

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

Year ended 31 December 2018

Contents

	Summary
A	Business and Performance
B	System of Governance
C	Risk Profile
D	Valuation for Solvency Purposes
E	Capital Management
F	Appendices
F.0	Cautionary statement
F.1	Public disclosure quantitative reporting templates
	<i>S.02.01 Balance Sheet</i>
	<i>S.05.01 Premium claims and expenses by line of business [life]</i>
	<i>S.12.01 Technical Provisions [life]</i>
	<i>S.22.01 Impact of transitional measures</i>
	<i>S.23.01 Own Funds</i>
	<i>S.25.02 Solvency Capital Requirement</i>
	<i>S.28.01 Minimum Capital Requirement</i>
F.2	Glossary of abbreviations and definitions
F.3	Approvals and determinations
F.4	Directors' statement
F.5	Audit opinion

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

Summary

The purpose of the Solvency and Financial Condition Report ("SFCR") is to provide information required by the Solvency II regulatory framework, in particular the capital position at 31 December 2018 of Aviva Life & Pensions UK Limited ("the Company"). This 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 under the laws of England and Wales, which transacts life assurance and long-term savings business. The Company has both non-profit and with-profits funds and writes primarily pensions, annuities, bonds, protection and investment products. The Company also purchases equity release business written by its wholly owned subsidiary Aviva Equity Release UK Limited. The Company predominantly carries out its business in the UK.

The Company reports to its chief operating decision makers using an alternative financial performance measure referred to as 'adjusted operating profit'. The Company regards adjusted operating profit as an appropriate measure of underwriting performance. Adjusted operating profit for the Company in 2018 was £1,106 million (2017: £818 million). The adjusted operating profit is shown after the impacts of quota share reinsurance arrangements with a fellow Group company, Aviva International Insurance Limited ("All"). Under the quota share reinsurance arrangements, 50% of a subset of the Company's non-profit business is reinsured to All. The adjusted operating profit has increased compared to 2017, due to further benefits from changes to longevity assumptions and continued growth of long-term savings and bulk purchase annuities.

On 31 May 2018, the Company acquired 100% of Friends First Life Assurance Company DAC ("Friends First"), an Irish insurer, for a consideration of €146 million (£127 million). A Part VII transfer process was completed on 29 March 2019 to transfer the business carried on through the Company's branches in Belgium, France and the Republic of Ireland and certain other business which was marketed to policyholders outside the UK to Friends First. The purpose of this Part VII transfer is to ensure that Aviva retains the ability to service its policyholders following the UK's departure from the EU ("Brexit"). On 29 March 2019 Friends First was renamed Aviva Life & Pensions Ireland DAC ("ALPI").

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 role is to be collectively responsible for promoting the long-term success of the Company. It sets the Company's risk appetite and satisfies itself that financial controls and risk management systems are robust, whilst ensuring the Company is adequately resourced. 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 and shareholders whilst in compliance with regulations.

Roles and responsibilities for risk management in Aviva are based around the 'three lines of defence model' where ownership for risk is taken at all levels in the Group.

Aviva has adopted a UK-wide approach to managing its UK insurance operations, covering Life insurance, General insurance and Health businesses. During the year, the Company's Board and Board Committee responsibilities and arrangements, and the fundamental approach to the system of governance, have not materially changed.

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, Actuarial, Compliance and Internal Audit – and how they are implemented within the Company; and
- 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 higher 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 identifies, measures, manages and monitors 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 Prudential Regulation Authority ("PRA").

The Company also applies a number of matching adjustments ("MA") when calculating the liabilities for certain business. The MA is an increase to the discount rate, in excess of risk-free, 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 relate to illiquidity risk. The PRA has approved the application for MAs to be applied in five matching adjustment portfolios ("MAPs") in the Company.

At 31 December 2018, the Company's excess of assets over liabilities was £12,979 million (*2017: £15,144 million*) on a Solvency II basis, with the decrease mainly due to the payment of dividends during the year. The excess of assets over liabilities is £8,043 million higher (*2017 restated: £8,899 million higher*) on a Solvency II basis than the value under International Financial Reporting Standards ("IFRS"). The difference is primarily driven by the different approaches used to value 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 Solvency Capital Requirement ("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; and
- Allocate capital rigorously to support value adding growth and repatriate excess capital where appropriate.

At 31 December 2018, the total eligible Own Funds to meet the SCR were £12,058 million (2017: £14,030 million), consisting of excess of assets over liabilities of £12,979 million (2017: £15,144 million), adjusted to add back allowable subordinated liabilities of £1,111 million (2017: £1,116 million), offset by a restriction in respect of the Company's ring-fenced funds ("RFFs") of £2,032 million (2017: £2,230 million).

The Company's eligible Own Funds continue to be primarily represented by unrestricted Tier 1 capital (86%) (2017: 88%) with the remaining Own Funds represented by restricted Tier 1 capital and Tier 2 capital.

The Company's SCR, at 31 December 2018 was £8,236 million (2017: £9,219 million). The overall surplus position was £3,822 million (2017: £4,811 million) which translates to a regulatory cover ratio of 146% (2017: 152%). The minimum capital requirement ("MCR") decreased during the year to £2,059 million (2017: £2,305 million).

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.

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

A. Business and Performance

[In this chapter](#)

A.1 Business

A.2 Underwriting performance

A.3 Investment 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

Aviva Life & Pensions UK Limited ("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, annuities, bonds, protection and investment products. The Company also purchases equity release business written by its wholly owned subsidiary Aviva Equity Release UK Limited. The Company predominantly carries out its business in the UK.

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 2018. 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 disclosed in the Company's financial statements.

A.1.3 Significant events in the reporting period

On 31 May 2018, the Company acquired 100% of Friends First Life Assurance Company DAC ("Friends First"), an Irish insurer, for a consideration of €146 million (£127 million). A Part VII transfer process was completed on 29 March 2019 to transfer the business carried on through the Company's branches in Belgium, France and the Republic of Ireland and certain other business which was marketed to policyholders outside the UK to Friends First. The purpose of this Part VII transfer is to ensure that Aviva retains the ability to service its policyholders following the UK's departure from the EU ("Brexit"). On 29 March 2019 Friends First was renamed Aviva Life & Pensions Ireland DAC ("ALPI").

Note on prior period comparative figures

The Company has changed its accounting policy relating to the recognition of investments in subsidiaries, joint ventures and associates. In prior periods subsidiaries were stated at fair value and classified as held at fair value through profit or loss, with movements recognised in the income statement. Any investments not held to back policyholder liabilities and not managed on a fair value basis are now stated at cost less impairment (see accounting policies C and D and note 1 in the Company's IFRS financial statements). This provides relevant and more reliable information as the critical accounting assumptions and judgements involved in calculating a fair value are no longer required. Prior year IFRS comparatives have been presented on a consistent basis with the Company's financial statements, and where applicable the impact of the restatement is indicated.

This change in accounting policy has had no impact on the Solvency II excess of assets over liabilities or the carrying value of participations in related undertakings in the Solvency II balance sheet. These are valued at the Company's proportionate equity share of the excess of assets over liabilities (valued on a Solvency II basis) as described in section D.1.4.

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 7 More London Riverside, London, SE1 2RT

Telephone number +44 (0) 20 7583 5000

Rounding convention

The SFCR is presented in pound sterling rounded to the nearest million which is consistent with the presentation in the IFRS financial statements. The quantitative reporting templates ("QRTs") are presented in pound sterling rounded to the nearest thousand. Rounding differences of +/- one unit can occur.

A.2 Underwriting Performance

Adjusted 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 'adjusted operating profit'. The Group and the Company regard adjusted operating profit as an appropriate measure of underwriting performance.

Adjusted 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;
- 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;
- Certain pension costs; and
- Integration and restructuring costs and other items.

While these excluded items are significant components in understanding and assessing the Company's financial performance, presentation of adjusted operating profit enhances the understanding and comparability of the underlying performance of the business by highlighting net income attributable to ongoing operations. Adjusted 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 adjusted operating profit may differ from similar measures used by other companies, and may change over time.

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

A.2.1 Performance from underwriting and other activities

The table below presents the adjusted operating profit for the Company for the year ended 31 December 2018, as well as the reconciliation of adjusted operating profit to IFRS profit before tax as included in the Company's financial statements.

	2018	2017 - restated
	£m	£m
Gross written premiums	7,039	5,521
Premiums ceded to reinsurers	(3,600)	(2,731)
Net earned premiums	3,439	2,790
Fee and commission income	802	508
	4,241	3,298
Net investment income/(expense)	(7,167)	10,847
Income	(2,926)	14,145
Claims and benefits paid, net of recoveries from reinsurers	(8,571)	(6,185)
Change in insurance liabilities, net of reinsurance	4,464	3,155
Change in investment contract provisions	7,722	(6,408)
Change in unallocated divisible surplus	281	137
Fee and commission expense	(829)	(282)
Other expenses	(850)	(579)
Finance costs	1,283	(3,805)
IFRS Profit before tax	574	178
Tax attributable to policyholders' returns	469	(262)
IFRS Profit/(loss) before tax attributable to shareholders	1,043	(84)
Adjusted for non-operating items:		
Revaluation of investment in Aviva Annuity UK Limited ("UKA") following Part VII transfer	-	1,200
Revaluation of investment in subsidiaries (excl. UKA)	-	12
Investment return variances and economic assumption changes	25	(373)
Other non-operating costs	38	63
Adjusted operating profit before tax attributable to shareholders	1,106	818

Adjusted 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.

Adjusted 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.

The Company's adjusted operating profit has increased compared to 2017. The key drivers of this increase were:

- The inclusion of a full 12 months of results from the business previously carried on by Friends Life Limited ("FLL") and Friends Life and Pensions Limited ("FLP") which was transferred on 1 October 2017;
- Continued growth in profits from bulk purchase annuity ("BPA") business; and
- The benefits following positive longevity experience and updates to mortality improvements.

The 2017 balances in the table above have been restated to reflect a change in the IFRS accounting policy, referred to in section A.1.3. This impacts the net investment income which has increased by £477 million compared with the balance reported in the prior year, the revaluation of investment in UKA which has decreased by £518 million, and the revaluation of investment in subsidiaries (excl. UKA) which has increased by £41 million. The 2017 adjusted operating profit remains unchanged.

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 the Quantitative Reporting Template ("QRT") S.05.01.02 (included in the Appendices in Section F.1). A summary of the information presented in this QRT is shown in the following table.

	Health insurance	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Life Reinsurance	2018 Total
	£m	£m	£m	£m	£m	£m
Gross premiums written	487	264	10,619	5,809	-	17,179
Premiums ceded to reinsurers	(136)	(12)	(1,096)	(3,472)	-	(4,716)
Net premiums written	351	252	9,523	2,337	-	12,463
Net claims incurred	(178)	(4,653)	(8,227)	(2,412)	(54)	(15,524)
Changes in other technical provisions	35	5,031	4,938	940	(189)	10,755
Direct expenses incurred	(76)	(187)	(882)	(791)	-	(1,936)

	Health insurance	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Life Reinsurance	2017 Total
	£m	£m	£m	£m	£m	£m
Gross premiums written	202	280	6,603	4,845	(2)	11,928
Premiums ceded to reinsurers	(104)	(8)	1,066	(2,735)	-	(1,781)
Net premiums written	98	272	7,669	2,110	(2)	10,147
Net claims incurred	(68)	(3,710)	(4,226)	(1,928)	(45)	(9,977)
Changes in other technical provisions	30	(1,322)	7,286	669	(149)	6,514
Direct expenses incurred	(59)	(195)	(543)	(112)	(1)	(910)

As instructed by EIOPA, the analysis presented in S.05.01.02 includes all insurance contracts regardless of accounting classification between investment and insurance. This contrasts with the IFRS financial statements including the extract presented in section A.2.1, where non-participating investment business is deposit accounted and net premiums and claims are not recognised in the income statement.

The Company sells a diverse range of products through its business. The principal products sold include pensions, annuities, bonds, protection and investment products. The Company also purchases equity release business written by its wholly owned subsidiary Aviva Equity Release UK Limited. 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.

Material assumption changes

During the year there have been two material assumption changes on technical provisions relating to; annuitant mortality and guaranteed annuity option ("GAO") take up rates. A description of each is included in section D.2.2.5.

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.

Adjusted 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 asset class:

	Debt Securities	Equity Securities	Loans	Other financial investment	Investment property	Other	2018 Total
Net Investment Income - Total	£m	£m	£m	£m	£m	£m	£m
Dividends	-	1,667	-	1,206	-	-	2,873
Interest	1,447	-	891	193	-	259	2,790
Net realised gains/(losses)	106	2,634	(12)	472	44	-	3,244
Net unrealised gains/(losses)	(1,689)	(5,686)	(499)	(8,447)	101	176	(16,044)
Rental income less expenses	-	-	-	-	271	-	271
Other income less management charges	-	-	-	-	-	(301)	(301)
Total	(136)	(1,385)	380	(6,576)	416	134	(7,167)

	Debt Securities	Equity Securities	Loans	Other financial investment	Investment property	Other	Restated 2017 Total
Net Investment Income - Total	£m	£m	£m	£m	£m	£m	£m
Dividends	-	1,137	-	315	-	-	1,452
Interest	1,087	-	828	201	-	175	2,291
Net realised gains/(losses)	(233)	1,781	134	(169)	(449)	17	1,081
Net unrealised gains/(losses)	977	1,786	459	3,098	697	(1,017)	6,000
Rental income less expenses	-	-	-	-	192	-	192
Other income less management charges	-	-	-	-	27	(196)	(169)
Total	1,831	4,704	1,421	3,445	467	(1,021)	10,847

The Company's expense for the year in respect of investment management fees amounted to £278 million (2017: £194 million).

The 2017 balances in the table above have been restated to reflect a change in the IFRS accounting policy, referred to in section A1.3. This impacts the net unrealised loss reported for the other asset class which has decreased by £477 million compared with the total reported in the prior year.

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

	Debt Securities	Equity Securities	Loans	Other financial investment	Investment property	Other	2018 Total
Net Investment Income – Total	£m	£m	£m	£m	£m	£m	£m
Policyholder assets	(22)	(1,355)	13	(5,317)	266	73	(6,342)
Participating assets	74	(16)	99	(1,283)	152	104	(870)
Shareholder assets	(188)	(14)	268	24	(2)	(43)	45
Total	(136)	(1,385)	380	(6,576)	416	134	(7,167)

	Debt Securities	Equity Securities	Loans	Other financial investment	Investment property	Other	Restated 2017 Total
Net Investment Income – Total	£m	£m	£m	£m	£m	£m	£m
Policyholder assets	168	3,705	(16)	2,731	263	57	6,908
Participating assets	360	936	38	856	179	31	2,400
Shareholder assets	1,303	63	1,399	(142)	25	(1,109)	1,539
Total	1,831	4,704	1,421	3,445	467	(1,021)	10,847

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

- Losses on debt securities reflect the returns on underlying indices (Government all stock indices of -2.2% and Corporate bond indices of -5.1%).
- Losses on equity securities reflect the returns on underlying indices (FTSE all share indices of -13.0%, S&P Europe indices of -12.2% and S&P World indices of -5.5%).
- Unit trusts are primarily invested in debt and equity funds. Consequently, losses on unit trusts reflect the returns on both debt and equity assets.
- 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 tranching, having both of the following characteristics:

- payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures; and
- 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 £100 million (2017: £67 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.

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

B. System of Governance

[In this chapter](#)

- B.1 General information on the system of governance
- B.2 Fit and Proper policy
- B.3 Risk management system including the own risk and solvency assessment
- B.4 Internal control system
- B.5 Internal audit function
- B.6 Actuarial function
- B.7 Outsourcing
- B.8 Any other information

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 control 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.

Aviva has adopted a UK-wide approach to managing its UK insurance operations, covering Life insurance, General insurance and Health businesses. During the year, the Company's Board and Board Committee responsibilities and arrangements, and the fundamental approach to the system of governance, have not materially changed.

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 collectively 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.

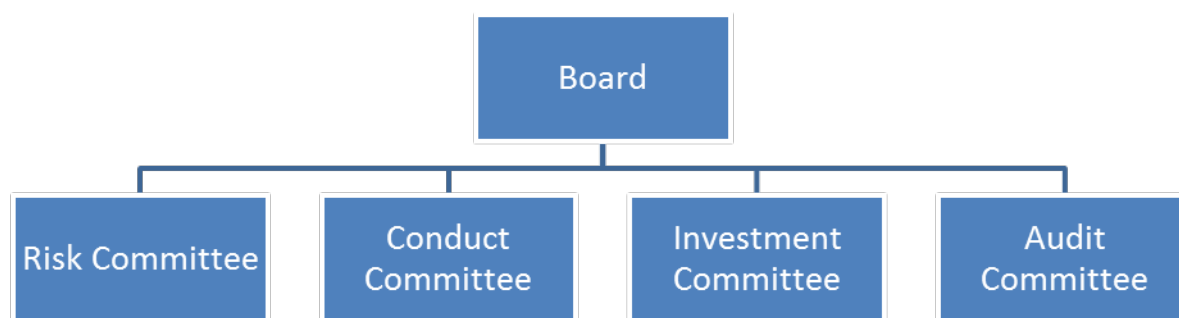
A strong system of governance aids effective decision-making and supports the achievement of business objectives for the benefit of customers, shareholders and regulators.

The Board comprises the Chairman, Chief Executive Officer ("CEO"), 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 in relation to solvency and liquidity and the risk profile, 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, 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 in relation to conduct matters. It also sets and reviews the conduct and financial crime risk profile 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 preferences approved by the Risk Committee; 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; and
- **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 Risk Management Framework ("RMF") including running the identify, measure, manage, monitor and report ("IMMMR") process, 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, Compliance and Actuarial functions

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

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.

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.

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, 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

An assessment of the effectiveness of the Company's governance, internal control and risk management systems was conducted at the end of 2018, and led to the CEO certifying that:

- There are sound risk management and internal control systems that are effective and fit for purpose in place across the business; and
- The business operates in a manner which conforms to the minimum requirements outlined in the Company's risk policies and business standards.

The Chief Risk Officer ("CRO") provided an opinion on the CEO declaration, based on a review carried out by the Risk function.

Any material risks not previously identified, control weaknesses or non-compliance with the Company's risk policies and business standards or local delegations of authority are highlighted as part of this process. The results of the certification process and details of key failings or weaknesses are reported to the Risk Committee and the Board to enable them to carry out an effectiveness assessment. The Risk Committee, on behalf of the Board, reviewed and discussed both the CEO and CRO certifications at its February 2019 meeting.

Changes in the system of governance during 2018

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

Terms of reference for all Board Committees were refreshed regularly as required.

B.1.2 Remuneration Policy

All staff are employed by a fellow subsidiary undertaking of Aviva plc, Aviva Employment Services Limited, which makes a management charge for services, including the provision of staff to the Company.

Aviva'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.

Aviva's remuneration policy is aligned to the Company's strategy, incentivises achievement of the Company's annual business plan and longer term sustainable growth of the business, and differentiates reward outcomes based on performance and behaviour that is consistent with the Company's values.

Further details on the Company's remuneration of Directors are shown in the Company's financial statements.

B.1.2.1 Executive Directors ("EDs")

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 Company. 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 is split between the following components:

- Basic salary informed by individual and business performance, levels of increase for the broader UK employee population and relevant pay data;
- Variable components (refer to section 'Variable components' below for further details);
- Pensions;
- Benefits;
- Relocation and mobility; and
- Shareholding requirement, in the shares of the ultimate parent company.

Variable components

The main forms of variable remuneration for EDs are:

- Annual bonus: Performance is assessed annually against a range of relevant financial, employee, customer and risk targets designed to incentivise the achievement of strategy as well as individual strategic objectives. A significant proportion of any bonus award is deferred into shares which vest in three equal tranches. Cash and deferred awards are subject to malus and clawback; and
- Long Term Incentive Plan ("LTIP"): Shares are awarded which vest over a three-year period, in some cases dependent on the achievement of performance conditions over that period, such as growth in operating earnings per share.

Base salaries are benchmarked externally to ensure there is not an overreliance on variable pay by any individual. Total remuneration is leveraged, with a suitable percentage of pay 'at risk' against the achievement of stretching goals, which is aligned with the Company's risk profile and employee behaviour.

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, chairing 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 NED nominated by the Group is remunerated for services to the Group as a whole and received no remuneration as a director of the Company.

The Chairman and NEDs do not participate in any incentive or performance plans or pension arrangements and do not receive an expense allowance. NEDs are reimbursed for reasonable expenses, and any tax arising on those expenses is settled directly by the Company. On the limited occasions when it is appropriate for a NED's spouse or partner to attend a business event, the Company will meet these costs and any tax liabilities that may arise.

B.1.2.3 Other 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 components and levels of remuneration for different employees may therefore differ from the policy for EDs. Any such elements are reviewed against market practice and approved in line with internal guidelines and frameworks.

Variable components 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 Company and/or individuals require this (other than where payments are required by law). Individual awards are based on an assessment of performance of individuals allowing for differentiation.

The remuneration of employees in the Risk, Compliance, Internal Audit and Actuarial functions is determined independently of the financial results of the business areas they oversee. This reinforces the independence of these Functions.

Shares in the ultimate parent company can be awarded to employees. These vest after three years, in some cases dependent on performance conditions over that period.

B.1.2.4 Pension and early retirement schemes

The Company did not operate any enhanced pension arrangements or early retirement schemes during the reporting period

B.1.2.5 Material transactions with shareholders and persons exercising significant influence during the period

No material transactions have been identified during the period with persons who exercise a significant influence on the undertaking, or with members of the administrative, management or supervisory body.

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. In 2018 other transactions with key management personnel were not deemed to be significant either by size or in the context of their individual financial positions.

Additional information on the material transactions with the Company's shareholder is included within note 44 – 'Related party transactions' of the Company's financial statements.

B.2 Fit and Proper policy

B.2.1 Description of specific requirements concerning skills and knowledge

For persons responsible for running the undertaking or responsible for key functions an assessment of fitness and propriety must consider their allocated responsibilities and skills and experience across the following areas:

- Insurance and financial markets;
- Business strategy and business models;
- Systems of governance;
- Financial and actuarial analysis where applicable to the role;
- Regulatory framework and requirements; and
- Any skills relevant to that role.

The Nomination Committee identifies the skills and experience that it would like to have at Board level. A skills matrix for Board members and the Company's executive management has been developed and it supports the Committee's discussions during the Board and Committee appointment process. The skills matrix sets out the expertise and experience of each Board member and the Group Executive and assists the Committee in identifying those who possess the desired skills and experience to join the Board and its committees, both now and in the future.

For the Group's key functions, prior to appointing an individual into a key function role each local business unit will ensure that the relevant skills and experience have been identified and agreed for the role. This is achieved by engaging internally, and where necessary externally, with relevant individuals in each market/specialism to define the skills and experience required for each key function role. With the diverse nature of the Group's business, these requirements can vary across each role and across the markets in which Aviva operates. These individual key function role skills and experience requirements and qualifications where applicable, are captured within individual role profiles.

B.2.2 Description of policies and processes for assessing fitness and propriety

Aviva has policies in place to ensure that individuals employed within the Group or acting on behalf of the Group are both "fit" and "proper". In line with the Prudential Regulatory Authority's ("PRA") Fit & Proper requirements for individuals subject to the Senior Managers and Certification Regime and the Financial Conduct Authority's ("FCA") requirements for Approved Persons, this means:

- 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.

At Aviva the governance over the fitness and propriety ("F&P") of individuals cuts across the employee lifecycle including recruitment, performance management and training. To ensure that Aviva protects itself against employing individuals who potentially could threaten our people, customers, properties, facilities or reputation, the majority of F&P 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 F&P 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.

Ongoing F&P checks include an annual confirmation by key function holders that their role profile is accurate and correct, that they understand their duties and obligations and have been discharging their responsibilities in accordance with the Principles and Standards. Bi-annually key function holders are also asked to re-confirm there has been no change to their answers since their last declaration.

Compliance with the initial and ongoing F&P minimum requirements is reported on a half yearly basis by the Chief Executive Officer of each market 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 (including risk preferences and risk tolerances); risk governance, including risk policies and business standards; and the processes used to identify, measure, manage, monitor and report 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 requirements for risk strategy, appetite, and minimum requirements for the Company's operations.

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 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 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 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 appetites are set for solvency and liquidity. The position against risk appetite is monitored and reported to the Board on a regular basis. Solvency II capital risk tolerances are also set for each risk type, calculated on the basis of the Solvency II balance sheet.

Risk preferences, being qualitative statements that express the risks that the Company seeks, wishes to avoid or minimize, or limit exposure are approved 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 as required. 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.

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 Risk function.

B.3.2 Risk function

The Risk function is responsible for the design and implementation of the risk management system, and the design and independent validation of Solvency II capital models requiring regulatory approval. The Risk 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, business plans, major projects, strategic investments and other key decisions.

The Risk 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 the Risk function's activities extends to all legal entities, joint ventures, partnerships, outsourcing and reinsurance arrangements.

The Risk function operates as part of the Global Risk function, which includes the Actuarial and Compliance functions as well as Risk. Further information on the Compliance and Actuarial functions is set out in sections B.4.2 and B.6 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 records the processes which have taken place and which facilitates the evidencing of the use of risk management and Solvency II capital in decision making.

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

B.3.4 Risk management system: Own risk and solvency assessment (“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 process 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 Solvency II 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 Solvency II 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 company’s annual ORSA report provides a forward-looking assessment of the risk and solvency needs of the Company over a 3-year time horizon; reflecting the company’s strategy and business plans. The ORSA processes and associated ORSA report play a key role in supporting decision making and strategy development at our boards and risk committees.

Outputs of the underlying ORSA processes are presented to the Board and/or its sub committees throughout the year. The subsequent ORSA report is produced and approved by the Board annually, or in the event that ORSA triggers are met (per its ORSA policy). For example, an out of cycle ORSA update may be triggered (at the discretion of the Board), in the event of:

- An actual or projected material impact on the Company’s own funds or diversified SCR compared to Plan;
- The invocation of the Company’s Crisis Action Leadership Team (under the Financial Event Response Plan); or
- More broadly any potentially material change to the Company’s risk profile.

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 the ORSA, capital resources and requirements are measured on the basis of Solvency II requirements for determining Solvency II Own Funds and SCR.

Solvency II 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. Solvency II capital is calculated using the Company’s Partial Internal Model.

The RMF, supported by risk policies and business standards, sets out the areas where businesses are expected to use Solvency II capital management information as part of their decision-making and risk management processes. This ensures that requirements to use Solvency II capital are embedded within the instructions of how the relevant processes (for example asset liability management or strategy and planning) are to be performed.

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 the Internal Model change application 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 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.

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 back-testing (historic experience is compared against the results produced by the model), sensitivity testing (the analysis of the change in results due to changes in its inputs) and benchmarking (the results of the Internal Model and its components are compared against external benchmarks, at the overall Group level). 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 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 Risk Director - UKLAP (who reports into the Chief Risk Officer) for each independent validation exercise, as required by the Internal Model Independent Validation Business Standard. The Risk Director - UKLAP performs the independent validation and provides an opinion to the Board whether the Internal Model is materially fit for purpose.

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; and
- The Company has a risk oversight process that provides adequate challenge to the completeness and openness of internal control and risk assessment. Where a committee structure is put in place to support this work, then all committees have defined terms of reference and appropriate membership, with proceedings adequately recorded and actions followed up.

B.4.2 Compliance function

The primary purpose of the Compliance function is to assess and manage the business’s exposure to 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 CRO and has delegated authority to manage compliance related risk across the business.

Three key processes comprise Aviva’s compliance activity:

- Conduct regulatory risk management (including monitoring regulatory developments), performed by the Compliance function and including activities such as;
 - Setting conduct and financial crime policy framework;
 - Provide advice, support, guidance and challenge on conduct and financial crime risk; and
 - Manage conduct and financial crime regulatory engagement.
- Prudential regulatory risk management (including monitoring regulatory developments), performed by the Risk function and including activities such as;
 - Setting prudential regulatory risk policy framework;
 - Provide advice, support, guidance and challenge on prudential regulatory risk; and
 - Manage prudential regulatory engagement.
- Legal developments monitoring, performed by the Legal and Company Secretarial function.

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.

Through these processes the Compliance, Risk and Legal Functions also take responsibility for reporting information to the Board and its committees. The oversight of conduct risk has remained a key focus of the Conduct Committee during 2018. The Committee receives a report from the CRO at each meeting which covers any material concerns regarding conduct risk and the treatment of customers generally, along with details and an assessment of the adequacy of management’s response.

The CRO has responsibility for prudential and conduct regulatory risk management, whilst the General Counsel is responsible for monitoring legal developments.

B.5 Internal Audit function

B.5.1 Roles and responsibilities

Internal Audit ("IA") provides independent and objective assurance designed to add value and improve Aviva's operations. IA does this by assessing whether all significant risks are identified and appropriately reported by management and the Risk function to the Board and Executive Management; assessing whether they are adequately managed; and by challenging Executive Management to improve the effectiveness of governance, risk management and internal controls.

B.5.2 Independence and objectivity of the Internal Audit function

IA must be independent from management at all times in order to be effective in performing its activities. The arrangements to protect the independence and objectivity of IA are set out below:

- The Company's Internal Audit Director reports directly to the Group Chief Audit Officer ("CAO") and has a dotted reporting line to the Chair of the Company's Audit Committee;
- The Company's Audit Committee has a duty to recommend to the Board the appointment or dismissal of the Company's Internal Audit Director and to participate, jointly with the Group CAO or designee, in the determination of the objectives of the Internal Audit Director and the evaluation of the levels of achievement, including consultation with the Chief Executive Officer;
- IA staff have no direct responsibility or authority over any operational activities reviewed and should 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 in the same business area of the Company for a period of at least one year after the end of their previous role. IA operates a formal policy of rotating staff to ensure that independence is maintained; and
- IA provides the Audit Committee with an annual confirmation of its independence, supported by an independence declaration form signed by all members of IA staff.

B.5.3 Authority and resources of the Internal Audit function

IA is authorised to review all areas of the Group and has full, free, and unrestricted access to all activities, records, property, and personnel necessary to complete their work. The scope of IA activities extends to all legal entities, joint ventures and other business partnerships, outsourcing and reinsurance arrangements, other than where the audit capabilities of the joint venture counterparty are deemed to be sufficient by the Group CAO, in which case the joint venture IA services may be provided by the joint venture partner. The Group CAO shall propose a budget which ensures that IA has sufficient skills and resources to discharge its responsibilities.

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 led 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 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 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 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;
- Supplier management and business continuity – risk based approach to management of supply contracts; and
- Business contingency and exit plans – a means to safely exit the arrangement without material harm to the business.

Critical or important outsourcing will attract the highest level of rigour, including regulatory notification, performance and relationship reviews, risk and control assessments and regulatory compliance reviews.

B.7.1 Outsourced functions and activities

The Group outsources a wide range of operational functions and activities, including the following that are considered critical or important: policy administration, claims handling, customer contact centres, fund management, finance/back office services and IT support services/system development. Service providers for these activities are mostly based in the UK with offshore support in India and Sri Lanka.

B.7.2 Material intra-group outsourcing arrangements

Material intra-group outsourcing arrangements for the year ended 31 December 2018 primarily comprise a range of shared support services (including IT, delivery of online customer propositions, finance and employment of staff) outsourced to service companies within the Group. Material intra-group outsourcing arrangements are primarily based in the UK.

Investment management services are outsourced within the Group in the UK.

B.8 Any other information

The Company has no other material information to disclose.

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

C. Risk Profile

[In this chapter](#)

- C Overview of the Company's risk profile
- C.1 Underwriting risk
- C.2 Market risk
- C.3 Credit risk
- C.4 Liquidity risk
- C.5 Operational risk
- C.6 Any other information
- C.7 Other material risks

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 board of this Company.

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.

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 one year time horizon. Solvency II SCR is the basis on which the Company sets solvency 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 Company'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.5.

Monitoring the effectiveness of risk mitigation techniques

Annually the Group Risk function undertakes an assessment, presented to the Group 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.5.

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 tolerances and capital limits. The main concentrations of risk for the Company are considered by risk type in sections C.1 to C.5.

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 tolerances 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 or adverse change in the value of liabilities arising from inappropriate insurance pricing, inadequate claims reserving assumptions as well as unforeseen fluctuations in the timing, frequency and severity of insured events relative to the expectations at the time of underwriting. The risk excludes operational risk arising from internal processes in the writing insurance business or settling of claims. 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 earlier 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 of adverse financial impact arising from changes in the level, trend, other changes to the term structure or volatility (i.e. variability due to population size) of the rates of policy lapses, terminations, renewals and surrenders (including partial surrenders, reduction in premiums and PUPs);
- Expense risk: The risk that the future costs of managing and administering customer policies are higher than expected; and
- Policyholder behaviour: The risk that the number and timing of customers exercising various choices differs from expectations e.g. paying additional premiums or extending the length of their policy. Also, the exercise of options, guarantees and other embedded 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.

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.

Exposure 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:

- Analysis of actual experience against expected experience to support ongoing monitoring of the appropriateness of assumptions;
- 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; and
- 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 possibility 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:

- 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;
- Projected liquidity is compared to risk appetite for the base plan and scenarios; and
- Business mix sensitivities to determine how Solvency II capital requirements would move under different plan scenarios.

At 31 December 2018, the underwriting component of the SCR amounted to £4,399 million before diversification and tax.

Changes to risk profile in the reporting period

The main changes in underwriting risk profile during 2018 are:

- A reduction in risk exposure as a result of a reduced expectation of how long annuitants will live; and
- A reduction in risk exposure as a result of the run-off of existing business being greater than the increase in risk from writing new business.

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 partly mitigated by use of reinsurance and is 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. The Retention Project was launched during 2017 with a specific focus on retaining policyholder funds; and
- 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 (for example, the Asset and Liability Committee), with ongoing effectiveness being monitored as part of 'business as usual' management information, the Life Insurance Risk Policy 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.1.4 Special purpose vehicles

The Company has not transferred underwriting risk to special purpose vehicles, as defined by the Solvency II Directive.

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;
- Equity price volatility risk: The Company is subject to equity price volatility arising from its equity securities portfolio. The most material exposures are within policyholder with-profits funds, for which an increase in the expected future volatility of equity securities increases the costs of policyholder guarantees;
- Property price risk: The Company and its subsidiaries are 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;
- Inflation risk: Inflation risk arises primarily from the Company's exposure to expense inflation and exposure to inflation-linked benefits within its annuity portfolio;
- 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 and risk hedging purposes including risk mitigation when structuring certain retail savings products; and
- 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 Solvency II 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, for example 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 appropriate management committee.

The Company is exposed to the level of the House Price Index ("HPI") and assumptions made about the future growth rate of the HPI on its equity release mortgage portfolio. The level of HPI is monitored and the impact of exposure to adverse HPI is regularly reviewed.

At 31 December 2018, the market risk component of the SCR amounted to £6,499 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 2018 are:

- A decrease in equity price risk. Falling equity markets in 2018 resulted in a lower exposure to equity prices;

- A decrease in equity implied volatility risk. This arises from equity volatility trades carried out during 2018 with the intention to reduce exposure to this risk; and
- An increase in interest rate risk exposure following trading activity that increased the amount of surplus assets invested in sovereign and corporate bonds in line with the Company's investment strategy.

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 respect of unit-linked funds hedging is in place to protect the surplus from falls in equity reducing the value of annual management charges;
- **Equity price volatility risk:** In the principal with-profits funds derivatives are held to reduce the adverse impact on surplus of an increase in equity price volatility;
- **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 HPI is mitigated by capping loan to value on origination at low levels and regularly monitoring the performance of the mortgage portfolio;
- **Inflation risk:** Exposure to inflation risk is monitored through Solvency II capital modelling, sensitivity testing and stress and scenario testing. The Company typically manages inflation risk through its investment strategy and, in particular, by investing in inflation-linked securities and through a variety of derivative instruments, including inflation-linked swaps;
- **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 (including capital requirements) from interest rate movements. Any asset-liability mismatch is monitored through Solvency II capital measures and interest rate hedges are used to maintain the sensitivity of the Solvency II balance sheet within risk appetite;
- **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; and
- **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 Solvency II capital) and financial measures, including cash flow, IFRS adjusted 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; and
- 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; and
- 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; and
- 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 2018, the counterparty default risk component of the SCR amounted to £310 million before diversification and tax.

Changes to risk profile in the reporting period

The main change in credit risk profile during 2018 is:

- An increase in credit risk exposure following trading activity that increased the amount of surplus assets invested in corporate bonds in line with the Company's investment strategy.

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:

- 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 foreign exchange trades where it has historically been the market norm not to collateralise, exchange traded positions and certain swaps with Private Finance Initiative ("PFI") counterparties). Residual exposures are captured within the Company's credit management framework; and

- 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 Asset and Liability Committee.

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 All, as detailed in the Business and Performance section of the Summary, 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 with-profits 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; and
- 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 stressed 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 2018.

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; and
- Limiting stock-lending of assets, and availability of repo arrangements.

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; and
- 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; and
- 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 £1,882 million as at 31 December 2018 (2017: £1,729 million). The increase in the year is predominantly driven by new business.

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 'risk limiting' preference 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 and 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. 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

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 capital to cover these risks within the Solvency II SCR.

At 31 December 2018, the operational risk component of the SCR amounted to £1,316 million before diversification and tax.

Changes to risk profile in the reporting period

The Company's continued exposure to risks such as data theft, conduct regulatory breaches and customer service interruption due to IT systems failure remained high in 2018.

Given the current global economic and political environment, the Company's exposure to the above factors is expected to remain high in the short to medium term. However, steps are already underway to improve the control framework and take mitigating actions so as to manage this exposure and related potential impacts. There were no material changes in the Company's operational risk profile during 2018.

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, that 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 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 the 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;
- an immediate full letter downgrade on 20% of bonds in the Matching Adjustment Portfolios (MAPs) (e.g. from AAA to AA, from AA to A); and
- 10% increase and 10% and 25% decreases in market values of equity assets.

Non-Economic assumptions

- 10% increase in maintenance and investment expenses (a 10% sensitivity on a base expense assumption of £10 p.a. would represent an expense assumption of £11 p.a.);
- 10% increase in lapse rates (a 10% sensitivity on a base lapse assumption of 5% p.a. would represent a lapse rate of 5.5% p.a.);
- 5% increase in both mortality and morbidity rates for life assurance; and
- 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 Measures on Technical Provisions is assumed to be recalculated in all sensitivities where its impact would be material.

The table below shows the absolute change in cover ratio under each sensitivity at 31 December 2018:

Sensitivities (net of tax and gross of non-controlling interests)		Absolute change in solvency cover ratio excluding fully ring-fenced funds
Changes in economic assumptions	25 bps increase in interest rate	1%
	100 bps increase in interest rate	1%
	25 bps decrease in interest rate	0%
	50 bps decrease in interest rate	(1)%
	50 bps increase in corporate bond spread	0%
	100 bps increase in corporate bond spread	(1)%
	50 bps decrease in corporate bond spread	1%
	20% of MA assets downgraded by 1 letter rating	(6)%
	10% increase in market value of equity	1%
	10% decrease in market value of equity	0%
	25% decrease in market value of equity	(1)%
Changes in non-economic assumptions	10% increase in maintenance and investment expenses	(9)%
	10% increase in lapse rates	(4)%
	5% increase in mortality/morbidity rates - life assurance	(3)%
	5% decrease in mortality rates - annuity business	(12)%

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.

C.7 Other Material Risks

The Company has no other material information to disclose regarding the material risks.

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

D. Valuation for Solvency Purposes

[In this chapter](#)

- D.1 Assets
- D.2 Technical provisions
- D.3 Other liabilities
- D.4 Alternative methods of valuation
- D.5 Any other information

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 2018 financial statements.

The table below sets out a summarised balance sheet as at 31 December 2018. It compares assets and liabilities as reported in the financial statements (column a) to 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 (b) and (c), 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 2018

IFRS balance sheet headings	Note from financial statements	IFRS (a) £m	Reclassification (b) £m	SII valuation adjustments (c) £m	Solvency II (d) £m	SII balance sheet headings	S.02.01.02 Appendix F.1 Reference	SFCR Note
Assets								
Acquired value in-force business and intangible assets	O & 10	58	-	(58)	-	Intangible assets	R0030	D.1.1
Deferred acquisition costs	AA & 19	1,702	-	(1,702)	-	Deferred acquisition costs	-	D.1.2
Investment property	Q & 13	5,640	(3,729)	-	1,911	Investment property	R0080	D.1.3
Investment in subsidiaries, joint ventures and associates	C, D, 11 & 12	2,231	25,174	193	27,598	Participations	R0090	D.1.4
					2,171	Equities	R0100	
					53,464	Bonds	R0130	
Debt and equity instruments	T & 17	87,116	(113,729)	-	488	Collective investment undertakings	R0180	D.1.5
Other financial investments		88,253			4,676	Derivatives	R0190	
					841	Deposits other than cash and cash equivalents	R0200	
		-	114,358	-	114,358	Assets held for index-linked and unit-linked funds	R0220	D.1.6
Loans	Y & 15	25,042	1,297	(37)	26,302	Loans and Mortgages	R0230	D.1.7
Reinsurance assets	N & 28	56,085	(133)	(1,401)	54,551	Reinsurance recoverables	R0270	D.1.8
Cash and cash equivalents	AB & 39(b)	23,155	(22,556)	-	599	Cash and cash equivalents	R0410	D.1.9
Receivables	U & 18	3,961	(3,412)	-	549	Receivables (insurance, reinsurance and intermediaries)	R0360 R0370	D.1.10
Prepayment and accrued income	19	1,253	2,510	-	3,763	Other assets (including prepayments and accrued income)	R0380 R0420	D.1.11
Total assets		294,496	(220)	(3,005)	291,271			
Liabilities								
Gross insurance liabilities	L & 24	97,265			98,881	Technical provisions – life (excluding index-linked and unit-linked)	R0600	D.2.1
Gross liabilities for investment contracts	L, M & 26	127,219	(1,445)	(8,809)	115,349	Technical provisions – index-linked and unit-linked	R0690	D.2.1
Unallocated divisible surplus	L & 30	2,420	-	(2,420)	-	-	-	D.3.6
Deferred tax liabilities	AE & 31	363	-	352	715	Deferred tax liabilities	R0780	D.3.2
Derivatives financial liabilities	V & 35	4,405	(73)	-	4,332	Derivatives	R0790	D.3.3
Debts owed to credit institutions	AF & 34	50	(11)	-	39	Debts owed to credit institutions	R0800	D.3.4
Financial liabilities other than debts owed to credit institutions	V, AF, 34 & 35	4,163	117	(115)	4,165	Financial liabilities other than debts owed to credit institutions	R0810	D.3.4
Payables arising out of direct insurance	V & 35	704	1,313	-	2,017	Insurance and intermediaries payables	R0820	D.3.4
Deposit received from reinsurers	V & 35	49,235	73	8	49,316	Deposits from reinsurers	R0770	D.3.5
Payables arising out of reinsurance operations	V & 35	236	-	-	236	Reinsurance payables	R0830	D.3.5
Other financial liabilities	V, AE, 31 & 35	1,559	153	-	1,712	Payables (trade, not insurance)	R0840	D.3.4
Loans from parent/group undertakings	AF & 34	1,056	-	56	1,112	Subordinated liabilities	R0850	D.3.4
Other liabilities	36	491	(351)	(121)	19	Other liabilities	R0880	D.3.6
Provisions	AD & 32	394	4	1	399	Provisions other than technical provisions	R0750	D.3.1
Total liabilities		289,560	(220)	(11,048)	278,292			
Excess of assets over liabilities		4,936	-	8,043	12,979			

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 (b) above. The key reclassifications are as follows:

- Reclassification of £114.4 billion of assets backing unit-linked and index-linked contracts to the assets held for index-linked and unit-linked funds category. This includes £102.1 billion shown as financial investments, £8.2 billion classified as cash and cash equivalents and £3.7 billion classified as investment property in the financial statements; and
- Reclassification into participations (where the criteria described in section D.1.4 are met) of liquidity funds classified within cash and cash equivalents and 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 2018. The nature of the material differences is 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 £8.1 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.

The Company considers markets to be active where transactions take place with sufficient frequency and volume for pricing information to be available on an ongoing basis. Where the Company has concluded that markets are not active, alternative methods for valuation are used. Refer to section D.4 for further details on alternative methods for valuation.

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 £1,702 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

A participation is a Solvency II term for a holding, direct or by way of control, of 20% or more of the voting rights of an undertaking. It can therefore be a subsidiary, an associate or a joint venture.

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. Liquidity funds (classified within cash and cash equivalents under IFRS) and collective investment schemes (held within financial investments under IFRS) are reclassified into participations under Solvency II.

As of 31 December 2018, under IFRS, investments in subsidiaries, associates and joint ventures which are held to back policyholder liabilities and are managed on a fair value basis are stated at their fair values, estimated using applicable valuation models underpinned by the quoted market valuations of comparable listed entities; other investments in subsidiaries are recognised at cost less impairment.

In prior periods, 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, primarily consisting of debt securities, equity securities and unit trusts, 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.

Listed equity securities, bonds and exchange traded derivatives in the IFRS financial statements are fair valued using quoted market prices. This methodology is consistent with Solvency II. Unlisted equities are fair valued using a range of techniques details of which are outlined in Section D.4. Collective investment undertakings are carried at fair value using

quoted unit prices which is consistent with Solvency II. The Solvency II valuation of deposits other than cash equivalents is in line with the IFRS treatment.

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. These assets are predominately financial investments which are valued as described in section D.1.5.

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

Loans and mortgages (primarily consisting of mortgage loans including commercial mortgages, equity release mortgages, loans to credit institutions, Private Finance Initiative ("PFI") loans and infrastructure loans), are measured at fair value under Solvency II. 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. Section D.4 describes alternative methods of valuation applicable to assets in this category.

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 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.1.11 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 and the volatility adjustment ("VA") or matching adjustment ("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 from 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; and
- 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 process and overall methodology for setting assumptions and technical provisions is consistent between funds. The material changes to assumptions during the year are detailed in the section D.2.2.5.

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

A deterministic valuation approach producing point estimates, based on best estimate assumptions and all relevant future cash flows required to settle the life insurance liabilities, 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. The Company is in the process of implementing a new actuarial modelling system for non-profit business. During the year ended 31 December 2018, annuities and certain protection products were transferred into the new modelling system which had minimal financial impact.

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 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 some classes of unitised with-profits business.

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 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;
- Changes to market value reduction factors and surrender bases;
- Changes to the target payout ratio; 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. 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; and
- 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.

On 7 December 2017 the PRA issued feedback to life insurers expressing a preference for unit liabilities included within technical provisions to be reported within technical provisions as a whole on the Solvency II Balance Sheet. This was not a mandated approach and has no impact on the measurement of own funds or of technical provisions. The Company has continued to present the unit liabilities within best estimate liabilities in line with the approach adopted in previous years.

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 ring fenced funds (see section E.1.7).

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, claims, 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;
- Guaranteed annuity options;
- 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 consists of an unearned premium reserve; an outstanding claims reserve (consisting of 'incurred but not reported' and 'reported but not paid' reserves) and a premium deficiency reserve.

The unearned premium reserve is that portion of the policy premium that has not yet been "earned" by the Company because the policy still has some time to run before the renewal date.

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.

Ring fenced funds ("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; and
- 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 regarded as Permanent 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.

(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)

Insurers need to hold capital to ensure that they can pay claims and their obligations in extreme scenarios. At the end of 2015 the regulations governing this changed from the previous Solvency I capital regulations to new Solvency II capital regulations. In order to avoid unnecessary disruption to insurers from 'transitioning' between these two capital regimes, a number of transitional arrangements were created, including the TMTP.

The TMTP is applied as a reduction to the Solvency II technical provisions and applies over a period of 16 years starting from 1 January 2016, with its use requiring approval from the PRA. A mandatory recalculation of the TMTP is required every two years, the last of which was at 31 December 2017. In the absence of any non-mandatory recalculations the TMTP would then run-off linearly between the mandatory recalculation dates, based on an end date of 31 December 2031. The TMTP value included in the 31 December 2018 Technical Provisions is based on the value recalculated at that date, and represents a voluntary reduction in the TMTP compared to the value calculated at 31 December 2017 with a 1 year run-off applied. The maximum TMTP available at 31 December 2018 if the voluntary reduction had not been applied is £2,927 million.

The calculation is done in two parts:

1. An unrestricted TMTP is derived for business written prior to 1 January 2016 as the difference in 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; and
 - 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.
2. If necessary 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 the unrestricted TMTP and the SCR) are no lower than the most onerous of the Solvency I Pillar 1 financial resources and Solvency I Pillar 2 financial resources (defined as the sum of the technical provisions, other non- technical liabilities, SCR plus any relevant ICG).

The restriction in part 2 above no longer applies following the recalculation of the TMTP at 31 December 2018.

The impact of removing the TMTP is set out below:

31 December 2018 (£m)	Including TMTP (A)	Setting TMTP to zero (B)	Impact of removing TMTP (C) = (B) – (A)
Technical Provisions	214,230	216,930	2,700
Basic Own Funds	12,058	9,716	(2,342)
Eligible Own Funds to meet SCR	12,058	9,716	(2,342)
SCR	8,236	8,594	358
Eligible Own funds to meet MCR	11,755	9,431	(2,324)
MCR	2,059	2,149	90

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
Credit risk adjustment	Critical illness (morbidity) rates
Matching adjustment	Annuitant mortality
Volatility adjustment	Persistence
Reinsurance counterparty default allowances	Guaranteed annuity option 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, credit risk adjustment ("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 2018 are stated in the table below. The figures shown below allow for a CRA of 10 bps on GBP and 10bps on EUR.

Risk-free rates	1 year	5 years	10 years	15 years	20 years	40 years
GBP	98	120	134	143	146	142
EUR	(33)	10	73	111	127	233

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 Duration to convergence		Ultimate forward rate pa
	extrapolation of risk-free rates (years)	to ultimate forward rate (years)	
GBP	50	90	4.05%
EUR	20	60	4.05%

Volatility adjustment

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 a MA is not applied, with the exception of unit-linked business and business originally written in the FLP heritage company, where no application was made.

The VAs used at 31 December 2018 are shown in the table below.

Volatility adjustment (bps)	31 December 2018
GBP	27
EUR	24

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 2018 (£m)	Including VA (A)	With VA set to zero (B)	Impact of removing VA (C) = (B) – (A)
Technical Provisions	214,230	214,933	703
Basic own funds	12,058	11,889	(169)
Eligible Own Funds to meet SCR	12,058	11,889	(169)
SCR	8,236	8,322	86
Eligible Own Funds to meet MCR	11,755	11,590	(165)
MCR	2,059	2,080	21

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

Matching adjustment

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 MAs to be applied in five matching adjustment portfolios ("MAPs") in the Company.

The MAs used for 31 December 2018 are shown in the table below. The MA shown below applies to technical provisions net of reinsurance retained in the MA portfolio.

Matching adjustment (bps)	UKA	FLL NPF	FLL WPF	FLL WL WPF	FLP
GBP	129	110	98	40	103

The MA is derived from the spread over risk-free on the assigned portfolio of assets, net of an allowance for default and downgrade (known as the fundamental spread). The fundamental spreads 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 that are used to back liabilities that are valued with a Matching Adjustment. This includes both 'Component A' and 'Component B' assets. Only Component A assets are used in the derivation of the MA, however Component B assets are required to cover the additional liability that arises due to the allowance for downgrade risk of the Component A assets. The table below includes the deposit withheld assets in respect of the All reinsurance arrangement.

31 December 2018 market value (£m)	Total eligible assets				
	UKA	FLL NPF	FLL WPF	FLL WL WPF	FLP
UK Government bonds	2,484	2,058	51	10	244
Overseas Government and Supranational bonds	548	78	31	-	1
Corporate bonds	13,735	6,120	1,278	9	1,951
Commercial mortgages	6,843	566	-	-	-
PFI loans and infrastructure	5,423	-	-	-	375
Equity release fixed rate note	7,309	-	-	-	-
Other	1,120	(36)	61	-	60
Total	37,462	8,786	1,421	19	2,631

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 and healthcare mortgages, PFI infrastructure loans and the equity release fixed rate notes eligible for inclusion within the MA are assigned a fundamental spread 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 2018 (£m)	Including MA (A)	With MA set to zero (B)	Impact of removing MA (C) = (B) – (A)
Technical Provisions	214,230	218,644	4,414
Basic Own Funds	12,058	7,757	(4,301)
Eligible Own Funds to meet SCR	12,058	7,757	(4,301)
SCR	8,236	11,260	3,024
Eligible Own Funds to meet MCR	11,755	7,475	(4,280)
MCR	2,059	2,815	756

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.

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 expense inflation is based on a future inflation RPI curve. Expenses are generally assumed to increase in line with RPI. Where future increases are specified in expense agreements, the assumption reflects the terms of that agreement.

Investment management expenses are assumed to vary in line with the projected change in funds under management.

Tax

The tax assumptions used at 31 December 2018 are shown in the table below.

Parameter	31 December 2018
Corporation tax (current year)	19%
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. Tax law was changed effective from 1 January 2018 to freeze RPI relief on capital gains to the position at 31 December 2017. Indexation of 2/3 of the market-implied future RPI rate was previously allowed for in projected capital gains before applying the 20% rate for Life business. No allowance has been made for taxation on UK equity income because income is not subject to taxation, 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 19% at 31 December 2018.

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; and
- 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; and
- 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 Txx08 tables for life protection policies, ACxx08 tables for critical illness protection policies, ELT15 tables for funeral plans and Axx00 tables for savings policies. Different tables apply to males and females and to smokers and non-smokers for products where the smoker status is known.

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; and
- future improvements.

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

For most individual annuities in payment these are expressed as a percentage of PMA08 HAMWP adjusted and PFA08 HAMWP adjusted. The percentage of these tables applied is based on analyses of recent experience for each of the main cohorts of business originally sold through different companies. The tables are based on the versions published in 2017 that incorporate the adjustments proposed by the CMI High Age Mortality Working Party (HAMWP). Further adjustments are made at old ages to remove distortions to the shape of the tables that arise from applying historic CMI improvements i.e. to better reflect the shape of actual improvements from 2008 to the valuation date.

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

For the largest portfolio of pensions annuity business transferred from Aviva Annuity UK Limited, the underlying mortality assumptions for Males are 108.0% of PMA08 HAMWP adjusted (2017: 105.5% of PCMA00) with base year 2008; for Females the underlying mortality assumptions are 101.0% of PFA08 HAMWP adjusted (2017: 96.0% of PCFA00) with base year 2008.

For all the main portfolios of annuities, improvements are based on 'CMI_2017 (S=7.5) Advanced with adjustments' (2017: CMI_2016) with a long-term improvement rate of 1.75% for males and 1.5% for females. The CMI_2017 tables have been adjusted by adding 0.25% and 0.35% to the initial rate of mortality improvements for males and females respectively (to allow for greater mortality improvements in the annuitant population relative to the general population on which CMI_2017 is based), and uses the advanced parameters to taper the long-term improvement rates to zero between ages 90 and 115 (the 'core' parameters taper the long-term improvement rates to zero between ages 85 and 110).

For pension annuity business transferred in from Aviva Annuity UK limited, year-specific adjustments are made to allow for potential selection effects due to the development of the Enhanced Annuity market and covering possible selection effects from pension freedom reforms. Impacts to the technical provision are described in section D.2.2.5.

For the largest portfolio of BPA business, the mortality assumptions are derived from internally generated tables produced from 'Club Vita' data. The 'Club Vita' data covers a wide variety of occupational pension schemes in the public and private sector. The assumptions include adjustments to the base tables for factors such as financial usage, council tax band, region, size of pension and early retirement factors.

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.

Assumptions are set by product, and may vary by duration, age, sales channel and size of policy.

Lapse rate assumptions for unit-linked pensions business combine transfers and retirements.

Guaranteed annuity option take-up rates

The guaranteed annuity option ("GAO") take-up rates define the proportion of policyholders expected to exercise the guaranteed annuity option 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:

- Administrative expenses;
- Claims management expenses/handling expenses;
- Acquisition expenses, but only to the extent that they are incurred on existing business after the valuation date;

- Commissions which are expected to be incurred in the future;
- Reserves for certain exceptional and project costs; and
- Investment management expenses, which are expressed as a percentage of funds under management.

These allowances cover all expenses arising within the Company and from the Company's three management services companies: UK Life Services Limited ("UKLS"), Aviva Management Services UK Limited ("AMSUK"), and Aviva Administration Limited ("AAL"), and also in respect of the outsourcing agreements on certain business between the management services companies and the outsourcing companies, and the investment management agreements with Aviva Investors.

It is assumed that the full cost incurred by the service companies in managing the policies will be charged to the Company, so the best estimate expenses is based on an estimate of the underlying costs to the service companies.

For with-profits policies, it is assumed that a defined charge in line with a Management Services Agreement is charged to the with-profits fund, and the difference between the defined charge and the underlying cost is charged to the non-profit fund.

Other assumptions

Individual 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; and
- 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; and
- 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 credit risk adjustment), with no allowance for volatility adjustment or matching adjustments.

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; and
- Diversification between a MA portfolio and the rest of the non-MA business within that fund is permitted.

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 an approximate approach.

D.2.2.4 Simplified methods

Simplified methods are used only where it would be disproportionate to apply an accurate method and where the impact on the technical provisions is not material. Examples of where simplifications have been applied are:

- 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;
- For some older products, subsidiary benefits are ignored where they are not likely to increase the liability, e.g. rider benefits paid for by mortality charging, where the mortality charge exceeds the expected cost, even in a stress scenario; and
- Manual adjustments to results calculated by the main valuation systems often involve approximations. Manual adjustments are usually made where a product or product feature is difficult to model, or where there is a data deficiency.

Other simplifications have already been mentioned, e.g. grouping of data to value with-profits guarantees.

D.2.2.5 Material changes in assumptions

This section highlights the most material changes to assumptions made in the calculation of technical provisions compared to the previous reporting period.

Annuitant Mortality

Benefits were recognised in the UKL longevity assumptions, reflecting our relevant experience and updates to the rate of historic and future mortality improvement including the adoption of CMI 2017, as described in section D2.2.2.

The base mortality tables have been updated to reflect latest experience data. The mortality rates are expressed as a percentage of the CMI '2008 series' mortality tables. Future mortality improvements have been changed to CMI_2017, as described in section D2.2.2.

Bulk Purchase Annuity longevity assumptions have been updated to reflect the experience of occupational pension schemes in the public and private sector, as described in section D2.2.2.

These changes reduced the best estimate liability, net of reinsurance recoverables, by £563 million.

Guaranteed annuity option take-up rates

The GAO take-up rates have been reduced based on current experience, as described in section D2.2.2.

These changes reduced the best estimate liability, net of reinsurance recoverables, by £94 million.

Ring fenced funds

Following guidance from the PRA, we have revised our approach to the disclosure of planned enhancements and are calculating technical provisions on the assumption of an immediate fall in payout to the level consistent with any permanent enhancement. Previously our approach allowed for a gradual fall in payout from the current level of planned enhancement to the level of permanent enhancement. With the agreement of the PRA, we have also introduced a framework for allowing for permanent enhancement in the funds, which has resulted in a 16% permanent enhancement being introduced for FLC NWPSF and FLC OWPSF.

These changes increased the best estimate liability, net of reinsurance recoverables, by £43m.

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 (included in the risk margin) on technical provisions.

#	Line of Business 31 December 2018	Technical provisions £m	Best Estimate £m	Risk Margin £m (unaudited)
29	Health insurance	798	794	4
30	Insurance with profit participation	37,700	36,994	706
31	Index-linked and unit-linked	115,343	115,333	10
32	Other life insurance	59,259	59,008	251
34	PPOs not health	117	117	-
D	Life insurance obligations	213,217	212,246	971
36	Life reinsurance	1,013	1,013	-
E	Life reinsurance obligations	1,013	1,013	-
	Total	214,230	213,259	971

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 2018	Best Estimate Liability ("BEL") £m	Risk Margin (unaudited) £m	Solvency II technical provisions £m	IFRS technical provisions £m	Difference £m
29	Health insurance	794	4	798	1,439	(641)
30	Insurance with profit participation	36,994	706	37,700	41,978	(4,278)
31	Index-linked and unit-linked	115,333	10	115,343	116,857	(1,514)
32	Other life insurance	59,008	251	59,259	61,632	(2,373)
34	PPOs not health	117	-	117	133	(16)
D	Life insurance obligations	212,246	971	213,217	222,039	(8,822)
36	Life reinsurance	1,013	-	1,013	1,000	13
E	Life reinsurance obligations	1,013	-	1,013	1,000	13
	Total	213,259	971	214,230	223,039	(8,809)

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

Under IFRS, assets in excess of liabilities of a with-profits fund are held as a separate liability called the UDS, which is not classified as part of IFRS technical provisions. Under Solvency II, a proportion of the UDS is implicitly included within the best estimate liability. This results in an increase in Solvency II best estimate liabilities relative to IFRS technical provisions in respect of this adjustment.

Under IFRS, enhancements to asset shares that the Company expects to pay in order to treat policyholders fairly are included in liabilities, together with consequent impacts on guarantee costs, irrespective of whether the enhancement is classified as ‘permanent’ under Solvency II. Neither IFRS nor Solvency II liabilities include the value of future shareholder transfers. This results in a decrease in Solvency II best estimate liabilities relative to IFRS technical provisions in respect of this adjustment.

These differences are most relevant to line of business 30 (Insurance with profit participation).

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 a credit risk adjustment and an MA or VA where applicable.

Following guidance from the PRA, the Solvency II best estimate liabilities for reinsured business in matching adjustment portfolios are discounted at a risk free rate. This increases gross of reinsurance best estimate liabilities, with an equal increase to the reinsurance asset, thus have no impact on best estimate liabilities net of reinsurance.

For non-participating life insurance contracts, IFRS technical provisions are valued using a 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.

No distinction is made for reinsured business in the IFRS valuation interest rate. This results in an increase in gross Solvency II best estimate liabilities relative to gross IFRS technical provisions in respect of this adjustment.

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; and
- 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 baselining 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 guaranteed annuity options, 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 (as adapted for Solvency II by the EU Directive, Delegated Regulation and Guidance, and the PRA Supervisory Statement SS2/14). Deferred tax is calculated on 'temporary differences' between the economic value of assets or liabilities on the Solvency II balance sheet and their tax base.

Deferred tax assets may be recognised separately on the Solvency II balance sheet in cases where there are net deferred tax assets after offset against corresponding deferred tax liabilities, or where deferred tax assets cannot be so offset. This is subject to the deferred tax assets meeting the criteria for recognition, in accordance with IAS 12 principles (adapted as described above).

At 31 December 2018 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 unrecognised tax losses of £146 million at 31 December 2018. The £146 million consists of £103 million of IFRS tax losses and a SII adjustment of £43 million relating to the revaluation of debt with fellow Aviva Group undertaking Friends Life Holdings plc to fair value.

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); and
- Subordinated liabilities.

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 outflows 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 £111 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.

Under Solvency II subordinated liabilities are valued on a fair value basis, adjusted to eliminate the impact of changes in the own credit standing of the Company, with reference to the market value of similar group issued instruments which are externally listed. These items are included within own funds for Solvency II and more detail on the instruments can be found in section E.

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 All. 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 £2,420 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. 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; and
- **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 2018, the following classes of assets and liabilities were subject to valuation under alternative valuation methods:

- Commercial mortgages, commercial real estate loans and healthcare mortgages;
- Equity release mortgages;
- Investment property and property partnerships;
- Over the Counter (“OTC”) derivatives;
- PFI and private infrastructure lending;
- Privately placed debt securities;
- Privately placed debt securities with explicit government/supranational guarantees;
- Privately placed, long dated, inflation linked lending transactions with utility companies;
- Private equity funds;
- Collateralised lending with banks;
- Collateralised loan obligations;
- Uncollateralised interest rate and inflation swaps; and
- Other illiquid debt securities, private loans and structured finance transactions.

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); and
- 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, they are based on a combination of expert judgement, 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.

Commercial mortgages, commercial real estate loans and healthcare mortgages (£10,110 million)

The mortgages are valued using a model that calculates a credit risk adjusted value for each mortgage. The credit risk adjusted contractual future cash flows are calculated by stochastically forecasting how the future loan repayments are impacted by a large number of inputs. The key inputs feeding into the credit risk calculation are changes in property value, probability of tenant defaults, expected rental growth and property growth and likelihood of the borrower continuing to service the loan if the tenant defaults. The credit risk adjusted cash flows are then discounted at a risk free rate plus a liquidity premium calibrated to lending on new loans.

Valuation uncertainty arises from variation in the expected range of the key inputs feeding into the credit risk calculation and the liquidity premium. Valuation uncertainty has been assessed as significant for this asset class.

During 2018, long-term assumptions for future property price growth and rental income growth have been kept under review to allow for the possible future adverse impact of the decision for the UK to leave the European Union. The aim has been to maintain an allowance in these assumptions in 2018 at least as strong as that which was included in 2016, as the impact of the Brexit process on the UK economy remains uncertain.

A small portion of the commercial real estate loan is managed by an external asset manager (£412 million). These mortgages are valued using a discounted cash flow approach, where credit spreads depend on the rating of the mortgage and are inferred from market observations. Valuation uncertainty has been assessed as significant for these assets.

Equity release mortgages (£6,752 million)

Equity release mortgage loans are valued using an internal model, with fair value initially being equal to the transaction price. The value of these loans is dependent on the expected term of the mortgage and the forecast property value at the end of the term and is calculated by adjusting future cash flows for credit risk and discounting using a yield curve plus an allowance for illiquidity. At 31 December 2018 the illiquidity premium used in the discount rate was 180 bps.

The mortgages have a no negative equity guarantee ("NNEG") such that the cost of any potential shortfall between the value of the loan and the realised value of the property, at the end of the term, is recognised by a deduction to the value of the loan. Property valuations at the reporting date are obtained by taking the most recent valuation for the property and indexing using market observable regional house price indices.

NNEG is calculated using base property growth rates reduced for the cost of potential dilapidations, using a stochastic model. In addition, a cost of capital charge is applied to reflect the variability in these cash flows. The base property growth rate assumption is RPI +0.75% which equates to a long-term growth rate of 4.3% pa. After applying the cost of capital charge, dilapidations and the stochastic distribution, the effective long-term growth rate equates to 0.6% pa.

Mortgage loan assumptions for future property prices also include an allowance for possible adverse impact of the decision for the UK to leave the European Union.

Investment property and property partnerships (£7,679 million)

Investment property is valued either quarterly or monthly by external chartered surveyors in accordance with guidance issued by The Royal Institution of Chartered Surveyors ("RICS"). 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 within the valuation of investment properties has been assessed based on back-testing analysis performed across the Company's portfolio. This back-testing analysis compares sale prices of investment properties against the properties' valuation one year prior to the date of sale, with adjustments made to allow for movements in property markets over the year. The results of this analysis corroborate closely with other research information available in the public domain and suggest that valuation uncertainty is significant for this asset class.

Over the Counter ("OTC") derivatives (-£417 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.

Valuation uncertainty has been assessed as moderate for this asset class. Please note this section excludes uncollateralised OTC derivatives with PFI counterparties (see comments below).

PFI and private infrastructure lending (£5,413 million)

PFI and infrastructure loans are valued using either a model that calculates a credit risk adjusted value for each loan or using a discounted cash flow model, depending on the nature of the loan.

Loans valued using credit risk adjusted contractual future cash flows are calculated by stochastically forecasting how the future loan repayments are impacted by a large number of inputs. The key inputs feeding into the credit risk calculation are changes in security value, probability of government defaults and expected inflation on income and costs. The credit risk adjusted cash flows are then discounted at a risk free rate plus a liquidity premium calibrated to lending on new loans.

Infrastructure loans valued using a discounted cash flow model add spreads for credit and illiquidity to a risk-free discount rate. Credit spreads are updated quarterly using an internally developed methodology which depends on the credit rating of each loan, credit spreads on publicly traded bonds and an adjustment to reflect the estimated recovery rate in the event of the infrastructure loan defaulting.

Valuation uncertainty arises from variation in the expected range of the key inputs feeding into the credit risk calculation and the illiquidity premium. Valuation uncertainty has been assessed as moderate for this asset class.

Privately placed corporate debt securities (£1,784 million)

Privately placed notes are valued using a discounted cash flow model. The discounted cash flow model uses discount factors based on swap curves, plus credit spreads inferred from comparable, publicly traded bonds as well as an incremental spread to reflect the illiquidity of the securities. Valuation uncertainty arises on the private placement portfolio in the choice of spreads for credit and liquidity.

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

Privately placed debt securities with explicit sovereign guarantees (£855 million)

The Company holds a number of debt securities supported by explicit sovereign or supranational guarantees, under export credit agency or similar schemes. In these cases, the credit spreads used to value the instruments reflect the security provided by the sovereign guarantee.

Valuation uncertainty has been assessed as low for these loans.

Private equity funds (£608 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 portfolio businesses against lagged valuations adjusted for movements in EV/EBITDA ratios for proxy stock market indices.

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

Collateralised lending with banks (£1,868 million)

Collateralised lending with banks comprises loans to banking counterparties which 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 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 variations in the expected range for a number of the key assumptions described above. Valuation uncertainty has been assessed as moderate for this asset class.

Collateralised loan obligations ("CLO") (£337 million)

The Company holds an illiquid senior note issued by an SPV which is backed by a series of loans to PFI counterparties. The valuation of this position incorporates assumptions regarding credit spreads on the underlying PFI loans, expected recoveries in the event of PFI default and joint default probabilities.

Valuation uncertainty has been assessed as moderate for this asset.

Uncollateralised interest rate and inflation swaps (£436 million)

The Company holds a number of uncollateralised interest rate and inflation swaps with PFI counterparties. These swaps were originally structured between PFI counterparties and banks and involve the PFI counterparty paying a fixed interest rate in return for a floating interest rate. Interest rates have fallen sharply since the swaps were originally executed, causing their fair value to be strongly positive in favour of the bank. The Company subsequently acquired these positions from the originating banks in secondary market transactions during 2017 and 2018.

These swaps are not collateralised, meaning the Company is exposed to counterparty credit risk. The valuation of these swaps therefore includes a credit valuation adjustment ("CVA") to reflect counterparty default risk. The CVA is calculated with reference to a number of assumptions including likelihood of counterparty default, recovery in event of default and exposure to counterparty at time of default.

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

Illiquid inflation linked notes issued by utilities (£649 million)

The Company holds a number of illiquid, long duration inflation linked notes issued by utility companies. Future cash flows are forecast using breakeven inflation rates then discounted using swap curves, plus credit spreads inferred from the closest comparable publicly traded instruments (with adjustments where necessary) and an illiquidity premium.

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

Other illiquid debt securities, private loans and structured finance transactions (£1,041 million)

Other illiquid debt securities are valued using discounted cash flow methodologies. Discount factors are constructed using risk free rates, credit and illiquidity spreads appropriate for the security in question.

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

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 and publicly traded bonds), this involves comparing the primary valuation to a secondary independent 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.

D.5 Any other information

The Company has no other material information to disclose regarding the valuation of assets or liabilities.

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

E. Capital Management

[In this chapter](#)

- E.1 Own Funds
- E.2 Solvency Capital Requirement ("SCR") and Minimum Capital Requirement ("MCR")
- E.3 Use of duration-based equity risk sub-module in the calculation of the SCR
- E.4 Difference between the Standard Formula and Internal Model
- E.5 Non-compliance with the MCR and non-compliance with the SCR
- E.6 Any other information

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 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

At 31 December 2018, total basic Own Funds equalled the total eligible Own Funds to meet the SCR, with no tiering limit restrictions. Eligible Own Funds were subject to restrictions of £303 million to meet the MCR.

The table below sets out the Company's Own Funds at 31 December 2018:

	Total	Tier 1 unrestricted	Tier 1 restricted	Tier 2	Tier 3
31 December 2018	£m	£m	£m	£m	£m
Ordinary share capital	192	192	-	-	-
Surplus funds	6,866	6,866	-	-	-
Preference shares	614	-	442	172	-
Reconciliation reserve	3,275	3,275	-	-	-
Subordinated liabilities	1,111	-	568	543	-
Total Basic Own Funds after adjustment	12,058	10,333	1,010	715	-
Restrictions	-	-	-	-	-
Total Eligible Own Funds to meet the SCR	12,058	10,333	1,010	715	-
Restrictions to meet the MCR	(303)	-	-	(303)	-
Total Eligible Own Funds to meet the MCR	11,755	10,333	1,010	412	-

31 December 2017	Total £m	Tier 1 unrestricted £m	Tier 1 restricted £m	Tier 2 £m	Tier 3 £m
Ordinary share capital	192	192	-	-	-
Surplus funds	7,808	7,808	-	-	-
Preference shares	500	-	322	178	-
Reconciliation reserve	4,414	4,414	-	-	-
Subordinated liabilities	1,116	-	558	558	-
Total Basic Own Funds after adjustment	14,030	12,414	880	736	-
Restrictions	-	-	-	-	-
Total Eligible Own Funds to meet the SCR	14,030	12,414	880	736	-
Restrictions to meet the MCR	(275)	-	-	(275)	-
Total Eligible Own Funds to meet the MCR	13,755	12,414	880	461	-

Further information on Own Funds by tier is presented in QRT S23.01.01 'Own Funds' within section F1.

- Tier 1 unrestricted capital

Unrestricted Tier 1 capital of £10,333 million represents 86% of the Company's Own Funds. 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 E.1.5). Tier 1 unrestricted capital includes high quality instruments with features such as permanence, subordination, undated, absence of redemption incentives, mandatory costs and encumbrances.

- Tier 1 restricted capital

Restricted Tier 1 capital of £1,010 million consists of preference shares and subordinated debt, both qualifying as restricted Tier 1 capital under the transitional provisions. Transitional measures are referred to in section E.1.3. Tier 1 restricted Own Funds are distinguished from Tier 1 unrestricted capital as they are subject to further quantitative restrictions.

- Tier 2 capital

Tier 2 capital of £715 million consists of preference shares and subordinated debt, both qualifying as Tier 2 capital under the transitional provisions. The amount of tier 2 capital allowed to meet the MCR is restricted to 20% of the MCR. The MCR is referred to in section E.2.2. The features of Tier 2 capital include subordination, minimum duration of 10 years with no contractual opportunity to redeem within 5 years, absence of redemption incentives, mandatory costs and encumbrances.

E.1.3 Details of Own Funds items

E.1.3.1 Issued share capital and share premium as at 31 December 2018

The company had an aggregate issued and outstanding ordinary share capital of £192 million at 31 December 2018.

E.1.3.2 Preference shares in issue as at 31 December 2018

The Company's Own Funds at 31 December 2018 include the following preference shares:

Capital Instrument	Date of next call	Solvency II Tier	Solvency II value 2018 £m	Solvency II value 2017 £m
Step-up Tier 1 Insurance Capital Securities (STICS)	1 July 2020 and then five yearly	Tier 1 restricted	328	322
Step-up Tier 1 Insurance Capital Securities (STICS)	1 July 2020 and then five yearly	Tier 2	172	178
Restricted Tier 1 Subordinated Notes (RT1 Notes)	31 May 2028 and then six monthly	Tier 1 restricted	114	-
Total preference shares			614	500

The Step-up Tier 1 Insurance capital Securities ("STICS") were transferred to the Company following the Part VII transfer of assets and liabilities from Friends Life Limited ("FLL") during 2017. The STICS are intra-group debt instruments that were originally issued by FLL to Friends Life Holdings plc ("FLH"). The tiering presentation of the preference shares reflect the relegation of capital due to the guarantees that the Company has made to the external debtholders of FLH. The adjustment is made to represent the reduction in quality of the Company's capital by the guarantees made and align it with the tiering of the external capital instruments. It relegates Own Funds from restricted Tier 1 to Tier 2.

The £114 million Restricted Tier 1 Subordinated Notes ("RT1 Notes") were issued on 31 May 2018 to finance the acquisition of a subsidiary. The RT1 Notes are perpetual securities and are not redeemable at the option of the holders at any time. The Company may, at its sole option, redeem all (but not part) of the RT1 Notes at their principal amounts on 31 May 2028 or thereafter on every 30 November and 31 May each year, providing that the solvency conditions are met and the relevant regulatory approvals have been obtained.

The fixed interest on the RT1 Notes of 5.50% per annum is due and payable only at the sole and absolute discretion of the Company. The Company is not permitted to pay the interest if the solvency conditions are not satisfied. Unpaid interest is assumed to be cancelled and shall not become due or accumulate. No interest is accrued until the payment is declared.

E.1.3.3 Subordinated liabilities in issue as at 31 December 2018

Under IFRS, subordinated debt is valued on an amortised cost basis. Under Solvency II, subordinated debt is valued on a fair value basis, with changes in own credit standing removed for subsequent measurement. A discounted cash flow approach has been used to assess the fair value and, for the purpose of valuation, it is assumed that the option to redeem at the first call date will be exercised.

Capital Instrument, including nominal, coupon and extent of subordination	Callable at par at option of the Company from	Solvency II Tier	Solvency II value 2018 £m	Solvency II value 2017 £m
10.05% £356m subordinated debt	8 May 2019 and then six monthly	Tier 1 restricted	367	354
8.25% £500m subordinated debt	At maturity on 22 April 2022	Tier 2	543	559
2.5068% £200m subordinated notes	8 Dec 2019	Tier 1 restricted	201	203
Total subordinated debt			1,111	1,116

Transitional measures

The transitional measures prescribed under Solvency II allow the subordinated debt concerned to count towards a firm's available Own Funds, subject to tiering limits, for a period of up to ten years after 1 January 2016. The Company's subordinated notes do not qualify directly as Solvency II Own Funds, but all met the Solvency I requirements without reliance on waivers and are all therefore eligible for Solvency II transitional treatment. The debt is grandfathered either as Tier 1 if it is perpetual or Tier 2 if it is dated.

Movement in the year

RT1 Notes as described in section E.1.3.2 were issued by the Company during 2018. These are classified as preference shares and qualify as Tier 1 restricted capital in the Solvency II Own Funds. There have been no other issuance/redemptions of qualifying capital instruments during 2018. Other movements in the total value of capital instruments relate to changes in the foreign exchange rates and the risk-free rates used for the Solvency II valuation of subordinated debt.

E.1.4 Surplus funds

The Company has recognised £6,866 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 E.1.5 below (Adjustment for restricted Own Fund items in respect of RFFs).

E.1.5 Reconciliation reserve

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

	2018	2017
	£m	£m
Solvency II excess of assets over liabilities	12,979	15,144
Other Basic Own Funds items	(7,672)	(8,500)
Adjustment for restricted Own Fund items in respect of ring fenced funds ("RFFs") (unaudited)	(2,032)	(2,230)
Reconciliation reserve	3,275	4,414

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, preference shares and surplus funds.
- The surplus Own Funds over notional SCR held within RFFs (refer to section E.1.7).

E.1.6 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.

	2018	Restated 2017
	£m	£m
Total Company equity on an IFRS basis	4,936	6,245
Elimination of intangible assets, deferred acquisition costs and deferred income reserve	(1,651)	(1,891)
Technical provision valuation differences (net of transitional deductions)	9,780	10,117
Inclusion of risk margin (net of transitional deductions)	(971)	(764)
Reinsurance recoverable valuation differences	(1,401)	(1,193)
Elimination of UDS from liabilities	2,420	2,699
Net deferred tax adjustments	(352)	(349)
Revaluation of participations	193	135
Other adjustments onto Solvency II basis (including fair value adjustments)	25	145
Solvency II excess of assets over liabilities	12,979	15,144

The increase in net assets of £8,043 million from IFRS to a Solvency II basis results from solvency valuation differences.

The decrease in Solvency II net assets of £2,165 million during the reporting period is largely due to the payment of £2,241 million of dividends.

The elimination of intangible assets, deferred acquisition costs and deferred income reserve are described in sections D.1.1, D.1.2 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).

The 2017 balances in the table above have been restated to reflect a change in the IFRS accounting policy, referred to in section A.1.3. This impacts two lines in the table: Total Company equity on an IFRS basis, which has decreased by £464 million compared with the balance reported in the prior year, and revaluation of participations which has increased by £464 million.

E.1.7 Restricted Own Funds items in respect of RFFs and MA portfolios (unaudited)

As at 31 December 2018, the total of excess of assets and liabilities within RFFs and MA portfolios amounted to £7.6 billion, of which £2.0 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 portfolios do not have a surplus in excess of 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 2018 is £8,236 million (2017: £9,219 million)

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

- UKLAP NP - non-profit business written in the non-profit sub-fund, including four matching adjustment portfolios
- NWPSF - primarily includes with-profits business
- OWPSF - primarily includes with-profits business
- WPSF - primarily includes with-profits business
- PMSF - primarily includes with-profits business
- IWPSF - with-profits fund of the Irish business
- FP WPSF - as well as with-profits business, it also includes a unit-linked portfolio (units held by UKLAP NP)
- FPLAL WPSF - primarily includes with-profits business
- FLAS WPSF - includes significant portfolios of non-profit and unit-linked business (units held by UKLAP NP) as well as with-profits business
- FLC NWPSF - primarily includes with-profits business
- FLC OWPSF - primarily includes with-profits business
- WL WPSF - includes a significant portfolio of unit-linked business (units held by UKLAP NP) as well as with-profits business, and a small matching adjustment portfolio
- FLP Secure Growth Fund - a with-profits fund that is an investment option for unitised contracts

The contribution of the above sub-funds to the Company SCR is calculated using an Internal Model with the exception of the ALPI subsidiary (within the UKLAP NP sub-fund) which is valued using the Standard Formula and aggregated using the Partial Internal Model methodology.

The table below shows the results of the Company SCR as at 31 December 2018 split by sub-fund/material subsidiaries:

SCR split by sub-fund	£m
UKLAP NP	5,267
NWPSF	351
OWPSF	140
WPSF	638
PMSF	139
IWPSF	90
FP WPSF	452
FPLAL WPSF	26
FLAS WPSF	490
FLC NWPSF	397
FLC OWPSF	118
WL WPSF	25
FLP Secure Growth Fund	103
Company SCR	8,236

A more detailed breakdown of the Company SCR by risk module is shown in the following table, 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 other adjustments from the S.25.02 QRT and the loss absorbing capacity of deferred tax.

SCR by risk module (£m)	Total	Internal Model	Standard Formula
Market risk	6,499	6,403	96
Counterparty default risk	310	310	-
Life underwriting risk	4,399	4,399	-
Health underwriting risk	-	-	-
Non-life underwriting risk	-	-	-
Operational risk	1,316	1,316	-
Other risks and adjustments	(982)	(982)	-
Total undiversified modules	11,542	11,446	96
Diversification	(3,306)		
SCR excluding capital add-on	8,236		
Capital add-on already set	-		
SCR	8,236		

The table below shows the results of the Company SCR as at 31 December 2018, compared to 31 December 2017,

Company SCR	Total £m
31 December 2018	8,236
31 December 2017	9,219
Decrease: (from 31 December 2017 to 31 December 2018)	(983)

The Company's SCR at 31 December 2018 is lower than the SCR as at 31 December 2017. The decrease in SCR is primarily due to the run off of existing business, management actions (including a reduction in equity volatility exposure in the with-profits funds), and economic changes (including a reduction in equity risk following significant market falls), and lower credit risk following a widening of credit spreads. This is partly offset by increased capital requirements from the writing of new business in 2018.

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 2018 is £2,059 million.

The following table shows the results of the Company MCR as at 31 December 2018, compared the MCR as at 31 December 2017.

Company MCR	Total £m
31 December 2018	2,059
31 December 2017	2,305
Decrease: (from 31 December 2017 to 31 December 2018)	(246)

The Company's MCR at 31 December 2018 is lower than the MCR as at 31 December 2017. The decrease in MCR arises directly from the decrease in SCR, as the 25% SCR floor to the MCR is biting.

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 2018

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 2018.

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. The SCR of the Company at 31 December 2018 does not include an add-on imposed by the regulators.

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

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; and
- 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.

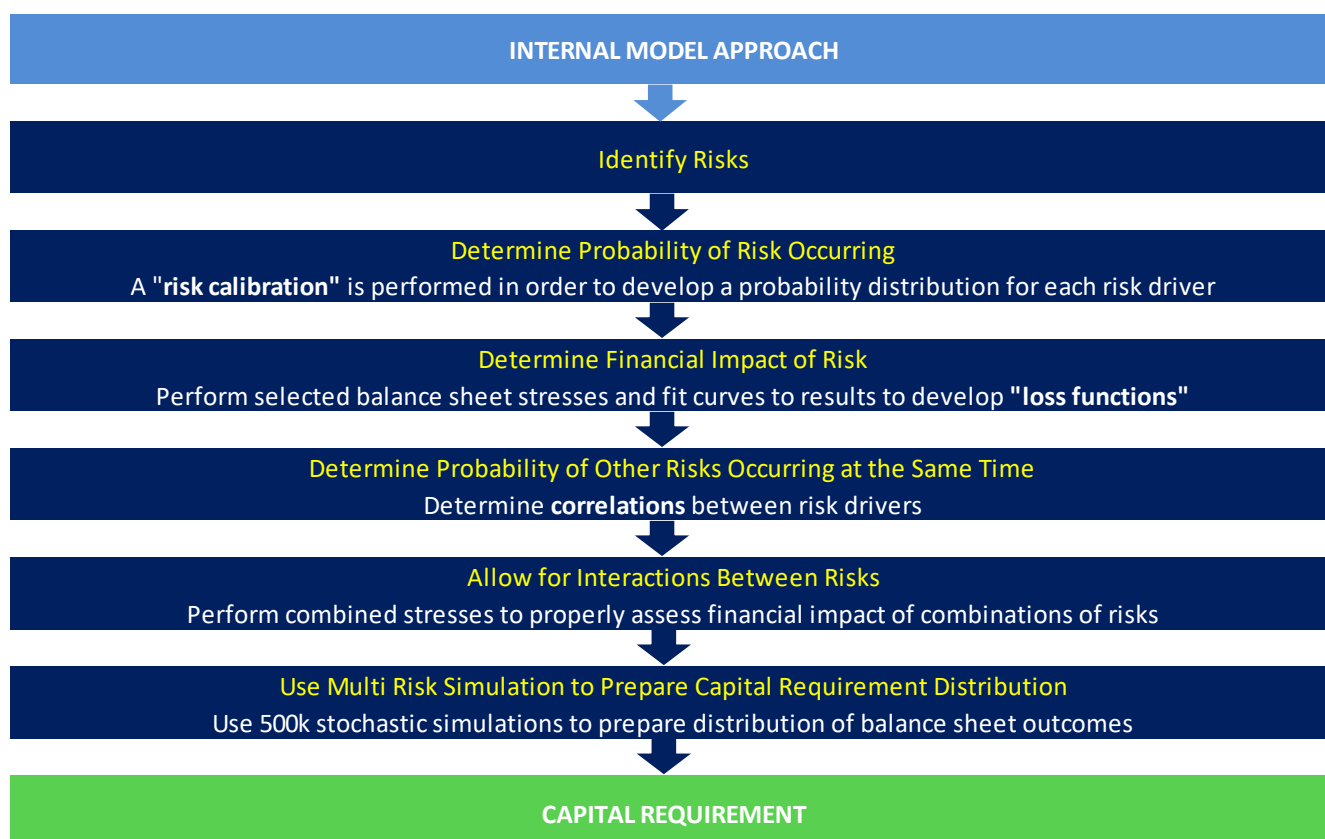
The funds and subsidiaries of the Company included in the Internal Model scope are listed in section E.2.1.

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 of the Solvency II Delegated Regulations.

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 SCRs 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, as well as mark to model valuations of certain non-traded assets. The data used is largely taken from the accounting process and, therefore, most data will be included under the heading 'accounting data'; and
- 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 Regulations.

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. The only business using the Standard Formula approach is the ALPI subsidiary within the UKLAP NP sub-fund.

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. Interest rate and equity volatility risks are particularly important for modelling business with guarantees.
- 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.

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

The Company complied with the MCR and SCR at all times during 2018.

E.6 Any other information (unaudited)

The table below shows the Operating Capital Generated by the Company.

	2018
	£m
New business	(120)
Existing business	618
Other	693
Operating capital generation	1,191
Non-operating capital generation	83
Total capital generation	1,274
Dividends	(2,241)
Interest paid on STICS net of tax relief	(22)
Foreign exchange variances	-
Acquired/divested business	-
Total change in excess capital	(989)

Aviva Life & Pensions UK Limited

Solvency and Financial Condition Report

2018

F. Appendices

[In this chapter](#)

F.0 Cautionary statement

F.1 Public disclosure templates

F.2 Glossary

F.3 Approvals and determinations

F.4 Directors' statement

F.5 Audit opinion

F.0 Cautionary statement

This announcement contains, and we may make other verbal or written 'forward-looking statements' with respect to certain of the Company's plans and current goals and expectations relating to future financial condition, performance, results, strategic initiatives and objectives. Statements containing the words 'believes', 'intends', 'expects', 'projects', 'plans', 'will', 'seeks', 'aims', 'may', 'could', 'outlook', 'likely', 'target', 'goal', 'guidance', 'trends', 'future', 'estimates', 'potential' and 'anticipates', and words of similar meaning, are forward-looking. By their nature, all forward-looking statements involve risk and uncertainty. Accordingly, there are or will be important factors that could cause actual results to differ materially from those indicated in these statements.

The Company believes factors that could cause actual results to differ materially from those indicated in forward-looking statements in the announcement include, but are not limited to: the impact of ongoing difficult conditions in the global financial markets and the economy generally; the impact of simplifying our operating structure and activities; the impact of various local and international political, regulatory and economic conditions; market developments and government actions (including those arising from the referendum on the UK's membership of the European Union); the effect of losses due to defaults by counterparties, including potential sovereign debt defaults or restructurings, on the value of our investments; changes in interest rates that may reduce the value of our portfolio; the impact of changes in short or long-term inflation; the impact of changes in equity or property prices on our investment portfolio; fluctuations in currency exchange rates; the effect of market fluctuations on the value of the assets backing reserves; the amount of allowances and impairments taken on our investments; the effect of adverse capital and credit market conditions on our ability to meet liquidity needs and our access to capital; changes in, or restrictions on, our ability to initiate capital management initiatives; changes in or inaccuracy of assumptions in pricing and reserving for insurance business (particularly with regard to policy renewal rates), a cyclical downturn of the insurance industry; the impact of natural and man-made catastrophic events on our business activities and results of operations; our reliance on information and technology and third-party service providers for our operations and systems; the inability of reinsurers to meet obligations or unavailability of reinsurance coverage; increased competition in the UK and in other countries where we have significant operations; regulatory approval of extension of use of the Company's internal model for calculation of regulatory capital under the European Union's SII rules; the impact of actual experience differing from estimates used in valuing and amortising deferred acquisition costs ("DAC"); the impact of recognising an impairment of our goodwill or intangibles with indefinite lives; changes in valuation methodologies, estimates and assumptions used in the valuation of investment securities; the effect of legal proceedings and regulatory investigations; the impact of operational risks, including inadequate or failed internal and external processes, systems and human error or from external events (including cyber attack); risks associated with arrangements with third parties; our reliance on third-party distribution channels to deliver our products; funding risks associated with our participation in defined benefit staff pension schemes; the failure to attract or retain the necessary key personnel; the effect of fluctuations in share price as a result of general market conditions or otherwise; the effect of simplifying our operating structure and activities; the effect of a decline in any of our ratings by rating agencies on our standing among customers, broker-dealers, agents, wholesalers and other distributors of our products and services; changes to our brand and reputation; changes in government regulations or tax laws in jurisdictions where we conduct business; the inability to protect our intellectual property; the policies, decisions and actions of government or regulatory authorities in the UK, the European Union, the US or elsewhere, including the implementation of key legislation and regulation. For a more detailed description of these risks, uncertainties and other factors, please see the Aviva plc Annual report and accounts.

The Company undertakes no obligation to update the forward-looking statements in this announcement or any other forward-looking statements it may make. Forward-looking statements in this report are current only as of the date on which such statements are made.

This Solvency and Financial Condition Report has been prepared for information only, it is based on our understanding as at 16 April 2019 and does not provide financial or legal advice. Other than set out in section F.4 (Directors Statement), the Company, its directors, employees, agents or advisers do not accept or assume responsibility to any other person to who this document is shown or into whose hands it may come, and any such responsibility or liability is expressly disclaimed.

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.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	0
Deferred tax assets	R0040	0
Pension benefit surplus	R0050	
Property, plant & equipment held for own use	R0060	0
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	91,148,555
Property (other than for own use)	R0080	1,911,209
Holdings in related undertakings, including participations	R0090	27,598,453
Equities	R0100	2,170,695
- Equities - Listed	R0110	2,033,851
- Equities - Unlisted	R0120	136,844
Bonds	R0130	53,463,718
- Government Bonds	R0140	22,616,382
- Corporate Bonds	R0150	29,845,646
- Structured Notes	R0160	29,399
- Collateralised securities	R0170	972,291
Collective Investments Undertakings	R0180	487,723
Derivatives	R0190	4,675,713
Deposits other than cash equivalents	R0200	841,043
Other investments	R0210	
Assets held for index-linked and unit-linked contracts	R0220	114,358,058
Loans & mortgages	R0230	26,301,713
- Loans on policies	R0240	20,595
- Loans & mortgages to individuals	R0250	6,822,646
- Other loans & mortgages	R0260	19,458,472
Reinsurance recoverables from:	R0270	54,550,505
- Reinsurance recoverables - Non-life and health similar 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	23,445,388
- Reinsurance recoverables - Health similar to life	R0320	406,107
- Reinsurance recoverables - Life excluding health and index-linked and unit-linked	R0330	23,039,281
- Reinsurance recoverables - Life index-linked and unit-linked	R0340	31,105,117
Deposits to cedants	R0350	0
Insurance & intermediaries receivables	R0360	315,681
Reinsurance receivables	R0370	233,796
Receivables (trade, not insurance)	R0380	3,712,555
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	599,016
Any other assets, not elsewhere shown	R0420	51,483
Total assets	R0500	291,271,363
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	98,882,261
- Technical provisions - Health (similar to life)	R0610	797,894
- TP calculated as a whole - Health (similar to life)	R0620	
- Best Estimate - Health (similar to life)	R0630	793,921
- Risk margin - Health (similar to life)	R0640	3,973
- Technical provisions - Life (excluding health and index-linked and unit-linked)	R0650	98,084,367
- 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	97,127,357
- Risk margin - Life (excl health, index-linked and unit-linked)	R0680	957,011
Technical provisions - Index-linked and unit-linked	R0690	115,347,808
- TP calculated as a whole - Index-linked and unit-linked	R0700	
- Best Estimate - Index-linked and unit-linked	R0710	115,338,081
- Risk margin - Index-linked and unit-linked	R0720	9,726
Contingent liabilities	R0740	
Provisions other than technical provisions	R0750	398,883
Pension benefit obligations	R0760	408
Deposits from reinsurers	R0770	49,316,161
Deferred tax liabilities	R0780	715,174
Derivatives	R0790	4,331,573
Debts owed to credit institutions	R0800	38,656
Financial liabilities other than debts owed to credit institutions	R0810	4,166,773
Insurance & intermediaries payables	R0820	2,017,289
Reinsurance payables	R0830	235,362
Payables (trade, not insurance)	R0840	1,711,563
Subordinated liabilities	R0850	1,111,500
- Subordinated liabilities not in BOF	R0860	0
- Subordinated liabilities in BOF	R0870	1,111,500
Any other liabilities, not elsewhere shown	R0880	19,421
Total liabilities	R0900	278,292,833
Excess of assets over liabilities	R1000	12,978,530

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 [accepted non-proportional reinsurance]	Insurance with profit participation	Unit-linked or index-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	Life reinsurance	Total
		C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0300
Premiums written										
Gross - Direct Business	R1410	486,763	263,735	10,618,806	5,810,154				11	17,179,469
Reinsurers' share	R1420	136,157	11,706	1,095,579	3,473,016				0	4,716,458
Net	R1500	350,606	252,029	9,523,228	2,337,138				11	12,463,011
Premiums earned										
Gross - Direct Business	R1510	486,763	263,735	10,618,806	5,810,154				11	17,179,469
Reinsurers' share	R1520	136,157	11,706	1,095,579	3,473,016				0	4,716,458
Net	R1600	350,606	252,029	9,523,228	2,337,138				11	12,463,011
Claims incurred										
Gross - Direct Business	R1610	281,975	4,655,541	10,770,896	5,052,476		2,499		58,268	20,821,655
Reinsurers' share	R1620	104,099	2,576	2,542,902	2,641,707		1,249		4,626	5,297,159
Net	R1700	177,876	4,652,966	8,227,993	2,410,769		1,249		53,642	15,524,495
Changes in other technical provisions										
Gross - Direct Business	R1710	61,837	5,022,215	8,183,268	778,360		4,528		-166,639	13,883,568
Reinsurers' share	R1720	27,314	-9,496	3,245,670	-159,806		2,264		22,431	3,128,377
Net	R1800	34,523	5,031,711	4,937,598	938,166		2,264		-189,070	10,755,191
Expenses incurred	R1900	76,121	187,023	881,685	791,016				543	1,936,388
Other expenses	R2500									75,318
Total expenses	R2600									2,011,706

	Insurance with profit participation	Unit-linked or index-linked insurance		Other life insurance			Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance	Accepted reinsurance	Total (Life other than health insurance, incl. Unit-Linked)	
	C0020	C0030	Contracts without options and guarantees C0040	Contracts with options or guarantees C0050	C0060	Contracts without options and guarantees C0070	Contracts with options or guarantees 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	36,997,334	115,219,786	169,790		59,007,477	195,913	116,995	1,019,388	212,726,683
Total Recoverables from reinsurance and SPV after the adjustment for expected losses due to counterparty default	R0080	-16,187	31,095,420	9,479		22,733,062	1,392	61,335	259,898	54,144,398
Best estimate minus recoverables from reinsurance and SPV - Total	R0090	37,013,521	84,124,366	160,312		36,274,416	194,521	55,660	759,490	158,582,285
Risk Margin	R0100	801,752	469,235		2,024,717			7,715	34,357	3,337,775
Amount of the transitional on Technical Provisions										
Technical Provisions calculated as a whole	R0110									
Best estimate	R0120	-3,278	-56,296			-195,076		-461	-6,134	-261,245
Risk margin	R0130	-95,985	-459,509		-1,773,473			-7,715	-34,357	-2,371,038
Technical provisions - Total	R0200	37,699,823	115,343,007		59,259,558			116,534	1,013,254	213,432,175

	Health [accepted non-proportional reinsurance]			Annuities stemming from non-life insurance contracts and relating to health insurance only	Health reinsurance	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	831,946			5	831,951
Total Recoverables from reinsurance and SPV after the adjustment for expected losses due to counterparty default	R0080	406,107				406,107
Best estimate minus recoverables from reinsurance and SPV - Total	R0090	425,839			5	425,844
Risk Margin	R0100	33,712			0	33,712
Amount of the transitional on Technical Provisions						
Technical Provisions calculated as a whole	R0110					
Best estimate	R0120	-38,030				-38,030
Risk margin	R0130	-29,739				-29,739
Technical provisions - Total	R0200	797,889			5	797,894

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	214,230,069	2,700,052		702,769	4,413,926
Basic Own Funds	R0020	12,058,453	-2,341,625		-169,013	-4,301,488
Eligible own funds to meet Solvency Capital Requirement	R0050	12,058,453	-2,341,625	0	-169,013	-4,301,488
Solvency Capital Requirement	R0090	8,235,853	358,427		85,600	3,023,604
Eligible own funds to meet Minimum Capital Requirement	R0100	11,754,914	-2,323,704	0	-164,733	-4,279,895
Minimum Capital Requirement	R0110	2,058,963	89,607		21,400	755,901

Annex I
S.23.01.01
Own Funds

Amounts in 000s

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
Share premium account related to ordinary share capital	R0030
Initial funds, members' contributions or the equivalent basic own fund item for mutual and mutual-type undertakings	R0040
Subordinated mutual member accounts	R0050
Surplus funds	R0070
Preference shares	R0090
Share premium account related to preference shares	R0110
Reconciliation reserve	R0130
Subordinated liabilities	R0140
An amount equal to the value of net deferred tax assets	R0160
Other own fund items approved by the supervisory authority as basic own funds not specified above	R0180

Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds

Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds

Deductions

Deductions for participations in financial and credit institutions	R0230
--	-------

Total basic own funds after deductions
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 - Solo
Available and eligible own funds

Total available own funds to meet the SCR	R0500
Total available own funds to meet the MCR	R0510
Total eligible own funds to meet the SCR	R0540
Total eligible own funds to meet the MCR	R0550
SCR	R0580
MCR	R0600
Ratio of eligible own funds to SCR	R0620
Ratio of eligible own funds to MCR	R0640

Total	Tier 1 Unrestricted	Tier 1 Restricted	Tier 2	Tier 3
C0010	C0020	C0030	C0040	C0050

192,000	192,000			
	0			
6,865,970	6,865,970			
613,700		441,520	172,180	
3,275,283	3,275,283			
1,111,500		568,348	543,152	
0				0

--	--	--	--	--

12,058,453	10,333,253	1,009,869	715,332	0
------------	------------	-----------	---------	---

12,058,453	10,333,253	1,009,869	715,332	0
12,058,453	10,333,253	1,009,869	715,332	
12,058,453	10,333,253	1,009,869	715,332	0
11,754,914	10,333,253	1,009,869	411,793	
8,235,853				
2,058,963				
1.4641				
5.7091				

C0060
Reconciliation Reserve

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

Expected profits

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

12,978,530
7,671,670
2,031,577
3,275,283
1,882,049
1,882,049

Annex I

S.25.02.21

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

Amounts in 000s

Unique number of component	Component Description
C0010	C0020
100000	Market Risk
200000	Counterparty Risk
300000	Life underwriting risk
400000	Health underwriting risk
500000	Non-life underwriting risk
701000	Operational risk
801000	Other risks
802000	Loss-absorbing capacity of technical provisions
803000	Loss-absorbing capacity of deferred tax
804000	Other adjustments

Calculation of the Solvency Capital Requirement	Amount modelled	USP	Simplifications
C0030	C0070	C0090	C0120
6,499,082	6,403,023		None
310,237	310,237		
4,399,443	4,399,443	None	None
		None	None
		None	None
1,315,604	1,315,604		
-590,438	-590,438		
-392,057	-392,057		

Calculation of Solvency Capital Requirement

Total undiversified components

R0110

C0100

11,541,871

Diversification

R0060

-3,306,018

Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC

R0160

Solvency Capital Requirement excluding capital add-on

R0200

8,235,853

Capital add-ons already set

R0210

Solvency capital requirement

R0220

8,235,853

Other information on SCR

Amount/Estimate of the overall loss-absorbing capacity of technical provisions

R0300

-4,522,694

Amount/Estimate of the overall loss-absorbing capacity of deferred taxes

R0310

-590,438

Capital requirement for duration-based equity risk sub-module

R0400

Total amount of Notional Solvency Capital Requirements for remaining part

R0410

3,208,653

Total amount of Notional Solvency Capital Requirements for ring fenced funds

R0420

2,966,360

Total amount of Notional Solvency Capital Requirements for matching adjustment portfolios

R0430

3,189,696

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

MCRNL Result	R0010	C0010	
		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

MCRL Result	R0200	C0040	
		1,895,320	
		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	25,280,795	
Obligations with profit participation - Future discretionary benefits	R0220	12,277,908	
Index-linked and unit-linked insurance obligations	R0230	84,232,964	
Other life (re)insurance and health (re)insurance obligations	R0240	36,917,187	
Total capital at risk for all life (re)insurance obligations	R0250		333,557,187

Overall MCR calculation

		C0070	
Linear MCR	R0300	1,895,320	
SCR	R0310	8,235,853	
MCR cap	R0320	3,706,134	
MCR floor	R0330	2,058,963	
Combined MCR	R0340	2,058,963	
Absolute floor of the MCR	R0350	3,281	
		C0070	
Minimum Capital Requirement	R0400	2,058,963	

F.2 Glossary

A glossary explaining the key terms used in this report is available on www.aviva.com/glossary.

F.3 Approvals and determinations

The following approvals, determinations and modifications apply for the Company at 31 December 2018:

F.3.1 Approvals

Approval	Further Information	PRA Reference
Matching adjustment in the calculation of technical provisions		4657691
Volatility adjustment in the calculation of technical provisions		4658257
Transitional measures on technical provisions	Friends Life Part VII transfer	4657753
Transitional measures on technical provisions	31 December 2017 reset	4850459
Partial internal model in the calculation of the SCR	5 December 2015: original approval	2243186
	1 March 2016: amendments and extensions to the internal model	2429705
	23 March 2017: amendments and extensions to the internal model	4105641
	21 December 2017: amendments and extensions to the internal model	4800491
	10 December 2018: amendments and extensions to the internal model	5090845
Own funds items not on the list	4 April 2018: approval to classify equity accounted subordinated liabilities as restricted Tier 1 capital	4906578

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.3.2 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.3.3 Modifications

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

F.4 Directors' statement

We acknowledge our responsibility for preparing the Solvency and Financial Condition Report of Aviva Life & Pensions UK Limited at 31 December 2018 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 2018, 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 2018 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 2019.

J M Windsor

Director

16 April 2019

F.5 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 2018:

- The 'Valuation for solvency purposes' and 'Capital Management' sections of the Solvency and Financial Condition Report of the Company as at 31 December 2018, (**'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 is, or derives from the Solvency Capital Requirement, as identified in the Appendix to this report;
- The 'Summary', 'Business and performance', 'System of governance' and 'Risk profile' elements of the Solvency and Financial Condition Report;
- Company templates S.05.01.02, S.05.02.01 and S.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 2018 is prepared, in all material respects, in accordance with the financial reporting provisions of the PRA Rules and Solvency II regulations on which they are based, as modified by relevant supervisory modifications, and as supplemented by supervisory approvals and determinations.

Basis for opinion

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

Conclusions relating to going concern

ISAs (UK) require us to report to you where:

- the directors' use of the going concern basis of accounting in the preparation of the Solvency and Financial Condition Report is not appropriate; or
- the directors have not disclosed in the Solvency and Financial Condition Report any identified material uncertainties that may cast significant doubt about the Company's ability to continue to adopt the going

concern basis of accounting for a period of at least twelve months from the date when the Solvency and Financial Condition Report is authorised for issue.

We have nothing to report in respect of the above matters.

However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Company's ability to continue as a going concern. For example, the terms on which the United Kingdom may withdraw from the European Union are not clear, and, in common with other companies, it is difficult to evaluate all of the potential implications on the Company's trade, customers, suppliers and the wider economy.

Emphasis of Matter - Basis of Accounting

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

Other Information

The Directors are responsible for the Other Information.

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

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

Responsibilities of Directors for the Solvency and Financial Condition Report

The Directors are responsible for the preparation of the Solvency and Financial Condition Report in accordance with the financial reporting provisions of the PRA rules and Solvency II regulations, which have been modified by the modifications, and supplemented by the approvals and determinations made by the PRA under section 138A of FSMA, the PRA Rules and Solvency II regulations on which they are based, 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 as to whether the information subject to audit in the relevant elements of the Solvency and Financial Condition Report is prepared, in all material respects, in accordance with financial reporting provisions of the PRA Rules and Solvency II regulations on which they are based.

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

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

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

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 also required to consider whether the Other Information is materially inconsistent with our knowledge obtained in the audit of the Company's statutory financial statements. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

PricewaterhouseCoopers LLP

Chartered Accountants

7 More London Riverside

London

SE1 2RT

16 April 2019

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'.