	R0050	
Property, plant & equipment held for own use	R0060	
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	46,645,588
Property (other than for own use)	R0080	974,564
Holdings in related undertakings, including participations	R0090	14,080,520
Equities	R0100	6,012,568
- Equities - Listed	R0110	5,832,202
- Equities - Unlisted	R0120	180,366
Bonds	R0130	20,465,716
- Government Bonds	R0140	12,755,204
- Corporate Bonds	R0150	7,204,611
- Structured Notes	R0160	58,610
- Collateralised securities	R0170	447,291
Collective Investments Undertakings	R0180	941,587
Derivatives	R0190	3,740,374
Deposits other than cash equivalents	R0200	430,259
Other investments	R0210	
Assets held for index-linked and unit-linked contracts	R0220	53,799,187
Loans & mortgages	R0230	1,899,696
- Loans on policies	R0240	14,743
- Loans & mortgages to individuals	R0250	4,133
- Other loans & mortgages	R0260	1,880,820
Reinsurance recoverables from:	R0270	30,165,032
- Reinsurance recoverables - Non-life and health similiar to non-life	R0280	
- Reinsurance recoverables - Non-life excluding health	R0290	
- Reinsurance recoverables - Health similar to non-life	R0300	
- Reinsurance recoverables - Life and health similar to life, excluding health and index-linked and unit-linked	R0310	1,898,852
- Reinsurance recoverables - Health similar to life	R0320	197,595
- Reinsurance recoverables - Life excluding health and index-linked and unit-linked	R0330	1,701,257
- Reinsurance recoverables - Life index-linked and unit-linked	R0340	28,266,180
Deposits to cedants	R0350	8,963,728
Insurance & intermediaries receivables	R0360	115,091
Reinsurance receivables	R0370	109,953
Receivables (trade, not insurance)	R0380	2,456,020
Own Shares (held directly)	R0390	
Amounts due in respect of own fund items or initial fund called up but not yet paid in	R0400	
Cash and cash equivalents	R0410	148,628
Any other assets, not elsewhere shown	R0420	49,195
Total assets	R0500	144,352,119
Liabilities		
Technical provisions - Non-life	R0510	
- Technical provisions - Non-life (excluding health)	R0520	
- TP calculated as a whole - Non-life (excluding health)	R0530	
- Best Estimate - Non-life (excluding health)	R0540	
- Risk margin - Non-life (excluding health)	R0550	
- Technical provisions - Health (similar to non-life)	R0560	
- TP calculated as a whole - Health (similar to non-life)	R0570	
- Best Estimate - Health (similar to non-life)	R0580	
- Risk margin - Health (similar to non-life)	R0590	
Technical provisions - Life (excluding index-linked and unit linked)	R0600	45,054,757
- Technical provisions - Health (similar to life)	R0610	358,382
- TP calculated as a whole - Health (similar to life)	R0620	
- Best Estimate - Health (similar to life)	R0630	354,842
- Risk margin - Health (similar to life)	R0640	3,540
- Technical provisions - Life (excluding health and index-linked and unit-linked)	R0650	44,696,375
- TP calculated as a whole - Life (excl health, index-linked and unit-linked)	R0660	
- Best Estimate - Life (excl health, index-linked and unit-linked)	R0670	44,252,051
- Risk margin - Life (excl health, index-linked and unit-linked)	R0680	444,324
Technical provisions - Index-linked and unit-linked	R0690	55,981,108
- TP calculated as a whole - Index-linked and unit-linked	R0700	
- Best Estimate - Index-linked and unit-linked	R0710	56,004,875
- Risk margin - Index-linked and unit-linked	R0720	-23,767
Contingent liabilities	R0740	
Provisions other than technical provisions	R0750	65,996
Pension benefit obligations	R0760	
Deposits from reinsurers	R0770	25,233,075
Deferred tax liabilities	R0780	512,596
Derivatives	R0790	3,145,813
Debts owed to credit institutions	R0800	45,904
Financial liabilities other than debts owed to credit institutions	R0810	3,776,680
Insurance & intermediaries payables	R0820	1,246,530
Reinsurance payables	R0830	53,728
Payables (trade, not insurance)	R0840	696,412
Subordinated liabilities	R0850	
- Subordinated liabilities not in BOF	R0860	
- Subordinated liabilities in BOF	R0870	
Any other liabilities, not elsewhere shown	R0880	8,824
Total liabilities	R0900	135,821,423
Excess of assets over liabilities	R1000	8,530,696

Annex I
S.05.01.02
Premiums, claims and expenses by line of business
Amounts in 000s

		Line of Business for: life insurance obligations						Life reinsurance obligations		
		Health Insurance (direct business)	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance	Health reinsurance (reinsurance accepted)	Life reinsurance	Total
		C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0300
Premiums written										
Gross - Direct Business	R1410	123,500	265,097	204,888	1,370,316				330,723	2,294,524
Reinsurers' share	R1420	189,167	8,782	3,026,282	1,002,110				802	4,227,143
Net	R1500	-65,667	256,315	-2,821,394	368,206				329,921	-1,932,619
Premiums earned										
Gross - Direct Business	R1510	123,500	265,097	204,888	1,370,316				330,723	2,294,524
Reinsurers' share	R1520	189,167	8,782	3,026,282	1,002,110				802	4,227,143
Net	R1600	-65,667	256,315	-2,821,394	368,206				329,921	-1,932,619
Claims incurred										
Gross - Direct Business	R1610	68,374	3,417,767	774,227	1,054,456		183		543,412	5,858,419
Reinsurers' share	R1620	39,026	1,260	355,391	594,729				9,637	1,000,041
Net	R1700	29,348	3,416,507	418,836	459,728		183		533,775	4,858,377
Changes in other technical provisions										
Gross - Direct Business	R1710	104,558	-314,365	-52,180	889,175		23,993		623,519	1,274,700
Reinsurers' share	R1720	264,479	-62,572	3,097,038	885,189		11,996		12,393	4,208,523
Net	R1800	-159,921	-251,793	-3,149,218	3,986		11,996		611,127	-2,933,823
Expenses incurred	R1900	14,889	120,296	793,504	193,776				58,490	1,180,955
Other expenses	R2500									2,568
Total expenses	R2600									1,183,523

Annex I

S.05.02.01

Premiums, claims and expenses by Country

Amounts in 000s

		Home Country	Top 5 countries (by amount of gross premius written) - life obligations					Total Top 5 and home country
		C0150	C0160	C0170	C0180	C0190	C0200	C0210
	R1400		IE	BE	IM	JE	GG	
		C0220	C0230	C0240	C0250	C0260	C0270	C0280
Premiums written								
Gross	R1410	2,064,301	193,686	15,432	10,686	5,998	3,856	2,293,958
Reinsurers' share	R1420	4,101,266	50,630	27,946	14,592	18,341	14,368	4,227,143
Net	R1500	-2,036,965	143,056	-12,515	-3,906	-12,343	-10,512	-1,933,185
Premiums earned								
Gross	R1510	2,064,301	193,686	15,432	10,686	5,998	3,856	2,293,958
Reinsurers' share	R1520	4,101,266	50,630	27,946	14,592	18,341	14,368	4,227,143
Net	R1600	-2,036,965	143,056	-12,515	-3,906	-12,343	-10,512	-1,933,185
Claims incurred								
Gross	R1610	5,526,487	246,244	12,241	23,113	27,467	17,173	5,852,725
Reinsurers' share	R1620	924,624	39,635	18,983	8,410	5,101	3,287	1,000,041
Net	R1700	4,601,863	206,609	-6,741	14,702	22,366	13,885	4,852,683
Changes in other technical provisions								
Gross	R1710	1,253,357	-14,125	13,225	3,307	20,515	12,530	1,288,808
Reinsurers' share	R1720	4,118,855	23,976	16,736	11,509	21,678	14,135	4,206,888
Net	R1800	-2,865,499	-38,101	-3,511	-8,202	-1,163	-1,605	-2,918,080
Expenses incurred	R1900	1,095,887	82,704		556	855	508	1,180,510
Other expenses	R2500							2,568
Total expenses	R2600							1,183,078

Annex I
S.12.01.02
Life and Health SLT Technical Provisions
Amounts in 000s

		Insurance with profit participation	Index-linked and unit-linked insurance			Other life insurance			Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insuranc	Accepted Reinsurance	Total (Life other than health insurance, incl. Unit
				Contracts without options and guarantees	Contracts with options or guarantees		Contracts without options and guarantees	Contracts with options or guarantees			
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0150
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	R0020										
Technical provisions calculated as a sum of BE and RM											
Best Estimate											
Gross Best Estimate	R0030	30,335,943		56,085,491	12,574		5,661,740	17,686	85,653	8,449,898	100,648,986
Total Recoverables from reinsurance and SPV after the adjustment for expected losses due to counterparty default	R0080	-64,841		28,254,553	11,627		1,607,446	3,231	42,795	112,626	29,967,437
Best estimate minus recoverables from reinsurance and SPV - Total	R0090	30,400,784		27,830,939	947		4,054,294	14,455	42,858	8,337,272	70,681,549
Risk Margin	R0100	312,685	158,441			358,407			19,546	794,788	1,643,867
Amount of the transitional on Technical Provisions											
Technical Provisions calculated as a whole	R0110										
Best estimate	R0120	-21,250		-93,190			-78,324			-199,296	-392,060
Risk margin	R0130	-42,790	-182,208			-236,342			-6,797	-755,173	-1,223,311
Technical provisions - Total	R0200	30,584,587	55,981,108			5,723,167			98,403	8,290,218	100,677,483

		Health Insurance (direct business)			Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Health reinsurance (reinsurance accepted)	Total (Health similar to life insurance)
			Contracts without options and guarantees	Contracts with options or guarantees			
		C0160	C0170	C0180	C0190	C0200	C0210
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	R0020						
Technical provisions calculated as a sum of BE and RM							
Best Estimate							
Gross Best Estimate	R0030		376,650				376,650
Total Recoverables from reinsurance and SPV after the adjustment for expected losses due to counterparty default	R0080		197,595				197,595
Best estimate minus recoverables from reinsurance and SPV - Total	R0090		179,055				179,055
Risk Margin	R0100	5,077					5,077
Amount of the transitional on Technical Provisions							
Technical Provisions calculated as a whole	R0110						
Best estimate	R0120		-21,808				-21,808
Risk margin	R0130	-1,536					-1,536
Technical provisions - Total	R0200	358,382					358,382

Annex I

S.22.01.21

Impact of long term guarantees and transitional measures

Amounts in 000s

		Amount with LG measures and transitionals	Impact of transitional on technical provisions	Impact of transitional on interest rate	Impact of volatility adjustment set to zero	Impact of matching adjustment set to zero
		C0010	C0030	C0050	C0070	C0090
Technical Provisions	R0010	101,035,865	1,638,715		686,515	1,812,852
Basic Own Funds	R0020	7,099,308	-2,488,572		-199,420	-3,999,417
Eligible own funds to meet Solvency Capital Requirement	R0050	7,099,308	-2,488,572	0	-199,420	-3,999,417
Solvency Capital Requirement	R0090	4,681,916	368,411		71,208	2,390,369
Eligible own funds to meet Minimum Capital Requirement	R0100	7,099,308	-2,488,572	0	-199,420	-3,999,417
Minimum Capital Requirement	R0110	1,170,479	92,103		17,802	597,592

Annex I
S.23.01.01
Own Funds
Amounts in 000s

		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	192,000	192,000			
Share premium account related to ordinary share capital	R0030					
Total 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	4,397,906	4,397,906			
Preference shares	R0090					
Share premium account related to preference shares	R0110					
Reconciliation reserve	R0130	2,509,402	2,509,402			
Subordinated liabilities	R0140					
An amount equal to the value of net deferred tax assets	R0160	0				0
Own fund from financial statements do not meet the criteria to be classified as Solvency II own funds	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	7,099,308	7,099,308			0
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					
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					
Available and eligible own funds						
Total available own funds to meet the SCR	R0500	7,099,308	7,099,308			0
Total available own funds to meet the MCR	R0510	7,099,308	7,099,308			
Total eligible own funds to meet the SCR	R0540	7,099,308	7,099,308			
Total eligible own funds to meet the MCR	R0550	7,099,308	7,099,308			
SCR	R0580	4,681,916				
MCR	R0600	1,170,479				
Ratio of Eligible own funds to SCR	R0620	1.5163				
Ratio of Eligible own funds to MCR	R0640	6.0653				

		C0060
Reconciliation Reserve		
Excess of assets over liabilities	R0700	8,530,696
Own shares (direct/indirect)	R0710	
Foreseeable dividends, distributions and charges	R0720	
Other basic own fund items	R0730	4,589,906
Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds	R0740	1,431,389
Reconciliation reserve	R0760	2,509,402
Expected profits		
Expected profits included in future premiums (EPIFP) - Life business	R0770	813,599
Expected profits included in future premiums (EPIFP) - Non-life business	R0780	
Total Expected profits included in future premiums (EPIFP)	R0790	813,599

Annex I

S.25.02.21

Solvency Capital Requirement - For undertakings using the standard formula and partial internal mod

Amounts in 000s

Unique number of component	Component Description	Calculation of the Solvency Capital Requirement	Amount modelled	USP	Simplifications
C0010	C0020	C0030	C0070	C0080	C0090
100000	Market Risk	3,486,036	3,367,479		
200000	Counterparty Risk	371,141	353,389		
300000	Life underwriting risk	3,408,003	3,238,218		
400000	Health underwriting risk	5,751			
500000	Non-life underwriting risk				
701000	Operational risk	576,482	564,938		
801000	Other risks				
802000	Loss-absorbing capacity of technical provisions				
803000	Loss-absorbing capacity of deferred tax	-437,607	-413,360		
804000	Other adjustments	-238,581	-238,581		

Calculation of Solvency Capital Requirement		C0100
Total undiversified components	R0110	7,171,225
Diversification	R0060	-2,489,313
Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC	R0160	
Solvency Capital Requirement excluding capital add-on	R0200	4,681,913
Capital add-ons already set	R0210	
Solvency capital requirement	R0220	4,681,913
Other information on SCR		
Amount/Estimate of the overall loss-absorbing capacity of technical provisions	R0300	-3,764,721
Amount/Estimate of the overall loss-absorbing capacity of deferred taxes	R0310	-437,607
Capital requirement for duration-based equity risk sub-module	R0400	
Total amount of Notional Solvency Capital Requirements for remaining part	R0410	2,541,226
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	1,591,510
Total amount of Notional Solvency Capital Requirements for matching adjustment portfolios	R0430	928,515
Diversification effects due to RFF nSCR aggregation for article 304	R0440	

Annex I

S.28.01.01

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

Amounts in 000s

Linear formula component for non-life insurance and reinsurance obligations

		C0010
MCRNL Result	R0010	

		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		
Other motor insurance and proportional reinsurance	R0060		
Marine, aviation and transport insurance and proportional reinsurance	R0070		
Fire and other damage to property insurance and proportional reinsurance	R0080		
General liability insurance and proportional reinsurance	R0090		
Credit and suretyship insurance and proportional reinsurance	R0100		
Legal expenses insurance and proportional reinsurance	R0110		
Assistance and proportional reinsurance	R0120		
Miscellaneous financial loss insurance and proportional reinsurance	R0130		
Non-proportional health reinsurance	R0140		
Non-proportional casualty reinsurance	R0150		
Non-proportional marine, aviation and transport reinsurance	R0160		
Non-proportional property reinsurance	R0170		

Linear formula component for life insurance and reinsurance obligations

		C0040
MCRL Result	R0200	703,654

		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	19,653,152	
Obligations with profit participation - Future discretionary benefits	R0220	11,174,893	
Index-linked and unit-linked insurance obligations	R0230	27,738,695	
Other life (re)insurance and health (re)insurance obligations	R0240	11,879,995	
Total capital at risk for all life (re)insurance obligations	R0250		162,758,529

Overall MCR calculation

		C0070
Linear MCR	R0300	703,654
SCR	R0310	4,681,913
MCR cap	R0320	2,106,861
MCR floor	R0330	1,170,478
Combined MCR	R0340	1,170,478
Absolute floor of the MCR	R0350	3,158

		C0070
Minimum Capital Requirement	R0400	1,170,478

F.2 Glossary

Product definitions

Annuity	A type of policy that pays out regular amounts, either immediately and for the remainder of a person's lifetime, or deferred to commence from a future date. Immediate annuities may be purchased for an individual and his or her dependants or on a bulk purchase basis for groups of people. Deferred annuities are accumulation contracts, which may be used to provide benefits in retirement and may be funded by a policyholder by payment of a series of contributions or by a capital sum. Annuities may be guaranteed, unit-linked or index-linked.
Bonds and savings	These are accumulation products with single or regular premiums and unit-linked or guaranteed investment returns.
Collective investment schemes (SICAVs)	This is an open-ended investment fund, structured as a legally independent joint stock company, whose units are issued in the form of shares.
Critical illness cover	Pays out a lump sum if the insured person is diagnosed with a serious illness that is specified within the insurance policy
Equity release	Equity release mortgages allow a homeowner to receive a lump sum in return for a mortgage secured on their house. No interest is payable on the loan; instead, interest is rolled-up on the loan and the loan and accrued interest are repayable at redemption (upon death or moving into long-term care).
Group pension	A pension plan that covers a group of people, which is typically purchased by a company and offered to their employees.
Income drawdown	The policyholder can transfer money from any pension fund to an income drawdown plan from which they receive an income. The remainder of the pension fund continues to be invested, giving it the potential for growth.
Individual savings accounts (ISAs)	Tax-efficient plans within the UK for investing in stocks and shares, cash deposits or life insurance investment funds, subject to certain limits.
Investment sales	Comprise retail sales of mutual fund-type products such as unit trusts, individual savings accounts (ISAs) and open ended investment companies (OEICs).
Mortgage endowment	An insurance contract combining savings and protection elements which is designed to repay the principal of a loan or a mortgage.
Mortgage life insurance	A protection contract designed to pay off the outstanding amount of a mortgage or loan in the event of the death of the insured.
Non-profit	Insurance cover guaranteeing certain benefits but for which the policyholder bears no investment risk and does not gain or lose if returns differ from expectations. Pure risk business, such as term assurance, annuities, health insurance and disability cover, is normally written on a non-profit basis.
Open ended investment company (OEIC)	A collective investment fund structured as a limited company in which investors can buy and sell shares.
Pension	A means of providing income in retirement for an individual and possibly his/her dependants.

Personal pension	A pension plan tailored to the individual policyholder, which includes the options to stop, start or change their payments.
Protection	An insurance contract that protects the policyholder or his/her dependants against financial loss on death or ill-health.
Regular premium	A series of payments are made by the policyholder, typically monthly or annually for part of or all of the duration of the contract.
Single premium	A single lump sum is paid by the policyholder at the start of the contract.
Stakeholder pensions	Low cost and flexible pension plans governed by specific regulations
Term assurance	A simple form of life insurance, offering cover over a fixed number of years during which a lump sum will be paid out if the life insured dies within the specified time period.
Unit trusts	A form of open ended collective investment constituted under a trust deed, in which investors can buy and sell units.
Whole life	A protection policy that remains in force for the insured's whole life with a lump sum paid out on death. Traditional whole life contracts have fixed premium payments that typically cannot be missed without lapsing the policy. Flexible whole life contracts allow the policyholder to vary the premium and/or amount of life cover, within certain limits.
With-profit	A type of investment plan in which extra amounts may be added to the main benefit (known as the sum assured) to reflect profits earned during the course of the contract. Regular or "reversionary" bonuses may be added, usually each year, and once declared are guaranteed. A final or "terminal" bonus may be added when the policy becomes payable. With-profit funds are typically invested in a mixture of equities, property and fixed income investments. Under poor stock market conditions a "market value adjustment" (MVA) may be applied to the value of the policy if it is surrendered before the maturity date.

General terms

99.5% percentile	An event that would be expected to occur once in every 200 years.
Alternative valuation methods	Valuation methods that are consistent with Article 75 of the SII Directive other than those which solely use the quoted market prices for the same or similar assets or liabilities.
Acquired value of in force (AVIF)	The present value of future profits on a portfolio of long-term insurance and investment contracts, acquired either directly or through the purchase of, or investment in, a business.
Basis risk	The risk resulting from the situation in which the exposure covered by the risk-mitigation technique does not correspond to the risk exposure of the insurance or reinsurance undertaking.
Best estimate liabilities (BEL)	The expected present value of future cash flows for a company's current insurance obligations, calculated using best estimate assumptions, projected over the contract's run-off period, taking into account all up-to-date financial market and actuarial information.
Concentration risk	All risk exposures with a loss potential which is large enough to threaten the solvency or the financial position of insurance and reinsurance undertakings.

Contract boundaries	A contract boundary is the first point in time in the lifetime of an insurance policy at which the insurer has the ability to review the premiums charged at the individual policy level, without any contractual constraints. For policies in which such a point does not exist, the contract boundary is the same as the full term of the contract. Under Solvency II, if a contract boundary on an insurance contract is less than the full term of the contract the expected future premiums and obligations that relate to cover which may be provided after that date are not recognised in the measurement of the insurance liabilities.
Credit risk	The risk of loss or of adverse change in the financial situation, resulting from fluctuations in the credit standing of issuers of securities, counterparties and any debtors to which insurance and reinsurance undertakings are exposed, in the form of counterparty default risk, spread risk or market risk concentrations.
Deferred acquisition costs (DAC)	The costs directly attributable to the acquisition of new business for insurance and investment contracts may be deferred under IFRS to the extent that they are expected to be recoverable out of future margins in revenue on these contracts.
Diversification benefit	The reduction in the risk exposure of insurance and reinsurance undertakings and groups related to the diversification of their business, resulting from the fact that the adverse outcome from another risk, where those risks are not fully correlated.
Expected profit included in future premium (EPIFP)	The expected present value of future cash flows which result from the inclusion in technical provisions of premiums relating to existing insurance and reinsurance contracts that are expected to be received in the future, but that may not be received for any reason, other than because the insured event has occurred, regardless of the legal or contractual rights of the policyholder to discontinue the policy.
Fair value	The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e. an exit price).
Financial Conduct Authority (FCA)	The FCA is an independent public body and is independent of the Bank of England. It is responsible for the conduct business regulation of financial services firms (including those firms subject to prudential regulation by the PRA) and the prudential regulation of firms not regulated by the PRA. The FCA has three statutory objectives: securing an appropriate degree of protection for consumers, protecting and enhancing the integrity of the UK financial system and promoting effective competition in the interests of consumers.
Inherited estate	The assets of the long-term with-profit funds less the realistic reserves for non-profit policies written within the with-profit funds, less asset shares aggregated across the with-profit policies and any additional amounts expected at the valuation date to be paid to in-force policyholders in the future in respect of smoothing costs and guarantees.
International financial reporting standards (IFRS)	These are international accounting regulations that all publicly listed companies in the European Union are required to use.
Life business	Businesses selling life and pensions contracts.
Liquidity premium	An addition to the risk-free rate used when projecting investment returns and discounting cash flows on certain types of contracts where the liabilities are illiquid and have cash flows that are predictable.
Liquidity risk	The risk that insurance and reinsurance undertakings are unable to realise investments and other assets in order to settle their financial obligations when they fall due.

Longevity risk	Risk associated with increasing life expectancy trends among policyholders and pensioners.
Long-term and savings business	Collective term for life insurance, pensions, savings, investments and related business.
Look through	The Company considers the risks, assets, liabilities of its subsidiary as if they were its own.
Market risk	The risk of loss or of adverse change in the financial situation resulting, directly or indirectly, from fluctuations in the level and in the volatility of market prices of assets, liabilities and financial instruments.
Matching adjustment (MA)	An increase applied to the risk-free rate used to value insurance liabilities where the cash flows are relatively fixed (e.g. no future premiums or surrender risk) and are well matched to assets that are intended to be held to maturity and have cash flows that are also relatively fixed.
Minimum capital requirement (MCR)	The Minimum Capital Requirement is the minimum amount of capital that an insurer needs to hold to cover its risks under the Solvency II regulatory framework. If an insurer's capital falls below the MCR then authorisation will be withdrawn by the regulator unless a firm is able to meet the MCR within a short period of time.
Morbidity	Rate of disease or how likely someone will fall ill, varying by such parameters as age, gender and health, used in pricing and calculating liabilities for policyholders of life and annuity products.
Mortality	Rate of death, varying by such parameters as age, gender and health, used in pricing and calculating liabilities for policyholders of life and annuity products which contain mortality risks.
Net written premiums	Total gross written premiums for the given period, minus premiums paid over or 'ceded' to reinsurers.
Operating expenses	The day-to-day expenses involved in running the business including the staff costs. For the avoidance of doubt, operating expenses excludes commission, non-operating integration and restructuring costs, and amortisation and impairment of AVIF and intangible assets.
Operating profit	This is a non-GAAP financial performance measure. It is based on expected investment returns and stated before tax and before non-operating items including impairment of goodwill and amortisation and impairment of acquired value of in-force business, the profit or loss on disposal and remeasurement of subsidiaries and other items.
Operational risk	The risk of loss arising from inadequate or failed internal processes, personnel or systems, or from external events.
Outsourcing	An arrangement of any form between an insurance or reinsurance undertaking and a service provider, whether a supervised entity or not, by which that service provider performs a process, a service or an activity, whether directly or by sub-outsourcing, which would otherwise be performed by the insurance or reinsurance undertaking itself.
Own Funds	Under Solvency II, capital available to cover the SCR and MCR is referred to as Own Funds. This includes the excess of assets over liabilities in the Solvency II balance sheet (calculated on best estimate, market consistent assumptions and net of transitional measures on technical provisions), subordinated liabilities that qualify as capital under Solvency II, and off-balance sheet Own Funds approved by the regulator. Own funds eligible to cover the SCR and MCR also reflect any tiering restrictions.

Persistency

The rate at which policies are retained over time and therefore continue to contribute to premium income and funds under management.

Prudential Regulation Authority (PRA)

The PRA is a part of the Bank of England and is responsible for the prudential regulation of deposit taking institutions, insurers and major investment firms. The PRA has three statutory objectives:

- A general objective to promote the safety and soundness of the firms it regulates
- An objective specific to insurance firms, to contribute to the securing of an appropriate degree of protection for those who are or may become insurance policyholders; and
- A secondary objective to facilitate effective competition.

Qualifying holding

A direct or indirect holding in an undertaking which represents 10% or more of the capital or of the voting rights or which makes it possible to exercise a significant influence over the management of that undertaking.

Required capital

The amount of assets, over and above the value placed on liabilities in respect of covered business, whose distribution to shareholders is restricted.

Ring fenced funds

Ring fenced funds (RFF) are arrangements where assets and liabilities are ring-fenced and form an identifiable unit as though the RFF were a separate undertaking. This arises where assets are earmarked or allocated to meeting specific liabilities to the exclusion of other liabilities or losses. In the case of a RFF there is a lack of transferability of assets that are included in calculating the excess of assets over liabilities within the insurance or reinsurance undertaking.

Risk-adjusted returns

Adjusting profits earned and investment returns by how much risk is involved in producing that return or profit

Risk margin

The amount an insurance company would require, in excess of best estimate liabilities, in order to take over and meet the whole portfolio of insurance and reinsurance obligations. It reflects the cost of providing capital equal to the Solvency II capital requirement for non-hedgeable risks necessary to support the insurance obligations over their lifetime. Risk margin represents the value of deviation risk of the actual outcome compared with the best estimate, expressed in terms of a defined risk measure.

Solvency II

These are insurance regulations designed to harmonise EU insurance regulation. Primarily this concerns the amount of capital that European insurance companies must hold under a measure of capital and risk. Solvency II became effective from 1 January 2016.

Solvency II cover ratio

Own funds divided by the Solvency Capital Requirement.

Solvency II surplus

Own funds less the Solvency Capital Requirement.

Solvency Capital Requirement (SCR)

The Solvency Capital Requirement is the amount of capital the regulator requires an insurer to hold to meet the requirements under the Solvency II regulatory framework. Holding capital in excess of the SCR demonstrates an insurer has adequate financial resources in place to meet all its liabilities as and when they fall due and that there is sufficient capital to absorb significant losses. Firms may use their own Internal Model, the European Insurance and Occupational Pensions Authority (EIOPA) prescribed Standard Formula or a partial Internal Model to determine SCR.

Special Purpose Vehicle	Any undertaking, whether incorporated or not, other than an existing or insurance or reinsurance undertaking, which assumes risks from insurance or reinsurance undertakings and which fully funds its exposure to such risks through the proceeds of a debt issuance or any other financing mechanism where the repayment rights of the providers of such debt or financing mechanism are subordinated to the reinsurance obligations of such an undertaking.
Transitional measures on technical provisions (TMTP)	TMTP is an adjustment to Solvency II technical provisions to bring them into line with the pre-Solvency II equivalent as at 1 January 2016 when the regulatory basis changed, to smooth the introduction of the new regime. This will decrease linearly over the 16 years following Solvency II implementation but may be recalculated to allow for material changes to the risk profile of the relevant business, subject to agreement with the regulator. TMTP may also be recalculated every 24 months at the request of either the firm or the regulator.
Underwriting risk	The risk of loss or of adverse change in the value of insurance liabilities, due to inadequate pricing and provisioning assumptions.
UK Corporate Governance Code	The code sets out guidance in the form of principles and provisions on how companies should be directed and controlled to follow good governance practice.
Volatility adjustment (VA)	A reduction to technical provisions to reflect temporary distortions in spreads caused by illiquidity in the market or extreme widening of credit spreads. The volatility adjustment reduces technical provisions by increasing the discount rate used to calculate the best estimate liability. Volatility adjustments are prescribed by EIOPA on a currency and country basis.

F.3 Additional information on related undertakings

The following table is a complete list of the Company's related undertakings as at 31 December 2016 and includes information in relation to the % ownership, class of shares held and country of incorporation of each related undertaking.

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company
Anna Livia Properties Limited	25/28 North Wall Quay Dublin 1 Ireland	Investment and development of property	Ireland	€1.00 Ordinary shares	100%
Aviva (Peak No.1) UK Limited	Pitheavlis Perth PH2 0NH	Dormant Company	Scotland	£1.00 Ordinary shares	100%
Aviva (Peak No.2) UK Limited	Aviva Wellington Row York YO90 1WR	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Annuity UK Limited	Aviva Wellington Row York YO90 1WR	Pension Funding	England and Wales	£1.00 Ordinary shares	100%
Aviva Equity Release UK Limited	Aviva Wellington Row York YO90 1WR	Financial intermediation	England and Wales	£1.00 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company
Aviva Investors European Renewable Energy S.A	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€1.00 Ordinary shares	100%
Aviva Investors Property Fund Management Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Pension Trustees UK Limited	Aviva Wellington Row York YO90 1WR	Financial intermediation	England and Wales	£1.00 Ordinary shares	100%
Aviva Undershaft Four Limited	One Park Place Hatch Street Dublin 2	Non-trading	Ireland	€1.25 Ordinary shares	100%
Barwell Business Park Nominee Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Centaurus CER (Aviva Investors) Sarl	47 Avenue John F. Kennedy L - 1855 Luxembourg	Operating Company	Luxembourg	€100.00 Ordinary shares	100%
Cornerford Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant Company	England and Wales	£1.00 A Ordinary £1.00 B Ordinary £1.00 Preference	100%
EBISU Investments Limited	St Helen's 1 Undershaft London EC3P 3DQ	Fund management activities	England and Wales	£1.00 Ordinary shares	100%
EPI NU Societe a responsabilite limitee	47 Avenue John F. Kennedy L - 1855 Luxembourg	Dormant Company	Luxembourg	€25.00 Ordinary shares	100%
GA Life Property Ireland Limited	25/28 North Wall Quay Dublin 1 Ireland	In liquidation	Ireland	€1.27 Ordinary shares	100%
Goodman Eurpoean Business Park Fund (Lux) Sarl	47 Avenue John F. Kennedy L - 1855 Luxembourg	Operating Company	Luxembourg	€25.00 Ordinary	42.3%
Hemel Hempstead Estate Management Limited	St Helen's 1 Undershaft London EC3P 3DQ	Management of real estate	England and Wales	£1.00 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company
Hexagone Sarl	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€25.00 Ordinary	100%
Lancashire and Yorkshire Reversionary Interest Company Limited	Aviva Wellington Row York YO90 1WR	Life insurance	England and Wales	£9.25 Ordinary shares	100%
Matthew Parker Street (Nominee no 1) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Matthew Parker Street (Nominee no 2) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Metropath Limited	No.1 Dorset Street Southampton Hampshire SO15 2DP	In Liquidation	England and Wales	£1.00 Ordinary shares	100%
Netnerve Limited	No.1 Dorset Street Southampton Hampshire SO15 2DP	In Liquidation	England and Wales	£1.00 Ordinary shares	100%
Norwich Union (Shareholder GP) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Holding Company	England and Wales	£1.00 Ordinary shares	100%
Norwich Union Life Insurance Company Limited	Aviva Wellington Row York YO90 1WR	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Origo Services Limited	7 Lochside View Edinburgh EH12 9DH United Kingdom	Operating Company	Scotland	£1.00 Ordinary shares	18.4%
Quarryvale One Limited	St Helen's 1 Undershaft London EC3P 3DQ	Development of building projects	England and Wales	£1.00 Ordinary shares	100%
Swan Valley Management Limited	St Helen's 1 Undershaft London EC3P 3DQ	Management of real estate	England and Wales	£1.00 A Ordinary £1.00 B Ordinary	100% (A Ordinary Shares) 0% (B Ordinary Shares)
Synergy Sunrise (Bowthorpe) Limited	Aviva Wellington Row York YO90 1WR	Dormant Company	England and Wales	£1.00 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company
Synergy Sunrise (Sentinel House) Limited	Aviva Wellington Row York YO90 1WR	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Victor Hugo 1 Sarl	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€25.00 Ordinary	100%
Wood Lane (Stadium) Limited	No.1 Dorset Street Southampton Hampshire SO15 2DP	In liquidation	England and Wales	£1.00 Ordinary shares	100%

Indirect related undertakings of the Company as at 31 December 2016 are listed below

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Aviva ERFA 15 UK Limited	Aviva Wellington Row York YO90 1WR	Operating Company	England and Wales	£1.00 Ordinary shares	100%
AIEREF Holding 1	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€1.00 Ordinary shares	100%
AIEREF Holding 2	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€1.00 Ordinary shares	100%
AIEREF Renewable Energy SRO	5/482 Ve Svahu Prague 4 147 00 Czech Republic	Operating Company	Czech Republic	CZK1.00 Ordinary shares	100%
Eólica Almatret S.L.	1D, 13 Edificio América Av. de Bruselas, 28108, Alcobendas (Madrid), Spain	Operating Company	Spain	€2861.9427 Ordinary shares	50%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
GEBPF Business Park (France) Sarl	62 Rue de la Chaussee d'Antin 75009 Paris France	Operating Company	France	€1.00 Ordinary shares	42.3%
GEBPF Marseille (France) Sarl	62 Rue de la Chaussee d'Antin 75009 Paris France	Operating Company	France	€1.00 Ordinary shares	42.3%
Goodman Business Park Fund Dusseldorf Development Verwallungs GmbH	Peter-Muller Strasse 10 40468 Dusseldorf Germany	In Liquidation	Germany	€25.00 Ordinary	42.3%
Vauban Developpement Sarl	62 Rue de la Chaussee d'Antin 75009 Paris France	Operation Company	France	€50.00 Ordinary	42.3%
AFRP Sarl	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€25.00 Ordinary	100%
Sapphire lle de France 1 Sarl	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€25.00 Ordinary	100%
Sapphire lle de France 2 Sarl	16, Avenue de la Gare Luxembourg Grand duchy of Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	€25.00 Ordinary	100%
Sapphire lle de France SCI	24 - 26 rue de la Pepiniere 75008 Paris France	Operating Company	France	€1.23 Ordinary	100%
Quarryvale Three Limited	St Helen's 1 Undershaft London EC3P 3DQ	Development of building project	England and Wales	£1.00 Ordinary shares	100%
Vanwall Road Management Company Limited	C/O Fairweathers 7 Chalfont Court Chalfont Way Lower Earley Reading Berkshire RG6 5SY	Operating Company	England and Wales	£1.00 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Reschop Carre Hattingen GmbH	1 Escheinheimer Anlage 60316 Frankfurt / Main Germany	Operating Company	Germany	€0.00 Ordinary	95%
Reschop Carre Marketing GmbH	1 Escheinheimer Anlage 60316 Frankfurt / Main Germany	Operating Company	Germany	€1.00 Ordinary	100%
20 Gracechurch (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 A Ordinary £1 B Ordinary	100% 100%
2-10 Mortimer Street GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 B Ordinary	100% (overall ownership 50%)
Airport Property H1 Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 B Ordinary	100% (overall ownership 50%)
Apia Regional Office Fund (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 A Ordinary	100% (overall ownership 50%)
Ascot Real Estate Investments GP LLP	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	N/A	50%
Aviva Investors (FP) Limited	Pitheavlis Perth PH2 0NH	Dormant	Scotland	£1.00 Ordinary shares	100%
Aviva Investors (GP) Scotland Limited	Pitheavlis Perth PH2 0NH	Operating Company	Scotland	£1.00 Ordinary shares	100%
Aviva Investors Commercial Assets GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Investors EBC GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Investors Ground Rent GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Investors Infrastructure GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Investors Polish Retail GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant	England and Wales	£1.00 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Aviva Investors Social Housing GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Investors UK Real Estate Recovery (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Aviva Special PFI GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Cardiff Bay GP Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant	England and Wales	£1.00 Ordinary shares	100%
Designer Retail Outlet Centres (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant	England and Wales	£1 A Ordinary	100% (overall ownership 50%)
Gobafoss General Partner Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Igloo Regeneration (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating	England and Wales	£1 A Ordinary	100% (overall ownership 50%)
Lime Property Fund (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
New Oxford Street (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Dormant	England and Wales	£1.00 Ordinary shares	100%
Norwich Union (Mall GP) Limited	No.1 Dorset Street Southampton Hampshire SO15 2DP	In liquidation	England and Wales	£1.00 Ordinary shares	100%
NUPPP (GP) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Paddington Central III (GP) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 A Ordinary £1 B Ordinary	100% 100%
Quantum Property Partnership (General Partner) Limited	43-45 Portman Square London W1H 6LY	Operating Company	England and Wales	£1.00 Ordinary shares	50%
Rugby Radio Station (General Partner) Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 B Ordinary	100% (overall ownership 50%)

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Serviced Offices UK GP Limited	No.1 Poultry London EC2R 8EJ	Operating Company	England and Wales	£1 A Ordinary	100% (overall ownership 50%)
Southgate General Partner Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1 A Ordinary	100% (overall ownership 50%)
SUE GP LLP	St Helen's 1 Undershaft London EC3P 3DQ	Dormant	England and Wales	N/A	50%
The Designer Retail Outlet Centres (Livingston) General Partner Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
The Designer Retail Outlet Centres (Mansfield) General Partner Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
The Designer Retail Outlet Centres (York) General Partner Limited	St Helen's 1 Undershaft London EC3P 3DQ	Operating Company	England and Wales	£1.00 Ordinary shares	100%
Tenet Business Solutions Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
Tenet Client Services Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
Tenet Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
Aspire Financial Management Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
Living in Retirement Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Active non-trading	England and Wales	£1.00 Ordinary shares	22.6%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Paragon Insurance Company Guernsey Limited	St Martin's House Le Bordage St Peter Port	Operating Company	Guernsey	£1 Ordinary Shares	22.6%
Sinfonia Asset Management Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£0.0001 Ordinary shares	22.6%
TenetFinnancial Solutions Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
The Employee Benefits Corporation Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1 A Ordinary £1 Redeemable Ordinary	34.64% 100% (overall combined 18.1%)
Tenet Valuation Services Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
TenetConnect Services Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
TenetConnect Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
TenetLime Limied	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
TenetSelect Limited	5 Lister Hill Horsforth Leeds West Yorkshire LS18 5AZ	Operating Company	England and Wales	£1.00 Ordinary shares	22.6%
Synergy Sunrise (Yorkshire House) Limited	Aviva Wellington Row York YO90 1WR	Dormant Company	England and Wales	£1.00 Ordinary shares	100%
Victor Hugo 2 Sarl	16 Avenue de la Gare Luxembourg L-1610 Luxembourg	Operating Company	Luxembourg	£1.00 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Airport Property GP (No.2) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating Company	England and Wales	£1 A Ordinary £1 B Ordinary	50% 50%
Devon Nominees (No.1) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating Company	England and Wales	£1 Ordinary shares	50%
Devon Nominees (No.2) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating Company	England and Wales	£1 Ordinary shares	50%
Devon Nominees (No.3) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating Company	England and Wales	£1 Ordinary shares	50%
Unitair General Partner Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating Company	England and Wales	£1 A Ordinary £1 B Ordinary	50% 50%
Serviced Offices UK (Services) Limited	No 1 Poultry, London, EC2R 8EJ	Dormant	England and Wales	£1 Ordinary shares	50%
Serviced Offices UK Nominee Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Quantum Property Partnership (Nominee) Limited	43-45 Portman Square, London, England, W1H 6LY, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Bristol and Bath Science Park Estate Management Company Limited	43-45 Portman Square, London, England, W1H 6LY, United Kingdom	Operating	England and Wales	£1D Ordinary	50%
BMG (York) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
BMG (Livingston) General Partner Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
BMG (Mansfield) Limited	No 1 Poultry, London, EC2R 8EJ	Dormant	England and Wales	£1 Ordinary shares	50%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
BMG (Mansfield) General Partner Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
BMG (York) General Partner Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
BMG (York) Partnership Trustco Limited	No 1 Poultry, London, EC2R 8EJ	Dormant	England and Wales	£1 Ordinary shares	50%
Aviva Investors UK Real Estate Recovery (Nominee) Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	In Liquidation	England and Wales	£1 Ordinary shares	100%
Aviva Investors UK Real Estate Recovery (Nominee Two) Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	In Liquidation	England and Wales	£1 Ordinary shares	100%
Igloo Regeneration Developments (General Partner) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Igloo Regeneration Developments (Nominees) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Blueprint (General Partner) Limited	FIRST FLOOR OFFICE SUITE, 48-50 ST MARYS GATE, LACE MARKET, NOTTINGHAM, NG1 1QA	Operating	England and Wales	£1 B Ordinary	100% (overall ownership 25%)
Blueprint (Nominees) Limited	FIRST FLOOR OFFICE SUITE, 48-50 ST MARYS GATE, LACE MARKET, NOTTINGHAM, NG1 1QA	Dormant	England and Wales	£1 Ordinary shares	25%
400 Caledonia Road Management Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	50%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Porth Teigr Management Company Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 B Ordinary	50%
Carillion-Igloo Limited	Carillion House, 84 Salop Street, Wolverhampton, WV3 0SR, United Kingdom	Operating	England and Wales	£1 Ordinary shares	25%
Maling Street Management Company Limited	24 Birch Street, Wolverhampton, WV1 4HY	Operating	England and Wales	£1 Ordinary shares	25%
Carillion-Igloo Nominees Limited	Carillion House, 84 Salop Street, Wolverhampton, WV3 0SR, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	25%
BIGG Regeneration (General Partner) Limited	SCOTTISH CANALS CANAL HOUSE, 1 APPLECROSS STREET, GLASGOW, G4 9SP, United Kingdom	Operating	Scotland	£1 A Ordinary	100% (overall ownership 25%)
Igloo Regeneration (Nominee) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Igloo Regeneration (Butcher Street) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Aviva Investors Polish Retail Sarl	16 Avenue de la Gare, Luxembourg, 1610, Luxembourg	Operating	Luxembourg	€100 Ordinary Shares	100%
Focus Park Zielona Gora Sp. Z.o.o	A1., Jana Pawla II 25, Warsaw, Poland	In Liquidation	Poland	PLZ500 Ordinary Shares	100%
Peace Harbor Capital Investments Sp. Z.o.o	Al. Jana Pawła II 25, 00-854, Warszawa, Poland	In Liquidation	Poland	100 Ordinary Shares	100%
Focus Mall Zielona Gora Sp. Z.o.o	A1., Jana Pawla II 25, Warsaw, Poland	Operating	Poland	PLZ50 Ordinary Shares	100%
Focus Park Piotrkow Trybunalski Sp.Zo.o	A1., Jana Pawla II 25, Warsaw, Poland	Operating	Poland	PLZ500 Ordinary Shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Lime Property Fund (Nominee) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	100%
Tyne Assets Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	100%
Tyne Assets (No. 2) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	100%
Rugby Radio Station (Nominee) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Southgate LP (Nominee 1) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Southgate LP (Nominee 2) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Aviva Investors Social Housing Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	Company Limited by Guarantee	N/A
Sue GP Nominee Limited	No 1 Poultry, London, EC2R 8EJ	Dormant	England and Wales	£1 Ordinary shares	50%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Aviva Investors EBC Sarl	16 Avenue de la Gare, Luxembourg, 1610, Luxembourg	Operating	Luxembourg	€150 A Ordinary €150 B Ordinary €150 C Ordinary €150 D Ordinary €150 E Ordinary €150 F Ordinary €150 G Ordinary €150 H Ordinary €150 I Ordinary €150 J Ordinary	100% 100% 100% 100% 100% 100% 100% 100% 100% 100%
Wroclaw B.C. Sp.zoo	AI Jana Pawla II 25, 00-854, Warsaw, Poland	Operating	Poland	PLZ50 Ordinary Shares	100%
Lodz B.C. Sp.zoo	A1., Jana Pawla II 25, Warsaw, Poland	Operating	Poland	PLZ50 Ordinary Shares	100%
Aviva Investors Ground Rent Holdco Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV 1 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV2 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Aviva Investors GR SPV3 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Aviva Investors GR SPV4 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV5 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV6 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV7 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV 8 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV9 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors GR SPV 10 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Aviva Investors GR SPV11 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Aviva Investors GR SPV12 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Aviva Investors GR SPV13 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Aviva Investors GR SPV 14 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Aviva Investors GR SPV15 Limited	c/o James Fletcher, Mainstay, Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Aviva Investors GR SPV16 Limited	Whittington Hall, Whittington Road, Worcester, England, WR5 2ZX, United Kingdom	Operating	England and Wales	£0.10 Ordinary shares	100%
Mortimer Street Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Fitzroy Place Residential Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	50%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Mortimer Street Associated Co 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Mortimer Street Associated Co 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Fitzroy Place Management Co Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
2-10 Mortimer Street (GP No.1) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	50%
Mortimer Street Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Fitzroy Place GP 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Mortimer Street Nominee 3 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	50%
Aviva Investors REaLM Infrastructure No. 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Solar Clean Energy Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£0.01 Ordinary shares	100%
TGHC Limited	The Green, Easter Park, Benyon Road, Reading, Berkshire, England, RG7 2PQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Free Solar Holdco Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Free Solar (Stage 1) Limited	The Green, Easter Park, Benyon Road, Reading, Berkshire, England, RG7 2PQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Free Solar (Stage 2) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Anesco South West Limited	The Green, Easter Park, Benyon Road, Reading, Berkshire, England, RG7 2PQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Renewable Clean Energy Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
EES Operations 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Norton Energy SLS Limited	The Green, Easter Park, Benyon Road, Reading, Berkshire, England, RG7 2PQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Freetricity South East Limited	Argyll House, All Saints Passage, London, England, SW18 1EP, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Anesco Mid Devon Limited	The Green, Easter Park, Benyon Road, Reading, Berkshire, England, RG7 2PQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
New Energy Residential Solar Limited	The Green, Easter Park, Benyon Road, Reading, Berkshire, England, RG7 2PQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Homesun Limited	c/o ANESCO LIMITED, THE GREEN EASTER PARK, BENYON ROAD , READING, England, RG7 2PQ , United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Homesun 2 Limited	c/o ANESCO LIMITED, THE GREEN EASTER PARK, BENYON ROAD , READING, England, RG7 2PQ , United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Homesun 3 Limited	c/o ANESCO LIMITED, THE GREEN EASTER PARK, BENYON ROAD , READING, England, RG7 2PQ , United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Homesun 4 Limited	c/o ANESCO LIMITED, THE GREEN EASTER PARK, BENYON ROAD , READING, England, RG7 2PQ , United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Homesun 5 Limited	c/o ANESCO LIMITED, THE GREEN EASTER PARK, BENYON ROAD , READING, England, RG7 2PQ , United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors REaLM Infrastructure No. 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Medium Scale Wind No.1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	100%
CE01 PEP Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
AD06 PEP Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
CE07 PEP Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
SE06 PEP Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
SE11 PEP Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary shares	100%
Aviva Investors REaLM Infrastructure No. 4B Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors REaLM Infrastructure No. 3 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Biomass UK No.1 LLP	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	N/A	75%
Sunrise Renewables (Hull) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£0.001 Deferred Shares £0.001 Ordinary Shares	100% 100%
Biomass UK No 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£0.01 A Ordinary £0.01 B Ordinary £0.01 C Ordinary £0.01 Deferred Shares	100% 100% 100% 100%
Sunrise Renewables (Barry) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£0.001 Deferred Shares £0.001 Ordinary Shares	100% 100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Biomass UK No.3 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£0.01 A Ordinary £0.01 Deferred Shares	100% 100%
Boston Biomass Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£0.01 Ordinary Shares	100%
Boston Wood Recovery Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Aviva Investors REaLM Infrastructure No. 4A Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Aviva Investors REaLM Infrastructure No. 5 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Jacks Lane Energy Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Turncole Wind Farm Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Woolley Hill Electrical Energy Ltd	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Den Brook Energy Ltd	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary shares	100%
Mill NU Properties Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 A Ordinary	100% (overall ownership 60%)
Mill NU Developments (Conference Centre) Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	Liquidation	England and Wales	£1 Ordinary shares	60%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
NU 3PS Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Building a Future (Newham Schools) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NUPPP Nominees Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Dormant	England and Wales	£1 Ordinary Shares	100%
NU College for Canterbury Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	Liquidation	England and Wales	£1 Ordinary Shares	100%
NU Offices for Surrey Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	Liquidation	England and Wales	£1 Ordinary shares	100%
NU Developments (Brighton) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
The Square Brighton Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Library for Brighton Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NUPPP Hard Services Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	Liquidation	England and Wales	£1 Ordinary shares	100%
NU Local Care Centres (Bradford) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (Farnham) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
NUPPP (Care Technology and Learning Centres) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Offices for Redcar Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Schools for Redbridge Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (West Park) Limited	No.1 Poultry London EC2R 8EJ	In Liquidation	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	Liquidation	England and Wales	£1 Ordinary shares	100%
NU Local Care Centres (Chichester No. 1) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (Chichester No. 2) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (Chichester No. 3) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (Chichester No. 4) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (Chichester No. 5) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Local Care Centres (Chichester No. 6) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
NU Technology and Learning Centres (Hackney) Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
NU Technology and Learning Centres Limited	No 1 Dorset Street, Southampton, Hampshire, SO15 2DP, United Kingdom	Liquidation	England and Wales	£1 Ordinary shares	100%
11-12 Hanover Square Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
11-12 Hanover Square Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
30 Warwick Street Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
30 Warwick Street Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
30-31 Golden Square Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
30-31 Golden Square Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
130 Fenchurch Street Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
130 Fenchurch Street Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Barratt House Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%

Subsidiary or related undertaking	Registered Office	Nature of business	Incorporated in	Class of shares	% owned by the Company's subsidiary
Barratt House Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Chancery House London Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Chancery House London Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Irongate House Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Irongate House Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
New Broad Street House Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
New Broad Street House Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Pegasus House and Nuffield House Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
Pegasus House and Nuffield House Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
W Nine Nominee 1 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%
W Nine Nominee 2 Limited	St Helen's, 1 Undershaft, LONDON, EC3P 3DQ, United Kingdom	Operating	England and Wales	£1 Ordinary Shares	100%

Indirect related undertakings of the Company (managed, not owned) as at 31 December 2016 are listed below:

Related undertaking	Address	Incorporated in
Equity Release Funding (No.1) plc	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
Equity Release Funding (No.2) plc	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
Equity Release Funding (No.3) plc	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
Equity Release Funding (No.4) plc	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
Equity Release Funding (No.5) plc	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
Equity Release Holdings Limited	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales

Related undertaking	Address	Incorporated in
ERF Trustee (No. 4) Limited	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
ERF Trustee (No. 5) Limited	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales
Equity Release Holdings (Jersey) Limited	26 NEW STREET ST HELIER JERSEY JE2 3RA	Jersey
Equity Release Holdings (No. 5) Limited	c/o WILMINGTON TRUST SP SERVICES (LONDON) LIMITED THIRD FLOOR 1 KING'S ARMS YARD LONDON EC2R 7AF	England and Wales

Related Undertakings – Other Investment Funds

INCORPORATED IN **Registered Address** RELATED UNDERTAKING	**Percentage of Ownership**	**Share Class**
FRANCE		
20, Place Vendome, 75001 Paris, France		
AXA LBO FUND IV FEEDER	39%	Private Equity Fund
5/7 rue de Monttessuy, 75007 Paris, France		
ELITE 1818 SECURITE SICAV	20%	SICAV
IRELAND		
22 Sir John Rogerson's Quay, Dublin, Ireland		
L&G MULTI-INDEX EURO ICAV	34%	ICVC
25/28 North Wall Quay, Dublin, Ireland		
AI EURO LIQUIDITY FUND	80%	ICVC

INCORPORATED IN **Registered Address** RELATED UNDERTAKING	**Percentage of Ownership**	**Share Class**
AI STERLING GOVERNMENT LIQUIDITY FUND	70%	ICVC
AI STERLING LIQUIDITY FUND	26%	ICVC
AI STERLING STRATEGIC LIQUIDITY FUND	75%	ICVC
Guild House, Guild Street, IFSC, Dublin, Ireland		
AVIVA IRL MERRION EXEMPT TRUST - MANAGED FUND	43%	Unit Trust
JERSEY		
19-21 Broad Street, St Helier, Jersey, Channel Islands, JE1 3PB		
11-12 HANOVER SQUARE UNIT TRUST	50%	Unit Trust
130 FENCHURCH STREET UNIT TRUST	50%	Unit Trust
30 WARWICK STREET UNIT TRUST	50%	Unit Trust
30-31 GOLDEN SQUARE UNIT TRUST	50%	Unit Trust
BARRAT HOUSE UNIT TRUST	50%	Unit Trust
CHANCERY HOUSE LONDON UNIT TRUST	50%	Unit Trust
IRONGATE HOUSE UNIT TRUST	50%	Unit Trust
NEW BROAD STREET HOUSE UNIT TRUST	50%	Unit Trust
PEGASUS HOUSE AND NUFFIELD HOUSE UNIT TRUST	50%	Unit Trust
W NINE UNIT TRUST	50%	Unit Trust
Lime Grove House , Green Street, St Helier, Jersey, Channel Islands, JE1 2ST		
20 GRACECHURCH UNIT TRUST	100%	Unit Trust
AIRPORT PROPERTY FUND UNIT TRUST	50%	Unit Trust
DESIGNER RETAIL OUTLET CENTRES UNIT TRUST	97%	Unit Trust
QUANTUM PROPERTY PARTNERSHIP	50%	Unit Trust
SERVICED OFFICES UNIT TRUST	50%	Unit Trust
SOUTHGATE UNIT TRUST	50%	Unit Trust
LUXEMBOURG		

INCORPORATED IN **Registered Address** RELATED UNDERTAKING	**Percentage of Ownership**	**Share Class**
2 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
AI - ASIAN EQUITY INCOME FUND	46%	SICAV
AI - EMERGING MARKETS BOND FUND	22%	SICAV
AI - EMERGING MARKETS EQUITY INCOME FUND	78%	SICAV
AI - EMERGING MARKETS EQUITY SMALL CAP FUND	65%	SICAV
AI - EMERGING MARKETS LOCAL CURRENCY BOND FUND	61%	SICAV
AI - EUROPEAN CORPORATE BOND FUND	30%	SICAV
AI - EUROPEAN EQUITY INCOME FUND	51%	SICAV
AI - EUROPEAN REAL ESTATE SECURITIES FUND	29%	SICAV
AI - GLOBAL CONVERTIBLES ABSOLUTE RETURN FUND	23%	SICAV
AI - GLOBAL CONVERTIBLES FUND	33%	SICAV
AI - GLOBAL EMERGING MARKETS INDEX FUND	100%	SICAV
AI - GLOBAL EQUITY ENDURANCE FUND	41%	SICAV
AI - GLOBAL HIGH YIELD BOND FUND	26%	SICAV
AI - GLOBAL INVESTMENT GRADE CORPORATE BOND FUND	66%	SICAV
AI - LONG TERM EUROPEAN BOND FUND	43%	SICAV
AI - MULTI-STRATEGY TARGET INCOME FUND	20%	SICAV
AI - UK EQUITY FOCUS	79%	SICAV
HEXAGONE	100%	FCP
4 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
VITUS	100%	Sarl
6 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
GERMAN RETAIL INVESTMENT PROPERTY FUND	98%	FCP
7 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		

INCORPORATED IN **Registered Address** RELATED UNDERTAKING	**Percentage of Ownership**	**Share Class**
LOGAXES FUND	85%	FCP
9 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
EPI NU SARL	100%	Sarl
10 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
VICTOR HUGO GERMAN MANDATE FUND	100%	Fund
11 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
CENTAURUS SARL	100%	Sarl
12 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
VICTOR HUGO FUND	100%	Fund
14 rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
AI EUROPEAN RENEWABLE ENERGY S.A.	100%	Sarl
47 Avenue John F Kennedy, Luxembourg		
GOODMAN EUR BUSINESS PARK OFFSHORE PRP UNIT TRUST	50%	Sarl
UNITED KINGDOM		
1 Poultry, London, EC2R 8EJ, United Kingdom		
2-10 MORTIMER STREET LIMITED PARTNERSHIP	49%	Limited Partnership
ASCOT REAL ESTATE INVESTMENTS LP	50%	Limited Partnership
IGLOO REGENERATION PARTNERSHIP	40%	Limited Partnership
SUE DEVELOPMENTS LIMITED PARTNERSHIP	50%	Limited Partnership
60 Gresham Street, London, EC2V 7BB, United Kingdom		
ALLIANCE TRUST COL SF CORPORATE BOND	43%	OEIC
ALLIANCE TRUST SUSTAINABLE FUT EURO GWTH	67%	OEIC
ALLIANCE TRUST SUSTAINABLE FUT MNGD	89%	OEIC
ALLIANCE TRUST SUSTAINABLE FUTURE ABSOLUTE GWTH	76%	OEIC

INCORPORATED IN **Registered Address** RELATED UNDERTAKING	**Percentage of Ownership**	**Share Class**
ALLIANCE TRUST SUSTAINABLE FUTURE GBL GWTH	57%	OEIC
ALLIANCE TRUST SUSTAINABLE FUTURE UK GROWTH	59%	OEIC
ALLIANCE TRUST UK ETHICAL	45%	OEIC
St Helen's, 1 Undershaft, London, EC3P 3DQ, United Kingdom		
AVIVA INVESTORS ASIA PACIFIC PROPERTY FUND	79%	OEIC
AVIVA INVESTORS CASH FUND	63%	OEIC
AVIVA INVESTORS CORPORATE BOND FUND	81%	OEIC
AVIVA INVESTORS EUROPEAN PROPERTY FUND	72%	OEIC
AVIVA INVESTORS HIGH YIELD BOND FUND	36%	OEIC
AVIVA INVESTORS INTERNATIONAL INDEX TRACKING FUND	49%	OEIC
AVIVA INVESTORS JAPAN EQUITY MANAGER OF MANAGERS 1 FUND	62%	OEIC
AVIVA INVESTORS MANAGED HIGH INCOME FUND	60%	OEIC
AVIVA INVESTORS MULTI-ASSET FUND I	31%	OEIC
AVIVA INVESTORS MULTI-ASSET FUND II	43%	OEIC
AVIVA INVESTORS MULTI-ASSET FUND III	52%	OEIC
AVIVA INVESTORS MULTI-ASSET FUND IV	51%	OEIC
AVIVA INVESTORS MULTI-ASSET FUND V	43%	OEIC
AVIVA INVESTORS MULTI-MANAGER 20-60% SHARES	75%	OEIC
AVIVA INVESTORS MULTI-MANAGER 40-85% SHARES	73%	OEIC
AVIVA INVESTORS MULTI-MANAGER FLEXIBLE	79%	OEIC
AVIVA INVESTORS MULTI-STRATEGY TARGET RETURN FUND	39%	OEIC
AVIVA INVESTORS POLISH RETAIL LIMITED PARTNERSHIP	100%	Limited Partnership
AVIVA INVESTORS PRIVATE EQUITY PROGRAMME 2008 PARTNERSHIP	34%	Limited Partnership
AVIVA INVESTORS STRATEGIC BOND FUND	27%	OEIC
AVIVA INVESTORS UK EQUITY FUND	26%	OEIC
AVIVA INVESTORS UK EQUITY INCOME FUND	53%	OEIC
AVIVA INVESTORS UK EQUITY MANAGER OF MANAGERS 1 FUND	61%	OEIC

INCORPORATED IN Registered Address RELATED UNDERTAKING	Percentage of Ownership	Share Class
AVIVA INVESTORS UK INDEX TRACKING	72%	OEIC
AVIVA INVESTORS UK OPPORTUNITIES FUND	98%	OEIC
AVIVIA INVESTORS EBC LIMITED PARTNERSHIP	100%	Limited Partnership
CAPITAL RESIDENTIAL FUND	88%	Unit Trust
CARDIFF BAY LIMITED PARTNERSHIP	100%	Limited Partnership
CORNERFORD LTD	100%	Ordinary Shares
EBISU INVESTMENTS LIMITED FUND	100%	Fund
PADDINGTON CENTRAL 3 LIMITED PARTNERSHIP	100%	Limited Partnership
RETIREMENT HOUSING PARTNERSHIP	100%	Limited Partnership
RUGBY RADIO STATION LIMITED PARTNERSHIP	50%	Limited Partnership

F.4 Approvals and determinations

The following approvals, determinations and modifications apply for the Company at 31 December 2016:

F.4.1 Approvals

Approval	Further information	PRA reference
Matching adjustment in the calculation of technical provisions		2198017
Volatility adjustment in the calculation of technical provisions		2200368
Transitional measures on technical provisions	30 June 2016 reset	3063346
Partial internal model in the calculation of the SCR	5 December 2015: Original approval 1 March 2016: Approval of the partial internal model integration technique 23 March 2017: Non-significant changes to the partial internal model	2243186 2429705 4105641

The Company has none of the following: - ancillary Own Funds, 'non-standard' items in Own Funds, use of transitional measure on the risk-free interest rate, application of the duration-based equity risk sub-module for standard formula operations or application of undertaking specific parameters for standard formula operations.

F.4.2 Determinations

The Company has a letter 20 July 2015 from the PRA on the application of the ring fenced fund restriction to the NWPSF and RIEESA as required by Article 80 of the Solvency II Delegated Acts.

F.4.3 Modifications

There are no modifications. No permission has been sought for non-disclosure of information in the SFCR.

F.5 Directors' statement

We acknowledge our responsibility for preparing the Solvency and Financial Condition Report of Aviva Life & Pensions UK Limited at 31 December 2016 in all material respects in accordance with the PRA Rules, the Solvency II Regulations, and the approvals, determinations and modifications listed in section F.4.

The Board is satisfied that to the best of its knowledge and belief:

a) throughout the financial year to 31 December 2016, the Company has complied in all material respects with the requirements of the PRA Rules and the Solvency II Regulations as applicable to the Company, and with the approvals, determinations and modifications listed in section F.4; and

b) it is reasonable to believe that in respect of the period from 31 December 2016 to the date of the publication of the SFCR, the Company has continued so to comply and that it will continue so to comply for the remainder of the financial year to 31 December 2017.

J M Windsor

Director

17 May 2017

F.6 Audit opinion

Report of the external independent auditors to the Directors of Aviva Life & Pensions 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 the Company as at 31 December 2016:

- The 'Valuation for solvency purposes' and 'Capital Management' sections of the Solvency and Financial Condition Report of the Company as at 31 December 2016, ('**the Narrative Disclosures subject to audit**'); and

- Company templates S.02.01.02, S.12.01.02, S.22.01.21, S.23.01.01 and S.28.01.01 ('**the Templates subject to audit'**).

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

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' elements of the Solvency and Financial Condition Report;

- Company templates S05.01.02, S05.02.01 and S.25.02.21;

- Information calculated in accordance with the previous regime used in the calculation of the transitional measure on technical provisions, and as a consequence all information relating to the transitional measure on technical provisions as set out in the Appendix to this report;

- The written acknowledgement by management 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 the Company as at 31 December 2016 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 supplemented by supervisory approvals.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK and Ireland) (ISAs (UK & I)), International Standard on Auditing (UK) 800 and International Standard on Auditing (UK) 805, and applicable law. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the relevant elements of the Solvency and Financial Condition Report* section of our report.

Emphasis of Matter - Basis of Accounting

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

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 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, as detailed in Appendix F.4.

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

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

It is our responsibility to form an independent opinion, in accordance with applicable law, ISAs (UK & I) and ISAs (UK) 800 and 805 as to whether the information subject to audit in the relevant elements of the Solvency and Financial Condition Report is prepared, in all material respects, in accordance with the financial reporting provisions of the PRA Rules and Solvency II regulations on which they are based. ISAs (UK & I) require us to comply with the Auditing Practices Board's Ethical Standard for Auditors

An audit involves obtaining evidence about the amounts and disclosures in the relevant elements of the Solvency and Financial Condition Report sufficient to give reasonable assurance that the relevant elements of the Solvency and Financial Condition Report are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the relevant elements of the Solvency and Financial Condition Report. In addition, we read all the financial and non-financial information in the Solvency and Financial Condition Report to identify material inconsistencies with the audited relevant elements of the Solvency and Financial Condition Report. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

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

Other Matter

The Company has authority to calculate its Solvency Capital Requirement using a partial 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 required to read the Other Information and consider whether it is materially inconsistent with the relevant elements of the Solvency and Financial Condition Report and our knowledge obtained in the audits of the Solvency and Financial Condition Report and of the Company's statutory financial statements. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

PricewaterhouseCoopers LLP

Chartered Accountants

Central Square
29 Wellington Street
Leeds
LS1 4DL

17 May 2017

- The maintenance and integrity of the Aviva website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept 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.

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

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
  - Row R0640: Technical provisions - health (similar to life) - risk margin
  - Row R0680: Technical provisions - life (excluding health and index-linked and unit-linked) - risk margin
  - Row R0720: Technical provisions - Index-linked and unit-linked - risk margin

- The following elements of template S.12.01.02
  - Row R0100: Technical provisions calculated as a sum of BE and RM - Risk margin
  - Rows R0110 to R0130 – Amount of transitional measure on technical provisions

- The following elements of template S.22.01.21
  - Column C0030 – Impact of transitional on technical provisions
  - Row R0010 – Technical provisions
  - Row R0090 – Solvency Capital Requirement
  -

- The following elements of template S.23.01.01
  - Row R0580: SCR
  - Row R0740: Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds

- The following elements of Company template S.28.01.01
  - Row R0310: SCR

- Elements of the Narrative Disclosures subject to audit identified as ‘unaudited’.