Aviva plc

Annual report and accounts 2019

Foreword

The Strategic report on pages 1 to 53 contains information about Aviva, how we create value and how we run our business. It includes our strategy, business model, market outlook and key performance indicators, as well as our approach to sustainability and risk.

The Strategic report is only part of the Annual report and accounts 2019. The Strategic report was approved by the Board on 4 March 2020 and signed on its behalf by Maurice Tulloch, Chief Executive Officer.

More information about Aviva can be found at www.aviva.com

Non-Financial Information Statement

Under sections 414CA and 414CB of the Companies Act 2006, Aviva is required to include, in its Strategic Report, a non-financial information statement. The information required by these regulations is included in Key performance indicators from page 7, Business model from page 9, Our people from page 17, Corporate responsibility from page 20 and Risk and risk management from page 44.

Contents

As a reminder

Reporting currency:
We use £ sterling.

Unless otherwise stated, all figures referenced in this report relate to Group.

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

The Company's registered office is St Helen's, 1 Undershaft, London, EC3P 3DQ
The Company's telephone number is +44 (0)20 7283 2000

At a glance

We are a leading international Savings, Retirement and Insurance business serving 33 million customers. Our c.30,000 employees aim to earn customers' trust as the best place to save for the future, navigate retirement and insure what matters most to them.

Our purpose

'With you today, for a better tomorrow'
Aviva has been looking after customers for more than 300 years. We are deeply invested in our people, our communities and the planet. We're here to be with people today as well as working for a better tomorrow.

Our business

We offer a wide range of products and solutions to help our customers and partners with their Savings, Retirement and Insurance needs. From 2020, we have reorganised our business into five divisions:

Investments, Savings & Retirement
Aviva Investors and UK Savings & Retirement[1]

UK Life
Annuities & Equity Release, Protection & Health, Heritage

General Insurance
UK, Canada, Europe, Singapore

Europe Life
France, Italy, Poland, Ireland, Turkey

Asia Life
Singapore, China, India, Indonesia, Vietnam

Read more in the 'Business model' and 'Our strategy' sections.

In the 2019 Strategic Report and 2019 Annual Report and Accounts, we continue to report the results of our businesses by market[2] on the basis they were managed in 2019. Read more in the 'Market review' section.

Our strategy

Our strategy is to simplify Aviva into a leading international Savings, Retirement and Insurance business delivering for our customers, shareholders, communities and other stakeholders. We have three strategic priorities:

Deliver great customer outcomes:
Our focus is on being the best place to meet our customers savings, retirement and insurance needs

Excel at the fundamentals:
Our focus is on the core activities of our business: underwriting, claims management, investment performance and cost efficiency

Invest in sustainable growth:
Our focus is on generating economic returns and long-term value for our shareholders

Read more about our strategy in the 'Our strategy' section.

Our Performance

Adjusted operating profit[3]
£3,184 million
2018 restated[4]: £3,004 million

IFRS profit before tax[5]
£3,374 million
2018: £2,129 million

Total dividend
30.9 pence
2018: 30.0 pence

Cash remittances[6]
£2,597 million
2018: £3,137 million

Operating earnings per share[6,7]
60.5 pence
2018 restated[4]: 56.2 pence

Solvency II return on equity[6]
14.3%
2018: 12.5%

Solvency II cover ratio[6,8]
206%
2018: 204%

Carbon emissions reduction since 2010
66%
2018: 60%

Read more about our performance and financial targets in the 'Key performance indicators' and 'Chief Financial Officer's review' sections.

1 UK Savings & Retirement is reported within UK Life in 2019.
2 In 2019 our markets are: UK Life, Aviva Investors, UK General Insurance, Canada, Europe and Asia.
3 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
4 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.
5 Profit before tax attributable to shareholders' profit.
6 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APM's, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
7 This measure is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.
8 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other Information' section of the Annual report and accounts for more information.

Chairman's statement

2019 was a year of change for Aviva. We reshaped our strategy and senior leadership team, while also facing a period of uncertainty in the external business environment, driven by lower interest rates and the UK decision to exit from the European Union.

On 4 March 2019, after a competitive process that included highly respected and experienced internal and external candidates, the Board was delighted to appoint Maurice Tulloch as Group Chief Executive Officer (CEO). During the year, with the support of the Board, Maurice initiated a review of our strategy in order to simplify Aviva into a leading international savings, retirement and insurance business delivering sustainable growth for shareholders and support for our communities. This strategy will allow us to fulfil our vision to earn our customers' trust as the best place to save for the future, navigate retirement and insure what matters most to them.

Our purpose

Throughout all of this change, it has been and continues to be our core purpose which illuminates our path forward. We are proud to say not only to our customers but to our people, our partners and our communities, that we will be with you today, for a better tomorrow. This means our customers can count on us to be there for them if things go wrong and to put it right, and to help them plan for their future. While the exact words used to express our purpose may have evolved, this continues to be the underlying promise that we navigate our company by, just as it has been over the last 323 years of our corporate history.

Our customers

The absolute commitment our people show to our customers every day also remains unchanged. I have always believed that their determination to live up to our value of 'Care More' is one of our greatest assets. This is one of the reasons why it was so important to incorporate our people's perspective as we set about creating a new articulation of our shared purpose.

The human connections that our people forge with our customers really are special. We are there to support them through some of the most important decisions or emotional moments in their lives. By drawing on our expertise and empathy to give them the best possible outcome, we can make a real difference to people when it matters most. And in doing so, we will ensure our financial strength and long-term future.

Our stakeholders

In the Strategic report we describe how the Board takes into account the interests of all our stakeholders. As an insurance company, we also understand better than most the imperative to act with urgency and conviction to help combat climate change. Although our environmental credentials are well-established, we are committed to doing more, both on our own account and in alliance with others. We have invested £6 billion in green assets since 2015 alone, including £3.8 billion in low carbon infrastructure (predominantly solar and wind power) and £2.2 billion in green and sustainable bonds. We expect this to increase significantly in the future.

In November 2019, Aviva signed up to the United Nations-convened Net Zero Asset Owners Alliance which brings together some of the world's biggest pension funds and insurers to commit to net zero greenhouse gas emissions in their investment portfolios by 2050. We are also committed to aligning our business to the target set out in the Paris Climate Agreement of limiting global warming to 1.5°C above pre-industrial levels.

Our communities

As a company, we have always understood that our duty of care reaches far beyond our customers to encompass all those who may be touched by our actions. Whether it is through the use of the volunteering leave granted to every UK employee each year, or through our strategic partnership with the British Red Cross, our people combine forces to build a future we all want to live in. This year also saw the further development of the Aviva Foundation which was created to use unclaimed shareholder assets to support good causes. The Foundation has so far committed £3.7 million in funding to projects that will support our communities and vulnerable customers when they need it most. This has included donations to a pilot project to provide a counselling package to vulnerable home insurance customers experiencing trauma following a serious event such as flooding; and funding a national programme to help people over the age of 50 increase their employability skills and to promote, among businesses, the benefits of being an age-friendly employer.

Changes to the Board

We have made a number of changes to our Board composition during 2019 in addition to the appointment of Maurice Tulloch as Group CEO. Andy Briggs and Tom Stoddard stepped down from the Board and looked to pursue other opportunities; we wish them both every future success. After a period as interim Group Chief Financial Officer (CFO), Jason Windsor, formerly CFO of Aviva UK Insurance, was appointed permanently to the role and also joined the Board of Directors on 26 September 2019.

After nine years of distinguished service, including as Chair of the Risk Committee, Mike Hawker retired from the Board on 31 March 2019. Following his appointment as Chairman of the Royal Mail, Keith Williams stepped down from the Board on 23 May 2019. On 31 December 2019, Glyn Barker and Claudia Arney both retired from the Board; Glyn after eight years including a period as Senior Independent Director and Claudia to focus on her expanded non-executive roles elsewhere. I am extremely grateful to them all for the valuable contributions they have made to the Board and Committees of Aviva plc.

We were delighted to welcome three new Non-Executive Directors to our Board this year, all with deep knowledge and experience of the financial services industry. Patrick Flynn, previously Chief Financial Officer of both ING and HSBC Insurance joined our Board on 16 July 2019. Patrick became Audit Committee Chair on 4 November 2019. George Culmer was appointed as a Non-Executive Director of the Company on 25 September 2019, having previously been Chief Financial Officer of Lloyds Banking Group and RSA Insurance Group plc. George assumed the role of Senior Independent Director following the departure of Glyn Barker. We also announced the appointment of Amanda Blanc with effect from 2 January 2020. Amanda was previously CEO at AXA UK & Ireland, and CEO, EMEA & Global Banking Partnerships at Zurich Insurance Group.

Finally, on 21 January 2020, I announced my intention to retire as Chairman during 2020. When I became Chairman in 2015, the Board asked me to commit to serving for at least five years. Now that Maurice has launched Aviva's strategy, a new senior management team is in place and the Board has been refreshed, it is also time for a new Chairman. In the meantime, I remain committed to this great organisation which I am confident will deliver for all its stakeholders. It has been my privilege to serve as Chairman, and I would like to thank the Board and indeed all my colleagues at Aviva for their support during the last five years.

Our performance

In 2019, we further strengthened our Solvency II capital position[1] and grew Group adjusted operating profit[2] by 6% to £3,184 million *(2018 restated[3]: £3,004 million)*. Group adjusted operating profit[2] benefited from improved performance in Canada and lower expenses and debt costs. IFRS profit before tax[4] increased to £3,374 million *(2018: £2,129 million)*, including higher Group adjusted operating profit[2] and positive investment variances driven by lower interest rates and equity market gains.

Dividend

At the full year 2018 results, we announced our move to a progressive dividend policy. In line with this policy, the Board proposes a final dividend for 2019 of 21.40 pence per share *(2018: 20.75 pence per share)*.

Looking ahead

Aviva faces the future with great optimism – accepting that it will hold challenges, and confident that our strategy and resources mean that we are well positioned to meet them and to prosper. This has been a year of evolution for us. With our new leadership now in place, we are aligned behind our strategy to create great outcomes for our customers and other stakeholders, and to deliver sustainable growth for our shareholders.

Sir Adrian Montague CBE
Chairman
4 March 2020

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APM's, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
3 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.
4 Profit before tax attributable to shareholders' profit.

Chief Executive Officer's review

Overview

Aviva made important changes to its business and leadership in 2019 and began to build operating momentum. This is reflected in our improved results, which included:

- Solvency II return on equity[1,2,3] of 14.3% *(2018: 12.5%)*;
- Growth in Solvency II net asset value per share, up 31 pence to 423 pence *(2018: 392 pence)*;
- Increased Solvency II capital surplus[2] and Solvency II shareholder cover ratio[2,3] at £12.6 billion and 206% respectively *(2018: £12.0 billion and 204% respectively)*;
- Group adjusted operating profit[4] up 6% to £3,184 million *(2018 restated[5]: £3,004 million)*; and
- Strong growth in operating earnings per share[3,6], up 8% to 60.5 pence *(2018 restated[5]: 56.2 pence)*.

The Board of Directors has declared a final dividend of 21.40 pence per share *(2018: 20.75 pence)*. This results in a full year dividend for 2019 of 30.9 pence per share *(2018: 30.0 pence)*, an increase of 3%.

Aviva has many positive attributes: high quality businesses, skilled and dedicated staff, a leading focus on sustainability and ESG and a large, loyal base of customers and intermediary partners. Our brand resonates with our customers and partners due to our track record of helping people to manage life's uncertainties by saving for the future, drawing a secure income in retirement and insuring what matters most to them.

My goal is for Aviva's portfolio of businesses to be best in class. We will achieve this through a relentless focus on the customer and commercial rigour as we execute our business plans and we will reallocate capital to maximise performance. In short, we will run Aviva better.

In 2019, our customer numbers were up 2% to 33.4 million and we improved growth in premiums and managed assets. There is much more to do, simplifying our business, reducing costs and navigating competitive markets to make Aviva a stronger, simpler and better company.

COVID-19 presents a new uncertainty in 2020. Our primary focus is the operational readiness and safety for our customers and staff, such that we continue to deliver on our promises. Our scale, diversity and the strength of our balance sheet allows us to meet any short-term challenges.

Structure, leadership and culture

In 2019, we made a number of changes to optimise our organisational structure and leadership. These changes were necessary to simplify our ways of working, improve operational efficiency and resilience. We now have greater focus, commercial rigour and accountability throughout the organisation.

In the UK, we separated management of our life and general insurance businesses, and our digital operations have been integrated back into the businesses to improve efficiency and customer delivery. Globally, we have reorganised our portfolio of major markets and strategic investments into five divisions with clear alignment of business model. Our objective is to compete and win in our markets by providing great customer outcomes and excelling at the fundamentals.

Aviva's leadership team has been strengthened and we have assembled a diverse and talented leadership group with proven success within their respective fields. With a mixture of internal promotions and external hires, my new team brings the expertise, ambition and focus required to grow our business profitably. The new team will help shape our culture, which remains focused on providing the highest standard of service and value for customers, maintaining leadership on environmental and social issues, while at the same time fostering greater commerciality, efficiency and accountability.

Progress against financial targets

At our capital markets day in November 2019, I outlined five key financial objectives that Aviva is targeting for 2022. Delivering these targets will provide a material enhancement in business performance and reinforce the sustainability of our progressive dividend policy and medium-term growth ambitions. In 2019, we made a strong start in pursuit of these objectives and we are on track to achieve our targets:

Solvency II Return on equity[1,2,3] (RoE) – 2022 target of 12%:
Aviva's RoE[1,2,3] was 14.3% in 2019, benefiting from favourable assumption changes. Meeting our 2022 ambition of a sustainable 12% RoE[1,2,3] will require improved underlying returns that will be achieved through cost reductions, organic business growth and active capital allocation to higher returning segments.

Operating capital generation[3] (OCG) – targeting £7.5 billion in 2019-22 inclusive:
In 2019, Group OCG[3] totalled £2.3 billion, representing approximately 30% of our four-year target.

Cash inflows[3] to centre – targeting £8.5 billion to £9.0 billion in 2019-22 inclusive:
Cash remittances[3] were £2.6 billion in 2019, representing approximately 30% of our four-year target.

Debt reduction – targeting £1.5 billion reduction in debt by 2022:
In 2019, we repaid £0.2 billion of subordinated debt, which was the total amount maturing during the year. With debt maturities of £2.7 billion in the next three years and continued strength in centre liquidity levels and cash generation, we expect to achieve our target, resulting in lower debt leverage[3] and declining interest expense.

Operating expenses[3] – targeting £300 million reduction in controllable costs[3] by 2022:
Controllable costs[3] were £3,939 million in 2019 *(2018: £3,968 million)*. Within this, we achieved net savings of £72 million[7] and incurred implementation costs of £59 million. We anticipate £150 million of savings (pre implementation costs) in our 2020 results, compared with our 2018 baseline.

1 Includes Group centre, debt costs and other items not allocated to the markets.
2 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other Information' section of the Annual report and accounts for more information.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APM's, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
5 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 2(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million and a reduction in operating earnings per share of 2.2 pence. There is no impact on profit before tax attributable to shareholders' profit.
6 This measure is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.
7 Constant currency.

Deliver great customer outcomes
At Aviva, delivering great customer outcomes is one of our strategic priorities. In 2019, our performance demonstrates that customers continue to choose Aviva to meet their savings, retirement and insurance needs. Across the Group, we have increased premium volumes and customer fund inflows. We have made further progress in service quality, with positive trends in net promoter scores, customer retention and resolving customer complaints.

Our response to natural catastrophes such as the recent storms in the UK showed Aviva at its best. We provided support to several thousand customers, responding quickly by helping fix damaged properties and using the latest technology to settle claims. We also identified vulnerable customers and worked with our network of suppliers to ensure these claims were given priority.

Natural catastrophes are happening with increased frequency around the world and sustainability is now a key focus for governments, corporates and the wider community. For many years, Aviva has been at the forefront of efforts to combat climate change. The products and services we provide are crucial in helping customers to prepare for, and respond to the challenges that a changing climate brings. We are also a leader in ESG, whether actively investing our customers' savings, or managing their retirement income. Aviva has been carbon neutral since 2006, is a signatory to the UN sustainable development goals and is committed to being a net zero asset owner by 2050. ESG matters to our customers, and it matters to Aviva.

Excel at the fundamentals
We aim to excel at the fundamentals and our 2019 results show the progress we have made in running Aviva better.

In UK Life, we increased sales across our product suite. In annuities & equity release, our capability in longevity data analytics, asset origination and transaction structuring enabled us to grow new business volumes by 29% to £6.2 billion *(2018: £4.8 billion)*. We delivered strong growth in bulk annuity sales, which included the first tranche (£1.7 billion) from Aviva's own staff pension scheme. In protection, 2019 was more challenging. Whilst new business volumes increased 4% to £1.9 billion *(2018: £1.8 billion)*, adverse experience, and higher reinsurance costs contributed to a reduction in profitability. We responded to these challenges by increasing sophistication of our pricing, underwriting and customer segmentation models.

In Investments, Savings & Retirement (IS&R), we improved customer net inflows despite the uncertain backdrop weighing on investor sentiment. UK Savings and Retirement net inflows[1] were £7.5 billion *(2018: 6.8 billion)* as we maintained our leading position in workplace pensions, winning significant new mandates and delivering strong client retention. We also continued to build momentum and increase share in the platform market. In asset management, investment performance has strengthened, with 84% of Aviva Investors' funds beating benchmark over a twelve month time horizon, while third-party net inflows[1] rose to positive £2.3 billion *(2018: negative £0.1 billion)*. Although 2019 was a challenging year for profitability at Aviva Investors, with a lower opening asset position and reduced asset origination weighing on results, the significant improvement in investment performance and flows are a step in the right direction.

In general insurance, net written premiums (NWP) increased 2% to £9.3 billion *(2018: £9.1 billion)*. We have continued to gradually and deliberately shift our business mix, with NWP from commercial customers rising 7% in the UK and 17% in Canada. Our focus on providing superior service to customers and intermediaries in the SME and mid-market has supported growth in new client acquisition and attractive retention. Our general insurance combined operating ratio (COR)[1] increased to 97.5% *(2018 restated[2]: 97.2%)* though this included an additional £113 million of costs allocated to the general insurance business as a result of the realignment of our digital operations. Excluding the 1.2 percentage point impact from these costs, our COR would have been 96.3%. The key driver of improvement was Canada, where we successfully responded to challenges in the auto insurance market, resulting in a 5.3 percentage point improvement in COR to 97.8% *(2018 restated[2]: 103.1%)*.

Our life businesses in Europe and Asia also expanded their customer franchises in 2019, with new business volumes up 9% and 15% respectively and European net fund inflows[1] remaining robust at £4.5 billion *(2018: £4.2 billion)*. In France, in the face of significantly lower interest rates, we increased unit linked new business volumes 46% through targeted campaigns and active engagement with our distribution partners. In Poland, we successfully launched a new protection product in the direct market and made a strong start in auto-enrolment, winning nearly 400 new corporate pension schemes covering more than 70,000 employees. In Singapore, we continued to invest in our leading financial advisor network, which provides customers with high levels of service and a wider array of product and provider choice compared with the traditional agency model.

An important element of our programme to run Aviva better is improving our efficiency. In June, we announced plans to reduce our controllable cost[1] base by £300 million per annum, net of inflation. This requires gross (pre-inflation) savings of approximately £500 million relative to our 2018 expense baseline of £4 billion. We have made good progress so far, achieving savings of £72 million[3] in 2019 and laying the groundwork necessary to increase savings to approximately £150 million in 2020.

Invest in sustainable growth
There is no shortage of ambition at Aviva and we have continued to invest in sustainable growth. This investment has been both direct, through deploying capital to write new business, and indirect, to improve the quality and cost effectiveness of our customer propositions and further enhance our data and risk management capability.

In November, we announced plans for Aviva Investors and our UK savings businesses to form a combined business segment called Investments, Savings & Retirement (IS&R). Under the leadership of Euan Munro, IS&R will bring together Aviva's global asset management capabilities with Aviva's leading UK workplace pension and platform operations. In addition to the growth potential of each business, their alignment enables Aviva to provide customers with unique, comprehensive solutions from accumulation of pension wealth through to drawing a secure income in retirement. The combination of an ageing society and increased private provision for retirement make this an attractive long-term growth opportunity. The £7.5 billion of net in-flows[1] in savings and retirement and £2.3 billion of third party net inflows[1] in Aviva Investors demonstrates that Aviva has the capability and the customer franchise to capture this growth opportunity

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APM's, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 Following the change in the definition of Group adjusted operating profit (see note 2(b)), COR now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets. Comparative amounts have been restated resulting in an increase in the prior period underwriting costs of £53 million and an increase in Group COR of 0.6%.
3 Constant currency.

We continue to invest in digital and technology. The integration of our digital activities into our business units will facilitate expense savings as we scale back or stop some activities which are either duplicated or judged not to offer future economic returns. However, we are also aiming to improve the connectivity and co-ordination of digital with our core customer facing businesses. As a result, we are continuing to invest across the group in initiatives that reduce run costs, enhance IT resilience and ensure that our businesses are able to offer service to our customers and distribution partners that is fast, fair and efficient.

Looking ahead

Aviva has made important structural changes and achieved good progress in pursuing our first goal of operational improvement. Our 2019 results showed evidence of our potential, with improved momentum on customer flows, assets and premiums, and a good start on delivering our financial targets.

My objective remains to run Aviva better. We will improve business performance enhancing returns through disciplined execution on expenses and underwriting. We will focus capital and resources where we can achieve competitive advantage and strong returns. We will take robust action across the portfolio where our performance falls short or where we can see a better way of delivering value to our shareholders.

Our foundations are strong and we have the necessary ingredients to succeed. Our franchises are well regarded by customers and partners, our capital position and risk management capabilities provide a secure footing. We have a team of talented colleagues across the group who are passionate about building a better tomorrow for our customers and providing attractive returns for our shareholders.

Maurice Tulloch
Group Chief Executive Officer
4 March 2020

Key performance indicators

We use a number of financial and non-financial metrics to help the Board and senior management assess performance against three dimensions: our strategic priorities (excel at the fundamentals, deliver great customer outcomes, invest in sustainable growth); our vision to earn our customers' trust as the best place to meet their savings, retirement and insurance needs; and our purpose: to be with you today, for a better tomorrow. These metrics are reviewed regularly to ensure that they remain appropriate.

These metrics include Alternative Performance Measures (APMs) which are non-GAAP measures that are not bound by the requirements of IFRS. Further guidance in respect of the APMs used by the Group to measure our performance and financial strength is included within the "Other Information" section of the Annual Report and Accounts. This guidance includes definitions and, where possible, reconciliations to relevant line items or sub-totals in the financial statements. The financial commentary included in this Strategic report should be read in conjunction with this guidance.

Changes to KPIs

In November 2019 we announced our new strategy, which is set out in more detail in the 'Our strategy' section. We also announced five financial targets focussed on economic value:

- Solvency II return on equity[1] – 2022 target of 12%
- Operating Capital Generation[1] – targeting £7.5 billion in 2019-22 inclusive
- Cash inflows to Group[1] – targeting £8.5 billion– £9.0 billion in 2019-22 inclusive
- Cost reduction – targeting £300 million reduction in controllable costs[1] by 2022
- Debt leverage[1] – targeting £1.5 billion reduction in debt by 2022

The KPIs to assess performance against these new targets have been included in the analysis below and in the Chief Financial Officer's review. New KPIs are identified by the symbol N.

Non-financial KPIs

Customer Net Promoter Score® (NPS®) R

NPS® is our measure of customer advocacy and we use it in nine of our markets to measure the likelihood of a customer recommending Aviva relative to our competitors. Our relationship NPS® survey shows four years of sustained high levels of customer advocacy in a challenging marketplace. We are working hard to earn customers trust by making things simple for customers thereby improving customer outcomes.

Number of markets in 2019:
at or above market average: **7**
2018: 8 2017: 7

below market average: **2**
2018: 1 2017: 2

Employee engagement

We give our people the freedom to act in line with our values to create an environment in which they can thrive through collaboration and recognition. We measure this through our annual global 'Voice of Aviva' survey. Engagement is down three percentage points to 73%, due to a period of uncertainty and change, however, the proportion of employees recommending Aviva as a great place to work is at an all-time high.

2019:
73%
2018: 76%
2017: 75%

Carbon emissions reduction

Since 2010 we have reduced carbon emissions (CO_2e)[2] from our day-to-day operations by 66% beating our 2020 target of a 50% reduction and making strong progress to our 70% reduction by 2030 target. We are a carbon-neutral company, offsetting the remaining emissions through projects that have benefited the lives of over one million people since 2012. In 2019 we have continued to reduce our operational carbon emissions through energy efficient technology, buildings and development of onsite renewable electricity generation. We have also added £717 million in low carbon infrastructure investments over the year.

2019:
66%
Reduction since 2010
2018: 60%
2017: 53%

Financial KPIs

Group adjusted operating profit[3] R

Group adjusted operating profit[3] increased by 6% to £3,184 million, which included significantly improved performance in Canada and lower expenses and debt costs. See the 'Market review' section for further details of the performance of our markets in the year.

2019:
£3,184 million
2018: £3,004 million[4]
2017: £2,975 million[4]

R Symbol denotes key performance indicators used as a base to determine or modify remuneration.

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APM's, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

2 CO2e data includes emissions from our buildings, business travel, water and waste to landfill.

3 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.

4 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million *(2017: £93 million)*. There is no impact on profit before tax attributable to shareholders' profit

Financial KPIs continued

Profit before tax attributable to shareholders' profit (PBT)

Profit before tax attributable to shareholders' profit increased to £3,374 million mainly due to growth in adjusted operating profit[1], and positive investment variances driven by lower interest rates, narrowing credit spreads and equity market gains.

2019:
£3,374 million
2018: £2,129 million
2017: £2,003 million

Operating earnings per share[1,2] R

Operating earnings per share[1,2] increased by 8% to 60.5p, mainly reflecting the growth in adjusted operating profit[3].

2019:
60.5p
2018: 56.2p[4]
2017: 53.0p[4]

Solvency II Return on equity[1] N

Group Solvency II return on equity[1] has increased by 1.8pp over the year primarily as a result of significant favourable assumption and modelling changes. See the 'Market review' section for further details of the performance of our markets in the year.

2019:
14.3%
2018: 12.5%

Solvency II Operating Capital Generation[1] N R

Group Operating Capital Generation[1] is £0.9 billion lower due to management actions impacting the Solvency Capital Requirement. See the 'Market review' section for further details of the performance of our markets in the year.

2019:
£2,259 million
2018: £3,198 million

Cash remittances[1] R

In 2019 cash remittances[1] from our markets decreased to £2,597 million *(2018: £3,137 million, including £1.25 billion special remittances from UK Life).* Within this, UK Life delivered £1,387 million (including £500 million of special remittances), and higher remittances were received from Canada, Europe and Asia.

2019:
£2,597 million
2018: £3,137 million
2017: £2,398 million

Controllable costs[1] N

Controllable costs[1] decreased by 1% to £3,939 million. The decrease in controllable costs[1] mainly reflects our focus on efficiency, partially offset by targeted spend on growth initiatives and IT simplification.

2019:
£3,939 million
2018: £3,968 million
2017: £3,840 million

Solvency II debt leverage[1] N

Solvency II debt leverage[1] has reduced by 2pp to 31%. This was due to a reduction in debt and an increase in Solvency II total regulatory own funds over 2019.

2019:
31%
2018: 33%

Estimated Solvency II shareholder cover ratio[1,5] R

We continue to maintain our strong financial position. During the year, the estimated Solvency II shareholder cover ratio[1,4] has strengthened by 2pp to 206% *(2018: 204%)* primarily as a result of total capital generation, partly offset by the payment of the Aviva plc dividend and repayment of hybrid debt.

2019:
206%
2018: 204%
2017: 198%

Value of new business on an adjusted Solvency II basis[1]

Value of new business on an adjusted Solvency II basis (VNB)[1] measures growth and is the source of future cash flows in our life businesses. VNB[1] increased by 2% to £1,224 million, mainly driven by growth in Bulk Purchase Annuity VNB[1] in the UK.

2019:
£1,224 million
2018: £1,202 million
2017: £1,243 million

Combined operating ratio[1]

The combined operating ratio (COR)[1] is a measure of general insurance profitability. The lower the COR[1] is below 100%, the more profitable we are. Reported COR[1] is broadly in line with 2018, with a better COR[1] in Canada offset by adverse movements in our other businesses. See the 'Market review' section for further details of the performance of our markets in the year.

2019:
97.5%
2018: 97.2%[4]
2017: 97.2%[4]

R Symbol denotes key performance indicators used as a base to determine or modify remuneration.

1 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

2 This measure is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.

3 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.

4 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million *(2017: £93 million).* There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, COR and operating earnings per share have also been restated to include the amortisation and impairment of internally generated intangible assets. Comparative amounts have been restated resulting in an increase in prior period COR of 0.6% *(2017: 0.6%)* and a reduction in the prior period operating earnings per share of 2.2 pence *(2017: 1.8 pence).*

5 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other Information' section of the Annual report and accounts for more information.

Read about our performance at www.aviva.com/about-us

Business model

Aviva exists to help our 33 million customers make the most out of life, to plan for the future, and to know that if things go wrong we will be with them to put it right. Aviva is a leading international Savings, Retirement and Insurance business and the largest multi-line insurer in the UK, our home market. We also operate in Europe, Canada and Asia.

Our business model defines us, differentiates us and helps us meet our customer's needs…

Our businesses
We have simplified our business into five new business divisions[1]:
- Investments, Savings & Retirement
- UK Life
- General Insurance
- Europe Life
- Asia Life

Our channels
Our customers can engage with us through multiple distribution and service channels:
- Digital applications
- Direct to customer
- Intermediaries, including tied agents and brokers
- Strategic partnerships and bancassurance arrangements

Our strengths
We have unique strengths as a business that gives us a significant competitive advantage:
- Strong technical skills
- Innovative analytical capabilities
- Diversified distribution
- Robust capital position
- Leading customer franchise
- Well recognised brand

Our skills
We have a wide range and blend of skills:
- Customer service
- Underwriting
- Risk management
- Claims management
- Digital innovation
- Data Science
- Asset and liability management

…through our products and solutions…

Investments and Savings
- Individual savings
- Workplace savings
- Advice and guidance
- Investments and asset management

Retirement
- Annuities
- Equity release mortgages
- Drawdown
- Pensions

Insurance
- Personal lines e.g. motor, home
- Commercial lines
- Protection
- Health

…from which cash and premiums are received…

Customers invest their savings with us. For a fee, we manage and administer their investments so they can grow their savings or secure an income in the future

Customers pay us premiums which we reinvest to provide them with income in their retirement, via a lump sum, regular payments or by releasing the money tied up in their property

Customers pay insurance premiums which we use to pay claims, protecting what matters to them. Our scale enables us to pool the risks and maintain capital strength, so we are there for our customers when they need us

…and sustainable value is created for…

Shareholders
We invest carefully so we can deliver sustainable, growing returns for our shareholders.

30.9 pence
Total 2019 dividend up 3%

Customers
Our customers benefit from a range of solutions to meet their needs, with easy access when and how they want it.

£33.2 billion
Paid out in benefits and claims to our customers in 2019

Communities
We play a significant role in our communities, including as a major employer and a long-term responsible investor.

Over 2,000
Community projects supported in 2019, helping over 1.2 million people

People
Our aim is for our people to achieve their potential within a diverse, collaborative and customer-focused organisation.

73%
Our employee engagement score in 2019

Read more about our business at www.aviva.com/about-us/who-we-are-and-what-we-do

1 From 2020.

The external environment

Our strategy has been developed to respond to and anticipate the following opportunities and challenges posed by the external environment and long-term trends impacting our industry. We acknowledge the risks these trends present and aim to turn these into opportunities for growth and delivery of our strategy.

Political and macroeconomic impact

Political and macroeconomic factors can impact the operating environment of our businesses in the UK and abroad. These include the continuation of modest economic growth, falling interest rates, political tensions in the UK and Europe around the finalisation of Brexit, trade pressure between the US and China, and potential volatility around the upcoming US elections.

In 2019, global GDP growth fell to its lowest rate since the financial crisis in 2008

2.8%

Source: IMF World Economic Outlook, October 2019

Active governments and regulators

Increasingly, governments are promoting private provision and reforms of services once funded by the State (e.g. pensions, healthcare) while regulators remain focused on customer outcomes, enforcing conduct and prudential supervision (e.g. Solvency II) as well as standardising insurance accounting (e.g. IFRS 17).

Increase in proportion of UK employees automatically enrolled in a workplace pension scheme between 2012 and 2019

32%

Source: Automatic enrolment, The Pensions Regulator, October 2019

Continuous advancement in technologies

'Big data' and advances in Artificial Intelligence are leading to new levels of simplicity, convenience and speed. These new technologies are offering advancements to traditional healthcare, allowing people to live longer, and access to new mobility options, in some cases moving from private ownership towards more efficient and cleaner modes of transport, while at the same time also increasing the challenges around the ethical use of data.

Expected increase in productivity caused by impact of Artificial Intelligence technologies by 2035.

40%

Source: Accenture, 2019

Climate change and sustainability

Climate change has increased the frequency of extreme weather events. These extreme weather events have resulted in an increase in political focus, regulation and focus on the economic and social impact of climate change. At the same time, customers have become more attentive to the environmental, social and governance (ESG) aspects of their saving and investment decisions.

Increase in annual inflows to ESG funds between 2018 and 2019

53%

Source: Morningstar, October 2019

New risks emerging in a connected world

New risks are emerging as a result of technological advancements in the provision and use of personal data, uninterrupted access to services, sharing of information, demise of traditional jobs, as well as development of new skills and capabilities – these changes can create demand for new saving, retirement and insurance products and solutions.

Estimated economic damage from cyber-attacks in 2018

$600 billion

Source: Munich Re, 2020

Read more about our risk management in the 'Risk and risk management' section of this Strategic report.

Our strategy

On 4 March 2019, Aviva announced Maurice Tulloch's appointment as Chief Executive Officer. Following his appointment, Maurice outlined his plans for a thorough review of the Group and business division strategies.

On 20 November 2019, we presented our refreshed strategy, purpose and vision, which are set out below.

'I am committed to running Aviva better. We will excel at the basics, giving customers a simpler, faster and more convenient service. Getting these fundamentals right will result in a simpler, stronger, better Aviva, while also improving returns for shareholders.'
– Maurice Tulloch, CEO

Our purpose

With you today, for a better tomorrow

Our purpose is the reason Aviva exists. Our roots reach back to 1696 and since those early days, we have been there for our customers when it really matters. We are here to help them make the most of life and know that if things go wrong, we will be with them to put it right. Our purpose inspires us to do the right thing. It reflects that we are deeply invested in our customers, our communities, our people and our planet. By caring more today we will leave a legacy to be proud of.

Our vision

To earn customers' trust as the best place to save for the future, navigate retirement and insure what matters most to them.

Our vision is ambitious but grounded. It is about being brilliant in our core areas of expertise and focusing where we have the strongest opportunities to make a meaningful difference.

Our strategy

Our strategy is to simplify Aviva into a leading international savings, retirement and insurance business delivering for our customers, shareholders, and communities.

We understand the fast-changing world around us and the implications these changes have on the needs of our customers. Our strategy aims to provide our customers with simplicity, speed and convenience, ensuring reliable service, good value products and transparent communication.

Under our new strategy we have set out three strategic priorities:
- Deliver great customer outcomes;
- Excel at the fundamentals;
- Invest in sustainable growth;

and we have simplified our operating model into five new business divisions.

We will deliver great customer outcomes

What this means

Our focus will be on meeting our customers' savings, retirement and insurance needs. We will simplify the way in which we interact with and serve our customers, promote resolution as early as possible and enhance our digital platforms. Through our well-known brand, it is our vision that customers will recognise Aviva as the best place to meet their savings, retirement and insurance needs.

We believe that this will lead to growth in new customers and improved retention of existing customers. We will monitor our progress through metrics including our trust and net promotor scores.

We will excel at the fundamentals

What this means

Our focus will be on the core activities of our business: underwriting, claims management, investment performance and cost efficiency. We will maximise our use of data and analytics and continue to digitise our business.

By pursuing strong performance across the fundamentals, we will embed a performance culture across our business.

We plan to achieve our cost saving target of £300 million over the next three years. We have achieved a £72 million saving in 2019 and initiatives are in place to deliver £150 million in our 2020 results, compared with our 2018 baseline.

We will invest in sustainable growth

What this means

Our focus will be investing with a clear commercial benefit. We will be selective with the opportunities we pursue and invest where we can generate economic returns and long-term value for our shareholders.

By adopting a rigorous investment framework, focused on value and capital return, we expect to generate increasing revenues, fund flows, capital, cash and profit.

We plan to invest £1.3 billion over the next three years in areas such as IT simplification, transformation of UK customer experience and mandated regulatory change.

When we get these priorities right, we succeed

Our three strategic priorities focus our actions to deliver our strategic and financial objectives. Evidence has shown that when we focus on these priorities, we deliver value for our customers, shareholders and communities, for example:
- By delivering great outcomes to our customers and their advisors we increased fund flows in our UK Advisor and Workplace Savings business, where assets under administration[1] grew by 73% (FY15 – 2019)
- By excelling at the fundamentals of underwriting in our General Insurance business, our UK digital aggregator QuoteMeHappy has grown by c.1.4 million customers since inception, while remaining efficient at a low expense ratio
- By being excellent at investment performance and technical expertise in our UK Life business, we have invested sustainably in the bulk purchase annuities market, growing new business from £2.6 billion in 2018 to £4.0 billion in 2019 as measured by the present value of new business premiums[1] (PVNBP).

As part of the strategy update in November 2019, we also set out new financial targets. These new targets focus on long-term economic value generation and confirm our commitment to deliver on our plan to reduce debt and maintain the progressive dividend policy and financial strength of the Group. Further information on the new financial targets can be found in the 'Key performance indicators' section.

Our values

Our four values are at the heart of how we do business. They are how we must operate:
- We **Care More** about our customers, our partners, our colleagues and the communities where we live and work
- We look for opportunities to **Kill Complexity**. We want to make things simpler for our customers and for each other so that we can all focus on what matters
- We **Never Rest** and have the ambition to be the best we can be
- And we **Create Legacy**, taking a long-term view to build a better and more sustainable future for everyone

1 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including reconciliation to the financial statements (where possible), can be found in the 'Other information' section of the Annual report and accounts.

Our businesses

Under our new strategy, we have simplified our operating model into five new business divisions[1]:

- Investments, Savings & Retirement
- UK Life
- General Insurance
- Europe Life
- Asia Life

This simplified operating model enables each business to focus on their strategic, commercial and operational priorities while still benefiting from overall synergies between divisions.

We expect all business divisions to deliver both cash flows and growth, however the balance will differ for each. This provides us with choices on how we allocate our capital and resources and ensures we generate the highest returns.

Below we set out an overview of each of these five new business divisions, including their updated strategy, key priorities and financial ambitions.

Investments, Savings & Retirement

Overview

Helping people meet their savings and retirement needs is one of the biggest challenges facing our communities. We have created a new division that will take on this challenge and provide us with an exciting growth opportunity. This division brings together our global asset manager, Aviva Investors, and our modern UK Savings & Retirement business[2] to create a wealth and asset management business. This business will serve a fast-growing market as consumers look to save for their future, safeguard against the unknown and enjoy income in their retirement years.

We are uniquely positioned to win in this business. We have a market leading brand, we are currently number one[3] in UK Workplace Pensions by assets under administration[4] (AuA) and as at 2019 Aviva Investors assets under management[4] (AuM) was £346 billion.

With a large customer base, scale of assets and strong advisor relationships, this division is well positioned for growth. It will also draw on our strong track record and expertise in the area of responsible investing.

'As we implement our plans, Aviva will become the leading provider of mass market savings and retirement solutions in the UK and the owner of a strong international asset management brand, serving third parties and global Aviva insurance businesses. I think it's an exciting future' – Euan Munro, CEO[5]

Key priorities for 2020:

- Realise value from the strong investment performance, environmental, social and governance (ESG) leadership, distribution reach and platform capability built over the last five years by: growing AuM by winning third party mandates at Aviva Investors, growing AuA by capturing more of the workplace and adviser markets in UK Savings & Retirement and growing Aviva Investors AuM across workplace and individual savings, by offering tailored and appropriate investment propositions to our customers
- Deliver holistic client and customer led propositions that unlock new segments of the market
- Build a strong Investments, Savings & Retirement brand to reposition ourselves in the market
- Deliver a market leading customer and client experience

Financial targets

- By 2022, annual net fund flows[4] of £10 billion from third party investors for Aviva Investors and £10 billion for UK Savings & Retirement.

UK Life

Overview

From 2020, our UK Life division incorporates three lines of business: annuities & equity release, protection & health and heritage. This division is key in generating sustainable cash flow.

We are already a leading provider within each of these three lines, evidenced by a strong franchise and leading market share positions, including: number one in individual annuities, number two in group protection and number two in individual protection. Across these lines we have a full suite of capabilities, including data analytics, underwriting, asset-liability management, scale efficiencies and access to Aviva Investors' solutions.

Our focus for UK Life is two-fold:

- Generate significant levels of capital and cash flow
- Recycle some of that capital to write profitable new business.

'UK Life is a fantastic business which I am incredibly proud to be leading. It has a central role to play in Aviva's success. My clear objective for this business is to deliver dependable growth in long-term cash flows' – Angela Darlington, CEO

Key priorities for 2020:

- Expand our annuity business with capital efficient growth in bulk purchase annuities to increase long-term cash-flows
- Capitalise on data analytics, scale and modelling techniques to better understand our target customers, distributors and risks, and to develop more focused pricing algorithms and services, which are attractive to new and existing customers and enhances overall performance
- Manage heritage savings to minimise operational complexity and optimise capital use
- Increase automation and digitisation to improve cost efficiency

Financial targets (Combined Investments, Savings & Retirement and UK Life)

- Solvency II return on capital[4] of 9.5% and cash inflows[4] to Group of £4.25-£4.75 billion (cumulative 2019 – 2022) and a special cash inflow[4] to Group of £0.5 billion (UK Life, 2019).

General Insurance

Overview:

Our General Insurance division helps protect our customers from loss in the event of damage to their property or assets, or injury to themselves or others for which they are responsible. We offer a wide a range of products to personal and business customers, including motor, home, travel and pet insurance, commercial property, liability and specialty covers such as classic car and boiler breakdown.

We provide General Insurance at scale in the UK and Canada and have an attractive European business operating in France, Ireland, Italy and Poland. We hold the number one market position in the UK, and number two in Canada and Ireland.

Our focus is on generating sustainable profitable growth through improving speed, simplicity and efficiency for our customers. In the UK, we have aligned our UK digital business with our UK General Insurance business to help deliver this. We will also build on our leading insurance expertise to expand our commercial lines business whilst continuing to optimise our potential in personal lines.

1 From 2020.
2 UK Savings & Retirement is reported within UK Life in 2019.
3 Number one by bundled workplace AuA, Broadridge UK DC & Retirement Income, 2018.
4 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including reconciliation to the financial statements (where possible), can be found in the 'Other information' section of the Annual report and accounts.
5 Subject to regulatory approval.

'We will be the best in the market at fundamentals. We will focus on speed of execution and we will simplify our business. Financial discipline in all decisions will be a core requirement. We will hold each other to account and there will be no excuses' – Colm Holmes, CEO

Key priorities for 2020:

- Focus on simplicity, speed and efficiency for our customers to strengthen growth and profitability across our business. To date we have already reduced the personal lines product suite by more than a quarter, and we continue to invest in our 'self-serve' claims technology
- Expand our commercial lines business by continuing to extend our strong small and medium enterprises position to mid-market and Global Corporate & Specialty portfolios
- Continue to deliver the recovery in Canada, following a 5.3pp improvement to combined operating ratio[1] in 2019 and expand by leveraging on our brokers and partnership with Royal Bank of Canada, which was recently extended to 2036

Financial targets

- Cash inflows[1] to Group of £2.0 – £2.5 billion (cumulative, 2019 – 2022), combined operating ratio[1] of 95% (2022), Solvency II return on capital[1] of 14% (2022) and achieve net written premium growth of 20% (2022 vs. 2018)

Europe Life

Overview:

Our Europe Life division offers a range of insurance savings, investment and protection products to customers who want to make the most of their money, plan for the future and protect against the unexpected. We operate across five countries, France, Italy, Poland, Ireland and Turkey and have eight million customers.

Europe Life has diverse distribution and focuses on maintaining a capital efficient product mix. We hold several strong market positions, including number two in Poland, number four in Ireland and number five in Italy. We have also grown our policyholder reserves to £120 billion at 2019.

Our focus will continue to be generating sustainable growth, while actively managing the low interest rate environment. We will achieve this by:

- Continuing to transform the product mix from guaranteed savings towards capital light products
- Expanding and investing in our distribution channels
- Focusing on the fundamentals of insurance to drive operational efficiencies, and
- Leveraging expertise and technology from across the Group

'It's my privilege to present our strategy for the European businesses, which continues to be a significant contributor to the Aviva Group. We contribute a material portion of the group operating profits and are an important part of the wider Aviva story' – Patrick Dixneuf, CEO

Key priorities for 2020:

- Further develop our multi-channel distribution capability and strengthen the awareness of our brand
- Continue to evolve the savings mix towards capital efficient unit linked and hybrid products
- Increase sales of protection products across our life customer base
- Simplify propositions and increase automation and digitisation to improve cost efficiency

Financial targets

- Solvency II return on capital[1] of 9.5% (2022) and cash inflows[1] to Group of £0.75 – £1.25 billion (cumulative 2019 – 2022)

Asia Life

Overview:

Asia Life comprises our businesses in Singapore, China, India, Indonesia, Vietnam and Hong Kong.

Our business in Singapore contributed 77% to Asia's total value of new business in 2019. Here, we are a leader in the financial advisor channel and operate a profitable business offering protection and savings products. Our aim is to continue to grow our market share and further extend our lead in the financial advisor and employee benefits segments with a broad customer footprint across private and public sectors.

In China, our joint venture company in partnership with COFCO continues to deliver strong growth, especially in the agency and broker channels, alongside margin expansion. Our plan is to further invest and extend these competitive advantages and continue to outperform our peers in value creation and profit growth.

In November 2019, we announced the sale of our stake in our Hong Kong joint venture, Blue, to our partner Hillhouse Capital, subject to regulatory approval. We are also in discussions with our partners in relation to our business in Vietnam and joint venture in Indonesia.

'Asia continues to be the growth engine for the insurance industry worldwide. Despite intense competition, Aviva focuses on leveraging our unique competitive advantages in individual Asian markets to continue to outperform our peers' – Chris Wei, CEO

Key priorities for 2020:

- Extend our lead in the financial advisor channel in Singapore
- Further invest in agency and productivity growth in China
- Maintain a value-focused approach in product mix and margins
- Streamline regional support functions to enhance efficiency

Financial targets (Singapore)

- Double digit Value of New Business[1] (VNB) and profit growth

Read about our businesses at www.aviva.com/investors/our-strategy.

1 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including reconciliation to the financial statements (where possible), can be found in the 'Other information' section of the Annual report and accounts.

Section 172 (1) statement and our stakeholders

Overview

We report here on how our directors have performed their duty under Section 172 (s.172) of the Companies Act 2006, and this statement reflects the contribution by the Aviva Group to the performance of Aviva plc. S.172 sets out a series of matters to which the directors' must have regard in performing their duty to promote the success of the Company for the benefit of its shareholders, which includes having regard to other stakeholders. Where this statement draws upon information contained in other sections of the Strategic report, this is signposted accordingly[1].

Our Board considers it crucial that the Company maintains a reputation for high standards of business conduct. The Board is responsible for setting, monitoring and upholding the culture, values, standards, ethics, brand and reputation of the Company to ensure that our obligations to our shareholders, employees, customers and others are met. Management drives the embedding of the desired culture throughout the organisation. The Board monitors adherence to our policies and compliance with local corporate governance requirements across the Group and is committed to acting where our businesses fail to act in the manner we expect of them.

Our Board is also focussed on the wider social context within which our businesses operate, including those issues related to climate change which are of fundamental importance to the planet's well-being. A detailed explanation of how Aviva continues to manage the impact of its business on the environment is outlined in the 'Corporate responsibility' section of the Strategic report.

Our culture

As the provider of financial services to millions of customers, Aviva seeks to earn their trust by acting with integrity and a deep sense of responsibility at all times. We look to build relationships with all our stakeholders based on openness and continuing dialogue.

Our culture is shaped by our clearly defined purpose – with you today, for a better tomorrow – to help ensure we do the right thing in Aviva. Throughout our business, we are proud that our people live by our core value of Care More for our customers, for each other and for the communities we serve. We value diversity and inclusivity in our workforce and beyond, and the 'Our people' section of this report sets out the strength of Aviva's culture in this regard and how that underpins everything we do every day.

Key strategic decisions in 2019

For each matter which comes before the Board, the Board considers the likely consequences of any decision in the long-term and identifies stakeholders who may be affected, and carefully considers their interests and any potential impact as part of the decision-making process.

In June 2019, we announced that our life and general insurance businesses in the UK will be managed separately, with our digital direct business integrated into UK General Insurance. This will enable stronger accountability and greater management focus on the UK's leading life and general insurance business. We also disclosed that we are targeting a £300 million per annum reduction in controllable costs[2] by 2022 (net of inflation), which will involve 1,800 role reductions across the Group.

In November 2019, we announced the outcome of a comprehensive strategic review of our business. Our strategy is to simplify Aviva into a leading international savings, retirement and insurance business delivering for our customers, shareholders and communities. We will achieve this by delivering great customer outcomes, excelling at the fundamentals and investing in sustainable growth. These actions will drive higher returns for our shareholders.

The Board determined that in order to progress its agreed strategic priorities, Aviva should be simplified into five operating divisions from 2020. This included the creation of a new business division; Investments, Savings & Retirement (IS&R). IS&R brings together Aviva Investors and our UK Life Savings & Retirement businesses to look after all stages of customers' savings and retirement needs.

As a result of our strategic review, we announced in November 2019 that we will retain our businesses in Singapore and China. We agreed the sale of our stake in our Hong Kong joint venture, Blue, to our partner Hillhouse Capital Group, and we are in discussions with our partners in relation to our business in Vietnam and joint venture in Indonesia. For further information on all these decisions, see 'Our strategy' in this Strategic report.

Our key financial decisions made during the year, including the adoption of a progressive dividend policy, our targeted £1.5 billion debt reduction and our planned investment of c.£1.3 billion in our operating businesses in the period to 2022, were all made in line with our long-term strategic goal of sustainable value creation. A full account of our financial performance is contained in the Chief Financial Officer's review within this Strategic Report.

1 The s.172 statements of our qualifying subsidiaries will be made available on the Aviva plc website.
2 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including reconciliation to the financial statements (where possible), can be found in the 'Other information' section of the Annual report and accounts

Stakeholder engagement

The table below sets out our approach to stakeholder engagement during 2019:

Stakeholders	Why are they important to Aviva?	What is our approach to engaging with them?
Customers	Our purpose, 'with you today, for a better tomorrow,' captures the reason we exist as a business. Understanding what's important to our 33 million customers is key to our long-term success.	• The Board receives regular reporting on customer outcomes and customer-related strategic initiatives throughout the year. We conducted reviews of the 'customer journey' within Aviva and of trust in the Aviva brand. • The Board closely monitors customer metrics and engages with the leadership team to understand the issues if our performance does not meet our customers' expectations. This is also reflected at each of our subsidiary boards. • During 2019, we reviewed our Board committee structures and repurposed the Governance Committee to the Customer, Conduct and Reputation Committee to ensure comprehensive scrutiny of all customer-related areas. • The Board continues to monitor and review developments concerning changes to our IT platforms which will allow us to simplify and support service delivery to our customers. • For further information on how we engage with our customers, please see the reports from each of our business divisions in the 'Market review' section of this Strategic report.
Our people	Our people's commitment to serving our customers is essential for us to deliver on our vision to earn customers' trust as the best place to save for the future, navigate retirement, and insure what matters most to them.	• Through employee forums, global internal communications and informal meetings, the directors engage with our people on a wide range of matters and act on the outputs of our annual global engagement survey. • The Chairman also chairs the Evolution Council (a diverse group of high calibre leaders from across the business), involving them in discussions related to the Group strategy and incorporating their insight into their final decisions. Council meetings are attended by a number of Non-Executive Directors. • Our directors have also attended meetings of Your Forum, our fully elected employee forum representing UK employees. • We believe these methods of engagement with Aviva employees are effective in building and maintaining trust and communication; allowing for openness, honesty and transparency and increasing innovation and productivity within the business. These methods of engagement also act as a platform for Aviva employees to influence change in relation to matters that affect them. • In line with our talent management programme, talent breakfasts were held with the Board and high potential employees. • Our people share in the business' success as shareholders through membership of our global share plans. • We are committed to recruiting, training and retaining the best talent we can find. We are proud to have been a pioneer in some areas of employee benefits, including providing six months paid parental leave for all UK employees. The Chairman remains a member of the 30% Club, a business-led organistion committed to accelerating progress towards better gender balance at all levels of organisations. Further information on our approach can be found in the 'Our people' section of this Strategic report.
Suppliers	We operate in conjunction with a wide range of suppliers to deliver services to our customers. It is vital that we build strong working relationships with our intermediaries, including around risk management and customer service.	• Our directors maintain oversight of the management of our most important suppliers and our operating subsidiary boards regularly review and report on their performance. During the year, we successfully progressed our migration to a new data centre infrastructure provider, including partial migration to the Cloud. • Our Board reviews the actions we have taken to prevent modern slavery and associated practices in any part of our supply chain and approves our Modern Slavery Statement each year. • All supplier-related activity is managed in line with the Group Procurement and Outsourcing business standard. This ensures that supply risk is managed appropriately in relation to customer outcomes, data security, corporate responsibility, and financial, operational, contractual and brand damage caused by inadequate oversight or supplier failure. • An important part of our culture is the promotion of high legal, ethical, environment and employee related standards within our business and also among our suppliers. Before working with any new suppliers, we provide them with our Supplier Code of Behaviour, and our interaction with them is guided by our Business Ethics Code. • In the UK, Aviva is a signatory of the Prompt Payment Code which sets high standards for payment practices. We are a Living Wage employer in the UK, and our supplier contracts include a commitment to paying eligible employees not less than the Living Wage in respect of work provided to Aviva in the UK.

Stakeholders	Why are they important to Aviva?	What is our approach to engaging with them?
Communities	We recognise the importance of contributing to our communities through volunteering, community investment, and long-term partnerships with non-governmental organisations, and as a major insurance company we are fully engaged in building resilience against the global impact of climate change.	• The Board receives regular updates on our community activities, including our strategic partnership with the British Red Cross, and our community investment directed through the Aviva Community Fund and the Aviva Foundation. • During the year, the Governance Committee supported the Board in this area by reviewing our Group Corporate Responsibility strategy and overseeing its implementation. This oversight will continue in 2020 through the Customer, Conduct and Reputation Committee. • Aviva and the British Red Cross have been working in partnership since 2016 to build safer and stronger communities in the UK and beyond, and many of our people have volunteered in support of this work including as Community Reserve Volunteers and through a Global Mapathon, to help map some of the world's most vulnerable communities, who otherwise could not easily be reached by aid organisations in crises. • Through the Aviva Foundation, we support the World Benchmarking Alliance which develops benchmarks to encourage sustainable business practices in relation to the UN Sustainable Development Goals. For further information, see the 'Corporate responsibility' section of this Strategic report. • Aviva was the first global insurer to become carbon neutral in 2006 and we continue to offset 100% of any remaining carbon emissions. • More on how the Board incorporates climate-related risks and opportunities into our governance, strategy and risk management operations is included in 'Our climate-related financial disclosures' in this Strategic report.
Regulators	As an insurance company, we are subject to financial services regulations and approvals in all the markets we operate in.	• As the subject of close and continuous supervision by our regulators, we maintain constructive and open relationships with them. We have a programme of regular meetings between the directors and our UK regulators. • This includes engagement on the management of our climate risk responsibilities to meet the requirements of the Prudential Regulation Authority's 2019 supervisory statement, 'Enhancing banks' and insurers' approaches to managing the financial risks from climate change'. • The Customer, Conduct and Reputation Committee enables continued focus in this area through its oversight of the regulatory landscape.
Shareholders	Our retail and institutional shareholders are the owners of the Company.	• The Board meets with shareholders at the Annual General Meeting which provides an opportunity, predominantly for our retail shareholders, to engage directly with the Board. • The Chairman, Senior Independent Director and Executive Directors have a programme of meetings with institutional investors during the year. The Board also receives regular briefings from our corporate brokers on investors' views. • A shareholder newsletter is published on aviva.com every quarter and provides shareholders with publicly available information including recent Board changes, financial or strategic updates, and information about our Aviva Foundation projects.

Our people

Our people are at the heart of our business. They play an integral role in fulfilling our purpose to be with you today, for a better tomorrow. Our focus for 2019 has been on continuing to transform Aviva's culture, making Aviva a great place to work with the people and skills we need to grow our business, and to simplify what we do and how we do it, so our people can maximise their focus on our customers.

Our diverse global workforce is made up of 31,181 colleagues, with more than 15,000 colleagues in our home market in the UK.

Our strategy

Our global people strategy sets out how we will accelerate the delivery of Aviva's strategy from the inside out. We will:

- Help our people to connect their work to our purpose and to our customers.
- Recruit, retain and develop the very best people, focusing especially on the fundamentals of insurance.
- Make our leaders accountable and empower them and their teams to act in line with our values, with an increased focus on performance.
- Embed inclusion throughout the business, making Aviva a place where everyone can be themselves.

Our values

Care *More*

We start with the customer and prioritise delivering a great outcome for them. We do the right thing, making sure we and those around us are acting with positive intent. We don't shrink from the tough conversations. We're in it together.

***Kill* Complexity**

We can list our priorities on one hand, picking a few things to do brilliantly. We make the call with the right information. We join forces and build it once.

Never *Rest*

We fail fast and learn fast, testing and learning at pace. We embrace digital. We are dissatisfied with the way things are done now. We challenge ourselves to learn about the cutting edge and harness it. We get it done at pace.

***Create* Legacy**

We invest with courage, taking smart risks and making good decisions to ensure we allocate our resources where they can do most. We think like an owner, taking responsibility. We go for more than quick wins. We take the long view.

Developing our people

Developing our people remains central to the work we do. We continue to build a digitally-enabled, life-long learning culture at Aviva, and focus on developing our talent and coaching capability. Highlights from 2019 include:

- We completed the global rollout of our flagship leadership programme – Leading for Growth. Over 2,000 leaders have now gone through the programme, and markets have been trained to provide ongoing delivery for remaining leaders and new recruits.
- We launched Emerging Leaders@Aviva – a new talent programme to spot and develop potential leaders early in their careers. There was significant interest with 1,000 applications for 134 places. There has been a strong gender and diversity mix (60% of participants are female), with very positive results to date.

- Our Women in Leadership Programme designed to accelerate high potential women for substantial business roles evolved. 170 women have now gone through the programme with 41% subsequently being promoted or taking on a broader role.
- It has been a very successful year for our Global Graduate Leadership Programme, with 51 graduates rolling off the programme and securing roles across the breadth of Aviva. 31 new graduates started in September (48% female).
- We've improved our on-demand learning offering with our migration to LinkedIn Learning, tying learning more closely to career progression and performance.
- We've continued to build and develop a professional internal global coaching faculty of around 100 "jobs-plus" coaches, providing valuable support and challenge to enhance the performance of our people.

Engaging our people

In 2019 our global Voice of Aviva survey focused on

- Business: Strategic Direction, Insurance Fundamentals, Leadership behaviours and
- People: Colleague Engagement, Colleague Wellbeing and Colleague Development.

Engagement remains high at 73% but is slightly down on 2018 (76%) due to a period of uncertainty and change. Although confidence in our strategy has fallen since the 2018 Voice of Aviva survey, this shift was to a 'wait and see' position as the 2019 survey was performed just before the new Aviva strategy was announced in November 2019. Verbatim comments reinforced this view with colleagues saying they were eagerly anticipating the new strategy and what this meant for them, as well as suggesting ways to improve customer service and how to make Aviva more commercially minded. However, colleagues also said they want more simplicity in processes and structures to help them to deliver this.

Pride, motivation and advocacy remain strong and consistent. The proportion of employees recommending Aviva as a great place to work is at an all-time high. Significantly more colleagues believe that Aviva cares for their health and wellbeing (up 6 points to 80%) and there have also been solid uplifts in the view that Aviva is a place where people are free from judgement or discrimination. This result in 2019 (82%) is now 13 points higher than in 2015 – a major improvement on Aviva's culture of inclusion in a short space of time. There is also a strong link between improvements on this metric and those colleagues who feel they have greater freedom to make decisions in their job.

Within Aviva we continue to take our responsibility to consult very seriously. We have a positive and constructive relationship with the trade union Unite as well as a fully elected all-employee representative body (Your Forum). The existence of Your Forum within Aviva is a key way of recognising that we all have a part to play in contributing to the debate on issues and opportunities impacting on our people and our organisation. During 2019, a full re-election process took place with the appointment of over ten employee representatives across the UK. We provided training and coaching for new and existing representatives to ensure that they had the skills and capabilities required to undertake this important role.

The representative bodies meet regularly with the Members of the Aviva Leadership Team throughout the year as well as the Chair of the Remuneration Committee. We believe that by doing so we encourage a culture of trust and open and honest communication that will help us ensure that our organisation is a better place to be. Following the launch of the Learning Agreement with Unite the Union in 2018, we have continued to see excellent examples of collaborative working, which has resulted in an increase in employees using the Apprenticeship Levy as well as building and fostering a culture of personal development and learning.

In 2019, we hosted a one-day conference on the topic of Redefining Resolution, following the successful launch and implementation of our Conflict Resolution and Mediation policy. The event was attended by nearly 200 external guests from a very broad spectrum of employers, highlighting how Aviva is helping to change the workplace and bring in new ideas through our policy agenda.

We have continued to attend and speak at a large number of public and governmental events to talk about Aviva policies, in particular around our market-leading Equal Parental Leave policy.

Diversity and Inclusion

Diversity and Inclusion are key to Aviva being a sustainable, successful business. An inclusive culture ensures employees are happier, can be themselves and work towards achieving their and the organisation's goals. Aviva's employees need to reflect our customer base and we continue to make sure all our customers are represented inside the organisation.

At the end of 2019, we had 31% female leaders *(2018: 31%)*. This has been achieved through targeted female development programmes, diverse short lists and a leadership team committed to change. In the UK, our mean and median gender pay gap and gender bonus gaps have all reduced marginally compared to the last two years. Whilst we welcome this movement, the change is minimal. It's too early to tell whether the actions we're taking are having a sustainable impact. We're committed to driving long term change and continue to focus on recruitment, progression and retention.

We are also committed to improving our ethnic diversity representation within our employee population and have launched an Ethnic Minority Leadership programme as well as sponsoring Uncovering Different Women, a report highlighting ethnic minorities in female resource groups and networks.

In November, we saw the second anniversary of our Equal Parental Leave policy. This policy has seen us as a first mover in the majority of our markets.

One of our drivers for an inclusive culture comes through our employee communities which were launched across all markets in 2018. There are six communities covering race and religion and social mobility; gender; sexuality and gender identity; caring responsibilities; age and mental and physical health. Over 6,000 employees have joined these communities so far. They act as a lobby group and conscience to the organisation and are actively sponsored by all members of the Aviva Leadership Team. Aviva does not have just one accountable executive for Diversity and Inclusion; all members are. Some of the notable contributions from the communities have been participating for the first time in Poland Pride, a series of activities marking Black History month, an event on the topic of Menopause and making sunflower lanyards available to colleagues (a discreet way for people with hidden disabilities to show they need additional support).

We have over 31,000 people working in our offices from Norwich to Singapore. Each of our colleagues brings unique knowledge and experience, attitudes and ambitions. It's important to us that everyone is involved including those with visible and invisible disabilities. We make reasonable adjustments for our people and also for candidates who are interested in working for us. As a Disability Confident Employer; a Government scheme that supports employers to make the most out of the talents that disabled colleagues can bring to our organisation, we will interview every disabled applicant that meets the minimum criteria for the job and offer Workplace Adjustment Passports to colleagues. Our AvivAbility community is for all colleagues with an interest in disability and engages with Aviva and the wider community to build interest around the topic of Visible and Invisible disabilities to increase awareness and acceptance of all disabilities and highlight the value that these individuals bring.

Health and wellbeing

We remain focussed on our employee health and wellbeing as vital to our success and growth. Our employees believe we're getting it right, as our Voice of Aviva Survey in September 2019 saw global colleagues score 80% for "Aviva values my health and wellbeing" (rising from 74% the previous year), and for the UK specifically the score was 82%.

In 2019, we've continued to deliver our Wellbeing@Aviva programme in the UK. We reviewed elements in place since it launched in 2017, making sure it continues to meet our colleagues' needs, and adding to it where appropriate. We continue to support colleagues to Be Healthy, Be Mindful, Be Secure and Be Awesome – supporting their physical, mental, financial and social wellbeing.

Some specific highlights from 2019 include:

- The launch of Digital GP – giving our UK colleagues free access to a GP via an app 24/7. From January 2019 to September 2019, 4,185 colleagues had registered on the app, with 1,301 GP appointments, 1,093 prescriptions and 170 specialist referrals made.
- We continue to offer colleagues the yearly free Headspace app – with over a million minutes of meditation since the launch of the programme. We also continue to train our leaders on mental health awareness. As a result, over 90% of leaders now feel they are comfortable having conversations about mental health with their team/peers and managers. They also know about and are comfortable signposting colleagues to the resources available to them.
- We rolled out wider financial wellbeing support including
  - The Mid Life MOT – visiting each of our UK locations to support the wealth, work and wellbeing of our 45+ population. The sessions booked up quickly, and voluntary attendance averaged 82%. Designed to boost confidence in wealth, work and wellbeing, and to raise awareness of where colleagues could seek support, the sessions met their goal with attendees scoring a 22% increase in confidence and a 34% increase in awareness of where to get support.
  - Continued to deliver the My Retirement My Way seminar to colleagues close to retirement, with sessions booked up within a few days of being announced and oversubscribed.
  - Created new presentations on Company pension and Reward, to make sure colleagues understand what they receive from being an Aviva employee.

Our plans for 2020

In 2020, our People priorities will be focused around the role our people play in delivering Aviva's refreshed strategy. We will build on the best of our culture, becoming more performance led and focused on customer outcomes. We will help our people connect to our purpose and the difference we can all make to Aviva's success.

At 31 December 2019, we had the following gender split:

Board membership
Male
6

Female[1]
3

Senior management
Male
888

Female
402

Aviva Group employees
Male
15,193

Female
15,988

The average number of employees during 2019 was 31,791 *(2018: 31,232)*.

Read more about our approach to responsible and sustainable business in the 'Corporate Responsibility' section of this report and our people strategy at www.aviva.com/about-us/our-people.

1 Independent Non-Executive Director Claudia Arney retired with effect from 31 December 2019. Amanda Blanc was appointed as an Independent Non-Executive Director with effect from 2 January 2020.

Corporate responsibility

At Aviva, we know that in order to earn the trust of our customers we need to act responsibly and sustainably every day. Only then will we be able to meet our strategic priorities and live out our purpose to be: 'with you today, for a better tomorrow.'

As a company we aim to do the right thing for the long term. We are deeply invested in our people, our customers, our communities and our planet. By caring more today, we can leave a legacy of which we can be proud.

A forward-looking approach
In 2019, as part of our commitment to bring our business into line with the Paris Agreement (a United Nations-backed global treaty to limit global warming), we committed to ensuring our assets have a 'net zero' carbon impact by 2050. Aligned to this we are also in the process of refreshing our wider responsible and sustainable business strategy (2020-2025), based on insight from over 9,000 stakeholders across the world. We look forward to sharing more on our new strategy in 2020.

This year also marks the end of our previous five-year Corporate Responsibility (CR) strategy. We are proud to have met or beaten a number of our ambitious targets over this period, including reducing our CO_2e emissions by 66% since 2010 (target: 50% reduction), supporting 4.8 million beneficiaries through our CR programmes (target: 2.5 million) and investing over £3.8 billion in low carbon infrastructure since 2015 (target: £2.5 billion).

The following sections outline the key areas of progress we have made over the course of 2019.

Putting the customer at the centre of everything we do.
In order to deliver great customer outcomes, we are committed to helping our 33 million customers protect what's important to them and save for a bright future. In 2019 we paid out £33.2 billion in benefits and claims around the world.

We know the importance of providing excellent customer service, as demonstrated through our businesses' Net Promoter Scores®, which are our measures of customer advocacy. Seven out of nine of our businesses are at or above the market average NPS®, which quantifies the likelihood of a customer recommending Aviva.

But we know that we do not always get it right and we take any complaints and feedback we receive seriously and investigate them thoroughly. Our customer service commitment is reflected in the Customer Experience Business Standard all our markets abide by (see the policies section of www.aviva.com/social-purpose).

Our more than 60 green or accessible products and services across the world enable our customers to be more environmentally responsible or give them easier access to the protection they need for themselves and their families. (More details can be found in our Corporate Responsibility Reporting Criteria 2019 on www.aviva.com/social-purpose).

In the UK last year, we launched a pilot with Moneyline (a leading not-for-profit social lender) offering a home contents insurance product. This is designed to support low-income, financially excluded customers and can be arranged at the same time as taking out a short-term loan. This will provide lessons on how to encourage low income households to take up insurance protection against financial loss.

In Aviva Singapore, we are going beyond paying out critical illness claims and are partnering with the Singapore Red Cross to set up a pilot 'Disability Fund' for our customers. This fund will help them use their pay-out effectively by paying for subsidised services such as transport to and from medical appointments, rehabilitation at a day activity centre and digital home monitoring to keep people safe.

Aviva Poland's anti-smog campaign continues to benefit customers. Over the last two years the campaign has seen us fund the addition of 400 external air quality sensors to the national network, with over half of these sensors placed in areas voted for by the public. The sensors are accompanied by a downloadable app, to help people keep track of pollution in their city and adjust their actions accordingly for the good of their health.

Creating a better tomorrow for our planet
To create a better tomorrow, we need to look after the planet we call home. Our plan to help tackle climate change is backed by our long history as a leader in sustainable practices.

We continue to manage the impact of our business on the environment. Our Corporate Responsibility, Environment and Climate Change business standard focuses on the most material operational environmental impacts, which we have identified as greenhouse gas emissions.

Our operational global greenhouse gas emissions data boundaries show the scope of the data we monitor and the emissions we offset. We report on Greenhouse Gas (GHG) emission sources on a carbon dioxide emissions equivalents basis (CO_2e) in respect of Aviva's Group-wide operations as required under the Companies Act 2006 (Strategic report and Directors' reports) 2013 Regulations. We also refer to the GHG Protocol Corporate Accounting and Reporting Standard, and emission factors from the UK Government's GHG Conversion Factors for Company Reporting 2019. The table below shows the absolute operational carbon emissions:

Tonnes CO_2e	**2019**	2018	2017
Scope 1	**14,207**	16,198	17,915
Scope 2	**21,340**	25,012	31,280
Scope 3	**14,628**	17,739	19,305
Absolute CO_2e*	**50,175**	58,949	68,500
Carbon offsetting**	**(50,175)**	(58,949)	(68,500)
Total net emissions	**—**	—	—

* 2019 Assurance provided by PricewaterhouseCoopers LLP available at www.aviva.com/CRkpisandassurance2019
** Carbon offsetting through the acquisition and surrender of emissions units on the voluntary and compliance markets.

Scope 1 – natural gas, fugitive emissions (leakage of gases from air conditioning and refrigeration systems), oil, and company owned cars.

Scope 2 – electricity.

Scope 3 – business travel and grey fleet (private cars used for business), waste and water.

The following table shows the carbon intensity of our operations:

	CO_2e tonnes per employee	CO_2e per £m GWP
2019	**1.0**	**1.61**
2018	1.6	2.06
2017	1.6	2.48

To date globally we have achieved a 66% reduction in CO_2e against our 2010 baseline and we have committed to align our business to the 1.5°C Paris targets, as outlined in the climate-related financial disclosure section of this Strategic report.

As well as cutting our emissions every year, we have offset any remaining emissions to ensure our business impacts have been 'carbon neutral' since 2006. We have helped make over 1.2 million people's lives better since 2012 through our carbon offsetting projects. This includes provision of household water filters in Laos and Cambodia, providing safe water.

In 2019 we completed the installation of an innovative solar car port at one of our UK offices – Norwich Horizon. From April until the end of October, 89% of the daytime electricity demand for the office was covered by the solar carport, with the rest coming from renewably sourced energy via the national grid. Our award-winning Smart Building Management approach in Ireland has also reduced electricity use by 3% and gas use by 25% from May to December 2019.

At the start of 2019, Aviva UK exited underwriting the standalone operational fossil fuel power market as part of its commitment to help tackle climate change. In July 2019 we became a founding signatory of the Powering Past Coal Alliance Finance Principles. Then in November we launched 'Aviva Renewable Energy' – an integrated package of insurance designed specifically to support large companies in the complex market of renewable energy, including onshore windfarms, solar power and battery storage. Overall, we have significantly reduced Aviva's underwriting exposure to coal to practically zero.

Aviva has a proud heritage in sustainability and was the first global insurer to become carbon-neutral in 2006, while Aviva Investors has invested £6 billion in green assets on behalf of Aviva and external clients since 2015. This includes £3.8 billion in low-carbon infrastructure, such as wind farms and solar panels, and £2.2 billion in green bonds.

Under the Carbon Reduction Commitment Energy Efficiency Scheme, we reported total emissions of 55,374 tonnes of CO_2e in 2019 costing £1,013,344. This mandatory scheme is limited to UK business emissions from building energy and includes the property portfolio of our investment funds managed by Aviva Investors.

Having acknowledged the growing numbers of our customers, colleagues and partners speaking up about the issue of plastics, our workplaces are now free of single-use plastic containers in all our markets bar one, which has a roadmap to do so in the first half of 2020.

More details of our environmental KPI data and our independent assurance process can be found at:
www.aviva.com/CRkpisandassurance2019.

Making an impact in communities

Since 2015, we have invested over £67.6 million in our communities, including £16 million in 2019 *(2018: £17.6 million)*. This has helped 4.8 million people during the last five years (1.2 million in 2019) and supported over 9,800 local community projects (2,080 in 2019). This beats our 2015-2020 target of 5,000 projects.

The last five years of our Aviva Community Fund programme has supported over 3,000 local projects in ten Aviva markets, investing over £13 million to help build capability and capacity in the charity sector. In 2019 Aviva France continued their ambitious Aviva La Fabrique programme, which saw 46 social entrepreneurs awarded a share of one million euros following over 1.5 million public votes. The Aviva La Fabrique Impact Fund was also set up to allow investors the opportunity to invest in these social enterprises.

Aviva Canada, a major general insurer, is also linking its core business expertise to its community investment. In 2019, the business launched its new social impact platform, Aviva Take Back Our Roads, which aims to make Canadian roads and school zones safer for all. The data-driven platform includes on-the-ground community projects, adoption of innovative safety products and technology, and utilises our employees' expertise to help solve road safety issues.

In total, 11,600 of our people globally have contributed more than 68,200 volunteering hours to support their local communities throughout 2019. They also gave or fundraised over £2.1 million.

Last year the Aviva Foundation in the UK invested unclaimed assets of shareholders through grants and social enterprise investments. In 2019 the Foundation has now committed to giving £3.7 million to nine non-profit organisations and social enterprises that, working with our business, can support our communities and vulnerable customers. This has included funding counselling for vulnerable home insurance customers who experience trauma following serious events such as flooding.

In 2019 we renewed our strategic partnership with the British Red Cross for a further two years. This has enabled us to continue to work together to make communities safer, stronger and more resilient in times of uncertainty and crisis. This in turn will help them to recover quicker when a disaster strikes. Projects in 2019 have included the launch of an innovative 'forecast-based financing' initiative. This resulted in Aviva supporting the Indonesian Red Cross in developing an early action protocol in Indonesia. Once completed, the protocol will be activated when severe flooding is forecasted, building resilience by enabling communities to act and be helped before crisis strikes and therefore reducing the impact it has on their lives. In support of this project, over 450 of our people mapped over 60,000 buildings in urban Indonesia in one week. These maps will help the Red Cross to prioritise who and what could be impacted during a disaster and determine the help they will receive ahead of time.

Good governance and business ethics

We are committed to the highest standards of ethical behaviour as outlined by our Business Ethics Code. This underscores our commitment to operate responsibly and transparently. We require all our people, at every level, to read and sign-up to our Code every year (99% of our employees did so in 2019).

We have a zero-tolerance approach to acts of bribery and corruption. To manage this risk, we have a risk management framework which sets policies and standards across all markets. These policies and standards apply to everyone at Aviva and it is the responsibility of CEOs (or equivalent) to ensure that their business operates in line with them.

The Financial Crime Business Standard, and supporting Minimum Compliance Standards, guide our risk-based financial crime programmes. These seek to prevent, detect and report financial crime, including any instances of bribery and corruption, while complying fully with relevant legislation and regulation. We use risk-based training to ensure employees and others acting on Aviva's behalf know what is expected of them and how they should manage bribery and corruption risks.

At a Group level, the Chief Risk Officer provides Aviva's Board Governance Committee[1] with regular reporting on financial crime matters. These include Aviva's anti-bribery and anti-corruption programme.

Our malpractice helpline, Speak Up, makes it easy to report any concerns in confidence, with all reports referred to an independent investigation team. In 2019, 89 cases were reported through Speak Up (*2018: 50*), with four related to bribery and corruption concerns. 59 cases reached conclusion, and 30 remain under investigation. There has been no material litigation arising from any case reported in 2019.

1 From 1 January 2020 this Committee has become the Customer, Conduct and Reputation Committee. Further details are available in the Governance Report in the Annual Report and Accounts.

We conduct due diligence when recruiting and engaging external partners. At the end of 2019, 98% of our UK and Ireland registered suppliers have agreed to abide by our Code of Behaviour (or provided a reason why they didn't do so, for example, because they have their own existing code of behaviour). Our Code of Behaviour outlines the way in which we commit to behave in our dealings with each other and includes guidance on financial crime laws and regulations.

We continue to work with our suppliers to promote the real Living Wage and include a Living Wage clause in all appropriate contracts. We are also working with the Living Wage Foundation to pilot and implement the new Living Wage Foundation standard, 'Living Hours', to ensure that workers have sufficient, predictable hours, for which we won the Global Sourcing Association Award 2019 for Social Programme of the Year.

Our Board Governance Committee[1] oversees our responsible and sustainable business strategy and the policies that underpin it. Aviva plc is subject to the UK Corporate Governance Code (the Code), which we aim to comply with fully. Kirstine Cooper, Group General Counsel and Company Secretary, is the Aviva Leadership Team member responsible for corporate responsibility and sustainability, and the topic has been covered by the Board Governance Committee[1] three times during the course of 2019, as well as once at the Aviva plc Board and twice at the Board Risk Committee.

Details of the Company's compliance with the Code can be found in the Directors' and Corporate Governance Report in the Annual report and accounts and online at www.aviva.com/investors/corporate-governance. The activities of the Board Governance Committee can be found in the Governance Committee Report in the Annual report and accounts.

We have assessed the environmental risks that we face as a business. The most significant of these is the potential impact of climate change on our customers' lives and our company's assets. More detail can be found in the 'Risk and risk management' section and in 'Our climate-related financial disclosure' sections of this Strategic report.

We also manage the risks associated with our community investment activities through the controls outlined in our overarching Corporate Responsibility Business Standard. This includes a governance framework for our charitable donations and partnerships and details of how we manage the risks associated with employee volunteering (for example, through safeguarding). This standard is reviewed each year and communicated to all Aviva businesses.

Our support for human rights

We are committed to supporting the human rights and anti-modern slavery agenda both within the organisation through our operations, and outside of it through partnerships and collaboration.

Our human rights policy[2] identifies our main stakeholders and the most salient human rights issues for our business. The scope of this policy is group-wide and sets out the Group's commitment to respect human rights.

Within our own operations, in 2019 we:

- Completed human rights due diligence in a number of key markets, reviewing their risk approach in areas including governance, employees, customers and investments. To date, 15 markets have completed an impact assessment including the UK, China, Turkey, Vietnam, Singapore, Italy and India. The assessments allow markets to prioritise the most important actions to enhance Aviva's work on human rights.
- Engaged key suppliers on the topic of human rights and conducted modern slavery threat assessments on a range of those suppliers who, based on their sector, are at a higher risk of being exposed to modern slavery. Since 2018 we have completed 18 assessments, with no cases of modern slavery being discovered at Aviva or in our supply chain. The assessments provide suppliers with the opportunity to spot any potential risks or control gaps which we then work with them to address. In 2019 we have conducted modern slavery training for key employees in five markets.

We also work with trusted partners to enhance our approach. This includes the Slave Free Alliance, whose insights we use to both improve our strategic approach to modern slavery, and to train our staff across different markets on human rights and modern slavery issues. These workshops have ensured our people understand the complexities of modern slavery and human trafficking, help them to spot the signs of it, and teach them how to respond in the event that a case is identified. We also continue our work with the UN Global Compact as part of the UK Working Group on modern slavery.

Finally, we use our influence and connections to bring others together and enhance the industry's wider understanding of, and impact on human rights. For example, we worked with the World Benchmarking Alliance (WBA) in 2019 to organise and host the official launch of the third Corporate Human Rights Benchmark (CHRB) 2019 rankings, in our role as funder and founding member.

For our complete modern slavery statement, please see: www.aviva.com/modernslaverystatement.

Towards a more sustainable future

Aviva is not just an insurer but an investor in the economy, investing in buildings, infrastructure projects and companies around the world to help our customers save for their future. We do this, in part, through Aviva Investors (AI), our global asset management company with a heritage in responsible investing dating back to the early 1970s.

We invest responsibly with Environmental, Social and Governance (ESG) considerations a central pillar of our investment process[3], because we believe it minimises risk and allows us to spot opportunities for our customers, empowering them to make more informed decisions. This process includes areas like climate change, human rights, plastics and gender diversity.

During 2019 Aviva Investors enhanced their responsible investment processes and embarked on a global, company-wide initiative to fully embed them across all asset classes. We have reached some important milestones. These include:

- Establishing a new responsible investment philosophy, setting out our responsible investment commitments as a business.
- Agreeing and implementing specific ESG integration policies for each of our investment functions: Credit, Equities, Multi-Asset and Macro, Real Assets and Solutions.
- Developing a framework for new products and solutions that meet the specific needs and values of our clients including building a Sustainable Outcomes Funds Range linked to the United Nations Sustainable Development Goals (SDGs). We have already launched the first two products in the range – the Sustainable Income and Growth Fund and the Climate Transition European Equities Fund – and will develop several more in the next three years.
- Working with Aviva UK Life to design funds for customers who want more bespoke solutions. For example, in July 2019 Aviva UK launched the 'Stewardship lifestyle strategy' – a workplace pension default investment strategy, marking the first time an investment strategy has been solely based on the Aviva Investors Stewardship Funds. These funds were also then launched onto Aviva UK's Adviser Platform, providing a new ethical and ESG option for pension customers.

1 From 2020 this Committee has become the Customer, Conduct and Reputation Committee. Further details are available in the Governance Report in the Annual Report and Accounts.
2 Our humans rights policy can be found at www.aviva.com/content/dam/aviva-corporate/documents/socialpurpose/pdfs/policies-responses/20171025-Human-Rights-Policy-Final.pdf
3 Please note there are no specific ESG restrictions on the Investment Manager's decision.

We also continue to play our role as a responsible asset owner engaging with the companies, projects and assets we own on issues such as climate change, human rights and diversity. For example, Aviva Investors worked with other investors on a resolution encouraging the oil and gas company British Petroleum to do more to show how its strategy is consistent with meeting the Paris Agreement – which passed with 96% support at its AGM.

We believe in the need to encourage change not just with the companies we invest in, but in our industry and economy as a whole. In September 2019, Maurice Tulloch, Global CEO, attended the UN General Assembly in New York to demonstrate our commitment to be a company that makes a difference. We know that an unsustainable planet creates huge risks for our business and our customers – so we engage with governments and policymakers to try and fix the financial system and make sure more money goes towards building a sustainable future. At the event he talked about the need for a Marshall Plan for the planet, an ambitious plan to change the financial system for the better.

We continue our support of the World Benchmarking Alliance (WBA), alongside the United Nations Foundation. The Alliance is committed to establishing public, transparent and authoritative league tables, ranking companies on their contribution to the SDGs. In 2019 the WBA published their first two rankings on sustainable seafood and climate change. In 2020 this will be accelerated with the publication of a suite of rankings addressing food and agriculture, digital inclusion and gender equality and empowerment.

Corporate Responsibility (CR) key performance indicators (including 2017-2019 figures) and the accompanying limited assurance statement by PwC can be found in Aviva's Environmental, Social and Governance Data sheet on www.aviva.com/social-purpose. Our CR Summary 2019 will be released later in 2020. More details of our internal diversity, inclusion and wellbeing approach can be found in the 'Our people' section of this Strategic report.

Chief Financial Officer's review

Key financial metrics

A summary of the financial metrics used to measure our performance, including key performance indicators and alternative performance measures (APMs) where appropriate, is shown below. Further guidance in respect of the APMs used by the Group is included in the 'Other information' section of the Annual report and accounts.

	2019 £m	Restated[7] 2018 £m	Sterling Change	Sterling % change
Group adjusted operating profit[1]	**3,184**	3,004	180	6%
Operating earnings per share[2,3]	**60.5p**	56.2p	4.3p	8%
IFRS profit before tax[4]	**3,374**	2,129	1,245	58%
Solvency II return on equity[2,5,6]	**14.3%**	12.5%	1.8pp	—
Solvency II operating own funds generation[2,6]	**2,257**	2,022	235	12%
Solvency II operating capital generation[2,6]	**2,259**	3,198	(939)	(29)%
Cash remittances[2]	**2,597**	3,137	(540)	(17)%
Controllable costs[2]	**3,939**	3,968	(29)	(1)%
Debt leverage[2]	**31%**	33%	(2)pp	—
Estimated Solvency II shareholder cover ratio[2,6]	**206%**	204%	2pp	—
Value of new business on an adjusted Solvency II basis[2]	**1,224**	1,202	22	2%
Combined operating ratio[2]	**97.5%**	97.2%	0.3pp	—

As set out in the 'Our strategy' section, in November 2019 we announced new financial targets focused on economic value. We also announced that we have simplified our operating model into five new business divisions from 2020. The 'Market review' section sets out the main changes relating to the new divisions and summarises the performance of our markets during 2019 on the basis on which they were managed during the year.

In the Business performance review on the next page, our 2019 performance against our new targets has been presented having regard to the new business divisions. UK Life and Investments, Savings & Retirement have been presented together for both the Solvency II operating capital generation[2] and Solvency II return on capital[2] metrics. This is consistent with the targets presented at the capital markets day in November 2019. Other key performance indicators have been presented separately for UK Life and Aviva Investors.

Overview

In 2019, the external environment provided both positives and challenges. Economic growth was subdued across most developed economies and government bond yields fell sharply in the second half of the year, moving into negative territory in a number of European countries. However, equity markets rebounded and were supportive for asset values. The political backdrop remained a source of uncertainty, particularly in the UK, where the December general election weighed on confidence and activity across the economy.

Aviva is designed to perform whatever the external environment and made good operational progress in 2019, delivering increases in customer activity levels and profitability across our businesses. Group adjusted operating profit[1] increased 6% to £3,184 million *(2018 restated[7]: £3,004 million)* while Solvency II return on equity[2,5,6] was 14.3% *(2018: 12.5%)*, continuing to benefit from favourable assumption changes.

We also further strengthened our financial position. Our Solvency II capital surplus[6] rose to £12.6 billion *(2018: £12.0 billion)*, with an increase in the cover ratio[2,6] to 206% *(2018: 204%)*. As planned, we reduced debt by £0.2 billion in 2019, leading to a reduction in our leverage ratio[2] to 31% *(2018: 33%)*. Cash remittances[2] of £2.6 billion *(2018: £3.1 billion)* were again very strong. At the end of February 2020, our centre liquidity was £2.4 billion *(February 2019: £1.6 billion)*.

Reflecting our operational momentum and strong financial fundamentals, the Board of Directors has declared a final dividend of 21.4 pence per share, resulting in a 3% increase in the full year dividend per share to 30.9 pence *(2018: 30.0 pence)*.

Economic returns

At our capital markets day in November 2019, we outlined our intention to increase Aviva's focus on economic performance in our financial communication. This reflects the importance of economic metrics in how we manage the business: the allocation of capital and other resources across the Group and the trading decisions we make each day. Economic returns ultimately support a sustainable dividend and our ability to invest to grow the company.

In 2019, Aviva generated Solvency II operating own funds[2,6] of £2.3 billion *(2018: £2.0 billion)* resulting in RoE[2,5,6] of 14.3% *(2018: 12.5%)*. Solvency II operating capital generation (OCG)[2] was £2.3 billion *(2018: £3.2 billion)*.

Our economic results continued to benefit from significant levels of longevity reserve reductions in our UK Life business, active balance sheet management and other modelling and assumption changes. As a result, net management actions added 6.2% to the Group return on equity[2,5,6] *(2018: 3.2%)* and £0.8 billion to OCG[2] *(2018: £1.7 billion)*. In 2018, OCG[2] also benefited from a number of actions such as model changes that reduced our solvency capital requirement (SCR).

We remain prudently reserved for life expectancy in our UK annuity portfolio, although in light of recent trends witnessed in 2019, we expect longevity reserve releases to be materially lower in future periods. As a result, while management actions are expected to make a positive contribution to capital generation and RoE over time, we reaffirm our guidance that this is likely to be at a much lower level than has been the case in 2018 and 2019.

On an underlying basis (excluding net management actions), return on equity[2,5,6] was 8.1% *(2018: 9.3%)* and OCG[2] was £1.4 billion *(2018: £1.5 billion)*. Our results benefited from improved returns in general insurance, particularly from Canada, and a reduction in debt interest and corporate centre expenditure. However, this was offset by lower returns from our life businesses which were affected by the loss of temporary transitionals on new business, experience variances in the UK, and lower new business profitability in Europe due to record low interest rates.

1 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
2 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
3 This measure is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other information' section of the Annual report and accounts.
4 IFRS profit before tax attributable to shareholders' profit.
5 Includes Group centre, debt costs and other items not allocated to the markets.
6 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other information' section of the Annual report and accounts for more information.
7 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 2(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, COR and operating earnings per share have also been restated to include the amortisation and impairment of internally generated intangible assets. Comparative amounts have been restated resulting in an increase in prior period COR of 0.6% and a reduction in the prior period operating earnings per share of 2.2 pence.

To achieve our 12% RoE[3] target in 2022, an increase in underlying economic returns is planned. This improvement will include lower costs, improved operating experience, higher new business profitability and prioritisation of capital to product and business segments offering superior returns.

Business performance review

Our operational progress in 2019 was reflected in improved IFRS results. Group adjusted operating profit[1] increased 6% to £3,184 million *(2018 restated[2]: £3,004 million)*, which in turn gave rise to 8% growth in operating earnings per share[3,4] to 60.5 pence *(2018 restated[2]: 56.2 pence)*. IFRS profit before tax increased to £3,374 million *(2018: £2,129 million)* helped by positive investment variances, and this led to basic EPS of 63.8 pence *(2018: 38.2 pence)*.

UK Life and Investments, Savings & Retirement (IS&R)

In UK Life and Investments, Savings & Retirement, own funds generation[3,5] was £1,314 million *(2018: £1,663 million)*, giving rise to return on capital[3,5] of 9.5% *(2018: 11.3%)*. The reduction in results was due to the loss of transitional benefits on new business, adverse experience variances related to persistency, expenses and challenges in the protection market, and lower Group adjusted operating profit[1] from Aviva Investors where revenues were impacted by lower opening assets under management in higher margin propositions and divestment of our European indirect real estate business in 2018. Positive assumption changes related to longevity reserves of approximately £0.8 billion were partially offset by a £175 million provision in relation to a heritage pension product where certain pension policyholders may not have been adequately informed of switching options available to them. While financial results were lower, in 2019, we achieved higher sales and customer net inflows[1] across our life and savings businesses. This underpinned asset growth of 19% in long-term savings to £138 billion *(2018: £116 billion)*, 9% in annuities & equity release to £67 billion *(2018: £62 billion)* and 5% in Aviva Investors to £346 billion *(2018: £331 billion)*, supporting a positive outlook for future financial results in our UK Life and Savings segments.

General Insurance

General Insurance results improved in 2019, with own funds generation[3,5] increasing to £628 million *(2018: £532 million)* and return on capital[3,5] of 14.0% *(2018: 11.7%)*. The improvement in results was principally driven by a recovery in profitability in Canada where pricing and underwriting actions we took in response to industry-wide challenges in the auto insurance market helped drive a 5.3 percentage point improvement in the combined operating ratio (COR)[3] to 97.8% *(2018 restated[2]: 103.1%)*. We are continuing to aim for a 96% or better COR[3] in Canada in 2020. In the UK, reported COR[3] in 2019 has been affected by higher costs following its incorporation of UK Digital during the year. Adjusting for these changes, our UK COR[3] was up 0.6 percentage points to 97.9%, with solid results in commercial lines offset by weaker performance in personal lines. In Europe we maintained attractive profitability with a COR[3] of 95.7% *(2018 restated[2]: 93.5%)* despite adverse large loss experience. Weather had a favourable impact on our COR[3] of 1.0 percentage point relative to long-term average *(2018: 0.1% unfavourable)* while prior year reserve development (PYD) had a favourable 1.7% impact *(2018: 2.3% favourable)*.

Europe Life

In Europe Life, we have balanced long-term franchise value with the requirement to actively manage the current environment of very low, and in some cases, negative government bond yields. Own funds generation[3,5] increased to £574 million *(2018: £384 million)* and included assumption changes of £181 million spread across our France, Italy and Ireland businesses. This in turn gave rise to an improvement in return on capital to 10.3% *(2018: 6.9%)*. New business volumes (PVNBP)[3] rose 9% to £13.8 billion *(2018: £12.6 billion)* demonstrating the strength of our distribution networks and customer appetite for our products. Strong volume growth was achieved in France (+32%) and Poland (+28%). However, the own funds contribution from new business declined to £167 million *(2018: £253 million)* due to low yields. We will continue to address the challenges from low yields through proactive balance sheet management and a constructive approach to distribution and product mix management.

Asia Life

In Asia Life, own funds generation increased 30% to £187 million *(2018: £144 million)* and return on capital[3,5] rose to 12.7% *(2018: 9.7%)*. Our businesses in Asia have continued to grow profitably in our larger markets while successfully narrowing losses elsewhere. New business volumes from our continuing operations in Asia increased 22% to £2.7 billion *(2018: £2.2 billion)* with double digit growth achieved in Singapore and China. This gave rise to Value of new business on an adjusted Solvency II basis (VNB)[3] in Asia of £210 million *(2018: £194 million)*, representing growth of 9%.

Corporate centre

Corporate centre costs reduced to £183 million *(2018: £216 million)* as we commenced initiatives aimed at streamlining our head office and reducing project spending, while debt interest expense fell to £255 million *(2018: £280 million)*. The loss from other operations narrowed to £26 million (*2018: £212 million loss)* primarily as a result of digital and other costs being realigned to our business units.

Operating expenses[3]

Total operating expenses[3] were £4,119 million *(2018: £4,138 million)* with reductions in controllable costs[3] partly offset by an increase in levies and premium taxes to £180 million *(2018: £170 million)*. Controllable costs fell to £3,939 million *(2018: £3,968 million)*.

Savings of £72 million[6] were mainly derived from our lean group centre initiative and reduced project spend, although we reinvested some of these savings in other areas including IT modernisation and proposition development. Implementation costs associated with the cost reduction programme and our spend on IFRS 17 was £59 million.

Capital and liquidity

At the end of 2019, our Solvency II surplus[5] was £12.6 billion *(2018: £12.0 billion)*, giving rise to cover ratio[3,5] of 206% *(2018: 204%)*.

1 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
2 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 2(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, COR and operating earnings per share have also been restated to include the amortisation and impairment of internally generated intangible assets. Comparative amounts have been restated resulting in an increase in prior period COR of 0.6% and a reduction in the prior period operating earnings per share of 2.2 pence.
3 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 This measure is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other information' section of the Annual report and accounts.
5 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other information' section of the Annual report and accounts for more information.
6 Constant currency.

All of our principal operating entities are well capitalised and operating within their respective normal working ranges. In France, we added approximately 70 percentage points of solvency cover in the second half of 2019, including a 20 percentage point benefit from PPE[1], following changes to regulations. This, combined with our active management of capital, including the purchase of interest rate and other hedges, gives us headroom to manage volatility from falling bond yields.

Solvency II net asset value (NAV)[2] per share rose 31 pence to 423 pence *(2018: 392 pence)*. During 2019, we redeemed £0.2 billion of hybrid capital as part of our overall £1.5 billion debt reduction target. Together with the increase in Solvency II own funds[2,3], this has led to a reduction in our leverage ratio[3] to 31% *(2018: 33%)*.

Cash remittances[3] were once more very strong in 2019 at £2.6 billion *(2018: £3.1 billion)*. This represents approximately 30% of our four-year target for cash inflows[3] to centre (of £8.5-£9.0 billion), underpinning our confidence in meeting this objective. At the end of February 2020, centre liquidity[3] was £2.4 billion *(February 2019: £1.6 billion)*.

Dividend

Aviva has a progressive dividend policy, which means we aim to maintain or grow the dividend. In light of our 2019 performance and continued strength of our capital and liquidity, the Board has declared a final dividend of 21.40 pence per share *(2018: 20.75 pence)*, bringing the full year dividend for 2019 to 30.9 pence *(2018: 30.0 pence)*.

Looking ahead

As CFO of Aviva, my focus is on growing the value of the company safely, by increasing sustainable return on equity[2,3], improving growth and avoiding volatility through prudent and proactive financial management. Our 2019 results show we are on the right path and I envisage significant upside in performance and value from delivering further progress.

So far 2020 has brought significant uncertainty, compounded by COVID-19, in relation to macro trends including the level of interest rates, investment market volatility and foreign exchange. However, we have a strong and resilient balance sheet that is designed to withstand volatility.

In the last three years, Group adjusted operating profit[4] and OCG[3] have benefited from large assumption changes and other actions, most notably a reduction of longevity reserves. We expect our results to benefit from some similar actions over the medium term, but from 2020, we expect this to be in a range of zero to £200 million per annum for IFRS and c.£200 million per annum for OCG[3], as we highlighted at our capital markets day in November.

We have set out our targets to improve returns, reduce debt leverage[3] and enhance sustainable capital generation while continuing to invest wisely to grow the company. We are committed to achieving these targets, and furthermore, we expect to make progress in 2020, with an increase in underlying OCG.

Jason Windsor
Chief Financial Officer
4 March 2020

1 Regulation was introduced in France that allows French insurers to place the Provision pour Participation aux Excedents (PPE) into Solvency II own funds. The PPE has been included in the France local regulatory own funds in 2019 but it is not included in the Group regulatory own funds.
2 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other information' section of the Annual report and accounts for more information.
3 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.

Market review

This section summarises the performance of our markets (UK Life, Aviva Investors, General Insurance – UK General Insurance and Canada, Europe and Asia) during 2019 on the basis on which they were managed during the year.

On 20 November 2019, we presented our refreshed strategy which simplifies our operating model into five new business divisions effective from 2020 (UK Life; Investments, Savings & Retirement; General Insurance; Europe Life and Asia Life). The main changes are that:
- Investments, Savings & Retirement will bring together Aviva Investors and the UK Savings & Retirement business, which is currently reported within UK Life
- General Insurance will include our Europe and Asia general insurance operations as well as UK General Insurance and our Canadian general insurance business
- Europe Life and Asia Life will only include our Europe and Asia life and health businesses

An overview of each of our five new business divisions, including their updated strategy, key priorities and financial targets is included in the 'Our strategy' section.

UK Life

Overview

Aviva is one of the UK's largest insurers with a 17%[1] share of the UK life and savings markets. We are here to earn our customers' trust as the best place to save for their future, navigate retirement and protect what matters most to them. We are uniquely positioned to help our customers and are a trusted provider of a broad range of products to both individual and corporate customers covering their savings, retirement, insurance and health needs.

With over 11 million customers we have one of the largest customer bases in the UK life and savings markets. We have a strong core capability in managing legacy books of business. We have strong relationships with independent financial advisers, brokers, employee benefit consultants and banks, single-tie agreements with three of the largest estate agencies and a digital direct offering. One of our key priorities is to become the retirement solutions partner of choice and we aim to empower our customers to take control of their financial futures to help them enjoy a secure and happy retirement. We are a leading provider of individual annuities and provide a secure income to 1.2 million customers in the form of an annuity, paying out over £3 billion each year. We are also a leading supplier[1] of equity release (lifetime mortgages), lending £770 million in 2019, helping people to raise money to fund whatever matters most to them in life. During 2019 we won 'Best Equity Release Lender', 'Best Equity Release Lender Customer Service' and 'Best Financial Protection Provider' at the What Mortgage Awards.

We continue to build on our defined benefit de-risking and bulk purchase annuity capabilities, supporting our business customers looking to reduce risk. We have a strong brand and leading distribution, with market leading illiquid asset origination supported by a 20-year track record in commercial mortgages and equity release.

We are the largest UK corporate pensions provider[2], servicing over 26,000 schemes and 3.5 million customers, including 23%[1] of the workplace pensions market. We offer pensions, protection, and bulk purchase annuity propositions to both large and small companies, as well as health, wellness and employee benefits, creating a differentiated proposition. During 2019 we won 'Defined Contribution Provider of the Year' and 'Pensions Communication Initiative of the Year' at the Professional Pensions UK Pension Awards.

We are an emerging leader in the adviser platform market, currently servicing over 12,000 IFAs and over 260,000 customers. Our platform continues to grow with assets under administration[3] up 28% in 2019 to £29 billion and net fund flows[3] continue to be positive at £3.5 billion. In 2019 we have outgrown the market, ranked second[4] for net fund flows[3] and are a top 10 player[4] by assets under administration[3].

We are proud not only of the scale of the financial and wider support that our protection products provide, but the care with which claims are managed. In 2018 we paid out 98.9% of life insurance claims[5] equating to £563 million[5]. We are one of the largest in the market for individual and group protection[6]. We protect over 5 million people during some of the most difficult times in their lives, such as bereavement and serious illness. We have won several awards recognising our achievements, including, for the second year running, 'Best Individual Critical Illness Provider' at both the Health Insurance & Protection Awards and the Cover Excellence awards, and also 'Best Group Critical Illness Provider' at the latter.

Health is a key concern for people in the UK. Our aim is to help our customers live more healthily, help them get better if they fall ill and to support them and their families when they can't. We have been recognised as Health Insurer of the year for the 10th year running[7].

1 Association of British Insurers (ABI) 12 months to end Q319.
2 Broadridge, UK DC and Retirement Income 2018.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 Fundscape advised platforms, 9 months to Q319.
5 Aviva individual protection claims report spring 2019.
6 Swiss Re Group Watch 2018.
7 Health & Insurance Protection Awards 2019.

Financial performance

	2019 £m	Restated[6] 2018 £m
Solvency II return on capital[1]	**9.3%**	10.9%
Solvency II operating capital generation (OCG)[1]	**1,170**	1,821
Cash remitted to Group[1]	**1,387**	2,152
Adjusted operating profit[2]		
Life	**1,820**	1,848
Health	**35**	38
	1,855	1,886
Profit before tax	**2,253**	1,436
Controllable Costs[1]	**1,045**	1,013
New business		
Present value of new business premiums (PVNBP)[1]	**27,570**	23,946
Value of new business on an adjusted Solvency II basis (VNB)[1]	**592**	481

Solvency II return on capital[1] and Solvency II operating capital generation[1] (OCG)

UK Life (including UK Savings & Retirement) Solvency II return on capital[1] reduced by 1.6pp to 9.3% *(2018: 10.9%)* and Solvency II own funds generation decreased to £1,244 million *(2018: £1,552 million)*.

This is largely due to no benefit from transitional relief on new business together with adverse experience on protection business. In 2018, new business written contributed to the calculation of transitional measures (in line with clarification issued by the PRA since 2017) but it is no longer applicable to the Group in 2019. 2018 own funds generation included £218 million of transitional benefits.

UK Life Solvency II operating capital generation (OCG)[1] has reduced to £1,170 million *(2018: £1,821 million)*. This is mainly due to the absence of transitional benefits on new business together with adverse experience variances and a reduction in assumption changes and management actions. These have been partially offset by lower new business strain which has significantly reduced due to reinsurance actions. The impacts of longevity assumption changes are broadly comparable in 2018 and 2019, but 2019 includes adverse impacts from persistency and other non-economic assumption changes. 2018 also included positive impacts from modelling changes and additional equity volatility hedging that did not re-occur in 2019.

Cash

Cash remitted to Group[1] by UK Life was £1,387 million *(2018: £2,152 million)*, including a £500 million special remittance following recent longevity developments. 2018 included £1,250 million of special remittances, £750 million due to positive longevity developments and management actions and the final Friends Life integration remittance of £500 million.

Profit

Adjusted operating profit[2]	2019 £m	Restated[6] 2018 £m
Long-term savings[3]	**211**	187
Annuities & equity release	**866**	777
Protection	**166**	221
Legacy[4]	**274**	316
Health	**35**	38
Other[5]	**303**	347
Total adjusted operating profit[2]	**1,855**	1,886

UK Life & Health adjusted operating profit[2] decreased by 2% to £1,855 million *(2018 restated[6]: £1,886 million)*. Within this, lower profit in protection and our legacy book were offset by higher profit in annuities & equity release. There was a lower contribution from other items mainly due to the alignment of UK digital business costs within UK Life (which is neutral at Group level).

The decrease in adjusted operating profit[2] is more than offset by a favourable movement in economic variances leading to an increase in profit before tax attributable to shareholders' profit of £2,253 million *(2018: £1,436 million)*.

Long-term savings

Long-term savings managed assets[1] increased 19% to £138 billion *(2018: £116 billion)*, with net fund inflows[1] improving to £5.4 billion *(2018: £5.0 billion)*. Within this, heritage pensions net outflows were £2.1 billion *(2018: £1.9 billion)*. These were more than offset by workplace pension net fund flows which grew to £4.8 billion *(2018: £3.7 billion)*, driven by new scheme wins with large corporates, the benefits of higher auto enrolment contributions and improved retention.

Positive net fund flows[1] of £3.5 billion *(2018: £3.9 billion)* along with market movements have resulted in platform managed assets[1] growing 28% to £29.1 billion *(2018: £22.6 billion)*.

Adjusted operating profit[2] has increased by 13% to £211 million *(2018 restated[6]: £187 million)*.

Annuities & equity release

Annuities & equity release adjusted operating profit[2] increased to £866 million *(2018 restated[6]: £777 million)*. Within this, new business adjusted operating profit[2] increased to £506 million *(2018: £363 million)* as BPA volumes increased 55% to £4.0 billion *(2018: £2.6 billion)*, including the partial buy-in of the Aviva staff pension scheme (£1.7 billion). Volumes in Individual annuities were 5% lower as we took a selective approach to trading to focus on margins. Existing business adjusted operating profit[2] fell by £54 million to £360 million *(2018 restated[6]: £414 million)* as there has been no repeat of either the in-year favourable longevity experience in 2018 or the £24 million benefit seen in 2018 from asset mix optimisation.

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 Includes workplace, platform, individual personal pensions and heritage pensions.
4 Legacy represents products no longer actively marketed, including with-profits and bonds.
5 Other life represents changes in assumptions and modelling, non-recurring items and non-product specific overheads.
6 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) in the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit.

Protection
Protection adjusted operating profit[1] decreased by 25% to £166 million *(2018 restated[4]: £221 million)* reflecting continued competitive trading conditions in the market, including the impact of hardening reinsurance rates and adverse claims experience in group protection.

Legacy
Legacy contributed adjusted operating profit[1] of £274 million *(2018 restated[4]: £316 million)*. 2019 fee income was impacted by lower asset values at the start of the year following weak investment markets towards the end of 2018. The fall in profits was broadly in line with the impact of expected net outflows.

Health
UK Health adjusted operating profit[1] decreased by 8% to £35 million *(2018: £38 million)*.

Other
Other adjusted operating profit[1] is £303 million *(2018 restated[4]: £347 million)*. During 2019, there was a net benefit from assumption changes of £574 million[2]. Within this, continued net positive longevity and mortality developments, including adopting CMI 2018, gave a benefit of £751 million which was partly offset by updates to persistency (£126 million charge) and other assumptions. A benefit to reflect changes to our unitised with profit reserving approach (£167 million) was largely offset by a number of other modelling changes. We have recognised a £175 million provision to allow for certain pension policyholders who may not have been adequately informed of switching options available to them. More detail is included in the 'market context and challenges' section.

Controllable costs[3]
Controllable costs[3] increased 3% to £1,045 million *(2018: £1,013 million)*, including the effect of realigning £52 million of UK digital business costs to UK Life. Excluding these costs, controllable costs[3] reduced by 2%. We have benefited from a continued focus on efficiency while continuing to invest in growth and simplification initiatives, including improvements to customer experience.

Life new Business

	PVNBP[3]		Solvency II VNB[3]		New Business Margin	
	2019 £m	2018 £m	**2019 £m**	2018 £m	**2019 %**	2018 %
Long-term savings	**18,884**	16,829	**141**	111	**0.7%**	0.7%
Annuities & equity release	**6,182**	4,784	**284**	196	**4.6%**	4.1%
Protection	**1,875**	1,799	**126**	140	**6.7%**	7.8%
Health and Other	**629**	534	**41**	34	**6.5%**	6.4%
Total	**27,570**	23,946	**592**	481	**2.1%**	2.0%

PVNBP[3] increased 15% to £27,570 million *(2018: £23,946 million)* as strong growth in BPA, workplace pensions, group protection and equity release was partly offset by lower platform and individual annuity volumes. VNB[3] increased by 23% to £592 million *(2018: £481 million)*, mainly reflecting growth in volumes and higher margins in annuities & equity release.

Long-term savings VNB[3] increased 27% to £141 million *(2018: £111 million)* as a result of growth in workplace pensions VNB[1]. Platform VNB[1] has been impacted by lower volumes driven by uncertain investment markets.

Annuities & equity release VNB[3] increased 45% to £284 million *(2018: £196 million)* despite the absence of new business transitional benefits in 2019. Growth has mainly been driven by higher BPA volumes written on a higher average margin due to pricing discipline, improved reinsurance rates and securing higher quality assets.

Protection VNB[3] decreased by 10% to £126 million *(2018: £140 million)* mainly due to hardening reinsurance rates with PVNBP[3] up 4% to £1,875 million *(2018: £1,799 million)*. Group protection volumes grew strongly driven by large corporates growth. Individual protection volumes were stable despite competitive trading pressures.

Health and Other VNB[3] improved to £41 million *(2018: £34 million)*, due to growth in health volumes.

Operational and customer highlights

During 2019 our operational highlights and examples of great customer outcomes we have delivered include:

Customer
- We continue to focus on the customer. Our transactional net promotor scores, a measure of the number of customers that would recommend us following a purchase, service or claim, has increased by 10 points to +43 *(2018: +33)*.
- We have received encouraging scores from a newly introduced Net Trust Index, showing we are above benchmark for consumer trust in our sector. We will continue working to improve consumer perception and trust levels.
- We constantly work to improve our customer service, taking learnings from dissatisfaction and analysing the root cause of complaints in order to improve our performance. In 2019 complaint volumes have fallen 21% compared to 2018.

Digital & Technology
- We have over 5.5 million customers in the UK registered on MyAviva, allowing them to manage their policies online. We are accessible to new and existing personal and corporate customers however they want to engage with us. In February 2019 we were awarded the Pension Age Innovation Award for Technology. Technology is at the heart of all our product offerings and this award recognises our work in helping to make members' pensions more accessible and manageable through MyAviva.
- We continue to improve connectivity with our intermediary partners, making it easier, simpler and more efficient to deal with us. For example, we have introduced a protection online advisor portal, enabling self-serve and reducing inbound call volumes. We have also launched MyPension into workplace to further capitalise on our market leading workplace position.

Products and solutions
- We have launched a new corporate mental health cover option, Mental Health Pathways Plus, enabling large companies and organisations in the UK to support employees with all addictions, including online gambling, gaming and social media.
- In 2019 we wrote over £4.0 billion of bulk purchase annuities, which included a £1.7 billion partial buy-in transaction with the Aviva Staff Pension Scheme, insuring the defined benefit pension liabilities and removing the investment and longevity risk of these members from the schemes.

1 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
2 Please refer to note 48 'Effect of changes in assumptions and estimates during the year' within the Annual report and accounts
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) in the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit.

- We have made significant changes to our lifetime mortgage proposition, introducing new flexible repayment options. With these new features, customers can take advantage of increased flexibility to make managing their finances in retirement even simpler.
- We continue to promote both financial and health wellbeing in the workplace through Aviva Wellbeing, our desktop and mobile app dedicated to helping people live their best lives. The programme offers a set of services aimed at helping employers strengthen the mental, physical and emotional wellbeing of their employees by inspiring positive behavioural change.
- We continue to receive external recognition for excellent service in the pensions marketplace, receiving a five-star rating in the Thomson's 2019 Pensions Provider Report. Our commitment to digital development, a solid Group Personal Pension product, improved retirement journey and our ambition to change benefits for the good were all cited as contributing factors.
- Aviva Financial Advice continues to expand its offering. We are also seeing positive engagement with large corporate schemes and SME businesses, connecting group scheme members with advice.
- We recognise the practical, financial and emotional costs many people in mid-life are facing in caring for relatives both young and old. To help support these employees we have introduced a carers' policy which provides up to 70 hours of additional annual leave for our people with caring responsibilities and are piloting a partnership with 'SuperCarers[1]' to help our people navigate the care landscape.
- The over-45s are the fastest growing working age-group in the UK. Aviva's mid-life MOT leads the market by providing its people with targeted guidance to help this population embrace the opportunities of a longer working life. We have also run sessions for a small number of corporate clients.

Market context and challenges

- In 2019, we recognised a £175 million provision after determining that past communications to a specific sub-set of pension policyholders may not have adequately informed them of switching options into with-profits funds that were available to them. The issue is restricted to a product acquired by Aviva through the purchase of Friends Life. It does not affect any other part of our business.
- The individual annuity market was particularly competitive during 2019. With bond yields tightening over the first half of the year, and the open market only growing by 2%[2], trading was difficult for Aviva and all of our competitors. With our disciplined approach to capital allocation, Aviva took a selective approach to trading to focus on margins.
- The highly competitive environment in the individual protection market continued into 2019 making for difficult trading conditions and the need to balance volume and margin. A focus on quality of business through Distributor Value Management and underwriting risk cost alongside enhancing pricing sophistication still allowed volume growth quarter on quarter throughout the year as we competed for quality share, but saw margin reductions against previous years.
- The Group Protection market continued to be highly price competitive in 2019. Despite the price competition, Aviva delivered strong trading results, especially in the first half of the year, whilst maintaining capital allocation and pricing discipline. Aviva's claims experience was weaker than expected, particularly across Group Life and Group Critical Illness products.
- In April 2019 auto-enrolment minimum contributions increased from 3% to 5%, supporting better retirement prospects for all UK workers. The 'secondary market', where businesses look to potentially change their workplace pension provider, continues to thrive as employers and employees increasingly recognise the value of a well-run pension scheme. In a recent survey pensions came second[3] in a poll of workplace benefits employees were most interested in, just behind annual leave.
- We are working with the PRA on the consultation process in respect of the capital required by firms offering equity release mortgages. We believe equity release is a valuable product for certain customers aged over 55, helping homeowners access money in their later life. We await clarification from the Financial Conduct Authority (FCA) into whether or not it intends to extend the scope of its review of the defined benefit transfer market. 2019 saw activity in this market fall significantly following the FCA's initial intervention.
- We promote strong regulation that is effectively targeted, efficiently delivered, and supports sustainable growth and innovation. We will continue to work closely with our regulator to bring further improvements to the market over the next two to three years.
- Many investors are cautious about short-term market movements and we have seen a growth in the popularity of funds which aim to address this need. The Aviva Smooth Managed Fund is designed to deliver growth over the medium to long term using a 'smoothing' process to shelter individuals from some of the impact of adverse market movements.
- In July we launched the 'Stewardship lifestyle strategy', a workplace pension default investment strategy that incorporates ethical and environmental, social and governance (ESG) considerations. The launch comes a year ahead of a significant ESG-related milestone in the UK in 2021 that means financial advisers will need to be more proactive with customers in relation to ESG considerations by asking them about their preferences. The funds have also been launched on the Adviser platform.

1 SuperCarers is an independent organisation that helps individuals and their families navigate the UK care system. www.supercarers.com
2 Association of British Insurers (ABI) 12 months to end Q319
3 Survey of 2,011 employed people carried out by Censuswide on behalf of Aviva in March 2019

Aviva Investors

Overview

We are Aviva's global asset management business with expertise in real assets, solutions, multi assets and macro[1], equity and credit. We currently invest £346 billion on behalf of our customers across a number of major markets. This gives us the size and scale to successfully seek out opportunities that will deliver specific outcomes our investors are looking for.

Being an integral part of the Group, we provide asset management services and solutions to both internal and external customers. We combine our insurance heritage and DNA with our skills and experience in asset allocation, portfolio construction and risk management to provide asset management solutions to institutional, wholesale and retail clients.

In a world of low interest rates and Solvency II, we aim to provide the solutions for investors to achieve the returns they need.

In November 2019 Aviva announced the creation of the Investments, Savings & Retirement (IS&R) division effective from 2020. IS&R brings together Aviva Investors and the UK Savings & Retirement business, which in 2019 and prior years was presented within UK Life.

Financial performance

	2019 £m	Restated[5] 2018 £m
Assets under management[2]	**£346bn**	£331bn
Revenue	**542**	597
Adjusted operating profit[3,4]	**96**	147
Profit before tax	**91**	170
Cash remitted to Group[2]	**86**	92
Controllable Costs[2]	**446**	450
Solvency II return on capital[2]	**13.7%**	22.7%
Solvency II operating capital generation (OCG)[2]	**90**	126

During 2019, our investment capabilities have delivered consistently improving investment performance across all asset classes. The expansion in our distribution capability in the US led to significant new business wins, creating a more diversified client base across a broader range of products.

Following global growth in demand among institutional investors, we have also strengthened our focus on our real assets business.

Net flows and assets under management[2]

Assets under management[2] (AUM) represents all assets managed by Aviva Investors. These comprise Aviva (internal) assets which are included within the Group's statement of financial position and those belonging to external clients outside the Aviva Group which are therefore not included in the Group's statement of financial position. These assets under management[2] exclude those funds that are managed by third parties. Assets under administration[2] comprise assets managed by third parties on platforms administered by Aviva Investors.

Assets under management[2] increased during the year by £15.4 billion to £346.1 billion *(2018: £330.7 billion)*. This is due to £21.4 billion of favourable market and foreign exchange movements, external net inflows of £2.3 billion and £1.3 billion net flows into liquidity funds and cash, partly offset by outflows on our Aviva client of £6.4 billion and £3.2 billion of assets transferred to an external manager, which were previously managed by Aviva Investors under a legacy distribution agreement. Assets under management and administration[2] at 31 December 2019 were £382.4 billion *(2018: £359.8 billion)*.

Revenue[2]

Revenue[2] decreased by 9% to £542 million *(2018: £597 million)* driven by the effect of the 2018 disposals of an indirect real estate multi-manager business and our interest in the management of a pan-European commercial property fund, reduced internal client demand for originating assets, higher margin external outflows and run-off of the legacy Aviva client book of business.

Profit

Adjusted operating profit[3,4] decreased by £51 million to £96 million *(2018 restated[5]: £147 million)* mainly due to the reduction in revenue described above. Cost control by the business helped mitigate the impact on profitability.

Profit before tax attributable to shareholders' profit has reduced to £91 million *(2018: £170 million)* mainly due to the lower adjusted operating profit[3,4]. In 2018 there was also a £27 million one off gain on disposal relating to the Real Estate Multi-Manager business and the disposal of our interest in the pan-European commercial property fund.

Cash

Cash remitted[2] to Group was £86 million *(2018: £92 million)*.

Controllable costs[2]

Controllable costs[2] in Aviva Investors were £446 million *(2018: £450 million)*. The decrease includes £11 million cost savings partly offset by £7 million of non-recurring restructuring costs.

1 A global macro strategy bases its holdings primarily on the overall economic and political views of various countries or their macroeconomic principles. Holdings may include long and short positions in various equity, fixed income, currency, commodities, and futures markets.
2 This is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
4 Fund management adjusted operating profit excludes £nil *(2018: £1 million)* of profit relating to the Aviva Investors Pensions Limited business.
5 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) in the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit.

Operational and customer highlights

- Positive net sales across our credit and real assets businesses in the second half of 2019 were very encouraging, with net positive external client flows of circa £2.3 billion at year end. However, redemptions from certain high margin funds in the first part of 2019 resulted in lower revenue for the year.
- Our key focus is on enhancing investment returns for our clients. With 84% of total AUM[1] ahead of benchmark as at 31 December, we have beaten our target objective of 70%, demonstrating the incremental value that we have achieved for our investors. We have also seen a significant improvement on the internal book of business, with 85% of AUM[1] ahead of benchmark as at the end of 2019, compared to 31% at the end of 2018.
- Our AIMS funds have materially improved in 2019, with AIMS Target Return fund up 9.9%, and the Target Income fund up 11.7% over the same period.
- We have also continued to see a strong long-term investment performance, with over 66% of our funds beating the benchmark over a five year period.
- We consistently integrated the environmental, social thinking and governance (ESG) investment processes across all our asset classes, with launches of several new ESG funds, such as Sustainable Income and Growth and Climate Transition European Equity Fund.
- We completed our Equity team build out in 2019, ensuring that we have the right expertise to deliver our global multi-asset and equity propositions.
- We launched the Credit Business Strategy, with continued focus on growth in the US and Canada, with $3.6 billion raised in US Investment Grade Credit in 2019.
- In Real Assets, we reshaped the team bringing investment, fund management and asset management together, and continued to focus on strengthening our capability.
- In November 2019 we merged Aviva Investors Real Estate SGP (Real Estate regulated business in France) into Aviva Investors France (all other regulated activities in France). This enabled us to simplify our Real Asset activities in France, and realise cost efficiencies.

Market context and challenges

- During the year our business has delivered improved investment performance despite the uncertainties arising from Brexit, the UK domestic political situation and trade pressure between the US and China.
- Brexit uncertainty continues to present challenges for the asset management industry. We continue to plan for all eventualities but believe Aviva Investors is already well placed both globally, and particularly within Europe, as we have a significant and long-standing established presence in France, Luxembourg and Poland.
- Our central expectation is for a stabilisation and improvement of global growth (barring any excess negative implications relating to the Coronavirus). This is happening in an environment of supportive monetary conditions. This should be supportive of risk assets.

1 This is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.

General Insurance

Overview

Aviva's General Insurance business operates at scale in the UK and Canada and we have a European business that operates in France, Ireland, Poland and Italy.

From 2020, all of our general insurance businesses will be reported together as a General Insurance division. For further details of our strategy and key priorities for this division, refer to the 'Our strategy' section.

The overall results of our General Insurance business are as follows:

	2019 £m	Restated[1] 2018 £m
Net written premiums (NWP)		
UK	**4,218**	4,193
Canada	**3,061**	2,928
Europe	**2,017**	1,985
Asia	**13**	13
	9,309	9,119
Adjusted operating profit[2]		
UK	**250**	383
Canada	**191**	27
Europe	**154**	201
Asia	**(1)**	(2)
	594	609
Combined operating ratio (COR)[3]		
UK	**97.9%**	94.6%
Canada	**97.8%**	103.1%
Europe	**95.7%**	93.5%
Asia	**112.8%**	123.0%
	97.5%	97.2%
Solvency II return on capital[3]	**14.0%**	11.7%
Solvency II operating capital generation (OCG)[3]	**574**	647

The following sections provide additional details and performance analysis of our UK and Canada general insurance businesses. For detail on the Europe and Asia general insurance businesses, refer to the Europe and Asia 'Market review' sections.

UK GI

Overview

Aviva is a leading insurer in the UK general insurance market with £4.2 billion of net written premiums in 2019, equating to a c.11% market share.

We offer Personal lines (Home, Motor and Travel insurance products) and Commercial lines insurance to a wide range of businesses from micro through small and mid-market to large, multinational corporates.

Our capabilities in distribution, underwriting and digital are clear differentiators. During the year we integrated the majority of our UK digital business into UK GI.

We focus on our customers, with customer service at the heart of our business. The quality of our service has enabled us to win long-term relationships with four of the UK's five largest banks to provide their insurance solutions.

We have increased our Regional and Global Corporate Specialty (GCS) underwriting capability and enhanced our multinational proposition. The commercial lines speciality portfolio continues to grow with new products launched based on customer demand and maximisation of a hardening rate environment, while the completion of Guidewire implementation across SME is delivering digitisation and automation benefits.

We continued to win many awards in 2019, including 'General Insurer of the Year' from Insurance Times for the sixth year running.

Financial performance

	2019 £m	Restated[1] 2018 £m
Adjusted operating profit[2]	**250**	383
Profit before tax	**288**	413
Combined operating ratio (COR)[3]	**97.9%**	94.6%
Net written premiums (NWP)	**4,218**	4,193
Cash remitted to Group[3,4]	**248**	361
Controllable Costs[3]	**726**	600

During 2019, as part of our strategy to simplify our business, we aligned our UK digital business with UK General Insurance and UK Life. It has had a significant effect on a number of UK GI's headline metrics this year which is explained in the analysis below.

Profit

Adjusted operating profit[2]	2019 £m	Restated[1] 2018 £m
Underwriting result	**86**	221
Long-term investment return	**166**	161
Other	**(2)**	1
Total adjusted operating profit[2]	**250**	383

Overall, adjusted operating profit[2,3] was down 35% at £250 million *(2018 restated[1]: £383 million)*. Excluding an adverse impact of £113 million from alignment of UK digital, adjusted operating profit[2] was down 5% at £363 million *(2018 restated[1]: £383 million)*. Within this, there was a 10% fall in the underwriting result to £199 million *(2018 restated[1]: £221 million)* which included higher expenses reflecting continued investment in our IT infrastructure and less favourable prior year reserve releases but lower weather costs compared to 2018. Long-term investment return[3] was up 3% at £166 million *(2018: £161 million)*.

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) in the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, COR has also been restated to include the amortisation and impairment of internally generated intangible assets. Comparative amounts have been restated.
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 2019 General Insurance cash remittances include £83 million *(2018: £331 million)* received from UK General Insurance in February 2020 in respect of 2019 activity.

Profit before tax was 30% lower at £288 million *(2018: £413 million)*. In addition to the reduction in adjusted operating profit[2] described above, there was a £235 million adverse movement due to the change in the Ogden discount rate (2019: £45 million strengthening; *2018: £190 million release*) which is described in more detail below. This was mostly offset by a £251 million favourable movement in short term fluctuations in investment performance and the impact of changes in economic assumptions on insurance liabilities (2019: £74 million gain; *2018: £177 million loss*) driven by lower interest rates, tightening credit spreads and gains in equity markets.

Following the announcement by the Lord Chancellor on 15 July 2019 to increase the Ogden discount rate[4] from the -0.75% set in 2017 to -0.25%, balance sheet reserves in the UK were calculated using a discount rate of -0.25% at 31 December 2019. This compares to the Ogden discount rate applied at 31 December 2018 of 0.00%. This has resulted in a strengthening of claims reserves of £45 million. The negative impact of this reserve change has been excluded from adjusted operating profit[2,3] in line with previous periods. The Ogden discount rate is expected to be reviewed again by the Lord Chancellor within five years.

Net written premium (NWP) and combined operating ratio (COR)

United Kingdom General insurance	Net written premiums 2019 £m	Net written premiums 2018 £m	Combined operating ratio[3] 2019 %	Combined operating ratio[3] Restated[1] 2018 %
Personal motor	**1,067**	1,125		
Personal non-motor	**1,332**	1,369		
UK Personal lines	**2,399**	2,494	**99.3%**	92.9%
Commercial motor	**555**	532		
Commercial non-motor	**1,264**	1,167		
UK Commercial lines	**1,819**	1,699	**96.0%**	97.3%
Total	**4,218**	4,193	**97.9%**	94.6%

NWP

NWP increased by 1% to £4,218 million *(2018: £4,193 million)*.

UK Personal lines NWP reduced 4% to £2,399 million *(2018: £2,494 million)* as we maintained our pricing discipline in Motor and targeted reductions in poor performing segments, combined with the continued run-off of the Creditor book. Home premiums were broadly stable. UK Commercial lines NWP increased 7% to £1,819 million *(2018: £1,699 million)* driven by a combination of volume and above inflation rate increases. There was an 8% increase in Commercial non-motor NWP to £1,264 million *(2018: £1,167 million)* with solid growth in SME and Global Corporate Specialty (GCS), while Commercial motor NWP increased 4% to £555 million *(2018: £532 million)*.

COR[3]

Overall, UK GI COR[3] was 97.9% *(2018 restated[1]: 94.6%)*. Excluding the 2.7pp effect of the alignment of UK digital, COR[3] was 0.6pp higher at 95.2% *(2018: 94.6%)* for the reasons described in relation to adjusted operating profit above.

Personal lines COR[3] of 99.3% *(2018: 92.9%)* was 6.4pp higher year-on-year, of which 4.6pp reflects the UK digital alignment. Excluding this, Personal lines COR[3] was 1.8pp higher reflecting higher expenses and lower prior year reserve releases, partly offset by lower weather costs.

Commercial lines COR[3] of 96.0% *(2018: 97.3%)* was 1.3pp better year-on-year, reflecting higher prior year reserve releases and lower weather costs.

Cash

Cash remitted to Group[3] was down 31% to £248 million *(2018: £361 million)*, reflecting lower Solvency II operating capital generation[3].

Controllable costs[3]

Controllable costs[3] increased to £726 million *(2018: £600 million)*. Excluding the impact from the alignment of UK digital, controllable costs[3] were up 3% to £619 million *(2018: £600 million)* reflecting continued investment in our IT infrastructure, partly offset by savings in the underlying costs of running the business.

Operational and customer highlights

Our operational and customer highlights in 2019 included:

- Our transactional Net Promoter Scores (TNPS) in Property Claims are strong and consistently lead the market.
- In underwriting, we introduced our 'Ask it Never' approach, reducing the number of questions we ask our customers from over 100 to just five.
- We launched our simple digital online underwriting tool at Barclays in November 2019 which we believe offers a blueprint for the future of integrating insurance into banking digital ecosystems.
- Our investment in digital and claims management has enabled customers to start and complete their claim online. 40% of people now notify their claims online.
- Global Corporate Specialty lines continues to grow and retention has increased to 89%. We are a leading property investors underwriter in the London market.
- In UK Personal lines our aggregator business, QuoteMeHappy, has acquired in excess of 1.4 million customers.
- Our UK Commercial business has been a key growth segment for us over the last few years, growing in the high single digits every year and in 2019 wrote over £1.8 billion in NWP. We are a leading player in the UK SME market.

1 Following the change in the definition of Group adjusted operating profit (see note 1(b) of the Annual report and accounts), COR now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets. Comparative amounts have been restated.
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts
4 The Ogden discount rate in Scotland is still at -0.75%.

Market context and challenges

- The Commercial business is actively pursuing attractive growth opportunities in the market, with a focus on growing our heartland commercial book, supporting UK business with overseas risks and leveraging our strong regional distribution network to provide a full suite of products, including specialty lines to our existing customers. Growth and profitability are expected to continue at existing levels, supported by a hardening rating environment across the majority of our product lines.
- In GCS, the market has seen an increasing frequency of large property losses, natural catastrophes and adverse prior year development from non-UK casualty and financial lines. These conditions will be supportive of a sustained rate hardening, and we are well placed to take advantage.
- In SME, the sector continues to suffer from significant levels of under-insurance and we are actively supporting customers and brokers with our commercial intelligence tool in identifying gaps; a good customer outcome that will also deliver growth. We also continue to automate and digitise policy administration, reducing manual intervention and cost, while enabling our customers and brokers to access our service by their preferred means.
- We have created a single Personal lines business and taken a number of actions to improve the underlying performance of the book. Our plan is to reduce controllable costs[3]. We see a positive rating environment in motor and home and will drive growth in channels and products where we believe there is profit opportunity.
- During 2019, the FCA published their GI Pricing Market Study Interim Report. We have provided a comprehensive response to this outlining our recommended solution and the action we have already taken. We are broadly supportive of tackling the issues raised, including protecting vulnerable customers and highlighted our progress on safeguarding and AvivaPlus.

Canada

Overview

We are the second largest general insurance provider in the market place, providing a range of Personal and Commercial lines products to over 2.4 million customers with a 10% market share[1]. Our business is primarily intermediated, sold through a network of just over 900 independent broker partners and, following our acquisition of RBC General Insurance (RBC GI) in 2016, RBC insurance agents.

We have returned to profitability following the deterioration that began in early 2017 and continued into 2018, which was principally due to increased claims costs in our motor insurance line of business and less favourable prior year reserve releases. Working with our regulator, we successfully achieved rate increases in late 2018 which are now earning through the book. 2019 also saw natural catastrophe losses more in line with the historical 10-year average. As a result, adjusted operating profit[2,4] in 2019 has recovered from the 2018 level and profitability actions are taking hold.

Financial performance

	2019 £m	Restated[4] 2018 £m
Adjusted operating profit[2,4]	**191**	27
Profit/(loss) before tax	**211**	(75)
Combined operating ratio (COR)[3,4]	**97.8%**	103.1%
Net written premiums (NWP)	**3,061**	2,928
Cash remitted to Group[3]	**156**	28
Controllable costs[3]	**402**	391

During 2019, adjusted operating profit[2,4] of £191 million *(2018 restated[4]: £27 million)* improved due to the extensive profit remediation plan put in place towards the end of 2017 with actions around pricing, indemnity management and risk selection.

All percentage movements below are quoted in constant currency unless otherwise stated.

Profit

Adjusted operating profit[2]	2019 £m	Restated[4] 2018 £m
Underwriting result	**65**	(90)
Long-term investment return	**133**	120
Other[5]	**(7)**	(3)
Total adjusted operating profit[2]	**191**	27

In 2019, the underwriting result was a profit of £65 million *(2018 restated[4]: loss of £90 million)*, mainly driven by premium rate increases, lower claims frequency and severity in our personal lines business, better weather conditions compared to the long-term average and favourable prior year reserve development, partly offset by higher commission. Long-term investment return improved 11% due to higher yields on short-duration securities and actions to optimise returns within our fixed income portfolio.

The improvement in underwriting profit, along with favourable market movements were the key drivers of the current year profit before tax attributable to shareholders' profits[4] of £211 million *(2018: loss of £75 million)*.

Net written premiums (NWP) and combined operating ratio (COR)[3]

	Net written premiums		Combined operating ratio[3]	
	2019 £m	2018 £m	2019 %	Restated[4] 2018 %
Personal lines	**2,100**	2,107	**97.8%**	105.0%
Commercial lines	**961**	821	**97.8%**	98.3%
Total	**3,061**	2,928	**97.8%**	103.1%

NWP

Net written premiums were £3,061 million *(2018: £2,928 million)*, up 3% on a constant currency basis. In personal lines, NWP was broadly stable at £2,100 million *(2018: £2,107 million)*. Commercial lines NWP increased to £961 million *(2018: £821 million)* due to growth in Global Corporate and Specialty new business and rate increases put through during renewals.

1 Market Security & Analysis inc. 2018 database
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 – 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 Following the change in the definition of Group adjusted operating profit (see note 1(b) of the Annual report and accounts), COR now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets. Comparative amounts have been restated.
5 Includes unwind of discount and pension scheme net finance costs.

COR[1]

The COR[1] improved to 97.8% *(2018 restated[2]: 103.1%)* due to the improvement in the underwriting result described above.

Cash

Cash remittances[1] during the year increased to £156 million *(2018: £28 million)*, reflecting our improved underwriting performance.

Controllable costs[1]

Controllable costs[1] were 1% higher in constant currency at £402 million *(2018: £391 million)*, reflecting increased investment in claims personnel and processes, investment in our pricing capabilities and the Global Corporate and Specialty business and continued investment in our IT infrastructure, mostly offset by lower real estate and other operating expenses.

Operational and customer highlights

- In addition to improved profitability in our Personal lines business, we invested in our claims capability, which delivered significant synergies. Greater capacity and improved processes led to more claims handled by Aviva staff and better customer and financial outcomes. In Commercial lines, our focus continued to be more efficient processing for small policies, improved risk selection in our core and middle market business and growth in our Global Corporate and Specialty division, which has been able to provide capacity in a significantly hardening market. These actions, along with a focus on efficiency, has resulted in significant progress towards our sub-96% target combined operating ratio[1] by the end of 2020.

Other key operational and customer highlights during the year included:

- Launched Connex, our new Personal lines service model for brokers, including dedicated underwriting teams and web chat for faster service.
- Brand refresh of our Global, Corporate and Specialty line and rebranded Ovation, our high net worth home insurance offering, helping customers better identify with the products they need.
- Launched BuyOnline for RBC property business to help customers, improve sales capacity and reduce commission expenses.
- Extended the RBC distribution partnership by a further 5 years to 2036.
- In the second half of 2019, we undertook a national launch of a commercial digital solution which provides c.50% of SME quotes making the process more efficient for our customers and partners.

Market context and challenges

- During 2019, there were significant changes to the provincial regulatory landscape in Canada impacting the auto insurance industry.
- In Ontario, the Financial Services Regulatory Authority was launched in June 2019 with a streamlining of the auto rate regulation process announced as a priority for 2019-20.
- In Alberta the provincial government decided not to renew a 5% cap on auto rate increases, from Q4 2019.
- In Commercial lines, adverse experience, particularly in residential property, along with shrinking capacity has resulted in a hardening market.

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 Following the change in the definition of Group adjusted operating profit (see note 1(b) of the Annual report and accounts), COR now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets. Comparative amounts have been restated.

Europe

Overview

Aviva operates in a number of markets in Europe with insurance operations in France, Italy, Poland, Ireland and Turkey. During 2019 we have focused on the development and implementation of our market strategies for organic growth and the integration of Friends First in Ireland.

Our European markets are a major contributor to the Group, providing a valuable source of diversification.

We have over 10 million customers and operate a life and general insurance model across all our European businesses except for Turkey where we offer life and savings products.

We are present in attractive markets where we have a competitive advantage and ability to source skills. We believe this offers us clear potential for future profitable growth.

Low interest rates and regulatory pressures in some markets have presented challenges during the year, but through the actions we have taken we believe we are well positioned to succeed.

From 2020, our European general insurance businesses will be presented as part of our General Insurance division. The Europe general insurance businesses will be managed day to day by the CEOs in each country. Our life and health businesses will form the Europe Life division. Further details of our strategic priorities for these divisions are set out in the 'Our Strategy' section.

Financial performance

	2019 £m	Restated[1] 2018 £m
Adjusted operating profit[2,3]		
Life & Health	**827**	807
General insurance	**154**	201
	981	1,008
France	**473**	510
Poland	**194**	198
Italy, Ireland and Other	**314**	300
	981	1,008
Profit before tax		
France	**410**	426
Poland	**198**	178
Italy, Ireland and Other	**352**	304
	960	908

All percentage movements below are quoted in constant currency unless otherwise stated.

Overall adjusted operating profit[2,3] in Europe was down by 1% to £981 million *(2018 restated[1]: £1,008 million)*. Europe Life adjusted operating profit[2,3] increased to £827 million *(2018 restated[1]: £807 million)* driven by increased revenue, improved product mix and focus on expense efficiencies. Adjusted operating profit[2,3] from Europe General Insurance business was down 23% to £154 million *(2018 restated[1]: £201 million)* due to weather costs and higher large losses and lower favourable prior year reserve releases compared to 2018.

Profit before tax attributable to shareholders' profits[3] has increased to £960 million *(2018: £908 million)* as the benefit from positive investment variances *(2018: negative variances)* was partly offset by the reduction in operating profit. The 2018 profit before tax included gains from disposals in Italy and Spain and the write-off of negative goodwill arising on the acquisition of Friends First in Ireland.

Europe Life

Overview, market context and challenges

- In France we are number 11[4] in a life market dominated by mutuals and banks and are number four amongst the traditional insurers. We offer a full range of savings, investment, protection and health insurance products with strength in distribution through AFER, the number 1 savers association[5], and UFF the number 2 financial adviser network[5]. In late 2018 the French government proposed new laws that seek to shift savings and investment towards the real economy, bringing about further opportunities for our savings and retirement business. The main challenge we face continues to be balancing the demand amongst French savers for low volatility guaranteed products with the pressure this places on our return on capital in the current low interest rate market environment. A key pillar of our strategy is to continue to adapt our business mix to position us for longer-term low interest rates whilst continuing to serve our customers' needs through the provision of attractive unit-linked and capital-light products.
- In Italy we are number five in the life market[6] and the second largest non-domestic insurer[6]. We offer savings, investments, pension and protection products with distribution through a major bancassurance partnership with UBI and also through independent financial advisor networks. Our hybrid proposition maintained its strong performance in the market in 2019, helping to improve our business mix that, together with other management actions and better market conditions, materially strengthened our capital position. In 2020, our current distribution agreements with our two principal bancassurance partners are reaching the end of their terms and we are in ongoing discussions about the future status of our relationships.
- In Poland we are the number two[7] life insurer in the market with one of the largest life tied agent salesforces and two key bancassurance partnerships with Santander and ING. The market in Poland has stagnated in recent years as insurers have moved away from single premium investment products and there has been an increased level of regulatory intervention in the market. Our Polish business is efficient, has very strong brand recognition, and through innovation in product development and digitisation we are in a strong position to outperform the market.
- In Ireland we are now number four[8] in the life market as a result of the acquisition of Friends First and continue to benefit from positive demographics and a strong macroeconomic environment with high GDP and low unemployment. The positive economic backdrop was muted for much of 2019 by concerns over a hard Brexit outcome but, once this risk dissipated, sales volumes have been encouraging. Aviva's Life business in Ireland is entirely distributed through intermediaries. The main challenge we face is improving the operational efficiency of the business and rationalising our product offering to improve margins.

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit.
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 – 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 The amounts shown above in respect of adjusted operating profit and profit before tax attributable to shareholders' profits reconcile to the corresponding amounts for Europe of France, Poland and Italy, Ireland and Other in note 5 – 'Segmental information' within the Annual report and accounts.
4 La Fédération Française de l'Assurance
5 AFER website, and UFF website and French Insurance Federation.
6 ANIA (Italian National Association of Insurance Companies)
7 Polska Izba Ubezpieczeń
8 Insurance Ireland

- In Turkey we have a life insurance business through our joint venture with Sabanci. We are number one in the market for pensions and the number three private auto-enrolment provider and we offer protection products through both bancassurance and retail channels including a direct sales force. Our business has responded well to the political instability and financial volatility in recent periods and we have seen strong growth in protection premiums during 2019.

Financial performance

	2019 £m	Restated[1] 2018 £m
Solvency II return on capital[3]	**10.3%**	6.9%
Solvency II operating capital generation (OCG)[3]	**754**	724
Cash remitted to Group[3]	**414**	336
Adjusted operating profit[2]	**827**	807
Controllable costs[3]	**548**	568
Life new business		
Present value of new business premiums (PVNBP)[3]	**13,772**	12,641
Value of new business on an adjusted Solvency II basis (VNB)[3]	**414**	517

Solvency II return on capital[3] and Solvency II operating capital generation (OCG)[3]

Europe Life Solvency II return on capital[3] has increased by 3.4pp to 10.3% *(2018: 6.9%)* and Solvency II operating own funds generation increased to £574 million *(2018: £384 million)*. This was primarily driven by modelling and assumption changes in Italy which are partly offset by a reduction in own funds generation from new business in France and Italy due to the impact of lower interest rates. 2018 included the adverse impact on own funds arising from the transfer of pensions business into a supplementary occupational pension fund (FRPS) in France (note the overall impact on capital generation was beneficial due to a significant reduction in solvency capital requirement).

Europe Life Solvency II operating capital generation[3] has increased by £30 million to £754 million *(2018: £724 million)*. Increases in management actions and higher returns on existing business have been partially offset by the increase in new business strain as a result of the low interest rate environment. In 2019, management actions included the beneficial impact of modelling and assumption changes in Italy as well as increased market risk hedging in France, while 2018 included the beneficial assumption changes and a benefit arising from the transfer of pensions business into a supplementary occupational pension fund (FRPS) in France.

Cash

Cash remitted to Group[3] was £414 million (*2018: £336 million*). This includes a special remittance of £107 million following the disposal of Avipop in 2018. 2019 remittances from France are £141 million *(2018: £176 million)*, which are shown after adjusting for a capital injection of £139 million *(2018: £nil)*, as the net amount more appropriately reflects the overall remittances received from France during the year.

Profit

Adjusted operating profit[2]	Life & Health 2019 £m	Life & Health Restated[1] 2018 £m
France	**408**	418
Poland	**174**	177
Italy (excl. Avipop)	**173**	147
Ireland	**59**	40
Other Europe[4] (excl. Spain)	**13**	10
Total (excl. Avipop, Spain)	**827**	792
Disposals (Avipop, Spain)	**—**	15
Total	**827**	807

Excluding the impact of disposals, the adjusted operating profit[2] of our life and health businesses grew by 6% to £827 million *(2018 restated[1]: £792 million)*. Dealing with each of the markets in turn:

- In France, adjusted operating profit[2] reduced by 2% to £408 million *(2018: £418 million)*. Within this, the life result was down 5% to £387 million *(2018: £408 million)*, mainly due to lower protection profit (including adverse claims experience in 2019), partly offset by an increase in savings business profit. The health result was £21 million *(2018: £10 million)* following actions to improve profitability.
- In Poland, adjusted operating profit[2] was flat in constant currency terms at £174 million *(2018 restated[1]: £177 million)*, with lower fee income on assets under management as a result of weak equity markets towards the end of 2018 offset by a more favourable mix of new business, and an improved result on protection business.
- In Italy, adjusted operating profit[2] was £173 million (2018 restated[1]*: £147 million*), an increase of 18% with significant net inflows to our hybrid product in 2017 and 2018 driving higher revenues on assets under management and an increase in profit from existing business.
- In Ireland, adjusted operating profit[2] increased to £59 million *(2018: £40 million)*, an increase of 49% mainly driven by a one-off benefit from methodology and assumption changes and the inclusion of a full year of Friends First in 2019.
- In Turkey, adjusted operating profit[2] was £13 million (*2018: £10 million*), mainly driven by strong growth in our protection business.

Controllable costs[3]

Controllable costs[3] for Europe Life reduced by 2% to £548 million (*2018: £568 million*). Excluding disposals, controllable costs[3] were down 3% to £548 million *(2018: £562 million)* mainly due to a reduction in project spend in France partly offset by increased marketing and IT spend in Italy.

Life new business

	PVNBP[3] 2019 £m	PVNBP[3] 2018 £m	Solvency II VNB[3] 2019 £m	Solvency II VNB[3] 2018 £m
France	**5,702**	4,335	**168**	210
Poland	**624**	486	**64**	58
Italy (excl. Avipop)	**5,537**	6,263	**147**	222
Ireland	**1,589**	1,208	**8**	11
Other Europe[4] (excl. Spain)	**320**	333	**27**	13
Total (excl. Avipop, Spain)	**13,772**	12,625	**414**	514
Disposals (Avipop, Spain)	**—**	16	**—**	3
Total	**13,772**	12,641	**414**	517

Excluding disposals, PVNBP[3] was up 10% to £13,772 million *(2018: £12,625 million)*. VNB[3] decreased by 18% to £414 million *(2018: £514 million)*.

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit.
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 – 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 Includes Turkey.

France, PVNBP[1] was up 33% reflecting growth in sales of with-profits savings products and the acquisition of a significant collective pension scheme with EDF. VNB[1] was down 19% primarily due to an adverse margin impact from lower interest rates. In Poland PVNBP[3] increased by 30% driven by the performance of our new protection product and pensions transfers. In Italy, PVNBP[1] was down by 11% due to a reduction in standalone with-profits and unit-linked volumes, partially offset by further growth in our hybrid product whilst VNB margins were adversely impacted by lower interest rates.

Operational and customer highlights

- In France we experienced strong inflows into with-profit funds as customers sought more stable returns in response to market volatility and record low interest rates. In response we undertook various commercial initiatives during the second half of the year to re-balance our new business inflows towards unit-linked products. These included targeted marketing campaigns and mix capping with some distributors. In parallel we undertook capital management actions to reduce the immediate pressure on our balance sheet resulting from low (and negative in early September) interest rates. These included interest rate hedging activities, further optimisation of our asset mix, and changes to our internal model. During the final quarter of 2019 we initiated the Savings Business Model Change programme to provide even greater focus on addressing the changes necessary to adapt and transform our business in the medium term.
- Other customer highlights in France included the launch of a new pension product (PERIN) which is compliant with the new French pension regime. In April, in conjunction with Aviva Investors France, we launched Aviva Solutions Durables a sustainable and responsible investment unit-linked life insurance offering. We are widely recognised as a leader in sustainable investing with the broadest range of propositions in the market. We continued our journey to improve the customer experience and during 2019 our funerals business made the switch from paper to nearly fully digital communication. Other digital innovations include the introduction of a chatbot to improve the customer journey and increase the sales conversion rate in our Eurofil distributor and we plan to widen deployment of this tool to retail motor, property and funeral products in 2020.
- We are also actively participating in several smaller acquisition opportunities as part of our strategy to expand our owned distribution network.
- In Italy, our Hybrid product offers customers a combination of attractive yields, stable performance with a partial capital guarantee together with protection and health riders. During the year we have consolidated on the success of the product and introduced further innovations in the structure of the product with an auto-switch with-profit to unit-linked mechanism. Commercial initiatives with our distributors allowed us to significantly reduce the mix of more capital-intensive standalone with-profit new business to 29% *(2018: 48%)*. Whilst the pressure on our balance sheet from higher Italian government bond spreads eased during the year, we undertook further de-risking activities to reduce the sensitivity of our balance sheet.
- Other highlights in Italy included investment in a multimedia marketing campaign which has resulted in a 16pp increase in our brand awareness. Overall customer numbers increased by 56%. Improvements to our customer segmentation capabilities will enhance our ability to design propositions in response to customer and distributor demand.
- Our Polish business has experienced growth despite contraction of the life insurance market. Growth has been supported by the launch of our new Twoje Życie (Your Life) protection product into our direct channels, the redesign of our CPI offering in the bancassurance channel, and the strengthening of our distribution relationships with Santander and ING. In the pension market, auto-enrolment commenced during the year and we have written nearly 400 contracts with companies employing 250+ employees since July (over 70,000 employees are covered). The MyAviva platform is very well embedded in Poland and 2019 has seen us reach over 400,000 active customers (a 71% increase), introduce 21 new functionalities, and hit 29,000 monthly transactions (an 86% increase).
- In Ireland we completed the integration of the Friends First business. We also successfully delivered the first phase of our new governance and operating model – separating the management of our Irish life and general insurance businesses – and shifted our focus to the realisation of further efficiency benefits and commercial initiatives to improve the margins on our unit-linked products. One of the key drivers here will be the consolidation of our IT administration systems and 50% of this work completed in 2019. We delivered the first phase of our Integrated Protection Product offering best of both Aviva and Friends First to our customers. Improvements were made to our annuity pricing process with a major re-price in August that improved our new business margins during the second half of the year, and the implementation of an annuity reinsurance solution in line with our longevity risk appetite. Our Irish business achieved first place in the annual Broker Service Excellence Awards in 2019 and our policyholder TNPS scores continue to be top quartile in our sector.
- In Turkey, we continued our market leadership in pensions and increased our market share in protection. While customer persistency actions played a key role in maintaining our pension leadership, we have increased our market share in protection driven by strong growth in our market leading "return of premium" endowment product and our new credit linked product, further assisted by a general market recovery in the second half of 2019. The new credit linked protection product is a very customer focused proposition and has positioned us favourably against our competition. We have increased our customer engagement through a new mobile app which has had nearly 500,000 downloads and enabled our customers to better manage their funds and offers a fully digitised sales process; providing an improved customer experience and driving process efficiency.

Europe GI

Overview, market context and challenges

- In France we are number 12[1] in the market and offer a full range of general insurance products with strength in distribution through our sizeable agent and broker networks and particular expertise in the construction sector. We have recognised an opportunity for profitable growth in SME commercial lines of business where the market is under-penetrated by our larger competitors and we have invested in our capabilities in this area during 2019.
- In Italy we dropped to number 18[2] in the market after the Avipop disposal in 2018. We offer general insurance across motor and non-motor lines of business. In the Italian market motor is the primary line of business representing nearly half of gross written premium in 2018 but has seen declining or flat premiums over the last five years with rising competition, customer churn, and loss ratios. Our response has been twofold: firstly in 2018 we took profitability actions on our motor book that reduced volumes but resulted in improvements in underlying loss ratios and a strong base from which to rebuild our book; secondly we have shifted our strategic focus to invest for growth in the under-penetrated but profitable SME commercial market, and in the growing non-motor personal lines segments, with expanded distribution through multi-agents and brokers.

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 La Fédération Française de l'Assurance
3 Associazione Nazionale fra le Imprese Assicuratrici

- In Poland we are number ten[4] in the market and provide general insurance distributed through a direct sales network, brokers and two key bancassurance partnerships with Santander and ING. The market is showing another year of strong growth. We have chosen to focus our growth strategy more on the commercial market due to price competition in personal lines.
- In Ireland we are a market leading general insurance provider and continue to benefit from a strong macroeconomic environment with high GDP and low unemployment. Despite a continuing soft personal lines market, we achieved a 92.6% combined operating ratio (COR)[3] demonstrating the strength of our underwriting capability. The Irish market has capacity challenges across a number of sectors such as Child Care, Elderly Care, Sports and Hospitality. Business repatriating from the UK continues to form part of the new business pipeline. We continue to prudently underwrite this business, only writing better quality risks with strong rate strength.

Financial performance

	2019 £m	Restated[1] 2018 £m
Adjusted operating profit[2]	**154**	201
Net written premiums (NWP)	**2,017**	1,985
Combined operating ratio (COR)[3]	**95.7%**	93.5%
Cash remitted to Group[3]	**180**	147
Controllable costs[3]	**288**	273

Profit

	General insurance	
Adjusted operating profit[1,2]	**2019 £m**	Restated[1] 2018 £m
France	**65**	92
Poland	**20**	21
Italy (excl. Avipop)	**22**	30
Ireland	**47**	56
Total (excl. Avipop)	**154**	199
Disposals (Avipop)	**—**	2
Total	**154**	201

Excluding disposals, Europe general insurance adjusted operating profit[2] reduced by 22% to £154 million *(2018 restated[1]: £199 million)*. Dealing with each of the markets in turn:

- In France, adjusted operating profit[2] was £65 million *(2018 restated[1]: £92 million)*, with growth in net earned premiums of 6%, particularly in commercial lines, more than offset by higher large losses and less favourable prior year reserve development than 2018.
- In Poland, adjusted operating profit[2] was £20 million *(2018: £21 million)* with net earned premiums in line with 2018.
- In Italy, excluding disposals, adjusted operating profit[2] was down 23% to £22 million *(2018: £30 million)*. Within this net earned premiums were down 3% as underwriting actions taken on the personal motor book during 2018 earned through and there were higher large losses in commercial lines and higher expenses.
- In Ireland, adjusted operating profit[2] reduced to £47 million *(2018: £56 million)* driven by a soft market in personal lines with earned premiums 2% lower than 2018, and higher expenses (driven largely by the impact of the new motor levy of 2% applied to all motor policies since December 2018), partly offset by lower large losses and more benign weather than 2018.

Net written premiums (NWP) and combined operating ratio (COR)[4]

	Net written premiums		Combined operating ratio[3]	
	2019 £m	2018 £m	**2019 %**	Restated[1] 2018 %
France	**1,166**	1,118	**97.2%**	94.6%
Poland	**112**	106	**85.9%**	87.0%
Italy (excl. Avipop)	**319**	317	**97.7%**	95.2%
Ireland	**420**	430	**92.6%**	91.5%
Total (excl. Avipop)	**2,017**	1,971	**95.7%**	93.5%
Disposals (Avipop)	**—**	14	**—**	87.8%
Total	**2,017**	1,985	**95.7%**	93.5%

NWP

Excluding the disposal of Avipop, NWP increased by 3% to £2,017 million *(2018: £1,971 million)* with growth in France, Italy and Poland (particularly in commercial lines) partly offset by lower premiums in Ireland as we maintained strong underwriting discipline in a soft personal motor market.

COR[3]

COR[3] has increased by 2.2pp to 95.7% *(2018 restated[1]: 93.5%)* for the reasons described in the profit section above.

Cash

Cash remitted to the Group[3] was £180 million (*2018: £147 million*) which includes a £65 million special remittance from the disposal of Avipop in Italy in 2018.

Controllable costs[3]

Controllable costs[3] were up 8% to £288 million *(2018: £271 million)* excluding the disposal of Avipop, which includes investment in underwriting platforms in Italy.

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, COR has also been restated to include the amortisation and impairment of internally generated intangible assets. Comparative amounts have been restated.
2 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 – 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 Polska Izba Ubezpieczeń

Operational and customer highlights

- In France we continued to organically build out our SME broker team which resulted in strong growth in commercial lines volumes. We continued to improve our pricing sophistication, notably through use of the RADAR tool which has enhanced our view of margins and competitor pricing. Our innovative Client Unique proposition aims to simplify the sales journey for our retail customers with consistent products and pricing across all distribution channels, together with centralised and efficient claims processing. We launched a pilot phase with 50 agents during the year with results expected during the first quarter in 2020.
- In Italy, we have launched a new Guidewire based underwriting platform offering a simple and flexible range of products initially to smaller businesses and have been commended by the industry for our innovative implementation. In parallel, we commenced a review and renewal of our entire product catalogue and intend to launch across more of our distribution channels so that all our customers and distribution partners can benefit from the simplicity of the new platform. We have achieved strong customer feedback during the year and were ahead of the market on both our customer satisfaction score and retail net promoter score.
- Our Polish business has experienced growth, particularly SME focused commercial lines business where net written premiums grew by 60% assisted by the launch of new propositions including general third-party liability. We also continue to build on the strength of our distribution relationship with our bancassurance partners and further digitised the sales and claims processes including self-claims in personal accident and the reporting of motor third party liability claims online.
- In Ireland the general insurance business has been able to navigate the soft personal lines market with underwriting discipline. We improved the underlying performance of our commercial lines' portfolio (1pp COR[1] improvement). We continued to improve our personal lines pricing sophistication as well as retaining key distribution partners, including a two-year extension with our largest partner An Post Insurance. Our customer recognition remained strong and our RNPS is in the upper quartile and market leading.

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Asia

All percentage movements below are quoted in constant currency unless otherwise stated.

Overview

Following a strategic review in 2019, we have a selective approach in Asia, focused on high potential markets in Singapore and China. We are continuing to explore strategic options for our businesses in Vietnam and Indonesia.

All of our markets provide access to a combined population of over 3 billion people[1], with relatively low insurance penetration compared to more developed Western markets. We currently provide life and health insurance solutions to over 5 million customers across our markets in Asia.

In particular, as a composite insurer with around 1 million customers, Aviva is one the biggest providers of employee benefits and healthcare insurance in Singapore[2].

Across Asia, we operate a multi-distribution channel strategy which includes tied-agency, financial advisers, bancassurance, affinity partnerships, telemarketing and direct sales force. Our core strategy is to leverage strong partnerships and our distribution capability to grow long term value. We continue to place emphasis on earning customers' trust and delivering great customer outcomes. Investment in enhancing Asia's distribution and analytics capabilities continued throughout 2019.

Our FPI business and our business in Hong Kong are classified as held for sale at 31 December 2019.

Financial performance

	2019 £m	Restated[3] 2018 £m
Adjusted operating profit[3,4]		
Life & Health	**276**	263
General Insurance	**(1)**	(2)
	275	261
Profit before tax	**87**	90
Controllable costs[5]	**202**	187
Life:		
Solvency II return on capital[5]	**12.7%**	9.7%
Solvency II operating capital generation (OCG)[5]	**60**	55
Cash remitted to Group[5]	**51**	6
Life new business		
Present value of new business premiums (PVNBP)[5]	**3,057**	2,656
Value of new business on an adjusted Solvency II basis (VNB)[5]	**206**	189
General Insurance:		
Net written premiums (NWP)	**13**	13
Combined operating ratio (COR)[3,5]	**112.8%**	122.1%

Profit

Adjusted operating profit[4]	Life & Health 2019 £m	Life & Health Restated[3] 2018 £m	General insurance 2019 £m	General insurance Restated[3] 2018 £m
Singapore	**145**	123	**(1)**	(2)
China	**25**	22	**—**	—
Other Asia (excl. FPI & Hong Kong)	**(13)**	(26)	**—**	—
Total (excl. FPI & Hong Kong)	**157**	119	**(1)**	(2)
FPI	**128**	151	**—**	—
Hong Kong	**(9)**	(7)	**—**	—
Total adjusted operating profit[4]	**276**	263	**(1)**	(2)

Adjusted operating profit[4] from our life and health businesses was £276 million *(2018 restated[3]: £263 million)*. Excluding FPI and Hong Kong, adjusted operating profit[4] increased by 29% to £157 million *(2018 restated[3]: £119 million)*. Within this, Singapore's result improved 14% to £145 million *(2018 restated[3]: £123 million)*, with continued investments in our financial advisory channel driving higher new business, and improving profitability in health insurance. China's adjusted operating profit improved by 18% to £25 million *(2018: £22 million)*.

Life adjusted operating profit for FPI was £128 million *(2018: £151 million),* while Hong Kong reported an adjusted operating loss of £9 million *(2018: £7 million loss)*.

Singapore general insurance reported an adjusted operating loss of £1 million *(2018: £2 million loss)*.

Profit before tax attributable to shareholders' profit decreased by 3% to £87 million *(2018: £90 million),* with the increase in operating profit more than offset by the effect of an impairment charge related to our associate in India and a £28 million remeasurement loss in relation to FPI.

Controllable costs[5]

Total controllable costs[5] for Asia subsidiaries was £202 million *(2018: £187 million)*. Excluding Hong Kong and FPI, controllable costs[5] were £155 million *(2018: £140 million)*. The increase was mainly to support Singapore's financial adviser development initiative and organic channel growth across Asia.

Solvency II return on capital[5] and Solvency II operating capital generation (OCG)[5]

Asia Life Solvency II return on capital[5] has increased by 3.0pp to 12.7% *(2018: 9.7%)*, Solvency II own funds generation increased by £43 million to £187 million *(2018: £144 million)* and Solvency II operating capital generation[5] has increased by £5 million to £60 million *(2018: £55 million)*. The increase is primarily due to growth and beneficial non-economic assumption changes in Singapore.

Cash

Cash remitted to Group[5] in 2019 has increased to £51 million *(2018: £6 million)*, mainly attributable to improved performance in Singapore. China paid its first dividend to Group of £5 million *(2018: £nil)* in 2019.

1 Swiss Re Institute sigma No 3/2019 publication
2 2018 Insurance statistics published by Monetary Authority of Singapore
3 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 2(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, COR has also been restated to include the amortisation and impairment of internally generated intangible assets. Comparative amounts have been restated.
4 Adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section, note 5 – 'Segmental Information' and 'Other Information' within the Annual report and accounts for further information.
5 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Life new business

	PVNBP[1]		Solvency II VNB[1]	
	2019 £m	2018 £m	**2019 £m**	2018 £m
Singapore	**1,580**	1,279	**159**	152
China	**718**	650	**43**	42
Other Asia (excl. FPI & Hong Kong)	**406**	279	**8**	—
Total (excl. FPI & Hong Kong)	**2,704**	2,208	**210**	194
FPI	**351**	448	**(1)**	(2)
Hong Kong	**2**	—	**(3)**	(3)
Total	**3,057**	2,656	**206**	189

Excluding FPI and Hong Kong, PVNBP[1] has increased by 20% to £2,704 million *(2018: £2,208 million)*, which was led by double digit growth in Singapore and China, and strong agency channel expansion in Vietnam. Solvency II VNB[1] increased by 6% to £210 million *(2018: £194 million)*.

Net written premiums (NWP) and combined operating ratio (COR)[1]
Singapore general insurance net written premiums were flat at £13 million *(2018: £13 million)*. Our general insurance combined operating ratio[1] improved by 10.2pp to 112.8% *(2018: 122.1%)* as a result of a change in mix away from motor to travel and commercial lines.

Operational and customer highlights

During 2019 Singapore continued to grow its distribution network. Our financial adviser subsidiaries, Aviva Financial Advisers and Professional Investments Advisory Services now have a combined total of 1,819 advisers *(2018: 1,540 advisers)*.

In China, we continued to have an excellent relationship with our partner COFCO and in 2019 our joint venture continued to focus on its core agency channel, growing operating profit by 18% as the market recovered following a period of regulatory tightening in 2018.

Other key operational and customer highlights during 2019 included:

- Our business in Singapore received several major awards including the Sustainability & Corporate Social Responsibility Award from Asia Insurance Review and Singapore's Best Workplaces (Medium and Large Workplaces) 2019 Award from the Great Place to Work Institute.
- In July 2019, we were awarded the contract to provide insurance cover to the Singapore government's Public Officers Group Insurance Scheme (POGIS).
- In China, our joint venture won an award from the Project Management Institute recognising our efforts to promote an innovative culture and to reduce complexity for our customers, agents and employees.
- By leveraging Quantum capabilities, Aviva Singapore has integrated artificial intelligence driven solutions across both pricing and distribution. These have contributed to both top line growth and bottom-line profit generation.

Market context and challenges

Driven by robust macro fundamentals in Asia, regional insurance markets are expected to continue their growth despite global economic volatility. We continue to believe that the long-term favourable trends of the rising middle-class, increasing awareness of retirement planning and a growing market in healthcare will persist across the region. We also believe Asia will continue to outperform other markets in insurance growth in the coming decade.

Asia's rapid growth in internet, social media and mobile activities continued in 2019, and China is a leader in the technology revolution and digital applications. Today, digital has become an essential part of our daily lives and we are strongly encouraged by various Asian governments' support in Fintech, and consumers continued rapid adoption.

Following the outbreak of Coronavirus, our Asia business has implemented safeguards to ensure business continuity and supporting the wellbeing of our customers, colleagues and communities. We continue to monitor developments closely.

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Risk and risk management

Risk management is key to Aviva's success. We accept the risks inherent to our core business lines of life, health and general insurance and asset management. We diversify these risks through our scale, geographic spread, the variety of the products and services we offer and the channels through which we sell them.

We receive premiums which we invest to maximise risk-adjusted returns, so that we can fulfil our promises to customers while providing a return to our shareholders.

In doing so we have a preference for retaining those risks we believe we are capable of managing to generate a return.

Looking forward, these risks may be magnified or dampened by current and emerging external trends (for example, climate change, cyber crime and political risks, such as Brexit) which may impact our current and longer term profitability and viability, in particular our ability to write profitable new business.

This includes the risk of failing to adapt our business model to take advantage of these trends. The 'Principal risk trends and causal factors' table in this section describes these trends, their impact, future outlook and how we manage these risks.

How we manage risk

Rigorous and consistent risk management is embedded across the Group through our Risk Management Framework, comprising our systems of governance, risk management processes and risk appetite framework.

Our governance

This includes risk policies and business standards, risk oversight committees and roles and responsibilities. Line management in the business is accountable for risk management which, together with the risk function and internal audit, form our 'three lines of defence'. The roles and responsibilities of the Board Governance Committee[1], Audit and Risk Committees and management's Disclosure, Asset Liability and Operational Risk Committees in relation to the oversight of risk management and internal control is set out in the 'Directors' and corporate governance report' in the Annual report and accounts.

Our process

The processes we use to identify, measure, manage, monitor and report risks, including the use of our risk models, and stress and scenario testing, are designed to enable dynamic risk-based decision-making and effective day-to-day risk management. Having identified and measured the risks of our business, depending on our risk appetite, we either accept these risks or take action to reduce, transfer or mitigate them.

Our risk appetite framework

This refers to the risks that we select in pursuit of return on capital deployed, the risks we accept but seek to minimise and the risks we seek to avoid or transfer to third parties, including quantitative expressions of the level of risk we can support (e.g. the amount of capital we are prepared to put at risk).

Types of risk inherent to our business model

Risks customers transfer to us

- Life and health insurance risk includes longevity risk (annuity customers living longer than we expect), mortality risk (customers with life protection), critical illness risk, expense risk (the amount it costs us to administer policies) and persistency risk (customers lapsing or surrendering their policies).
- General insurance risk is the risk arising from loss events (fire, flooding, windstorms, accidents etc).

Risks arising from our investments

- Credit risks (actual defaults and market expectation of defaults) create uncertainty in our ability to offer a minimum investment return on our investments.
- Liquidity risk is the risk of not being able to make payments when they become due because there are insufficient assets in cash form.
- Market risks result from fluctuations in asset values, including equity prices, property prices, foreign exchange, inflation and interest rates.

Risks from our operations and other business risks

- Operational risk is the risk of direct or indirect loss, arising from inadequate or failed internal processes, people and systems, or external events including changes in the regulatory environment.
- Asset management risk is the risk of customers redeeming funds, not investing with us, or switching funds, resulting in reduced fee income.

1 From 1 January 2020 the Committee has become Customer, Conduct and Reputation Committee. Further details are available in the Governance Report in the Annual Report and Accounts

Principal risk types

The types of risk to which the Group is exposed have not changed significantly over the year and are described in the table below. All of the risks below, and in particular operational risks, may have an adverse impact on our brand and reputation.

Risk type	Risk preference	Mitigation
Credit risk • Credit spread[1] • Credit default	We take a balanced approach to credit and believe we have the expertise to manage it and the structural investment advantages conferred to insurers with long-dated, relatively illiquid liabilities that enables us to earn superior investment returns.	• Risk appetites set to limit overall level of credit risk • Credit limit framework imposes limits on credit concentration by issuer, sector and type of instrument • Investment restrictions on certain sovereign and corporate exposures • Credit risk hedging programme • Specific asset de-risking
Market risk • Equity price[1] • Property • Interest rate • Foreign exchange • Inflation	We actively seek some market risks as part of our investment and product strategy. We have a limited appetite for interest rate and property risks as we do not believe that these are adequately rewarded.	• Risk appetites set to limit exposures to key market risks • Active asset management and hedging in business units • Scalable Group-level equity and foreign exchange hedging programme • Pension fund active risk management • Asset and liability duration matching limits impact of interest rate changes and actions taken to manage guarantee risk, through product design
Life and health insurance risk • Longevity[1] • Persistency • Mortality and morbidity • Expenses	We take measured amounts of life insurance risk provided we have the appropriate core skills in underwriting and pricing.	• Risk selection and underwriting on acceptance of new business • Longevity swaps covering pensioner-in-payment scheme liabilities • Product design that ensures products and propositions meet customer needs • Use of reinsurance on longevity risk for our annuity business, including the bulk annuity buy-in transaction with Aviva staff pension scheme.
General insurance risk • Catastrophe • Reserving (latent and non-latent) • Underwriting • Expenses	We take general insurance risk in measured amounts for explicit reward, in line with our core skills in underwriting and pricing. We have a preference for those risks that we understand well, that are intrinsically well managed and where there is a spread of risks in the same category. General insurance risk diversifies well with our Life Insurance and other risks.	• Use of reinsurance to reduce the financial impact of a catastrophe and manage earnings volatility • Application of robust and consistent reserving framework to derive best estimate with results subject to internal and external review, including independent reviews and audit reviews • Extensive use of data, financial models and analysis to improve pricing and risk selection • Underwriting appetite framework linked to delegations of authority that govern underwriting decisions and underwriting limits • Product development and management framework that ensures products and propositions meet customer needs • Formal and documented claims management procedures
Liquidity risk[2]	The relatively illiquid nature of insurance liabilities is a potential source of additional investment return by allowing us to invest in higher yielding, but less liquid, assets such as commercial mortgages.	• Maintaining committed borrowing facilities (£1.65 billion at 31 December 2019) from banks • Asset liability matching methodology develops optimal asset portfolio maturity structures in our businesses to ensure cash flows are sufficient to meet liabilities • Commercial paper issuance • Use of our limit framework covering minimum liquidity cover ratio and minimum Group Centre liquidity • Contingency funding plan in place to address liquidity funding requirements in a significant stress scenario
Asset management risk • Fund liquidity • Performance and margin • Product • Retention risks	Risks specific to asset management should generally be reduced to as low a level as is commercially sensible, on the basis that taking on these risks will rarely provide us with an upside.	• Product development and review process • Investment performance and risk management oversight and review process • Propositions based on customer needs • Client relationship teams managing client retention risk

1 Top three risks ranked by diversified Solvency II Solvency Capital Requirement
2 Not quantifiable in terms of economic capital

Risk type	Risk preference	Mitigation
Operational risk • Conduct • Legal & regulatory • People • Process • Data security • Technology • Brand and Reputation	Operational risk should generally be reduced to as low a level as is commercially sensible. Operational risk will rarely provide us with an upside.	• Application of enhanced business standards covering key processes • Our Operational Risk & Control Management Framework which includes the tools, processes and standardised reporting necessary to identify, measure, manage, monitor and report on the operational risks and the controls in place to mitigate those risks within centrally set tolerances • Enhanced scenario-based approach to determine appropriate level of capital to be held in respect of operational risks • On-going investment in simplifying our technology estate to improve the resilience and reliability of our systems and in IT security to protect ours and our customers' data • During 2019 we transitioned IT services to new data centres bringing disaster recovery risk back into tolerance

Principal emerging trends and causal factors

This table describes the emerging trends and causal factors impacting our inherent risks, their impact, future outlook and how we take action to manage these risks:

Key trends and movement	Risk management	Outlook
Economic & credit cycle – uncertainty over prospects for future macroeconomic growth, credit and current low interest rates, and the response of Central Banks, could adversely impact the valuation of our investments or credit default experience as well as the level of the returns we can offer to customers going forwards and our ability to profitably meet our promises of the past. Trend: Increasing Risks impacted: Credit risk, Market risk, Liquidity risk	Over the last few years we have taken significant steps to reduce the sensitivity of our balance sheet to investment risks. While interest rate exposures are complex, we aim to closely duration-match assets and liabilities and take additional measures to limit interest rate risk. We hold substantial capital against market risks, and we protect our capital with a variety of hedging strategies to reduce our sensitivity to shocks. We regularly monitor our exposures and employ both formal and ad hoc processes to evaluate changing market conditions. Other actions taken in the past include reducing sales of products with guarantees and shifting our sales towards protection and unit-linked products.	During 2019, interest rates reached record lows in many eurozone economies, requiring further management action in our businesses in France and Italy. We expect rates to remain at low levels for some time to come and we continue to manage our key exposures, specifically in Italy, France and Asia. While asset returns had a strong run, a number of economists have warned we are approaching the end of this credit cycle. In addition, there continues to be significant geopolitical risks that will have knock on impacts to economies and financial markets, including Brexit and the threat of both trade wars and actual wars.
UK-EU relations (Free Trade Agreement uncertainty) – there remains considerable uncertainty over the outcome of negotiations over the UK's future relationship with the EU, and the implications for our operations, economic growth and productivity and in the longer term for financial services regulation, including Solvency II. Trend: Stable Risks impacted: Credit risk, Market risk, Operational risk	In preparing for the end of the transition period on 31 December 2020 under the UK-EU withdrawal agreement, we have already taken the operational measures necessary to ensure continuous service to our customers. This includes addressing the loss of our ability to passport business into the EU through insurance portfolio transfers to our business in Ireland and expansion of our business in Luxembourg to serve our EEA asset management clients and funds, and amending contractual terms for data sharing to allow continued uninterrupted flow of personal data between our EU businesses and the UK. We have contingency plans to restructure our businesses in case the UK is not considered Solvency II equivalent and restrictions to asset management delegation rights as a non-EU manager.	As 2020 progresses we expect greater clarity to emerge over the terms of any future UK-EU free trade agreement and other aspects of the future relationship and the extent, if at all, to which financial and other services are included. There is a risk that financial services are included in a way that leaves the UK as a "rule taker" of EU regulation, which would negatively impact on the ability for the UK to calibrate financial services rules for UK market needs. There is also a risk that negotiations fail to conclude by 31 December 2020, the end of the transition period under the withdrawal agreement, and without an extension to negotiations the UK may need to revert to trading on World Trade Organisation terms. Any agreement may require an implementation period after 2020. While the ultimate outcome remains uncertain, we expect UK financial markets to be volatile and macroeconomic growth subdued.

Key trends and movement	Risk management	Outlook
Changes in public policy – any change in public policy (government or regulatory) could influence the demand for, and profitability of, our products. In some markets there are (or could be in the future) restrictions and controls on premium rates, rating factors and charges. Trend: Volatile Risks impacted: Operational risk	We actively engage with governments and regulators in the development of public policy and regulation. We do this to understand how public policy may change and to help ensure better outcomes for our customers and the Company. The Group's multi-channel distribution and product strategy and geographic diversification underpin the Group's adaptability to public policy risk, and often provides a hedge to the risk. For example, since the end of compulsory annuitisation in the UK, we have compensated for falling sales of individual annuities by increasing sales of other pension products – particularly bulk purchase annuities.	Following the decisive general election victory, the new UK government has a clear mandate on Brexit, and a relatively pro-business stance more generally. We believe that a relatively hard Brexit with minimal alignment to the EU is likely by the end of 2020. Within the domestic agenda there are potential risks around tax, pensions legislation and increasing regulatory intervention (particularly on GI pricing). In the EU there is a review of Solvency II, the key regulatory regime for EU insurers. A new EU Commission has an ambitious agenda for climate change and Artificial Intelligence/data regulation which may bring regulatory changes directly impacting on our businesses in the EU and in a post Brexit UK indirectly.
New technologies & data – failure to understand and react to the impact of new technology and its effect on customer behaviour and how we distribute products could potentially result in our business model becoming obsolete. Failure to keep pace with the use of data to price more accurately and to detect insurance fraud could lead to loss of competitive advantage and underwriting losses. Trend: Increasing Risks impacted: Operational risk	Our data science capabilities facilitate market leading innovation in the use of data analytics to significantly improve the customer journey, improve our understanding of how customers interact with us, and improve underwriting margins. Our Data Charter sets out our public commitment to use data responsibly and securely. Considerable work is going into modernising our legacy infrastructure.	Data creation is likely to continue to grow, while effective use of "Big data" through artificial intelligence and advanced analytics will increasingly become a critical driver of competitive advantage for insurers, and subject to increasing regulatory scrutiny. The competitive threat to traditional insurers is likely to increase with the potential for big technology companies and low cost innovative digital start-ups to enter the insurance market, where previously underwriting capability, risk selection and required capital have proven to be a sufficient barrier to entry.
Climate change – potentially resulting in higher than expected weather-related claims (including business continuity claims) and inaccurate pricing of general insurance risk, as well as adversely impacting economic growth and investment markets. Trend: Increasing Risks impacted: General insurance risk, Credit risk, Market risk	We are actively engaged in public policy debate on the risks and impacts of climate change to our business and customers. We use reinsurance to reduce the financial impact of catastrophic weather events. In the UK, our flood mapping analytics helps us identify properties most at risk and improve our risk selection. Our responsible investment strategy ensures climate change, as well as other environmental and social issues are integrated into our investment decisions. You can read more about the physical, transition and liability risks we face as an asset owner, insurer and asset manager in our 'Climate-related financial disclosure'.	Global average temperatures over the last five years have been the hottest on record. Despite the UNFCCC Paris agreement, the current trend of increasing CO_2e emissions is expected to continue, in the absence of radical action by governments, with global temperatures likely to exceed pre-industrial levels by at least 2°C and weather events (floods, droughts, windstorms) increasing in frequency and severity. Disclosure of potential impacts against various climate scenarios and time horizons will become increasingly common for all companies.
Cyber crime – criminals may attempt to access our IT systems to steal or utilise company and customer data, or plant malware viruses, in order to access customer or company funds, and/or damage our reputation and brand. Trend: Increasing Risks impacted: Operational risk	Aviva has invested significantly in Cyber security introducing additional automated controls to protect our data and critical IT services. This investment has enhanced our ability to identify, detect and prevent Cyber-attacks and we regularly test ourselves through our own 'white hat' hackers to test our Cyber defences and crisis management protocols. Aviva encourages a Cyber aware culture by regularly undertaking activities such as employee phishing exercises, computer-based training and more regular communications about specific Cyber threats.	In 2019 there continued to be high profile cyber security incidents for corporates in the UK and elsewhere and Cyber threat is expected to persist in 2020 from multiple sources, including cyber criminals and rogue states, with increasing levels of sophistication and industrialisation anticipated. Aviva continuously monitors the external threat environment to ensure that our Cyber investment remains appropriate to mitigate the continued and changing nature of the cyber threat.

Key trends and movement	Risk management	Outlook
Medical advances and healthier lifestyles – these contribute to an increase in life expectancy of our annuity customers and thus future payments over their lifetime may be higher than we currently expect. Trend: Stable Risks impacted: Life insurance risk (longevity)	We monitor our own experience carefully and analyse external population data to identify emerging trends. Detailed analysis of the factors that influence mortality informs our pricing and reserving policies. We add qualitative medical expert inputs to our statistical analysis and analyse factors influencing mortality and trends in mortality by cause of death. We also use longevity swaps to hedge some of the longevity risk from the Aviva Staff Pension Scheme and longevity reinsurance for bulk purchase annuities and for some of our individual annuity business.	There is considerable uncertainty as to whether the improvements in life expectancy that have been experienced over the last 40 years will continue into the future. Despite continued medical advances emerging, dietary changes, increasing obesity and strains on public health services have begun to slow this trend, leading in the UK to some significant industry-wide longevity reserve releases in recent years. In the longer term this may even result in a reversal in the trend of increasing life expectancy. Although the latest analysis of population data indicates much lighter mortality in 2019 compared to 2018, which is a marked change to the experience seen during the past decade.
Changes in customer behaviour – will impact how customers wish to interact with us and the product offering they expect, including the exercise of options embedded in contracts already sold by us. Trend: Stable Risks impacted: Operational risk	We listen to our customers to ensure we meet their savings, retirement and insurance needs. We also seek to improve the way we serve our customers by simplifying our interactions with them, resolving queries at their first point of contact where appropriate and enhancing our digital capabilities.	We expect customers will be much more in control, expecting to self-service and self-solve. They will want to access data and insight and use it to guide their own decisions. However, we also expect regulatory scrutiny to increase to ensure we continue to serve and treat our existing customers fairly particularly those who are vulnerable and less digitally aware.
Outsourcing – we rely on a number of outsourcing providers for business processes, customer servicing, investment operations and IT support. The failure of a critical outsourcing provider could disrupt our operations. Trend: Stable Risks impacted: Operational risk	Our businesses are required to identify business critical outsourced functions (internal and external) and for each to have exit and termination plans, and business continuity and disaster recovery plans in place in the event of supplier failure, which are reviewed annually. We also carry out supplier financial stability reviews at least annually.	We expect regulatory scrutiny of outsourcing arrangements to remain following financial difficulties faced by some providers, as well as customer service issues following the migration of our third party provided IT platform in the UK.
Pandemic – in an increasingly globalised world, new or mutations of existing bacteria or viruses may be difficult for stretched healthcare systems to contain, disrupting national economies and affecting our operations and the health and mortality of our customers. Trend: Increasing Risk impacted: Market, Credit, Life Insurance risk (mortality, longevity, morbidity), General Insurance (business interruption, travel) and Operational risk.	We have taken significant steps to reduce the sensitivity of our balance sheet to market/credit risks and have contingency plans which are designed to reduce as far as possible the impact on operational service arising from mass staff absenteeism, travel restrictions and supply chain disruption caused by a pandemic. We reinsure much of the mortality risk arising from our Life Protection business and hold capital to cover the risk of a 1-in-200 year pandemic event. We model extreme pandemic scenarios such as a repeat of the 1918 Spanish Influenza pandemic. In the Group and commercial insurance business we limit our potential exposure through our policy wordings. As an investment manager and investor, we engage with companies to ensure the responsible use of antibiotics to reduce the risk that antimicrobial resistance negate the efficacy of medical treatment.	2020 has begun with the outbreak of a new strain of the Coronavirus in China. With confirmed cases in more than 50 countries including all of those in which Aviva has material businesses. There is a risk of a significant global pandemic and economic disruption. We have imposed travel restrictions on staff and a work-from-home self-quarantine regime for staff who have recently visited infected regions. In addition we have reviewed the exposure of our balance sheet, and are taking actions to further reduce our sensitivity to economic shocks. Notwithstanding our robust capital and liquidity position and the operational and financial actions that we are taking, a deterioration in the situation, and the consequent impacts on financial markets, our insurance exposures and our operations, would have adverse implications for our businesses. Going forward, increasing migration and international travel is expected to make the containment of future pandemics more challenging.

Capital management

Overview

Group capital is represented by Solvency II own funds. The Group manages capital in conjunction with its solvency capital requirements (SCR), and seeks to, on a consistent basis:

- Maintain sufficient, but not excessive, financial strength in accordance with risk appetite, to support new business growth and satisfy the requirements of our regulators and other stakeholders giving both our customers and shareholders assurance of our financial strength
- Retain financial flexibility by maintaining strong liquidity, access to a range of capital markets and significant unutilised committed credit lines
- Manage an appropriate level of leverage to ensure an efficient capital structure
- Allocate capital rigorously to support value adding growth and repatriate excess capital where appropriate
- Operate a sustainable dividend policy with reference to factors including growth in cash flow and capital generation

The Solvency II position disclosed is based on a 'shareholder view'. The shareholder view is considered by management to be more representative of the shareholders' risk exposure and the Group's ability to cover the SCR with eligible own funds and aligns with management's approach to dynamically manage its capital position. In arriving at the shareholder position, a number of adjustments are typically made to the regulatory Solvency II position. The Group Solvency II capital position, including these adjustments, is summarised in the table below:

	Own funds 2019 £m	**SCR 2019 £m**	**Surplus 2019 £m**	Own funds 2018 £m	SCR 2018 £m	Surplus 2018 £m
Estimated Solvency II regulatory surplus as at 31 December	**28,347**	**(15,517)**	**12,830**	27,567	(15,339)	12,228
Adjustments for:						
Fully ring-fenced with-profit funds	**(2,501)**	**2,501**	**—**	(2,634)	2,634	—
Staff pension schemes in surplus	**(1,181)**	**1,181**	**—**	(1,142)	1,142	—
Notional reset of the transitional measure on technical provisions (TMTP)	**—**	**—**	**—**	(127)	—	(127)
Pro forma adjustments[1]	**(117)**	**(75)**	**(192)**	(113)	(6)	(119)
Estimated Solvency II shareholder surplus at 31 December	**24,548**	**(11,910)**	**12,638**	23,551	(11,569)	11,982

1 The 31 December 2019 Solvency II position includes three pro forma adjustments that relate to the disposal of FPI (£nil impact on surplus), the disposal of Hong Kong (£nil impact on surplus) and the potential impact of an expected change to Solvency II regulations on the treatment of equity release mortgages (£0.2 billion decrease in surplus as a result of an increase in SCR). The 31 December 2018 Solvency II position includes the pro forma impact of the disposal of FPI (£0.1 billion increase in surplus) and the potential impact of an expected change to Solvency II regulations on the treatment of equity release mortgages (£0.2 billion reduction in surplus as a result of an increase in SCR).

The estimated Solvency II cover ratio[1] is 206% at 31 December 2019 *(2018: 204%)*.

The movement in the Solvency II shareholder surplus over the period is shown in the table below:

Shareholder view	**Own funds 2019 £m**	**SCR 2019 £m**	**Surplus 2019 £m**
Group Solvency II surplus at 1 January	**23,551**	**(11,569)**	**11,982**
Operating capital generation	**2,257**	**2**	**2,259**
Non-operating capital generation	**178**	**(362)**	**(184)**
Dividends	**(1,222)**	**—**	**(1,222)**
Share buy-back	**—**	**—**	**—**
Hybrid debt repayments	**(210)**	**—**	**(210)**
Acquired/divested business	**(6)**	**19**	**13**
Estimated Solvency II surplus at 31 December	**24,548**	**(11,910)**	**12,638**

Solvency II operating capital generation[1] (OCG) measures the amount of Solvency II capital the Group generates from operating activities. Capital generated enhances Solvency II surplus which can be used to support sustainable cash remittances[1] from our business, which in turn supports the Group's progressive dividend as well as funding investments that provide sustainable growth. The OCG[1] by market is summarised in the table below:

Operating capital generation[1]	**2019 £m**	2018 £m
UK Life (including UK Savings & Retirement)	**1,170**	1,821
Aviva Investors	**90**	126
General Insurance	**574**	647
Europe Life	**754**	724
Asia Life	**60**	55
Group centre, debt costs and Other	**(389)**	(175)
Total Group Solvency II operating capital generation[1]	**2,259**	3,198

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Solvency II own funds

One of the objectives of capital management is to maintain an efficient capital structure using a combination of equity shareholders' funds, preference share capital, subordinated debt and borrowings, in a manner consistent with our risk profile and the regulatory and market requirements of our business. The table below provides a summary of the Group's regulatory Solvency II own funds by Tier:

Regulatory view	2019 £m	2018 £m
Unrestricted Tier 1	**20,377**	19,312
Restricted Tier 1	**1,839**	2,096
Tier 2	**5,794**	5,811
Tier 3[1]	**337**	348
Total regulatory own funds[2]	**28,347**	27,567

1 Tier 3 regulatory own funds at 31 December 2019 consists of £259 million subordinated debt *(2018: £253 million)* plus £78 million net deferred tax assets *(2018: £95 million)*.
2 Regulation was introduced in France that allows French insurers to place the Provision pour Participation aux Excedents (PPE) into Solvency II own funds. The PPE has been included in the France local regulatory own funds in 2019 but it is not included in the Group regulatory own funds.

- Unrestricted Tier 1 capital includes Aviva's ordinary share capital and share premium which are high quality instruments with principal loss absorbing features such as permanence, subordination, undated, absence of redemption incentives, mandatory costs and encumbrances
- Restricted Tier 1 includes Aviva's direct capital instrument (DCI), preference shares and subordinated debt. None of these instruments include principal loss absorbency features and all qualify as restricted Tier 1 capital under transitional provisions
- Tier 2 capital consists of dated subordinated debt. The features of Tier 2 capital include subordination, a minimum duration of 10 years with no contractual opportunity to redeem within 5 years, absence of redemption incentives and mandatory costs and encumbrances
- Tier 3 capital consists of subordinated debt and net deferred tax assets after taking into account the ability to offset assets against deferred tax liabilities. The features of Tier 3 capital include subordination and a minimum duration of 5 years

Capital and liquidity risk appetite

The Group's economic capital risk appetite is set in terms of our Solvency II shareholder cover ratio[1]. Our Solvency II cover ratio[1] working range is 160%-180%.

More recently, our Solvency II cover ratio[1] has typically been in a range of 190-210%, above our working range. If the ratio was to remain above 200% for an extended period we have scope for additional actions such as further debt reduction or additional investment in business growth and change. Similarly, if the ratio reduced to below the bottom of the working range, we would consider improvement actions which include derisking and reprioritisation of growth initiatives.

Our businesses are capitalised based on their regulatory minimum levels with further prudent volatility buffers specific to each entity. Market local capital appetites and working ranges are reviewed regularly by local boards. Our Group cash remittance policy is that business units should pay down to the bottom of their respective working ranges based on up-to-date assessments of their capital positions. This is consistent with our preference to hold excess capital at centre to improve fungibility and underpins the upstreaming of excess business unit capital via additional remittances seen in recent years.

We actively manage our centre liquidity and we have defined a liquidity risk appetite that sets a minimum level of centre liquid assets to be held at all times. In addition, we stress our forecast levels of centre liquid assets in order to ensure that we would still able to meet our commitments to pay a progressive dividend and meet our deleveraging ambitions if a liquidity event were to occur.

Capital deployment and allocation framework

The Group's economic value-added (EVA) framework ensures that we deploy our capital based on a robust assessment of value creation. EVA is calculated as the own funds generated less the Group's cost of capital and this EVA approach is closely related to our Solvency II return on equity[1] metric.

We use EVA to support strategic decision making, such as transformation projects or M&A, business capital allocation, pricing, hedging, reinsurance and asset allocation. We also use EVA to support a detailed review of each segment of the group to inform strategic planning and performance management.

When making capital allocation decisions in addition to EVA we consider other key metrics including cash remittances[1], OCG[1] and Group adjusted operating profit[1].

1 This is an Alternative Performance Measure (APM) which provides useful information to enhance the understanding of financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Our climate-related financial disclosure

As an international insurance group, our sustainability and financial strength is underpinned by an effective risk management framework. Our business is directly impacted by the effects of the climate crisis. We believe that unmitigated climate-related risks present a systemic threat to societal and financial stability and therefore to our business, over the coming decades.

This disclosure reflects Aviva's 2019 response to the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD). It sets out how Aviva incorporates climate-related risks and opportunities into governance, strategy, risk management, metrics and targets and how we are responding to new regulatory requirements. These pages, along with the expanded report, are available at www.aviva.com/TCFD.

Governance

Aviva has built a strong system of governance, with effective and robust controls. In 2019 we updated the Senior Management Function's Statements of Responsibilities in line with the PRA's Supervisory Statement 3/19[1]. The regulated entities' Chief Risk Officers (CROs) are responsible for ensuring that climate-related risks and opportunities are identified, monitored and managed through Aviva's risk management framework and in line with our risk appetite. The Group CRO is responsible for overseeing, at Group level, the embedding of the risk management framework. To support the CROs in meeting regulatory expectations, we have initiated a group-wide climate-related risks and opportunities project. The Group CRO is the executive sponsor of the project.

The Board Risk Committee and Board Governance Committee[2] oversee our management of climate-related risks and opportunities. The Board Risk Committee[2] met six times in 2019 to review, manage and monitor all aspects of risk management, including climate-related risks and opportunities. The Board Governance Committee[2] met four times in 2019 to oversee how Aviva meets its corporate and societal obligations.

In 2019, we updated our risk policies and business planning process to ensure the assessment of climate-related risks and opportunities is integrated into our overall strategy, decision-making, risk management and reporting frameworks. Local markets have also responded to local regulations (e.g. Article 173 in France and the PRA's climate change Insurance Stress Test). In 2019 papers considering the impact of climate change on our business have been presented to Board committees across the group (e.g. the outcomes of the PRA's climate change Insurance Stress Test were presented to the UK Life and UK GI Risk Committees).

As part of our regular Board training programme, Aviva's climate-related risks and opportunities are presented to the Board. This training equips the Board to give appropriate direction to the company and ensure actions are taken to identify, measure, manage, monitor and report these risks and opportunities.

Strategy

Having achieved the targets set as part of our 2015 strategic response to climate change, this year our climate strategy took another important step forward. We are widening the scope from primarily focusing on investments, to create a broader, joined-up four-pillar approach covering investments, insurance, our operations and influence.

Aviva is a trusted climate leader. We commit to aligning our business to the 1.5°C Paris target[3] and to be a net zero asset owner by[4] 2050. Our businesses will seek to develop and offer further climate-friendly products. We also commit to further cutting our operational carbon impact, as well as using our influence to help tackle climate change. This strategy is aligned to our Company Purpose 'With you today, for a better tomorrow' and will be implemented as part of the Group Business Strategy.

Investments – There are three ways in which Aviva is involved in investments i.e. as an asset owner, a long-term savings and pensions provider and as an asset manager.

- **As an asset owner**, we seek to align our investments with a pathway towards net zero carbon emissions and ensure consistency with the Paris target. We have signed-up to key global commitments such as the UN Net Zero Asset Owners Alliance. We are working with the industry to define methodologies and milestones with respect to these commitments and plan to increase our level of investment in low carbon infrastructure through to 2030; in addition to our £3.8 billion investments since 2015. We use our shareholder influence to encourage companies to transition to a low carbon economy and divest from highly carbon-intensive fossil fuel companies where we consider they are not making sufficient progress towards the engagement goals set. We engaged with an initial set of 40 companies where Aviva has beneficial holdings, and which have >30% of their business (by revenue) associated with thermal coal mining or coal power generation. By the start of 2020 we had divested Aviva's own assets from 18 thermal coal mining and power generation companies; we are prepared to add further companies to our Investment Stoplist to limit our exposure to this and other carbon intensive sectors.
- **For long-term savings and pensions,** we integrate consideration of long-term issues into the products and services we offer. We continue to develop our customer Environmental, Social and Governance (ESG) strategy, and offer climate friendly and ethical funds such as the stewardship fund range.
- **As an asset manager,** Aviva Investors (AI) integrates consideration of ESG factors into the investment process to deliver long-term sustainable and superior investment outcomes for customers whilst adhering to their mandate. AI is developing a range of funds that support the climate change transition. In 2019, AI launched the European Equity Climate Transition Fund, which whilst excluding investments in companies with exposure to high carbon fossil fuels, invests in companies that provide solutions for climate mitigation/adaptation; or are orientating their business models to be successful in adapting to a warmer world, and supporting the transition to a low-carbon economy. In 2019 we integrated the T-Risk methodology[5] into our real assets' assessment process and continued to integrate climate issues into our voting strategy by withholding support for high carbon emitting companies that do not publish TCFD disclosures.

1 Prudential Regulation Authority's (PRA) Supervisory Statement – 'Enhancing bank's and insurers' approaches to managing the financial risks from climate change'
2 From 1 January 2020 the Committee has become Customer, Conduct and Reputation Committee. Further details are available in the Governance Report in the Annual Report and Accounts
3 The 1.5C target was set as an aspiration by the global Paris climate change deal in 2015 to limit the damage wreaked by acute events such as extreme weather and chronic events such as sea level rise.
4 Reduce the carbon emissions of our investment portfolio to net-zero
5 T-risk is a model using research inputs from in-house as well as academia, consultants, civil society, peers to rate the 159 GICS (Global Industry Classification System) sub-industries on their risk exposure to both physical and decarbonisation risks through their value chain

Insurance – We seek to grasp opportunities to support the transition to a low carbon economy and promote activities that will secure a better future for our customers and wider society. We develop 'climate conscious' products across Aviva, which reward customers for environmentally responsible actions, provide an element of adaptation/resilience or additional cover for those customers at risk of the extreme weather impacts of climate change. For example, we offer products and services that support customers' choices such as bespoke electric vehicle policies (France), reduce premiums for customers who opt to use public transport (France), support the sharing economy (Canada), cover solar panels on residential insurance policies without charging an additional premium (UK GI). Last year, Aviva confirmed we would stop underwriting fossil fuel power generation worldwide and has recently launched its whole lifecycle insurance for renewable energy companies. We continue to reduce the environmental impact of our claims process and implement changes which benefit the customer and minimise the amount of waste to landfill or recycling.

Operations – Our operations have been carbon neutral since 2006, through reducing our emissions year-on-year and offsetting any remaining emissions. Our ambition over time is that our business operations should have positive climate impact. We have already reduced our emissions by 66%[1] since 2010 and have a long-term reduction target of 70% by 2030. We are committed to using 100% renewable electricity by 2025 (via our RE100 commitment[2]). In 2019, we commissioned a 'first of its kind in the UK' solar carport installation for our Norwich office, which with the right weather conditions removes our reliance on the National Grid and feeds surplus electricity back into the grid. In 2019 our carport produced 40 GWh of electricity, of which 3.8 GWh was exported to the grid. We have identified two further locations for the installation of solar carports which will come on-stream in 2020. We have planning permission for a wind turbine at our Perth office, which through the combination of the existing solar array, new solar carport and battery storage will take the location off-grid.

Influence – Aviva continues to provide strong and vocal support for capital market reform, to mobilise the trillions of pounds required to transition to a low carbon economy and correct existing market failures with respect to climate change.

We encourage policymakers and regulators to change the financial system so markets reward sustainable investments and sustainable businesses. Aviva's CEO spoke about climate at the UN High-level Dialogue Financing for Development Forum, which was convened by the UN General Assembly in September 2019. He highlighted the need for strategic asset allocation for governments and the private sector, the need for free public league tables e.g. the World Benchmarking Alliance, the need for subsidies to be in the right places and the responsibility of financial advisors to have to ask customers for their views on how their money is invested. We launched our report "A Marshall Plan for the Planet", which develops these ideas, during the UN General Assembly.

Risk management

Rigorous and consistent risk management is embedded across Aviva through our risk management framework, comprising our systems of governance, and risk management processes. This framework sets out how Aviva identifies, measures, manages, monitors and reports on the risks to which it is, or could be, exposed (including climate-related risks). Aviva considers climate change to be one of the most material long-term risks to our business model, and its impacts are already being felt.

Given its materiality and proximity, we are acting now to mitigate and manage the impacts of climate change both today and in the future. Through these actions, Aviva continues to build resilience to climate-related transition, physical and liability risks. Aviva has developed models and tools to assess the potential impact on our business of the four Intergovernmental Panel on Climate Change (IPCC) scenarios. Each IPCC scenario describes a potential trajectory for future levels of greenhouse gases and other air pollutants. These can be mapped to likely temperature rises: 1.5°C (aggressive mitigation), 2°C (strong mitigation), 3°C (some mitigation) and 4°C (business as usual).

Aviva calculates a Climate Value-at-Risk (Climate VaR) for each IPCC scenario to assess the climate-related risks and opportunities over the next 15 years with the ability to look at shorter time periods (three to five years) where appropriate. A range of different financial indicators are used to assess the impact on our investments and insurance liabilities. These impacts are aggregated to determine the overall impact across all scenarios by assigning relative likelihoods or probabilities to each scenario. Climate VaR includes the financial impact of transition risks and opportunities. This covers the projected costs of policy action related to limiting greenhouse gas emissions as well as projected profits from green revenues arising from developing new technologies and patents. In addition, it captures the financial impact of physical risks from extreme weather (e.g. flood, windstorm and wildfires) as well as chronic effects (e.g. the impact of rising sea levels and temperature), although we recognise that the most extreme physical effects will only be felt in the second half of the century. Our UK Life and UK GI businesses have also participated in the PRA's 2019 Insurance Stress Test. This included a climate stress test covering both physical and transition risk. Aviva also recognises that there is a growing trend in climate-related litigation and has assessed its potential exposure accordingly.

1 Scope 1 -natural gas, fugitive emissions, oil and company owned cars; Scope 2 – electricity, and Scope 3- business travel, grey fleets, waste and water. More details of this analysis can be found on www.aviva.com/social-purpose.
2 RE100's purpose is to accelerate change towards zero carbon grids, at global scale. Aviva has signed up to the commitment pledging to purchase or generate 100% of our global electricity from renewable sources by 2025

Metrics and targets

In addition to Climate VaR, Aviva uses a variety of other metrics to manage, monitor and report its alignment with global or national targets on climate change mitigation and the associated potential financial impact on our business. Whilst recognising the limitations of the metrics and tools used (e.g. the scope of emissions or sectors covered) and that some are backward looking, we believe they are still valuable in supporting our climate-related governance, strategy and risk management.

- We track our investment in green assets and low carbon infrastructure. We have already invested £6 billion in green assets (i.e. £3.8 billion in low carbon infrastructure and £2.2 billion in green and sustainable bonds).
- We use carbon foot-printing and weighted average carbon intensity data (tCO_2e/£m sales) to assess our assets exposure to a potential increase in carbon prices in shareholder funds and we continue to report on our operational carbon footprints.
- We use Carbon Delta's portfolio warming potential metric to assess our shareholder funds' alignment with the Paris target. This warming potential methodology captures Scope 1[1] emissions as well as revenues from low-carbon technology to provide a forward-looking perspective. We would like to extend this analysis to our whole portfolio over time.
- We use Notre-Dame University's Notre Dame-Global Adaptation Index (ND-GAIN) to measure and monitor our sovereign holdings exposure to climate change. ND-GAIN measures a country's vulnerability to climate change and its readiness by considering: economic, governance and social readiness.
- We build the possibility of extreme weather events into our pricing to ensure it is adequate and monitor actual weather-related losses versus planned weather losses by business (net of reinsurance). Catastrophic event model results are supplemented by in-house disaster scenarios. Our general insurance business exposure is limited by being predominantly in Northern Europe and Canada. We require our general insurance businesses to protect against all large, single catastrophe events in line with local regulatory requirements, or where none exist, to at least a 1-in-250-year event.

We are working closely with peers, academics, professional bodies, regulators, governments and international agencies to further develop our tools and approaches. For example, we are a member of the United Nations Environment Programme Finance Initiative insurance pilot and the PRA-FCA Climate Financial Risk Forum as well as the UN Net Zero Asset Owners Alliance.

1 Scope 1- All direct emissions from the activities of an organisation or under their control, including fuel combustion onsite such as gas boilers, fleet vehicles and air-conditioning leaks

Governance

In this section

Chairman's Governance Letter

Our Governance

Good governance is of fundamental importance to Aviva. At Aviva we have a clear and shared purpose, which is to be with our customers today, for a better tomorrow. Without good governance, underpinned by our values and our culture, we would simply be unable to deliver on that promise for all our stakeholders. I also believe that our strong and consistent approach to governance will enable us to deliver on our strategy to simplify Aviva into a leading international savings, retirement and insurance business.

2018 Corporate Governance Code

We welcomed the introduction by the Financial Reporting Council of the revised and simplified 2018 UK Corporate Governance Code (the Code). This is our first year of reporting on our application of and compliance with the Code. Amongst other changes, the Code created a heightened requirement for boards to set and maintain a corporate culture rooted in a strong ethical base, and for directors, and the companies they lead, to build and maintain positive relationships with a diverse and comprehensive range of stakeholders. Considering our stakeholders when performing our duties as directors is not a new concept, and indeed was first codified into the Companies Act 2006, and this is a well-established feature of our Board processes. The Code reinforces the importance of the Board's consideration of the Company's stakeholders in its decision-making processes, which we describe in our 'Section 172 (1) statement and our stakeholders' section in the Strategic report.

Board Changes

On 21 January 2020, I announced my intention to retire as Chairman of the Company during 2020 once a successor has been appointed. Having led the Board for five years and through the appointment of our new Chief Executive Officer (Group CEO) it feels that now is the right time for a new Group Chairman. This is an exciting time for Aviva, we have a refreshed purpose and strategy, a new senior management team and an experienced Board. The succession planning process to find the new Chairman is advancing and, in the meantime, I remain committed to this great organisation which I am confident will deliver for all its stakeholders.

The Board has led Aviva through a period of substantial change during 2019 to make sure our Company is fully fit for the future. From October 2018 when our former CEO stepped down until the appointment of Maurice Tulloch as Group Chief Executive Officer (Group CEO) on 4 March 2019, I operated in the capacity as Executive Chairman. This was a hugely challenging but rewarding experience that brought me even greater insight into the businesses of Aviva and which I continue to draw on after reverting to being Non-Executive Chairman.

As we reported last year, the process to select our Group CEO was a thorough and competitive process and the Board unanimously agreed that Maurice Tulloch was the right choice for the role. As we progressed through 2019, we continued to refresh the Board. Andy Briggs and Tom Stoddard stepped down from the Board as Chief Executive Officer, UK Insurance and Group Chief Financial Officer respectively, and we wish them every future success. After a period as Interim Group Chief Financial Officer, Jason Windsor, formerly Chief Financial Officer (CFO) of Aviva UK Insurance, was appointed permanently to the role and joined the Board of Directors on 26 September 2019.

There were also several changes amongst our Non-Executive Directors this year. After nine years of distinguished service, including as Chair of the Risk Committee, Mike Hawker retired from the Board on 31 March 2019 and, following his appointment as Chairman of Royal Mail, Keith Williams stepped down from the Board on 23 May 2019. On 31 December 2019, Glyn Barker and Claudia Arney both retired from the Board. Glyn retired after eight years and having assisted with the Board refreshment process, and Claudia to focus on her expanded non-executive roles elsewhere. I am extremely grateful to them all for the valuable contributions they have made to the Board and Committees of Aviva plc.

We were delighted to welcome three new Non-Executive Directors to our Board this year, all with deep knowledge and experience of the financial services industry. Patrick Flynn, previously Chief Financial Officer of ING and of HSBC Insurance joined our Board on 16 July 2019 and became Audit Committee Chair on 4 November 2019. George Culmer was appointed as a Non-Executive Director of the Company on 25 September 2019, having previously been Chief Financial Officer of Lloyds Banking Group and of RSA Insurance Group plc. George assumed the role of Senior Independent Director on 1 January 2020 following the retirement of Glyn Barker. We also announced the appointment of Amanda Blanc to the Board with effect from 2 January 2020. Amanda was previously CEO at AXA UK & Ireland, and CEO, EMEA & Global Banking Partnerships at Zurich Insurance Group. I look forward to introducing our new Non-Executive Directors to our shareholders at our upcoming Annual General Meeting (AGM) on 26 May 2020.

Aviva Governance Framework

We recognise that good governance requires Board ownership and accountability for driving the necessary behaviours and culture that we are striving to achieve at Aviva. Good governance supports the sustainable growth and superior customer outcomes we are targeting.

During the year the Board introduced a new governance framework, which reflects how the Aviva plc Board, through the CEO and Aviva's leadership team, delivers key customer, shareholder and broader stakeholder outcomes and how this is oversighted through the organisation. The governance framework incorporates the legal and regulatory flow of accountability, prescribed delegations of authority and the supporting ancillary frameworks, policies and standards involved in the management of our business, including the three lines of defence model which assesses the effectiveness of controls and enables risks to be managed.

The governance framework will be applied to each subsidiary across the Group and attested to on an annual basis. This will underpin our focus on board effectiveness at every level of the organisation.

While much has gone well, the Board continues to focus on the Company's overall control environment. There remains considerable political and economic uncertainty which has led us to review and improve the Company's risk indicators and our financial and operational risk appetite monitoring, for example around interest rate risk exposures.

The improvements made in 2019 have been recognised by the Board, however, the downward risk and control adjustment to the Annual Bonus Plan scorecard is a clear statement of the need to keep a strong focus on improving in these areas and this is something the Board will be closely monitoring in 2020.

Our Strategy

The Board, together with the new Group CEO, reviewed the Group strategy in 2019. On 20 November 2019 we announced our refreshed purpose, vision and strategy. The strategy is designed to optimise our offering to our customers and to improve efficiencies by simplifying Aviva into five operating divisions: Investments, Savings and Retirement; UK Life; General Insurance; Europe Life; and Asia Life. We reaffirmed our commitment to our progressive dividend policy and we also set out a series of new financial metrics to allow investors to better measure our performance in relation to capital, cash and operating profit. The Board is committed to supporting the Group CEO and his team in executing on the strategy and in running a more commercially focused business.

Culture

The Board continues to focus on enhancing its understanding of the culture within the organisation. This includes broadening the measures which the Board uses to assess and drive the requisite culture. We are placing emphasis on four measures: accountability; psychological safety; diversity of thought; and customer focus. These measures are intended to provide both historic data as well as leading indicators. Evidence shows us that these specific cultural traits have a positive impact on workforce productivity and performance.

Diversity

The charts below illustrate the diversity of the Board and senior management as at the date of this report.

	Board of Directors		
	Non-Executive	Executive	Aviva Leadership Team
Composition			
Total	7	2	14
Gender			
Male	4	2	9
Female	3	—	5
Experience and Skills[1]			
Insurance	6	2	9
Banking	6	1	5
Actuarial/Capital Management	3	1	6
Transformation	6	2	3
Law	2	—	2
Government	4	1	1
Customer	4	2	5
IT/Digital	3	2	3
Strategy	6	2	6
International Experience[1]			
Europe	7	2	13
Asia Pacific	2	1	3
The Americas	1	1	2
Middle East & Africa	1	1	1
Tenure			
>10 years	—	—	—
5-10 years	3	—	5
4 years	1	—	1
3 years	—	—	—
2 years	—	1	—
1 year	—	—	4
<1 year	3	1	4
Age			
30-39	—	—	2
40-49	—	1	4
50-59	4	1	7
60+	3	—	1

1 Individual directors may fall into one or more categories

The Code rightly continues to stress the importance of diversity in the composition of an effective Board. I continue to be committed to bringing diversity in its widest sense to the Board including gender, ethnicity, diversity of thought, tenure, age, experience, skills, and geographic, educational, social and professional background. I am very pleased that the Board has met its target for women to represent a minimum of 33% of our Board by 2020.

The Group Executive Committee was reconstituted as the Aviva Leadership Team (ALT) during 2019 and expanded to 14 members by the first quarter of 2020. As at the date of this report, females represented 35% of the ALT and our ambition remains to drive female representation on the ALT higher. The Board continues to monitor the pipeline of talent for both the Board and ALT with diversity in mind, aligned of course with our skills matrix, to ensure that we continue to develop a high performing and diverse top team. I am proud to continue to support the FTSE 100 30% Club and will continue to keep the diversity agenda at the forefront of the Board's mind.

Sir Adrian Montague CBE
Chairman
4 March 2020

Our Board of Directors

Sir Adrian Montague, CBE ▲

Position: Chairman
Nationality: British
Committee Membership: Nomination Committee[2] (Chair)
Tenure: 7 years 2 months. Appointed to the Board as a Non-Executive Director in January 2013, as Chairman in April 2015 and Executive Chairman from October 2018 to March 2019 before reverting to Non-Executive Chairman.
Skills and Experience: Having held appointments as Chairman of Anglian Water Group Ltd, Friends Provident plc, British Energy Group plc, Michael Page International plc and Crossrail Ltd, Sir Adrian possesses a wealth of experience as a Chairman. He has extensive leadership skills, together with a deep knowledge of the financial services industry, government affairs and regulatory matters. His diverse skill-set and strategic awareness facilitate open discussion and allow for constructive challenge in the boardroom.
External Appointments: Chairman of The Manchester Airports Group and Cadent Gas Ltd. Chair of the Advisory Council of TheCityUK and a trustee of the Commonwealth War Graves Foundation.

Maurice Tulloch ■

Position: Group Chief Executive Officer (CEO)
Nationality: British/Canadian
Committee Membership: N/A
Tenure: 2 years 9 months. Appointed to the Board as an Executive Director in June 2017 and as CEO in March 2019.
Skills and Experience: Maurice has more than 25 years' experience within Aviva and knows the business inside out having led businesses in the UK and internationally. Maurice has a deep understanding of insurance and customer needs and his focus on the fundamentals and customer experience make him well qualified to re-energise Aviva and deliver long-term growth for shareholders. He most recently held the role of CEO of International Insurance and had responsibility for Aviva's life insurance and general insurance operations internationally, together with the Global Corporate and Speciality business.
External Appointments: Non-Executive Director of Pool Reinsurance Company Ltd, a member of the Insurance Development Forum and the Board of the Geneva Association.

Jason Windsor ■

Position: Chief Financial Officer
Nationality: British
Committee Membership: N/A
Tenure: 6 months. Appointed to the Board and as Chief Financial Officer in September 2019.
Skills and Experience: Jason became Interim Chief Financial Officer on 1 July 2019 and was previously Chief Financial Officer of Aviva UK Insurance. Jason joined Aviva in 2010 and has extensive experience of the group, including as Chief Capital and Investments Officer, and as a member of the Aviva Leadership Team. Jason has a proven track record as CFO of the UK Insurance business and a deep understanding of Aviva and its markets and brings a strong analytical and commercial perspective to his role as Group CFO.
External Appointments: N/A.

Amanda Blanc ▲

Position: Independent Non-Executive Director
Nationality: British
Committee Membership: Governance Committee[1] (Chair), Nomination Committee[2], Risk Committee
Tenure: 2 months. Appointed to the Board in January 2020.
Skills and Experience: Amanda brings extensive knowledge and experience of the insurance industry to her role at Aviva, having held several senior executive roles across the insurance industry. Amanda was most recently CEO, EMEA & Global Banking Partnerships at Zurich Insurance Group and before that CEO at AXA UK & Ireland. In 2018, Amanda was the first woman to be appointed as Chair of the Association of British Insurers and was also Chair of the Insurance Fraud Bureau and President of the Chartered Insurance Institute. Amanda's breadth and depth of experience of the UK and European insurance industry and her detailed understanding of insurance business and customers make her well placed to Chair the Governance Committee.
External Appointments: Non-Executive Director of the Welsh Rugby Union and Chair of the Professional Game Board.

Patricia Cross ▲

Position: Independent Non-Executive Director
Nationality: Australian
Committee Membership: Remuneration Committee (Chair), Audit Committee, Nomination Committee[2]
Tenure: 6 years 3 months. Appointed to the Board in December 2013.
Skills and Experience: Patricia is an experienced company director with over 20 years' experience of serving on multiple ASX-30 boards including Macquarie Group Ltd and Macquarie Bank Ltd, National Australia Bank, Wesfarmers Ltd, AMP Ltd, and Qantas Airways Ltd. She is the founding Chair of the 30% Club in Australia. Patricia has held several Australian government positions, including with the Financial Sector Advisory Council, Companies and Securities Advisory Committee, Panel of Experts to the Australian Financial Centre Forum and Sydney APEC Business Advisory Council. Patricia has served on a wide range of not for profit boards, including the Murdoch Children's Research Institute, and she was a founding Director of The Grattan Institute. In 2001, Patricia received the Australian Centenary Medal for service to Australian society through the finance industry and was awarded Life Fellowship of the Australian Institute of Company Directors in 2018. Having started her career in the U.S. Government working in foreign affairs, Patricia had a long career in senior executive roles in large international banking and investment management organisations.
External Appointments: Chair of the Commonwealth Superannuation Corporation, and Ambassador for the Australian Indigenous Education Foundation.

George Culmer ▲

Position: Senior Independent Non-Executive Director
Nationality: British
Committee Membership: Audit Committee, Nomination Committee[2], Remuneration Committee, Risk Committee
Tenure: 6 months. Appointed to the Board in September 2019 and as Senior Independent Director on 1 January 2020.
Skills and Experience: George brings significant board-level experience with 15 years experience as a FTSE 100 Chief Financial Officer, and a deep understanding of insurance and wider financial services. George was previously Chief Financial Officer of Lloyds Banking Group plc and joined its board on 16 May 2012. He has extensive insurance experience and was previously a director and Chief Financial Officer of RSA Insurance Group plc; Head of Capital Management of Zurich Financial Services and Chief Financial Officer of its UK operations. George has a deep understanding of the challenges that affect the industry, Aviva's businesses, and the implications for shareholders, which enables him to support the Chairman and Board in driving the strategy, culture and values of the Company.
External Appointments: Non-Executive Director of Rolls Royce plc.

Patrick Flynn ▲

Position: Independent Non-Executive Director
Nationality: Irish
Committee Membership: Audit Committee (Chair), Nomination Committee[1], Risk Committee
Tenure: 8 months. Appointed to the Board in July 2019.
Skills and Experience: Patrick is an experienced finance executive and has significant experience of retail financial and insurance services. Patrick was previously Chief Financial Officer of ING, the Netherlands' largest financial services group, and was recognised for playing a key role in the transformation of the group to a well-capitalised and focused financial services provider with a significant retail offering. Prior to that Patrick was Chief Financial Officer of HSBC Insurance and served as a Non-Executive Director of the boards of two listed former ING insurance companies, and this experience thoroughly equips Patrick to chair the Audit Committee.
External Appointments: Non-Executive Director of the Royal Bank of Scotland.

Belén Romana García ▲

Position: Independent Non-Executive Director
Nationality: Spanish
Committee Membership: Risk Committee (Chair), Audit Committee, Governance Committee[2], Nomination Committee[1]
Tenure: 4 years 8 months. Appointed to the Board in June 2015.
Skills and Experience: Belén has extensive governmental and regulatory experience and brings a detailed knowledge of the financial services industry and regulations to the Board. Belén has held senior positions at the Spanish Treasury and represented the Spanish government at the Organisation for Economic Co-operation and Development. Belén's experience as both an executive and a non-executive in the financial services sector, and in international policy making and regulation provide a valuable perspective to the Board and in her role as Chair of the Risk Committee.
External Appointments: Independent Non-Executive Director of Banco Santander and a member of the advisory board of the Foundation Rafael del Pino (non-profit organisation) and Co-Chair of the Global Board of Trustees of the Digital Future Society.

Michael Mire ▲

Position: Independent Non-Executive Director
Nationality: British
Committee Membership: Governance Committee[1], Nomination Committee[2], Remuneration Committee, Risk Committee
Tenure: 6 years 6 months. Appointed to the Board in September 2013.
Skills and Experience: Michael has a detailed understanding of the financial services sector and a wealth of experience in business transformation and developing strategies for retail and financial services companies. Michael was a senior partner at McKinsey & Company where he worked for more than 30 years, and alongside his governmental experience, he brings a unique perspective and insight to the Board.
External Appointments: Chairman of HM Land Registry, Non-Executive Director of the Department of Health and Social Care, and senior adviser to Lazard.

Kirstine Cooper ◆

Position: Group General Counsel and Company Secretary
Nationality: British
Committee Membership: N/A
Tenure: 9 years 3 months. Appointed as Company Secretary in December 2010 and a member of the Aviva Leadership Team in May 2012.
Skills and Experience: Kirstine has over 25 years' experience at Aviva and is a trusted advisor to the Board. As a qualified solicitor Kirstine is able to execute the role of Company Secretary by advising the Board on governance issues and the regulatory environment. Kirstine established the legal and secretarial function as a global team and is responsible for the provision of legal services to the Group. She also leads the team on public policy and corporate responsibility. During March 2016 to March 2017, Kirstine was the Commissioner on the Cabinet Office's Dormant Assets Commission which was tasked with identifying new pools of dormant assets and working with industry to encourage the contribution of these assets to good causes.
External Appointments: Trustee of the Royal Opera House and Non-Executive Director of HM Land Registry. Kirstine is also Insurance and pension champion for an expanded Dormant Assets scheme.

The full biographies for all our Board and Aviva Leadership Team are available online at www.aviva.com/about-us

Key
■ Executive
▲ Non-Executive
◆ Group General Counsel and Company Secretary

1 The Nomination Committee changed its name to the Nomination and Governance Committee with effect 1 January 2020
2 The Governance Committee changed its name to the Customer, Conduct and Reputation Committee with effect 1 January 2020

Directors' and Corporate Governance report

The UK Corporate Governance Code

As a UK Premium Listed company, Aviva's governance framework is based on the 2018 UK Corporate Governance Code (the Code). The Code is publicly available at www.frc.org.uk. Details of how we have applied and complied with the Code during 2019 are set out in this report and the Directors' Remuneration report. The Strategic report also discloses information on how we have complied with the reporting requirements set out in the Companies (Miscellaneous Reporting) Regulations 2018 (the Regulations) on our engagement with our employees, suppliers, customers and other stakeholders. Also, in line with the Regulations, further information on how the directors have performed their Companies Act 2006 Section 172 duties is contained in the Strategic report.

The Board can confirm that the Company was compliant with the Code throughout the financial year under review, except for a period of non-compliance with Provision 9 of the Code from 9 October 2018 to 4 March 2019 when Sir Adrian Montague assumed the role of Executive Chairman. Following the appointment of Maurice Tulloch as Group Chief Executive Officer (Group CEO) on 4 March 2019, Sir Adrian reverted to his former position as Non-Executive Chairman.

Changes to the Board

There were several Board changes during 2019. Following an extensive and rigorous process which included a number of highly talented external and internal candidates, the Board unanimously agreed to appoint Maurice Tulloch as Group CEO on 4 March 2019. The Board believes that Maurice Tulloch's deep knowledge of Aviva's domestic and international businesses, combined with his vision for delivering enhanced shareholder returns through a relentless focus on the customer experience, make him uniquely well qualified to guide Aviva through the next phases in our development.

Two of our Executive Directors stepped down from their roles during the year to pursue opportunities outside the Group. Andy Briggs left Aviva on 24 April 2019 and was replaced as CEO UK Insurance by Angela Darlington on an interim basis. Following the separation of UKI into three separate divisions, General Insurance, Life and Investment, Savings and Retirement, Angela was confirmed as CEO UK Life with effect from 7 August 2019. Following the departure of Tom Stoddard as Group Chief Financial Officer (Group CFO) on 30 June 2019, and after a period as interim Group CFO, Jason Windsor, formerly CFO of UK Insurance, was appointed permanently to the role and also joined the Board of Directors on 26 September 2019. Jason Windsor joined Aviva in 2010 and has a broad range of experience, including as Chief Capital and Investments Officer, and as a member of the Aviva Leadership Team.

Four of our Non-Executive Directors retired from the Board during the year. In line with Provision 10 of the Code, Michael Hawker stepped down as a Non-Executive Director and as Chair of the Risk Committee after nine years' service on 31 March 2019. Belén Romana García was appointed Chair of the Risk Committee following Michael's retirement. Keith Williams retired from the Board at the conclusion of the Annual General Meeting on 23 May 2019 after being appointed Chair of Royal Mail Group plc. On 31 December 2019, and after eight years' service including two years as Senior Independent Director, Glyn Barker retired from the Board. Claudia Arney also retired on the same date in order to focus on her other non-executive directorships. We would like to thank them all for their significant contributions to Aviva.

We were delighted to appoint three highly experienced Non-Executive Directors to the Board during the year. Patrick Flynn joined the Board as a Non-Executive Director and a member of the Board Audit, Risk and Nomination Committees on 16 July 2019. He became Chair of the Audit Committee on 4 November 2019. Patrick was previously Chief Financial Officer at ING and has also served as Chief Financial Officer of HSBC Insurance and as a Non-Executive Director on the boards of two listed former ING insurance companies.

George Culmer was appointed as a Non-Executive Director of the Company on 25 September 2019, and he also joined the Board Audit, Remuneration, Risk and Nomination Committees. Following the retirement of Glyn Barker, George was appointed as Senior Independent Director. George was previously Chief Financial Officer of Lloyds Banking Group and has held positions as Chief Financial Officer of RSA Insurance Group plc; Head of Capital Management of Zurich Financial Services and Chief Financial Officer of its UK operations.

Amanda Blanc joined the Board as a Non-Executive Director on 2 January 2020. She was formerly CEO at AXA UK & Ireland, and CEO, EMEA & Global Banking Partnerships at Zurich Insurance Group. Amanda is Chair of the Customer, Conduct and Reputation Committee (previously the Governance Committee) and is a member of the Risk and the Nomination and Governance Committees (previously the Nomination Committee).

On 21 January 2020 we announced that Sir Adrian Montague will retire as Chairman during 2020. He was appointed to the Board of Aviva in January 2013 and became Senior Independent Director in May 2013, and Chairman in April 2015.

The succession planning process to find the new Chairman is ongoing.

The Board

As at the date of this report the Board is comprised of the Non-Executive Chairman, two Executive Directors and six independent Non-Executive Directors (NEDs). Details of the role of the Board and its committees are described in this report. The duties of the Board and of each of its committees are set out in the respective Terms of Reference. Our committees' Terms of Reference can be found on the Company's website at www.aviva.com/committees and are also available on request from the Group Company Secretary. The Terms of Reference list both matters that are specifically reserved for decision by our Board and those matters that must be reported to it. The Board delegates clearly defined responsibilities to its committees and reports from the Audit, Governance, Nomination and Risk Committees are contained in this report. A report from the Remuneration Committee is included in the Directors' Remuneration report.

Board diversity and inclusion

At Aviva, diversity encompasses a very wide range of factors, including but not limited to: gender; ethnicity; disability; sexual orientation; social background; and diversity of thought. Supporting and embracing diversity and inclusion, and valuing difference, are integral parts of our culture. The ways in which we seek to put into practice these values are set out in our Board Diversity and Inclusion Statement, which supports our Nomination Committee's approach to succession planning. This is closely linked to our Group-wide Global Inclusion and Diversity Strategy (Diversity Strategy), which sets out how we implement our policies to increase diversity and inclusion throughout the Group. Board diversity is monitored by the Nomination Committee which reviews the balance of skills, knowledge, experience and diversity of the Board and leads on succession planning for appointments to the Board and the senior executive team. Our Board skills matrix supports this approach enabling us to map the range of diversity of skills, knowledge and experience of the Board and link these to our strategy.

We have been committed to our target of having 33% of women on the Board by 2020, and we are pleased to have achieved this. We recognise that as a Board we have further to travel to reach our shared ambition that our Board composition should be fully reflective of the diversity of the customers we seek to serve, and we remain firmly committed to reaching that goal. Inclusion at Aviva is imperative not only because it's the right thing to do, but also because it will help us deliver the outcomes that our shareholders and other stakeholders expect us to achieve. Further detail can be found in the Nomination Committee report.

Board activities during 2019

Strategy and business plans
- Approved the revised strategic plans and purpose for the Aviva Group, which were announced during our Capital Markets Day on 20 November 2019
- Approved the proposed cost reduction plans to support the business to move towards better cost efficiency and a lean group centre
- Held an annual dedicated two-day offsite strategy session in June 2019, supplemented by further specific strategy sessions, to oversee the development and implementation of the Group's strategy

Oversight of risk and risk management
- Received and discussed reports from the Chief Risk Officer (CRO), and assessed the Group's significant risks and regulatory issues
- Approved the Group's risk appetite and risk policies which provide the risk framework for managing risk across the Group
- Reviewed the effectiveness, challenges and management action plans in relation to the Group's Operational Risk and Control Management Framework
- Reviewed the Group's strategy on climate related financial risk in line with regulatory requirements

Governance
- Discussed reports from Board committees and management on legislation and proposed consultations that affect or will affect the Group's legal and regulatory obligations, including the 2018 UK Corporate Governance Code (the Code)
- Reviewed and approved the revised Group Governance Framework
- Discussed and approved changes to the Board committee structure, and the repurposing of the Nomination Committee and the Governance Committee to the Nomination and Governance Committee and the Customer, Conduct and Reputation Committee respectively

Significant transactions and expenditure
- Approved financial matters in line with the Group Funding Plan, including capital injections where required into regulated subsidiaries, the redemption of the £210 million Step-Up Tier 1 Insurance Capital Securities (STICS) perpetual subordinated loan notes, and an asset reinsurance transaction

Financial reporting and controls, capital structure and dividend policy
- Discussed reports provided by the Group Chief Financial Officer (Group CFO) and by the Group's committees on key matters of financial reporting, providing the opportunity for the Board to input and challenge where necessary
- Monitored the Group's financial performance, financial results, approved dividend payments and the adoption of a progressive dividend policy
- Assessed the Group's capital and liquidity requirements, arising from the Group's strategy and Group Plan
- Approved the full year results and Annual report and accounts, and the half year results

People, culture, succession planning and Board effectiveness
- Oversaw the search process, reviewed candidates and approved the appointment of Maurice Tulloch as Group CEO and Jason Windsor as Group CFO following recommendations from the Nomination Committee
- Following recommendations from the Nomination Committee, approved the appointment of the three Non-Executive Directors to the Board during 2019
- Discussed the current Group culture, its alignment with strategy, and how it has been further strengthened during the year
- Reviewed the succession plan of the Board and approved the new Board succession planning process
- Undertook an evaluation of the Board's effectiveness, the effectiveness of each committee and individual directors

Stakeholder engagement

In line with the requirements of the Companies (Miscellaneous Reporting) Regulations 2018, we report on our stakeholder engagement and other relevant matters in the 'Section 172 (1) and Our stakeholders' section of the Strategic report. This outlines how the Board has engaged with our principal stakeholder groups. The Board considers stakeholder engagement, including engagement with our workforce to be a matter of strategic importance.

Board appointments

Our Non-Executive Directors played a principal role in the process to appoint Maurice Tulloch as Group CEO, and Jason Windsor as Group CFO, and in the appointment of three Non-Executive Directors during the year through their membership of the Nomination Committee. In line with our succession planning processes, and led by the Nomination Committee, we undertake a formal, rigorous and transparent search process for each appointment, considering the current balance of skills, experience and diversity amongst our directors. Each appointment is made subject to receipt of the requisite regulatory approvals. Furthermore, the continuation of each Board appointment is also subject to the annual board effectiveness review to confirm that each director's performance continues to be satisfactory. In accordance with the Code and our articles of association, all serving directors must retire and those who wish to continue in office must stand for election or re-election by our shareholders at each Annual General Meeting (AGM). All directors were re-elected in 2019 except Keith Williams who retired from the Board at the conclusion of the AGM.

Board and committee structure

The Board is collectively responsible for promoting the long-term, sustainable success of the Company through delivering excellent outcomes for our customers, seeking to generate value for shareholders whilst fulfilling our responsibilities to our stakeholders and contributing positively to the societies in which we operate. One of the Board's key roles is to determine our shared purpose and to set and uphold the Group's values, standards and ethics which combine together to create our corporate culture. We recognise that there is a clear link between our culture and our conduct, both with regards to our customers and to the way in which governance operates in the Group, and our policies, processes and behaviours in relation to these issues are closely monitored by the Board. The Board is also responsible for setting the Group's risk appetite and monitoring the operation of our controls framework. It also seeks to maintain an appropriate dialogue with shareholders on strategy and remuneration.

In order to ensure there is a clear division of responsibilities between the running of the Board and the running of the business, the Board has identified certain 'reserved matters' for its approval. In relation to all other matters, unless they are specifically reserved for shareholder approval in a general meeting, the Board delegates responsibility for these to our Group CEO, who then delegates responsibility for specific operations to members of the Aviva Leadership Team (ALT), comprised of our most senior managers from across the business.

The Board has established certain principal committees to assist in fulfilling its oversight responsibilities, providing dedicated focus on the areas set out below. Each committee chairman reports to the Board on the committee's activities after each meeting. Full details of the responsibilities of the Board committees are set out later in this report and in the Directors' Remuneration report.

With effect from 1 January 2020, certain amendments were made to the structure and defined responsibilities of our suite of Board committees. To better align with our strategy to deliver great customer outcomes we redefined the remit of the Governance Committee around customer and customer conduct issues and renamed this committee the 'Customer, Conduct and Reputation Committee' (CCRC). This is also aligned to our refreshed purpose, to ensure our actions in every part of the business are fully focused on consistently earning customers' trust as the best place to save, retire and insure. To provide more time for the CCRC to consider the customer, we expanded the remit of the Nomination Committee to cover a broader range of governance issues, including subsidiary governance and oversight of the Aviva governance framework, which had previously been considered by the Governance Committee and renamed this the 'Nomination and Governance Committee' (NGC). The NGC will continue to play a key role in succession planning for both our Executive and Non-Executive Directors as well as having oversight of our governance framework and regulatory environment.

Upon their establishment, the chairs and members of the new committees were unchanged except for the CCRC which is now chaired by Amanda Blanc following Claudia Arney's retirement from the Board on 31 December 2019.

The new remits of the Committees are outlined below.

Committee's purpose

Name of Committee	Committee Purpose
Audit Committee	Assists the Board in its oversight of financial reporting by assessing the integrity of the Company's financial statements and related announcements; monitoring the adequacy of controls over financial reporting; monitoring the Group's whistleblowing provisions; and monitoring the independence and performance of the Internal Audit function and the External Auditors.
Nomination and Governance Committee	Assists the Board in its oversight of Board composition; Board and senior executive succession; talent development; diversity and inclusion initiatives; operation of the Group governance framework; Aviva's subsidiary governance principles; and the regulatory control environment.
Customer, Conduct and Reputation Committee	Assists the Board in its oversight of customer, conduct and reputation issues including operational risks related to customer and business conduct; the Group's customer strategy and customer conduct obligations; oversight of the Group's brand; reputational risk profile; data governance and data privacy; and corporate responsibility.
Remuneration Committee	Assists the Board in its oversight of remuneration by reviewing the Group Remuneration Policy, the Directors' Remuneration Policy, and recommending remuneration packages for the ALT. Works with the Board Risk Committee to ensure that risk management is considered in setting the Remuneration Policy and promoting a risk awareness culture through the alignment of incentive and rewards with risk management.
Risk Committee	Assists the Board in its oversight of risk by assessing the effectiveness of the Group's risk management framework, risk strategy, risk appetite and risk profile; the methodology used in determining the Group's capital requirements and stress testing these requirements; assessing the adequacy of the Group's system of non-financial reporting controls; its cyber strategy and compliance with prudential regulatory requirements.

Board independence
During the year the Nomination Committee assessed the independence of the Non-Executive Directors to ensure that they are able to properly fulfil their roles on the Board and provide constructive challenge to the Executive Directors. The independence criteria set out in the Code were taken into account as part of the selection process for the three Non-Executive Directors who joined Aviva during the year.

During 2019, the Committee determined that all Non-Executive Directors were free from any relationship or circumstances that could affect, or appear to affect, their independent judgement. In line with the Code, over half of our Board members, excluding the Chairman, are independent Non-Executive Directors.

Time commitment
It is vital to the proper functioning of our Board and committees that each Non-Executive Director is able to commit sufficient time to their roles in order to discharge their responsibilities effectively. In January 2020 the Nomination and Governance Committee assessed the Non-Executive Directors' time commitment considering both the time required for Aviva Board and committee appointments (including on subsidiary boards) and the number and nature of the directors' external commitments. All Non-Executive Directors have demonstrated they have sufficient time to devote to their present role within Aviva, including during any potential periods of corporate stress. George Culmer became a Non-Executive Director of Rolls Royce plc on 2 January 2020. The time commitment and potential conflicts involved were assessed by the Nomination and Governance Committee which determined that George has sufficient time to commit to the Aviva Board and committee appointments.

The Senior Independent Director (SID) reviewed the time commitment of the Chairman. During the period to 4 March 2019, the Chairman increased his time commitment to allow him to perform the role of Executive Chairman. He was supported in this by the Chairman's Committee, composed of the Executive Directors at the time, Maurice Tulloch, Andy Briggs and Tom Stoddard, who advised on the strategic, performance and risk and control aspects of the management of the Group. The role of SID was also enhanced during this time to allow for the monitoring and management of any potential conflicts arising from Sir Adrian's role as Executive Chairman.

According to the Board's policy, Executive Directors may hold one external directorship, subject to obtaining the prior consent of the Board. The Executive Directors do not hold any such external directorships at present.

Conflicts of interest
In accordance with the Companies Act 2006, the Company's Articles of Association allow the Board to authorise potential conflicts of interest that may arise and to impose such limits or conditions as are necessary. The decision to authorise a conflict of interest can only be made by non-conflicted directors (those who have no interest in the matter being considered) and in making such a decision the directors must act in a way they consider, in good faith, will be most likely to promote the Company's success for the benefit of its shareholders as a whole.

The Board continues to monitor and note any potential conflicts of interest that each Director may have and recommends to the Board whether these should be authorised and whether conditions should be attached to any such authorisation. The directors are regularly reminded of their continuing obligations in relation to conflicts and are required annually to review and confirm their external interests, which helps to determine whether they can continue to be considered independent.

Independent advice
All directors have access to the advice and services of the Group Company Secretary in relation to the discharge of their duties on the Board and any committees they serve on. Furthermore, any directors may take independent professional advice at the Company's expense. During the year, no directors sought to do so. The Company arranges appropriate insurance cover in respect of legal actions against its directors and has also entered into indemnities with its directors as described in the 'Other Statutory Information' section in this report.

Role profiles
Following an update to the Board's Terms of Reference during 2019 to reflect the provisions of the Code, and consistent with the Senior Managers and Certification Regime (SMCR), amended role profiles have been created for the Non-Executive Chairman, SID, Group CEO, Group CFO and Non-Executive Directors which are all available at www.aviva.com/about-us/roles. A profile for the Executive Chairman was in place during the period that Sir Adrian Montague occupied that role.

The Non-Executive Chairman is tasked with leadership of the Board, setting its agenda and ensuring its effectiveness, and enabling the constructive challenge of the performance and strategic plans of the Executive Directors by the Non-Executive Directors. The Chairman also plays a key role in working with the Board to establish our culture, purpose and values. The Group CEO is the senior executive of the Company and has overall accountability for the development and execution of the Group's overall strategy in line with the policies and objectives agreed by the Board.

The role of the SID is to provide a sounding board for the Chairman and to serve as an intermediary for the other directors where necessary. The SID should be available to shareholders should they have concerns they have been unable to resolve through normal channels, or when such channels would be inappropriate.

Throughout the year the Chairman held meetings with the Non-Executive Directors without management present. Additionally, Glyn Barker as SID met with other Non-Executive Directors without the Chairman present to discuss any matters which they wished to raise.

Induction, training and development
A commitment to support the continuing development of all employees is a central part of Aviva's culture. Our directors are highly supportive of this and are committed to their own ongoing professional development. During 2019, the directors participated in internal training sessions on subjects including blockchain, the impact of IFRS 17, regulatory capital, financial crime, SMCR and directors' duties. Further training sessions have been incorporated into the Board and Committee plans for 2020. The Board also receives regular briefings on a range of strategically important matters to ensure they are informed of developments in these areas.

A structured and tailored induction programme was prepared for each of our three new Non-Executive Directors appointed this year. This covered, amongst other matters, the current strategic and operational plan; meeting packs and minutes from recent board meetings; stakeholder engagement; organisation structure charts; a history of the Group; role profiles; and all relevant policies, procedures and other governance material. The induction also included meeting key members of the management team and visiting different Aviva office locations. Any knowledge or skill enhancements identified during the directors' regulatory application process would also be addressed through their induction programme.

Board calendar

During 2019, 16 Board meetings were held, of which twelve were scheduled meetings and four were additional meetings called at short notice. In addition, the Board delegated responsibility for certain items to specially created Board committees, which met nine times to discuss these particular items.

The unusually high number of meetings of the Nomination Committee included eight ad hoc meetings which were called to consider specific matters in relation to the appointment processes for the Executive and Non-Executive Directors who joined the Board during the year. If any Directors are unable to attend a meeting, they can communicate their opinions and comments on the matters to be considered via the Chairman of the Board or the relevant committee chairman.

The Board visits different markets each year and during 2019 held a Board meeting at our Irish office. This gave the Board the opportunity to meet the senior management team locally and to gain a deeper understanding of the operations and performance of the business. In June 2019, the Board held its annual two-day strategy meeting offsite in the UK to review progress against our strategic plan and to consider how it should be further developed to ensure we deliver on our commitments to our shareholders and our stakeholders. Following the meeting a refresh to the Group strategy was announced on 20 November 2019.

Board and Committee meetings attendance during 2019

Number of meetings held[1]	Board[1] 16	Audit Committee 7	Governance Committee 4	Nomination Committee 13	Remuneration Committee 10	Risk Committee 6
Chairman						
Sir Adrian Montague[2]	16/16	—	—	13/13	—	—
Executive Directors						
Maurice Tulloch	16/16	—	—	—	—	—
Tom Stoddard[3]	7/7	—	—	—	—	—
Andy Briggs[4]	4/4	—	—	—	—	—
Jason Windsor[5]	4/4	—	—	—	—	—
Non-Executive Directors						
Glyn Barker[6]	15/16	6/7	4/4	10/13	8/10	3/6
Patricia Cross	16/16	7/7	—	13/13	10/10	—
Belén Romana García[7]	16/16	4/5	4/4	13/13	—	6/6
Michael Hawker[8]	3/3	3/3	—	6/6	—	2/2
Michael Mire[9]	16/16	—	4/4	13/13	9/10	6/6
Claudia Arney[10]	16/16	—	4/4	13/13	10/10	5/6
Keith Williams[11]	4/5	3/3	2/2	7/8	—	2/2
Patrick Flynn[12]	7/8	4/4	—	4/4	—	3/3
George Culmer[13]	4/4	2/2	—	1/1	—	2/2

1 During the year there were 16 Board meetings, of which 12 were scheduled meetings and 4 were called at short notice. In addition, there were 9 further Board sub-committee meetings held at short notice and attended by the Chairman and the NEDs.
2 Sir Adrian Montague acted as Executive Chairman in the period to 4 March 2019 when Maurice Tulloch was appointed as Group Chief Executive Officer. Following this, Sir Adrian reverted to his previous position as Non-Executive Chairman.
3 Tom Stoddard resigned as an Executive Director on 30 June 2019.
4 Andy Briggs resigned as an Executive Director on 24 April 2019.
5 Jason Windsor was appointed to the Board as Group Chief Financial Officer on 26 September 2019.
6 Glyn Barker was unable to attend three meetings of the Risk Committee due to prior commitments; he was unable to attend 3 meetings of the Nomination Committee and Remuneration Committee both called at short notice due to prior commitments. Glyn also missed a Board meeting and Audit Committee meeting due to prior engagements.
7 Belén Romana García was unable to attend a meeting of the Audit Committee due to a prior commitment accepted before she became a member of the Audit Committee.
8 Michael Hawker retired as a Non-Executive Director on 31 March 2019.
9 Michael Mire was unable to attend a meeting of the Remuneration Committee called at short notice due to prior commitments.
10 Claudia Arney was unable to attend a meeting of the Risk Committee due to prior commitments.
11 Keith Williams retired as a Non-Executive Director on 23 May 2019.
12 Patrick Flynn joined the Board as a Non-Executive Director on 16 July 2019 and was unable to attend a Board meeting due to prior commitments.
13 George Culmer joined the Board as a Non-Executive Director on 25 September 2019.

Board priorities

During 2019, the Board continued to make progress on delivering sustainable and growing financial returns for our shareholders and overseeing prudent capital management. We put in place a progressive dividend policy which is aligned to the Solvency II Return on Equity[14] target of 12% by 2022 which we announced as part of our Capital Markets Day in November 2019, and continued our programme of debt deleveraging including the redemption of the £210 million Step-Up Tier 1 Insurance Capital Securities (STICS) perpetual subordinated loan notes during the year.

Following the appointment of our new Group CEO in March 2019, we embarked on a comprehensive strategic review of our business, identifying a number of changes which are now being implemented to enhance our service to customers and improve the operating efficiencies of our business.

This includes the simplification of Aviva into our five operating divisions from 2020: Investments, Savings and Retirement; UK Life; General Insurance; Europe Life; and Asia Life. In the 2019 Strategic report and 2019 Annual report and accounts, we continue to report the results of our business by market on the basis they were managed in 2019. In making these changes, we are leveraging our substantial digital and insurance expertise to drive better commercial outcomes across Aviva and rigorously controlling our costs, including a £300 million per annum reduction in controllable costs[14] by 2022 (net of inflation).

14 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

We understand that our financial plans can only be achieved through a relentless focus on the experience of our customers and by working to ensure that we offer each one of our personal and corporate customers great outcomes, earning their trust as the best place to save for the future, navigate retirement and insure what matters most to them. The Board has focused on understanding our customers' experience, closely monitoring customer metrics and engaging with management to understand the issues involved when our performance did not meet our customers' expectations.

During 2020, the Board's agenda will focus on driving delivery of the Group's strategic priorities, which are to deliver great customer outcomes; excel at the fundamentals; and to continue to invest in sustainable growth.

We will seek to ensure that we successfully implement our simplified operating model and maintain our careful control of operating costs. The Board will closely monitor and drive enhancements in our risk and control environment and will continue to assess and respond to changes in the external political and economic environment; including those related to the UK's decision to leave the European Union (EU). The Board will seek to ensure that as a business, we maintain our focus on managing operational resilience and potential risks around our IT estate. We will closely review our progress towards meeting the financial targets outlined in our strategic update in November 2019 which will support our progressive dividend strategy and our goal of driving higher returns for our stakeholders.

Our two-day offsite Board strategy session in June 2020 will be used to review our three-year strategic plan and to set out strategic priorities for the year ahead.

Culture will remain a key area, and we will continue to engage with our stakeholders and integrate their interests and concerns into our decision-making processes. Succession planning and the continued development of the talent pipeline will remain an area of focus for both the Board and the Nomination and Governance Committee.

Board evaluation

The effectiveness of the Board is vital to the success of the Group. The Board undertakes a rigorous evaluation process each year to assess how it, its committees and individual directors are performing. During 2018, an external evaluation was conducted, with a series of outcomes reported in 2019. Following an externally facilitated evaluation process over the last two years, the Board decided that the 2019 evaluation be undertaken through an internal questionnaire prepared in conjunction with Lintstock. Lintstock also provide evaluations to other operating subsidiaries in the Aviva Group. Lintstock are an independent provider of Board evaluations and have no other connection with Aviva or any individual director. The questionnaires covered a variety of areas including board composition, strategic and operational oversight, risk management and internal controls, and culture. The Board considered the final report and the recommendations which were shared with each committee, and an action plan for areas of focus was agreed. The 2018 Board evaluations and 2019 actions are outlined in the table below.

Outcomes from the 2018 Board evaluation and steps taken in 2019

Focus area	Theme	Feedback/actions
Board composition	Utilising our skills matrix as part of our Board succession planning	The Board skills matrix was utilised to focus NED recruitment on specific Board skills requirements, including insurance, finance and accounting experience. We have successfully recruited three NEDs with very deep experience in these areas.
Governance	Reorganisation of our Board committees and their remits	We made certain changes to remits of our Board committees, including repurposing the Governance Committee as the Customer, Conduct and Reputation Committee and the Nomination Committee as the Nomination and Governance Committee. The aim of these changes was to further enhance our focus on the customer and customer conduct issues.
Stakeholder engagement	Reviewing our engagement mechanisms in relation to the Code	The interests of our stakeholders are central to the way we operate as a company, and the Board reviewed the ways in which we engage with them to ensure that they facilitate dialogue and that the interests of our stakeholders are considered in our decision making.
Culture	Continuing to set and monitor our corporate culture	The Board had several discussions on the Group's culture and this remains a priority for 2020. The Board remains committed to maintaining our focus on valuing diversity and policies supporting inclusion across the Group. It ensured that these are fully considered in overseeing succession planning for the senior leadership team. It also closely monitors the outputs from our 'Voice of Aviva' engagement surveys and reviews actions proposed to improve employee engagement.

Committee effectiveness
As part of the Board effectiveness review process, each committee considers the feedback from the Board evaluation exercise and develops an action plan as appropriate.

Frameworks for risk management and internal control
The Board is responsible for promoting the long-term success of the Company for the benefit of shareholders, as well as taking account of other stakeholders including employees and customers. This includes ensuring that an appropriate system of risk governance is in place throughout the Group. To discharge this responsibility, the Board has established frameworks for risk management and internal control using a 'three lines of defence' model and reserves for itself the setting of the Group's risk appetite. Further details are contained on the following pages.

In-depth monitoring of the establishment and operation of prudent and effective controls in order to assess and manage risks associated with the Group's operations is delegated to the Risk, Governance and Audit Committees which report regularly to the Board. However, the Board retains ultimate responsibility for the Group's systems of internal control and risk management and has reviewed their effectiveness for the year. The frameworks for risk management and internal control play a key role in the management of risks that may impact the fulfilment of the Board's objectives. They are designed to identify and manage, rather than eliminate, the risk of the Group failing to achieve its business objectives and can only provide reasonable and not absolute assurance against material misstatement and loss. The frameworks are regularly reviewed and were in place for the financial year under review and up to the date of this report. They help ensure the Group complies with the Financial Reporting Council's (FRC) guidance on Risk Management, Internal Controls and Related Financial and Business Reporting.

A robust assessment was conducted by the Board of the emerging and principal risks facing the Company, including those that could impact the Group's business model, future performance, solvency and liquidity. In 2019 the Risk Committee reviewed a number of emerging risk scenarios and the management actions and mitigation to address them. These included the decision for the UK to leave the European Union (regular updates), UK political risk, US-China trade war, the credit cycle, systemic cloud risk, harmonisation of European conduct regulation, pension tax relief, risks posed by climate change and other emerging risks and sources of market uncertainty. The Company's approach to risk and risk management together with the principal risks that face the Group are explained within the Risk and risk management section of this report.

Risk management framework
The Risk Management Framework (RMF) is designed to identify, measure, manage, monitor and report the principal risks to the achievement of the Group's business objectives and is embedded throughout the Group. It is codified through risk policies and business standards which set out the risk strategy, appetite, framework and minimum requirements and controls for the Group's worldwide operations. Further detail is set out in note 60.

Internal controls
Internal controls facilitate effective and efficient operations, the development of robust and reliable internal reporting and compliance with laws and regulations. Group reporting manuals in relation to IFRS and Solvency II reporting requirements and a Financial Reporting Control Framework (FRCF) are in place across the Group. FRCF relates to the preparation of reliable financial reporting, covering both IFRS and Solvency II reporting activity. The FRCF process follows a risk-based approach, with management identification, assessment (documentation and testing), remediation (as required), reporting and certification over key financial reporting related controls. Management regularly undertakes quality assurance procedures over the application of the FRCF process and controls.

In 2019, the Group continued to focus on its operational resilience by completing major control improvements in a number of areas, including disaster recovery capability and the strengthening of its cyber security controls, through continued investment in the Group's IT estate. More broadly the Group seeks to continue to monitor and further enhance its control frameworks across the business, including change management, financial crime prevention and data privacy. Further information can be found in the Audit and Risk Committee reports.

First line – management monitoring
The Aviva Leadership Team and each market Chief Executive Officer are responsible for the application of the RMF, for implementing and monitoring the operation of the system of internal control and for providing assurance to the Audit, Governance and Risk Committees and the Board.

Second line – risk management, compliance and actuarial functions
The Risk Management function is accountable for the quantitative and qualitative oversight and challenge of the identification, measurement, monitoring and reporting of principal risks and for developing the RMF.

The Actuarial function is accountable for the Group wide actuarial methodology, reporting to the relevant governing body on the adequacy of reserves and the appropriateness of the Solvency II internal model, as well as underwriting and reinsurance arrangements. The Compliance function supports and advises the business on the identification, measurement and management of its regulatory, financial crime and conduct risks. It is accountable for maintaining the compliance standards and framework within which the Group operates and monitoring and reporting on its compliance risk profile.

Third line – internal audit
The third line of defence is 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, Governance and Risk Committees, market audit committees and the Board. Further information can be found in the Audit Committee report.

The principal committees that oversee risk management are as follows

The Risk Committee	The Governance Committee	The Audit Committee
Assists the Board in its oversight of risk and risk management across the Group and makes recommendations on risk appetite to the Board. Reviews the effectiveness of the risk management framework, and the methodology in determining the Group's capital and liquidity requirements. Ensures that risk management is properly considered in setting remuneration policy.	Works closely with the Risk Committee and is responsible for assisting the Board in its oversight of operational risk across the Group, particularly the risk of not delivering good customer outcomes and compliance with our corporate governance principles. From 1 January 2020 the Governance Committee was renamed the Customer, Conduct and Reputation Committee.	Works closely with the Risk Committee and is responsible for assisting the Board in discharging its responsibilities for the integrity of the Company's financial statements, the effectiveness of the system of internal controls and for monitoring the effectiveness, performance and objectivity of the internal and external auditors.

Board oversight of risk management

The Board's delegated responsibilities regarding oversight of risk management and the approach to internal controls are set out on the previous pages. There are good working relationships between the Board committees, and they provide regular reports to the Board on their activities and escalate significant matters where appropriate. The responsibilities and activities of each Board committee are set out in the committee reports.

Assessment of effectiveness of risk management

Each business unit Chief Executive Officer and Chief Risk Officer is required to make a declaration that the Group's governance, and system of internal controls are effective and are fit for purpose for their business and that they are kept under review through the year.

Any material risks not previously identified, control weaknesses or non-compliance with the Group's risk policies or local delegations of authority must be highlighted as part of this process. This is supplemented by investigations carried out at Group level and a Group CEO and CRO declaration for Aviva plc.

The effectiveness assessment also draws on the regular cycle of assurance activity conducted during the year, as well as the results of the annual assessment process. During 2019, this has been supported by the application of the Group's Operational Risk & Control Management framework. The details of key failings or weaknesses are reported to the Risk and Audit Committee and the Board on a regular basis and are summarised annually to enable them to carry out an effectiveness assessment.

The Risk Committee, on behalf of the Board, have reviewed the effectiveness of the systems of internal control and risk management. This review occurs annually. In addition, Internal Audit plays a significant role in contributing to the routine ongoing assessment of the Group's Risk & Control framework. There has been regular reporting to the committees throughout the year to ensure that outstanding areas of improvement are both identified and remediated. Whilst there has been substantial progress during the year there remains a number of areas where significant work is still required. The reports to the Audit and Risk Committees refer to the need to sustain the embedding of controls in a number of areas where significant progress has been made in 2019, such as cyber security, risk management through major change, UK Insurance complaints management and IT disaster recovery; and the need to continue to make further improvement in a number of other areas, such as IT resilience, financial crime prevention, data management, risk culture and ongoing improvements in Canada, France and Ireland. The Risk Committee, on behalf of the Board will continue to monitor progress throughout 2020.

The risk management framework of a small number of our joint ventures and strategic equity holdings differs from the RMF outlined in this report. We continue to work with these entities to understand how their risks are managed and to align them, where possible, with our framework.

Communication with shareholders

The Company places considerable importance on communication with shareholders. The Executive Directors have an ongoing dialogue and a programme of meetings with institutional investors, fund managers and analysts which are managed by the Company's Investor Relations function. The Chairman met several of the Company's major shareholders during 2019. At these meetings a range of issues were discussed within the constraints of information already made public, to understand shareholders' perspectives. On 20 November 2019 we held a Capital Markets Day in London to update investors and analysts on our strategy and financial objectives. Shareholders' views are regularly communicated to the Board through the Group CEO's, and Group CFO's reports and weekly briefings from the corporate brokers and the Investor Relations function. The SID was available to meet with major investors to discuss any concerns that could not be resolved through normal channels and a formal programme of introductory investor meetings for the new SID commenced in January 2020.

2020 AGM

The 2020 AGM will be held on Tuesday 26 May 2020 and the Notice of AGM and related papers will, unless otherwise noted, be sent to shareholders at least 20 working days before the meeting. The AGM provides a valuable opportunity for the Board to communicate with private shareholders. All serving directors attended the Company's 2019 AGM, and plan to attend the 2020 AGM. A presentation on the Group's performance will be given at the 2020 AGM and made available on the Company's website after the meeting at www.aviva.com/agm

Shareholders are invited to ask questions related to the business of the meeting at the AGM and have an opportunity to meet with the directors following the conclusion of the meeting. Further details on the AGM are provided in the Shareholder Services section of this report.

Nomination Committee report

Committee focus during 2019

I am pleased to present the Nomination Committee's (the Committee) report for the year ended 31 December 2019.

During the year, the Committee led the selection process for the appointment of Maurice Tulloch as the Group Chief Executive Officer (Group CEO) on 4 March 2019, and the appointment of Jason Windsor as the Group Chief Financial Officer (Group CFO) on 26 September 2019.

The Committee also led the Independent Non-Executive Director succession process in view of the retirement of Michael Hawker, Keith Williams, Claudia Arney and Glyn Barker during the year, and with the appointment of Patrick Flynn, George Culmer and Amanda Blanc to the Board.

Committee membership

Michael Hawker and Keith Williams retired from the Board and the Committee on 31 March 2019 and 23 May 2019 respectively, and Glyn Barker and Claudia Arney retired from the Board and the Committee on 31 December 2019. I would like to thank them all for their contribution. The members of the Committee as at 31 December 2019 are shown in the table below. Amanda Blanc joined the Committee on 2 January 2020. Details of members' experience and qualifications are shown in the 'Our Board of Directors' section, and their attendance at Committee meetings during the year is shown within the Directors' and Corporate Governance report.

Name	Member since	Years on the Committee
Sir Adrian Montague[1]	06/03/2013	7
Claudia Arney[2]	08/02/2016	4
Glyn Barker[3]	01/07/2012	7
Patricia Cross	01/12/2013	6
Belén Romana García	26/06/2015	4
Michael Mire	12/09/2013	6
Patrick Flynn	16/07/2019	<1
George Culmer	25/09/2019	<1

1 Chair
2 Claudia Arney retired from the Committee on 31 December 2019
3 Glyn Barker retired from the Committee on 31 December 2019

Committee Purpose

The main purpose of the Committee is oversight of the balance of skills, knowledge, experience and diversity on the Board to enable it to identify and respond appropriately to current and future opportunities and challenges. To assist in identifying and nominating candidates for the Board, the Committee monitors the succession plans for senior management and Executive and Non-Executive Directors. The Committee also oversees diversity and inclusion initiatives and talent development for the wider Group. During the year, the Board and Committees' remit and responsibilities were reviewed. With effect from 1 January 2020 the Committee changed its name to the Nomination and Governance Committee and expanded its responsibilities to include oversight of governance, regulatory compliance and organisational change. More information on the Board and Committees' structure can be found in the Directors' and Corporate Governance report.

Board and executive succession planning

The 2018 UK Corporate Governance Code (the Code) places greater emphasis on succession planning and the Committee has built on its existing processes to enhance its focus in this area.

The Committee, on behalf of the Board, regularly assesses the balance of Executive and Non-Executive Directors, and the composition of the Board in terms of skills, experience, diversity and capacity.

Executive Directors

The Committee led the process for the recruitment of a new Group CEO following the departure of Mark Wilson in October 2018. The Committee approved the search brief and engaged Spencer Stuart to identify suitable candidates. The brief included finding candidates with strong insurance experience, a track record of running large global organisations, outstanding leadership qualities, a customer focused approach, and alignment to the Company's culture and values. A diverse shortlist of internal and external candidates was interviewed by the Chairman, the Senior Independent Director and the chairs of the Board Audit, Risk, Governance and Remuneration Committees. The preferred candidates met with all Non-Executive Directors and the successful candidate met with the Financial Conduct Authority (FCA) and the Prudential Regulatory Authority (PRA). The Remuneration Committee led on the development of an appropriate remuneration package for the role and approved the final package to be offered to the successful candidate. Both the Remuneration and Nomination Committees were mindful of shareholder views when considering the remuneration package for the role. Having considered all the skills, experience and personal attributes of the preferred candidates, the Committee unanimously agreed to recommend Maurice Tulloch as Group CEO. The Board appointed Maurice as Group CEO on 4 March 2019. Maurice was formerly Chief Executive Officer International Insurance. The appointment of Maurice as Group CEO reflected a strong internal succession planning process and demonstrated our focus on people development and readiness for future roles.

On 30 June 2019, Tom Stoddard stepped down as Group CFO and as an Executive Director of Aviva plc. The Committee was involved in the appointment of the new Group CFO and engaged Spencer Stuart to carry out an extensive external search and to benchmark internal candidates for the role. A shortlist of highly capable and diverse internal and external candidates was produced and considered against the role profile previously agreed by the Committee. Interviews were held with the shortlisted candidates and the Non-Executive Directors, following which the Committee unanimously agreed to recommend Jason Windsor's appointment to the role. The Board appointed Jason Windsor as Group CFO and Executive Director of Aviva plc from 26 September 2019. Jason Windsor was Aviva's interim Chief Financial Officer from 1 July 2019 and was previously Chief Financial Officer of Aviva UK Insurance. He has a deep understanding of Aviva and the markets we operate in and was considered the right candidate for the role in line with our executive succession plans.

During the year, Spencer Stuart had no other connection with the Company or any individual director.

Non-Executive Directors

Following nine years on the Board, Michael Hawker retired from the Board and as Chair of the Risk Committee on 31 March 2019. Keith Williams retired from the Board and as chair of the Audit Committee, following the conclusion of the Company's AGM on 23 May 2019. Claudia Arney and Glyn Barker retired from the Board and as chair of the Governance Committee and Senior Independent Director respectively, with effect from 31 December 2019.

During the year, the Committee reviewed the Board skills matrix and capability gaps identified and agreed the areas of experience which would be beneficial to the composition of the Board. Spencer Stuart was engaged to undertake an extensive external search based on the specification agreed by the Committee. The Committee considered the role profiles of the shortlisted candidates, met the candidates with the most alignment to the specification and recommended the appointment of Patrick Flynn, George Culmer and Amanda Blanc to the Board. Patrick Flynn was appointed to the Board on 16 July 2019 and became Chair of the Audit Committee on 4 November 2019. Patrick brings significant experience of both retail financial and insurance services. George Culmer joined the Board on 25 September 2019, bringing extensive insurance and banking experience. He was appointed as the Senior Independent Director with effect from 1 January 2020. Amanda Blanc joined the Board as a Non-Executive Director and Chair of the Governance Committee on 2 January 2020. Amanda brings strong knowledge of the UK and European insurance industry and a detailed understanding of business and customers.

Following Michael Hawker's retirement from the Board, Belén Romana García became the Chair of the Risk Committee with effect from 5 July 2019. Belén has been a member of the Risk Committee since joining the Board in June 2015 and has extensive experience of financial services including insurance, banking, regulation and risk management.

Talent management

The Committee also monitors the development of the Aviva Leadership Team (ALT) to ensure that there is a diverse supply of senior executives and potential future Board members with the appropriate skills and experience. Following the appointment of the Group CEO, the ALT was refreshed in line with the Group's strategic direction. The investment made in growing our leadership capability over the past three years meant that there was a strong pipeline of internal candidates available with the majority of ALT appointments originating internally in line with our succession plans. During 2019, the Committee received regular updates from the Group CEO on the composition and changes to the ALT and considered the development plans and talent profiles of these individuals in line with the Group's succession plans.

The Committee also considers the development plans designed to prepare successors for ALT roles. Internal talent development and developing a pipeline of potential future leaders has continued to receive Committee focus during the year.

The Committee also considers the initiatives to enhance, strengthen and diversify the talent pipeline across the wider Group and members of the Committee remain involved in various initiatives, including an ongoing programme of talent breakfasts where high potential employees meet with the Board.

Diversity

Diversity and inclusion continue to be an area of focus for the Committee and the Board. The Board is committed to having a diverse and inclusive leadership team which provides a range of perspectives and insights and the challenge needed to support good decision making. Diversity at Aviva includes, but is not limited to gender, and is inclusive of all strands of diversity including skills and experience, geographic background, ethnicity, disability and sexual orientation. The Board is supportive of the recommendations set out in the Parker Review and we aim to increase the ethnic diversity of the Board by 2021, as well as monitoring ethnic diversity in our succession and leadership pipeline.

As a global business Aviva recognises the importance of reflecting the diversity of the customers we serve in the composition of our Board and the senior management of the markets we operate in.

As at the date of the report the representation of women on the Board has increased from 27% in March 2019 to 33%. We actively support women advancing into senior roles, with the Chairman being an active member of the 30% Club. We are a charter signatory of HM Treasury's Women in Finance Charter, which commits financial services companies to a range of measures to improve gender diversity amongst senior management. As at the date of this report females represent 35% of the ALT and further details on gender diversity in the workforce can be found in the Strategic report.

In May 2017, the Board adopted a Diversity and Inclusion statement which supports the Committee in its approach to succession planning. The Board's Diversity and Inclusion statement, which is in line with the overall Group Diversity and Inclusion strategy, is available on the Company's website at www.aviva.com/corporate-governance

Conflicts of interest and independence

During 2019, the Committee reviewed the balance of skills, experience and independence of the Board. The Committee conducted a review of individual director conflict authorisations as recorded in the Conflicts of Interest register. The register is maintained by the Group Company Secretary and sets out any actual or potential conflict of interest situations which a director has disclosed to the Board in line with their statutory duties. In order to form a view surrounding director independence when reviewing the conflicts of interest authorisations, consideration was also given to other external appointments held by each director.

For Non-Executive Directors, independence in thought and judgement is vital to facilitating constructive and challenging debate in the boardroom and is essential to the operational effectiveness of the Board and Committees of Aviva.

The Committee determines a Non-Executive Director's independence in line with Provision 10 of the Code. During 2019 the Committee conducted a particularly rigorous review of Glyn Barker, who had served on the Board for more than seven years. Glyn's deep understanding of accounting and regulatory issues and his extensive experience as a business leader meant that he also continued to provide independent insight and challenge to the boardroom. After careful consideration the Committee agreed that Glyn remained independent and continued to make a valuable contribution to the Board. The Committee examined Glyn's former position as a partner at the Group's current external auditors and was satisfied this did not affect his judgement or independence as a director.

The Committee also considered the cross-directorships of Keith Williams and Claudia Arney who were both directors on the Board of Halfords plc. The Committee was satisfied that the cross directorships did not impact the independence of either Claudia Arney or Keith Williams or their ability to carry out their role as directors of the Company. Claudia Arney stepped down from the board of Halfords plc on 1 March 2019.

Committee effectiveness review

The Committee undertakes a review of its effectiveness annually. More information can be found in the Directors' and Corporate Governance report.

2020 priorities

In 2020, the Committee will continue to focus on succession planning at the Board and senior management level (particularly following the internal appointments to the ALT during the year) and developing a strong and diverse talent pipeline. The Committee will also focus on appointing the new Chair and building an induction and training programme to support their appointment process. The Committee will also begin to operate under its extended Terms of Reference as the Nomination and Governance Committee.

Sir Adrian Montague
Chair of the Nomination Committee
4 March 2020

Committee activities during 2019

Evaluation and annual assessment

- Assessed the Non-Executive Directors' independence
- Considered and recommended to the Board the election/re-election of each continuing director ahead of their election/re-election by shareholders at the Company's 2019 AGM
- Reviewed and made recommendations to the Board in respect of each directors actual, potential or perceived conflicts of interests
- Reviewed the external appointments and time commitments of the Non-Executive Directors

Board composition and diversity

- Reviewed the composition of the Board and its committees and whether the Board required additional skills and experience which would complement those of the existing members and the Company's risk profile and strategy
- Led the search process for the new Group CEO, Group CFO and the three Non-Executive Directors appointed during 2019
- Considered specific steps to be taken in relation to diversity in Board and executive succession planning

Succession planning

- Continued to focus on succession planning arrangements at both Board and executive level, against a specification for the role and capabilities required for the position and the composition of the Board
- Considered plans for succession for each Aviva Leadership Team member, including talent development below the ALT level

Talent pipeline

- Reviewed the career and development plans for the ALT to ensure that there is an adequate talent pool of potential Executive Directors
- Reviewed talent development throughout the Group to ensure there is a sufficient and diverse pipeline of talent available to execute the Company's current and future strategy

Risk Committee report

Committee focus during 2019

I am pleased to present the Risk Committee's (the Committee) report for the year ended 31 December 2019.

The Company's approach to risk and risk management together with detail on the principal risks that face the Group are explained within the Risk and risk management section of this report.

During the year, the Committee focused on strengthening the risk culture and control environment, with particular attention given to operational and IT risks. The Committee also focused on the changing macroeconomic and political environment, including preparations for the UK to leave the European Union (EU), the risks posed by the low interest rate environment, cyber threats, climate change and ongoing regulatory change.

The Company's overall risk profile has remained stable throughout 2019 and the Committee continued to review and oversee the strengthening of the Group's operational risk profile and control environment.

Committee membership

I assumed the role of Chair on 5 July 2019. Michael Hawker was the Chair until 31 March 2019 when he stepped down from the Board and the Committee after nine years' service. Glyn Barker and Claudia Arney also retired from the Board and the Committee on 31 December 2019 and I would like to thank them all for their contribution. The members of the Committee as at 31 December 2019 are shown in the table below. Amanda Blanc became a member of the Committee on 2 January 2020 following her appointment to the Board. Details of members' experience, qualifications and attendance at Committee meetings during the year are shown within the Directors' and Corporate Governance report.

Name	Member since	Years on the Committee
Belén Romana García[1]	26/06/2015	4
Michael Mire	12/09/2013	6
Claudia Arney[2]	01/01/2017	3
Glyn Barker[3]	02/05/2012	7
Patrick Flynn	16/07/2019	<1
George Culmer	25/09/2019	<1

1 Chair.
2 Claudia Arney retired from the Committee on 31 December 2019
3 Glyn Barker retired from the Committee on 31 December 2019

Committee purpose

The main purpose of the Committee is to assist the Board in its oversight of risk within the Group, with a focus on reviewing the Group's risk appetite and risk profile in relation to capital, liquidity and franchise value and reviewing the effectiveness of the Group's risk management framework. The Committee reviews the methodology used in determining the Group's capital requirements and associated stress testing and ensures that due diligence appraisals are carried out on strategic or significant transactions. In addition to the risks inherent in the Group's investment portfolio, the Committee reviews the Group's operational risks, including significant changes to the regulatory framework. The Committee works with the Remuneration Committee to ensure that risk management and risk culture is properly considered in setting the Remuneration Policy. During 2019 the Committee supported the development of the new primary risk and control metric included in the Company's Annual Bonus Plan and further details on this can be found in the Directors' Remuneration report.

During the year the remit of the Committee was reviewed, and it was agreed that responsibility for controls over financial reporting will remain with the Audit Committee while the Committee has responsibility for all other internal controls. The Committee's Terms of Reference were updated accordingly.

The Committee works closely with the Remuneration and Audit Committees. The cross membership between these Committees promotes a good understanding of issues and efficient communication.

UK exit from the EU

During the year the Committee monitored the negotiations between the UK and EU and reviewed the Group's operational readiness planning, including the appropriateness of the 'No Deal' operational planning assumption against the backdrop of political uncertainty. Management plans included implementing a monthly Steering Committee to oversee preparations and the Committee reviewed the progress made by the Steering Committee and the implementation of the Part VII transfers of insurance portfolios to subsidiaries in Ireland, which were completed by 29 March 2019. More generally the Committee discussed the Group's contingency planning to ensure continuous service to customers in the event of a 'No Deal' exit and also considered customer service capacity planning to ensure that continuous service could be maintained in the event that a 'No Deal' exit occurred concurrently with other risk events (for example extreme weather) and business-as-usual peak demand (for example tax year-end). The resilience of the Group's balance sheet and the effectiveness of financial hedges to help mitigate possible financial market shocks from a 'No Deal' exit were reviewed, together with the progress made by the team working across the Group to ensure EEA to UK data transfers would be legally compliant absent of an EU data protection adequacy ruling. The Committee reviewed the scenario planning for potential fund suspensions, particularly property funds, to ensure that communication controls and cascades were in place.

Control environment

During the year the Committee received updates on disaster recovery, cyber resilience and IT outsourcing, and monitored and challenged the progress made by management.

The Committee reviewed the progress made by management in testing Aviva's ability to recover critical IT services in the event of a disaster and the robustness of the controls to support this on an ongoing basis. The progress made on the disaster recovery testing, and the new facilities provided by the data centre migration, allowed the Committee to support a return to tolerance for Aviva's disaster recovery risks.

In the case of cyber resilience, the Committee requested that management develop supporting management information (MI) for each business to demonstrate the effectiveness of key controls. The cyber scorecard allows each market to track control effectiveness and take proactive actions to address any issues arising. The Committee recognised that progress had been made across the overall cyber risk and control environment, including an improvement in cyber resilience maturity. In addition, there had been demonstrable improvements in Aviva's Cyber and Disaster Recovery controls, and focus will remain on ensuring the controls operate at an optimum level.

Notwithstanding these improvements the Committee believes that further work is required on the overall risk and control environment and that the assessment and the subsequent impact on the Company's 2019 Annual Bonus pool provides a clear statement of the focus on continual improvement across 2020.

Data centre migration

As part of the lessons learned from previous change programmes, the Committee ensured that appropriate governance structures were in place for future programmes. During 2019, a joint multi-entity forum was used for the data centre migration project with assurance provided by an independent expert. This forum operated in support of each legal entity board to ensure appropriate oversight of the programme and the most material IT migrations. As a result of this oversight, and the risk management practices embedded within the programme, the migration of Aviva's data centres was completed with minimal impact to customer service.

Risk culture

During the year the Committee reviewed the overall risk culture within the Group and the balance of risk and control expertise. This is in addition to the annual assessment of the performance of all Group business units and functions against the Group Risk and Control Goal which considered a range of quantitative and qualitative measures and outcomes. As a result, there has been a greater focus on risk culture with additional scrutiny on relevant metrics which forms part of the new operational risk appetite framework and focus will remain on further development.

Committee effectiveness review

The Committee undertakes a review of its effectiveness annually. More information can be found in the Directors' and Corporate Governance report.

2020 priorities

The Committee will continue to monitor the political environment, following the UK's exit from the European Union, including progress on trade negotiations and the future regulatory and political relationship. There will continue to be a focus on strengthening the risk and control environment particularly in relation to change activity, cyber risk reduction and ensuring IT service continues to meet customer demands and support the emerging requirements of operational resilience. The new risk reward metric and operational risk appetite should support this momentum while balancing the need to incentivise the required culture and behaviours to ensure controls are sustainably returned to tolerance. The Committee will focus on the potential risks associated with the business growth agenda and cost reduction activities to ensure these stay aligned to our commitment to improve the risk and control environment and deliver great customer outcomes.

In addition, I will continue to ensure a strong dialogue between the Group Risk Committee and our equivalent subsidiary level committees. This will include further developing the strength of the Company's controls around non-financial and emerging risks and how they support overall operational resilience, the horizontal and geographic review of key risks, remuneration processes and the linkage to culture.

Finally, on 11 February 2020 we welcomed Jan-Hendrick Erasmus as the new Group Chief Risk Officer. The Committee will work closely with Jan-Hendrick on his on-boarding and objectives which will be closely aligned to the priorities for the Committee.

Belén Romana García
Chair of the Risk Committee
4 March 2020

Committee activities during 2019

Risk appetite, risk management and risk reporting

- Reviewed reports from the Group Chief Risk Officer (Group CRO), which included updates on significant risks facing the Group, the Group's capital and liquidity position, the control environment, emerging risks and the Company's risk profile, and operational, regulatory and conduct risks
- Reviewed and recommended for Board approval, the Group's risk policies
- Reviewed and recommended for Board approval the Group's Solvency II (SII) capital and liquidity risk appetites
- Approved the Group's SII capital risk tolerances by risk type

Group capital and liquidity, financial plan and stress testing

- Approved the 2019 Group Capital and Liquidity Plan and subsequent updates
- Reviewed capital and liquidity projections including the Group's SII shareholder cover ratio and liquidity cover ratio
- Reviewed updates on credit risk and the Company's credit exposure and reviewed mitigating actions
- Reviewed the development of the Company's strategy from a risk perspective
- Approved the Systemic Risk Plan, the Recovery Plan and the Liquidity Risk Management Plan
- Approved the scenarios for group-wide stress testing to support the Group Recovery Plan
- Reviewed the risks to the 2020-2022 Group Plan

Solvency II internal model

- Undertook a review of the internal model components, reviewed internal model validation reports and governance updates, and approved changes to the internal model

External factors

- Reviewed regular updates on the performance of the Group's investment portfolios and on the external economic environment and assessed the implications on the Group's asset portfolio
- Monitored the risk for cyber security, the progress against cyber risks and reviewed the results of simulated security attacks against the Group
- Monitored the impact of the decision of the UK to leave the EU, the exit scenarios and regularly reviewed updates regarding the potential impact on our customers and capital and liquidity
- Reviewed the most significant emerging risk scenarios affecting the delivery of the Company's strategy

Regulatory, governance and internal audit

- Received risk and control updates from certain business units as part of an updated programme of risk deep-dive reviews
- Reviewed the Group Own Risk and Solvency Assessment (ORSA) Supervisory Report and approved its submission to the regulator
- Received updates on the disaster recovery, IT security, IT outsourcing and cyber risk Major Control Improvement Topics, and monitored and challenged progress by management
- Received quarterly reports from the Group Chief Audit Officer on internal audit which included progress on improving the control environment
- Approved the refresh of Solvency II related Group Business Standards
- Reviewed and approved the annual objectives and performance of the Group CRO
- Reviewed the effectiveness of the systems of internal control and risk management
- Reviewed the Company's reporting on the Taskforce on Climate Related Financial Disclosures requirements
- Recommended the 2020 Risk and Control Goal for approval by the Remuneration Committee
- Reviewed the adequacy and quality of the risk function
- Assessed the performance of all Group business units against the 2019 Group Risk and Control Goal

Audit Committee report

Committee focus during 2019

I am pleased to present the Audit Committee's (the Committee) report for the year ended 31 December 2019.

During 2019, the Audit Committee dedicated substantial time to reviewing the Aviva Group financial statements at both half and full year. In both cases, the financial statements were supported by detailed reports with judgements applied in preparation of the financial statements, including Life and GI technical provisions and reserves. The Committee also spent time considering the merits of more frequent financial reporting.

The Committee also focused on the Company's financial reporting, our system of internal controls over financial reporting, and the performance of the internal and external auditors. The potential impact of new International Financial Reporting Standards (IFRSs), particularly the new insurance accounting standard (IFRS 17) on the Company's financial operations and financial reporting remained under close review by the Committee and the Committee also commenced a project for the tender of the external audit.

Committee membership

I became Chair of the Audit Committee on 4 November 2019 and succeeded Glyn Barker, who had chaired the Committee on an interim basis following the retirement of Keith Williams on 23 May 2019, and pending receipt of my regulatory approval for the role. I would like to thank Glyn for his support to the Committee during this interim phase and prior to his retirement from the Board on 31 December 2019. Michael Hawker also retired from the Committee on 31 March 2019. The members of the Committee as at 31 December 2019 are shown in the table below. Details of their experience, qualifications and attendance at Committee meetings, together with the number of Committee meetings held, during the year are shown in the 'Our Board of Directors' section and the Directors' and Corporate Governance report.

Name	Member since	Years on the Committee
Patrick Flynn[1]	16/07/2019	<1
Glyn Barker[2]	08/08/2012	7
Patricia Cross	01/12/2013	6
Belén Romana García	05/07/2019	<1
George Culmer	25/09/2019	<1

1 Chair
2 Glyn Barker retired from the Committee on 31 December 2019.

Committee member requirements

The Committee annually reviews how its members meet the experience and expertise criteria set out in the 2018 UK Corporate Governance Code (the Code) and the FCA Disclosure Guidance and Transparency Rules (DTRs). Following the review undertaken for 2019, a recommendation was made to the Board that I as Committee Chair, – Belén Romana García and George Culmer, fulfilled the Code requirements for recent and relevant financial experience and the DTR requirements for competence in accounting and auditing and Patricia Cross confirmed that she also met the Code requirement for recent and relevant financial experience. The Committee as a whole has competence relevant to both the insurance and financial services industry.

Committee purpose

The primary purpose of the Committee is to make sure we follow a robust process to ensure our half and full year financial statements are suitable for publication. The Committee supports the Board in carrying out its responsibilities in relation to accounting policies, and internal controls and the financial reporting framework. The Committee monitors the adequacy and effectiveness of our system of control over financial reporting and the effectiveness, performance, objectivity and independence of our internal and external auditors. The Committee also monitors our whistleblowing arrangements. The Audit Committee responsibilities are set out in its Terms of Reference.

During the year the remit of the Committee was reviewed and clarified in certain areas. The Committee is responsible for overseeing internal controls over financial reporting while the Risk Committee is responsible for the oversight of other areas of internal controls. The Committee's Terms of Reference were updated accordingly. The Committee acts independently of management and works closely with the Governance, Remuneration and Risk Committees. The cross-membership between these Committees supports good understanding of current issues and efficient communication.

Significant issues

The significant issues that the Committee considered during the year are set out in the table below.

Areas of focus	Actions taken by the Committee
IFRS and Solvency II Life technical provisions and reserves	Challenged the assumptions used in the calculation of the Best Estimate Liability component of the technical provisions and the reserves required under Solvency II (SII), and the expense impacts on SII reserves. Reviewed and challenged the longevity, expense and credit default assumptions used for the 2019 half and full year financial statements. The challenge around the setting of longevity assumptions was a particularly significant area for review as those judgements could continue to have a material impact on Aviva's SII and IFRS results. During 2019, a detailed analysis was conducted, and reviewed by the Committee, to validate changes observed in recent mortality experience and the resulting impact on the existing longevity assumptions. In particular, the Committee reviewed the rate of annuitant mortality improvement reflecting recent experience in the UK market. The Committee met with the Chair of the UK Life Audit Committee, which had conducted its own review of longevity assumptions, together with the UK Life Chief Financial Officer. This provided an additional opportunity to examine the assumptions in greater detail. Following assessment of the proposed assumption changes the Committee considered the associated release of margins and the timing of the recognition of changes in longevity experience in the financial statements. During the year the Committee considered, reviewed and approved the adoption of the relevant industry tables for the Bulk Purchase Annuity business in the UK. The Committee also reviewed proposals for the adoption of updated Continuous Mortality Investigations (CMI) models for mortality improvement including the selection of parameters within the CMI model. The Committee reviewed the continued implementation of a new modelling tool to measure actuarial liabilities in place of an externally hosted product. The implementation of the new model was ongoing and would continue to be applied to further actuarial models on a phased basis. The Committee also approved the maintenance expenses used in the measurement of life insurance contract liabilities in UK Life.
IFRS and SII GI reserving issues and judgements	Reviewed and challenged the principal assumptions in the calculation of the GI reserves, in particular the 'Ogden rate' for bodily injury claims including the impact of the July 2019 announcement by the Lord Chancellor of the -0.25% Ogden discount rate. This resulted in a £45 million reduction in IFRS profit. The Committee continues to monitor how the Ogden rate might change and subsequent reviews (at least every five years) including the potential for a dual rate, and the impact of future mortality and economic scenarios. The Committee considered the key points of the PRA's 'Dear Chief Actuary' letter and the actions taken across the Group to ensure our reserving remains at best practice level. It also tracked actual weather claims against expectations throughout the year.
IFRS and SII key issues and judgements and disclosures	Challenged estimates and judgements for IFRS and SII reporting bases. IFRS judgements included goodwill and intangible asset impairment reviews, assets classified as held for sale, (including the continued held for sale of Friends Provident International Limited) and the valuation assumptions for certain mark to model assets and liabilities. With the repeated change of date for the UK exit from the European Union and reflecting the continuing uncertainty and risk of a 'no deal' exit from the EU, the Committee continued to review the size and continuation of the allowance in relation to the UK exit from the EU and agreed the allowance should continue to be retained and that further disclosure of the purpose of retaining the allowance be provided in the financial statements. The Committee also reviewed two provisions created in respect of product governance issues for heritage book customers in the UK Life business. The first related to advice given on the transfer from defined benefit pensions to personal pension arrangements and resulted in a £229 million provision *(2018: £250 million)*. The second related to past communications to a specific sub-set of policyholders that may not have adequately informed them of switching options into with-profits funds that were available to them and resulted in a provision of £175 million. In addition, the Committee reviewed an issue relating to the incorrect consolidation of investment funds, the resulting restatement of financial statements at Half Year 2019 following the reclassification of those Investment funds, and the further strengthening of the internal controls for the classification of investment funds going forward. The Committee monitored the additional disclosures required at Full Year 2019 following the restatement at Half Year 2019 and continues to assess the revisions to the control environment.
Internal controls	The Committee continued to challenge and drive the ongoing implementation of the Operational Risk and Control Management framework (ORCM) to ensure ORCM is embedded across the Group and to support a risk aware culture. From 1 January 2020 the Committee's Terms of Reference were updated to clarify that the Committee will oversee internal controls over financial reporting. The Risk Committee Terms of Reference were updated at the same time to clarify that the other internal controls are overseen by the Risk Committee. The Committee reviewed the internal controls over financial management to gain assurance that these remained in tolerance with no control weaknesses which could have a material impact on the full year 2019 financial results.

IFRS 16 and IFRS 17	Prepared for the implementation of new IFRSs, but most significantly IFRS 16 (the new leasing standard adopted on 1 January 2019) and IFRS 17, the new insurance accounting standard issued by the International Accounting Standards Board (IASB) due to take effect on 1 January 2022. In particular, the Committee reviewed the transition approach to be taken by the Group on the adoption of IFRS 16. Implementation of the standard has resulted in an additional c.£0.5 billion of assets and liabilities relating to the Group's owner-occupied property portfolio being recognised on the statement of financial position for the first time. In respect of IFRS17, the Committee considered the impact of the proposed requirement to calculate a 'Contractual Service Margin' (CSM), whereby the profits earned from a policy will be spread over its full life, and a new CSM liability to be held on the balance sheet representing 'unearned profits'. While the impact of adopting IFRS 17 has yet to be fully assessed, particularly as the standard has not yet been finalised, it is expected that IFRS 17 will have a significant impact on the measurement and disclosure of insurance contracts. The Committee continues to regularly assess the impact on financial reporting, the operation of new internal financial tools to be used for financial forecasting and planning purposes, and the cost of implementing the new IFRS 17 standard.
Longer term viability statement (the Statement)	Reviewed and challenged the principles underpinning the Statement for 2019 and concluded that the Company and its subsidiaries will be able to continue in operation and meet their liabilities as they become due. The Committee continues to consider it appropriate that the Statement covers a three-year period.
Financial transformation	The Committee reviewed and challenged management's plans for the simplification of the Group's internal finance functions. The primary objective of this activity is to simplify and consolidate finance systems and operations to a unified model and underlying IT systems, driving simplicity and lower cost.
Tender of external audit	Under Competition and Markets Authority regulations, Aviva is required to tender for the provision of the external audit every 10 years. PricewaterhouseCoopers LLP (PwC) was appointed for the first time for the 31 December 2012 financial year end and therefore a mandatory re-tender is required for the year ending 31 December 2022. The Committee initiated and is leading the external audit tender process which is expected to be completed during 2020. The timing of the tender of the external audit will align the appointment, or re-appointment of the external auditor, with the introduction of IFRS 17.
External quality assessment (EQA) of the Internal Audit Function	The Internal Audit function is required by professional standards to engage an independent EQA review at least every 5 years. The EQA covers all aspects of the governance and operation of the function including compliance with relevant professional standards. The Committee reviewed the report of the EQA and will continue to monitor the associated action plan for the Internal Audit function following the EQA report.
Performance measures	At the Capital Markets Day on 20 November 2019 new financial metrics were announced which align with our strategic priorities. The Committee has reviewed those economic value metrics based on SII which will be used to manage the business and measure future performance.

External auditor

PwC was appointed as the Group's External Auditor (Auditor) in 2012 following a formal tender process. The external audit contract must be put out to tender at least every ten years in conformance with Competition and Markets Authority (CMA) rules on mandatory audit tendering. The Committee has agreed that a competitive tender process will be completed during 2020, for the 2022-year end.

While there is no requirement to rotate audit firms until the current auditor has served a maximum of 20 years, in determining the proposed timing of the tender process, the Committee is mindful that it is necessary to allow the selected auditor appropriate time to become independent should the Committee propose that an auditor other than PwC be selected. The Committee will continue to monitor the effectiveness and independence of PwC, as well as considering whether this proposed timing remains appropriate in light of business developments.

The Committee is leading the tender and has defined audit quality as the primary criteria for selecting the external auditor. The Committee expressly requested that audit firms outside the 'big four' be invited to participate in the tender process and we were pleased that several firms outside the 'big four' discussed the audit tender with us.

The external audit is currently led by the audit partner, Andrew Kail, who replaced Marcus Hine by rotation following the approval of the 2018 annual report in March 2019. Andrew completed a detailed transition exercise with Marcus during the completion of the 2018-year end audit process.

The Auditor attends every Committee meeting and submits a formal report for discussion. This report updates the Committee on the progress of audit activity, a review of the reasonableness of managements' approach to key issues, judgements and accounting matters and the impact on the financial statements and assurance around auditor independence. The Auditor also provides the Committee with external benchmarking data around key areas of interest such as annuitant mortality assumptions, pensions and internal controls.

An annual review of the Auditor was undertaken through completion of a questionnaire by the Committee, subsidiary company audit committees, senior management, and members of the Group's finance team. The review focused on the effectiveness of the audit team, expertise and resources and interaction with audit committees. Feedback on interaction with the Auditor from audit committees across the Group was positive. Where opportunities for improvement were identified, the finance function engaged with the Auditor to include that feedback into the planning for future audit activity. The Committee concluded that the Auditor continued to perform effectively and is recommended to shareholders for reappointment at the 2020 AGM.

The Company has complied with the Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 for the year ended 31 December 2019.

The Company has an External Auditor Business Standard (Standard) in place which is aimed at safeguarding and supporting the independence and objectivity of the Auditor. The Standard is compliant with all UK and International Federation of Accountants rules and takes into account the FRC's Revised Ethical Standard 2016 and the EU Audit Directive (2014/56/EU).

Non-audit fees

In 2019 the Group paid PwC £21.2 million *(2018: £20.4 million)* for audit and audit-related assurance services, with the overall increase primarily due to additional fees relating to the prior year audit of Group subsidiaries. In addition, PwC were paid £0.8 million *(2018: £1.9 million)* for other services, including £0.7 million *(2018: £0.9 million)* for other assurance services, giving a total fee to PwC of £22.0 million *(2018: £22.3 million)*.

In line with the Standard, the Committee satisfied itself that for all non-audit engagements, robust controls were in place through a quarterly review process for audit related and non-audit services provided, to ensure that PwC's objectivity and independence was safeguarded, and concluded that it was in the interests of the Company to purchase these services from PwC due to their specific expertise. Further details are provided in note 13 of the financial statements.

Internal control

The Committee is responsible for supporting the Board in ensuring a robust system of internal control and risk management in the Group. The Committee receives regular reports on the status of the control environment and updates on the management of operational risks and controls under the Operational Risk and Control Management (ORCM) framework. More information about our system of internal control and risk management can be found in the Directors' and Corporate Governance report. The Committee has clarified its role to provide oversight on internal controls over financial reporting with other areas of internal control overseen by the Risk Committee.

The Committee also receives quarterly control reports from the Internal Audit function and reviews and challenges management on the actions being taken to improve the quality of the overall control environment and the risk control culture across the Group. The quarterly reports include an assessment of control environment metrics including: any risks that are reported to be outside of tolerance; the plans to return these to tolerance; the status of internal audit opinions that are rated as unsatisfactory or where major improvement is needed; key issues identified and emerging trends and themes for the Committee to focus on in the future.

The Committee reviews and approves the Internal Audit Plan and budget and satisfied itself that the Internal Audit function had the appropriate resources to discharge its remit. The Committee also conducts an annual review of the Internal Audit Function to assess its effectiveness and to satisfy itself that the quality, experience and expertise of the Internal Audit function is appropriate for the business. This is carried out by reviewing reports issued by Internal Audit and the output of an annual stakeholder effectiveness survey. This formal process is supplemented by regular private discussions with executive management, the Internal Auditor, and the Auditor. In 2019, the Internal Audit function also undertook an EQA review, and the Committee assessed the outcome of this review. The EQA results highlighted the strength of the Internal Audit function, and action plans were developed to address areas of improvement identified, with progress against that plan reported to the Committee. The Committee concluded that for 2019 the function performed well and remained effective.

For the financial year under review, the Company met the relevant provisions of the Code relating to internal controls, and the FRC's 2014 'Guidance on Risk Management, Internal Control and Related Financial and Business Reporting'.

The Committee is also supported in its work by the audit committees that operate in the Group's subsidiary entities. The subsidiary audit committees review the operation of internal controls in these subsidiaries, and actively challenge judgement made by management, strengthening the overall governance and control framework for the Group. The Committee Chair will meet with subsidiary entity audit chairs during the year to discuss their oversight responsibilities.

Whistleblowing

The Committee Chair is the whistleblowers' champion for the Group and has responsibility to oversee the integrity, independence and effectiveness of the Group's policies in relation to whistleblowing. The Committee as a whole is responsible for establishing and overseeing the effectiveness of controls put in place in accordance with regulatory requirements in respect of whistleblowing. The Audit Committee and Board receives updates from the Committee Chair as the whistleblowers' champion. Aviva's whistleblowing programme 'Speak Up' is available to employees across the Group. The Committee receives reports on the number of cases reported to the Speak Up service, the proportion of reports that are designated as instances of whistleblowing, the number of substantiated cases and summaries of the action taken. The Committee continues to look for opportunities to further enhance the Speak Up service.

Committee effectiveness review

The Committee undertakes a rigorous review of its effectiveness annually. More information can be found in the 'Our Board of Directors' and Corporate Governance report'.

2020 priorities

In 2020, in addition to carrying out its principal function, the Committee will continue to monitor the implementation of the new IFRS 17 standard, ahead of its scheduled introduction from 1 January 2022. The Committee also intends to complete the external audit tender process while also considering changes in the external audit environment following the Brydon, Kingman and Competition and Market Authority reviews of the audit market. The Committee will consider the changes in segmental reporting following the announcements made at the Capital Markets Day on the revised structure of the Aviva Group and will continue to support the development of the ORCM framework in relation to internal controls over financial reporting.

Patrick Flynn
Chair of the Audit Committee
4 March 2020

Committee activities during 2019

Financial statements and accounting policies

- Recommended to the Board for approval the 2019 half and full year financial statements
- Approved the IFRS and SII technical provisions with the 2019 half and full year financial statements
- Recommended to the Board for approval the SII Solvency and Financial Condition Report
- Reviewed and challenged the reserve positions relating to the Group Life and GI operations
- Reviewed and challenged the treatment and recoverability of goodwill and other intangible assets
- Reviewed the Group Chief Financial Officer's reports which included: IFRS and SII key issues and judgements; accounting developments including the new IFRSs; and overview of internal control and risk management over financial reporting
- Reviewed and challenged the going concern assumptions for 2019 and the principles underpinning the Longer-Term Viability Statement
- Reviewed the Group Risk Actuary's report on significant issues related to the technical provisions of SII and IFRS
- Reviewed an issue relating to the incorrect consolidation of investment funds, the resulting restatement of financial statements at half year 2019 following the reclassification of those investment funds, and updates to relevant internal controls
- Assessed that the Annual report was considered fair, balanced and understandable

External audit, auditor engagement and policy

- Reviewed the effectiveness of the Auditor and was satisfied that the services it provided remained effective, objective and fit for purpose
- Reviewed the Auditor's compliance with the independence criteria set out in the Code
- Monitored compliance with our External Auditor Business Standard on a quarterly basis
- Refreshed the External Auditor Business Standard
- Held private meetings with the Auditor without management present to provide an appropriate forum for issues to be raised
- Reviewed reports from the Auditor regarding: the 2019 Audit Plan and progress against plan and reports on the audit of the 2019 half and full year results including key assumptions used and outcomes of the audit
- Commenced the process for a tender of the external audit

Internal audit

- Reviewed reports from the Chief Audit Officer (CAO)
- Recommended to the Board the appointment of a new CAO during the year
- Reviewed and approved changes to our Internal Audit Charter and Business Standard
- Reviewed and approved our Internal Audit Plan
- Assessed the independence of the CAO
- Assessed the effectiveness of the Internal Audit function
- Held private meetings with the CAO without management present
- Reviewed the objectives of the CAO

Internal controls, including financial reporting control framework and financial reporting developments

- Received quarterly updates on the effectiveness of our ORCM FRCF framework and rectification of controls
- Reviewed management's assessment of the effectiveness of the risk management and control environment
- Reviewed the Internal Audit function report to ensure adequacy of the systems of internal control and risk management
- Received updates from the Speak Up and whistleblowers' champion

Governance Committee report

Committee focus during 2019

I am pleased to present the Governance Committee's (the Committee) report for the year ended 31 December 2019.

During the year, the Committee considered and monitored a range of matters which included the treatment of our customers including vulnerable customers, our corporate responsibility agenda, data governance and regulatory compliance.

The Committee reviewed the scope and outcomes from a governance review of the UK businesses and monitored implementation of the recommendation from the review of the governance framework across the Group.

Committee membership

I joined the Board on 2 January 2020 and also assumed the Chair of the Committee. Claudia Arney was the Committee Chair throughout 2019 and I would like to thank Claudia for her leadership of the governance agenda and for enhancing the Committee's focus on the customer. Glyn Barker retired from the Board and the Committee, on 31 December 2019, and I would also like to thank Glyn for his contribution as a Committee member. The members of the Committee who served during 2019 and as at the date of this report are shown in the table below. Details of their experience, qualifications and attendance at Committee meetings during the year are shown within the Directors' and Corporate Governance report.

Name	Member Since	Years on the Committee
Amanda Blanc[1]	02/01/2020	<1
Claudia Arney[2]	01/06/2016	3
Glyn Barker[3]	10/05/2017	2
Michael Mire	12/09/2013	6
Belén Romana García	26/06/2015	4

1 Chair
2 Claudia Arney retired from the Committee on 31 December 2019
3 Glyn Barker retired from the Committee on 31 December 2019

Committee purpose

The main purpose of the Committee is to assist the Board in overseeing our customer and conduct obligations, our data governance, compliance with our corporate governance principles, our broader compliance activities and shaping the culture and ethical values of the Group and our approach to corporate responsibility.

With effect from 1 January 2020 the Committee's remit was refocused to provide greater clarity on the role of the Committee in overseeing customer and conduct topics. As a result, the Committee changed its name to the Customer, Conduct and Reputation Committee (CCRC). This report sets out the Committee purpose and activities during 2019 prior to becoming the CCRC.

Customers

During 2019, the Committee had oversight of the changes to Aviva's organisational design, particularly the restructuring of the UK Insurance (UKI) business, into two separate businesses to enhance the end to end customer experience and drive clearer accountabilities. This included providing input to the development of the customer measures that form part of the Company's Annual Bonus Plan. Further details on these enhancements are provided in the Directors' Remuneration report.

The creation of UKI customer operations, working across both our Life and Insurance businesses, was monitored by the Committee to ensure positive outcomes for the customer. The Committee regularly reviewed the balanced scorecard of customer metrics to better understand our customers' needs.

The Committee emphasised the importance of the customer agenda in the Group strategy and provided constructive challenge on how customer service and perception could be incorporated into the strategy.

The identification and fair treatment of vulnerable customers was also an area of focus for the Committee. The Committee conducted 'deep dives' into customer complaints and carried out an assessment of the UKI Complaint Risk controls to understand the key root causes of complaints. The Committee also increased the focus on standardised monitoring of customer complaints across all international markets.

Data

During 2019 the Committee reviewed the development and delivery of the data governance and data privacy framework and records management within the Group. A data protection officer has been appointed in each European market and in Aviva Investors and training and awareness of data privacy has been rolled out to all employees to support a strong, robust data privacy culture.

The Committee recognised that data incidents remained a significant threat to the Company's business and reputation and therefore emphasised the importance of an effective Data Strategy, and focus remains on further developing this Strategy and improving the quality and robustness of the Company's data privacy processes and framework.

Conduct and compliance

The Committee continued to pay close attention to Aviva's conduct risk agenda, conduct risk profile, compliance obligations and the wider regulatory landscape. The Committee reviewed the Group's regulatory risk profile and conduct risk data analytics capability. The Committee considered and approved updates to the Conduct Risk Policy and its application across the Group.

In addition to UK conduct risks, the Committee also reviewed conduct and compliance risks across our markets and received a deep dive on conduct risk in our Turkish and French businesses.

The Committee monitored material compliance developments and changes in the regulatory landscape particularly from a conduct risk perspective. The Committee also reviewed and approved the annual Group Compliance Plan and reviewed performance against this Plan and the delivery of good customer outcomes. The Committee continued to monitor the financial crime risks for the Group, and associated action plans and during the year focused on strengthening first line anti-fraud controls.

Governance

The Committee focused on changes in the internal governance of the Group, particularly governance within our subsidiary businesses. The Committee continued to receive updates and approved changes to the subsidiary governance principles and subsidiary succession management framework to provide a consistent governance framework across the Group. The governance around managing multi-disciplined projects was also strengthened to provide a consistent approach to major change projects.

The Committee also reviewed the outcomes of the board evaluations completed by subsidiaries across the Group and monitored the action plans developed by subsidiary boards to reflect those outcomes.

Corporate responsibility

The Committee continued to monitor our approach to corporate responsibility and the corporate responsibility strategy to build pride and trust in our company. During the year, the Committee approved updates to the Business Ethics Code to include explicit references to human rights and the reporting of climate change related risks. The Committee also continued to monitor and support our community investment.

The Committee reviewed Aviva's reporting on modern slavery and received updates on the Aviva Foundation, which had been established to distribute the proceeds of the Company's share forfeiture programme. The Foundation has committed over £3.7 million to projects that support our communities and vulnerable customers. This included funding a pilot to provide a counselling package to vulnerable home insurance customers' experiencing trauma following a serious event such as flooding; and funding a national programme to help people over 50 increase their employability skills and to promote, among businesses, the benefits of being an age friendly employer. The Foundation also supported the World Benchmarking Alliance which aims to challenge businesses to do more to achieve the UN Sustainable Development Goals.

Aviva is committed to behaving as a responsible corporate citizen and the Committee sets the guidance, direction and policies for the Group's corporate responsibility agenda to identify the most important sustainability issues for customers, the business and our wider stakeholders. Further information on our integrated responsibility and sustainable business approach can be found on the Company's website at www.aviva.com/social-purpose

Culture, diversity and inclusion

The Committee reviewed the outcomes of the employee Voice of Aviva engagement survey, which provided insights into employee concerns and the culture of the Group. The Committee also received updates on Global Inclusion and the evolution of the working culture to actively embrace all individuals and build an agile and diverse workforce. The Committee recognised that shifting demographics were making it ever more important to understand and reflect the diversity of the markets Aviva operated in. During 2019, the Committee prioritised two dimensions of diversity, gender and ethnicity, and progress is being made in both areas, evidenced by the success of both internal interventions and external recognition.

Committee effectiveness review

The Committee undertakes a review of its effectiveness annually. More information can be found in the Directors' and Corporate Governance report.

2020 priorities

In 2020, the Committee will begin to operate under its revised Terms of Reference as the CCRC, with an enhanced focus on the customer agenda, customer conduct issues, the Group's exposure in managing financial risks from climate change and concentrating on further improving the experience we provide to our customers.

The Committee will also focus on overseeing Aviva's reputation, our conduct risk profile and corporate responsibility agenda.

Amanda Blanc
Chair of the Governance Committee
4 March 2020

Committee activities during 2019

Customer and risk

- Focused on the customer agenda and received regular updates and monitored progress on customer metrics relating to customer complaints and the conduct agenda, sales, retention and claims experience

Corporate responsibility

- Continued to drive the corporate responsibility agenda and monitored compliance with the Group's corporate responsibility strategy
- Reviewed the Group's Modern Slavery statement, annual corporate responsibility reporting and the Group's Financial Crime, Regulatory Business and Corporate Responsibility, Environment and Climate Change Business Standards
- Received updates on the Group's health and safety performance

Governance

- Considered regular updates from the Group Company Secretary on governance matters, legal and litigation risks which had the potential to impact the reputation of the Group
- Monitored the Group's compliance with the 2018 UK Corporate Governance Code and other areas of regulation and guidance
- Reviewed and where appropriate approved changes to the composition of the material subsidiary boards
- Discussed the outcomes of the 2019 subsidiary board effectiveness reviews
- Considered succession planning for material subsidiaries around the Group
- Reviewed the outcomes of the governance review and monitored implementation of the recommendations to the governance framework

People

- Reviewed the results of the Voice of Aviva surveys
- Reviewed and considered the talent development programmes for leadership across the Group, with a focus on diversity
- Approved updates to the Business Ethics Code

Regulatory and financial crime

- Regularly reviewed updates from the Group Compliance Oversight Director
- Reviewed potential financial crime risks and any actions required in response
- Monitored the implementation of the data governance and data privacy framework
- Monitored the Group's relationship and interaction with regulatory bodies and actions taken in respect of regulatory developments
- Reviewed and challenged management's explanations and actions in response to issues/events

Other statutory information

The directors submit their Annual report and accounts for Aviva plc, together with the consolidated financial statements of the Aviva group of companies, for the year ended 31 December 2019.

The Directors' report required under the Companies Act 2006 comprises this Directors' and Corporate Governance report, the Directors' Remuneration report and the following disclosures in the Strategic report:

- Corporate responsibility – Disclosure of our greenhouse gas emissions
- Our people – Inclusive diversity – details of our employment policies
- Our people – Engaging with our people – details of employee engagement
- Our business relationships – suppliers, customers and others
- Our strategy – Delivering on a clear plan of action
- Important events since the financial year end
- Future developments

Details of significant post balance sheet events that have occurred after 31 December 2019 are disclosed in note 66.

The management report required under Disclosure and Transparency Rule 4.1.5R comprises the Strategic report (which includes the principal risks relating to our business) and details of material acquisitions and disposals made by the Group during the year which are included in notes 3 and 4. This Directors' and Corporate Governance report fulfils the requirements of the corporate governance statement under Disclosure and Transparency Rule 7.2.1.

Our policy on hedging

The hedging policy is disclosed in note 61.

Related party transactions

Related party transactions are disclosed in note 63 which is incorporated into this report by reference.

Dividends

Dividends for ordinary shareholders of Aviva plc are as follows:

- Paid interim dividend of 9.50 pence per ordinary share *(2018: 9.25 pence)*
- Proposed final dividend of 21.40 pence per ordinary share *(2018: 20.75 pence)*
- Total ordinary dividend of 30.9 pence per ordinary share *(2018: 30.0 pence)*
- Total cost of ordinary dividends paid in 2019 was £1,184 million *(2018: £1,128 million)*

Subject to shareholder approval at the 2020 AGM, the final dividend for 2019 will become due and payable on 2 June 2020 to all holders of ordinary shares on the Register of Members at the close of business on 24 April 2020 (payment date approximately four business days later for holders of the Company's American Depositary Shares (ADS)).

In compliance with the rules issued by the Prudential Regulation Authority in relation to the implementation of the Solvency II regime, the dividend is required to remain cancellable at any point prior to becoming due and payable and to be cancelled if, prior to payment, the Group ceases to hold capital resources equal to or in excess of its Solvency Capital Requirement, or if that would be the case if the dividend was paid. Details of any dividend waivers are disclosed in note 35.

Dividend policy

For the full year dividend for 2019 the Board of Directors has proposed a 3% increase to 30.9 pence per share. Aviva has adopted a progressive dividend policy. This means that, under ordinary circumstances, the Board of Directors would aim to at least maintain the current annual ordinary dividend per share, while seeking to grow the dividend per share over time based on the Board of Directors' periodic assessment of the Group's financial performance and future outlook. Moderating the rate of dividend per share growth will enhance our flexibility to repay debt and invest in business improvement.

Under UK company law, we may only pay dividends if the Company has 'distributable profits' available. 'Distributable profits' are accumulated realised profits/(losses) not previously distributed or capitalised, less accumulated unrealised losses not previously written off based on IFRS. Even if distributable profits are available, we pay dividends only if the amount of our net assets is not less than the aggregate of our called-up share capital and non distributable reserves and the payment of the dividend does not reduce the amount of our net assets to less than that aggregate.

As a holding company, the Company is dependent upon dividends and interest from our subsidiaries to pay cash dividends. Many of the Company's subsidiaries are subject to insurance regulations that restrict the amount of dividends that they can pay to us.

Historically, the Company has declared an interim and a final dividend for each year (with the final dividend being paid in the year following the year to which it relates). Subject to the restrictions set out above, the payment of interim dividends on ordinary shares is made at the discretion of the Board, while payment of any final dividend requires the approval of the Company's shareholders at a general meeting. Dividends on preference shares are made at the discretion of the Board.

The Company pays cash dividends in pounds sterling and euros, although the articles of association permit payment of dividends on ordinary shares in any currency and in forms other than cash, such as ordinary shares.

Interim dividends are paid in September, subject to declaration by the Board. A final dividend is typically proposed by the Company's Board after the end of the relevant year and generally paid in May. The following table shows certain information regarding the dividends that we paid on ordinary shares.

Year	Interim dividend per share (pence)	Interim dividend per share (cents)[1]	Final dividend per share (pence)	Final dividend per share (cents)[1]
2014	5.85	N/A	12.25	N/A
2015	6.75	N/A	14.05	N/A
2016	7.42	N/A	15.88	18.71
2017	8.40	9.50	19.00	21.77
2018	9.25	10.25	20.75	24.12
2019	9.50	10.62	21.4	–

1 Euro dividend rate per share

Distributable reserves
Under UK company law, dividends can only be paid if a company has distributable reserves sufficient to cover the dividend. At 31 December 2019, Aviva plc itself had distributable reserves of greater than £3.9 billion. In UK Life, our largest operating subsidiary, distributable reserves, which could be paid to Aviva plc via its intermediate holding company, are based on the updated Companies Act 2006 (Distributions of Insurance Companies) Regulations 2016 which uses an adjusted Solvency II Own Funds measure in determining profits available for distribution. While the UK insurance regulatory laws applicable to UK Life and our other UK subsidiaries impose no statutory restrictions on an insurer's ability to declare a dividend, the rules require maintenance of each insurance company's solvency margin, which might impact their ability to pay dividends to the parent company. Our other life insurance, general insurance, and fund management subsidiaries' ability to pay dividends and make loans to the parent company is similarly restricted by local corporate or insurance laws and regulations. In all jurisdictions, when paying dividends, the relevant subsidiary must take into account its capital position and must set the level of dividend to maintain sufficient capital to meet minimum solvency requirements and any additional target capital expected by local regulators. We do not believe that the legal and regulatory restrictions constitute a material limitation on the ability of our businesses to meet their obligations or to pay dividends to the parent company, Aviva plc.

Share class and listing
All the Company's shares in issue are fully paid up and the ordinary and preference shares have a Premium and Standard listing respectively on the London Stock Exchange.

Details of the Company's share capital and shares under option at 31 December 2019 and shares issued during the year are given in notes 33 to 36. The calculation of earnings per share is included in note 15.

Share capital
During the year, 18,776,934 ordinary shares were allotted to satisfy amounts under the Group's employee share and incentive plans. At 31 December 2019 the:
- issued ordinary share capital totalled 3,921,129,145 shares of 25 pence each (83% of total share capital)
- issued preference share capital totalled 200,000,000 shares of £1 each (17% of total share capital)

Further details on the ordinary share capital of the Company are shown in note 33.

Rights and obligations attaching to the Company's ordinary shares and preference shares
Rights and obligations attaching to the Company's shares together with the powers of the Company's directors are set out in the Company's Articles of Association (the Articles), copies of which can be obtained from Companies House and the Company's website at www.aviva.com/articles, or by writing to the Group Company Secretary. The powers of the Company's directors are subject to relevant legislation and, in certain circumstances (including in relation to the issue or buying back by the Company of its shares), are subject to authority being given to the directors by shareholders at a general meeting. At the 2020 AGM, shareholders will be asked to renew the directors' authority to allot new securities. Details are contained in the Notice of 2020 Annual General Meeting (Notice of AGM).

Restrictions on transfer of securities
With the exception of restrictions under the Company's employee share incentive plans, while the shares are subject to the plan rules, there are no restrictions on the voting rights attaching to the Company's ordinary shares or the transfer of securities in the Company.

Where, under an employee share incentive plan operated by the Company, participants are the beneficial owners of shares but not the registered owners, the voting rights are normally exercised at the discretion of the participants. No person holds securities in the Company carrying special rights with regard to control of the Company. The Company is not aware of any agreements between holders of securities that may result in restrictions on the transfer of securities or voting rights.

Significant agreements – change of control
There are a number of agreements that take effect, alter or terminate upon a change of control of the Company following a takeover bid, such as commercial contracts and joint venture agreements. None are considered to be significant in terms of their potential impact on the business of the Group as a whole. All of the Company's employee share incentive plans contain provisions relating to a change of control. Outstanding awards and options would normally vest and become exercisable on a change of control, subject to the satisfaction of any performance conditions and pro rata reduction as may be applicable under the rules of the employee share incentive plans.

Authority to purchase own shares
At the Company's 2019 AGM, shareholders renewed the Company's authorities to make market purchases of up to 391 million ordinary shares, up to 100 million 8¾% preference shares and up to 100 million 8⅜% preference shares. The authority was not used and no shares were purchased during 2019. At the 2020 AGM, shareholders will be asked to renew the authorities to buy Aviva shares for another year and the resolution will once again propose a maximum aggregate number of ordinary shares which the Company can purchase of less than 10% of the issued ordinary share capital. Details are contained in the Notice of AGM available at www.aviva.com/agm. The Company held no treasury shares during the year or up to the date of this report.

Disclosure guidance and transparency rule 5 – major shareholders
The table below shows the holdings of major shareholders in the Company's issued ordinary share capital in accordance with the Disclosure Guidance and Transparency Rules (DTRs) notified to the Company as at 31 December 2019 and 4 March 2020. Information provided to the Company under the DTRs is publicly available via the regulatory information services and on the Company's website.

Shareholding interest

	At 31 December 2019		At 4 March 2020	
Shareholder	Notified holdings	Nature of holding	Notified holdings	Nature of holding
BlackRock, Inc[1]	Above 5%	Indirect	Above 5%	Indirect

1 Holding includes holdings of subsidiaries.

Directors
The directors as at the date of this report, together with their biographical details and details of Board appointments, resignations and retirements is shown earlier in the report.

The rules regarding the appointment and removal of directors are contained in the Company's Articles. Under the Articles, the Board can appoint additional directors or appoint a director to fill a casual vacancy. The new director must retire at the first AGM following their appointment and can only continue as a director if they are elected by shareholders at the AGM.

At no time during the year did any director hold a material interest in any contract of significance with the Company or any of its subsidiary undertakings other than an indemnity provision between each director and the Company and employment contracts between each executive director and a Group company. The Company has purchased and maintained throughout the year directors' and officers' liability insurance in respect of itself, its directors and others.

The Company has also executed deeds of indemnity for the benefit of each director of the Company, and each person who was a director of the Company during the year, in respect of liabilities that may attach to them in their capacity as directors of the Company or of associated companies. The Articles allow such indemnities to be granted. These indemnities are qualifying third-party indemnity provisions as defined by section 234 of the Companies Act 2006. These indemnities are currently in force. Details of directors' remuneration, service contracts, employment contracts and interests in the shares of the Company are set out in the Directors' Remuneration report.

The Company has also granted indemnities by way of a deed poll to the directors of the Group's subsidiary companies, including former directors who retired during the year and directors appointed during the year, which is a 'qualifying third party indemnity' for the purposes of the applicable sections 309A to 309C of the Companies Act 1985. The deed poll indemnity was in force throughout the year and remains in force.

Financial instruments

Group companies use financial instruments to manage certain types of risks, including those relating to credit, foreign currency exchange, cash flow, liquidity, interest rates, and equity and property prices. Details of the objectives and management of these instruments are contained in the 'Risk and risk management' section and in note 60 on risk management.

Political donations

Aviva did not make any political donations during 2019.

Disclosure of information to the auditor

In accordance with section 418 of the Companies Act 2006, the directors in office at the date of approval of this Annual report and accounts confirm that, so far as they are each aware, there is no relevant audit information of which the Company's External Auditor, PricewaterhouseCoopers (PwC), is unaware and each director has taken all steps that ought to have been taken as a director in order to make themselves aware of any relevant audit information and to establish that PwC is aware of that information.

Annual general meeting

The 2020 AGM of the Company will be held on Tuesday 26 May 2020 at the Queen Elizabeth II Centre, Broad Sanctuary, Westminster, London SW1P 3EE at 1.30pm. The Notice of AGM convening the meeting describes the business to be conducted thereat. Any proxy voting instruction, whether provided online, by post or via CREST or Proxymity voting, must be received by our Registrar, Computershare Investor Services PLC, by no later than 1.30pm on Thursday 21 May 2020. Further details can be found in the shareholder information section of the Notice of AGM.

Articles of association

Unless expressly stated to the contrary in the Articles, the Company's Articles may only be amended by special resolution of the shareholders. The Company's current Articles were adopted on 10 May 2018.

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the Strategic Report. The performance review includes the 'Risk and risk management' section. In addition, the 'Financial statements' sections include notes on the Group's borrowings (note 53); its contingent liabilities and other risk factors (note 56); its capital management (note 58); management of its risks including market, credit and liquidity risk (note 60); and derivative financial instruments (note 61).

The Group has considerable financial resources together with a diversified business model, with a spread of businesses and geographical reach. The directors believe the Group is well placed to manage its business risks successfully.

After making enquiries, the directors have a reasonable expectation that the Company and the Group as a whole have adequate resources to continue in operational existence for a period of at least 12 months from the date of approval of the financial statements. For this reason, they continue to adopt, and to consider appropriate, the going concern basis in preparing the financial statements.

Longer-term viability statement

It is fundamental to the Group's longer-term strategy that the directors manage and monitor risk, taking into account all key risks the Group faces, including longer-term insurance risks, so that it can continue to meet its obligations to policyholders. The Group is also subject to extensive regulation and supervision including Solvency II from 1 January 2016, as a result of being designated a Global Systemically Important Insurer by the Financial Stability Board.

Against this background, the directors have assessed the prospects of the Group in accordance with Provision 31 of the 2018 UK Corporate Governance Code, with reference to the Group's current position and prospects, its strategy, risk appetite, and the potential impact of the principal risks and how these are managed (as detailed in the 'Risk and risk management' section of the Strategic report as well as note 60 of the IFRS financial statements).

The assessment of the Group's prospects by the directors covers the three years to 2022 and is underpinned by management's 2020-2022 business plan which includes projections of the Group's capital, liquidity and solvency.

The Group's stress and scenario testing considers the Group's capacity to respond to a series of relevant financial, insurance (e.g., catastrophe) or operational shocks should future circumstances or events differ from the current assumptions in the business plan. The Group addresses the impacts of contingent management actions designed to maintain or restore key capital, liquidity and solvency metrics to within the Group's approved risk appetites over the planning period.

Based on this assessment, the directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the three-year assessment period.

Fair, balanced and understandable

To support the directors' statement below that the Annual report and accounts, taken as a whole, is fair, balanced and understandable, the Board considered the process followed to draft the Annual report and accounts:

- Each section of the Annual report and accounts is prepared by a member of management with appropriate knowledge, seniority and experience. Each preparer receives guidance on the requirement for content included in the Annual report and accounts to be fair, balanced and understandable
- The overall co-ordination of the production of the Annual report and accounts is overseen by the Chief Accounting Officer to ensure consistency across the document
- An extensive verification process is undertaken to ensure factual accuracy
- Comprehensive reviews of drafts of the Annual report and accounts are undertaken by members of the Aviva Leadership team and other members of senior management and, in relation to certain parts of the report external legal advisers and the External Auditor
- An advanced draft is considered and reviewed by the Disclosure Committee
- The final draft is reviewed by the Audit Committee prior to consideration by the Board
- Board members receive drafts of the Annual report and accounts for their review and input. This includes the opportunity to discuss the drafts with both management and the External Auditor, challenging the disclosures where appropriate.

Directors' responsibilities

The directors are responsible for preparing the Annual report and accounts, the Directors' Remuneration report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have prepared the Group and parent company financial statements in accordance with IFRS as adopted by the EU. Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company and of the profit or loss for that period. In preparing these financial statements, the directors are required to:

- select suitable accounting policies and apply them consistently
- make reasonable and prudent judgements and accounting estimates
- state whether applicable IFRSs as adopted by the EU have been followed, subject to any material departures disclosed and explained in the financial statements
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company and Group will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and Group and enable them to ensure that the financial statements and the Directors' Remuneration report comply with the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation. They are also responsible for safeguarding the assets of the Company and Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for making, and continuing to make, the Company's Annual report and accounts available on the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The directors consider that the Annual report and accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's and the Company's position and performance, business model and strategy.

Each of the current directors whose names and functions are detailed in the 'Our Board of Directors' section and in the Directors' and Corporate Governance report confirm that, to the best of their knowledge: the Group financial statements, which have been prepared in accordance with IFRSs as adopted by the EU, give a true and fair view of the assets, liabilities, financial position and profit of the Group; and the Strategic report and the Directors' and Corporate Governance report in this Annual report include a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces.

Listing Rules requirements

For the purposes of Listing Rule (LR) 9.8.4C R, the information required to be disclosed by LR 9.8.4 R can be found in the following locations:

Section in LR 9.8.4C R	Topic	Location in the Annual report and accounts
12	Shareholder waivers of dividends	IFRS Financial Statements – note 35
13	Shareholder waivers of future dividends	IFRS Financial Statements – note 35

By order of the Board on 4 March 2020.

Maurice Tulloch
Chief Executive Officer

Jason Windsor
Chief Financial Officer

Remuneration Committee report

On behalf of the Remuneration Committee (the Committee), I am pleased to present the Directors' Remuneration report (DRR), for the year ended 31 December 2019.

Company performance

As described in our strategic report, 2019 has been a year of significant change to our business and in our leadership team, and we began to build operating momentum. We made progress relative to our financial targets including a strong start in pursuit of the five key financial objectives that we are targeting for 2022. Our Solvency II return on equity[1] (SII RoE) was 14.3%, Group adjusted operating profit[2] increased 6% to £3.2 billion and our capital position remains strong. We delivered higher sales and customer flows across the Group and costs have begun to decline. Despite this progress, we recognise that our share price continues to underperform versus our peers and the broader market.

The Committee's primary remit is to ensure that executive pay is aligned with Aviva's performance in the round. As such, in considering outcomes under the 2019 Annual Bonus and the 2017-19 Long Term Incentive Plan (LTIP), the Committee has sought to ensure that they reflect Aviva's overall progress over these timeframes.

2019 Annual Bonus

The Committee carefully considered financial and strategic performance of the Group, business unit and individual Executive Director (ED) performance during 2019.

Details of this assessment are contained in this report. The formulaic outcome against the 2019 bonus scorecard prior to any adjustments was 101.1% (out of a maximum of 200%).

As part of the annual bonus framework, further details of which are provided on page 86, the Committee conducted an extensive analysis of the quality of earnings, noting recommendations by the Audit Committee. In addition, the Committee consulted with the Risk Committee, and noted the significant progress made to remediate risk and control issues during 2019. Overall, there has been a very positive response to particular risk and control challenges. Nevertheless, this is a critical area for Aviva, and it was concluded that further work is required to fully embed the desired risk culture and to deliver the target state risk and control environment against a backdrop of internal/external change. Accordingly, a 10% downward adjustment has been applied to the scorecard for risk and controls, which represents an escalation from the 5% applied for 2018. The Committee believes this provides a clear statement of the emphasis which is being placed on continual improvement across 2020 and is further reflected in our annual bonus targets for 2020. This resulted in an adjusted scorecard outcome of 91.1%.

In assessing the individual performance of the EDs, the Committee noted the EDs contributions in establishing the strategic direction for the Group, leading the simplification agenda, building an experienced Aviva Leadership Team (ALT) and turning our new strategy into clear financial targets as announced at the Capital Markets Day in November 2019.

As a result, annual bonuses for Maurice Tulloch and Jason Windsor were 95% and 101% of salary respectively.

The Committee was satisfied that these outcomes fairly reflected the overall performance of the business during 2019, and that no further adjustments were required.

2017-19 LTIP

As a result of our three-year performance over the 2017-19 period, the 2017 LTIP vested at 50% of maximum. This reflects strong performance against the adjusted IFRS return on equity[1] (IFRS RoE) performance condition. The relative Total Shareholder Return (TSR) condition lapsed. No discretion regarding the vesting outcome of the 2017 LTIP was exercised by the Committee.

Appointment of new Chief Financial Officer (CFO)

As announced on 26 September 2019, the Board appointed Jason as our new Group CFO. The Committee gave careful consideration to the remuneration package for Jason, taking into account the terms of our Remuneration Policy (the Policy), Jason's current remuneration arrangements, and shareholder expectations.

Jason's remuneration consists of:

- A salary of £675,000 per annum
- Our standard benefits package for EDs, including private family medical insurance, life insurance, and reasonable travel benefits
- Pension contribution of 14% of salary which is aligned with the rate available to the majority of our UK workforce
- A maximum annual bonus opportunity of 150% of salary, with one-third of any bonus earned paid in cash after the year end, and two-thirds deferred into shares which will vest in equal annual tranches over three years
- For 2020, Jason will be eligible for the grant of an award under the LTIP of 225% of basic salary
- Jason is also subject to a shareholding requirement of 200% of salary, which will continue for two years post-cessation

Jason's salary is below that of Tom Stoddard prior to his departure, reflecting that Jason is new to the role.

Departure of Andy Briggs and Tom Stoddard

On 24 April and 30 June 2019, Andy and Tom respectively stepped down from the Board. The Committee carefully considered the treatment to be applied to their remuneration arrangements as a result of their departure.

Reflecting their performance during their tenure, the leadership and commitment demonstrated during the Group Chief Executive Officer (CEO) transition, the Committee, in its discretion, determined to treat both Andy and Tom as good leavers under the Annual Bonus Plan (ABP) and LTIP. Following his appointment at Phoenix Group, Andy's LTIP awards have lapsed. Further details can be found on page 93.

Both were eligible to receive an annual bonus in respect of 2019, pro-rated to reflect the period prior to being placed on garden leave. The annual bonus was calculated in the same manner as for the continuing EDs.

1 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.

Revised Corporate Governance Code

The UK Corporate Governance Code (the Code) came into effect from 1 January 2019. As outlined in last year's report, several areas were already aligned with the new provisions with further enhancements made over the course of 2019. These included:

- **Implementation of post-cessation shareholding guidelines:** EDs are now required to hold shares for a further two years following their departure from the Group. For 2020, a transitional arrangement applies where any leaver will be required to hold the lower of their current holding at cessation or 50% of the current (within employment) guideline. From 1 January 2021, the post-cessation guideline will be the same level as the current (within employment) guideline. Reflecting the Committee's view of its importance, this has also been extended to the ALT.
- **Pensions:** On their respective appointments the pension provisions for both Maurice and Jason were set at 14% of salary in line with the rate available to the majority of our UK workforce.
- **Addition of LTIP and ABP post-retirement activity restrictions**: If after receiving good leaver treatment as a retiree EDs take up employment elsewhere, these restrictions allow awards to be reduced or recovered accordingly.

Gender Pay Gap Report (GPGR)

We released our third GPGR in January 2020, along with details of actions we are taking to drive change and close the gender pay gap. The report can be found at www.aviva.com/gpgr

Shareholder consultation

On behalf of the Committee, I sought the views of a number of our shareholders and key proxy voting agencies towards the end of 2019. Following the financial and strategic plans which were presented at the Capital Markets Day in November, we wanted to consult with shareholders to get their view on several changes to the incentive measures to ensure continued alignment with this new direction. I am pleased to say that the overall feedback we received was positive, and I would like to thank shareholders for their time and input.

Remuneration in 2020

Salary

Maurice and Jason received salary increases of 1.5%, consistent with other Aviva employees in the UK

Annual Bonus

The current split of financial (70%) and non-financial (30%) metrics will be retained. However, we have refined the metrics to place greater emphasis on key areas of focus (capital generation, delivering great customer outcomes and a strong risk and control environment) in line with the Group's strategy.

On financial performance, there are two changes:

- Increased weighting on Operating Capital Generation (OCG)[1] from 25% to 30% of the total bonus scorecard
- Replace Operating Earnings Per Share (EPS)[2,3] with Group adjusted Operating Profit[3] with a reduced weighting

Non-financial metrics will comprise:

- Two customer metrics (with a total weighting of 15%): Transactional Net Promoter Score (TNPS) and Relationship Net Promotor Score (RNPS)
- A risk metric (15% weighting): Percentage of Risks Inside Tolerance. The metric will be focused on the High and Very High risks for the major businesses across the Group and is aligned to the Operational Risk Appetite. It will build on the progress made during 2019, on our established risk management framework and risk monitoring and will reinforce our focus on customer outcomes

Separately, the Risk and Controls modifier, covering a range of quantitative and qualitative measures, and sitting outside the scorecard, will remain. The other two non-financial modifiers will be Employee Engagement and Customer Trust.

2020 LTIP

The Group's three financial priorities are to improve our Return on Capital[1], deliver a progressive dividend and further deleverage our debt profile. Achieving these will require management to focus on Cash Remittances[1] to the Group, OCG[1], Group adjusted Operating Profit[3] and delivering improved customer outcomes.

To ensure that the LTIP aligns with these business goals, SII RoE[1] replace Operating EPS[2,3] as one half of the framework. SII RoE[1] is a fundamental building block to increasing shareholder return over the long-run. SII RoE[1] is important in measuring the productive use of our economic capital. A Solvency II cover ratio[1] (SII cover ratio) will continue to act as an underpin to the financial metric.

Relative TSR remains an important metric which aligns the EDs to shareholders and continues to be weighted at 50%.

Awards will be 300% for the Group CEO and 225% for the CFO of basic salary.

Committee changes during the year

Claudia Arney and Glyn Barker stepped down from the Board and the Committee at the end of 2019 and I would like to thank them for their hard work and commitment during their tenures. George Culmer joined the Committee in January 2020 and brings significant financial services and accounting experience gained from a long and successful career in banking and insurance. The Committee works hard to ensure alignment with shareholder interests, and over the last year has dealt with a number of time critical matters, including changes to the Board. I want to thank all Committee members, past and present, for their dedication and active participation on this Committee.

2020 focus areas

The Committee intends to perform a detailed review of the remuneration framework for EDs and senior leadership team ahead of the next vote on the Policy at the 2021 Annual General Meeting (AGM). We look forward to engaging with shareholders during the course of developing the Policy to get their views and inputs on remuneration framework at Aviva.

I look forward to meeting with shareholders at the 2020 AGM.

Patricia Cross
Chair of the Remuneration Committee
4 March 2020

1 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
2 This measure is derived from the Group adjusted operating profit Alternative Performance Measure (APM). Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.
3 Group adjusted operating profit is an APM which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.

Annual report on remuneration

This section of the report sets out how Aviva has implemented its Policy for EDs during the course of 2019. This is in accordance with the requirements of the Large & Medium Sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended).

The full terms of reference for the Committee can be found on the Company's website at www.aviva.com/remuneration-committee and are also available from the Group General Counsel and Company Secretary.

Committee membership

The members of the Committee are shown below. There were no changes during 2019.

	Member Since	Years on the Committee
Patricia Cross[1]	01/12/2013	6
Michael Mire	14/05/2015	4
Claudia Arney	01/06/2016	3
Glyn Barker	10/05/2017	2

1 Chair from 19 February 2014.

The Committee met ten times during 2019, of which four were scheduled meetings and six were additional meetings outside of the normal timetable. Details of attendance at Committee meetings are shown on page 63.

The Group Chairman attended all meetings of the Committee. The Group General Counsel and Company Secretary acted as secretary to the Committee. The Chair of the Committee reported to subsequent meetings of the Board on the Committee's work and the Board received a copy of the agenda and the minutes of each Committee meeting.

During the year, the Committee received assistance in considering executive remuneration from a number of senior managers, who attended certain meetings (or parts thereof) by invitation during the year, including:

- the Group CEO;
- the Group CFO;
- the Chief People Officer;
- the Group Reward and Performance Director;
- the Chief Accounting Officer;
- the Chief Audit Officer;
- the Group Chief Risk Officer; and
- the Remuneration Committee Chair of Aviva Investors

No person was present during any discussion relating to their own remuneration.

During the year, the Committee received advice on executive remuneration matters from Deloitte LLP. Deloitte LLP were approved as advisers to the Committee in 2012 following a competitive tender process. The Committee regularly reviews and satisfies itself that the advice received from Deloitte LLP is independent and objective. The Committee notes they are a member of the Remuneration Consultants Group and adhere to its Code of Conduct. During the year, Deloitte LLP also provided advice to the Group on taxation, financial due diligence, risk, compliance and other consulting advisory services (including technology transformation and cyber). Tapestry Compliance Limited, appointed by the Company, provided advice on share incentive plan related matters, including on senior executive remuneration matters and views on shareholder perspectives.

During the year, Deloitte LLP were paid fees totalling £192,300 and Tapestry Compliance Limited were paid fees totalling £62,730 for their advice to the Committee on these matters. Fees were charged on a time plus expenses basis.

The Committee reflects on the quality of the advice provided and whether it properly addresses the issues under consideration as part of its normal deliberations. The Committee is satisfied that the advice received during the year was objective and independent.

The Committee's decisions are taken in the context of the Reward Governance Framework, which sets out the key policies, guidelines and internal controls and is summarised on the next page.

Committee performance and effectiveness

During 2019, the Committee undertook an evaluation of its effectiveness, alongside the exercise undertaken by the Board. Further details on how this has been carried out and the actions arising are contained in the Directors and Corporate Governance report.

Committee activities during 2019

Governance, regulatory issues and reporting policy

- Reviewed and approved the Committee's Terms of Reference
- Reviewed updates from external advisers on the regulatory environment and on benchmarking the company's remuneration policies and practices against industry best practice
- Approved our Employment Shareholding Policy, setting out our post-employment holding requirements in line with the 2018 Code
- Engaged with key investors on financial and non-financial metrics for 2020 ABP targets and 2020-2022 LTIP
- Reviewed and approved the Company's annual remuneration regulatory reporting and disclosures
- Considered and agreed the remuneration packages for the departing EDs, and approved associated regulatory disclosures
- Focused on the alignment of the Policy with an appropriate risk culture and to appropriate sustainability metrics
- Reviewed and approved the Reward Governance Framework Policies
- Approved the list of in scope staff in respect of the different regulatory regimes to which the Company is subject

Senior management objectives, bonus target setting and pay decisions

- Determined appropriate levels of discretion to be applied to EDs and senior managers remuneration outcomes, including in relation to Ogden, risk and controls environment and events related to our preference shares
- Reviewed engagement with investors on 2019 ABP targets, including customer and trust metrics as strategic progress measures
- Discussed and approved the ABP targets for 2019
- Reviewed and approved the proposed individual remuneration for each member of the ALT in relation to their performance
- Agreed an appropriate approach to a remuneration package for incoming and outgoing EDs and ALT members
- Reviewed wider workforce pay and employment conditions elsewhere in the Group
- Reviewed the Risk and Internal Audit 2019 Performance Opinion in relation to remuneration
- Discussed and approved the overall maximum bonus pool available to senior managers for the 2019 performance year, taking into account metrics on culture and risk as well as on financial performance

Share plan operation and performance testing

- Reviewed performance testing of all existing LTIP awards, and approved targets for the 2019 LTIP awards
- Approved vesting of the 2016 LTIP and noted the interim testing for the 2017, 2018 and 2019 awards
- Reviewed the proposed changes to future LTIP grants
- Approved the terms of the Aviva Savings Related Share Option Scheme 2019 (SAYE) and the Aviva Ireland Save as You Earn Scheme, the Ireland Profit Share Scheme, and the invitation terms for eligible employees
- Reviewed and approved the Aviva Investors Long Term Participation Plan and the Deferred Plan rules
- Reviewed and approved any application of malus/clawback provisions under incentive plans
- Approved amendments to share plans rules in line with the 2018 Code

2018 Corporate Governance Code

In determining remuneration arrangements at Aviva, the Committee aims to ensure that they support the execution of our strategy and the delivery of sustainable long-term shareholder value. In doing so, the Committee takes into account the 2018 Code, wider workforce remuneration and emerging best practice in relation to ED remuneration.

The Committee believes that our remuneration framework is clear and transparent and aligned with our culture. We operate a simple incentive framework of an annual bonus and LTIP. Award levels are capped with pay-out linked to performance against a limited number of measures that are aligned to our strategy. Stretching but fair targets are set. This ensures that potential reward outcomes are clear and aligned with the performance achieved, with the Committee having the discretion to adjust outcomes where this is not considered to be the case.

Pay levels are set taking into account internal and external reference points to ensure that pay is competitive while remaining equitable within the Company. A number of additional factors are in place to mitigate reputational and other risks, including malus and clawback provisions, unfettered discretion, a two-year holding period on LTIP awards, and both within and post-employment shareholding guidelines.

Reward Governance Framework

<table>
<tr><th colspan="4">Terms of reference, policies and guidelines</th><th colspan="2">Control and assurance</th></tr>
<tr><td rowspan="2">Terms of Reference</td><td colspan="3">Remuneration Committee terms of reference
Sets out the Committee's scope and responsibilities, including authorities which may be delegated but which still retain Committee oversight</td><td rowspan="7">Remuneration Business Standard
Assurance framework to attest Reward operations are conducted within the Global Remuneration Policy, Directors' Remuneration Policy and supporting policies</td><td rowspan="7">Reward Approvals Matrix
Approval requirements to ensure Reward operations are conducted within the Global Remuneration Policy, Directors' Remuneration Policy and supporting policies</td></tr>
<tr><td colspan="3">Subsidiary Board Remuneration Committee terms of reference
Sets out the Subsidiary Remuneration Committee's scope and responsibilities</td></tr>
<tr><td>Overarching Policy</td><td colspan="2">Global Remuneration Policy
Approved by the Remuneration Committee, applies to all employees in entities within Aviva Group</td><td>Directors' Remuneration Policy
Approved by the shareholders, applies to the Directors of Aviva plc</td></tr>
<tr><td>Supporting Policies</td><td>Identification of Remuneration Regulated Staff</td><td>Variable Pay and Risk Adjustment
(includes bonus, LTIP, buy-out, retention, recognition awards and funding)</td><td>Malus and clawback</td></tr>
<tr><td rowspan="2">Internal Guidelines and non-Remuneration Committee approved policies (examples)</td><td>New Hires</td><td>Terminations</td><td>Buyouts</td></tr>
<tr><td>Retention plans</td><td>Recognition Awards</td><td>Global Mobility</td></tr>
</table>

Key

Dark grey: Element of the Reward Governance Framework managed as part of the business of the Committee

Light grey: Element of the Reward Governance Framework managed mainly under delegated authority from the Committee

Single total figures of remuneration for 2019

The table below sets out the total remuneration for 2019 and 2018 for each of our EDs. Sir Adrian Montague remained on his Non-Executive Chairman remuneration arrangements while acting as Executive Chairman for the period 9 October 2018 to 4 March 2019. Given that he was not performing the role of Group CEO and did not receive a typical CEO remuneration package, he is not shown in this table, and is instead shown in table 9. Maurice was appointed Group CEO on 4 March 2019 and remuneration figures up to this date reflect his role as CEO of International Insurance.

1 Total 2019 remuneration – Executive Directors (audited information)

	Executive Directors						Former Executive Directors		Total emoluments of Executive Directors[10]	
	Maurice Tulloch[6]		Jason Windsor[7]		Tom Stoddard[8]		Andy Briggs[9]			
	2019 £000	2018 £000	**2019 £000**	2018 £000	**2019 £000**	2018 £000	**2019 £000**	2018 £000	**2019 £000**	2018 £000
Basic Salary[1]	**946**	706	**177**	—	**370**	728	**241**	746	**1,734**	2,180
Benefits[2]	**443**	51	**10**	—	**47**	85	**19**	44	**519**	180
Annual Bonus[3]	**886**	598	**178**	—	**338**	616	**218**	632	**1,620**	1,846
LTIP[4]	**588**	637	**82**	—	**559**	645	—	662	**1,229**	1,944
Pension[5]	**138**	198	**22**	—	**104**	204	**67**	209	**331**	611
Total	**3,001**	2,190	**469**	—	**1,418**	2,278	**545**	2,293	**5,433**	6,761

1 Basic salary received during the relevant year.
2 The benefits disclosure includes the cost, where relevant, of private medical insurance, life insurance, accommodation, travel and car benefits. In the case of Maurice, Jason and Andy this also includes benefits resulting from the UK HMRC tax-advantaged SAYE plan, and for Andy only the UK HMRC tax-advantaged share incentive plan, the All Employee Share Ownership Plan (AESOP), in which they participate on the same basis as all eligible employees. All numbers disclosed include the tax charged on the benefits, where applicable. As disclosed on appointment and in last year's report Maurice was provided with assistance with relocation from Canada to the UK, of an amount up to £250,000 exclusive of tax, payable against receipted costs incurred within a period of 24 months from date of appointment. During 2019, £139,000 of this allowance was used reflecting temporary accommodation, ongoing residential accommodation and flights between Canada and the UK. This is shown as £246,000 in the table above, grossed-up for tax. Other benefits include: Private medical insurance (£17,000), taxable travel and subsistence (£59,000,of which £50,000 is the grossed-up tax value of flights), accompanied travel (£32,000), car benefits (£40,000) and advisor fees (£40,000) in relation to tax assistance. Benefits for Tom and Andy include a small amount relating to the correction of an under deduction of NIC in relation to pension cash allowance.
3 Bonus payable in respect of the financial year including any deferred element at the face value at the date of award. The deferred element is made under the ABP.
4 With the exception of Jason, the value of the LTIP for 2019 relates to the 2017 award, which had a three-year performance period ending 31 December 2019. 50% of the award will vest in March 2020. An assumed share price of 411.2 pence has been used to determine the value of the award based on the average share price over the final quarter of the 2019 financial year. The proportion of the value of the LTIP that is attributable to share price depreciation (the depreciation being the difference between the face value at the date of award and the vested value of the award) is 22.4% for Maurice and Tom. In a similar manner, the LTIP amounts shown in last year's report in respect of the LTIPs awarded in 2016 were calculated with an assumed share price of 415.20 pence. The actual share price at vesting was 412.25 pence, and the table has been updated to reflect this change. The estimated value of the awards for the EDs was £1,958,000; the actual value was £1,944,000 (decrease of £14,000). Jason, prior to becoming an ED, was granted a Restricted Stock Unit (RSU) award. This award does not have performance conditions and in accordance with the regulations, a pro-rated amount is shown in respect of qualifying services during the year, using the share price at grant to determine the value of the award. Following confirmation of his role at Phoenix Group, Andy's 2017 LTIP award has lapsed. Additional information on these awards can be found in table 18.
5 Pension contributions consist of employer defined contribution benefits, excluding salary exchange contributions made by the employees, plus cash payments in lieu of pension. For Maurice, following his appointment as Group CEO on 4 March 2019 and for Jason the total was 12.34% of basic salary (pension contribution of 14% which is reduced for the effect of employers' National Insurance contributions when paid as cash). For former EDs (and Maurice prior to his appointment as Group CEO) the aggregate total was 28% of basic salary. No ED has prospective entitlement to benefit in a defined benefit scheme.
6 Maurice was appointed as Group CEO on 4 March 2019. Prior to his appointment he was CEO of International Insurance and his basic salary and benefits were set in Canadian dollars, which have been converted to sterling using an average exchange rate for 2019 of CAD 1.70
7 Jason was appointed to the Board on 26 September 2019. For 2019, the values relate to the period while he was an ED
8 Tom stepped down from the Board on 30 June 2019; values for 2019 relate to the period while he was an ED. Details of Tom's leaving arrangements are set out on page 93.
9 Andy stepped down from the Board on 24 April 2019; values for 2019 relate to the period while he was an ED. Details of Andy's leaving arrangements are set out on page 93.
10 Year on year decrease is primarily driven by changes in Board membership.

Additional disclosures in respect of the single total figure of remuneration table

Malus and clawback

As part of the annual pay review process, the Committee has considered whether any recovery or withholding under the malus and clawback provisions of Aviva's incentive plans is required by any current circumstances. No incidents concerning the EDs are currently subject to action under Aviva's Malus and Clawback policy.

Other items of remuneration

The EDs have not received any items in the nature of remuneration other than those disclosed in table 1.

2019 annual bonus outcomes

The chart below summarises how our annual bonus operates for 2019.

Step I – Bonus scorecard

Financial measures
- 20% Operating EPS[1,2]
- 25% Cash remittances[3]
- 25% OCG[3]

Performance against financial measures subject to a quality of earnings assessment.

Strategic measures
- 20% RNPS
- 10% Multiple Product Holdings (MPH)

Performance is assessed against defined minimum, target and maximum targets.

Step II – Non-financial performance modifiers

- Employee engagement
- Customer
- Risk & Controls

The bonus scorecard outcome as determined under step I may be modified by consideration of performance in these areas.

Typically, any adjustments would be in the range of +/- 15%, but may be larger for major customer and/or risk & controls issues.

Step III – Individual performance

The bonus scorecard outcome coming out of step II may then be modified based on:

- Individual contribution and achievements;
- How the individual has assisted the Group achieve progress against its strategic objectives;
- The leadership they have exhibited; and
- How the individual has demonstrated Aviva's values.

Individual adjustments are not determined in a formulaic manner. The Committee reviews overall performance against each individual's objectives and applies judgement as to whether any adjustment is warranted. In recent years adjustments have ranged from -17.5% to +22%.

Discretion

The Committee retains overarching discretion to adjust outcomes upwards or downwards in order to align remuneration for the overall performance of the Group and wider circumstances.

Step I – Bonus scorecard

The table below sets out performance against financial and non-financial targets under the bonus scorecard. The overall scorecard outcome percentage applies to all of the EDs.

2 2019 performance against bonus scorecard for Executive Directors' bonuses

Measure	Weighting	Minimum	Target	Maximum	Actual	Outcome
Financial measures (70% of total)						
Operating EPS[1,2]	20.0%	54.0p	58.3p	62.6p	**57.2p**	17.6%
Cash remittances[3]	25.0%	£2,531m	£2,736m	£2,941m	**£2,597m**	16.5%
OCG[3]	25.0%	£1,535m	£1,735m	£1,935m	**£2,259m**	50.0%
Total financial measures	**70.0%**	—	—	—	—	**84.1%**
Strategic measures (30% of total)						
RNPS	20.0%	3	8	11	**6.5**	17.0%
MPH (% growth)	10.0%	5%	8%	11%	**1.7%**	0.0%
Total strategic measures	**30.0%**	—	—	—	—	**17.0%**
Scorecard outcome	**100.0%**					**101.1%**

1 This measure is derived from the Group adjusted operating profit Alternative Performance Measure APM. Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.
2 Group adjusted operating profit is an APM which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Step II – Non-financial performance modifiers

The Committee considered Group performance against the non-financial modifiers set out below, the outcome of which may result in an adjustment to the bonus scorecard outcome if considered appropriate.

3 2019 non-financial modifiers relating to bonus scorecard

Modifier	Assessment
Employee Employee engagement.	Engagement remains high at 73% but is slightly down on 2018 (76%) due to a period of uncertainty and change. Pride, motivation and advocacy remain strong and consistent. The proportion of employees recommending Aviva as a great place to work is at an all-time high. Significantly more colleagues believe that Aviva cares for their health and wellbeing (up 6 points to 80%) and there have also been solid uplifts in the view that Aviva is a place where people are free from judgement or discrimination. This result in 2019 (82%) is now 13 points higher than in 2015 – a major improvement on Aviva's culture of inclusion in a short space of time. There is also a strong link between improvements on this metric and those colleagues who feel they have greater freedom to make decisions in their job.
Customer Performance against our overall focus on customer outcomes, including Brand Trust.	Of the seven core businesses measured, five were either at or above the competitor benchmark. We are working hard to meet our strategic priority of delivering great customer outcomes by improving service and product simplicity as well as reducing complaints through root cause analysis work.
Risk & Controls Aviva's reward strategy includes specific risk and control objectives for senior management and EDs. The aim is to help drive and reward effective risk management and a robust control environment across the Group.	The assessments performed by our Risk and Internal Audit functions looked at the effectiveness and robustness of the risk framework and control environment. The outputs of the assessments were shared with the Risk and Audit Committees ahead of decisions being made on impacts to bonus. Notwithstanding improvements made in 2019, it was concluded that further work is required to embed a strong risk culture and deliver the target state risk and control environment against a backdrop of internal/external change. As a result, and to provide a clear statement of the focus on continual improvement across 2020 the Committee applied a downward adjustment of 10% to the bonus scorecard outcome in respect of this modifier.

The bonus scorecard outcome was revised to 91.1%.

Step III – Individual performance

The Committee assessed EDs on their individual performance in the year. Details of each individual's achievements are set out in the table below.

Maurice Tulloch	Jason Windsor
Maurice was appointed Group CEO from 4 March 2019, previously his role was CEO International and Chairman Global General Insurance (GI). Since being appointed as Group CEO, Maurice has provided strong leadership in the Group and at the PLC Board, with some notable achievements: • Establishment of the strategic direction for the Group to simplify the business and definition of new financial targets as announced at the Capital Markets Day in November • Built an experienced ALT, promoting talents internally and recruiting seasoned external leaders, with a number of new appointments, including new Group CFO, Group Chief Operating Officer, Group Chief People Officer, Group Chief Risk Officer, with role changes for CEO Europe, Global CEO General Insurance and CEO Investments, Savings & Retirement (IS&R) • Rebuilt relationships with investor community with two capital market days and a significant investor outreach program • Maintained financial strength of the Group and achieved 6% Group adjusted operating profit[1] growth and increased SII RoE[2] to 14.3% • Implemented a new operational model to make Aviva simpler, separating UK GI and Life management teams, aligning UK Digital to UK GI, and creating the new IS&R division • Launched a new project to reduce costs by £300 million net by 2022, with £72 million reduction achieved in 2019	Jason was appointed as CFO and ED of the Company from 26 September 2019, after becoming interim CFO on 1 July 2019 following Tom's departure. Jason's contribution to the finance function and the wider Aviva Group was critical to many key deliveries including: • Assisting the Group CEO in defining the strategic direction and turning it into a coherent set of financial targets as announced at the Capital Markets Day in November • Maintained financial strength of the Group with a SII cover ratio[2,3] of 206% and centre liquidity[4] of £2.4 billion despite macroeconomic volatility, particularly low interest rates across Europe (most notably in France) and continued uncertainty around the decision for the UK to leave the European Union • Increased profile of the Risk & Control environment with clear accountability and engagement, and steps taken to increase the strength of our control environment • Restructure of the finance function to make it simpler, leaner and more commercial • Rationalisation of the finance change programme and continued progress in the implementation of IFRS17
Andy Briggs	**Tom Stoddard**
Andy was the CEO of Aviva UK Insurance until 30 April 2019. Over this period Andy provided strong leadership in the UK and continued to play an active leadership role at the PLC Board. Notable milestones in 2019 include: • Setting and driving ambitious financial targets for UK Insurance during Q1 to contribute to the overall success of Aviva • Continuing to define and implement growth opportunities across the UK Insurance portfolio • Led the Group wide Customer Pillar work as a fundamental priority for the business • Drove ongoing implementation of AvivaPlus and oversaw post-launch review process on potential strategic impact on existing customer propositions • Continued sponsorship of Aviva's Generations community, focussing on supporting an intergenerational workplace, as well as acting as the Government's Business Champion for Older Workers	Tom was the Group CFO until 30 June 2019. Over this period Tom played a critical role in supporting Maurice in his transition to CEO. Notable achievements in 2019 include: • Driving delivery of the overall financial objectives for the Group and delivered strong half year financial results as presented during the interim results • Assisting incoming Group CEO in developing the strategic direction for Aviva • Provided an orderly handover with his successor to ensure continuity in the finance function • Coordinated IFRS17 implementation and the Finance & Innovation programme to minimise their joint costs and managed dependencies • Continued sponsorship of the Aviva 'Origins' community, promoting race, ethnicity, religion and social mobility as an important dimension of diversity and inclusion

The Committee carefully considered the individual performance of each ED. Details of the individual adjustments are reflected in table 4.

1 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
2 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
3 The estimated Solvency II position represents the shareholder view. Please refer to note 57 and the 'Other Information' section of the Annual report and accounts for more information.
4 Stated as at end February 2020.

4 2019 bonus outcomes for Executive Directors

	Maurice Tulloch	Jason Windsor	Tom Stoddard	Andy Briggs
Bonus scorecard (0% – 200%)	100.2%[1]	101.1%	101.1%	101.1%
– Non-financial modifiers	(10.0%)	(10.0%)	(10.0%)	(10.0%)
– Individual adjustment	5.0%	10.0%	0.0%	0.0%
Final Outcome	**95.2%**	**101.1%**	**91.1%**	**91.1%**
Target opportunity	100% of salary	100% of salary	100% of salary	100% of salary
Maximum opportunity for 2019[2]	192% of salary[3]	150% of salary	150% of salary	150% of salary
Final bonus outcomes				
– % of salary[4]	**95.2%**	**100.6%**	**91.1%**	**91.1%**
– % of maximum	**49.7%**	**67.0%**	**60.7%**	**60.7%**
– £ amount	£886,315[5]	£177,698[6]	£337,926[6]	£218,218[6]

1 Pro-rated to reflect International and Group scorecards of 94.1% and 101.1% respectively.
2 The Group CEO has a maximum bonus opportunity of two times target (i.e. 200% of salary) while other EDs have a maximum opportunity of one and a half times target (150% of salary).
3 Maximum bonus opportunity is pro-rated for 2019 to reflect the time spent as CEO International and as Group CEO during the year.
4 The bonus scorecard for EDs can range from 0 to 200%. When the final outcome is above 100%, the resulting final bonus outcome, as a % of salary, is on a '1% for 1%' basis for the Group CEO and on a '2% for 1%' basis for other EDs; e.g. a final outcome of 140% would result in a bonus of 140% of salary for the Group CEO and 120% of salary for other EDs. When below 100% scaling is '1% for 1%', such that a final outcome of 80% would result in a bonus of 80% of salary for all EDs, including the Group CEO.
5 Pro-rated for different salary as CEO International and as Group CEO during the year
6 This outcome is pro-rated to reflect the time served on the Board

Discretion
The Committee is conscious of the provisions of the 2018 Code, with remuneration committees being encouraged to review incentive outcomes against individual and company performance, together with any wider circumstances, and to exercise independent judgement and discretion in relation to remuneration outcomes. Taking into account the impact of the outcome of the quality of earnings assessment and the non-financial modifiers, and an assessment of individual performance, the Committee is of the view that these outcomes appropriately reflect the overall performance of Aviva during the year and are aligned with the experience of shareholders over this period and no discretion regarding outcomes was therefore exercised by the Committee.

2017 LTIP vesting in respect of performance period 2017-2019
All references to adjusted IFRS RoE relate to the 2017 LTIP award only and represent RoE calculated as IFRS profit after tax and non-controlling interest but excluding investment variances, economic assumption changes, pension scheme income/charge over average IFRS equity (excluding pension scheme net surplus/deficit). The adjusted IFRS RoE[1] and TSR[2] outcome for the 2017 LTIP are detailed in the table below. 50% of the award will vest in March 2020. No discretion regarding the vesting outcome of the 2017 LTIP was exercised by the Committee.

5 2017 LTIP award – performance conditions (audited information)

	Weighting	Threshold (20% vest)	Maximum (100% vest)	Outcome	Vesting (% of maximum)
Adjusted IFRS RoE[1] Performance	50%	28.8%	35.2%	42.9%	100%
Relative TSR[2] Performance	50%	Median	Upper quintile and above	10.3/14	0%

1 2017 adjusted IFRS RoE performance outcome excludes the positive impact of the £300 million and £600 million share buy-backs (in 2017 and 2018 respectively).
2 TSR is a measure of share price growth, calculated as the difference between the share price at the vesting date and the 90 day average for the period immediately preceding the start of the three year performance period.

Quality of earnings assessment – 2019 remuneration decisions
The Committee discussed those items that impacted the overall results in 2019 including to update e.g. foreign exchange, acquisitions and disposals, life assumption and modelling changes, prior year reserve development, and other items that are non-recurring in nature. This process provides the Committee with an understanding of the core profitability of the business taking these factors into account.

6 Awards granted during the year (audited information)

Share and option awards granted to EDs during the year are set out below.

	Date of Award	Award Type[1]	Face Value (% of basic salary)[2]	Face Value (£)[2]	Threshold Performance (% of face value)	Maximum Performance (% of face value)	End of performance period	End of vesting/ holding period
Maurice Tulloch	25 Mar 2019	LTIP	300%	£2,925,000	20%	100%	31 Dec 2021	25 Mar 2024
	25 Mar 2019	ABP	41%	£398,759	N/A			25 Mar 2022
	01 Oct 2019	SAYE	1.85%	£18,000				01 Dec 2022
Jason Windsor[3]	25 Mar 2019	LTIP	N/A	£310,000	N/A	N/A	N/A	25 Mar 2022
	25 Mar 2019	ABP	N/A	£136,025	N/A			25 Mar 2022
	01 Oct 2019	SAYE	2.67%	£18,000				01 Dec 2022
Former Directors[4]								
Tom Stoddard	25 Mar 2019	LTIP[5]	225%	£1,650,060	20%	100%	31 Dec 2021	25 Mar 2024
	25 Mar 2019	ABP	56%	£410,677	N/A			25 Mar 2022
Andy Briggs	25 Mar 2019	LTIP[5]	225%	£1,691,775	20%	100%	31 Dec 2021	25 Mar 2024
	25 Mar 2019	ABP	56%	£421,063	N/A			25 Mar 2022
	14 Oct 2016	AESOP	0.37%	£2,750	N/A			17 Oct 2022

1 ABP and LTIP awards have been granted as share awards. The LTIP is a conditional right to receive shares based on a three-year performance period, with an additional two-year holding period. ABP represents the portion of the 2018 bonus deferred into shares which vests in three equal tranches. Shares issued in lieu of dividends accrue on ABP and LTIP awards during the ABP deferral period and the LTIP performance period. SAYE awards are savings-related options normally exercisable during the six-month period following the end of the relevant 3 or 5 year savings contract. AESOP includes partnership, matching and dividend share awards which vest after three years. Further details are provided in tables 16 and 18.
2 Face value for the awards granted on 25 March 2019 has been calculated using the average of the middle-market closing price of an Aviva ordinary share on the three consecutive business days immediately preceding the main date of grant, of 421.00 pence. For SAYE the option price is fixed to a three day average closing middle-market price of an ordinary share of the Company, prior to invitation date, with a discount of 20% as permitted under the SAYE plan (284.00 pence). AESOP has been calculated using the average price achieved at purchase of the partnership shares throughout 2019 of 407.00 pence.
3 Jason was not an ED at the time his 2019 LTIP and ABP awards were made. The 2019 LTIP award is a RSU award. This award does not have performance conditions.
4 Andy stepped down from the Board on 24 April 2019 and Tom on 30 June 2019.
5 LTIP awards for Tom and Andy have subsequently lapsed, in line with the leaving arrangements outlined on page 93.

Operating EPS[1,2] targets for awards made in 2019

Operating EPS[1,2] performance determines the vesting of 50% of the LTIP award. Three-year targets are set annually within the context of the Company's strategic plan. The 2019 targets are provided below.

7 2019 LTIP operating EPS[1] targets (audited information)

Achievement of Operating EPS[1,2] targets over the three-year performance period	Percentage of shares in award that vests based on achievement of Operating EPS[1] targets
Less than 4% p.a.	0%
4% p.a.	10%
Between 4% p.a. and 10.0% p.a.	Pro-rata between 10% and 50% on a straight line basis
10% p.a. and above	50%

Any vesting of the operating EPS[1,2] element of the LTIP is subject to two gateway hurdles – SII RoE[3] and SII shareholder cover ratio[3,4]. The SII RoE[3] hurdle is 12% p.a. and the SII shareholder cover ratio[3,4] is to meet or exceed the minimum of the stated working range (in 2019, this was 160% to 180%).

1 This measure is derived from the Group adjusted operating profit Alternative Performance Measure (APM). Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.
2 Group adjusted operating profit is an APM which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 The estimated Solvency II position represents the shareholder view. Please refer to note 58 and the 'Other Information' section of the Annual report and accounts for more information.

TSR targets for awards made in 2019

Relative TSR performance determines the vesting of the other 50% of the LTIP award. For the 2019 grant, Aviva's TSR performance will be assessed against that of the following companies: Aegon, Allianz, Assicurazioni Generali, AXA, CNP Assurances, Direct Line Group, Legal & General, Lloyds Banking Group, Old Mutual, Phoenix, Prudential, RSA, Standard Life Aberdeen and Zurich Insurance.

The performance period for the TSR performance condition is the three years beginning 1 January 2019. For the purposes of measuring the TSR performance condition, the Company's TSR and that of the comparator group will be based on the 90-day average TSR for the period immediately preceding the start and end of the performance period. The vesting schedule is set out in the table below.

8 TSR vesting schedule for the 2019 LTIP award (audited information)

TSR position over the three-year performance period	Percentage of shares in award that vest based on achievement of TSR targets
Below median	0%
Median	10%
Between median and upper quintile	Pro-rata between 10% and 50% on a straight line basis
Upper quintile and above	50%

Payments to past directors (audited information)

Russell Walls retired from the Board with effect from 8 May 2013.

- Russell was appointed as a Non-Executive Director (NED) of Aviva Italia Holdings S.p.A on 4 December 2014 and on 30 April 2015 was appointed as Chair and subsequently stepped down on 26 September 2019
- The emoluments he received in respect of this directorship for the 2019 financial year was €67,500

Payments for loss of office (audited information)

We announced on 24 April 2019 that the Board and Andy Briggs had decided that Andy would step down as CEO UK Insurance and as a Director of the Company with immediate effect.

- Andy was placed on garden leave for six months with effect from 30 April 2019 to 23 October 2019. During this period, he continued to receive his salary and contractual benefits. For the period 25 April 2019 to 23 October 2019 these totalled £500,592
- Andy received a pro-rated bonus in respect of 2019, reflecting the portion of the year worked prior to going on garden leave. The bonus was determined on the normal timetable and can be found in the bonus section in table 4
- Reflecting his performance during his tenure, leadership and commitment demonstrated during the Group CEO transition, the Committee exercised discretion to treat Andy as a good leaver under the ABP and LTIP
  - Andy's outstanding deferred share awards under ABP will continue to vest on the normal vesting dates. All outstanding awards will remain subject to malus and clawback
  - Andy's 2019 LTIP award lapsed on his departure. Andy's 2017 and 2018 LTIP awards were allowed to continue to vest, pro-rated for the time from the date of grant to his leave date and remained subject to performance vesting. Following confirmation of his new role at Phoenix Group, these awards have lapsed
- In line with the Policy, Andy was entitled to a capped contribution of £5,000 (excluding VAT) towards legal fees incurred in connection with his departure

We announced on 5 June 2019 that the Board and Tom Stoddard had decided that Tom would step down as CFO and as a Director of the Company from 30 June 2019.

- Tom was placed on garden leave for six months with effect from 1 July 2019 to 31 December 2019. During this period, he continued to receive his salary and contractual benefits. For the period of his garden leave these totalled £531,336
- In line with his arrangements while a Director, Tom will receive tax support for the UK financial year 2019/20 and the US tax year 2019. The total value of this benefit is anticipated to be £9,000
- Tom received a pro-rated bonus in respect of 2019, reflecting the portion of the year worked prior to going on garden leave. The bonus was determined on the normal timetable and can be found in the bonus section in table 4
- Reflecting his performance during his tenure, leadership and commitment demonstrated during the Group CEO transition, the Committee exercised discretion to treat Tom as a good leaver under the ABP and LTIP
  - Tom's outstanding deferred share awards under ABP will continue and will vest on the normal vesting dates
  - Tom's 2017 and 2018 LTIP awards will to continue to vest, pro-rated for the time from the date of grant to his leave date and remain subject to performance vesting. His 2019 LTIP award has lapsed
  - All outstanding share awards will remain subject to malus and clawback
- In line with the Policy, Tom was entitled to a capped contribution of £5,000 (excluding VAT) towards legal fees incurred in connection with his departure

9 Total 2019 remuneration for Non-Executive Directors (audited information)

The table below sets out the total remuneration earned by each NED who served during 2019 for Group-related activities.

	Fees		Benefits[1]		Aviva plc total		Subsidiaries fees		Group total	
	2019 £000	2018 £000	**2019 £000**	2018 £000	**2019 £000**	2018 £000	**2019 £000**	2018 £000	**2019 £000**	2018 £000
Chairman										
Sir Adrian Montague	**550**	550	**88**	88	**638**	638	**—**	—	**638**	638
Non-Executive Directors										
Claudia Arney[2]	**155**	155	**2**	2	**157**	157	**73**	78	**230**	235
Glyn Barker[2]	**177**	168	**2**	3	**179**	171	**—**	—	**179**	171
Patricia Cross	**128**	128	**—**	—	**128**	128	**60**	60	**188**	188
George Culmer[3]	**29**	—	**2**	—	**31**	—	**—**	—	**31**	—
Patrick Flynn[3]	**55**	—	**2**	—	**57**	—	**—**	—	**57**	—
Belén Romana García	**139**	105	**15**	10	**154**	115	**44**	40	**198**	155
Michael Mire	**118**	118	**3**	1	**121**	119	**—**	—	**121**	119
Former Non-Executive Directors[4]										
Michael Hawker	**34**	138	**—**	—	**34**	138	**—**	—	**34**	138
Keith Williams	**59**	150	**—**	2	**59**	152	**—**	—	**59**	152
Total emoluments of NEDs	**1,444**	1,512	**114**	106	**1,558**	1,618	**177**	178	**1,735**	1,796

1 Benefits include the gross taxable value of expenses relating to accommodation, travel and other expenses incurred on Company business in accordance with our expense policy and may vary year-on-year dependent on the time required to be spent in the UK.
2 Claudia Arney and Glyn Barker retired from the Board on 31 December 2019.
3 Patrick Flynn was appointed to the Board on 16 July 2019 and George Culmer on 25 September 2019.
4 Michael Hawker stepped down from the Board on 31 March 2019 and Keith Williams on 23 May 2019.

The Aviva plc total amount paid to NEDs in 2019 was £1,558,000 which is within the limits set in the Company's Articles of Association, as previously approved by shareholders.

Subsidiary company board memberships

During the year, the following NEDs were appointed as directors of subsidiary companies to support and further enhance the flow of information between material subsidiaries and the Group. The additional emoluments received in respect of these roles are detailed below:

- Claudia Arney received an additional fee of £72,500 (*2018: £78,346*) in respect of her duties as Non-Executive Chairman and Conduct Committee member of Aviva UK Digital Limited. Claudia subsequently stepped down on 31 December 2019.
- Patricia Cross received an additional fee of £60,000 (*2018: £60,000*) in respect of her duties as Senior Independent Director of Aviva Investors Holdings Limited
- Belén Romana García received an additional fee of €50,000 (*2018: €44,712*) in respect of her duties as a Board member of Aviva Italia Holding S.p.A., and as a committee member of the Audit and Risk Committees
- Sir Adrian Montague became a director of Aviva Group Holdings Ltd on 9 October 2018 and stepped down on 4 March 2019 as part of his transition back to his Non-Executive Chairman role. He also became a director of Aviva SA on 24 April 2019. He received no fees in respect of these appointments

Percentage change in remuneration of the Group CEO

The table below sets out the increase in the basic salary, bonus and benefits of the Group CEO and that of the wider workforce. The UK employee workforce was chosen as a suitable comparator group, as the Group CEO and CFO are based in the UK (albeit with global responsibilities), and pay changes across the Group vary widely depending on local market conditions. Given that both the Group CEO and his predecessor served for a part-year only in 2019, the Group CEO's pay for each year has been annualised so as to provide a comparison. The reduction in salary reflects the differences in the incumbent's package. The increase in benefits reflects relocation and taxable travel and subsistence.

10 Percentage change in remuneration of Group CEO

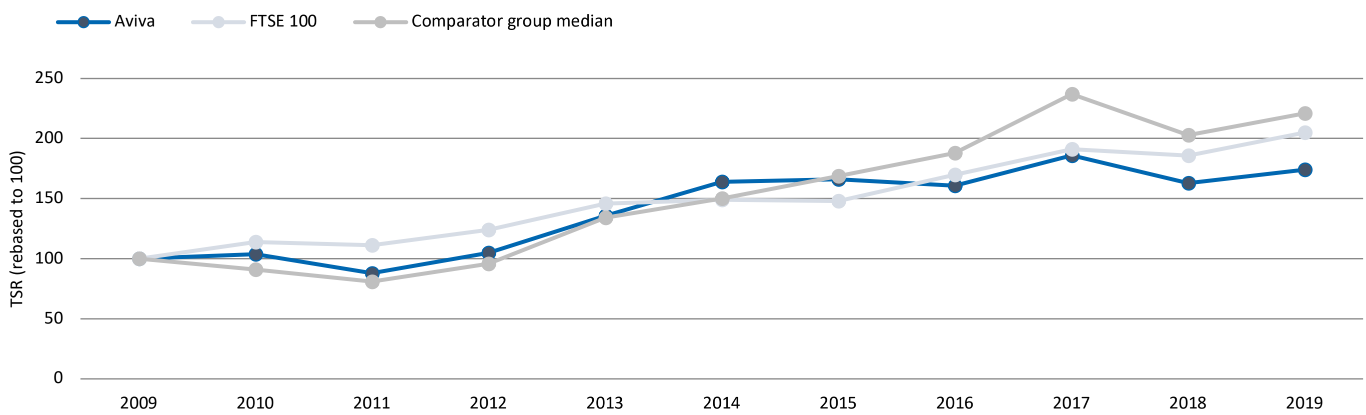
	% change in basic salary 2018-2019	% change in bonus 2018-2019	% change in benefits 2018-2019
Group CEO[1]	(8.5)%	4.7%	269.4%
All UK-based employees[2]	3.8%	(10.8)%	27.2%

1 Salary, annual bonus and benefit amounts for 2019 for the Group CEO and 2018 for the former Group CEO have been annualised up to reflect what they would have been over a full 12-month period to add comparison. The increase in benefits reflects relocation and taxable travel and subsistence.
2 The increase in benefits for UK based employees has been driven by changes in pieces of tax legislation leading to a) some car parking provision now being a taxable benefit and b) an increase in company car benefit. Without these changes, benefits increased by 4.3%.

Historical TSR performance and Group CEO remuneration outcomes

Table 11 compares the TSR performance of the Company over the past ten years against the TSR of the FTSE 100. This index has been chosen because it is a recognised equity market index of which Aviva is a member. In addition, median TSR performance for the LTIP comparator group has been shown. The companies which comprise the LTIP comparator group for TSR purposes are listed above table 8.

11 Aviva plc ten-year TSR performance against the FTSE 100 and the median of the comparator group



The table below summarises the historical Group CEO single figure for total remuneration, and annual bonus and LTIP outcomes as a percentage of maximum over this period.

12 Historical Group CEO remuneration outcomes

	Group CEO	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
Annual bonus payout (as a % of maximum opportunity)	Maurice Tulloch[1]	—	—	—	—	—	—	—	—	—	**48.1%**
	Mark Wilson[2]	—	—	—	75.0%	86.7%	91.0%	91.0%	94%	42.0%	—
	Andrew Moss[3]	74.3%	81.0%	—	—	—	—	—	—	—	—
LTIP vesting (as a % of maximum opportunity)	Maurice Tulloch	—	—	—	—	—	—	—	—	—	**50.0%**
	Mark Wilson	—	—	—	—	—	53.0%	41.3%	36.9%	—	—
	Andrew Moss	72.3%	81.7%	—	—	—	—	—	—	—	—
Group CEO single figure of remuneration (£000)	Maurice Tulloch	—	—	—	—	—	—	—	—	—	**2,352**
	Mark Wilson	—	—	—	2,615	2,600	5,438	4,523	4,318	1,836	
	Andrew Moss	2,748	3,477	554	—	—	—	—	—	—	—

1 Maurice was appointed Group CEO on 4 March 2019
2 Mark joined the Board as an ED with effect from 1 December 2012 and became Group CEO on 1 January 2013. Mark stepped down as Group CEO and left the Board on 9 October 2018
3 Andrew resigned from the Board with effect from 8 May 2012 and left the Company on 31 May 2012

Sir Adrian Montague remained on his Non-Executive Chairman remuneration arrangements while acting as Executive Chairman for the period 9 October 2018 to 4 March 2019. Given that he was not performing the role of Group CEO and did not receive a typical CEO remuneration package, he is not shown in this table.

CEO Pay ratio reporting

The table below sets out the ratio at median, 25th and 75th percentile of the total remuneration received by the Group CEO compared to the total remuneration received by our UK employees. Total remuneration reflects all remuneration received by an individual in respect of the relevant years, and includes salary, benefits, pension, and value received from incentive plans.

13 CEO Pay ratio table

Year	Method	P25 (lower quartile)	P50 (median)	P75 (upper quartile)
2019	Option A	90:1	63:1	37:1
2018	Option A	76:1	53:1	32:1

We would highlight the following in terms of the approach taken:
- In calculating the Group CEO data for 2019, we have aggregated the amount shown in the single figure table of £106,625 for Sir Adrian Montague in respect of his services as Executive Chairman from 1 January to 3 March 2019 (for which he received no additional payment), and the amount shown in the single figure table of £2.35 million for Maurice in respect of his services from 4 March to 31 December 2019. Similar to 2018, as 2019 was an atypical year for Aviva, we have provided an additional ratio below, calculated on a full-year basis using total target remuneration
- In 2018, the single figure for Mark Wilson was aggregated with the pro-rata fees for Sir Adrian Montague as Executive Chairman
- The P25, P50 and P75 employees were calculated based on full-time equivalent data as at 31 December of the relevant years
- Out of the three alternatives available for calculating the ratio, we chose to use Option A as it is considered to be the most accurate way of identifying employees at P25, P50 and P75, and is aligned with investor expectations. Under this approach we calculate total remuneration on a full-time equivalent basis for all of our UK employees and rank them accordingly

The increase in the ratio reflects:
- 2019 remuneration outcomes for the CEO include LTIP vesting, whereas there was no LTIP vesting for 2018
- Maurice Tulloch was CEO for approximately one month longer in 2019 than Mark Wilson was in 2018
- A slightly higher bonus outturn for Maurice Tulloch as a % of maximum (48% for period as CEO compared to 42% in 2018 for Mark Wilson)
- An increase in benefits partly reflecting relocation costs which run for 24 months from appointment

Whilst the CEO pay ratio has increased, the salary and total remuneration for each quartile employee has also increased (median salary has increased 3.9% and median total compensation increased 4.5%).

Table 14 below provides further information on the total remuneration figure for each quartile employee, and the salary component within this.

14 Salary and total remuneration used in the CEO pay ratio calculations

Year	Pay element	P25 (lower quartile)	P50 (median)	P75 (upper quartile)
	Salary	£22,413	£31,600	£53,128
2019	Total remuneration	£27,285	£39,134	£65,664

In reviewing the employee pay data, the Committee is comfortable that the P25, P50 and P75 individuals identified appropriately reflect the employee pay profile at those quartiles, and that the overall picture presented by the ratios is consistent with our pay, reward and progression policies for UK employees.

As referred to above, we recognise that both 2019 and 2018 are unusual years for Aviva resulting in a Group CEO pay ratio which is likely to be lower than we might typically expect. Shareholders may find it helpful to consider what the ratio might have been in a more normal year, recognising that the ratio may well vary significantly from year-to-year. Specifically, we have considered the ratio if Maurice had been employed for the full year 2019 and had received an on-target annual bonus of 100% of salary (half of maximum) and LTIP vesting at 150% of salary (half of maximum).

These circumstances would lead to a total single figure for the Group CEO of £3.98 million and the following Group CEO pay ratios.

Year	P25 (lower quartile)	P50 (median)	P75 (upper quartile)
2019 (illustrative based on a notional 'target' package)	146:1	102:1	61:1

At Aviva, we consider that we are equally focused on our colleagues as we are on our customers. We work hard to recognise the individual needs of colleagues and in this context, we are proud of the reward, benefits and overall career packages that we offer our colleagues:
- In the UK, we have been an accredited Living Wage employer since April 2014
- We have a structured salary progression scheme for our frontline colleagues, providing incremental salary increases over the first few years in role as individuals develop and gain experience
- We conduct regular market reviews of our salary ranges in order to maintain competitiveness to market rates, and we move everyone who is below a band to at least the minimum of that range each year
- We have a comprehensive flexible benefits offering, providing colleagues with the opportunity to select the benefits that matter most to them including equal parental leave
- Our competitive pension scheme provides an employer contribution of 14% of salary (subject to the level of employee contribution). Above this level, we share employer National Insurance savings with our colleagues
- Our broader Wellbeing offering aims to promote health and wellness among our colleagues. Our priorities in 2019 were mental and financial wellbeing, our priorities for 2020 are mental wellbeing and menopause support
- UK colleagues are eligible to participate in our SAYE and AESOP offerings with similar plans operating for many of our overseas colleagues. We are proud of the participation rates in these plans, with over 60% participating in the SAYE and over 70% in the AESOP

Relative importance of spend on pay

Table 15 outlines Group adjusted operating profit[1], dividends paid to shareholders and share buy-backs, compared to overall spend on pay in total. This measure of profit has been chosen as it is used for decision-making and the internal performance management of the Group's operating segments.

15 Relative importance of spend on pay

	Restated[4] 2017 £m	Restated[4] 2018 £m	**2019 £m**	% change between 2018 & 2019
Group adjusted operating profit[1]	2,975	3,004	**3,184**	6%
Dividends paid[2]	983	1,128	**1,184**	5%
Share buy-backs	300	600	**—**	(100)%
Total staff costs[3]	1,942	1,974	**2,036**	3%

1 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to accounting policy B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
2 The total cost of ordinary dividends paid to shareholders.
3 Total staff costs from continuing operations includes wages and salaries, social security costs, post-retirement obligations, profit sharing and incentive plans, equity compensation plans and termination benefits. The average number of employees in continuing operations was 31,791 (2019) and 31,232 (2018).
4 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b) of the Annual report and accounts). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million *(2017: £93 million)*. There is no impact on profit before tax attributable to shareholders' profit.

Statement of directors' shareholdings and share interests

EDs share ownership requirements

Under our Employment Shareholding Policy, the Company requires the Group CEO to build a shareholding in the Company equivalent to 300% of basic salary and each ED to build a shareholding in the Company equivalent to 200% of basic salary.

- The EDs are required to retain 50% of the net shares released from ABP and LTIP awards until the shareholding requirement is met
- The shareholding requirement needs to be built up over a period not exceeding five-years
- Unvested share awards, including shares held in connection with bonus deferrals, are not taken into account in applying this test
- A post-cessation holding period of two years applies. There will be a transitional period until 31 December 2020, where any leaver will be required to hold 50% of the current (within employment) guideline. From 1 January 2021, the post-cessation guideline will be the same level as the current (within employment) guideline. The Committee will retain the discretion to waive part or all of the guideline where considered appropriate, for example in exceptional or compassionate circumstances

16 Executive directors – share ownership requirement (audited information)

	Shares held			Options held				
Executive Directors	Owned outright[1]	Unvested and subject to performance conditions[2]	Unvested and subject to continued employment[3]	Unvested and subject to continued employment[4]	Vested but not exercised	Shareholding requirement (% of salary)	Current shareholding[5] (% of salary)	Requirement met
Maurice Tulloch	471,522	1,291,728	290,810	6,338	—	300	202%	No[6]
Jason Windsor	427,708	—	298,218	6,338	—	200	265%	Yes
Andy Briggs	431,289	—	351,730	5,128	—	200	235%	Yes
Tom Stoddard	509,702	453,626	347,460	—	—	200	285%	Yes

1 Directors' beneficial holdings in the ordinary shares of the Company. This information includes holdings of any connected persons.
2 Awards granted under the Aviva LTIPs which vest only if the performance conditions are achieved.
3 Awards arising through the ABP. Under this plan, some of the earned bonuses are paid in the form of conditional shares and deferred for three years. The transfer of the shares to the director at the end of the period is not subject to the attainment of performance conditions but the shares can be forfeited if the ED leaves service before the end of the period. For Jason, this also includes RSU awards, granted under the LTIP prior to his appointment to the Board. Details of these awards can be found in table 18.
4 Savings-related options (without performance conditions) over shares granted under the SAYE plan.
5 Based on the closing middle-market price of an ordinary share of the Company on 31 December 2019 of 418.7 pence. The closing middle-market price of an ordinary share of the Company during the year ranged from 352.3 pence to 438.8 pence.
6 Maurice is still within the timeframe required to meet his shareholding requirement, which increased upon his appointment to Group CEO.

There were no changes to the EDs interests in Aviva shares during the period 1 January 2020 to 4 March 2020.

17 Non-Executive Directors' shareholdings[1] (audited information)

	1 January 2019	31 December 2019
Sir Adrian Montague	58,553	58,553
Claudia Arney	14,000	14,000
Glyn Barker	22,700	47,700
Patricia Cross	25,112	30,574
George Culmer	—	31,276
Patrick Flynn	—	—
Belén Romana García	4,475	10,223
Michael Mire	50,000	50,000

1 This information includes holdings of any connected persons.

There were no changes to the NEDs interests in Aviva shares during the period 1 January 2020 to 4 March 2020.

Share awards and share options

Details of the EDs who were in office for any part of the 2019 financial year and hold or held outstanding share awards or options over ordinary shares of the Company pursuant to the Company's share based incentive plans are set out in table 18. EDs are eligible to participate in the Company's broad-based employee share plans on the same basis as other eligible employees. Details of awards and options granted to EDs under these plans are also included in tables 1, 6 and 16 (and SAYE options are included in table 18). More information around HMRC tax-advantaged plans can also be found in note 34.

18 LTIP, ABP and options over Aviva shares (audited information)

	At 1 January 2019 (number)	Options/awards granted during year[1] (number)	Options/awards exercised/vesting during year (number)	Options/awards lapsing during year (number)	At 31 December 2019 (number)	Market price at date awards granted[2] (number)	SAYE exercise price (options) (pence)	Market price at date awards vested/option exercised(pence)	Normal vesting date/ exercise period[5]
Maurice Tulloch									
LTIP[3,4]									
2016	309,278	—	181,893[9]	154,639	—	456.70	—	409.90	Mar-19
2017	286,091	—	—	—	286,091	523.00	—	—	Mar-20
2018	310,863	—	—	—	310,863	542.60	—	—	Mar-21
2019	—	694,774	—	—	694,774	409.00	—	—	Mar-22
ABP									
2016	63,144	—	74,273[9]	—	—	456.70	—	409.90	Mar-19
2017	85,564	—	—	—	85,564	523.00	—	—	Mar-20
2018	110,529	—	—	—	110,529	494.10	—	—	Mar-21
2019	—	94,717	—	—	94,717	409.00	—	—	Mar-22
SAYE[6]									
2019	—	6,338	—	—	6,338	—	284.00	—	Dec-22 – May-23
Jason Windsor[5]									
LTIP									
2016[5]	206,185	—	121,261[9]	103,093	—	456.70	—	409.90	Mar-19
2017	77,358	—	—	—	77,358	523.00	—	—	Mar-20
2018	83,333	—	—	—	83,333	494.10	—	—	Mar-21
2019	—	73,634	—	—	73,634	409.00	—	—	Mar-22
ABP									
2016	50,721	—	59,660[9]	—	—	456.70	—	409.90	Mar-19
2017	18,721	—	10,435[9]	—	9,361	523.00	—	—	Mar-20
2018	33,333	—	11,757[9]	—	22,222	494.10	—	—	Mar-21
2019	32,310	—	—	—	32,310	409.00	—	—	Mar-22
SAYE[8]									
2019	—	6,338	—	—	6,338	—	284.00	—	Dec-22 – May-23
Andy Briggs[6]									
LTIP[3,4]									
2016	320,972	—	188,770[9]	160,486	—	456.70	—	409.90	Mar-19
2017	302,532	—	—	302,532	—	523.00	—	—	Mar-20
2018	325,892	—	—	325,892	—	542.60	—	—	Mar-21
2019	—	401,846	—	401,846	—	409.00	—	—	Mar-22
ABP									
2016	92,510	—	108,814[9]	—	—	456.70	—	409.90	Mar-19
2017	116,530	—	—	—	116,530	523.00	—	—	Mar-20
2018	135,185	—	—	—	135,185	494.10	—	—	Mar-21
2019	—	100,015	—	—	100,015	409.00	—	—	Mar-22
SAYE[8]									
2016	5,128	—	—	5,128	—	—	351.00	—	Dec-19 – May-20
Tom Stoddard[7]									
LTIP[3,4]									
2016	313,144	—	184,167[9]	156,572	—	456.70	—	409.90	Mar-19
2017	295,153	—	—	23,160	271,993	523.00	—	—	Mar-20
2018	317,857	—	—	136,224	181,633	542.60	—	—	Mar-21
2019	—	391,938	—	391,938	—	409.00	—	—	Mar-22
ABP									
2016	120,618	—	141,876[9]	—	—	456.70	—	409.90	Mar-19
2017	118,061	—	—	—	118,061	523.00	—	—	Mar-20
2018	131,851	—	—	—	131,851	494.10	—	—	Mar-21
2019	—	97,548	—	—	97,548	409.00	—	—	Mar-22

1 The aggregate net value of share awards granted to the EDs in the period was £8.0 million (*2018: £11.1 million*). The net value has been calculated by reference to the closing middle-market price of an ordinary share of the Company at the date of grant.
2 The actual price used to calculate the ABP and LTIP awards is based on a three-day average closing middle-market price of an ordinary share of the Company, prior to grant date. These were in 2016: 485 pence, 2017: 530 pence, 2018: 504 pence and 2019: 421 pence.
3 For the 2016 and 2017 LTIP grant, the TSR comparator group consisted of the following companies: Aegon, Allianz, Assicurazioni Generali, Axa, CNP Assurances, Direct Line Group, Legal & General, MetLife, NN Group, Old Mutual, Prudential, RSA Insurance Group, Standard Life and Zurich Insurance Group. For the 2018 and 2019 LTIP, the comparator group is: Aegon, Allianz, Assicurazioni Generali, Axa, CNP Assurances, Direct Line Group, Legal & General, Lloyds Banking Group, Old Mutual, Phoenix, Prudential, RSA, Standard Life Aberdeen, Zurich Insurance Group.
4 The performance periods for these awards begin at the commencement of the financial year in which the award is granted and run for a three-year period.
5 LTIP awards for Jason comprise RSUs and were granted prior to his appointment to the Board. The transfer of the shares at the end of the period is not subject to the attainment of performance conditions but the shares can be forfeited if he leaves service before the end of the period.
6 Andy stepped down from the Board on 24 April 2019. Following confirmation of Andy joining Phoenix Group, the 2017, 2018 and 2019 LTIP awards lapsed in full.
7 Tom stepped down from the Board on 30 June 2019. The 2017 and 2018 LTIP awards have been time pro-rated to reflect the number of days worked from the date of grant to the final date of service, and the 2019 LTIP award lapsed in full.
8 Any unexercised options will lapse at the end of the exercise period. Options are not subject to performance conditions. The option price was fixed by reference to a three day average closing middle-market price of an ordinary share of the Company, prior to invitation date, with a discount of 20% as permitted under the SAYE plan. Options granted under the SAYE are normally exercisable during the six-month period following the end of the relevant (3 or 5 year) savings contract.
9 The shares comprised in these vested awards include shares issued in lieu of dividends accrued during the deferral period.

Dilution

Awards granted under Aviva employee share plans are generally met by issuing new shares as agreed by the Board. Shares are held in employee trusts, details of which are set out in note 35.

The Company monitors the number of shares issued under the Aviva employee share plans and their impact on dilution limits. The Company's usage of shares compared to the relevant dilution limits set by the Investment Association in respect of all share plans (10% in any rolling ten-year period) and executive share plans (5% in any rolling ten-year period) was 3.58% and 1.89% respectively on 31 December 2019.

Governance Regulatory Remuneration Code

Aviva Investors and two small 'firms' (as defined by the FCA) within the UK Insurance business are subject to the Capital Requirements Directive IV (CRD IV) and the FCA Remuneration Code (SYSC 19A). Additionally, Aviva Investors UK Funds Services Ltd is subject to the Alternative Investment Fund Management Directive (AIFMD), the Undertakings for Collective Investments in Transferrable Securities (UCITS V) directive and the Markets in Financial Instruments Directive II (MiFID II). Remuneration Code requirements include an annual disclosure. For AIFMD and UCITS V the disclosure is part of the Financial Statements and/or Annual accounts of the Alternative Investment Funds or UCITS V. For CRD IV requirements the most recent Aviva Investors disclosure can be found in Section 5 of the Pillar 3 Disclosure available at www.aviva.com/pillar3 and a link to the disclosure for the UK Insurance firms can be found at www.aviva.com/remuneration-committee.

Solvency II remuneration

Remuneration Requirements (PRA PS22/16 & SS10/16) apply to the Aviva Group. Our remuneration structures have been designed in a way so that they are compliant with these requirements for all senior managers across the Group, not just those identified as being specifically covered by the requirements of the regulation. Such employees at Aviva are termed 'Covered Employees'. We are required to complete a Remuneration Policy Statement, which outlines how we have complied with each of the requirements, this document was approved by the Group Remuneration Committee and submitted to the Prudential Regulatory Authority (PRA).

The Solvency II reporting requirements for the year ended 31 December 2019 necessitate firms to produce the Solvency and Financial Condition Report (SFCR) which contains remuneration information and is publicly available. 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.

Statement of voting at AGM

The result of the shareholder vote at the Company's 2019 AGM in respect of the 2018 Directors' Remuneration report is set out in table 19. The Committee was pleased with the level of support received from shareholders for the resolution.

19 Results of votes at 2019 AGM

	Percentage of votes cast		Number of votes cast		
	For	Against	For	Against	Votes withheld
Directors' Remuneration Policy[1]	97.13%	2.87%	2,809,661,298	83,164,398	3,970,718
Directors' Remuneration Report	97.61%	2.39%	2,574,643,176	63,055,053	2,660,993

1 Voting on Remuneration Policy at 2018 AGM.

Approach to NED fees for 2020

NED fees are reviewed annually and were last increased with effect from 1 April 2014. The only change to the current fee levels is to the basic Board membership fee, as set out in the table below.

20 Non-Executive Directors' fees

Role	Fee from 1 January 2020	Fee from 1 January 2019
Chairman of the Company[1]	£550,000	£550,000
Board membership fee	£75,000	£70,000
Additional fees are paid as follows:		
Senior Independent Director	£35,000	£35,000
Committee Chair (inclusive of committee membership fee):		
• Audit	£45,000	£45,000
• Governance	£35,000	£35,000
• Remuneration	£35,000	£35,000
• Risk	£45,000	£45,000
Committee membership:		
• Audit	£15,000	£15,000
• Governance	£12,500	£12,500
• Nomination	£7,500	£7,500
• Remuneration	£12,500	£12,500
• Risk	£15,000	£15,000

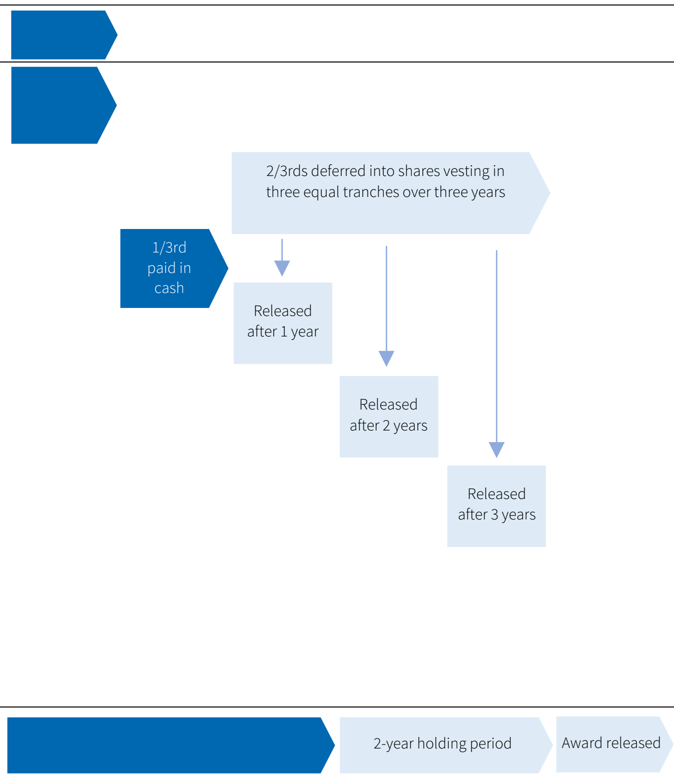
1 Inclusive of Board membership fee and any committee membership fees, and committee chair of the Nomination Committee.

21 Implementation of Policy in 2020

The implementation of the Policy will be consistent with that outlined in table 22.

Key Element

Phasing — **2020** **2021** **2022** **2023** **2024** **2025** — **Implementation in 2020**



Salary[1]

- Group CEO – £989,625 per annum
- CFO – £685,125 per annum

Bonus[6]

- One-year performance assessed against financial and non-financial performance measures
- As outlined in the Chair's letter, the annual bonus metrics have been updated to reflect key strategic priorities:

Financial measures (70% of total):
- 15% – Group adjusted operating profit[2]
- 25% – Cash remittances[3]
- 30% – OCG[3]

Non-financial strategic measures (30% of total):
- 7.5% – RNPS
- 7.5% – TNPS
- 15% – Risks Inside Tolerance
- A quality of earnings assessment will be undertaken by the Committee to provide assurance that bonus payouts appropriately reflect underlying performance and the shareholder experience
- Performance against a number of other non-financial modifiers will be considered when determining bonus payouts (employee engagement, customer trust and risk)
- Personal performance during the year will be taken into account

LTIP

- Group CEO – 300% of salary
- CFO – 225% of salary

As outlined in the Chair's letter, for 2020 LTIP awards, Operating EPS[2,4] will be replaced with SII RoE[3]:
- 50% SII RoE[3] subject to a SII shareholder cover ratio[3]
- 50% relative TSR against a comparator group[5]

For the 2020 awards, the SII shareholder cover ratio[3] is to meet or exceed the minimum of the stated working range (currently 160% to 180%).

50% SII RoE[2] target		50% TSR target	
SII RoE[2] %	Vesting level	TSR Ranking	Vesting level
Below 11%	0%	Below median	0%
11 %	10%	Median	10%
Between 11% and 13%	10-50% (straight line)	Between median and upper quintile	Pro rata between 10% and 50% on a straight line basis
Above 13%	50%	Upper quintile and above	50%

1 Salary will be effective from 1 April 2020.
2 Group adjusted operating profit is an Alternative Performance Measure (APM) which is used by the Group to supplement the required disclosures under IFRS. Please refer to note B in the 'Accounting Policies' section and to the 'Other Information' section within the Annual report and accounts for further information.
3 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.
4 This measure is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other Information' section of the Annual report and accounts.
5 2020 LTIP Comparator Group: Aegon, Allianz, Assicurazioni Generali, Axa, Direct Line Group, Intact, Legal & General, Lloyds Banking Group, M&G, Phoenix, RSA, Standard Life Aberdeen, Zurich Insurance Group.
6 The target ranges are considered by the Board to be commercially sensitive and will be disclosed in the 2020 DRR.

Approval by the Board

This Directors' Remuneration report was reviewed and approved by the Board on 4 March 2020.

Patricia Cross
Chair, Remuneration Committee

Directors' Remuneration Policy

Our Remuneration Policy was approved by shareholders at our AGM on 10 May 2018 and will apply for a period of up to three years. The full and definitive Policy is therefore set out in our 2018 Annual report and accounts, which can be found on our website at https://www.aviva.com/reports/

The following section reproduces the Policy for convenience, although the original Policy referred to above remains our formally approved Policy and should be consulted where this is required. In addition, we have taken the opportunity to update the scenario charts to reflect 2020 remuneration arrangements for our EDs, as well as appointment end dates for NEDs.

Alignment of Group strategy with executive remuneration

The Committee considers that alignment between Group strategy and the remuneration of its EDs is critical. Our Remuneration Policy provides market competitive remuneration, and incentivises EDs to achieve both the annual business plan and the longer-term strategic objectives of the Group. 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.

Table 22 below provides an overview of the Policy for EDs. For an overview of the Policy for NEDs, see table 24.

22 Key aspects of the Remuneration Policy for Executive Directors

Element		
Basic salary	**Purpose** To provide core market related pay to attract and retain the required level of talent. **Operation** Annual review, with changes normally taking effect from – 1 April each year. The review is informed by: • Individual and business performance • Levels of increase for the broader employee population • Relevant pay data including market practice among relevant FTSE listed companies of comparable size to Aviva in terms of market capitalisation, large European and global insurers, and UK financial services companies	**Maximum opportunity** There is no maximum increase within the Policy. However, basic salary increases take account of the average basic salary increase awarded to the broader employee population. Different levels of increase may be agreed in certain circumstances at the Committee's discretion, such as: • An increase in job scope and responsibility • Development of the individual in the role • A significant increase in the size, value or complexity of the Group **Assessment of performance** Any movement in basic salary takes account of the performance of the individual and the Group.
Annual bonus	**Purpose** To reward EDs for achievement against the Company's strategic objectives and for demonstrating the Aviva values and behaviours. Deferral provides alignment with shareholder interests and aids retention of key personnel. **Operation** Awards are based on performance in the year. Targets are set annually and pay-out levels are determined by the Committee based on performance against those targets and a quality of earnings assessment and risk review. **Form & timing of payment** • One-third of any bonus is payable in cash at the end of the year • Two-thirds of any bonus awarded is deferred into shares which vest in three equal annual tranches Additional shares are awarded at vesting in lieu of dividends paid on the deferred shares. **Malus and clawback** Cash and deferred awards are subject to malus and clawback. Details of when these may be applied are set out in the notes below.	**Maximum opportunity** 200% of basic salary for Group CEO 150% of basic salary for other EDs **Outcome at threshold and on target** Performance is assessed against multiple metrics. Threshold performance against a single metric would result in a bonus payment of no more than 25% of basic salary. 100% of basic salary is payable for on target performance. **Assessment of performance** Performance is assessed against a range of relevant financial, employee, customer and risk targets designed to incentivise the achievement of our strategy, as well as individual strategic objectives as set by the Committee. Although financial performance is the major factor in considering overall expenditure on bonuses, performance against non-financial measures including progress towards our strategic priorities and behaviours in line with our values will also be taken into consideration. **Discretion** The Committee has discretion to amend vesting levels to prevent unreasonable outcomes, which it may use taking into account a range of factors, including the management of risk and good governance and, in all cases, the experience of shareholders.

Element		
Long-term incentive plan	**Purpose** To reward EDs for achievement against the Company's longer-term objectives; to align EDs' interests with those of shareholders and to aid the retention of key personnel and to encourage focus on long-term growth in enterprise value. **Operation** Shares are awarded annually which vest dependent on the achievement of performance conditions. Vesting is subject to an assessment of quality of earnings, the stewardship of capital and risk review. **Performance period** Three years. Additional shares are awarded at vesting in lieu of dividends on any shares which vest. **Additional holding period** Two years. **Malus and clawback** Awards are subject to malus and clawback. Details of when these may be applied are set out in the notes below.	**Maximum opportunity** 350% of basic salary. **Performance measures** Awards will vest based on a combination of financial, strategic and TSR performance metrics. For the 2020 awards the measures and weightings will be: • 50% SII RoE[1] • 50% TSR against a comparator group The financial metric combined with TSR will be a minimum of 80% of the total LTIP award. If, in subsequent years, shareholders indicate support for strategic measures, the Policy will allow for up to 20% of the LTIP to be awarded on the basis of strategic measures and this will be fully disclosed in the DRR. **Vesting at threshold** 20% of award for each performance measure. **Discretion** The Committee has discretion to amend vesting levels to prevent unreasonable outcomes, which it may use taking into account a range of factors, including the management of risk and good governance and, in all cases, the experience of shareholders.
Pension	**Purpose** To give a market competitive level of provision for post retirement income. **Operation** EDs are eligible to participate in a defined contribution plan up to the annual limit. Any amounts above annual or lifetime limits are paid in cash.	**Maximum opportunity** If suitable employee contributions are made, the Company contributes: • 20% of basic salary for new ED appointments • 28% of basic salary for existing EDs (into pension or paid as cash as applicable)
Benefits	**Purpose** To provide EDs with a suitable but reasonable package of benefits as part of a competitive remuneration package. This involves both core executive benefits, and the opportunity to participate in flexible benefits programmes offered by the Company (via salary sacrifice). This enables us to attract and retain the right level of talent necessary to deliver the Company's strategy. **Operation** Benefits are provided on a market related basis. The Company reserves the right to deliver benefits to EDs depending on their individual circumstances, which may include a cash car allowance, life insurance, private medical insurance and access to a company car and driver for business use. In the case of non-UK executives, the Committee may consider additional allowances in line with standard relevant market practice. EDs are eligible to participate in the Company's broad based employee share plans on the same basis as other eligible employees.	**Maximum opportunity** Set at a level which the Committee considers appropriate against comparable roles in companies of a similar size and complexity to provide a reasonable level of benefit. Costs would normally be limited to providing a cash car allowance, private medical insurance, life insurance, and reasonable travel benefits (including the tax cost where applicable). In addition, there may be one-off or exceptional items on a case by case basis, which would be disclosed in the DRR.
Relocation and mobility	**Purpose** To assist with mobility across the Group to ensure the appropriate talent is available to execute strategy locally. **Operation** Employees who are relocated or reassigned from one location to another receive relevant benefits to assist them and their dependants in moving home and settling in-to the new location.	**Maximum opportunity** Dependent on location and family size, benefits are market related and time bound. They are not compensated for performing the role but to defray costs of a relocation or residence outside the home country. The Committee would reward no more than it judged reasonably necessary, in the light of all applicable circumstances.
Shareholding requirements	**Purpose** To align EDs' interests with those of shareholders. **Operation** A requirement to build a shareholding in the Company equivalent to 300% of basic salary for the Group CEO and 200% of basic salary for other EDs. This shareholding is normally to be built up over a period not exceeding 5 years (subject to the Committee's discretion where personal circumstances dictate).	

1 This is an Alternative Performance Measure (APM) which provides useful information to supplement an understanding of our financial performance. Further information on APMs, including a reconciliation to the financial statements (where possible), can be found in the 'Other Information' section of the Annual report and accounts.

Notes to the table:

Performance measures

For the annual bonus, performance measures are chosen to align to some of the Group's KPIs and include financial, strategic, risk, employee and customer measures. Achievement against individual strategic objectives is also taken into account.

LTIP performance measures are chosen to provide an indication of both absolute and relative return generated for shareholders. In terms of target setting, a number of reference points are taken into account each year including, but not limited to, the Group's business plan and external market expectations of the Company. Maximum payouts require performance that significantly exceeds expected performance under both the annual bonus and the LTIP.

Quality of Earnings assessments

Throughout the year, the Committee engages in a regular quality of earnings assessment. A quality of earnings assessment sign-off is the final step in determining annual bonus scorecard outcomes, and in making decisions on LTIP vesting. This sign-off is undertaken before decisions are made on the modifiers for risk, customer and employee engagement under the annual bonus, and before vesting is determined against financial metrics under the LTIP.

As a minimum, at any Committee meeting where LTIP vesting or annual bonus scorecard decisions are considered, the Chief Accounting Officer prepares a report to the Committee on the quality of earnings reflected in the results being assessed, against performance targets. Extensive information from the audited accounts is used to explain the vesting and scorecard outcomes – ranging from movements in reserves, capital management decisions, consistency of accounting treatment and period to period comparability. The Chief Accounting Officer attends the Committee meeting to answer any questions that any member of the Committee may choose to ask. Any vesting decision or confirmation of awards is made after this process has been undertaken.

Malus and Clawback

The circumstances when malus (the forfeiture or reduction of unvested shares awarded under the ABP and LTIP) and clawback (the recovery of cash and share awards after release) may apply include (but are not limited to) where the Committee considers that the employee concerned has been involved in or partially/wholly responsible for:

- A materially adverse misstatement of the Company's financial statements, or a misleading representation of performance;
- A significant failure of risk management and/or controls;
- A scenario or event which causes material reputational damage to the Company;
- Misconduct which, in the opinion of the Committee, ought to result in the complete or partial lapse of an award;
- Conduct which resulted in significant loss(es);
- Failure to meet appropriate standards of fitness and propriety;
- Any other circumstance required by local regulatory obligations.

The clawback period runs for two years from the date of payment in the case of the cash element of any annual bonus award.

For deferred bonus elements and LTIP awards, the overall malus and clawback period is five years from the date of grant.

Discretions

The discretions the Committee has in relation to the operation of the ABP and LTIP are set out in the plan rules. These include (but are not limited to) the ability to set additional conditions (and the discretion to change or waive those conditions). In relation to the LTIP and in accordance with its terms, the Committee has discretion in relation to vesting and to waive or change a performance condition if anything happens which causes the Committee reasonably to consider it appropriate to do so. Such discretions would only be applied in exceptional circumstances, to ensure that awards properly reflect underlying business performance. Any use of the discretions and how they were exercised will be disclosed, where relevant, in the DRR and, where appropriate, be subject to consultation with Aviva's shareholders.

Change in control

In the event of a change in control, unless a new award is granted in exchange for an existing award, or if there is a significant corporate event like a demerger, awards under the LTIP would normally vest to the extent that the performance conditions have been satisfied as at the date of the change in control, and unless the Committee decides otherwise, would be pro-rated to reflect the time between the start of the performance period and the change in control event. Awards under the ABP would normally vest on the date of the change in control and may vest if there is a significant corporate event.

Consistency of executive Policy across the Group

The Policy for our EDs is designed as part of the remuneration philosophy and principles that underpin remuneration for the wider Group. Remuneration arrangements for employees below the 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.

Differentiation in reward outcomes based on performance and behaviour that is consistent with the Aviva values is a feature of how Aviva operates its annual bonus plan for its senior leaders and managers globally. A disciplined approach is taken to moderation across the Company in order to recognise and reward the key contributors. The allocation of LTIP awards also involves strong differentiation, with expected contribution and ability to collaborate effectively in implementation of the strategy driving award levels.

Legacy payments

The Committee reserves the right to make any remuneration payments and payments for loss of office (including exercising any discretions available to it in connection with such payments) notwithstanding that they are not in line with the Policy set out above, where the terms of the payment were agreed (i) before May 2014 (the date the Company's first Policy came into effect), (ii) before the Policy set out above came into effect, provided that the terms of the payment were consistent with the Policy in force at the time they were agreed, or (iii) at a time when the relevant individual was not a director of the Company and, in the opinion of the Committee, the payment was not in consideration for the individual becoming a director of the Company. For these purposes, 'payments' includes the Committee satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are 'agreed' at the time the award is granted.

Approach to recruitment remuneration

On hiring a new ED, the Committee would align the proposed remuneration package with the Policy in place for EDs at the time of the appointment.

In determining the actual remuneration for a new ED, the Committee would consider the package in totality, taking into account elements such as the skills and experience of the individual, local market benchmarks, remuneration practice, and the existing remuneration of other senior executives. The Committee would ensure any arrangements agreed would be in the best interests of Aviva and its shareholders. It would seek not to pay more than necessary to secure the right candidate.

Where considered appropriate the Committee may make awards on hiring an external candidate to 'buyout' remuneration arrangements forfeited on leaving a previous employer. In doing so, the Committee would take account of relevant factors including any performance conditions attached to these awards, the form in which it was paid (e.g. cash or shares) and the timeframe of awards. Buyout awards would be awarded on a 'like for like' basis compared to remuneration being forfeited, and would be capped to reflect the value being forfeited. The Committee considers that a buyout award is a significant investment in human capital by Aviva, and any buyout decision will involve careful consideration of the contribution that is expected from the individual.

The maximum level of variable pay which could be awarded to a new ED, excluding any buyouts, would be in line with the Policy set out above and would therefore be no more than 550% of basic salary for the Group CEO (200% of basic salary annual bonus opportunity and 350% of basic salary as the face value of a LTIP grant) and 500% of basic salary for other EDs (150% of basic salary annual bonus opportunity and 350% of basic salary as the face value of a LTIP grant).

All other elements of remuneration will also be in line with the Policy set out above.

Should the Company have any prior commitments outside of this Policy in respect of an employee promoted internally to an ED position, the Committee may continue to honour these for a period of time. Where an ED is appointed from within the organisation, the normal policy of the Company is that any legacy arrangements would be honoured in line with the original terms and conditions. Similarly, if an ED is appointed following Aviva's acquisition of, or merger with, another company, legacy terms and conditions may be honoured.

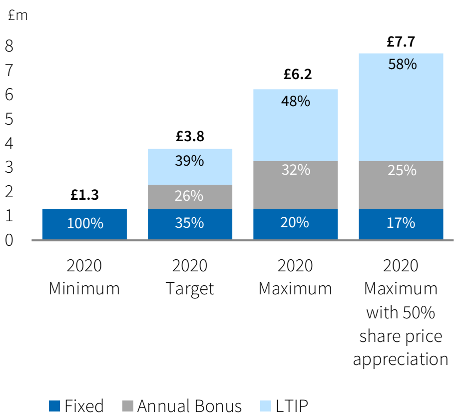
On appointing a new NED, the Committee would align the remuneration package with the Policy for NEDs, outlined in table 24, including fees and travel benefits.

Illustration of the Policy

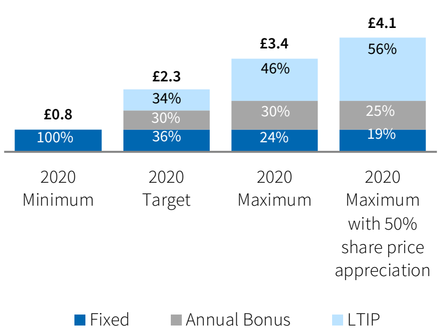
The charts below illustrate how much EDs could earn under different performance scenarios in one financial year:

- Minimum – basic salary, pension or cash in lieu of pension and benefits, no bonus and no vesting of the LTIP
- Target – basic salary, pension or cash in lieu of pension, benefits, and:
  – A bonus of 100% and an LTIP of 300% of basic salary (with notional LTIP vesting at 50% of maximum) for the Group CEO; and
  – A bonus of 100% and an LTIP of 225% of basic salary (with notional LTIP vesting at 50% of maximum) for the CFO.
- Maximum – basic salary, pension or cash in lieu of pension, benefits, and:
  – A bonus of 200% and an LTIP of 300% of basic salary (with notional LTIP vesting at maximum) for the Group CEO; and
  – A bonus of 150% and an LTIP of 225% of basic salary (with notional LTIP vesting at maximum) for the CFO.
- Maximum with share price increase – indicative maximum remuneration, assuming a notional LTIP vesting at maximum and share price appreciation of 50% on the LTIP.

Maurice Tulloch
Potential earnings by pay element



Jason Windsor
Potential earnings by pay element



Notes to the charts
Fixed pay consists of basic salary, pension as described in table 22, and estimated value of benefits provided under the Remuneration Policy, excluding any one offs. Actual figures may vary in future years.
The value of the deferred element of the annual bonus assumes a constant share price and does not include additional shares awarded in lieu of dividends that may have been accrued during the vesting period.
The value of the LTIP assumes a constant share price (with the exception of the maximum with share price increase scenario) and does not include additional shares awarded in lieu of dividends that may have been accrued during the vesting period.
The LTIP is as proposed to be awarded in 2020.

Employment contracts and letters of appointment

ED employment contracts and NED letters of appointment are available for inspection at the Company's registered office during normal hours of business, and at the place of the Company's 2020 AGM on 26 May from 1.15pm until the close of the meeting.

The key employment terms and conditions of the current EDs, and those who served during the year, as stipulated in their employment contracts, are set out in the table below.

23 Executive Directors' key conditions of employment

Provision	Policy	
Notice period		
By the ED	6 months.	
By the Company	12 months, rolling. No notice or payment in lieu of notice to be paid where the Company terminates for cause.	
Termination Payment	Pay in lieu of notice up to a maximum of 12 months' basic salary. Any payment is subject to phasing and mitigation requirements. An ED would be expected to mitigate the loss of office by seeking alternative employment. Any payments in lieu of notice would be reduced, potentially to zero, by any salary received from such employment.	
Remuneration and Benefits	The operation of the annual bonus and LTIP is at the Company's discretion.	
Expenses	Reimbursement of expenses reasonably incurred in accordance with their duties.	
Holiday entitlement	30 working days plus public holidays.	
Private medical insurance	Private medical insurance is provided for the ED and their family. The ED can choose to opt out of this benefit or take a lower level of cover. However, no payments are made in lieu of reduced or no cover.	
Other benefits	Other benefits include participation in the Company's staff pension scheme, life insurance and, where applicable, access to a Company car and driver for business related use.	
Sickness	100% of salary for the first 52 weeks and up to £150,000 per annum for a further 5 years.	
Non-compete	During employment and for six months after leaving (less any period of garden leave) without the prior written consent of the Company.	
Contract dates	**Director**	**Date current contract commenced**
	Maurice Tulloch	4 March 2019
	Jason Windsor	26 September 2019

Policy on payment for loss of office

There are no pre-determined ED special provisions for compensation for loss of office. The Committee has the ability to exercise its discretion on the final amount actually paid. Any compensation would be based on basic salary, pension entitlement and other contractual benefits during the notice period, or a payment made in lieu of notice, depending on whether the notice is worked.

Where notice of termination of a contract is given, payments to the ED would continue for the period worked during the notice period. Alternatively, the contract may be terminated and phased monthly payments made in lieu of notice for, or for the balance of, the 12 months' notice period. During this period, EDs would be expected to mitigate their loss by seeking alternative employment. Payments in lieu of notice would be reduced by the salary received from any alternative employment, potentially to zero. The Company would typically make a reasonable contribution towards an ED's legal fees in connection with advice on the terms of their departure.

There is no automatic entitlement to an annual bonus for the year in which loss of office occurs. The Committee may determine that an ED may receive a pro-rata bonus in respect of the period of employment during the year loss of office occurs based on an assessment of performance. Where an ED leaves the Company by reason of death, disability or ill health, or any other reason determined by the Committee, there may be a payment of a pro rata bonus for the relevant year at the discretion of the Committee.

The treatment of leavers under the ABP and LTIP is determined by the rules of the relevant plans. Good leaver status under these plans would be granted in the event of, for example, the death of an ED. Good leaver status for other leaving reasons is at the discretion of the Committee, taking into account the circumstances of the individual's departure, but would typically include planned retirement, or their departure on ill health grounds. In circumstances where good leaver status has been granted, awards may still be subject to malus and clawback in the event that inappropriate conduct of the ED is subsequently discovered post departure. If good leaver status is not granted, all outstanding awards will lapse.

In the case of LTIPs, where the Committee determines EDs to be good leavers, vesting is normally based on the extent to which performance conditions have been met at the end of the relevant performance period, and the proportion of the award that vests is pro-rated for the time from the date of grant to final date of service (unless the Committee decides otherwise). Any decision not to apply this would only be made in exceptional circumstances, and would be fully disclosed. It is not the practice to allow such treatment.

Consideration of wider employee pay and shareholder views

When determining the Policy and arrangements for our EDs, the Committee considers:

- Pay and employment conditions elsewhere in the Group to ensure that pay structures are suitably aligned and that levels of remuneration remain appropriate. The Committee reviews levels of basic salary increases for other employees and executives based in their respective locations. It reviews changes in overall bonus pool funding and long-term incentive grants. The Committee considers feedback on pay matters from sources including the employee opinion survey and employee forums. The Committee also takes into account information provided by the people function and external advisers and the Committee Chair has in place a programme of consultation and meetings with employee forums including the Evolution Council and Your Forum to discuss remuneration.
- In its ongoing dialogue with shareholders, the Committee seeks shareholder views and takes them into account when any significant changes are being proposed to remuneration arrangements and when formulating and implementing the Policy.

Non-Executive Directors

The table below, sets out details of our Policy for NEDs.

24 Key aspects of the Policy for Non-Executive Directors

Element		
Chairman and NEDs' fees	**Purpose** To attract individuals with the required range of skills and experience to serve as a Chairman or as a NED. **Operation** 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. NEDs are able to use up to 100 percent of their post-tax base fees to acquire shares in Aviva plc. 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 Aviva. To the extent that these are deemed taxable benefits, they will be included in the DRR, as required.	**Maximum opportunity** The Company's Articles of Association provide that the total aggregate remuneration paid to the Chairman of the Company and NEDs will be determined by the Board within the limits set by shareholders and detailed in the Company's Articles of Association.
Chairman's Travel Benefits	**Purpose** To provide the Chairman with suitable travel arrangements for him to discharge his duties effectively.	The Chairman has access to a company car and driver for business use. Where these are deemed a taxable benefit, the tax is paid by the Company.
NED Travel and Accommodation	**Purpose** To reimburse NEDs for appropriate business travel and accommodation, including attending Board and committee meetings.	**Operation** Reasonable costs of travel and accommodation for business purposes are reimbursed to NEDs. On the limited occasions when it is appropriate for a NED's spouse or partner to attend, such as to a business event, the Company will meet these costs. The Company will meet any tax liabilities that may arise on such expenses.

The NEDs, including the Chairman of the Company, have letters of appointment which set out their duties and responsibilities. The key terms of the appointments are set out in table below.

25 Non-Executive Directors' key terms of appointment

Provision	Policy
Period	In line with the requirement of the Code, all NEDs, including the Chairman, are subject to annual re-election by shareholders at each AGM.
Termination	By the director or the Company at their discretion without compensation upon giving one month's written notice for NEDs and three months written notice for the Chairman of the Company.
Fees	As set out in table 20.
Expenses	Reimbursement of travel and other expenses reasonably incurred in the performance of their duties.
Time commitment	Each director must be able to devote sufficient time to the role in order to discharge his or her responsibilities effectively.

	Committee appointments					Appointment date[1]	Appointment end date[2]
Director	Nomination	Audit	Governance	Remuneration	Risk		
Sir Adrian Montague	C					14 January 2013	AGM 2020
Amanda Blanc	✓		C		✓	2 January 2020	AGM 2020
Patricia Cross	✓	✓		C		1 December 2013	AGM 2020
George Culmer	✓	✓			✓	25 September 2019	AGM 2020
Patrick Flynn	✓	C			✓	16 July 2019	AGM 2020
Belén Romana García	✓	✓	✓		C	26 June 2015	AGM 2020
Michael Mire	✓		✓	✓	✓	12 September 2013	AGM 2020

Key
C Chair of Committee
✓ Committee
1 The dates shown above reflect the date the individual was appointed to the Aviva plc Board.
2 Appointment end dates are in accordance with letters of appointment.

IFRS financial statements

Report on the audit of the financial statements

Opinion

In our opinion, Aviva plc's Group financial statements and Company financial statements (the 'financial statements'):

- give a true and fair view of the state of the Group's and of the Company's affairs as at 31 December 2019 and of the Group's and the Company's profit and cash flows for the year then ended;
- have been properly prepared in accordance with International Financial Reporting Standards ('IFRS') as adopted by the European Union; and
- have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements, included within the Annual report and accounts (the "Annual Report"), which comprise:

- the Consolidated and Company statements of financial position as at 31 December 2019;
- the Consolidated and Company income statements and statements of comprehensive income for the year then ended;
- the Reconciliation of Group adjusted operating profit to profit for the year then ended;
- the Consolidated and Company statements of cash flows for the year then ended;
- the Consolidated and Company statements of changes in equity for the year then ended;
- the principal accounting policies adopted in the preparation of the financial statements; and
- the notes to the financial statements, which include other explanatory information.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ('ISAs (UK)') and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Company.

Other than those disclosed in note 13 to the financial statements, we have provided no non-audit services to the Group or the Company in the period from 1 January 2019 to 31 December 2019.

Our audit approach

Overview

- Overall group materiality: £158.0 million *(2018: £156 million)*, based on 5% of Group adjusted operating profit before tax attributable to shareholders' profits.
- Overall Company materiality: £47.8 million *(2018: £105.0 million)*, based on 5% of Profit for the year before tax.
- Based on the output of our risk assessment, along with our understanding of the Aviva Group structure, we performed full scope audits over the following components; UK Life, UK General Insurance, Canada and France Life.
- We identified a further two components, Aviva Investors and Italy Life, where specific account balances were considered to be significant in size in relation to the Group, and scoped our audit to include detailed testing of those account balances.
- We completed review procedures over other components not subject to full scope audits.
- We also performed audit procedures over the head office operations and the consolidation process, as well as over certain other group activities, including specific account balances in the Aviva Employment Services, Aviva Central Services and Aviva Group Holdings components.
- Our risk assessment analysis identified the following as areas of focus for the audit of the financial statements:
  - Valuation of life insurance contract liabilities;
  - Valuation of non-life insurance contract liabilities;
  - Valuation of hard to value investments; and
  - Valuation of specific UK Life provisions.
- Significant changes in our approach: In our 2019 report the following changes to the key audit matters identified have been made, compared with our 2018 report:
  - The key audit matter regarding the valuation of a specific UK Life provision has been updated to include an additional provision identified at UK Life during the period; and
  - We no longer consider the implementation of a new actuarial modelling system at UK Life to be a key audit matter as its implementation was a one-off event in the prior year.

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at where the directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

1 The maintenance and integrity of the Aviva plc website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly the auditors accept no responsibility for any changes that may have occurred to the full annual financial statements since they were initially presented on the website.
2 Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Capability of the audit in detecting irregularities, including fraud

Based on our understanding of the Group, Company and their industries, we identified that the principal risks of non-compliance with laws and regulations related to breaches of UK and European regulatory principles, such as those governed by the Prudential Regulation Authority and the Financial Conduct Authority, and we considered the extent to which non-compliance might have a material effect on the financial statements of the Group and Company. We also considered those laws and regulations that have a direct impact on the financial statements of the Group and Company such as the Companies Act 2006, the Listing Rules, the Prudential Regulation Authority's regulations, the Pensions Regulator legislation, UK tax legislation and equivalent local laws and regulations applicable to in-scope components.

We have also evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls) and determined that the principal risks are related to management bias in accounting estimates and judgmental areas of the financial statements as shown in our "Key Audit Matters".

Audit procedures performed by the engagement team included:

- Discussions with the Board, management, internal audit, senior management involved in the Risk and Compliance functions and the Group and Company's legal function, including consideration of known or suspected instances of non-compliance with laws and regulation and fraud;
- Evaluation and testing of the operating effectiveness of management's controls designed to prevent and detect irregularities;
- Assessment of matters reported on the Group and Company's whistleblowing helpline and fraud register and the results of management's investigation of such matters;
- Reading key correspondence with the Prudential Regulation Authority and the Financial Conduct Authority, including those in relation to compliance with laws and regulations;
- Reviewing relevant meeting minutes including those of the Board of Directors and Audit Committee;
- Making enquiries of the Group Investigations team who are responsible for independently investigating suspected or alleged fraudulent activity across the group, utilising activities including, but not limited to, whistle blowing hotlines and data analytics;
- Identifying and testing journal entries based on risk criteria;
- Designing audit procedures to incorporate unpredictability around the nature, timing or extent of our testing; and
- Testing transactions entered into outside of the normal course of the Group and Company's business specifically in respect of acquisitions and disposals.

There are inherent limitations in the audit procedures described above and, the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Key audit matter	How our audit addressed the key audit matter
Valuation of life insurance contract liabilities (Group) Refer to the Audit Committee report, Accounting policy (L) Insurance and participating investment contract liabilities – Long-term business provisions and note 43 Insurance liabilities (b) Long-term business liabilities.	
For UK Life insurance contract liabilities, the Directors' valuation of the provisions for the settlement of future claims, involves complex and subjective judgements about future events, both internal and external to the business, for which small changes in assumptions can result in material impacts to the valuation of these liabilities.	The work to address the valuation of the life insurance contract liabilities included the following procedures: • We understood the governance process in place to determine the insurance contract liabilities, including testing the associated financial reporting control framework; • We tested the design and operating effectiveness of controls over the accuracy and completeness of the data used; • Using our actuarial specialist team members, we applied our industry knowledge and experience and we compared the methodology, models and assumptions used against recognised actuarial practices; • We tested the key judgements over the preparation of the liabilities, including manually calculated components. We focused on the consistency in treatment and methodology period-on-period and with reference to recognised actuarial practice; • We tested key controls which support the calculation of the liabilities; • We used the results of an independent PwC annual benchmarking survey of assumptions to further challenge the assumption setting process by comparing certain assumptions used relative to the Group's industry peers; and • We assessed the disclosures in the financial statements.

Key audit matter | **How our audit addressed the key audit matter**

As part of our consideration of the entire set of assumptions, we focused particularly on annuitant mortality, credit default and expense assumptions for the UK Life component given their significance to the Group's result and the level of judgement involved. These aspects of our work have been considered in more detail below.

Based on the work performed and the evidence obtained, we consider the methodology and assumptions used to value the life insurance contract liabilities to be appropriate.

Annuitant mortality assumptions (Group)

Refer to the Audit Committee report, Accounting policy (L) Insurance and participating investment contract liabilities – Long-term business provisions and note 44 Insurance liabilities methodology and assumptions (a) Long-term business.

Annuitant mortality assumptions at UK Life require a high degree of judgement due to the number of factors which may influence mortality experience. The differing factors which affect the assumptions are underlying mortality experience (in the portfolio), industry and management views on the future rate of mortality improvements and external factors arising from developments in the annuity market.

There are two main components to the annuitant mortality assumptions:
- Mortality base assumption: this component is typically less subjective as it is derived using external Continuous Mortality Investigation (CMI) tables or an equivalent, adjusted for internal experience. However, judgement is required in choosing the appropriate table and fitting internal experience to this table.
- Rate of mortality improvements: this component is more subjective given the lack of data and the uncertainty over how life expectancy will change in the future.

Management have adopted the most recent CMI 2018 model and dataset in setting this assumption with specific parameters for the long term rate of improvement and tapering at older ages and adjustments to reflect the profile of their portfolio. This reflects their views on the rate of mortality improvement.

In addition, a margin for prudence is applied to the annuitant mortality assumptions.

In respect of the annuitant mortality assumptions, we performed the following:
- We tested the methodology used by management to derive the assumptions with reference to relevant rules and actuarial guidance and by applying our industry knowledge and experience. This included evaluating management's choice of, and fitting to, the CMI or equivalent base tables and the adoption of the CMI 2018 model and dataset for improvements, together with associated parameters and the margin for prudence;
- We assessed the results of the experience investigations carried out by UK Life management for the annuity business to determine whether they provided support for the assumptions used by management; and
- We compared the mortality assumptions selected by UK Life against those used by their peers.

Based *on the work performed and the evidence obtained, we consider the assumptions used for annuitant mortality to be appropriate.*

Credit default assumptions for illiquid assets, specifically: commercial mortgages and equity release mortgages (Group)

Refer to the Audit Committee report, Accounting policy (L) Insurance and participating investment contract liabilities – Long-term business provisions and note 44 Insurance liabilities methodology and assumptions (a) Long-term business.

UK Life has substantial holdings in illiquid asset classes with significant credit risk, notably commercial mortgages and equity release mortgages.

Management use an active approach to setting the associated credit default assumptions on these illiquid assets. A long term deduction for credit default is made from the current market yields and a supplementary allowance is also held to cover the risk of higher short term default rates along with a margin for prudence.

In respect of the credit default assumptions, we performed the following:
- We tested the methodology and credit risk pricing models used by management for commercial and equity release mortgages to derive the assumptions with reference to relevant rules and actuarial guidance, including the adoption of an appropriate prudence margin and by applying our industry knowledge and experience; and
- We validated significant assumptions used by management by ensuring consistency with the assumptions used for the valuation of the assets, and against market observable data (to the extent available and relevant) and our experience of market practices

Based on the work performed and the evidence obtained, we consider the assumptions used for credit default risk on commercial mortgages and equity release mortgages to be appropriate.

Key audit matter	How our audit addressed the key audit matter
Expense assumptions (Group) Refer to the Audit Committee report, Accounting policy (L) Insurance and participating investment contract liabilities – Long-term business provisions and note 44 Insurance liabilities methodology and assumptions (a) Long-term business.	
Future maintenance expenses and expense inflation assumptions are used in the measurement of life insurance contract liabilities at UK Life. The assumptions reflect the expected future expenses that will be required to maintain the in-force policies at the balance sheet date, including an allowance for project costs and a margin for prudence. The assumptions used require significant judgement.	In respect of the expense assumptions, we performed the following: • We tested the methodology used by management to derive the assumptions with reference to relevant rules and actuarial guidance and by applying our industry knowledge and experience. This included testing the split of expenses between acquisition and maintenance by agreeing a sample to supporting evidence; • We validated significant assumptions used by management, including the margin for prudence and the rate of inflation against past experience, market observable data (to the extent available and relevant) and our experience of market practices; and • We tested that the assumptions appropriately reflect the expected future expenses for maintaining policies in force at the balance sheet date, which includes consideration of the allowance for project costs. *Based on the work performed and the evidence obtained, we consider the expense assumptions to be appropriate.*
Valuation of non-life insurance contract liabilities (Group) Refer to the Audit Committee report, Accounting policy (L) Insurance and participating investment contract liabilities – General insurance and health provisions and note 43 Insurance liabilities methodology and assumptions (c) General insurance and health.	
The estimation of non-life insurance contract liabilities involves a significant degree of judgement. The liabilities are based on the estimated ultimate cost of all claims incurred but not settled at 31 December 2019, whether reported or not, together with the related claims handling costs. A range of methods, including stochastic projections, may be used to determine these provisions. Underlying these methods are a number of explicit or implicit assumptions relating to the expected settlement amount and settlement patterns of claims. This includes assumptions relating to the settlement of personal injury lump sum compensation amounts. Given their size in relation to the consolidated Group and the complexity of the judgements involved, our work focused on the actuarial liabilities in the UK General Insurance and Canada General Insurance components.	In the UK General Insurance and Canada components, we assessed the calculation of the non-life insurance liabilities by performing the following procedures: • We understood and tested the governance process in place to determine the insurance contract liabilities, including testing the associated financial reporting control framework; • We tested the underlying data to source documentation on a sample basis; • Using our actuarial specialist team members, we applied our industry knowledge and experience and we compared the methodology, models and assumptions used against recognised actuarial practices; • Using our actuarial specialist team members, we independently estimated the reserves on selected classes of business, particularly focusing on the largest and most uncertain reserves. For these classes we compared our estimated reserves to those booked by management, and sought to understand any significant differences; • For the remaining classes we evaluated the methodology and assumptions applied, or performed a diagnostic check to identify and investigate any anomalies; and • We assessed the disclosures in the financial statements. *Based on the work performed and evidence obtained, we consider the methodology and assumptions used to value the non-life insurance contract liabilities to be appropriate.*
Valuation for hard to value investments (Group) Refer to Audit Committee report, Accounting policies (F) and (T) and note 24 Fair Value methodology, note 26 Securitised mortgages and related assets and note 28 Financial Investments.	
The valuation of the investment portfolio involves judgement and continues to be an area of inherent risk. The risk is not uniform for all investment types and is greatest for the following, where the investments are hard to value because quoted prices are not readily available: • Commercial mortgage loans (UK Life); • Equity release and UK securitised mortgage loans (UK Life); • Collateralised loan obligations and non-recourse loans (UK Life); and • Structured bond-type investments (France Life).	We assessed the Directors' approach to valuation for these hard to value investments by performing the following procedures: • We agreed data inputs used in the valuation models to underlying documentation on a sample basis; • We evaluated the methodology and assumptions used by management, including yield curves, discounted cash flows, property growth rates, longevity and liquidity premiums as relevant to each asset class; • We tested the operation of data integrity and change management controls for the valuation models, which we baseline every three years; • Using our valuation experts, we performed independent valuations for a sample of collateralised loans, non-recourse loans and structured bonds; and • We assessed the disclosures in the financial statements. *Based on the work performed and the evidence obtained, we consider the methodology and assumptions used by management to value hard to value assets to be appropriate.*

Key audit matter	How our audit addressed the key audit matter
Valuation of specific UK Life provisions (Group) Refer to Audit Committee report, Accounting policies (AA) and note 51 Pension deficits and other provisions (b) Movements on restructuring and other provisions.	
The valuation of product governance provisions involves significant judgement. Given the historic nature of these provisions, information to calculate redress amounts can be limited. There were two material provisions held at the year end at UK Life. The first provision relates to advised sales by Friends Provident. The valuation of this provision involves a high degree of judgement due to the time elapsed since the advice was given. The estimate of the provision could change substantially over time as specific case investigations continue and new information is obtained. The second provision relates to past communications to a specific sub-set of pension policyholders on a product sold between 1985 and 1989 by an entity acquired by the Group through the purchase of Friends Life. Specifically, these policyholders may not have been adequately informed of switching options into with-profit funds that were available to them. The valuation of the provision involves a high degree of judgement and estimation uncertainty due to the dependence on decisions made by customers.	We assessed management's approach to valuation for these provisions by performing the following procedures: • We understood management's approach to identifying product governance provisions; • We assessed these product governance provisions against the IAS 37 recognition criteria; • We evaluated the methodology and key assumptions used by management, including the populations of policies affected and the redress factor applied; • We reviewed material assumptions, tested a sample of customer calculations used to determine the assumptions and agreed inputs in these calculations to supporting documentation; and • We assessed the adequacy of the disclosure in the financial statements. In respect of the first provision, we also assessed management's approach to valuation of the provision by performing the following procedure: • We assessed the expertise and independence of management's experts. In respect of the second provision, we also assessed management's approach to valuation of the provision by performing the following procedure: • We used auditors' experts to assess certain key assumptions to confirm whether they were based on regulatory expectations. *Based on the work performed and the evidence obtained, we consider the valuation of the provisions to be appropriate.*

We determined that there were no key audit matters applicable to the Company to communicate in our report.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the Group and the Company, the financial reporting process and controls, and the industries in which they operate.

Using the outputs of our risk assessment, along with our understanding of Aviva, we scoped our audit based on the significance of the results and financial position of individual components relative to the Group result and financial position. In doing so, we also considered qualitative factors and ensured we obtained sufficient coverage across all financial statement line items in the consolidated financial statements. Our scoping provided us with audit coverage of 86% for IFRS profit before tax (2018: 94%) and 79% of Group adjusted operating profit before tax attributable to shareholders' profits (*2018: 80%*). We also obtained audit coverage of 83% for Gross Written Premiums (*2018: 83%*) and 83% for Total Assets (*2018: 82%*).

The Group's primary reporting format aggregates individual operating segments into market reporting lines with supplementary information being given by business activity. The IFRS 8 operating segments or 'markets' of the Group are United Kingdom (Life and General Insurance), France, Poland, 'Italy, Ireland, Spain and Other', Canada, Asia, Aviva Investors and 'Other group activities'. Individual components that are used in our risk assessment are a more granular subset of the Group's operating segments. In establishing the overall approach to the Group audit, we determined the type of work that needed to be performed at each of the components by us, as the Group audit team, or auditors of the components within PwC UK or from other PwC network firms operating under our instruction.

As the Group audit team, we determined the level of involvement required at those components to be able to conclude whether sufficient and appropriate audit evidence had been obtained as a basis for our opinion on the consolidated financial statements as a whole. In our role as Group auditors, we exercised oversight of the work performed by auditors of the components including performing the following procedures:

- Maintained an active dialogue with reporting component audit teams throughout the year, including holding a workshop for those teams in London during the planning phase of the audit;
- Visited all in-scope components and undertook a detailed review of audit working papers;
- Attended meetings with local management; and
- Attended Audit Committee meetings for certain in-scope components.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Company financial statements
Overall materiality	£158.0 million *(2018: £156.0 million)*.	£47.8 million *(2018: £105.0 million)*.
How we determined it	5% of Group adjusted operating profit before tax attributable to shareholders' profits.	5% of Profit for the year before tax.
Rationale for benchmark applied	In determining our materiality, we considered financial metrics which we believed to be relevant, and concluded, consistent with the prior year that Group adjusted operating profit before tax attributable to shareholders' profit was the most relevant benchmark. Group adjusted operating profit presents a longer-term assessment of the performance of the entity which is more in line with the operations and time horizons of an insurer where insurance contracts and customer relationships span over multiple years. We draw attention to Accounting policy (B), which describes amendments made to the definition of this metric during the period. The benchmark we have used has been updated for these amendments.	In determining our materiality, we considered financial metrics which we believed to be relevant, and concluded, consistent with the prior year that profit before tax was the most relevant benchmark as the Company is profit-orientated and users of the financial statements will be focused on this benchmark.

For each component in the scope of our Group audit, we allocated a materiality that is less than our overall Group materiality. The range of materiality allocated across components was between £20 million and £145 million. Certain components were audited to a local statutory audit materiality that was also less than our overall Group materiality.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above £7 million (Group audit) (*2018: £7 million*) and £2.4 million (Company audit) (*2018: £5.2 million*) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Going concern

In accordance with ISAs (UK) we report as follows:

Reporting obligation	Outcome
We are required to report if we have anything material to add or draw attention to in respect of the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the directors' identification of any material uncertainties to the Group's and the Company's ability to continue as a going concern over a period of at least twelve months from the date of approval of the financial statements.	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's and Company's ability to continue as a going concern. For example, the terms of the United Kingdom's withdrawal from the European Union are not clear, and it is difficult to evaluate all of the potential implications on the Group and Company's business, customers, suppliers and the wider economy.
We are required to report if the directors' statement relating to Going Concern in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	We have nothing to report.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements 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 based on these responsibilities.

With respect to the Strategic Report and Directors' and Corporate Governance Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, the Companies Act 2006, (CA06), ISAs (UK) and the Listing Rules of the Financial Conduct Authority (FCA) require us also to report certain opinions and matters as described below (required by ISAs (UK) unless otherwise stated).

Strategic report and Directors' and corporate governance report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic report and Directors' and Corporate Governance Report for the year ended 31 December 2019 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements. (CA06)

In light of the knowledge and understanding of the Group and Company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic report and Directors' and Corporate Governance Report. (CA06)

The directors' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

We have nothing material to add or draw attention to regarding:

- The directors' confirmation on page 65 of the Annual Report that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity;
- The disclosures in the Annual Report that describe those risks and explain how they are being managed or mitigated; and
- The directors' explanation on page 81 of the Annual Report as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We have nothing to report having performed a review of the directors' statement that they have carried out a robust assessment of the principal risks facing the Group and statement in relation to the longer-term viability of the Group. Our review was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the UK Corporate Governance Code (the 'Code'); and considering whether the statements are consistent with the knowledge and understanding of the Group and Company and their environment obtained in the course of the audit. (Listing Rules)

Other Code Provisions

We have nothing to report in respect of our responsibility to report when:

- The statement given by the directors, on page 82, that they consider the Annual report taken as a whole to be fair, balanced and understandable, and provides the information necessary for the members to assess the Group's and the Company's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and the Company obtained in the course of performing our audit;
- The section of the Annual report on page 73 describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; and
- The directors' statement relating to the Company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified, under the Listing Rules, for review by the auditors.

Directors' Remuneration

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006. (CA06)

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Directors' Responsibilities Statement set out on page 82, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole 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 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 economic decisions of users taken on the basis of these financial statements.

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

Use of this report
This report, including the opinions, has been prepared for and only for the Company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting
Under the Companies Act 2006 we are required to report to you if, in our opinion:
- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the Company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the Company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment
Following the recommendation of the audit committee, we were appointed by the members on 3 May 2012 to audit the financial statements for the year ended 31 December 2012 and subsequent financial periods. The period of total uninterrupted engagement is 8 years, covering the years ended 31 December 2012 to 31 December 2019.

Andrew Kail (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London
4 March 2020

1 The maintenance and integrity of the Aviva plc website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly the auditors accept no responsibility for any changes that may have occurred to the full annual financial statements since they were initially presented on the website.
2 Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Aviva plc (the 'Company'), a public limited company incorporated and domiciled in the United Kingdom (UK), together with its subsidiaries (collectively, the 'Group' or 'Aviva') transacts life assurance and long-term savings business, fund management and most classes of general insurance and health business through its subsidiaries, joint ventures, associates and branches in the UK, Ireland, continental Europe, Canada and Asia.

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all years presented, unless otherwise stated.

(A) Basis of preparation

The consolidated financial statements and those of the Company have been prepared and approved by the Directors in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union (EU), and those parts of the Companies Act 2006 applicable to those reporting under IFRS. The consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of land and buildings, investment property, available-for-sale financial assets, and financial assets and financial liabilities (including derivative instruments) at fair value through profit or loss.

In accordance with IFRS 4 *Insurance Contracts*, the Group has applied existing accounting practices for insurance and participating investment contracts, modified as appropriate to comply with the IFRS framework and applicable standards. Further details are given in accounting policy L.

Items included in the financial statements of each of the Group's entities are measured in the currency of the primary economic environment in which that entity operates (the functional currency). The consolidated financial statements are stated in pounds sterling, which is the Company's functional and presentational currency. Unless otherwise noted, the amounts shown in these financial statements are in millions of pounds sterling (£m). The separate financial statements of the Company are on pages 264 to 273.

Comparative figures have been restated for adjustments as detailed in note 1.

New standards, interpretations and amendments to published standards that have been adopted by the Group and/or the Company

The Group and/or the Company has adopted the following amendments to standards which became effective for the annual reporting period beginning on 1 January 2019:

(i) IFRS 16, Leases

In January 2016, the IASB published IFRS 16 *Leases*. This standard replaces IAS 17 *Leases* and applies to annual reporting periods beginning on or after 1 January 2019. The standard has been endorsed by the EU.

The adoption of IFRS 16 has resulted in an update to the Group's stated accounting policy for leases. The standard has introduced a definition of a lease with a single lessee accounting model, eliminating the previous classification of either operating or finance leases. Lessees are required to recognise lease assets and liabilities on the statement of financial position for all leases, with the exception of short-term and low-value leases. Further information can be found in accounting policy Z.

The Group has chosen to adopt the modified retrospective approach on transition permitted by IFRS 16. This approach does not require prior period comparatives to be restated, and the impact of adoption of the standard on retained earnings is shown as an adjustment to opening retained earnings. On transition, and where applicable, the Group has applied the following practical expedients:

- Applied a single discount rate to a portfolio of leases with reasonably similar characteristics;
- Relied on existing assessments on whether leases are onerous as an alternative to performing an impairment review. Where such leases existed, the onerous lease provision held at 31 December 2018 was offset against the initial right-of-use asset at the date of initial application as permitted by IFRS 16;
- Excluded initial direct costs for the measurement of the right-of-use asset at the date of initial application; and
- Used hindsight in determining the lease term where the contract contains options to extend or terminate the lease.

The Group has reviewed existing service and outsourcing contracts to determine whether they are either a lease or contain a lease at the date of initial application. This has not resulted in any additional contracts being recognised as leases in the statement of financial position.

Application of the modified retrospective approach on transition has resulted in a reduction of retained earnings of £110 million at 1 January 2019. This reflects the fact that the right-of-use assets and lease liabilities amortise to nil at different rates over the lease term. A higher initial amortisation of the right-of-use asset compared to the lease liability results in the asset value being lower than the lease liability during the lease term, with the difference between the two generally converging to nil as the lease term ends. There have been corresponding increases in the value of assets (£434 million) and liabilities (£544 million), representing the right-of-use assets and liabilities, net of any tax impacts, not previously recognised on the balance sheet in accordance with IAS 17. There has been no material impact on profit before tax.

The weighted average discount rate applied to the lease liabilities recognised at 1 January 2019 was 2.95%.

Future contractual aggregate minimum lease payments under non-cancellable operating leases, as disclosed in note 56 of the Group's 2018 annual report and accounts, were £728 million at 31 December 2018. Lease liabilities in respect of operating leases brought on to the balance sheet at 1 January 2019 following the adoption of IFRS 16 were £544 million. The balance shown at 1 January 2019 represents a present value of lease payments, whereas the figure disclosed at 31 December 2018 is the aggregated undiscounted payments. Other differences between the commitments disclosed and the opening IFRS 16 lease liabilities recognised relate primarily to amounts paid under service contracts that were included as a commitment in prior periods, but do not meet the definition of a lease under IFRS 16.

Lessor accounting remains similar to the previous approach set out in IAS 17. The Group's lessor accounting policies have not changed as a result of the introduction of IFRS 16.

Leased property classified as investment property is held at fair value and measured in accordance with IAS 40 *Investment Property*. This is consistent with the approach adopted under IAS 17.

The introduction of IFRS 16 has had no impact on the Company's financial statements.

The following amendments to existing standards and IFRIC interpretations have been issued and endorsed by the EU, are effective from 1 January 2019 or earlier, and do not have an impact on the Group's consolidated financial statements.

(ii) ***IFRIC 23, Uncertainty over Income Tax Treatments***
In June 2017, the IASB published IFRIC 23 *Uncertainty over Income Tax Treatments*. The standard is effective for annual reporting beginning on or after 1 January 2019.

(iii) ***Amendments to IAS 19 – Plan Amendment, Curtailment or Settlement***
In February 2018, the IASB published *Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)*. The amendments are effective for annual reporting beginning on or after 1 January 2019.

(iv) ***Amendments to IAS 28: Long-term Interests in Associates and Joint Ventures***
In October 2017, the IASB published *Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)*. The amendments are effective for annual reporting beginning on or after 1 January 2019.

(v) ***Annual Improvements to IFRS Standards 2015-2017 Cycle***
These improvements consist of amendments to four IFRSs including IFRS 3 *Business Combinations*, IFRS 11 *Joint Arrangements*, IAS 12 *Income taxes* and IAS 23 *Borrowing Costs*. The amendments are effective for annual reporting beginning on or after 1 January 2019.

Standards, interpretations and amendments to published standards that are not yet effective and have not been adopted early by the Group

The following new standards and amendments to existing standards have been issued, are not yet effective for the Group and have not been adopted early by the Group:

(i) ***IFRS 17, Insurance Contracts***
In May 2017, the IASB published IFRS 17 *Insurance Contracts*, a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. Once effective, IFRS 17 will replace IFRS 4 that was issued in 2005. IFRS 17 applies to all types of insurance contracts as well as to certain financial instruments with discretionary participation features. In contrast to the requirements in IFRS 4, which are largely based on grandfathering of previous local accounting policies, IFRS 17 provides a comprehensive and consistent approach to insurance contracts. The core of IFRS 17 is the general model, supplemented by a specific adaption for contracts with direct participation features (the variable fee approach) and a simplified approach (the premium allocation approach) mainly for short-duration contracts.

The main features of the new accounting model for insurance contracts are, as follows: the measurement of the present value of future cash flows incorporating an explicit risk adjustment and remeasured at each reporting period (the fulfilment cash flows); a contractual service margin that is equal and opposite to any day one gain in the fulfilment cash flows of a group of contracts, representing the unearned profit of the insurance contracts to be recognised in profit or loss over the service period (coverage period); the presentation of insurance revenue and insurance service expenses in the statement of comprehensive income based on the concept of insurance services provided during the period; and extensive disclosures to provide information on the recognised amounts from insurance contracts and the nature and extent of risks arising from these contracts.

The impact of the adoption of IFRS 17 significantly impacts the measurement and presentation of the contracts in scope of the standard. Following the publication of an Exposure Draft of proposed amendments to IFRS 17 in June 2019, it is expected that the standard will apply to annual reporting periods beginning on or after 1 January 2022 at the earliest. The final standard is due to be published mid-2020 and remains subject to endorsement by the EU and the UK. We note the UK's endorsement procedure, following departure from the EU, remains under development through the transition period to the end of December 2020.

(ii) ***IFRS 9, Financial Instruments***
In September 2016, the IASB published amendments to IFRS 4 *Insurance Contracts* that addressed the accounting consequences of the application of IFRS 9 to insurers prior to implementing IFRS 17. The amendments introduced two options for insurers: the deferral approach and the overlay approach. The deferral approach provides an entity, if eligible, with a temporary exemption from applying IFRS 9. The overlay approach allows an entity to remove from profit or loss the effects of some of the accounting mismatches that may occur before the new insurance contracts standard is applied. The Group has met the eligibility requirements of the deferral approach as set out below and has opted to apply this deferral from 1 January 2018. The Group has however been required to apply the additional disclosure requirements of IFRS 9 which are set out in note 54 and note 60.

Eligibility for the deferral approach was based on an assessment of the Group's liabilities as at 31 December 2015, in accordance with the date specified in the amendments to IFRS 4. At this date the Group's liabilities connected with insurance exceeded 90% of the carrying amount of the Group's total liabilities. The Group's total liabilities were £369,642 million and liabilities connected with insurance in the statement of financial position at this date primarily included insurance and participating investment contracts within the scope of IFRS 4 (£218,604 million), non-participating investment contract liabilities (£103,125 million), unallocated divisible surplus (£8,811 million), borrowings (£8,770 million), and certain amounts within payables and other financial liabilities which arise in the course of writing insurance business (£10,285 million).

In November 2018 the IASB recommended an amendment to IFRS 17 to defer the effective date to 1 January 2022. At the same time, they recommended an extension to the fixed expiry date for the temporary exemption for insurers from applying IFRS 9 until 1 January 2022. These amendments are subject to IASB's due process and were included in an exposure draft published in July 2019, with final amendments expected to be published in mid-2020.

The impact of the adoption of IFRS 9 on the Group's consolidated financial statements will be dependent on the interaction with the new insurance contracts standard, IFRS 17. As such, it is not possible to fully assess the effect of the adoption of IFRS 9. IFRS 9 has been endorsed by the EU.

IFRS 9 incorporates new classification and measurement requirements for financial assets, the introduction of an expected credit loss impairment model which will replace the incurred loss model of IAS 39, and new hedge accounting requirements. Under IFRS 9, all financial assets will be measured at either amortised cost or fair value. The basis of classification will depend on the business model and the contractual cash flow characteristics of the financial assets. The standard retains most of IAS 39's requirements for financial liabilities except for those designated at fair value through profit or loss whereby that part of the fair value changes attributable to own credit is to be recognised in other comprehensive income instead of the income statement. The hedge accounting requirements are more closely aligned with risk management practices and follow a more principle based approach.

The Company is not eligible to apply the deferral approach and has adopted IFRS 9 from 1 January 2018. IFRS 9 information relating to entities within the Group which have applied IFRS from 1 January 2018 can be found in the entities' publicly available individual financial statements.

The following new standards and amendments to existing standards have been issued, are not yet effective and are not expected to have a significant impact on the Group's consolidated financial statements:

(iii) Amendments to References to the Conceptual Framework in IFRS Standards
Published by the IASB in March 2018. The amendments are effective for annual reporting beginning on or after 1 January 2020 and were endorsed by the EU on 29 November 2019.

(iv) Amendment to IFRS 3 Business Combinations
Published by the IASB in October 2018. The amendments are effective for annual reporting beginning on or after 1 January 2020 and have not yet been endorsed by the EU.

(v) Amendment to IAS 1 and IAS 8: Definition of material
Published by the IASB in October 2018. The amendments are effective for annual reporting beginning on or after 1 January 2020 and were endorsed by the EU on 29 November 2019.

(vi) Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7
Published by the IASB in October 2019. The amendments are effective for annual reporting beginning on or after 1 January 2020 and were endorsed by the EU on 15 January 2020.

(B) Group adjusted operating profit

The long-term nature of much of the Group's operations means that, for management's decision-making and internal performance management of our operating segments, the Group focuses on Group adjusted operating profit, a non-GAAP alternative performance measure (APM) which is not bound by IFRS. The APM incorporates the expected return on investments which supports its long-term and non-long-term businesses.

Group adjusted operating profit for long-term business is based on expected investment returns on financial investments backing shareholder and policyholder funds over the reporting period, with allowance for the corresponding expected movements in liabilities. Variances between actual and expected investment returns, and the impact of changes in economic assumptions on liabilities, are disclosed separately outside Group adjusted operating profit. For non-long-term business, the total investment income, including realised and unrealised gains, is analysed between that calculated using a longer-term return and short-term fluctuations from that level. The exclusion of short-term realised and unrealised investment gains and losses from the Group adjusted operating profit APM reflects the long-term nature of much of our business and presents separately the operating profit APM which is used in managing the performance of our operating segments from the impact of economic factors. Further details of this analysis and the assumptions used are given in notes 9 and 10.

Group adjusted operating profit excludes impairment of goodwill, associates and joint ventures; amortisation and impairment of intangibles acquired in business combinations; amortisation and impairment of acquired value of in-force business; and the profit or loss on disposal and remeasurement of subsidiaries, joint ventures and associates. These items principally relate to mergers and acquisition activity which we view as strategic in nature, hence they are excluded from the operating profit APM as this is principally used to manage the performance of our operating segments when reporting to the Group's chief operating decision maker. For 2019, the Group adjusted operating profit APM has been amended and now excludes only the amortisation and impairment of intangible assets acquired in business combinations. Group adjusted operating profit now includes amortisation and impairment of internally generated intangible assets to provide more relevant information by better reflecting their operational nature. These assets include advisor platforms, digital distribution channels and claims and policy administration systems which are used to support operational activities. The 2018 comparative figures have been restated (see note 1(b)).

In addition, integration and restructuring costs are now included in Group adjusted operating profit. There is no impact on 2018 comparative figures.

Group adjusted operating profit also excludes other items, which are those items that, in the Directors' view, are required to be separately disclosed by virtue of their nature or incidence to enable a full understanding of the Group's financial performance. Details of these items, including an explanation of the rationale for their exclusion, are provided in the Alternative Performance Measures section within 'Other information'.

The Group adjusted operating profit APM should be viewed as complementary to IFRS GAAP measures. It is important to consider Group adjusted operating profit and profit before tax together to understand the performance of the business in the period.

(C) Critical accounting policies and the use of estimates

Critical accounting policies

The preparation of financial statements requires the Group to select accounting policies and make estimates and assumptions that affect items reported in the consolidated income statement, consolidated statement of financial position, other primary statements and notes to the consolidated financial statements.

The Audit Committee reviews the reasonableness of judgements and assumptions applied and the appropriateness of significant accounting policies. The significant issues considered by the Committee in the year are included within the Audit Committee Report on page 72.

The following accounting policies are those that have the most significant impact on the amounts recognised in the financial statements, with those judgements involving estimation summarised thereafter.

Item	Critical accounting judgement	Accounting policy
Consolidation	Assessment of whether the Group controls the underlying entities including consideration of its decision making authority and rights to the variable returns from the entity. As part of this assessment Aviva applies a corridor approach to consolidation thresholds, where the Group's percentage ownership in certain investment vehicles fluctuates daily.	D
Insurance and participating investment contract liabilities	Assessment of the significance of insurance risk transferred to the Group in determining whether a contract should be accounted for as insurance or investment contract. Insurance contracts are defined as those containing significant insurance risk if, and only if, an insured event could cause an insurer to make significant additional payments in any scenario, excluding scenarios that lack commercial substance, at the inception of the contract.	G
Financial investments	Classification of investments including the application of the fair value option. The Group classifies its investments as either FVTPL or AFS. The classification depends on the purpose for which the investments were acquired and is determined by local management at initial recognition.	T

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 table below sets out those items considered particularly susceptible to changes in estimates and assumptions, that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year, and the relevant accounting policy and note disclosures.

Item	Critical accounting estimates	Accounting policy	Note
Measurement of insurance and participating investment contract liabilities	Principal assumptions used in the calculation of life insurance and participating investment contract liabilities include those in respect of annuitant mortality, expenses, valuation interest rates and credit default allowances on corporate bonds and other non-sovereign credit assets.	L	44(a)
	Principal assumptions used in the calculation of general insurance and health liabilities include the discount rates used in determining our latent claim and structured settlements liabilities, and the assumption that past claims experience can be used as a basis to project future claims (estimated using a range of standard actuarial claims projection techniques).		44(b)
Fair value of financial instruments and investment property	Where quoted market prices are not available, valuation techniques are used to value financial instruments and investment property. These include broker quotes and models using both observable and unobservable market inputs. The valuation techniques involve judgement with regard to the valuation models used and the inputs to these models can lead to a range of plausible valuations for financial investments.	F,T,U	24(g)
Valuation of two specific UK Life provisions	UK Life hold provisions relating to two historical product governance issues. The amount of the provision is determined based on the Group's estimation of the expenditure required to settle the obligation at the statement of financial position date. The valuation of the provisions involves a high degree of judgement and estimation uncertainty due to either the time that has elapsed since the customer contracts were incepted or due to the dependence on decisions made by customers.	AA	51(b)

During the year management reassessed the critical estimates previously provided and, based on their assessment of qualitative and quantitative risk factors, resolved that amortisation and impairment of acquired value of in-force business (AVIF) and deferred acquisition costs (DAC) were no longer critical estimates in the context of the Group results.

(D) Consolidation principles

Subsidiaries

Subsidiaries are those entities over which the Group has control. The Group controls an investee, if and only if, the Group has all of the following:

- power over the investee,
- exposure, or rights, to variable returns from its involvement with the investee, and
- the ability to use its power over the investee to affect its returns.

The Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including: the purpose and design of an investee, relevant activities, substantive and protective rights, and voting rights and potential voting rights.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control.

Investment vehicles

In several countries, the Group has invested in a number of specialised investment vehicles such as Open-ended Investment Companies (OEICs) and unit trusts. These invest mainly in equities, bonds, cash and cash equivalents, and properties, and distribute most of their income. In determining whether the Group controls such vehicles, primary considerations include whether the Group is acting as a principal or an agent (including an assessment of the substantive removal rights of third parties) and the variability in the returns associated with the Group's aggregate economic interest in the fund (direct interest and expected management fees) relative to the total variability of returns.

Additionally, the Group's percentage ownership in these vehicles can fluctuate on a daily basis according to the level of participation of the Group and third-parties. To avoid transitory or minor changes in fund holdings (which do not reflect the wider facts and circumstances of the Group's involvement) resulting in binary changes in the consolidation conclusions, the Group takes into account the trend of ownership over a period of time. This is performed in line with the following principles:

- Where the entity is managed by a Group asset manager, and the Group's ownership holding in the entity exceeds 40 per cent, the Group is judged to have control over the entity;
- Where the entity is managed by a Group asset manager, and the Group's ownership holding in the entity is between 30 per cent and 40 per cent, the facts and circumstances of the Group's involvement in the entity are considered, in forming a judgement as to whether the Group has control over the entity. Considerations include the rights held by other parties, the Group's rights to fees from the entity, the variability in the returns associated with the Group's aggregate economic interest in the fund and the nature of the Group's exposure to variability compared with that of other investors;
- Where the entity is managed by a Group asset manager, and the Group's ownership holding in the entity is less than 30 per cent, the Group is judged to not have control over the entity.

Where the Group is deemed to control such vehicles, they are consolidated, with the interests of parties other than Aviva being classified as liabilities. These appear as 'Net asset value attributable to unitholders' in the consolidated statement of financial position.

Where the Group does not control such vehicles, and these investments are held by its insurance or investment funds, they are carried at fair value through profit or loss within financial investments in the consolidated statement of financial position, in accordance with IAS 39 *Financial Instruments: Recognition and Measurement*.

As part of their investment strategy, long-term business policyholder funds have invested in a number of property limited partnerships (PLPs), either directly or via property unit trusts (PUTs), through a mix of capital and loans. The PLPs are managed by general partners (GPs), in which the long-term business shareholder companies hold equity stakes and which themselves hold nominal stakes in the PLPs. The PUTs are managed by a Group subsidiary.

Accounting for the PUTs and PLPs as subsidiaries, joint ventures, associates or other financial investments depends on whether the Group is deemed to have control or joint control over the PUTs and PLPs' shareholdings in the GPs and the terms of each partnership agreement are considered along with other factors that determine control, as outlined above. Where the Group exerts control over a PUT or a PLP, it has been treated as a subsidiary and its results, assets and liabilities have been consolidated. Where the partnership is managed by an agreement such that there is joint control between the parties, notwithstanding that the Group's partnership share in the PLP (including its indirect stake via the relevant PUT and GP) may be lower or higher than 50%, such PUTs and PLPs have been classified as joint ventures (see below). Where the Group has significant influence over the PUT or PLP, as defined in the following section, the PUT or PLP is classified as an associate. Where the Group holds non-controlling interests in PLPs, with no significant influence or control over their associated GPs, the relevant investments are carried at fair value through profit or loss within financial investments.

Consolidation procedure

Subsidiaries are consolidated from the date the Group obtains control and are excluded from consolidation from the date the Group loses control. All intercompany transactions, balances and unrealised surpluses and deficits on transactions between Group companies have been eliminated. Accounting policies of subsidiaries are aligned on acquisition to ensure consistency with Group policies.

The Group is required to use the acquisition method of accounting for business combinations. Under this method, the Group recognises identifiable assets, liabilities and contingent liabilities at fair value, and any non-controlling interest in the acquiree. For each business combination, the Group has the option to measure the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. The excess of the consideration transferred over the fair value of the net assets of the subsidiary acquired is recorded as goodwill (see accounting policy O below). Acquisition-related costs are expensed as incurred.

Transactions with non-controlling interests that lead to changes in the ownership interests in a subsidiary but do not result in a loss of control are treated as equity transactions.

Merger accounting and the merger reserve

Prior to 1 January 2004, the date of first time adoption of IFRS, certain significant business combinations were accounted for using the 'pooling of interests method' (or merger accounting), which treats the merged groups as if they had been combined throughout the current and comparative accounting periods. Merger accounting principles for these combinations gave rise to a merger reserve in the consolidated statement of financial position, being the difference between the nominal value of new shares issued by the Parent Company for the acquisition of the shares of the subsidiary and the subsidiary's own share capital and share premium account. These transactions have not been restated, as permitted by the IFRS 1 transitional arrangements.

The merger reserve is also used where more than 90% of the shares in a subsidiary are acquired and the consideration includes the issue of new shares by the Company, thereby attracting merger relief under the Companies Act 1985 and, from 1 October 2009, the Companies Act 2006.

Associates and joint ventures

Associates are entities over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control. Generally, it is presumed that the Group has significant influence if it has between 20% and 50% of voting rights. Joint ventures are joint arrangements whereby the Group and other parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control. In a number of these, the Group's share of the underlying assets and liabilities may be greater or less than 50% but the terms of the relevant agreements make it clear that control is not exercised. Such jointly controlled entities are referred to as joint ventures in these financial statements.

Gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Losses are also eliminated, unless the transaction provides evidence of an impairment of the asset transferred between entities.

Other than investments in investment vehicles which are carried at fair value through profit or loss, investments in associates and joint ventures are accounted for using the equity method of accounting. Under this method, the cost of the investment in a given associate or joint venture, together with the Group's share of that entity's post-acquisition changes to shareholders' funds, is included as an asset in the consolidated statement of financial position. As explained in accounting policy O, the cost includes goodwill recognised on acquisition. The Group's share of their post-acquisition profit or losses is recognised in the income statement and its share of post-acquisition movements in reserves is recognised in reserves. Equity accounting is discontinued when the Group no longer has significant influence or joint control over the investment.

If the Group's share of losses in an associate or joint venture equals or exceeds its interest in the undertaking, the Group does not recognise further losses unless it has incurred obligations or made payments on behalf of the entity.

The Company's investments

In the Company's statement of financial position, subsidiaries, associates and joint ventures are stated at cost less impairment. Investments are reviewed annually to test whether any indicators of impairment exist. Where there is objective evidence of such an asset being impaired the investment is impaired to its recoverable value and any unrealised loss is recorded in the income statement.

(E) Foreign currency translation

Income statements and cash flows of foreign entities are translated into the Group's presentation currency at average exchange rates for the year while their statements of financial position are translated at the year-end exchange rates. Exchange differences arising from the translation of the net investment in foreign subsidiaries, associates and joint ventures, and of borrowings and other currency instruments designated as hedges of such investments, are recognised in other comprehensive income and taken to the currency translation reserve within equity. On disposal of a foreign entity, such exchange differences are transferred out of this reserve and are recognised in the income statement as part of the gain or loss on sale. The cumulative translation differences were deemed to be zero at the transition date to IFRS.

Foreign currency transactions are accounted for at the exchange rates prevailing at the date of the transactions. Gains and losses resulting from the settlement of such transactions, and from the translation of monetary assets and liabilities denominated in foreign currencies, are recognised in the income statement.

Translation differences on debt securities and other monetary financial assets measured at fair value and designated as held at fair value through profit or loss (FVTPL) (see accounting policy T) are included in foreign exchange gains and losses in the income statement. For monetary financial assets designated as available for sale (AFS), translation differences are calculated as if they were carried at amortised cost and so are recognised in the income statement, while foreign exchange differences arising from fair value gains and losses are recognised in other comprehensive income and included in the investment valuation reserve within equity. Translation differences on non-monetary items, such as equities which are designated as FVTPL, are reported as part of the fair value gain or loss, whereas such differences on AFS equities are included in the investment valuation reserve.

(F) Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. This presumes that the transaction takes place in the principal (or most advantageous) market under current market conditions. Fair value is a market-based measure and in the absence of observable market prices in an active market, it is measured using the assumptions that market participants would use when pricing the asset or liability.

The fair value of a non-financial asset is determined based on its highest and best use from a market participant's perspective. When using this approach, the Group takes into account the asset's use that is physically possible, legally permissible and financially feasible.

The best evidence of the fair value of a financial instrument at initial recognition is normally the transaction price i.e. the fair value of the consideration given or received. In certain circumstances, the fair value at initial recognition may differ from the transaction price. If the fair value is evidenced by comparison with other observable current market transactions in the same instrument (i.e. without modification or repackaging), or is based on a valuation technique whose variables include only data from observable markets, then the difference between the fair value at initial recognition and the transaction price is recognised as a gain or loss in the income statement. When unobservable market data has a significant impact on the valuation of financial instruments, the difference between the fair value at initial recognition and the transaction price is not recognised immediately in the income statement, but deferred and recognised in the income statement on an appropriate basis over the life of the instrument but no later than when the valuation is supported wholly by observable market data or the transaction is closed out or otherwise matured.

If an asset or a liability measured at fair value has a bid price and an ask price, the price within the bid-ask spread that is most representative of fair value in the circumstances is used to measure fair value.

(G) Product classification

Insurance contracts are defined as those containing significant insurance risk if, and only if, an insured event could cause an insurer to make significant additional payments in any scenario, excluding scenarios that lack commercial substance, at the inception of the contract. Such contracts remain insurance contracts until all rights and obligations are extinguished or expire. Contracts can be reclassified as insurance contracts after inception if insurance risk becomes significant. Any contracts not considered to be insurance contracts under IFRS are classified as investment contracts. Some insurance and investment contracts 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.

As noted in accounting policy A, insurance contracts and participating investment contracts in general continue to be measured and accounted for under existing accounting practices at the later of the date of transition to IFRS ('grandfathered') or the date of the acquisition of the entity, in accordance with IFRS 4. IFRS accounting for insurance contracts in UK companies was grandfathered at the date of transition to IFRS and determined in accordance with the Statement of Recommended Practice issued by the Association of British Insurers (subsequently withdrawn by the ABI in 2015).

In certain businesses, the accounting policies or accounting estimates have been changed, as permitted by IFRS 4 and IAS 8 respectively, to remeasure designated insurance liabilities to reflect current market interest rates and changes to regulatory capital requirements. When accounting policies or accounting estimates have been changed, and adjustments to the measurement basis have occurred, the financial statements of that year will have disclosed the impacts accordingly. One such example is our adoption of Financial Reporting Standard 27 *Life Assurance* (FRS 27) which was issued by the UK's Accounting Standards Board (ASB) in December 2004 (subsequently withdrawn by the ASB in 2015).

(H) Premiums earned

Premiums on long-term insurance contracts and participating investment contracts are recognised as income when receivable, except for investment-linked premiums which are accounted for when the corresponding liabilities are recognised. For single premium business, this is the date from which the policy is effective. For regular premium contracts, receivables are recognised at the date when payments are due. Premiums are shown before deduction of commission and before any sales-based taxes or duties. Where policies lapse due to non-receipt of premiums, then all the related premium income accrued but not received from the date they are deemed to have lapsed is offset against premiums.

General insurance and health premiums written reflect business incepted during the year, and exclude any sales-based taxes or duties. Unearned premiums are those proportions of the premiums written in a year that relate to periods of risk after the statement of financial position date. Unearned premiums are calculated on either a daily or monthly pro rata basis. Premiums collected by intermediaries, but not yet received, are assessed based on estimates from underwriting or past experience, and are included in premiums written.

Deposits collected under investment contracts without a discretionary participation feature (non-participating contracts) are not accounted for through the income statement, except for the fee income (covered in accounting policy I) and the investment income attributable to those contracts, but are accounted for directly through the statement of financial position as an adjustment to the investment contract liability.

(I) Other investment contract fee revenue

Investment contract policyholders are charged fees for policy administration, investment management, surrenders or other contract services. The fees may be for fixed amounts or vary with the amounts being managed, and will generally be charged as an adjustment to the policyholder's balance. Fees related to investment management services are recognised as revenue over time, as performance obligations are satisfied. In most cases this revenue is recognised in the same period in which the fees are charged to the policyholder. Fees that are related to services to be provided in future periods are deferred and recognised when the performance obligation is fulfilled. Variable consideration, such as performance fees and commission subject to clawback arrangements, is not recognised as revenue until it is reasonably certain that no significant reversal of amounts recognised would occur.

Initiation and other 'front-end' fees (fees that are assessed against the policyholder balance as consideration for origination of the contract) are charged on some non-participating investment and investment fund management contracts. Where the investment contract is recorded at amortised cost, these fees are deferred and recognised over the expected term of the policy by an adjustment to the effective yield. Where the investment contract is measured at fair value, the front-end fees that relate to the provision of investment management services are deferred and recognised as the services are provided. Origination fees are recognised immediately where the sale of fund interests represent a separate performance obligation.

(J) Other fee and commission income

Other fee and commission income consists primarily of fund management fees, distribution fees from mutual funds, commissions on reinsurance ceded, commission revenue from the sale of mutual fund shares and transfer agent fees for shareholder record keeping. Reinsurance commissions receivable are deferred in the same way as acquisition costs, as described in accounting policy X. All other fee and commission income is recognised over time as the services are provided.

(K) Net investment income

Investment income consists of dividends, interest and rents receivable for the year, movements in amortised cost on debt securities, realised gains and losses, and unrealised gains and losses on FVTPL investments (as defined in accounting policy T). Dividends on equity securities are recorded as revenue on the ex-dividend date. Interest income is recognised as it accrues, taking into account the effective yield on the investment. It includes the interest rate differential on forward foreign exchange contracts. Rental income is recognised on an accruals basis, and is recognised on a straight line basis unless there is compelling evidence that benefits do not accrue evenly over the period of the lease.

A gain or loss on a financial investment is only realised on disposal or transfer, and is the difference between the proceeds received, net of transaction costs, and its original cost or amortised cost, as appropriate.

Unrealised gains and losses, arising on investments which have not been derecognised as a result of disposal or transfer, represent the difference between the carrying value at the year end and the carrying value at the previous year end or purchase value during the year, less the reversal of previously recognised unrealised gains and losses in respect of disposals made during the year. Realised gains or losses on investment property represent the difference between the net disposal proceeds and the carrying amount of the property.

(L) Insurance and participating investment contract liabilities

Claims

Long-term business claims reflect the cost of all claims arising during the year, including claims handling costs, as well as policyholder bonuses accrued in anticipation of bonus declarations.

General insurance and health claims incurred include all losses occurring during the year, whether reported or not, related handling costs, a reduction for the value of salvage and other recoveries, and any adjustments to claims outstanding from previous years.

Claims handling costs include internal and external costs incurred in connection with the negotiation and settlement of claims. Internal costs include all direct expenses of the claims department and any part of the general administrative costs directly attributable to the claims function.

Long-term business provisions

Under current IFRS requirements, insurance and participating investment contract liabilities are measured using accounting policies consistent with those adopted previously under existing accounting practices, with the exception of liabilities remeasured to reflect current market interest rates to be consistent with the value of the backing assets, and those relating to UK with-profits and non-profit contracts.

The long-term business provisions are calculated separately for each life operation, based either on local regulatory requirements or existing local GAAP (at the later of the date of transition to IFRS or the date of the acquisition of the entity); and actuarial principles consistent with those applied in each local market. Each calculation represents a determination within a range of possible outcomes, where the assumptions used in the calculations depend on the circumstances prevailing in each life operation. The principal assumptions are disclosed in note 43(a). For the UK with-profits funds, FRS 27 required liabilities to be calculated on the realistic basis adjusted to remove the shareholders' share of future bonuses. FRS 27 was grandfathered from UK regulatory requirements prior to the adoption of Solvency II. For UK non-profit insurance contracts, the liabilities are calculated using the gross premium valuation method. This method uses the amount of contractual premiums payable and includes explicit assumptions for interest and discount rates, mortality and morbidity, persistency and future expenses. These assumptions are set on a prudent basis and can vary by contract type and reflect current and expected future experience. These estimates depend upon the outcome of future events and may need to be revised as circumstances change. The liabilities are based on the UK regulatory requirements prior to the adoption of Solvency II, adjusted to remove certain regulatory reserves and margins in assumptions, notably for annuity business.

Unallocated divisible surplus

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 to either policyholders or shareholders has not been determined by the end of the financial year are held within liabilities as an unallocated divisible surplus.

If the aggregate carrying value of liabilities for a particular participating business fund is in excess of the aggregate carrying value of its assets, then the difference is held as a negative unallocated divisible surplus balance, subject to recoverability from margins in that fund's participating business. Any excess of this difference over the recoverable amount is charged to net income in the reporting period.

Embedded derivatives

Embedded derivatives that meet the definition of an insurance contract or correspond to options to surrender insurance contracts for a set amount (or based on a fixed amount and an interest rate) are not separately measured. All other embedded derivatives are separated and measured at fair value if they are not considered closely related to the host insurance contract or do not meet the definition of an insurance contract. Fair value reflects own credit risk to the extent the embedded derivative is not fully collateralised.

Liability adequacy

At each reporting date, an assessment is made of whether the recognised long-term business provisions are adequate, using current estimates of future cash flows. If that assessment shows that the carrying amount of the liabilities (less related assets) is insufficient in light of the estimated future cash flows, the deficiency is recognised in the income statement by setting up an additional provision in the statement of financial position.

General insurance and health provisions

Outstanding claims provisions

General insurance and health outstanding claims provisions are based on the estimated ultimate cost of all claims incurred but not settled at the statement of financial position date, whether reported or not, together with related claims handling costs. Significant delays are experienced in the notification and settlement of certain types of general insurance claims, particularly in respect of liability business, including environmental and pollution exposures, the ultimate cost of which cannot be known with certainty at the statement of financial position date. As such, booked claim provisions for general insurance and health insurance are based on the best estimate of the cost of future claim payments plus an explicit allowance for risk and uncertainty. Any estimate represents a determination within a range of possible outcomes. Further details of estimation techniques are given in note 43(b).

Provisions for latent claims and claims that are settled on an annuity type basis such as structured settlements are discounted, in the relevant currency at the reporting date, having regard to the expected settlement dates of the claims and the nature of the liabilities. The discount rate is set at the start of the accounting period with any change in rates between the start and end of the accounting period being reflected below operating profit as an economic assumption change. The range of discount rates used is described in note 43(b). Outstanding claims provisions are valued net of an allowance for expected future recoveries. Recoveries include non-insurance assets that have been acquired by exercising rights to salvage and subrogation under the terms of insurance contracts. Where material, anticipated recoveries are disclosed under receivables and not deducted from outstanding claims provisions.

Provision for unearned premiums

The proportion of written premiums, gross of commission payable to intermediaries, attributable to subsequent periods is deferred as a provision for unearned premiums. The change in this provision is taken to the income statement as recognition of revenue over the period of risk.

Liability adequacy

At each reporting date, the Group reviews its unexpired risks and carries out a liability adequacy test for any overall excess of expected claims and deferred acquisition costs over unearned premiums, using the current estimates of future cash flows under its contracts after taking account of the investment return expected to arise on assets relating to the relevant general business provisions. If these estimates show that the carrying amount of its insurance liabilities (less related deferred acquisition costs) is insufficient in light of the estimated future cash flows, the deficiency is recognised in the income statement by setting up a provision in the statement of financial position.

Other assessments and levies

The Group is subject to various periodic insurance-related assessments or guarantee fund levies. Related provisions are established where there is a present obligation (legal or constructive) as a result of a past event. Such amounts are not included in insurance liabilities but are included under 'Pension deficits and other provisions' in the statement of financial position.

(M) Non-participating investment contract liabilities

Claims

For non-participating investment contracts with an account balance, claims reflect the excess of amounts paid over the account balance released.

Contract liabilities

Deposits collected under non-participating investment contracts are not accounted for through the income statement, except for the investment income attributable to those contracts, but are accounted for directly through the statement of financial position as an adjustment to the investment contract liability.

The majority of the Group's contracts classified as non-participating investment contracts are unit-linked contracts and are measured at fair value. Certain liabilities for non-linked non-participating contracts are measured at amortised cost.

The liability's fair value is determined using a valuation technique to provide a reliable estimate of the amount for which the liability could be transferred in an orderly transaction between market participants at the measurement date, subject to a minimum equal to the surrender value. For unit-linked contracts, the fair value liability is equal to the current unit fund value, including any unfunded units. In addition, if required, non-unit reserves are held based on a discounted cash flow analysis. For non-linked contracts, the fair value liability is based on a discounted cash flow analysis, with allowance for risk calibrated to match the market price for risk.

Amortised cost is calculated as the fair value of consideration received at the date of initial recognition, less the net effect of payments such as transaction costs and front-end fees, plus or minus the cumulative amortisation (using the effective interest rate method) of any difference between that initial amount and the maturity value, and less any write-down for surrender payments. The effective interest rate is the one that equates the discounted cash payments to the initial amount. At each reporting date, the amortised cost liability is determined as the value of future best estimate cash flows discounted at the effective interest rate.

(N) Reinsurance

The Group assumes and cedes reinsurance in the normal course of business, with retention limits varying by line of business. Premiums on reinsurance assumed are recognised as revenue in the same manner as they would be if the reinsurance were considered direct business, taking into account the product classification of the reinsured business. The cost of reinsurance related to long-duration contracts is accounted for over the life of the underlying reinsured policies, using assumptions consistent with those used to account for these policies.

Where general insurance liabilities are discounted, any corresponding reinsurance assets are also discounted using consistent assumptions.

Gains or losses on buying retroactive reinsurance are recognised in the income statement immediately at the date of purchase and are not amortised. Premiums ceded and claims reimbursed are presented on a gross basis in the consolidated income statement and statement of financial position as appropriate.

Reinsurance assets primarily include balances due from both insurance and reinsurance companies for ceded insurance and investment contract liabilities. This includes balances in respect of investment contracts which are legally reinsurance contracts but do not meet the definition of a reinsurance contract under IFRS. Amounts recoverable from reinsurers are estimated in a manner consistent with the underlying contract liabilities, outstanding claims provisions or settled claims associated with the reinsured policies and in accordance with the relevant reinsurance contract.

Reinsurance of non-participating investment contracts and reinsurance contracts that principally transfer financial risk are accounted for directly through the statement of financial position. A deposit asset or liability is recognised, based on the consideration paid or received less any explicitly identified premiums or fees to be retained by the reinsured. These deposit assets or liabilities are shown within reinsurance assets in the consolidated statement of financial position.

If a reinsurance asset is impaired, the Group reduces the carrying amount accordingly and recognises that impairment loss in the income statement. A reinsurance asset is impaired if there is objective evidence, as a result of an event that occurred after initial recognition of the reinsurance asset, that the Group may not receive all amounts due to it under the terms of the contract, and the event has a reliably measurable impact on the amounts that the Group will receive from the reinsurer.

(O) Goodwill, AVIF and intangible assets

Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net assets of the acquired subsidiary, associate or joint venture at the date of acquisition. Goodwill arising on the Group's investments in subsidiaries is shown as a separate asset, while that on associates and joint ventures is included within the carrying value of those investments.

Goodwill on acquisitions prior to 1 January 2004 (the date of transition to IFRS) is carried at its book value (original cost less cumulative amortisation) on that date, less any impairment subsequently incurred. Goodwill arising before 1 January 1998 was eliminated against reserves and has not been reinstated.

Where negative goodwill arises on an acquisition, this is recognised immediately in the consolidated income statement.

Acquired value of in-force business (AVIF)

The present value of future profits on a portfolio of long-term insurance and investment contracts, acquired either directly or through the purchase of a subsidiary, is recognised as an asset.

If the AVIF results from the acquisition of an investment in a joint venture or an associate, it is held within the carrying amount of that investment. In all cases, the AVIF is amortised over the useful lifetime of the related contracts in the portfolio on a systematic basis. The rate of amortisation is chosen by considering the profile of the additional value of in-force business acquired and the expected depletion in its value.

Non-participating investment contract AVIF is reviewed for evidence of impairment, consistent with reviews conducted for other finite life intangible assets. Insurance and participating investment contract AVIF is reviewed for impairment at each reporting date as part of the liability adequacy requirements of IFRS 4 (see accounting policy L). AVIF is reviewed for evidence of impairment and impairment tested at product portfolio level by reference to a projection of future profits arising from the portfolio.

Intangible assets

Intangible assets consist primarily of contractual relationships such as access to distribution networks, customer lists and software. The economic lives of these are determined by considering relevant factors such as usage of the asset, typical product life cycles, potential obsolescence, maintenance costs, the stability of the industry, competitive position and the period of control over the assets. Finite life intangibles are amortised over their useful lives, which range from three to 30 years, using the straight-line method.

The amortisation charge for the year is included in the income statement under 'Other expenses'. For intangibles with finite lives, impairment charges will be recognised in the income statement where evidence of such impairment is observed. Intangibles with indefinite lives are subject to regular impairment testing, as described below.

Impairment testing

For impairment testing, goodwill and intangible assets with indefinite useful lives have been allocated to cash-generating units. The carrying amount of goodwill and intangible assets with indefinite useful lives is reviewed at least annually or when circumstances or events indicate there may be uncertainty over this value. Goodwill and indefinite life intangibles are written down for impairment where the recoverable amount is insufficient to support its carrying value. Further details on goodwill allocation and impairment testing are given in note 17. Any impairments are charged as expenses in the income statement.

(P) Property and equipment

Owner-occupied properties are carried at their revalued amounts, and movements are recognised in other comprehensive income and taken to a separate reserve within equity. When such properties are sold, the accumulated revaluation surpluses are transferred from this reserve to retained earnings. These properties are depreciated down to their estimated residual values over their useful lives.

This excludes owner-occupied properties held under lease arrangements, which are measured at amortised cost. Refer to accounting policy Z for further information.

All other items classed as property and equipment within the statement of financial position are carried at historical cost less accumulated depreciation.

Investment properties under construction are included within property and equipment until completion, and are stated at cost less any provision for impairment in their values until construction is completed or fair value becomes reliably measurable.

Depreciation is calculated on a straight-line basis to write down the cost of other assets to their residual values over their estimated useful lives as follows:

• Properties under construction	No depreciation
• Owner-occupied properties, and related mechanical and electrical equipment	25 years
• Motor vehicles	Three years, or lease term (up to useful life) if longer
• Computer equipment	Three to five years
• Other assets	Three to five years

The assets' residual values, useful lives and method of depreciation are reviewed regularly, and at least at each financial year end, and adjusted if appropriate. Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount. Gains and losses on disposal of property and equipment are determined by reference to their carrying amount.

Borrowing costs directly attributable to the acquisition and construction of property and equipment are capitalised. All repair and maintenance costs are charged to the income statement during the financial period in which they are incurred. The cost of major renovations is included in the carrying amount of the asset when it is probable that future economic benefits in excess of the most recently assessed standard of performance of the existing asset will flow to the Group and the renovation replaces an identifiable part of the asset. Major renovations are depreciated over the remaining useful life of the related asset.

(Q) Investment property

Investment property is held for long-term rental yields and is not occupied by the Group. Completed investment property is stated at its fair value, as assessed by qualified external valuers or by qualified staff of the Group. Changes in fair values are recorded in the income statement in net investment income.

As described in accounting policy P above, investment properties under construction are included within property and equipment, and are stated at cost less any impairment in their values until construction is completed or fair value becomes reliably measurable.

(R) Impairment of non-financial assets

Property and equipment and other non-financial assets are reviewed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised in the income statement for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of an asset's fair value less costs of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows. Non-financial assets, except goodwill which have suffered an impairment, are reviewed annually for possible reversal of the impairment.

(S) Derecognition and offset of financial assets and financial liabilities

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognised where:

- The rights to receive cash flows from the asset have expired;
- The Group retains the right to receive cash flows from the asset, but has assumed an obligation to pay them in full without material delay to a third party under a 'pass-through' arrangement; or
- The Group has transferred its rights to receive cash flows from the asset and has either transferred substantially all the risks and rewards of the asset, or has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires.

Financial assets and liabilities are offset and the net amount reported in the statement of financial position when there is a currently enforceable legal right to set off the recognised amounts and there is the ability and intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

(T) Financial investments

The Group classifies its investments as either FVTPL or AFS. The classification depends on the purpose for which the investments were acquired, and is determined by local management at initial recognition. The FVTPL category has two subcategories – those that meet the definition as being held for trading and those the Group chooses to designate as FVTPL (referred to in this accounting policy as 'other than trading') upon initial recognition.

In general, the other than trading category is used as, in most cases, the Group's investment or risk management strategy is to manage its financial investments on a fair value basis. Debt securities and equity securities, which the Group acquires with the intention to resell in the short term, are classified as trading, as are non-hedge derivatives (see accounting policy U below). The AFS category is used where the relevant long-term business liability (including shareholders' funds) is passively managed, as well as in certain fund management and non-insurance operations.

Purchases and sales of investments are recognised on the trade date, which is the date that the Group commits to purchase or sell the assets, at their fair values. Debt securities are initially recorded at their fair value, which is taken to be amortised cost, with amortisation credited or charged to the income statement. Investments classified as trading, other than trading and AFS, are subsequently carried at fair value. Changes in the fair value of trading and other than trading investments are included in the income statement in the period in which they arise.

Changes in the fair value of securities classified as AFS are recognised in other comprehensive income and recorded in a separate investment valuation reserve within equity. When securities classified as AFS are sold or impaired, the accumulated fair value adjustments are transferred out of the investment valuation reserve to the income statement with a corresponding movement through other comprehensive income.

Impairment

The Group reviews the carrying value of its AFS investments on a regular basis. If the carrying value of an AFS investment is greater than the recoverable amount, the carrying value is reduced through a charge to the income statement in the period of impairment. The following policies are used to determine the level of any impairment, some of which involve considerable judgement.

AFS debt securities

An AFS debt security is impaired if there is objective evidence that a loss event has occurred which has impaired the expected cash flows, i.e. where all amounts due according to the contractual terms of the security are not considered collectible. An impairment charge, measured as the difference between the security's fair value and amortised cost, is recognised when the issuer is known to be either in default or in financial difficulty. Determining when an issuer is in financial difficulty requires the use of judgement, and we consider a number of factors including industry risk factors, financial condition, liquidity position and near-term prospects of the issuer, credit rating declines and a breach of contract. A decline in fair value below amortised cost due to changes in risk-free interest rates does not necessarily represent objective evidence of a loss event.

For securities identified as being impaired, the cumulative unrealised loss previously recognised within the investment valuation reserve is transferred to realised losses for the year, with a corresponding movement through other comprehensive income. Any subsequent increase in fair value of these impaired securities is recognised in other comprehensive income and recorded in the investment valuation reserve unless this increase represents a decrease in the impairment loss that can be objectively related to an event occurring after the impairment loss was recognised in the income statement. In such an event, the reversal of the impairment loss is recognised as a gain in the income statement.

AFS equity securities

An AFS equity security is considered impaired if there is objective evidence that the cost may not be recovered. In addition to qualitative impairment criteria, such evidence includes a significant or prolonged decline in fair value below cost. Unless there is evidence to the contrary, an equity security is considered impaired if the decline in fair value relative to cost has been either at least 20% for a continuous six-month period or more than 40% at the end of the reporting period, or been in an unrealised loss position for a continuous period of more than 12 months at the end of the reporting period. We also review our largest equity holdings for evidence of impairment, as well as individual equity holdings in industry sectors known to be in difficulty. Where there is objective evidence that impairment exists, the security is written down regardless of the size of the unrealised loss.

For securities identified as being impaired, the cumulative unrealised loss previously recognised within the investment valuation reserve is transferred to realised losses for the year with a corresponding movement through other comprehensive income. Any subsequent increase in fair value of these impaired securities is recognised in other comprehensive income and recorded in the investment valuation reserve.

Reversals of impairments on any of these assets are only recognised where the decrease in the impairment can be objectively related to an event occurring after the write-down (such as an improvement in the debtor's credit rating), and are not recognised in respect of equity instruments.

(U) Derivative financial instruments and hedging

Derivative financial instruments include foreign exchange contracts, interest rate futures, currency and interest rate swaps, currency and interest rate options (both written and purchased) and other financial instruments that derive their value mainly from underlying interest rates, foreign exchange rates, credit or equity indices, commodity values or equity instruments.

All derivatives are initially recognised in the statement of financial position at their fair value, which usually represents their cost. They are subsequently remeasured at their fair value, with the method of recognising movements in this value depending on whether they are designated as hedging instruments and, if so, the nature of the item being hedged. 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 carried as assets when the fair values are positive and as liabilities when the fair values are negative. Premiums paid for derivatives are recorded as an asset on the statement of financial position at the date of purchase, representing their fair value at that date.

Derivative contracts may be traded on an exchange or over-the-counter (OTC). Exchange-traded derivatives are standardised and include certain futures and option contracts. OTC derivative contracts are individually negotiated between contracting parties and include forwards, swaps, caps and floors. Derivatives are subject to various risks including market, liquidity and credit risk, similar to those related to the underlying financial instruments. Many OTC transactions are contracted and documented under International Swaps and Derivatives Association master agreements or their equivalent, which are designed to provide legally enforceable set-off in the event of default, reducing the Group's exposure to credit risk.

The notional or contractual amounts associated with derivative financial instruments are not recorded as assets or liabilities on the statement of financial position as they do not represent the fair value of these transactions. These amounts are disclosed in note 60(b).

The Group has collateral agreements in place between the individual Group entities and relevant counterparties. Accounting policy W covers collateral, both received and pledged, in respect of these derivatives.

Interest rate and currency swaps

Interest rate swaps are contractual agreements between two parties to exchange fixed rate and floating rate interest by means of periodic payments, calculated on a specified notional amount and defined interest rates. Most interest rate swap payments are netted against each other, with the difference between the fixed and floating rate interest payments paid by one party. Currency swaps, in their simplest form, are contractual agreements that involve the exchange of both periodic and final amounts in two different currencies. Both types of swap contracts may include the net exchange of principal. Exposure to gain or loss on these contracts will increase or decrease over their respective lives as a function of maturity dates, interest and foreign exchange rates, and the timing of payments.

Interest rate futures, forwards and options contracts

Interest rate futures are exchange-traded instruments and represent commitments to purchase or sell a designated security or money market instrument at a specified future date and price. Interest rate forward agreements are OTC contracts in which two parties agree on an interest rate and other terms that will become a reference point in determining, in concert with an agreed notional principal amount, a net payment to be made by one party to the other, depending upon what rate prevails at a future point in time. Interest rate options, which consist primarily of caps and floors, are interest rate protection instruments that involve the potential obligation of the seller to pay the buyer an interest rate differential in exchange for a premium paid by the buyer. This differential represents the difference between current rate and an agreed rate applied to a notional amount. Exposure to gain or loss on all interest rate contracts will increase or decrease over their respective lives as interest rates fluctuate. Certain contracts, known as swaptions, contain features which can act as swaps or options.

Foreign exchange contracts

Foreign exchange contracts, which include spot, forward and futures contracts, represent agreements to exchange the currency of one country for the currency of another country at an agreed price and settlement date. Foreign exchange option contracts are similar to interest rate option contracts, except that they are based on currencies, rather than interest rates.

Hedge accounting

Hedge accounting is applied to certain transactions which meet the criteria set out in IAS 39, in order to mitigate the Group's exposure to risk. At the inception of the transaction, the Group documents the relationship between the hedging instrument and the hedged item, as well as the risk management objective and the strategy for undertaking the hedge transaction. The Group also documents its assessment of whether the hedge is expected to be, and has been, highly effective in offsetting the risk in the hedged item, both at inception and on an ongoing basis.

Changes in the fair value of hedging instruments that are designated and qualify as a hedge of a net investment in a foreign operation (net investment hedges) or a hedge of a future cash flow attributable to a recognised asset or liability, a highly probable forecast transaction or a firm commitment (cash flow hedges), and that prove to be highly effective in relation to the hedged risk, are recognised in other comprehensive income and a separate reserve within equity. Gains and losses accumulated in this reserve are included in the income statement on disposal of the relevant investment or occurrence of the cash flow as appropriate.

Changes in the fair value of hedging instruments that are designated and qualify as a hedge of the fair value of a recognised asset or liability (fair value hedges) are recognised in the income statement. The gain or loss on the hedged item that is attributable to the hedged risk is recognised in the income statement. This applies even if the hedged item is an available for sale financial asset or is measured at amortised cost. If a hedging relationship no longer meets the criteria for hedge accounting, the cumulative adjustment made to the carrying amount of the hedged item is amortised to the income statement, based on a recalculated effective interest rate over the residual period to maturity. In cases where the hedged item has been derecognised, the cumulative adjustment is released to the income statement immediately.

The Group does not currently apply the specific hedge accounting rules to its derivative transactions which are treated as derivatives held for trading. The fair value gains and losses on these derivatives are recognised immediately in net investment income.

(V) Loans

Loans with fixed maturities, including policyholder loans, mortgage loans on investment property, securitised mortgages and collateral loans, are recognised when cash is advanced to borrowers. Certain loans are carried at their unpaid principal balances and adjusted for amortisation of premium or discount, non-refundable loan fees and related direct costs. These amounts are deferred and amortised over the life of the loan as an adjustment to loan yield using the effective interest rate method.

However, for the majority of mortgage loans, the Group has taken advantage of the fair value option under IAS 39 to present the mortgages, associated borrowings and derivative financial instruments at fair value, since they are managed as a portfolio on a fair value basis. This presentation provides more relevant information and eliminates any accounting mismatch that would otherwise arise from using different measurement bases for these three items. The fair values of these mortgages are estimated using discounted cash flow models, based on a risk-adjusted discount rate which reflects the risks associated with these products. They are revalued at each period end, with movements in their fair values being taken to the income statement.

At each reporting date, we review loans carried at amortised cost for objective evidence that they are impaired and uncollectable, either at the level of an individual security or collectively within a group of loans with similar credit risk characteristics. To the extent that a loan is uncollectable, it is written down as impaired to its recoverable amount, measured as the present value of expected future cash flows discounted at the original effective interest rate of the loan, taking into account the fair value of the underlying collateral through an impairment provision account. Subsequent recoveries in excess of the loan's written-down carrying value are credited to the income statement.

The Company classifies and measures loans at either amortised cost, fair value through other comprehensive income, or fair value through profit or loss based on the outcome of an assessment of the Company's business model for managing financial assets and the extent to which the financial assets' contractual cash flows are solely payment of principal and interest.

The Company calculates expected credit losses for all financial assets held at either amortised cost or fair value through other comprehensive income. Expected credit losses are calculated on either a 12-month or lifetime basis depending on the extent to which credit risk has increased significantly since initial recognition.

(W) Collateral

The Group receives and pledges collateral in the form of cash or non-cash assets in respect of stock lending transactions, certain derivative contracts and loans, in order to reduce the credit risk of these transactions. Collateral is also pledged as security for bank letters of credit. The amount and type of collateral required depends on an assessment of the credit risk of the counterparty.

Collateral received in the form of cash, which is not legally segregated from the Group, is recognised as an asset in the statement of financial position with a corresponding liability for the repayment in financial liabilities (see note 61). However, where the Group has a currently enforceable legal right of set-off and the ability and intent to net settle, the collateral liability and associated derivative balances are shown net. Non-cash collateral received is not recognised in the statement of financial position unless the transfer of the collateral meets the derecognition criteria from the perspective of the transferor. Such collateral is typically recognised when the Group either (a) sells or repledges these assets in the absence of default, at which point the obligation to return this collateral is recognised as a liability; or (b) the counterparty to the arrangement defaults, at which point the collateral is seized and recognised as an asset.

Collateral pledged in the form of cash, which is legally segregated from the Group, is derecognised from the statement of financial position with a corresponding receivable recognised for its return. Non-cash collateral pledged is not derecognised from the statement of financial position unless the Group defaults on its obligations under the relevant agreement, and therefore continues to be recognised in the statement of financial position within the appropriate asset classification.

(X) Deferred acquisition costs and other assets

Costs relating to the acquisition of new business for insurance and participating investment contracts are deferred in line with existing local accounting practices, to the extent that they are expected to be recovered out of future margins in revenues on these contracts. For participating contracts written in the UK, acquisition costs are generally not deferred as the liability for these contracts is calculated on a realistic basis which was grandfathered from UK regulatory requirements prior to the adoption of Solvency II (see accounting policy L). For non-participating investment and investment fund management contracts, incremental acquisition costs and sales enhancements that are directly attributable to securing an investment management service are also deferred.

Long-term business deferred acquisition costs are amortised systematically over a period no longer than that in which they are expected to be recoverable out of these future margins. Deferred acquisition costs for non-participating investment and investment fund management contracts are amortised over the period in which the service is provided. General insurance and health deferred acquisition costs are amortised over the period in which the related revenues are earned. The reinsurers' share of deferred acquisition costs is amortised in the same manner as the underlying asset.

Deferred acquisition costs are reviewed by category of business at the end of each reporting period and are written-off where they are no longer considered to be recoverable.

Where such business is reinsured, an appropriate proportion of the deferred acquisition costs is attributed to the reinsurer. Recoverability is assessed net of reinsurance, and may result in deferred acquisition costs being written-off if any liability recognised for the reinsurer's share is insufficient.

Other receivables and payables are initially recognised at cost, being fair value. Subsequent to initial measurement they are measured at amortised cost.

(Y) Statement of cash flows

Cash and cash equivalents

Cash and cash equivalents consist of 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 with only an insignificant change in their fair values.

For the purposes of the statement of cash flows, cash and cash equivalents also include bank overdrafts, which are included in payables and other financial liabilities on the statement of financial position.

Operating cash flows

Purchases and sales of investment property, loans and financial investments are included within operating cash flows as the purchases are funded from cash flows associated with the origination of insurance and investment contracts, net of payments of related benefits and claims.

(Z) Leases

Where the Group is the lessee, a lease liability equal to the present value of outstanding lease payments and a corresponding right-of-use asset equal to cost are initially recognised. The right-of-use asset is subsequently measured at amortised cost and depreciated on a straight-line basis over the length of the lease term. Depreciation on lease assets and interest on lease liabilities is recognised in the income statement.

The Group has made use of the election available under IFRS 16 to not recognise any amounts on the balance sheet associated with leases that are either deemed to be short term, or where the underlying asset is of low value. A short-term lease in this context is defined as any arrangement which has a lease term of 12 months or less. Lease payments associated with such arrangements are recognised in the income statement as an expense on a straight-line basis. The Group's total short term and low value lease portfolio is not material.

Where the Group is the lessor, leases are classified as finance leases if the risks and rewards of ownership are substantially transferred to the lessee and operating leases if they are not substantially transferred. Lease income from operating leases is recognised in the income statement on a straight-line basis over the lease term. When assets are subject to finance leases, the present value of the lease payments, together with any unguaranteed residual value, is recognised as a receivable. The Group has not entered into any material finance lease arrangements as lessor.

Comparative figures

Prior period comparatives have not been restated to reflect the adoption of IFRS 16. The accounting policy relating to leases applied to comparatives is set out below.

Leases, where a significant portion of the risks and rewards of ownership is retained by the lessor, are classified as operating leases. Where the Group is the lessee, payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the term of the relevant leases.

Where the Group is the lessor, lease income from operating leases is recognised in the income statement on a straight-line basis over the lease term.

Where assets are subject to finance leases, the present value of the lease payments, together with any unguaranteed residual value, is recognised as a receivable. The Group has not entered into any material finance lease arrangements either as lessor or lessee.

(AA) Provisions and contingent liabilities

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is more probable than not that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. Restructuring provisions include lease termination penalties and employee termination payments. They comprise only the direct expenditures arising from the restructuring, which are those that are necessarily entailed by the restructuring; and not associated with the ongoing activities of the entity. The amount recorded as a provision is the best estimate of the expenditure required to settle the present obligation at the balance sheet date. Where the effect of the time value of money is material, the provision is the present value of the expected expenditure. Provisions are not recognised for future operating losses.

Where the Group expects a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain.

The Group recognises a provision for onerous contracts when the expected benefits to be derived from a contract are less than the unavoidable costs of meeting the obligations under the contract. Contingent liabilities are disclosed if there is a possible future obligation as a result of a past event, or if there is a present obligation as a result of a past event but either a payment is not probable or the amount cannot be reasonably estimated.

(AB) Employee benefits

Pension obligations

The Group operates a number of pension schemes, whose members receive benefits on either a defined benefit or defined contribution basis. Under a defined contribution plan, the Group's legal or constructive obligation is limited to the amount it agrees to contribute to a fund and there is no obligation to pay further contributions if the fund does not hold sufficient assets to pay benefits. A defined benefit pension plan is a pension plan that is not a defined contribution plan and typically defines the amount of pension benefit that an employee will receive on retirement.

The defined benefit obligation is calculated by independent actuaries using the projected unit credit method. The pension obligation is measured as the present value of the estimated future cash outflows, using a discount rate based on market yields for high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating to the terms of the related pension liability. The resultant net surplus or deficit recognised as an asset or liability on the statement of financial position is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets.

Plan assets exclude unpaid contributions due from Group entities to the schemes, and any non-transferrable financial instruments issued by a Group entity and held by the schemes. If the fair value of plan assets exceeds the present value of the defined benefit obligation, the resultant asset is limited to the asset ceiling defined as present value of economic benefits available in the form of future refunds from the plan or reductions in contributions to the plan. In order to calculate the present value of economic benefits, consideration is given to any minimum funding requirements that apply to any plan in the Group.

Remeasurements of defined benefit plans comprise actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions, the return on plan assets (excluding net interest) and the effect of the asset ceiling (if any). The Group recognises remeasurements immediately in other comprehensive income and does not reclassify them to the income statement in subsequent periods.

Service costs comprising current service costs, past service costs, gains and losses on curtailments and net interest expense/income are charged or credited to the income statement.

Past service costs are recognised at the earlier of the date the plan amendment or curtailment occurs or when related restructuring costs are recognised.

The Group determines the net interest expense/income on the net defined benefit liability/asset for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the year to the net defined benefit liability/asset. Net interest expense is charged to finance costs, whereas, net interest income is credited to investment income.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension plans. Once the contributions have been paid, the Group, as employer, has no further payment obligations. The Group's contributions are charged to the income statement in the year to which they relate and are included in staff costs.

Equity compensation plans

The Group offers share award and option plans over the Company's ordinary shares for certain employees, including a Save As You Earn plan (SAYE plan), details of which are given in the Directors' Remuneration Report and in note 33.

The Group accounts for options and awards under equity compensation plans, which were granted after 7 November 2002, until such time as they are fully vested, using the fair value based method of accounting (the 'fair value method'). Under this method, the cost of providing equity compensation plans is based on the fair value of the share awards or option plans at date of grant, which is recognised in the income statement over the expected vesting period of the related employees and credited to the equity compensation reserve, part of shareholders' funds. In certain jurisdictions, awards must be settled in cash instead of shares, and the credit is taken to liabilities rather than reserves. The fair value of these cash-settled awards is recalculated each year, with the income statement charge and liability being adjusted accordingly.

Shares purchased by employee share trusts to fund these awards are shown as deduction from shareholders' equity at their weighted average cost.

When the options are exercised and new shares are issued, the proceeds received, net of any transaction costs, are credited to share capital (par value) and the balance to share premium. Where the shares are already held by employee trusts, the net proceeds are credited against the cost of these shares, with the difference between cost and proceeds being taken to retained earnings. In both cases, the relevant amount in the equity compensation reserve is then credited to retained earnings.

(AC) Income taxes

The current tax expense is based on the taxable profits for the year, after any adjustments in respect of prior years. Tax, including tax relief for losses if applicable, is allocated over profits before taxation and amounts charged or credited to components of other comprehensive income and equity, as appropriate.

Provision is made for deferred tax liabilities, or credit taken for deferred tax assets, using the liability method, on all material temporary differences between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements.

The rates enacted or substantively enacted at the statement of financial position date are used to value the deferred tax assets and liabilities.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. Where there is a history of tax losses, deferred tax assets are only recognised in excess of deferred tax liabilities if there is convincing evidence that future profits will be available.

Deferred tax is provided on any temporary differences arising from investments in subsidiaries, associates and joint ventures, except where the timing of the reversal of the temporary difference can be controlled and it is probable that the difference will not reverse in the foreseeable future.

Deferred taxes are not provided in respect of temporary differences arising from the initial recognition of goodwill, or from the initial recognition of an asset or liability in a transaction which is not a business combination and affects neither accounting profit nor taxable profit or loss at the time of the transaction.

Current and deferred tax relating to items recognised in other comprehensive income and directly in equity are similarly recognised in other comprehensive income and directly in equity respectively. Deferred tax related to fair value re-measurement of available for sale investments, pensions and other post-retirement obligations and other amounts charged or credited directly to other comprehensive income is recognised in the statement of financial position as a deferred tax asset or liability. Current tax on interest paid on the direct capital instrument and tier 1 notes is credited directly in equity.

Current and deferred tax includes amounts provided in respect of uncertain tax positions, where management expects it is more likely than not that an economic outflow will occur as a result of examination by a relevant tax authority. Provisions reflect management's best estimate of the ultimate liability based on their interpretation of tax law, precedent and guidance, informed by external tax advice as necessary. The final amounts of tax due may ultimately differ from management's best estimate at the balance sheet date. Changes in facts and circumstances underlying these provisions are reassessed at each balance sheet date, and the provisions are re-measured as required to reflect current information.

In addition to paying tax on shareholders' profits ('shareholder tax'), the Group's life businesses in the UK, Ireland and Singapore pay tax on policyholders' investment returns ('policyholder tax') on certain products at policyholder tax rates. The incremental tax borne by the Group represents income tax on policyholder's investment return. In jurisdictions where policyholder tax is applicable, the total tax charge in the income statement is allocated between shareholder tax and policyholder tax. The shareholder tax is calculated by applying the corporate tax rate to the shareholder profit. The difference between the total tax charge and shareholder tax is allocated to policyholder tax. This calculation methodology is consistent with the legislation relating to the calculation of tax on shareholder profits. The Group has decided to show separately the amounts of policyholder tax to provide a meaningful measure of the tax the Group pays on its profit.

In the pro forma reconciliations, the Group adjusted operating profit has been calculated after charging policyholder tax.

(AD) Borrowings

Borrowings are classified as being for either core structural or operational purposes. They are recognised initially at their issue proceeds less transaction costs incurred. Subsequently, most borrowings are stated at amortised cost, and any difference between net proceeds and the redemption value is recognised in the income statement over the period of the borrowings using the effective interest rate method. All borrowing costs are expensed as they are incurred except where they are directly attributable to the acquisition or construction of property and equipment as described in accounting policy P.

Where loan notes have been issued in connection with certain securitised mortgage loans, the Group has taken advantage of the fair value option under IAS 39 to present the mortgages, associated liabilities and derivative financial instruments at fair value, since they are managed as a portfolio on a fair value basis. This presentation provides more relevant information and eliminates any accounting mismatch which would otherwise arise from using different measurement bases for these three items.

(AE) Share capital and treasury shares

Equity instruments

An equity instrument is a contract that evidences a residual interest in the assets of an entity after deducting all its liabilities. Accordingly, a financial instrument is treated as equity if:

(i) there is no contractual obligation to deliver cash or other financial assets or to exchange financial assets or liabilities on terms that may be unfavourable; and

(ii) the instrument is a non-derivative that contains no contractual obligation to deliver a variable number of shares or is a derivative that will be settled only by the Group exchanging a fixed amount of cash or other assets for a fixed number of the Group's own equity instruments.

Share issue costs

Incremental external costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds of the issue and disclosed where material.

Dividends

Interim dividends on ordinary shares are recognised in equity in the period in which they are paid. Final dividends on these shares are recognised when they have been approved by shareholders. Dividends on preference shares are recognised in the period in which they are declared and appropriately approved.

Treasury shares

Where the Company or its subsidiaries purchase the Company's share capital or obtain rights to purchase its share capital, the consideration paid (including any attributable transaction costs net of income taxes) is shown as a deduction from total shareholders' equity. Gains and losses on own shares are charged or credited to the treasury share account in equity.

(AF) Fiduciary activities

Assets and income arising from fiduciary activities, together with related undertakings to return such assets to customers, are excluded from these financial statements where the Group has no contractual rights in the assets and acts in a fiduciary capacity such as nominee, trustee or agent.

(AG) Earnings per share

Basic earnings per share is calculated by dividing net income available to ordinary shareholders by the weighted average number of ordinary shares in issue during the year, excluding the weighted average number of treasury shares.

Earnings per share has also been calculated on Group adjusted operating profit attributable to ordinary shareholders, net of tax, non-controlling interests, preference dividends, the direct capital instrument (the DCI) and tier one notes as the directors believe this figure provides a better indication of operating performance. Details are given in note 15.

For the diluted earnings per share, the weighted average number of ordinary shares in issue is adjusted to assume conversion of all dilutive potential ordinary shares, such as convertible debt and share options granted to employees.

Potential or contingent share issuances are treated as dilutive when their conversion to shares would decrease net earnings per share.

(AH) Operations held for sale

Assets and liabilities held for disposal as part of operations which are held for sale are shown separately in the consolidated statement of financial position. Operations held for sale are recorded at the lower of their carrying amount and their fair value less the estimated selling costs.

Consolidated financial statements

Consolidated income statement
For the year ended 31 December 2019

	Note	2019 £m	Restated[1] 2018 £m
Income	6		
Gross written premiums		**31,243**	28,659
Premiums ceded to reinsurers		**(3,563)**	(2,326)
Premiums written net of reinsurance		**27,680**	26,333
Net change in provision for unearned premiums		**(209)**	(81)
Net earned premiums	H	**27,471**	26,252
Fee and commission income	I & J	**2,141**	2,178
Net investment income/(expense)	K	**40,577**	(10,912)
Share of profit after tax of joint ventures and associates		**85**	112
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	4(a)	**(22)**	102
		70,252	17,732
Expenses	7		
Claims and benefits paid, net of recoveries from reinsurers		**(23,096)**	(23,142)
Change in insurance liabilities, net of reinsurance	42(b)	**(5,702)**	6,246
Change in investment contract provisions		**(24,095)**	5,321
Change in unallocated divisible surplus	49	**(3,985)**	3,237
Fee and commission expense		**(5,536)**	(3,326)
Other expenses		**(3,329)**	(3,843)
Finance costs	8	**(576)**	(573)
		(66,319)	(16,080)
Profit before tax		**3,933**	1,652
Tax attributable to policyholders' returns	14(d)	**(559)**	477
Profit before tax attributable to shareholders' profits		**3,374**	2,129
Tax (expense)/credit	AC & 14	**(1,270)**	35
Less: tax attributable to policyholders' returns	14(d)	**559**	(477)
Tax attributable to shareholders' profits	14(d)	**(711)**	(442)
Profit for the year		**2,663**	1,687
Attributable to:			
Equity holders of Aviva plc		**2,548**	1,568
Non-controlling interests	41	**115**	119
Profit for the year		**2,663**	1,687
Earnings per share	AG & 15		
Basic (pence per share)		**63.8**	38.2
Diluted (pence per share)		**63.1**	37.8

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

Consolidated statement of comprehensive income

For the year ended 31 December 2019

	Note	2019 £m	2018 £m
Profit for the year		**2,663**	1,687
Other comprehensive income:			
Items that may be reclassified subsequently to income statement			
Investments classified as available for sale			
Fair value gains	39	**39**	57
Fair value gains transferred to profit on disposals	39	**(19)**	(78)
Share of other comprehensive income/(loss) of joint ventures and associates	39	**22**	(10)
Foreign exchange rate movements	39, 41	**(219)**	5
Aggregate tax effect – shareholder tax on items that may be reclassified subsequently to income statement	14(b)	**6**	8
Items that will not be reclassified to income statement			
Owner-occupied properties – fair value gains	39	**3**	1
Remeasurements of pension schemes	40	**(867)**	(279)
Aggregate tax effect – shareholder tax on items that will not be reclassified subsequently to income statement	14(b)	**103**	43
Total other comprehensive income, net of tax		**(932)**	(253)
Total comprehensive income for the year		**1,731**	1,434
Attributable to:			
Equity holders of Aviva plc		**1,655**	1,310
Non-controlling interests		**76**	124
		1,731	1,434

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

Reconciliation of Group adjusted operating profit to profit for the year

For the year ended 31 December 2019

	Note	2019 £m	Restated[1] 2018 £m
Group adjusted operating profit before tax attributable to shareholders' profits			
Life business		**3,000**	2,976
General insurance and health		**644**	651
Fund management		**92**	143
Other:			
Other operations		**(114)**	(270)
Corporate centre		**(183)**	(216)
Group debt costs and other interest		**(255)**	(280)
Group adjusted operating profit before tax attributable to shareholders' profits		**3,184**	3,004
Adjusted for the following:			
Life business: Investment variances and economic assumption changes	9	**654**	(197)
Non-life business: Short-term fluctuation in return on investments	10(a)	**167**	(476)
General insurance and health business: Economic assumption changes	10(a)	**(54)**	1
Impairment of goodwill, joint ventures, associates and other amounts expensed	17(a), 20	**(15)**	(13)
Amortisation and impairment of intangibles acquired in business combinations	18	**(87)**	(97)
Amortisation and impairment of acquired value of in-force business	18	**(406)**	(426)
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	4(a)	**(22)**	102
Other[2]		**(47)**	231
Adjusting items before tax		**190**	(875)
Profit before tax attributable to shareholders' profits		**3,374**	2,129
Tax on group adjusted operating profit	15(a)(i)	**(668)**	(625)
Tax on other activities	15(a)(i)	**(43)**	183
		(711)	(442)
Profit for the year		**2,663**	1,687

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.

2 Other in 2019 relates to a charge of £45 million in relation to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note 44(b)) and a charge of £2 million relating to negative goodwill which arose on the acquisition of Friends First (see note 3). Other in 2018 includes a movement in the discount rate used for estimating lump sum payments in the settlement of bodily injury claims which resulted in a gain of £190 million, a provision release of £78 million relating to the sale of Aviva USA in 2013, a gain of £36 million relating to negative goodwill on the acquisition of Friends First, a charge of £63 million relating to the UK defined benefit pension scheme as a result of the requirements to equalise members' benefits of the effects of Guaranteed Minimum Pension and a charge of £10 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs.

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

Reconciliation of Group adjusted operating profit to profit for the year continued

Group adjusted operating profit can be further analysed into the following segments (details of segments can be found in note 5):

For the year ended 31 December 2019	Long-term business £m	General insurance and health £m	Fund management £m	Other[1] £m	Total £m
United Kingdom	**1,820**	**285**	**—**	**—**	**2,105**
Canada	**—**	**191**	**—**	**—**	**191**
France	**425**	**94**	**—**	**(46)**	**473**
Poland	**171**	**20**	**—**	**3**	**194**
Italy, Ireland and Other	**258**	**69**	**—**	**(13)**	**314**
Asia	**299**	**(8)**	**(4)**	**(12)**	**275**
Aviva Investors	**—**	**—**	**96**	**—**	**96**
Other Group activities	**27**	**(7)**	**—**	**(46)**	**(26)**
	3,000	**644**	**92**	**(114)**	**3,622**
Corporate Centre					**(183)**
Group debt costs and other interest					**(255)**
Total					**3,184**

For the year ended 31 December 2018 restated[2]	Long-term business £m	General insurance and health £m	Fund management £m	Other[1] £m	Total £m
United Kingdom	1,848	421	—	—	2,269
Canada	—	26	—	1	27
France	436	109	—	(35)	510
Poland	170	20	—	8	198
Italy, Ireland, Spain and Other	225	90	—	(15)	300
Asia	300	(16)	(4)	(19)	261
Aviva Investors	1	—	147	—	148
Other Group activities	(4)	1	—	(210)	(213)
	2,976	651	143	(270)	3,500
Corporate Centre					(216)
Group debt costs and other interest					(280)
Total					3,004

1 Other Group activities within Other includes net expenses of £15 million *(2018 restated: £180 million)* in relation to the Group's UK digital business.
2 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

Consolidated statement of changes in equity

For the year ended 31 December 2019

	Ordinary share capital Note 33 £m	Preference share capital Note 36 £m	Capital reserves[1] Note 33b, 38 £m	Treasury shares Note 35 £m	Currency translation reserve Note 39 £m	Other reserves Note 39 £m	Retained earnings Note 40 £m	DCI and tier 1 notes Note 37 £m	Total equity excluding non-controlling interests £m	Non-controlling interests Note 41 £m	Total equity £m
Balance at 1 January	**975**	**200**	**10,232**	**(15)**	**1,122**	**(279)**	**4,523**	**731**	**17,489**	**966**	**18,455**
Adjustment at 1 January for adoption of IFRS 16[2]	—	—	—	—	—	—	(110)	—	(110)	—	(110)
Balance at 1 January restated[2]	**975**	**200**	**10,232**	**(15)**	**1,122**	**(279)**	**4,413**	**731**	**17,379**	**966**	**18,345**
Profit for the year	—	—	—	—	—	—	2,548	—	2,548	115	2,663
Other comprehensive income	—	—	—	—	(308)	178	(763)	—	(893)	(39)	(932)
Total comprehensive income for the year	—	—	—	—	(308)	178	1,785	—	1,655	76	1,731
Dividends and appropriations	—	—	—	—	—	—	(1,244)	—	(1,244)	—	(1,244)
Non-controlling interests share of dividends declared in the year	—	—	—	—	—	—	—	—	—	(63)	(63)
Reclassification of tier 1 notes to financial liabilities[3]	—	—	—	—	—	—	21	(231)	(210)	—	(210)
Reserves credit for equity compensation plans	—	—	—	—	—	62	—	—	62	—	62
Shares issued under equity compensation plans	5	—	25	(5)	—	(62)	55	—	18	—	18
Treasury shares held by subsidiary companies	—	—	—	13	—	—	—	—	13	—	13
Forfeited dividend income	—	—	—	—	—	—	4	—	4	—	4
Changes in non-controlling interests in subsidiaries	—	—	—	—	—	—	—	—	—	(2)	(2)
Change in equity accounted option	—	—	—	—	—	—	22	—	22	—	22
Shares purchased in buy-back	—	—	—	—	—	—	—	—	—	—	—
Transfer to profit on disposal of subsidiaries, joint ventures and associates	—	—	—	—	—	—	—	—	—	—	—
Capital contributions from non-controlling interests	—	—	—	—	—	—	—	—	—	—	—
Aggregate tax effect – shareholder tax	—	—	—	—	—	—	9	—	9	—	9
Balance at 31 December	**980**	**200**	**10,257**	**(7)**	**814**	**(101)**	**5,065**	**500**	**17,708**	**977**	**18,685**

1 Capital reserves consist of share premium of £1,239 million, a capital redemption reserve of £44 million and a merger reserve of £8,974 million.
2 The Group adopted IFRS 16 *Leases* from 1 January 2019. In line with the transition options available, prior period comparatives have not been restated and the impact of the adoption has been shown as an adjustment to opening retained earnings. See accounting policy A for further information.
3 On 17 October 2019, notification was given that the Group would redeem the 6.875% £210 million tier 1 notes. At that date, the instrument was reclassified as a financial liability of £210 million, representing its fair value at that date. On 21 November 2019, the instrument was redeemed in full at a cost of £210 million. The difference between its carrying amount of £231 million and fair value of £210 million has been charged to retained earnings. See note 37 for further details.

For the year ended 31 December 2018

	Ordinary share capital Note 33 £m	Preference share capital Note 36 £m	Capital reserves[1] Note 33b, 38 £m	Treasury shares Note 35 £m	Currency translation reserve Note 39 £m	Other reserves Note 39 £m	Retained earnings Note 40 £m	DCI and tier 1 notes Note 37 £m	Total equity excluding non-controlling interests £m	Non-controlling interests Note 41 £m	Total equity £m
Balance at 1 January	1,003	200	10,195	(14)	1,141	(274)	4,918	731	17,900	1,235	19,135
Profit for the year	—	—	—	—	—	—	1,568	—	1,568	119	1,687
Other comprehensive income	—	—	—	—	28	(50)	(236)	—	(258)	5	(253)
Total comprehensive income for the year	—	—	—	—	28	(50)	1,332	—	1,310	124	1,434
Dividends and appropriations	—	—	—	—	—	—	(1,189)	—	(1,189)	—	(1,189)
Non-controlling interests share of dividends declared in the year	—	—	—	—	—	—	—	—	—	(90)	(90)
Reclassification of tier 1 notes to financial liabilities	—	—	—	—	—	—	—	—	—	—	—
Reserves credit for equity compensation plans	—	—	—	—	—	64	—	—	64	—	64
Shares issued under equity compensation plans	2	—	7	(1)	—	(55)	49	—	2	—	2
Treasury shares held by subsidiary companies	—	—	—	—	—	—	—	—	—	—	—
Forfeited dividend income	—	—	—	—	—	—	4	—	4	—	4
Changes in non-controlling interests in subsidiaries	—	—	—	—	(7)	—	1	—	(6)	(306)	(312)
Change in equity accounted option	—	—	—	—	—	—	—	—	—	—	—
Shares purchased in buy-back[2]	(30)	—	30	—	—	—	(600)	—	(600)	—	(600)
Transfer to profit on disposal of subsidiaries, joint ventures and associates	—	—	—	—	(40)	36	—	—	(4)	—	(4)
Capital contributions from non-controlling interests	—	—	—	—	—	—	—	—	—	3	3
Aggregate tax effect – shareholder tax	—	—	—	—	—	—	8	—	8	—	8
Balance at 31 December	975	200	10,232	(15)	1,122	(279)	4,523	731	17,489	966	18,455

1 Capital reserves consist of share premium of £1,214 million, a capital redemption reserve of £44 million and a merger reserve of £8,974 million.
2 On 1 May 2018, the Group announced a share buy-back of ordinary shares for an aggregate purchase price of up to £600 million. On completion in 2018 of this buy-back, £600 million of shares had been purchased and shares with a nominal value of £30 million have been cancelled, giving rise to an additional capital redemption reserve of an equivalent amount. See note 33 for further details of the shares purchased in buy-back.

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

Consolidated statement of financial position

As at 31 December 2019

	Note	2019 £m	Restated[1] 2018 £m	Restated[1] 1 January 2018 £m
Assets				
Goodwill	O & 17	**1,855**	1,872	1,876
Acquired value of in-force business and intangible assets	O & 18	**2,800**	3,201	3,455
Interests in, and loans to, joint ventures	D & 19	**1,227**	1,214	1,221
Interests in, and loans to, associates	D & 20	**304**	304	421
Property and equipment	P & 21	**889**	548	509
Investment property	Q & 22	**11,203**	11,482	10,797
Loans	V & 25	**38,579**	36,184	37,227
Financial investments	S, T, U & 28	**343,418**	319,825	331,690
Reinsurance assets	N & 47	**12,356**	11,755	13,492
Deferred tax assets	AC & 50	**151**	185	144
Current tax assets		**132**	76	94
Receivables	29	**8,995**	8,639	8,151
Deferred acquisition costs	X & 30	**3,156**	2,965	2,906
Pension surpluses and other assets	X & 31	**2,799**	3,341	3,468
Prepayments and accrued income	X & 31(b)	**3,143**	3,149	3,117
Cash and cash equivalents	Y & 59(d)	**19,524**	15,926	13,377
Assets of operations classified as held for sale	AH & 4(b)	**9,512**	8,855	10,871
Total assets		**460,043**	429,521	442,816
Equity				
Capital	AE			
Ordinary share capital	33	**980**	975	1,003
Preference share capital	36	**200**	200	200
		1,180	1,175	1,203
Capital reserves				
Share premium	33(b)	**1,239**	1,214	1,207
Capital redemption reserve	33(b)	**44**	44	14
Merger reserve	D & 38	**8,974**	8,974	8,974
		10,257	10,232	10,195
Treasury shares	35	**(7)**	(15)	(14)
Currency translation reserve	39	**814**	1,122	1,141
Other reserves	39	**(101)**	(279)	(274)
Retained earnings	40	**5,065**	4,523	4,918
Equity attributable to shareholders of Aviva plc		**17,208**	16,758	17,169
Direct capital instrument and tier 1 notes	37	**500**	731	731
Equity excluding non-controlling interests		**17,708**	17,489	17,900
Non-controlling interests	41	**977**	966	1,235
Total equity		**18,685**	18,455	19,135
Liabilities				
Gross insurance liabilities	L & 43	**149,338**	144,077	148,650
Gross liabilities for investment contracts	M & 45	**222,127**	202,468	203,986
Unallocated divisible surplus	L & 49	**9,597**	5,949	9,082
Net asset value attributable to unitholders	D	**16,610**	16,338	18,176
Pension deficits and other provisions	AA, AB & 51	**1,565**	1,399	1,429
Deferred tax liabilities	AC & 50	**2,155**	1,885	2,377
Current tax liabilities		**569**	254	290
Borrowings	AD & 53	**9,039**	9,420	10,286
Payables and other financial liabilities	S & 54	**18,138**	17,681	16,676
Other liabilities	55	**3,094**	3,074	2,856
Liabilities of operations classified as held for sale	AH & 4(b)	**9,126**	8,521	9,873
Total liabilities		**441,358**	411,066	423,681
Total equity and liabilities		**460,043**	429,521	442,816

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Approved by the Board on 4 March 2020

Jason Windsor
Chief Financial Officer

Company number: 2468686

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

Consolidated statement of cash flows

For the year ended 31 December 2019

The cash flows presented in this statement cover all the Group's activities and include flows from both policyholder and shareholder activities. All cash and cash equivalents are available for use by the Group.

	Note	2019 £m	Restated[1] 2018 £m
Cash flows from operating activities[2]			
Cash generated from operating activities	59(a)	**6,517**	5,848
Tax paid		**(549)**	(447)
Total net cash from operating activities		**5,968**	5,401
Cash flows from investing activities			
Acquisitions of, and additions to, subsidiaries, joint ventures and associates, net of cash acquired	59(b)	**(19)**	192
Disposals of subsidiaries, joint ventures and associates, net of cash transferred	59(c)	**12**	381
Purchases of property and equipment	21	**(84)**	(87)
Proceeds on sale of property and equipment		**4**	15
Purchases of intangible assets		**(63)**	(64)
Total net cash (used in)/from investing activities		**(150)**	437
Cash flows from financing activities			
Proceeds from issue of ordinary shares		**27**	8
Shares purchased in buy-back	33	**—**	(600)
Treasury shares purchased for employee trusts		**(9)**	(4)
New borrowings drawn down, net of expenses		**580**	3,148
Repayment of borrowings[3]		**(927)**	(4,181)
Net repayment of borrowings	53(e)	**(347)**	(1,033)
Interest paid on borrowings		**(553)**	(551)
Preference dividends paid	16	**(17)**	(17)
Ordinary dividends paid	16	**(1,184)**	(1,128)
Forfeited dividend income		**4**	4
Coupon payments on direct capital instrument and tier 1 notes	16	**(43)**	(44)
Capital contributions from non-controlling interests of subsidiaries	41	**—**	3
Dividends paid to non-controlling interests of subsidiaries	41	**(63)**	(90)
Other[4]		**(5)**	(13)
Total net cash used in financing activities		**(2,190)**	(3,465)
Total net increase in cash and cash equivalents		**3,628**	2,373
Cash and cash equivalents at 1 January		**16,051**	13,617
Effect of exchange rate changes on cash and cash equivalents		**(245)**	61
Cash and cash equivalents at 31 December	59(d)	**19,434**	16,051

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.
2 Cash flows from operating activities include interest received of £5,834 million *(2018 restated: £5,758 million)* and dividends received of £5,614 million *(2018 restated: £4,880 million)*.
3 2019 includes the redemption of 6.875% £210 million tier 1 notes. 2018 includes the redemption of €500 million 6.875% subordinated notes and $575 million 7.875% undated subordinated notes in full at first call dates and the maturity of €350 million 0.100% senior notes.
4 2019 includes a £5 million *(2018: £3 million)* donation of forfeited dividend income to a charitable foundation. 2018 also includes £10 million related to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs (see note 36).

The accounting policies (identified alphabetically) on pages 117 to 131 and notes (identified numerically) on pages 139 to 263 are an integral part of the financial statements.

1 – Changes to comparative amounts

(a) Presentation of consolidated investment funds

Following a review of the Group's presentation of consolidated investment funds, corrections to previous reported values on the consolidated statement of financial position and consolidated income statement have been identified (with corresponding impacts on the consolidated statement of cash flows) and comparative amounts have been restated. There has been no impact on profit for the period or equity for any of the periods presented. The nature of the restatements are as follows:

- Fixed maturity securities, loans, derivatives and receivables held indirectly through certain majority-owned fund investments in the UK and France, which in 2018 were presented as cash and cash equivalents, are now presented as financial investments, loans, receivables and payables and other financial liabilities which reflect the classification of the underlying holdings;
- Corrections to the calculation of minority ownership of certain fund investments have resulted in a restatement of net asset value attributable to unitholders and an adjustment to de-consolidate two investment funds where the Group was incorrectly deemed to have been the controlling entity in 2018;
- Corrections to the calculation of minority ownership have resulted in a restatement of the investment income attributable to minority shareholders recorded in fee and commission expense, net investment expense and fee and commission income for the period ending 31 December 2018; and
- Accrued interest on certain fixed maturity securities held indirectly through certain majority-owned funds, which in 2018 was presented within financial investments, is now presented in prepayments and accrued income (consistent with accrued interest on the Group's directly held fixed maturity securities).

The impact of the changes above on the following captions in the income statement for the prior period presented is shown below:

	31 December 2018		
	As reported £m	Effect of changes £m	Restated £m
Fee and commission income	2,180	(2)	2,178
Net investment expense	(10,847)	(65)	(10,912)
Fee and commission expense	(3,393)	67	(3,326)

The impact of the changes above on the statement of financial position for the prior periods presented is shown below:

	31 December 2018			1 January 2018		
	As reported £m	Effect of changes £m	Restated £m	As reported £m	Effect of changes £m	Restated £m
Assets						
Loans	28,785	7,399	36,184	27,857	9,370	37,227
Financial investments	297,585	22,240	319,825	311,082	20,608	331,690
Receivables	8,879	(240)	8,639	8,285	(134)	8,151
Prepayments and accrued income	2,947	202	3,149	2,860	257	3,117
Cash and cash equivalents	46,484	(30,558)	15,926	43,347	(29,970)	13,377
Other	45,798	—	45,798	49,254	—	49,254
Total assets	**430,478**	**(957)**	**429,521**	**442,685**	**131**	**442,816**
Liabilities						
Net asset value attributable to unit holders	18,125	(1,787)	16,338	18,327	(151)	18,176
Payables and other financial liabilities	16,882	799	17,681	16,459	217	16,676
Other liabilities	3,043	31	3,074	2,791	65	2,856
Other	373,973	—	373,973	385,973	—	385,973
Total liabilities	**412,023**	**(957)**	**411,066**	**423,550**	**131**	**423,681**
Total equity	**18,455**	**—**	**18,455**	**19,135**	**—**	**19,135**

1 – Changes to comparative amounts continued

(a) Presentation of consolidated investment funds continued

The impact of the changes above on the following captions in the statement of cash flows for the prior period presented is shown below:

		31 December 2018	
	As reported £m	Effect of changes £m	Restated £m
Cash generated from operating activities	6,405	(557)	5,848
Total net cash from operating activities	**5,958**	**(557)**	**5,401**
Total net increase in cash and cash equivalents	2,930	(557)	2,373
Cash and cash equivalents at 1 January[1]	43,587	(29,970)	13,617
Effect of exchange rate changes on cash and cash equivalents	92	(31)	61
Cash and cash equivalents at 31 December[1]	**46,609**	**(30,558)**	**16,051**

1 Cash and cash equivalents shown in the statement of cash flows above include cash and cash equivalents of operations classified as held for sale and bank overdrafts.

The above items have also resulted in a number of corresponding reclassifications in the Group's fair value hierarchy level disclosures included in note 24. The primary changes reflect:

- The inclusion of fixed maturity securities in level 2 and loans in amortised cost (the assets were previously classified as cash and cash equivalents and therefore not included in the fair value hierarchy); and
- A reduction in financial investments reflecting the de-consolidation of two investment funds where the Group was incorrectly deemed to have been the controlling entity.

Additionally, following the review, £33,050 million of fixed maturity securities previously included within level 1 have been reclassified to level 2 at 31 December 2018.

(b) Amendment to Group adjusted operating profit

For 2019, the Group adjusted operating profit APM has been amended and now includes amortisation and impairment of internally generated intangible assets to provide more relevant information by better reflecting their operational nature. These assets include advisor platforms, digital distribution channels and claims and policy administration systems which are used to support operational activities. Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations as these items principally relate to merger and acquisition activity which we view as strategic in nature. The effect of this change is to move £112 million relating to amortisation of internally generated intangible assets into Group adjusted operating profit for 2018. The 2018 comparative figures have been restated in the Reconciliation of Group adjusted operating profit to profit for the year and the Segmental income statement (see note 5). The relevant EPS metrics (operating EPS and diluted operating EPS) for 2018 have also been restated (see note 15). There is no impact from this change on profit before tax attributable to shareholders' profit.

2 – Exchange rates

The Group's principal overseas operations during the year were located within the eurozone, Canada and Poland. The results and cash flows of these operations have been translated into sterling at the average rates for the year, and the assets and liabilities have been translated at the year end rates as follows:

	2019	2018
Eurozone		
Average rate (€1 equals)	**£0.88**	£0.88
Year end rate (€1 equals)	**£0.85**	£0.90
Canada		
Average rate ($CAD1 equals)	**£0.59**	£0.58
Year end rate ($CAD1 equals)	**£0.58**	£0.57
Poland		
Average rate (PLN1 equals)	**£0.20**	£0.21
Year end rate (PLN1 equals)	**£0.20**	£0.21

3 – Subsidiaries, joint ventures and associates – acquisitions

The Group completed minor acquisitions in Canada, the UK and France in 2019. The aggregate consideration paid in these transactions was £20 million. With the exception of the acquisition of an associate in Canada, the acquired entities are all consolidated subsidiaries. During 2019, an adjustment of £2 million was made to the acquisition balance sheet of Friends Life Assurance Company DAC (Friends First), which became a wholly owned subsidiary on 1 June 2018. This resulted in a corresponding decrease in the negative goodwill previously recognised.

4 – Subsidiaries, joint ventures and associates – disposals and held for sale

This note provides details of the disposals of subsidiaries, joint ventures and associates that the Group has made during the year, together with details of businesses held for sale at the year end.

(a) Summary

The profit on the disposal and remeasurement of subsidiaries, joint ventures and associates comprises:

	2019 £m	2018 £m
Disposals	**6**	113
Held for sale remeasurements	**(28)**	(13)
Remeasurements due to change in control status	**—**	2
Total (loss)/profit on disposal and remeasurements	**(22)**	**102**

The loss on the disposal and remeasurement of subsidiaries, joint ventures and associates during the year of £22 million *(2018: £102 million gain)* consists of £6 million of gains relating to small disposals and a £28 million remeasurement loss relating to Friends Provident International Limited (FPI), see note 4(b) for further details. In 2018, the profit on disposal of £113 million primarily related to the disposals of Avipop Assicurazioni S.p.A. (Italy Avipop) and three businesses in Spain and the remeasurement loss of £13 million was related to FPI.

4 – Subsidiaries, joint ventures and associates – disposals and held for sale continued

(b) Assets and liabilities of operations classified as held for sale

The assets and liabilities of operations classified as held for sale as at 31 December 2019 are as follows:

	2019 £m	2018 £m
Assets		
Acquired value of in-force business and intangible assets	**526**	660
Interests in, and loans to, joint ventures and associates	**8**	—
Property and equipment	**8**	5
Loans	**1**	—
Financial investments	**7,824**	7,251
Reinsurance assets	**75**	45
Other assets	**290**	206
Cash and cash equivalents	**780**	688
Total assets	**9,512**	8,855
Liabilities		
Gross insurance liabilities	**687**	121
Gross liabilities for investment contracts	**8,324**	8,341
External borrowings	**28**	—
Other liabilities	**87**	59
Total liabilities	**9,126**	8,521
Net assets	**386**	334

Assets and liabilities of operations classified as held for sale as at 31 December 2019 relate primarily to the expected disposal of the international operations of FPI and also include Group's operations in Hong Kong. See below for further details. Assets and liabilities of operations classified as held for sale during 2018 relate entirely to FPI.

(i) FPI

On 19 July 2017, Aviva announced the sale of FPI to RL360 Holding Company Limited, a subsidiary of International Financial Group Limited, for a total consideration of £340 million, and FPI has been reported as held for sale by the Group since 31 December 2017. The conditions defined in IFRS 5 for a subsidiary to be classified as held for sale include the presumption that the sale will be completed within 12 months of the date of reclassification. However, if events or circumstances extend the period to complete the sale beyond 12 months, a held for sale classification continues to be appropriate if certain conditions are met.

The transaction remains subject to regulatory approvals. The delays to receiving these approvals have been beyond the control of the Group and both the Group and RL360 have continued to cooperate with the regulatory approval process throughout. The Group remains committed to completing the transaction and now expects it to complete in 2020. As such, the subsidiary continues to be classified as held for sale and has been remeasured at fair value less costs to sell of £334 million, based on the agreed price. This resulted in a total loss on remeasurement of £28 million in 2019 *(2018: £13 million)* (see note 18). The business remains a consolidated subsidiary of Aviva at the balance sheet date.

(ii) Hong Kong joint venture

On 20 November 2019, Aviva announced the sale of its entire 40% shareholding in its Hong Kong joint venture (Blue) to Hillhouse AV Holdings Limited for 450 million HKD (approximately £44 million). In addition to the investment in the joint venture, Aviva retained control of certain activities under the previous sale agreement reached in 2018, which remain fully consolidated at the balance sheet date, and which form part of the sale agreement to Hillhouse AV Holding Limited. No remeasurement loss has been recognised on reclassification to held for sale.

(c) Significant restrictions

In certain jurisdictions the ability of subsidiaries to transfer funds to the Group in the form of cash dividends or to repay loans and advances is subject to local corporate or insurance laws and regulations and solvency requirements. There are no protective rights of non-controlling interests which significantly restrict the Group's ability to access or use the assets and settle the liabilities of the Group.

5 – Segmental information

The Group's results can be segmented either by activity or by geography. Our primary reporting format is along market reporting lines, with supplementary information being given by business activity. This note provides segmental information on the consolidated income statement. In November 2019 the Group announced the creation of new divisions. From 2020 UK Life will focus on three product lines – annuities and equity release, protection and health and heritage. The Investments, Savings and Retirement division, will bring together Aviva Investors and the modern UK Savings and Retirement business that is currently reported in UK Life. The global General Insurance division will report the results of the UK, Canada and our European and Asian general insurance businesses. Europe Life and Asia Life will no longer include the results of the European and Asian general insurance businesses. The following segments represent how the business has been managed in 2019 and are consistent with the segments presented in 2018.

(a) Operating segments

United Kingdom

The United Kingdom comprises two operating segments – Life and General Insurance. The principal activities of our UK Life operations are life insurance, long-term health and accident insurance, savings, pensions and annuity business. UK General Insurance provides insurance cover to individuals and businesses, for risks associated mainly with motor vehicles, property and liability (such as employers' liability and professional indemnity liability) and medical expenses.

Canada

The principal activity of our operation in Canada is general insurance. In particular it provides personal and commercial lines insurance products principally distributed through insurance brokers.

France

The principal activities of our operations in France are long-term business and general insurance. The long-term business offers a range of long-term insurance and savings products, primarily for individuals, with a focus on the unit-linked market. The general insurance business predominantly sells personal and small commercial lines insurance products through agents and a direct insurer.

Poland

Activities in Poland comprise long-term business and general insurance and includes our long-term business in Lithuania.

Italy, Ireland and Other

These countries are not individually significant at a Group level, so have been aggregated into a single reporting segment in line with IFRS 8 *Operating Segments*. The principal activities of our operations in Italy and Ireland are long-term business and general insurance. Our 'Other' operations include our life operations in Turkey. This segment also includes Friends First, which was acquired on 1 June 2018. The comparative results include our operations within Spain up to the date of disposal (Caja Murcia Vida and Caja Granada Vida on 11 July 2018 and Pelayo Vida on 1 October 2018), the principal activity of which was the sale of accident and health insurance and a selection of savings products. The comparative results also include Avipop, part of our operations in Italy, up to the date of disposal on 29 March 2018.

Asia

Our activities in Asia principally comprise our long-term business operations in China, India, Singapore, Hong Kong (see note 4(b)), Vietnam, Indonesia, and FPI (see note 4(b)). This segment also includes general insurance and health operations in Singapore and health operations in Indonesia.

Aviva Investors

Aviva Investors operates in most of the markets in which the Group operates, in particular the UK, France, North America and Asia Pacific. Aviva Investors manages policyholders' and shareholders' invested funds, provides investment management services for institutional pension fund mandates and manages a range of retail investment products. These include investment funds, unit trusts, open-ended investment companies and individual savings accounts.

Other Group activities

Investment return on centrally held assets and head office expenses, such as Group treasury and finance functions, together with certain taxes and financing costs arising on central borrowings are included in 'Other Group activities'. The results of our internal reinsurance operations and the Group's interest in Wealthify are also included in this segment, as are the elimination entries for certain inter-segment transactions and group consolidation adjustments.

5 – Segmental information continued

Measurement basis

The accounting policies of the segments are the same as those for the Group as a whole. Any transactions between the business segments are subject to normal commercial terms and market conditions. The Group evaluates performance of operating segments on the basis of:

(i) profit or loss from operations before tax attributable to shareholders

(ii) profit or loss from operations before tax attributable to shareholders, adjusted for items outside the segment management's control, including investment market performance and fiscal policy changes.

(a) (i) Segmental income statement for the year ended 31 December 2019

	United Kingdom			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Ireland and Other £m	Asia £m	Aviva Investors £m	Other Group activities[2] £m	Total £m
Gross written premiums	8,596	4,624	3,204	6,883	643	5,761	1,532	—	—	31,243
Premiums ceded to reinsurers	(2,271)	(406)	(143)	(86)	(12)	(264)	(381)	—	—	(3,563)
Internal reinsurance revenue	—	—	—	—	—	—	1	—	(1)	—
Premiums written net of reinsurance	6,325	4,218	3,061	6,797	631	5,497	1,152	—	(1)	27,680
Net change in provision for unearned premiums	(2)	(57)	(99)	(28)	2	(9)	(16)	—	—	(209)
Net earned premiums	6,323	4,161	2,962	6,769	633	5,488	1,136	—	(1)	27,471
Fee and commission income	951	113	24	305	99	123	205	320	1	2,141
	7,274	4,274	2,986	7,074	732	5,611	1,341	320	—	29,612
Net investment income	27,070	254	171	6,267	155	4,352	967	61	1,280	40,577
Inter-segment revenue	—	—	—	—	—	—	—	247	—	247
Share of profit of joint ventures and associates	20	—	—	48	—	12	33	—	(28)	85
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	6	—	—	—	(28)	—	—	(22)
Segmental income[1]	34,364	4,528	3,163	13,389	887	9,975	2,313	628	1,252	70,499
Claims and benefits paid, net of recoveries from reinsurers	(9,569)	(2,614)	(1,938)	(4,751)	(380)	(2,820)	(1,003)	—	(21)	(23,096)
Change in insurance liabilities, net of reinsurance	(3,428)	(53)	(16)	(1,112)	(49)	(1,062)	(32)	—	50	(5,702)
Change in investment contract provisions	(16,411)	—	—	(4,041)	1	(3,365)	(216)	(63)	—	(24,095)
Change in unallocated divisible surplus	162	—	—	(2,010)	(4)	(1,764)	(369)	—	—	(3,985)
Fee and commission expense	(669)	(1,265)	(823)	(816)	(156)	(352)	(257)	(27)	(1,171)	(5,536)
Other expenses	(1,332)	(298)	(162)	(246)	(95)	(230)	(283)	(447)	(236)	(3,329)
Inter-segment expenses	(218)	(6)	(6)	(2)	(5)	(10)	—	—	—	(247)
Finance costs	(159)	(4)	(7)	(1)	(1)	(6)	(8)	—	(390)	(576)
Segmental expenses	(31,624)	(4,240)	(2,952)	(12,979)	(689)	(9,609)	(2,168)	(537)	(1,768)	(66,566)
Profit/(loss) before tax	2,740	288	211	410	198	366	145	91	(516)	3,933
Tax attributable to policyholders' returns	(487)	—	—	—	—	(14)	(58)	—	—	(559)
Profit/(loss) before tax attributable to shareholders' profits	2,253	288	211	410	198	352	87	91	(516)	3,374
Adjusting items:										
Reclassification of corporate costs and unallocated interest	—	(8)	33	46	—	—	—	5	(76)	—
Life business: Investment variances and economic assumption changes	(695)	—	—	84	(4)	(42)	10	—	(7)	(654)
Non-life business: Short-term fluctuation in return on investments	—	(102)	(64)	(95)	(5)	(33)	—	—	132	(167)
General insurance and health business: Economic assumption changes	—	27	2	24	—	—	—	—	1	54
Impairment of goodwill, joint ventures, associates and other amounts expensed	—	—	2	—	—	—	13	—	—	15
Amortisation and impairment of intangibles acquired in business combinations	54	—	13	2	5	2	11	—	—	87
Amortisation and impairment of AVIF	243	—	—	2	—	33	126	—	2	406
(Profit)/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	(6)	—	—	—	28	—	—	22
Other[3]	—	45	—	—	—	2	—	—	—	47
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	1,855	250	191	473	194	314	275	96	(464)	3,184

1 Total reported income, excluding inter-segment revenue, includes £39,041 million from the United Kingdom (Aviva plc's country of domicile). Income is attributed on the basis of geographical origin which does not differ materially from revenue by geographical destination, as most risks are located in the countries where the contracts were written.

2 Other Group activities include internal reinsurance and net expenses of £15 million in relation to the UK digital business. The reduction of £165 million from 2018 reflects the alignment of the UK digital business with the UK Life and UK GI businesses during the year.

3 Other includes a charge of £45 million in relation to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note 44(b)) and a charge of £2 million relating to the negative goodwill that arose on acquisition of Friends First (see note 3).

5 – Segmental information continued

(a) (ii) Segmental income statement for the year ended 31 December 2018 – restated[1,2]

	United Kingdom			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Ireland, Spain and Other £m	Asia £m	Aviva Investors[4] £m	Other Group activities[5] £m	Total £m
Gross written premiums	7,302	4,504	3,047	5,584	616	6,504	1,102	—	—	28,659
Premiums ceded to reinsurers	(1,666)	(317)	(119)	(77)	(12)	(113)	(20)	—	(2)	(2,326)
Internal reinsurance revenue	—	6	—	—	—	(2)	(7)	—	3	—
Premiums written net of reinsurance	5,636	4,193	2,928	5,507	604	6,389	1,075	—	1	26,333
Net change in provision for unearned premiums	14	(87)	27	(38)	7	9	(13)	—	—	(81)
Net earned premiums	5,650	4,106	2,955	5,469	611	6,398	1,062	—	1	26,252
Fee and commission income	939	122	24	313	94	113	202	368	3	2,178
	6,589	4,228	2,979	5,782	705	6,511	1,264	368	4	28,430
Net investment (expense)/income	(6,771)	16	51	(2,302)	(73)	(1,111)	(286)	37	(473)	(10,912)
Inter-segment revenue	—	—	—	—	—	—	—	259	—	259
Share of profit of joint ventures and associates	144	—	1	9	—	10	14	—	(66)	112
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	—	—	89	(5)	27	(9)	102
Segmental income[3]	(38)	4,244	3,031	3,489	632	5,499	987	691	(544)	17,991
Claims and benefits paid, net of recoveries from reinsurers	(10,184)	(2,731)	(1,989)	(4,659)	(356)	(2,595)	(570)	—	(58)	(23,142)
Change in insurance liabilities, net of reinsurance	6,184	351	(133)	557	148	(872)	(40)	—	51	6,246
Change in investment contract provisions	7,540	—	—	27	—	(2,249)	42	(39)	—	5,321
Change in unallocated divisible surplus	270	—	—	1,754	12	1,063	138	—	—	3,237
Fee and commission expense	(738)	(1,225)	(791)	(484)	(146)	(343)	(199)	(33)	633	(3,326)
Other expenses	(1,663)	(220)	(182)	(256)	(106)	(188)	(272)	(449)	(507)	(3,843)
Inter-segment expenses	(232)	(5)	(6)	(1)	(6)	(7)	—	—	(2)	(259)
Finance costs	(172)	(1)	(5)	(1)	—	(5)	(3)	—	(386)	(573)
Segmental expenses	1,005	(3,831)	(3,106)	(3,063)	(454)	(5,196)	(904)	(521)	(269)	(16,339)
Profit/(loss) before tax	967	413	(75)	426	178	303	83	170	(813)	1,652
Tax attributable to policyholders' returns	469	—	—	—	—	1	7	—	—	477
Profit/(loss) before tax attributable to shareholders' profits	1,436	413	(75)	426	178	304	90	170	(813)	2,129
Adjusting items:										
Reclassification of corporate costs and unallocated interest	—	(16)	31	48	—	(1)	—	5	(67)	—
Life business: Investment variances and economic assumption changes	115	—	—	(6)	10	57	21	—	—	197
Non-life business: Short-term fluctuation in return on investments	—	172	45	44	2	57	—	—	156	476
General insurance and health business: Economic assumption changes	—	4	—	(5)	—	—	—	—	—	(1)
Impairment of goodwill, joint ventures, associates and other amounts expensed	—	—	—	—	2	—	3	—	8	13
Amortisation and impairment of intangibles acquired in business combinations	50	—	26	1	6	2	12	—	—	97
Amortisation and impairment of AVIF	285	—	—	2	—	6	130	—	3	426
(Profit)/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	—	—	(89)	5	(27)	9	(102)
Other[6]	—	(190)	—	—	—	(36)	—	—	(5)	(231)
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	1,886	383	27	510	198	300	261	148	(709)	3,004

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. As a result of the review, there have been reclassifications between operating segments to ensure a consistent presentation of investment fund consolidation entries in the Other Group Activities segment. These consolidation adjustment reclassifications relate to UK property funds (£66 million reclassified to Other Group Activities, which predominately includes net investment expense (£78 million), other expenses (£24 million credit) and finance costs (£15 million)). This segmental restatement has had no impact on the consolidated income statement. See note 1(a) for further information.
2 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.
3 Total reported income, excluding inter-segment revenue, includes £4,412 million from the United Kingdom (Aviva plc's country of domicile). Income is attributed on the basis of geographical origin which does not differ materially from revenue by geographical destination, as most risks are located in the countries where the contracts were written.
4 Aviva Investors adjusted operating profit includes £1 million profit relating to the Aviva Investors Pensions Limited business.
5 Other Group activities include internal reinsurance and net expenses of £180 million (restated) in relation to the UK digital business.
6 Other includes a movement in the discount rate used for estimating lump sum payments in settlement of bodily injury claims which resulted in a gain of £190 million, a provision release of £78 million relating to the sale of Aviva USA in 2013, a gain of £36 million relating to negative goodwill on the acquisition of Friends First, a charge of £63 million relating to the UK defined benefit pension scheme as a result of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension and a charge of £10 million relating to the goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs.

5 – Segmental information continued

(b) Further analysis by products and services

The Group's results can be further analysed by products and services which comprise long-term business, general insurance and health, fund management and other activities.

Long-term business

Our long-term business comprises life insurance, long-term health and accident insurance, savings, pensions and annuity business written by our life insurance subsidiaries, including managed pension fund business. Long-term business also includes our share of the other life and related business written in our associates and joint ventures, as well as lifetime mortgage business written in the UK.

General insurance and health

Our general insurance and health business provides insurance cover to individuals and to small and medium-sized businesses, for risks associated mainly with motor vehicles, property and liability, such as employers' liability and professional indemnity liability, and medical expenses.

Fund management

Our fund management business invests policyholders' and shareholders' funds and provides investment management services for institutional pension fund mandates. It manages a range of retail investment products, including investment funds, unit trusts, open-ended investment companies and individual savings accounts. Clients include Aviva Group businesses and third-party financial institutions, pension funds, public sector organisations, investment professionals and private investors.

Other

'Other' includes service companies, head office expenses, such as Group treasury and finance functions, and certain financing costs and taxes not allocated to business segments and elimination entries for certain inter-segment transactions and group consolidation adjustments.

(b) (i) Segmental income statement – products and services for the year ended 31 December 2019

	Long-term business £m	General insurance and health[2] £m	Fund management £m	Other[3] £m	Total £m
Gross written premiums[1]	20,335	10,908	—	—	31,243
Premiums ceded to reinsurers	(2,879)	(684)	—	—	(3,563)
Premiums written net of reinsurance	17,456	10,224	—	—	27,680
Net change in provision for unearned premiums	—	(209)	—	—	(209)
Net earned premiums	17,456	10,015	—	—	27,471
Fee and commission income	1,490	126	319	206	2,141
	18,946	10,141	319	206	29,612
Net investment income/(expense)	38,722	622	(1)	1,234	40,577
Inter-segment revenue	—	—	250	—	250
Share of profit of joint ventures and associates	113	—	—	(28)	85
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(28)	6	—	—	(22)
Segmental income	**57,753**	**10,769**	**568**	**1,412**	**70,502**
Claims and benefits paid, net of recoveries from reinsurers	(16,612)	(6,484)	—	—	(23,096)
Change in insurance liabilities, net of reinsurance	(5,566)	(136)	—	—	(5,702)
Change in investment contract provisions	(24,095)	—	—	—	(24,095)
Change in unallocated divisible surplus	(3,985)	—	—	—	(3,985)
Fee and commission expense	(1,546)	(2,672)	(27)	(1,291)	(5,536)
Other expenses	(1,850)	(649)	(453)	(377)	(3,329)
Inter-segment expenses	(237)	(13)	—	—	(250)
Finance costs	(170)	(10)	—	(396)	(576)
Segmental expenses	**(54,061)**	**(9,964)**	**(480)**	**(2,064)**	**(66,569)**
Profit/(loss) before tax	3,692	805	88	(652)	3,933
Tax attributable to policyholders' returns	(559)	—	—	—	(559)
Profit/(loss) before tax attributable to shareholders' profits	3,133	805	88	(652)	3,374
Adjusting items	(133)	(161)	4	100	(190)
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	**3,000**	**644**	**92**	**(552)**	**3,184**

1 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £62 million, which all relates to property and liability insurance.
2 General insurance and health business segment includes gross written premiums of £944 million relating to health business. The remaining business relates to property and liability insurance.
3 Other includes net expenses of £15 million in relation to the UK digital business. The reduction of £165 million from 2018 reflects the alignment of the UK digital business with the UK long-term and general insurance businesses during the year.

5 – Segmental information continued

(b) (ii) Segmental income statement – products and services for the year ended 31 December 2018 – restated[1, 2]

	Long-term business £m	General insurance and health[4] £m	Fund management £m	Other[5] £m	Total £m
Gross written premiums[3]	18,140	10,519	—	—	28,659
Premiums ceded to reinsurers	(1,775)	(551)	—	—	(2,326)
Premiums written net of reinsurance	16,365	9,968	—	—	26,333
Net change in provision for unearned premiums	—	(81)	—	—	(81)
Net earned premiums	16,365	9,887	—	—	26,252
Fee and commission income	1,496	138	365	179	2,178
	17,861	10,025	365	179	28,430
Net investment (expense)/income	(10,453)	63	(1)	(521)	(10,912)
Inter-segment revenue	—	—	263	—	263
Share of profit of joint ventures and associates	178	—	—	(66)	112
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	84	—	27	(9)	102
Segmental income	7,670	10,088	654	(417)	17,995
Claims and benefits paid, net of recoveries from reinsurers	(16,540)	(6,602)	—	—	(23,142)
Change in insurance liabilities, net of reinsurance	6,044	202	—	—	6,246
Change in investment contract provisions	5,321	—	—	—	5,321
Change in unallocated divisible surplus	3,237	—	—	—	3,237
Fee and commission expense	(1,245)	(2,592)	(31)	542	(3,326)
Other expenses	(2,128)	(596)	(461)	(658)	(3,843)
Inter-segment expenses	(249)	(12)	—	(2)	(263)
Finance costs	(179)	(6)	—	(388)	(573)
Segmental expenses	(5,739)	(9,606)	(492)	(506)	(16,343)
Profit/(loss) before tax	1,931	482	162	(923)	1,652
Tax attributable to policyholders' returns	477	—	—	—	477
Profit/(loss) before tax attributable to shareholders' profits	2,408	482	162	(923)	2,129
Adjusting items	568	169	(19)	157	875
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	2,976	651	143	(766)	3,004

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. As a result of the review, there have been reclassifications between operating segments to ensure a consistent presentation of investment fund consolidation entries in the Other segment. These consolidation adjustment reclassifications relate to property funds (£66 million reclassified from Long-term business to Other, which predominately includes net investment expense (£78 million), other expenses (£24 million credit) and finance costs (£15 million)). This segmental restatement has had no impact on the consolidated income statement. See note 1(a) for further information.
2 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.
3 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £56 million which all relates to property and liability insurance.
4 General insurance and health business segment includes gross written premiums of £879 million relating to health business. The remaining business relates to property and liability insurance.
5 Other includes net expenses of £180 million (restated) in relation to the UK digital business.

6 – Details of income

This note gives further detail on the items appearing in the income section of the income statement.

	2019 £m	Restated[1] 2018 £m
Gross written premiums		
Long-term:		
Insurance contracts	**12,906**	11,064
Participating investment contracts	**7,429**	7,076
General insurance and health	**10,908**	10,519
	31,243	28,659
Less: premiums ceded to reinsurers	**(3,563)**	(2,326)
Gross change in provision for unearned premiums (note 43(c)(v))	**(231)**	(98)
Reinsurers' share of change in provision for unearned premiums (note 47(c)(iii))	**22**	17
Net change in provision for unearned premiums	**(209)**	(81)
Net earned premiums	**27,471**	26,252
Fee and commission income		
Fee income from investment contract business	**1,064**	1,059
Fund management fee income	**439**	527
Other fee income	**451**	403
Reinsurance commissions receivable	**32**	26
Other commission income	**175**	164
Net change in deferred revenue	**(20)**	(1)
	2,141	2,178
Total revenue	**29,612**	28,430
Net investment income		
Interest and similar income		
From financial instruments designated as trading and other than trading	**5,950**	5,716
From AFS investments and financial instruments at amortised cost	**49**	54
	5,999	5,770
Dividend income	**5,614**	4,881
Other income from investments designated as trading		
Realised gains/(losses) on disposals	**1,388**	(803)
Unrealised gains and losses (see accounting policy K)		
Gains/(losses) arising in the year	**1,866**	(1,887)
(Losses)/gains recognised now realised	**(1,388)**	803
	478	(1,084)
	1,866	(1,887)
Other income from investments designated as other than trading		
Realised gains on disposals	**9,130**	8,044
Unrealised gains and losses (see accounting policy K)		
Gains/(losses) arising in the year	**27,050**	(20,757)
Losses recognised now realised	**(9,130)**	(8,044)
	17,920	(28,801)
	27,050	(20,757)
Realised gains on AFS investments		
Gains recognised in prior periods as unrealised in equity	**19**	78
Net income from investment properties		
Rent	**555**	583
Expenses relating to these properties	**(158)**	(121)
Realised gains on disposal	**58**	69
Fair value gains on investment properties (note 22)	**93**	307
	548	838
Foreign exchange (losses)/gains on investments other than trading	**(454)**	192
Other investment expenses	**(65)**	(27)
Net investment income/(expense)	**40,577**	(10,912)
Share of profit after tax of joint ventures (note 19(a)(i))	**18**	91
Share of profit after tax of associates (note 20(a)(i))	**67**	21
Share of profit after tax of joint ventures and associates	**85**	112
(Loss)/profit on disposal and remeasurement of subsidiaries, joint ventures and associates (note 4(a))	**(22)**	102
Total income	**70,252**	17,732

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

7 – Details of expenses

This note gives further detail on the items appearing in the expenses section of the income statement.

	2019 £m	Restated[1] 2018 £m
Claims and benefits paid		
Claims and benefits paid to policyholders on long-term business		
Insurance contracts	**13,017**	12,163
Participating investment contracts	**5,333**	6,117
Non-participating investment contracts	**7**	8
Claims and benefits paid to policyholders on general insurance and health business	**6,765**	6,913
	25,122	25,201
Less: Claim recoveries from reinsurers		
Insurance contracts	**(2,029)**	(1,984)
Participating investment contracts	**3**	(75)
Claims and benefits paid, net of recoveries from reinsurers	**23,096**	23,142
Change in insurance liabilities		
Change in insurance liabilities (note 42(b))	**6,824**	(6,415)
Change in reinsurance asset for insurance provisions (note 42(b))	**(1,122)**	169
Change in insurance liabilities, net of reinsurance	**5,702**	(6,246)
Change in investment contract provisions		
Investment expense/(income) allocated to investment contracts	**14,972**	(6,128)
Other changes in provisions		
Participating investment contracts (note 45(c)(i))	**7,365**	540
Non-participating investment contracts	**1,767**	272
Change in reinsurance asset for investment contract provisions	**(9)**	(5)
Change in investment contract provisions	**24,095**	(5,321)
Change in unallocated divisible surplus (note 49)	**3,985**	(3,237)
Fee and commission expense		
Acquisition costs		
Commission expenses for insurance and participating investment contracts	**2,829**	2,678
Change in deferred acquisition costs for insurance and participating investment contracts	**(163)**	(183)
Deferrable costs for non-participating investment contracts	**39**	32
Other acquisition costs	**1,048**	996
Change in deferred acquisition costs for non-participating investment contracts	**(83)**	84
Investment expense/(income) attributable to unitholders	**1,355**	(771)
Reinsurance commissions and other fee and commission expense	**511**	490
	5,536	3,326
Other expenses		
Other operating expenses		
Staff costs (note 11(b))	**1,161**	1,172
Central costs and sharesave schemes	**183**	216
Depreciation	**98**	40
Impairment of goodwill on subsidiaries (note 17(a))	**6**	13
Amortisation of acquired value of in-force business on insurance/investment contracts (note 18)	**406**	426
Amortisation of intangible assets (note 18)	**212**	209
Impairment of intangible assets (note 18)	**13**	—
Other expenses (see below)	**1,345**	1,729
Impairments		
Net impairment on loans	**4**	1
Net impairment on receivables and other financial assets	**10**	9
Other net foreign exchange losses	**(109)**	28
Other expenses	**3,329**	3,843
Finance costs (note 8)	**576**	573
Total expenses	**66,319**	16,080

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Other expenses were £1,345 million *(2018: £1,729 million)* which included costs relating to property, IT and a charge of £2 million relating to negative goodwill on the acquisition of Friends First. Other expenses in 2018 included a provision release of £78 million relating to the sale of Aviva USA in 2013, a gain of £36 million relating to negative goodwill on the acquisition of Friends First, a charge of £63 million relating to the UK defined benefit pension scheme as a result of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension (see note 52(b)) and a charge of £10 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs.

Change in insurance liabilities includes a charge of £45 million *(2018: gain of £190 million)* relating to the movement in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note 44(b)).

8 – Finance costs

This note analyses the interest costs on our borrowings (which are described in note 53) and similar charges. Finance costs comprise:

	2019 £m	2018 £m
Interest expense on core structural borrowings		
Subordinated debt	**336**	364
Long term senior debt	**16**	6
Commercial paper	**(1)**	(2)
	351	368
Interest expense on operational borrowings		
Amounts owed to financial institutions	**21**	20
Securitised mortgage loan notes at fair value	**77**	95
	98	115
Interest on collateral received	**10**	8
Net finance charge on pension schemes (note 52(b)(i))	**23**	22
Interest on lease liabilities	**14**	—
Other similar charges	**80**	60
Total finance costs	**576**	573

9 – Life business investment variances and economic assumption changes

(a) Definitions

Group adjusted operating profit for life business is based on expected long-term investment returns on financial investments backing shareholder funds over the period, with consistent allowance for the corresponding expected movements in liabilities. Group adjusted operating profit includes the effect of variance in experience for operating items, such as mortality, persistency and expenses, and the effect of changes in operating assumptions. Changes due to economic items, such as market value movements 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 separately outside Group adjusted operating profit, in investment variances and economic assumption changes.

(b) Methodology

The expected investment returns and corresponding expected movements in life business liabilities are calculated separately for each principal life business unit.

The expected return on investments for both policyholders' and shareholders' funds is based on opening economic assumptions applied to the expected funds under management over the reporting period. Expected investment return assumptions are derived actively, based on market yields on risk-free fixed interest assets at the end of each financial year. The same margins are applied on a consistent basis across the Group to gross risk-free yields, to obtain investment return assumptions for equity and property. Expected funds under management are equal to the opening value of funds under management, adjusted for sales and purchases during the period arising from expected operating experience.

The actual investment return is affected by differences between the actual and expected funds under management and changes in asset mix, as well as movements in interest rates. To the extent that these differences arise from the operating experience of the life business, or management decisions to change asset mix, the effect is included in the Group adjusted operating profit. The residual difference between actual and expected investment return is included in investment variances, outside Group adjusted operating profit but included in profit before tax attributable to shareholders' profits.

The movement in liabilities included in Group adjusted operating profit reflects both the change in liabilities due to the expected return on investments and the impact of experience variances and assumption changes for non-economic items. This would include movements in liabilities due to changes in the discount rate arising from discretionary management decisions that impact on product profitability over the lifetime of products.

The effect of differences between actual and expected economic experience on liabilities, and changes to economic assumptions used to value liabilities, are taken outside Group adjusted operating profit. For many types of life business, including unit-linked and with-profits funds, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit. The profit impact of economic volatility on other life business depends on the degree of matching of assets and liabilities, and exposure to financial options and guarantees.

(c) Assumptions

The expected rate of investment return is determined using consistent assumptions at the start of the period between operations, having regard to local economic and market forecasts of investment return and asset classification under IFRS.

The principal assumptions underlying the calculation of the expected investment return for equity and property are:

	Equity		Property	
	2019	2018	**2019**	2018
United Kingdom	**4.9%**	4.8%	**3.4%**	3.3%
Eurozone	**4.3%**	4.4%	**2.8%**	2.9%

The expected return on equity and property has been calculated by reference to the ten-year mid-price swap rate for an AA rated bank in the relevant currency plus a risk premium. The use of risk premium reflects management's long-term expectations of asset return in excess of the swap yield from investing in different asset classes. The asset risk premiums are set out in the table below:

All territories	**2019**	2018
Equity risk premium	**3.5%**	3.5%
Property risk premium	**2.0%**	2.0%

The ten-year mid-price swap rates at the start of the period are set out in the table below:

Territories	**2019**	2018
United Kingdom	**1.4%**	1.3%
Eurozone	**0.8%**	0.9%

For fixed interest securities classified as fair value through profit or loss, the expected investment returns are based on average prospective yields for the actual assets held less an adjustment for credit risk (assessed on a best estimate basis). This includes an adjustment for credit risk on all eurozone sovereign debt. Where such securities are classified as available for sale, the expected investment return comprises the expected interest or dividend payments and amortisation of the premium or discount at purchase.

9 – Life business investment variances and economic assumption changes continued

(d) Investment variances and economic assumption changes

The investment variances and economic assumption changes excluded from the life adjusted operating profit are as follows:

Life business	2019 £m	2018 £m
Investment variances and economic assumptions	**654**	(197)

Investment variances and economic assumption changes were £654 million *(2018: £197 million negative)*. This is primarily due to the UK where there was a positive variance as a result of a reduction in yields, a narrowing of fixed income spreads and a consequent impact from economic assumption changes, including an alignment of methodology across the UK, partially offset by the impact of increases in equities. The impact of yields and equities reflects the fact that we hedge on an economic rather than on an IFRS basis.

The Group continues to keep under review the allowance in our assumptions for future property prices and rental income in relation to our commercial and equity release mortgages, for the possible adverse impact including but not limited to the ultimate arrangements regarding the UK's exit from the European Union. At 31 December 2019 this allowance has been determined in line with previous periods and is estimated at £440 million *(2018: £395 million)*. As more clarity is provided on the terms of the UK's exit from the European Union, the Group will look to establish core property assumptions without an explicit allowance for Brexit uncertainty.

The variance in 2018 was primarily due to negative variances in the UK and Italy. In the UK, these variances were mainly due to an increase in yields, the widening of corporate bond spreads and an increase in the allowance for the possible adverse impact of the decision for the UK to leave the European Union, partially offset by the beneficial impact of our equity hedges. The negative variance in Italy was primarily driven by a widening of sovereign credit spreads and a fall in equity markets.

10 – Non-life business: short-term fluctuations in return on investments

(a) Definitions

Group adjusted operating profit for non-life business is based on an expected long-term investment return over the period. Any variance between the total investment return (including realised and unrealised gains) and the expected return over the period is disclosed separately outside Group adjusted operating profit, in short-term fluctuations.

The short-term fluctuations in investment return and economic assumption changes attributable to the non-life business result and reported outside Group adjusted operating profit were as follows:

Non-life business	2019 £m	2018 £m
Short-term fluctuations in investment return (see (d) below)	**167**	(476)
Economic assumption changes (see (e) below)	**(54)**	1
	113	(475)

(b) Methodology

The long-term investment return is calculated separately for each principal non-life market. In respect of equities and investment properties, the return is calculated by multiplying the opening market value of the investments, adjusted for sales and purchases during the year, by the long-term rate of investment return.

The long-term rate of investment return is determined using consistent assumptions between operations, having regard to local economic and market forecasts of investment return. The allocated long-term return for other investments (including debt securities) is the actual income receivable for the year. Actual income and long-term investment return both contain the amortisation of the discounts/premium arising on the acquisition of fixed income securities. For other operations, the long-term return reflects assets backing non-life business held in Group centre investments.

Market value movements which give rise to variances between actual and long-term investment returns are disclosed separately in short-term fluctuations outside Group adjusted operating profit.

The impact of realised and unrealised gains and losses on Group centre investments, including the centre hedging programme which is designed to economically protect the total Group's capital against adverse equity and foreign exchange movements, is included in short-term fluctuations on other operations.

(c) Assumptions

The principal assumptions underlying the calculation of the long-term investment return are:

	Long-term rates of return Equities		Long-term rates of return Investment properties	
	2019 %	2018 %	2019 %	2018 %
United Kingdom	**4.9**	4.8	**3.4**	3.3
Eurozone	**4.3**	4.4	**2.8**	2.9
Canada	**6.0**	5.9	**4.5**	4.4

The long-term rates of return on equities and investment properties have been calculated by reference to the ten-year mid-price swap rate for an AA rated bank in the relevant currency plus a risk premium. The underlying reference rates and risk premiums for the United Kingdom and Eurozone are shown in note 9.

10 – Non-life business: short-term fluctuations in return on investments continued

(d) Analysis of investment return

The total investment income on our non-life business, including short-term fluctuations, are as follows:

Non-life business	2019 £m	2018 £m
Analysis of investment income:		
Net investment income/(expenses)	**511**	(88)
Foreign exchange gains/(losses) and other charges	**55**	(8)
	566	(96)
Analysed between:		
Long-term investment return, reported within Group adjusted operating profit	**399**	380
Short-term fluctuation in investment return, reported outside Group adjusted operating profit		
General insurance and health	**296**	(315)
Other operations[1]	**(129)**	(161)
	167	(476)
	566	(96)

1 Other operations represents short-term fluctuations on assets backing non-life business in Group centre investments, including the centre hedging programme.

The short-term fluctuations during 2019 of £167 million favourable is primarily due to strong market conditions across all our major markets. This resulted in significant gains on equities plus gains on fixed income securities driven by interest rates falling and a narrowing of credit spreads. These gains are partly offset by losses on hedges held by the Group, including the Group centre hedging programme, and other adverse movements on centre holdings.

The adverse short-term fluctuations during 2018 were mainly due to adverse market conditions across most of our major markets. This resulted in losses on fixed interest income securities driven by interest rate increases and widening credit spreads plus significant falls in equities and other adverse market movements on Group centre holdings.

(e) Economic assumption changes

In the general insurance and health business, there is a negative impact of £54 million *(2018: £1 million positive)* primarily as a result of a decrease in interest rates used to discount claims reserves for both periodic payment orders and latent claims.

As explained in accounting policy L, provisions for latent claims are discounted, using rates based on the relevant swap curve, in the relevant currency at the reporting date, having regard to the duration of the expected settlement of the claims. The discount rate is set at the start of the accounting period, with any change in rates between the start and end of the accounting period being reflected below Group adjusted operating profit as an economic assumption change. The range of discount rates used is disclosed in note 44.

11 – Employee information

This note shows where our staff are employed throughout the world, excluding staff employed by our joint ventures and associates, and analyses the total staff costs.

(a) Employee numbers

The number of persons employed by the Group, including directors under a service contract, was:

	At 31 December		Average for the year[1]	
	2019 Number	2018 Number	**2019 Number**	2018 Number
United Kingdom	**15,335**	15,746	**15,863**	15,414
Canada	**4,264**	4,334	**4,338**	4,330
France	**3,911**	3,928	**3,925**	3,911
Poland	**1,648**	1,708	**1,696**	1,716
Italy, Ireland, Spain and Other	**1,969**	1,950	**1,933**	1,864
Asia	**1,876**	1,832	**1,842**	1,817
Aviva Investors	**1,495**	1,471	**1,485**	1,460
Other Group activities	**683**	734	**709**	720
Total employee numbers	**31,181**	31,703	**31,791**	31,232

1 Average employee numbers have been calculated using a monthly average that takes into account recruitment, leavers, transfers, acquisitions and disposals of businesses during the year.

(b) Staff costs

	2019 £m	2018 £m
Wages and salaries	**1,321**	1,260
Social security costs	**239**	233
Post-retirement obligations		
Defined benefit schemes (note 52(d))	**22**	23
Defined contribution schemes (note 52(d))	**164**	163
Profit sharing and incentive plans	**193**	221
Equity compensation plans (note 34(d))	**62**	64
Termination benefits	**35**	10
Total staff costs	**2,036**	1,974

Staff costs are charged within:

	2019 £m	2018 £m
Acquisition costs	**611**	565
Claims handling expenses	**197**	161
Central costs and sharesave schemes	**67**	76
Other operating expenses (note 7)	**1,161**	1,172
Total staff costs	**2,036**	1,974

12 – Directors

Information concerning individual directors' emoluments, interests and transactions is given in the Directors' Remuneration Report in the 'Corporate governance' section of this report. For the purposes of the disclosure required by Schedule 5 to the Companies Act 2006, the total aggregate emoluments of the directors in respect of 2019 was £7 million *(2018: £10 million)*. Employer contributions to pensions for executive directors for qualifying periods were £18,813 *(2018: £165,373)*. The aggregate net value of share awards granted to the directors in the period was £8.0 million *(2018: £11.1 million)*. The net value has been calculated by reference to the closing middle market price of an ordinary share at the date of grant. During the year, no share options were exercised by directors *(2018: no share options)*.

13 – Auditors' remuneration

This note shows the total remuneration payable by the Group, excluding VAT and any overseas equivalent thereof, to our auditors.

	2019 £m	2018 £m
Fees payable to PwC LLP and its associates for the statutory audit of the Aviva Group and Company financial statements	**1.8**	1.9
Fees payable to PwC LLP and its associates for other services		
Audit of Group subsidiaries	**13.7**	13.4
Additional fees related to the prior year audit of Group subsidiaries	**0.8**	0.4
Total audit fees	**16.3**	15.7
Audit related assurance	**4.9**	4.7
Other assurance services	**0.7**	0.9
Total audit and assurance fees	**21.9**	21.3
Tax compliance services	**—**	—
Tax advisory services	**—**	—
Services relating to corporate finance transactions	**—**	—
Other non-audit services not covered above	**0.1**	1.0
Fees payable to PwC LLP and its associates for services to Group companies	**22.0**	22.3
Fees payable to BDO LLP and its associates for the statutory audit of Group subsidiaries in Poland	**0.4**	0.2
Fees payable to Mazars LLP and its associates for the statutory audit of Group subsidiaries in Italy	**0.3**	—
Fees payable to PwC LLP, BDO LLP, Mazars LLP and their associates for services to Group companies	**22.7**	22.5
Fees payable to PwC LLP and its associates for Group occupational pensions scheme audits	**0.3**	0.3

Fees payable for the audit of the Group's subsidiaries include fees for the statutory audit of the subsidiaries, both inside and outside the UK, and for the work performed by the principal auditors in respect of the subsidiaries for the purpose of the consolidated financial statements of the Group.

Audit related assurance comprises services in relation to statutory and regulatory filings. These include fees for the audit of the Group's Solvency II regulatory returns for 2019, services for the audit of other regulatory returns of the Group's subsidiaries and review of interim financial information under the Listing Rules of the UK Listing Authority. Total audit fees (excluding additional fees relating to the prior year audits of Group subsidiaries) and audit-related assurance fees were £20.4 million *(2018: £20.0 million)*.

Other assurance services in 2019 of £0.7 million *(2018: £0.9 million)* mainly include fees relating to providing an annual Audit and Assurance Faculty (AAF) report for Aviva Investors to give internal and external clients and their auditors comfort over the operating effectiveness of internal controls and review of the information security business protection standard and associated controls.

Details of the Group's process for safeguarding and supporting the independence and objectivity of the external auditors are given in the Audit Committee report.

14 – Tax

This note analyses the tax charge for the year and explains the factors that affect it.

(a) Tax charged/(credited) to the income statement

(i) The total tax charge/(credit) comprises:

	2019 £m	2018 £m
Current tax		
For the period	**1,062**	559
Prior period adjustments	**(179)**	(49)
Total current tax	**883**	510
Deferred tax		
Origination and reversal of temporary differences	**402**	(531)
Changes in tax rates or tax laws	**(6)**	(13)
Write back of deferred tax assets	**(9)**	(1)
Total deferred tax	**387**	(545)
Total tax charged/(credited) to income statement	**1,270**	(35)

(ii) The Group, as a proxy for policyholders in the UK, Ireland and Singapore, is required to record taxes on investment income and gains each year. Accordingly, the tax benefit or expense attributable to UK, Ireland and Singapore life insurance policyholder returns is included in the tax charge. The tax charge attributable to policyholder returns included in the charge above is £559 million *(2018: credit of £477 million)*.

(iii) The tax charge/(credit) above, comprising current and deferred tax, can be analysed as follows:

	2019 £m	2018 £m
UK tax	**851**	(236)
Overseas tax	**419**	201
	1,270	(35)

(iv) Unrecognised tax losses and temporary differences of previous years were used to reduce the current tax expense and deferred tax charge by £nil and £11 million *(2018: £nil and £nil)*, respectively.

(v) Deferred tax charged/(credited) to the income statement represents movements on the following items:

	2019 £m	2018 £m
Long-term business technical provisions and other insurance items	**(1,185)**	907
Deferred acquisition costs	**4**	3
Unrealised gains/(losses) on investments	**1,554**	(1,453)
Pensions and other post-retirement obligations	**21**	2
Unused losses and tax credits	**4**	7
Subsidiaries, associates and joint ventures	**4**	(7)
Intangibles and additional value of in-force long-term business	**(63)**	(64)
Provisions and other temporary differences	**48**	60
Total deferred tax charged/(credited) to income statement	**387**	(545)

(b) Tax credited to other comprehensive income

(i) The total tax credit comprises:

	2019 £m	2018 £m
Current tax		
In respect of pensions and other post-retirement obligations	**(49)**	(59)
In respect of foreign exchange movements	**(10)**	(1)
	(59)	(60)
Deferred tax		
In respect of pensions and other post-retirement obligations	**(56)**	16
In respect of fair value gains on owner-occupied properties	**1**	—
In respect of unrealised gains/(losses) on investments	**5**	(7)
	(50)	9
Total tax credited to other comprehensive income	**(109)**	(51)

(ii) There is no tax charge/(credit) attributable to policyholders' return included above in either 2019 or 2018.

14 – Tax continued

(c) Tax credited to equity

Tax credited directly to equity in the year in respect of coupon payments on the direct capital instrument and tier 1 notes amounted to £9 million *(2018: £8 million)*.

(d) Tax reconciliation

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the tax rate of the home country of the Company as follows:

	Shareholder £m	Policyholder £m	2019 £m	Shareholder £m	Policyholder £m	2018 £m
Total profit before tax	**3,374**	**559**	**3,933**	2,129	(477)	1,652
Tax calculated at standard UK corporation tax rate of 19.00% *(2018: 19.00%)*	**641**	**106**	**747**	405	(91)	314
Reconciling items						
Different basis of tax – policyholders	**—**	**454**	**454**	—	(385)	(385)
Adjustment to tax charge in respect of prior periods	**5**	**—**	**5**	(16)	—	(16)
Non-assessable income and items not taxed at the full statutory rate	**(51)**	**—**	**(51)**	(4)	—	(4)
Non-taxable profit on sale of subsidiaries and associates	**(1)**	**—**	**(1)**	(59)	—	(59)
Disallowable expenses	**41**	**—**	**41**	50	—	50
Different local basis of tax on overseas profits	**98**	**(1)**	**97**	71	(1)	70
Change in future local statutory tax rates	**(6)**	**—**	**(6)**	—	—	—
Movement in deferred tax not recognised	**(4)**	**—**	**(4)**	(3)	—	(3)
Tax effect of profit from joint ventures and associates	**(8)**	**—**	**(8)**	(6)	—	(6)
Other	**(4)**	**—**	**(4)**	4	—	4
Total tax charged/(credited) to income statement	**711**	**559**	**1,270**	442	(477)	(35)

The tax charge/(credit) attributable to policyholder returns is removed from the Group's total profit before tax in arriving at the Group's profit before tax attributable to shareholders' profits. As the net of tax profits attributable to with-profits and unit-linked policyholders is zero, the Group's pre-tax profit attributable to policyholders is an amount equal and opposite to the tax charge/(credit) attributable to policyholders included in the total tax charge.

Finance Act 2016 introduced legislation reducing the UK corporation tax rate from 1 April 2020 to 17%. In addition, in France the rate of corporation tax was reduced from 34.43% to 32.02% from 1 January 2019, to 27.37% from 1 January 2021 and 25.83% from 1 January 2022. These reduced rates were used in the calculation of the Group's deferred tax assets and liabilities as at 31 December 2018.

During 2019 changes were made in France to alter the reduction in corporation tax rates, delaying the reduction to 32.02% to 1 January 2020 and amending the rate to take effect from 1 January 2021 to 28.41%. These revised rates have been used in the calculation of France's deferred tax assets and liabilities as at 31 December 2019.

During 2019, the UK Government indicated that it would reverse the reduction in corporation tax rate to 17% due from 1 April 2020. As of the 31 December 2019, this measure had not been substantively enacted and therefore no impact is reflected in the calculation of the UK's deferred tax assets and liabilities as at 31 December 2019. Were this measure to be introduced, it would increase the Group's deferred tax liability by approximately £73 million.

15 – Earnings per share

This note shows how to calculate earnings per share on profit attributable to ordinary shareholders, based both on the present shares in issue (the basic earnings per share) and the potential future shares in issue, including conversion of share options granted to employees (the diluted earnings per share). We have also shown the same calculations based on our Group adjusted operating profit as we believe this gives an important indication of operating performance. Consideration of both these measures gives a full picture of the performance of the business in the period.

(a) Basic earnings per share

(i) The profit attributable to ordinary shareholders is:

	2019 £m			Restated[1] 2018 £m		
	Group adjusted operating profit £m	Adjusting items £m	Total £m	Group adjusted operating profit £m	Adjusting items £m	Total £m
Profit before tax attributable to shareholders' profits	**3,184**	**190**	**3,374**	3,004	(875)	2,129
Tax attributable to shareholders' profit	**(668)**	**(43)**	**(711)**	(625)	183	(442)
Profit for the year	**2,516**	**147**	**2,663**	2,379	(692)	1,687
Amount attributable to non-controlling interests	**(98)**	**(17)**	**(115)**	(100)	(19)	(119)
Cumulative preference dividends for the year	**(17)**	**—**	**(17)**	(17)	—	(17)
Coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax)	**(34)**	**—**	**(34)**	(36)	—	(36)
Profit attributable to ordinary shareholders	**2,367**	**130**	**2,497**	2,226	(711)	1,515

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit.

(ii) Basic earnings per share is calculated as follows:

	2019 £m			Restated[2] 2018 £m		
	Before tax £m	Net of tax, NCI, preference dividends and DCI[1] £m	Per share p	Before tax £m	Net of tax, NCI, preference dividends and DCI[1] £m	Per share p
Group adjusted operating profit attributable to ordinary shareholders	**3,184**	**2,367**	**60.5**	3,004	2,226	56.2
Adjusting items:						
Life business: Investment variances and economic assumption changes	**654**	**535**	**13.7**	(197)	(198)	(5.0)
Non-life business: Short-term fluctuation in return on investments	**167**	**129**	**3.3**	(476)	(378)	(9.6)
General insurance and health business: Economic assumption changes	**(54)**	**(33)**	**(0.8)**	1	(1)	—
Impairment of goodwill, joint ventures, associates and other amounts expensed	**(15)**	**(15)**	**(0.4)**	(13)	(13)	(0.3)
Amortisation and impairment of intangibles acquired in business combinations[2]	**(87)**	**(61)**	**(1.6)**	(97)	(82)	(2.1)
Amortisation and impairment of acquired value of in-force business	**(406)**	**(356)**	**(9.1)**	(426)	(371)	(9.4)
Profit on disposal and remeasurement of subsidiaries, joint ventures and associates	**(22)**	**(23)**	**(0.6)**	102	102	2.6
Other[3]	**(47)**	**(46)**	**(1.2)**	231	230	5.8
Profit attributable to ordinary shareholders	**3,374**	**2,497**	**63.8**	2,129	1,515	38.2

1 DCI includes the direct capital instrument and tier 1 notes.
2 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, comparative amounts for operating earnings per share have also been restated resulting in a reduction in the prior period of 2.2 pence.
3 Other in 2019 relates to a charge of £45 million in relation to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note 44(b)) and a charge of £2m relating to negative goodwill which arose on the acquisition of Friends First (see note 3). Other in 2018 includes a movement in the discount rate used for estimating lump sum payments in the settlement of bodily injury claims which resulted in a gain of £190 million, a provision release of £78 million relating to the sale of Aviva USA in 2013, a gain of £36 million relating to negative goodwill on the acquisition of Friends First, a charge of £63 million relating to the UK defined benefit pension scheme as a result of the requirements to equalise members' benefits of the effects of Guaranteed Minimum Pension and a charge of £10 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs.

(iii) The calculation of basic earnings per share uses a weighted average of 3,911 million *(2018: 3,963 million)* ordinary shares in issue, after deducting treasury shares. The actual number of shares in issue at 31 December 2019 was 3,921 million *(2018: 3,902 million)* and 3,919 million *(2018: 3,899 million)* excluding treasury shares.

(iv) On 1 May 2018 the Group announced a share buy-back of ordinary shares for an aggregate purchase price of up to £600 million, which was carried out in full during the period from 1 May 2018 to 17 September 2018. The number of shares in issue reduced by 119 million as at 31 December 2018 in respect of shares acquired and cancelled under the buy-back programme.

15 – Earnings per share continued

(b) Diluted earnings per share

(i) Diluted earnings per share is calculated as follows:

	2019 Total £m	2019 Weighted average number of shares million	2019 Per share p	2018 Total £m	2018 Weighted average number of shares million	2018 Per share p
Profit attributable to ordinary shareholders	**2,497**	**3,911**	**63.8**	1,515	3,963	38.2
Dilutive effect of share awards and options	**—**	**45**	**(0.7)**	—	47	(0.4)
Diluted earnings per share	**2,497**	**3,956**	**63.1**	1,515	4,010	37.8

(ii) Diluted earnings per share on Group adjusted operating profit attributable to ordinary shareholders is calculated as follows:

	2019 Total £m	2019 Weighted average number of shares million	2019 Per share p	Restated[1] 2018 Total £m	Restated[1] 2018 Weighted average number of shares million	Restated[1] 2018 Per share p
Group adjusted operating profit attributable to ordinary shareholders	**2,367**	**3,911**	**60.5**	2,226	3,963	56.2
Dilutive effect of share awards and options	**—**	**45**	**(0.7)**	—	47	(0.7)
Diluted group adjusted operating profit per share	**2,367**	**3,956**	**59.8**	2,226	4,010	55.5

1 During 2019 the Group adjusted operating profit APM has been revised and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1(b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax attributable to shareholders' profit. Following the change in the definition of Group adjusted operating profit, comparative amounts for diluted earnings per share have also been restated resulting in a reduction in prior period diluted group adjusted operating profit per share of 2.2 pence.

16 – Dividends and appropriations

This note analyses the total dividends and other appropriations paid during the year. The table below does not include the final dividend proposed after the year end because it is not accrued in these financial statements.

	2019 £m	2018 £m
Ordinary dividends declared and charged to equity in the period		
Final 2018 – 20.75 pence per share, paid on 30 May 2019	**812**	—
Final 2017 – 19.00 pence per share, paid on 17 May 2018	**—**	764
Interim 2019 – 9.50 pence per share, paid on 26 September 2019	**372**	—
Interim 2018 – 9.25 pence per share, paid on 24 September 2018	**—**	364
	1,184	1,128
Preference dividends declared and charged to equity in the period	**17**	17
Coupon payments on DCI and tier 1 notes	**43**	44
	1,244	1,189

Subsequent to 31 December 2019, the directors proposed a final dividend for 2019 of 21.40 pence per ordinary share *(2018: 20.75 pence)*, amounting to £839 million *(2018: £812 million)* in total. Subject to approval by shareholders at the AGM, the dividend will be paid on 2 June 2020 and will be accounted for as an appropriation of retained earnings in the year ending 31 December 2020.

Interest on the direct capital instrument and tier 1 notes is treated as an appropriation of retained profits and, accordingly, is accounted for when paid. This year's tax relief is obtained at a rate of 19% *(2018: 19%)*.

17 – Goodwill

This note analyses the changes to the carrying amount of goodwill during the year and details the results of our impairment testing on both goodwill and intangible assets with indefinite lives.

(a) Carrying amount

	2019 £m	2018 £m
Gross amount		
At 1 January	**1,991**	2,080
Acquisitions and additions	**4**	8
Disposals	**(5)**	(99)
Foreign exchange rate movements	**(22)**	2
At 31 December	**1,968**	1,991
Accumulated impairment		
At 1 January	**(119)**	(168)
Impairment charges	**(6)**	(13)
Disposals	**—**	63
Foreign exchange rate movements	**12**	(1)
At 31 December	**(113)**	(119)
Carrying amount at 1 January[1]	**1,872**	1,912
Carrying amount at 31 December	**1,855**	1,872
Less: Assets classified as held for sale	**—**	—
Carrying amount at 31 December	**1,855**	1,872

1 The balance on 1 January 2018 includes goodwill of £36 million which was part of operations classified as held for sale.

Goodwill from acquisitions and additions in 2019 arose from small acquisitions in Canada and the UK (see note 3). Goodwill from acquisitions and additions in 2018 arose on the acquisition of Wealthify. In 2018, negative goodwill of £36 million arose on the purchase of Friends First, this was recognised immediately in the income statement.

Disposals in 2019 relate to a small disposal in Canada. Disposals in 2018 include those related to the disposal of the Italy Avipop business as well as the remainder of the business in Spain.

The total impairment of goodwill in 2019 is a charge of £6 million comprised of impairments of goodwill relating to businesses in Asia and Canada. The total impairment of goodwill in 2018 was a charge of £13 million relating to businesses in the UK, Asia and Poland. Impairment tests on goodwill were conducted as described in note 17(b) below.

(b) Goodwill allocation and impairment testing

A summary of the goodwill and intangibles with indefinite useful lives allocated to groups of cash generating units (CGUs) is presented below.

	Carrying amount of goodwill		Carrying amount of intangibles with indefinite useful lives (detailed in note 18)		Total	
	2019 £m	2018 £m	2019 £m	2018 £m	2019 £m	2018 £m
United Kingdom – long-term business	**663**	663	**—**	—	**663**	663
United Kingdom – general insurance and health	**927**	924	**1**	—	**928**	924
Canada	**77**	82	**—**	—	**77**	82
France – long-term business	**—**	—	**52**	56	**52**	56
Poland	**25**	27	**7**	7	**32**	34
Italy – general insurance and health	**24**	26	**—**	—	**24**	26
Ireland – general insurance and health	**94**	99	**—**	—	**94**	99
Asia	**45**	51	**1**	—	**46**	51
	1,855	1,872	**61**	63	**1,916**	1,935

Goodwill in all business units is tested for impairment by comparing the carrying value of the cash generating unit to which the goodwill relates, to the recoverable value of that cash generating unit. The recoverable amount is the value in use of the cash generating unit unless otherwise stated.

Long-term business

Value in use has been calculated based on a shareholder value of the business calculated in accordance with Solvency II principles, adjusted where Solvency II does not represent a best estimate of shareholders' interests. The principal adjustments relate to the exclusion of the benefit of transitional measures on technical provisions and the volatility adjustment under Solvency II, modification of the Solvency II risk margin to an economic view and removal of restrictions on contract boundaries or business scope.

17 – Goodwill continued

The present value of expected profits arising from future new business may be included within the shareholder value and is calculated on an adjusted Solvency II basis, using profit projections based on the most recent three-year business plans approved by management. These plans reflect management's best estimate of future profits based on both historical experience and expected growth rates for the relevant cash generating unit. The underlying assumptions of these projections include market share, customer numbers, mortality, morbidity and persistency.

Future new business profits beyond the initial three years are extrapolated using a steady growth rate. Growth rates and expected future profits are set with regards to management estimates, past experience and relevant available market statistics.

Expected profits from future new business are discounted using a risk adjusted discount rate. The discount rate is a combination of a risk-free rate and a risk margin to make prudent allowance for the risk that experience in future years for new business may differ from that assumed.

Key assumptions

The Solvency II non-economic assumptions in relation to mortality, morbidity, persistency and expenses and other items are based on management's best estimate assumptions. Economic assumptions are based on market data as at the end of each reporting period. The basic risk-free rate curves used to value the technical provisions reflect the curves, credit risk adjustment and fundamental spread for the matching adjustment published by the European Insurance and Occupational Pensions Authority (EIOPA) on their website. For the purposes of calculating value in use, the Solvency II risk margin has been modified to an economic view, with a cost of capital rate of 2%.

General insurance, health, fund management and other businesses

Value in use is calculated as the discounted value of expected future profits of each business. The calculation uses cash flow projections based on business plans approved by management covering a three-year period. These plans reflect management's best estimate of future profits based on both historical experience and expected growth rates for the relevant cash generating unit. The underlying assumptions of these projections include market share, customer numbers, premium rate and fee income changes, claims inflation and commission rates.

Cash flows beyond that three-year period are extrapolated using a steady growth rate. Growth rates and expected future profits are set with regards to past experience and relevant available market statistics.

Future profits are discounted using a risk adjusted discount rate which is based on the Capital Asset Pricing Model (CAPM). The inputs include the risk-free rate of interest appropriate to the geographic location of the cash flows related to each CGU being tested, market risk premium, beta and other adjustments to factor local market risks and risks specific to each CGU.

Key assumptions

	Extrapolated future profits growth rate		Future profits discount rate	
	2019 %	2018 %	**2019 (Pre-tax) %**	2018 (Pre-tax) %
United Kingdom general insurance and health	**1**	1	**6.8**	6.3
Ireland general insurance and health	**Nil**	Nil	**6.8**	6.9
Italy general insurance and health	**Nil**	Nil	**10.3**	12.5
Canada general insurance	**4**	4	**8.0**	7.8

Indefinite life intangible asset

France

The recoverable amount of the indefinite life intangible asset has been assessed based on the fair value less costs to sell of the cash generating unit to which it relates. The fair value less costs to sell was determined based on the quoted market value of Aviva's share of the subsidiary to which it relates.

Results of impairment testing

Management's impairment review of the Group's cash generating units identified the need to impair goodwill by a total amount of £6 million (£4 million of which relates to one of the cash generating units within the Asia operating segment, and £2 million to one of the cash generating units within the Canada operating segment). This impairment is due to current and forecast performance of the related cash generating units being below the original financial plan. Impairment in 2018 totalling £13 million related to one of the cash generating units in the UK within the Other Group Activities operating segment, one of the cash generating units within the Asia operating segment and one of the cash generating units within the Poland operating segment.

18 – Acquired value of in-force business (AVIF) and intangible assets

This note shows the movements in cost, amortisation and impairment of the acquired value of in-force business and intangible assets during the year.

	AVIF on insurance contracts[1] (a) £m	AVIF on investment contracts[2] (a) £m	Other intangible assets with finite useful lives (b) £m	Intangible assets with indefinite useful lives (c) £m	Total £m
Gross amount					
At 1 January 2018	2,620	2,697	1,966	380	7,663
Additions and transfers	67	30	153	(57)	193
Disposals	—	—	(488)	(189)	(677)
Foreign exchange rate movements	5	(1)	(8)	—	(4)
At 31 December 2018	**2,692**	**2,726**	**1,623**	**134**	**7,175**
Additions and transfers	**—**	**—**	**136**	**2**	**138**
Disposals	**—**	**—**	**(36)**	**(1)**	**(37)**
Foreign exchange rate movements	**(21)**	**(1)**	**(6)**	**(7)**	**(35)**
At 31 December 2019	**2,671**	**2,725**	**1,717**	**128**	**7,241**
Accumulated amortisation					
At 1 January 2018	(1,060)	(838)	(544)	(57)	(2,499)
Amortisation for the year	(183)	(243)	(209)	—	(635)
Disposals and transfers	—	—	48	57	105
Foreign exchange rate movements	(4)	—	2	—	(2)
At 31 December 2018	**(1,247)**	**(1,081)**	**(703)**	**—**	**(3,031)**
Amortisation for the year[3]	**(180)**	**(226)**	**(212)**	**—**	**(618)**
Disposals and transfers	**—**	**—**	**28**	**—**	**28**
Foreign exchange rate movements	**18**	**1**	**—**	**—**	**19**
At 31 December 2019	**(1,409)**	**(1,306)**	**(887)**	**—**	**(3,602)**
Accumulated Impairment					
At 1 January 2018	(27)	(134)	(46)	(71)	(278)
Impairment charges	—	(13)	—	—	(13)
Disposals	—	—	8	—	8
Foreign exchange rate movements	—	—	—	—	—
At 31 December 2018	**(27)**	**(147)**	**(38)**	**(71)**	**(283)**
Impairment charges[4]	**—**	**(28)**	**(13)**	**—**	**(41)**
Disposals	**—**	**—**	**6**	**—**	**6**
Foreign exchange rate movements	**—**	**—**	**1**	**4**	**5**
At 31 December 2019	**(27)**	**(175)**	**(44)**	**(67)**	**(313)**
Carrying amount					
At 1 January 2018	1,533	1,725	1,376	252	4,886
At 31 December 2018	1,418	1,498	882	63	3,861
At 31 December 2019	**1,235**	**1,244**	**786**	**61**	**3,326**
Less: Assets classified as held for sale	**(29)**	**(496)**	**(1)**	**—**	**(526)**
	1,206	**748**	**785**	**61**	**2,800**

1 On insurance and participating investment contracts.
2 On non-participating investment contracts.
3 Amortisation of other intangible assets with finite useful lives includes £87 million *(2018: £97 million)* of amortisation in respect of intangible assets acquired in business combinations.
4 Impairment charges comprise £28 million *(2018: £13 million)* of AVIF impairment in respect of FPI recognised within profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates due to FPI's classification as held for sale (see note 4).

(a) Acquired value of in-force business

AVIF on insurance and investment contracts is generally recoverable in more than one year. Of the total of £2,479 million, £2,380 million *(2018: £2,904 million)* is expected to be recoverable more than one year after the statement of financial position date.

Non-participating investment AVIF is reviewed for evidence of impairment, consistent with reviews conducted for other finite life intangible assets. Insurance and participating investment contract AVIF is reviewed for impairment at each reporting date as part of the liability adequacy requirements in IFRS 4. AVIF is reviewed for evidence of impairment and impairment tested at product portfolio level by reference to the value of future profits in accordance with Solvency II principles, adjusted where Solvency II does not represent a best estimate of shareholders' interests, consistent with the impairment test for goodwill for long term business (see note 17(b)).

In 2019, an impairment charge of £28 million *(2018: £13 million)* was recognised in relation to the AVIF on non-participating investment contracts relating to FPI, to write down the AVIF balance to its recoverable amount measured at the estimated fair value less costs to sell.

18 – Acquired value of in-force business (AVIF) and intangible assets continued

(b) Other intangible assets with finite useful lives

Other intangible assets with finite useful lives consist mainly of the value of bancassurance and other distribution agreements and capitalised software. Additions of intangible assets with finite lives in 2019 and 2018 relate to capitalisation of software costs in relation to the Group's digital initiatives.

(c) Intangible assets with indefinite useful lives

Intangible assets with indefinite useful lives primarily comprise the value of distribution channel Union Financière de France Banque in France where the existing life of the asset supports this classification. Impairment testing of these intangible assets is covered in note 17(b). No impairment has been recognised in 2019 *(2018: £nil)*.

19 – Interests in, and loans to, joint ventures

In several businesses, Group companies and other parties jointly control certain entities. This note analyses these interests and describes the principal joint ventures in which we are involved.

(a) Carrying amount and details of joint ventures

(i) The movements in the carrying amount comprised:

			2019			2018
	Goodwill and intangibles £m	**Equity interests £m**	**Total £m**	Goodwill and intangibles £m	Equity interests £m	Total £m
At 1 January	**46**	**1,168**	**1,214**	57	1,164	1,221
Share of results before tax	**—**	**27**	**27**	—	99	99
Share of tax	**—**	**(4)**	**(4)**	—	(3)	(3)
Share of results after tax	**—**	**23**	**23**	—	96	96
Amortisation of intangibles[1]	**(5)**	**—**	**(5)**	(5)	—	(5)
Share of (loss)/profit after tax	**(5)**	**23**	**18**	(5)	96	91
Reclassification from subsidiary	**—**	**—**	**—**	—	5	5
Additions	**—**	**131**	**131**	—	33	33
Disposals	**—**	**(96)**	**(96)**	—	(79)	(79)
Share of gains/(losses) taken to other comprehensive income	**—**	**22**	**22**	—	(10)	(10)
Dividends received from joint ventures	**—**	**(27)**	**(27)**	—	(35)	(35)
Foreign exchange rate movements	**(3)**	**(24)**	**(27)**	(6)	(6)	(12)
At 31 December	**38**	**1,197**	**1,235**	46	1,168	1,214
Less: Joint venture classified as held for sale	**—**	**(8)**	**(8)**	—	—	—
At 31 December	**38**	**1,189**	**1,227**	46	1,168	1,214

1 Comprises other intangibles of £5 million *(2018: £5 million)*.

Additions and disposals during 2019 relate mainly to the Group's holdings in property management undertakings.

On 20 November 2019, Aviva announced the sale of its entire 40% shareholding in its Hong Kong joint venture (Blue) to Hillhouse AV Holdings Limited for 450 million HKD (approximately £44 million). In addition to the investment in the joint venture, Aviva retained control of certain activities under the previous sale agreement reached in 2018, which remain fully consolidated at the balance sheet date, and which form part of the sale agreement to Hillhouse AV Holding Limited. No remeasurement loss has been recognised on reclassification to held for sale, as detailed in note 4(b).

The Group's share of total comprehensive income related to joint venture entities is £40 million *(2018: £81 million)*.

19 – Interests in, and loans to, joint ventures continued

(ii) The carrying amount at 31 December comprised:

	2019 Goodwill and intangibles £m	2019 Equity interests £m	2019 Total £m	2018 Goodwill and intangibles £m	2018 Equity interests £m	2018 Total £m
Property management undertakings	—	792	792	—	797	797
Long-term business undertakings	38	397	435	46	363	409
General insurance and health undertakings	—	8	8	—	8	8
Total	38	1,197	1,235	46	1,168	1,214

The property management undertakings perform property ownership and management activities, and are incorporated and operate in the UK. All such investments are held by subsidiary entities.

The long-term business undertakings perform life insurance activities. All investments in such undertakings are unlisted with the exception of AvivaSA Emeklilik ve Hayat A.S which has issued publicly a minority portion of shares. All investments in such undertakings are held by subsidiaries, except for the shares in the Chinese joint venture, Aviva-COFCO Life Insurance Company Ltd., which are held by Aviva plc. The Group's share of net assets of that company is £320 million *(2018: £294 million)* and it has a carrying value at cost of £123 million *(2018: £123 million)*.

The investment in general insurance and health undertakings relates to the health insurance operations in our Indonesian joint venture.

(iii) No joint ventures are considered to be material from a Group perspective *(2018: none)*. The Group's principal joint ventures are as follows:

Name	Nature of activities	Principal place of business	Proportion of ownership interest 2019	Proportion of ownership interest 2018
Ascot Real Estate Investments LP	Property management	UK	50.00%	50.00%
2-10 Mortimer Street Limited Partnership	Property management	UK	50.00%	50.00%
Aviva-COFCO Life Insurance Company Limited	Life insurance	China	50.00%	50.00%
PT Astra Aviva Life	Life and Health insurance	Indonesia	50.00%	50.00%
Aviva Life Insurance Company Limited	Life insurance	Hong Kong	40.00%	40.00%
AvivaSA Emeklilik ve Hayat A.S	Life insurance	Turkey	40.00%	40.00%

The Group has no joint ventures whose non-controlling interest (NCI) is material on the basis of their share of profit/(loss).

(iv) From time to time group joint ventures may receive liability claims or become involved in actual or threatened related litigation. At 31 December 2019 this includes a contingent liability in respect of a dispute where the Group's maximum exposure is approximately £95 million. In the opinion of the directors it is unlikely that the Group will suffer financial loss arising from this dispute. The joint ventures have no other contingent liabilities to which the Group has significant exposure. The Group has commitments to provide funding to property management joint ventures of £13 million *(2018: £13 million)*.

In certain jurisdictions the ability of joint ventures to transfer funds in the form of cash dividends or to repay loans and advances made by the Group is subject to local corporate or insurance laws and regulations and solvency requirements.

(b) Impairment testing

Interests in joint ventures are tested for impairment of goodwill and intangibles when there is an indicator of impairment. They are tested for impairment by comparing the carrying value of the cash generating unit to which the goodwill or intangible relates to the recoverable value of that cash generating unit. Recoverable amount for long-term and general insurance businesses is calculated on a consistent basis with that used for impairment testing of goodwill, as set out in note 17(b). The recoverable amount of property management undertakings is the fair value less costs to sell of the joint venture, measured in accordance with the Group's accounting policy for investment property (see accounting policy Q).

20 – Interests in, and loans to, associates

This note analyses our interests in entities which we do not control but where we have significant influence.

(a) Carrying amount and details of associates

(i) The movements in the carrying amount comprised:

	2019 Equity interests £m	2018 Equity interests £m
At 1 January	**304**	421
Share of results before tax	**80**	22
Share of tax	**(4)**	(1)
Share of results after tax	**76**	21
Impairment	**(9)**	—
Share of profit after tax	**67**	21
Acquisitions	**1**	—
Additions	**1**	2
Reduction in Group interest	**(1)**	(78)
Reclassification to investment	**—**	(54)
Dividends received from associates	**(54)**	(8)
Foreign exchange rate movements	**(14)**	—
Movements in carrying amount	**—**	(117)
At 31 December	**304**	304

The Group's share of total comprehensive income related to associates is £67 million *(2018: £21 million)*.

(ii) No associates are considered to be material from a Group perspective *(2018: none)*. All investments in principal associates are held by subsidiaries. The Group's principal associates are as follows:

Name	Nature of activities	Principal place of business	Proportion of ownership interest 2019	Proportion of ownership interest 2018
Aviva Life Insurance Company India Limited	Life insurance	India	**49.00%**	49.00%
SCPI Logipierre 1	Property Management	France	**44.46%**	44.46%
Lend Lease JEM Partners Fund Limited	Investment holding	Singapore	**22.50%**	22.50%
SCPI Ufifrance Immobilier	Property Management	France	**20.40%**	20.40%
AI UK Commercial Real Estate Debt Fund[1]	Property Management	UK	**17.53%**	17.16%

1 The Group has significant influence over AI UK Commercial Real Estate Debt Fund so it is therefore accounted for as an associate.

(iii) The associates have no contingent liabilities to which the Group has significant exposure. The Group has commitments to provide funding to property management associates of £6 million *(2018: £5 million)*.

In certain jurisdictions the ability of associates to transfer funds in the form of cash dividends or to repay loans and advances made by the Group is subject to local corporate or insurance laws and regulations and solvency requirements.

(b) Impairment testing

The recoverable amount of property management undertakings is the fair value less costs to sell of the associate, measured in accordance with the Group's accounting policy for investment property (see accounting policy Q).

An impairment charge of £9 million *(2018: £nil)* was recognised within the income statement as a component of share of profit after tax of joint ventures and associates following management's annual impairment review of the Group's associate in India, Aviva Life Insurance Company India Limited (Aviva India).

21 – Property and equipment

This note analyses our property and equipment, which are primarily properties occupied by Group companies.

	Properties under construction £m	Owner-occupied properties £m	Motor vehicles £m	Computer equipment £m	Other assets £m	Total £m
Cost or valuation						
At 1 January 2018	1	340	3	155	265	764
Additions	1	21	1	24	40	87
Disposals	(2)	(8)	—	(7)	(6)	(23)
Fair value gains	—	3	—	—	—	3
Foreign exchange rate movements	—	3	—	3	7	13
At 31 December 2018	—	359	4	175	306	844
Adjustment at 1 January for adoption of IFRS 16[1]	**—**	**1,149**	**—**	**—**	**—**	**1,149**
At 1 January 2019 restated	**—**	**1,508**	**4**	**175**	**306**	**1,993**
Additions	**—**	**53**	**—**	**19**	**12**	**84**
Disposals	**—**	**(6)**	**—**	**(16)**	**(16)**	**(38)**
Fair value losses	**—**	**(3)**	**—**	**—**	**—**	**(3)**
Foreign exchange rate movements	**—**	**(18)**	**—**	**(3)**	**(6)**	**(27)**
At 31 December 2019	**—**	**1,534**	**4**	**175**	**296**	**2,009**
Depreciation and impairment						
At 1 January 2018	—	(3)	(2)	(125)	(120)	(250)
Depreciation charge for the year	—	—	(1)	(14)	(25)	(40)
Disposals	—	—	—	6	2	8
Impairment charge	—	—	—	—	—	—
Foreign exchange rate movements	—	—	—	(4)	(5)	(9)
At 31 December 2018	—	(3)	(3)	(137)	(148)	(291)
Adjustment at 1 January for adoption of IFRS 16[1]	**—**	**(739)**	**—**	**—**	**—**	**(739)**
At 1 January 2019 restated	**—**	**(742)**	**(3)**	**(137)**	**(148)**	**(1,030)**
Depreciation charge for the year	**—**	**(62)**	**—**	**(16)**	**(20)**	**(98)**
Disposals	**—**	**1**	**—**	**16**	**15**	**32**
Impairment charge	**—**	**(22)**	**—**	**—**	**—**	**(22)**
Foreign exchange rate movements	**—**	**—**	**—**	**2**	**4**	**6**
At 31 December 2019	**—**	**(825)**	**(3)**	**(135)**	**(149)**	**(1,112)**
Carrying amount						
At 31 December 2018	—	356	1	38	158	553
At 31 December 2019	**—**	**709**	**1**	**40**	**147**	**897**
Less: Assets classified as held for sale	**—**	**(7)**	**—**	**—**	**(1)**	**(8)**
At 31 December 2019	**—**	**702**	**1**	**40**	**146**	**889**

1 The Group has adopted IFRS 16 *Leases* from 1 January 2019. In line with the transition options available, prior period comparatives have not been restated and the impact of the adoption has been shown as an adjustment to opening property and equipment.

Owner-occupied properties, excluding £385 million held under lease arrangements, are stated at their revalued amounts, as assessed by qualified external valuers. These values are assessed in accordance with the relevant parts of the current Royal Institute of Chartered Surveyors Appraisal and Valuation Standards in the UK, and with current local valuation practices in other countries. This assessment is in accordance with UK Valuations Standards 'Red book', and is the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction, after proper marketing wherein the parties had acted knowledgeably and without compulsion, on the basis of the highest and best use of asset that is physically possible, legally permissible and financially feasible. The valuation assessment adopts market-based evidence and is in line with guidance from the International Valuation Standards Committee and the requirements of IAS 16 *Property, Plant and Equipment*.

Similar considerations apply to properties under construction, where an estimate is made of valuation when complete, adjusted for anticipated costs to completion, profit and risk, reflecting market conditions at the valuation date.

Owner-occupied properties held under lease arrangements are stated at amortised cost and are amortised on a straight-line basis over the lease term. For further information on the Group's lease arrangements see note 23.

If owner-occupied properties were stated on a historical cost basis, the carrying amount would be £431 million *(2018: £364 million)*.

22 – Investment property

This note gives details of the properties we hold for long-term rental yields or capital appreciation.

	2019 Freehold £m	2019 Leasehold £m	2019 Total £m	2018 Freehold £m	2018 Leasehold £m	2018 Total £m
Carrying value						
At 1 January	**9,601**	**1,881**	**11,482**	9,147	1,650	10,797
Acquisitions	**—**	**—**	**—**	218	208	426
Additions	**731**	**189**	**920**	543	97	640
Capitalised expenditure on existing properties	**143**	**68**	**211**	136	15	151
Fair value gains/(losses)	**183**	**(90)**	**93**	307	—	307
Disposals	**(1,036)**	**(200)**	**(1,236)**	(713)	(177)	(890)
Reclassification	**—**	—	**—**	(82)	82	—
Foreign exchange rate movements	**(243)**	**(24)**	**(267)**	45	6	51
At 31 December	**9,379**	**1,824**	**11,203**	9,601	1,881	11,482

See note 24 for further information on the fair value measurement and valuation techniques of investment property.

The fair value of investment properties leased to third parties under operating leases at 31 December 2019 was £10,931 million *(2018: £11,172 million)*. Future contractual aggregate minimum lease rentals receivable under the non-cancellable portion of these leases are given in note 23.

23 – Lease assets and liabilities

From 1 January 2019 the Group has adopted IFRS 16 *Leases*, the standard which replaces IAS 17 *Leases*. Adoption of the standard has resulted in assets previously held under operating leases (and their corresponding lease liabilities) being recognised on the statement of financial position for the first time. Adoption of the standard resulted in the following assets and liabilities being included within the statement of financial position for the first time at 1 January 2019:

- £410 million owner-occupied property assets, included within Property and equipment (see note 21);
- £24 million deferred tax assets; and
- £544 million lease liabilities, included within Payables and other financial liabilities (see note 54).

The Group's leased assets primarily consist of properties occupied by Group companies carried at amortised cost (see note 21) and leasehold investment properties carried at fair value (see note 22) which are sublet to third parties. Leasehold investment properties are measured in accordance with IAS 40 *Investment Property* (see accounting policy Q) and there have been no changes to their classification or measurement arising from the adoption of IFRS 16.

Although the Group is exposed to changes in the residual value at the end of the current leases to third parties on investment property, the Group typically enters into new operating leases and therefore is not expected to immediately realise any reduction in residual value at the end of these leases. Expectations about the future residual values are reflected in the fair value of the properties.

(i) The following amounts in respect of leased assets have been recognised in the Group's consolidated income statement.

	2019 £m
Interest expense on lease liabilities	**14**
Total lease expenses recognised in the income statement	**14**

Total cash outflows recognized in the period in relation to leases were £70 million. Expenses recognised in the Group consolidated income statement in relation to short-term and low-value leases were £nil. Variable lease payments not included in the measurement of lease liabilities were £nil.

(ii) The following table analyses the right-of-use assets relating to leased properties occupied by Group companies.

	2019 Total £m
Balance at 1 January	**410**
Additions	**42**
Disposals	**(1)**
Foreign exchange rate movements	**(4)**
Depreciation	**(62)**
Balance at 31 December	**385**

There were no gains arising from sale and leaseback transactions during the year. Included within the income statement is £2 million of income in respect of sublets of right-of-use assets.

23 – Lease assets and liabilities continued

(iii) Lease liabilities included within note 54 total £572 million. Future contractual aggregate minimum lease payments are as follows:

	2019 £m
Within 1 year	**89**
Later than 1 year and not later than 5 years	**296**
Later than 5 years	**237**
	622

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

The lease agreements do no impose any covenants other than the security interest in the leased assets that are held by the lessor.

(iv) Future contractual aggregate minimum lease rentals receivable under non-cancellable operating leases are as follows:

	2019 £m
Within 1 year	**265**
Between 1 and 2 years	**205**
Between 2 and 3 years	**183**
Between 3 and 4 years	**161**
Between 4 and 5 years	**208**
Later than 5 years	**1,599**
	2,621

24 – Fair value methodology

This note explains the methodology for valuing our assets and liabilities measured at fair value, and for fair value disclosures. It also provides an analysis of these according to a 'fair value hierarchy', determined by the market observability of valuation inputs.

(a) Basis for determining fair value hierarchy

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the 'fair value hierarchy' described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1

Inputs to Level 1 fair values are quoted prices (unadjusted) in active markets for identical assets and liabilities that the entity can access at the measurement date.

Level 2

Inputs to Level 2 fair values are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the instrument. Level 2 inputs include the following:

- Quoted prices for similar assets and liabilities in active markets.
- Quoted prices for identical or similar assets and liabilities in markets that are not active, the prices are not current, or price quotations vary substantially either over time or among market makers, or in which little information is released publicly.
- Inputs other than quoted prices that are observable for the asset or liability (for example, interest rates and yield curves observable at commonly quoted intervals, implied volatilities, and credit spreads).
- Market-corroborated inputs.

Where we use broker quotes and no information as to the observability of inputs is provided by the broker, the investments are classified as follows:

- Where the broker price is validated by using internal models with market observable inputs and the values are similar, we classify the investment as Level 2.
- In circumstances where internal models are not used to validate broker prices, or the observability of inputs used by brokers is unavailable, the investment is classified as Level 3.

Level 3

Inputs to Level 3 fair values are unobservable inputs for the asset or liability. Unobservable inputs may have been used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. However, the fair value measurement objective remains the same, i.e. an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. Unobservable inputs reflect the assumptions the business unit considers that market participants would use in pricing the asset or liability. Examples are investment properties and commercial and equity release mortgage loans.

24 – Fair value methodology continued

The majority of the Group's assets and liabilities measured at fair value are based on quoted market information or observable market data. Of the total assets and liabilities measured at fair value 16.8% *(2018: 16.6%)* of assets and 3.1% *(2018: 3.4%)* of liabilities are based on estimates and recorded as Level 3. Where estimates are used, these are based on a combination of independent third-party evidence and internally developed models, calibrated to market observable data where possible. Third-party valuations using significant unobservable inputs validated against Level 2 internally modelled valuations are classified as Level 3, where there is a significant difference between the third-party price and the internally modelled value. Where the difference is insignificant, the instrument would be classified as Level 2.

(b) Changes to valuation techniques

There were no changes in the valuation techniques during the year compared to those described in the 2018 annual consolidated financial statements.

(c) Comparison of the carrying amount and fair values of financial instruments

Set out below is a comparison of the carrying amounts and fair values of financial assets and liabilities, excluding those classified as held for sale. These amounts may differ where the assets or liabilities are carried on a measurement basis other than fair value, e.g. amortised cost.

	2019		Restated[1] 2018	
	Fair value £m	**Carrying amount £m**	Fair value £m	Carrying amount £m
Financial assets				
Loans (note 25(a))	**38,559**	**38,579**	36,130	36,184
Financial investments (note 28(a))	**343,418**	**343,418**	319,825	319,825
Fixed maturity securities[2]	**198,832**	**198,832**	191,675	191,675
Equity securities	**99,570**	**99,570**	88,227	88,227
Other investments (including derivatives)[2]	**45,016**	**45,016**	39,923	39,923
Financial liabilities				
Non-participating investment contracts (note 45(a))	**129,365**	**129,365**	112,013	112,013
Net asset value attributable to unitholders	**16,610**	**16,610**	16,338	16,338
Borrowings (note 53(a))[3]	**10,268**	**9,039**	9,826	9,420
Derivative liabilities (note 61(b))	**6,517**	**6,517**	6,478	6,478

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as loans, fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1a for further information.
2 Following a review of the classification of financial assets, comparative amounts have been amended from those previously reported. The effect of this change is to reclassify £2,201 million of assets from fixed maturity securities to other investments.
3 Within the fair value total, the estimated fair value has been provided for the portion of borrowings that are carried at amortised cost as disclosed in note 24 (h).

Fair value of the following assets and liabilities approximate to their carrying amounts:

- Receivables
- Cash and cash equivalents
- Loans at amortised cost
- Payables and other financial liabilities

As set out in accounting policy A, the Group has chosen to defer application of IFRS 9 due to its activities being predominantly connected with insurance. To facilitate comparison with entities applying IFRS 9 in full, the table below splits the Group's financial instruments as at the reporting date between those which are considered to have contractual terms which are solely payments of principal and interest (SPPI) on the principal amount outstanding (excluding instruments held for trading or managed and evaluated on a fair value basis), and all other instruments not falling into this category.

	2019		Restated[1] 2018	
	SPPI – Fair value £m	**Non-SPPI – fair value[2] £m**	SPPI – Fair value £m	Non-SPPI – fair value[2] £m
Fixed maturity securities	**—**	**199,481**	273	191,799
Equity securities	**—**	**99,826**	—	88,437
Loans	**9,580**	**28,980**	9,859	26,271
Receivables	**5,799**	**3,265**	5,609	3,041
Cash and cash equivalents	**15,344**	**4,960**	11,249	5,365
Accrued income and Interest	**272**	**1,924**	193	2,505
Other financial assets	**5**	**51,930**	10	46,557
Total	**31,000**	**390,366**	27,193	363,975

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as loans, fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1a for further information.
2 Instruments within this category include financial assets that meet the definition of held for trading, financial assets that are managed and evaluated on a fair value basis, and instruments with contractual terms that do not give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

There has been a £24 million increase *(2018: £7 million decrease)* in the fair value of SPPI instruments, and a £20,090 million increase *(2018: £23,645 million decrease)* in the fair value of non-SPPI instruments during the reporting period.

24 – Fair value methodology continued

(d) Fair value hierarchy analysis

An analysis of assets and liabilities measured at amortised cost and fair value categorised by fair value hierarchy is given below.

2019	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Sub-total Fair value £m	Amortised cost £m	Total carrying value £m
Recurring fair value measurements						
Investment property (note 22)	—	—	11,203	11,203	—	11,203
Loans (note 25(a))	—	—	28,319	28,319	10,260	38,579
Financial investments measured at fair value (note 28(a))						
Fixed maturity securities	67,638	113,599	17,595	198,832	—	198,832
Equity securities	98,850	—	720	99,570	—	99,570
Other investments (including derivatives)	32,465	6,878	5,673	45,016	—	45,016
Financial assets classified as held for sale	5,788	50	1,986	7,824	1	7,825
Total	204,741	120,527	65,496	390,764	10,261	401,025
Financial liabilities measured at fair value						
Non-participating investment contracts[1] (note 45(a))	129,323	42	—	129,365	—	129,365
Net asset value attributable to unit holders	16,498	—	112	16,610	—	16,610
Borrowings (note 53(a))	—	—	1,233	1,233	7,806	9,039
Derivative liabilities (note 61(b))	418	5,444	655	6,517	—	6,517
Financial liabilities classified as held for sale	5,259	20	3,045	8,324	28	8,352
Total	151,498	5,506	5,045	162,049	7,834	169,883

1 In addition to the balances in this table, included within reinsurance assets in the statement of financial position and note 47 are £4,006 million of non-participating investment contracts, which are legally reinsurance but do not meet the definition of a reinsurance contract under IFRS. These assets are financial instruments measured at fair value through profit and loss and are classified as Level 1 assets.

2019	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement				
Properties occupied by Group companies	—	—	320	320
Total	—	—	320	320

IFRS 13, Fair Value Measurement, permits assets and liabilities to be measured at fair value on either a recurring or non-recurring basis. Recurring fair value measurements are those that other IFRSs require or permit in the statement of financial position at the end of each reporting period, whereas non-recurring fair value measurements of assets or liabilities are those that other IFRSs require or permit in the statement of financial position in particular circumstances. The value of owner-occupied properties measured on a non-recurring basis at 31 December 2019 was £320 million (*2018: £352 million*), stated at their revalued amounts in line with the requirements of IAS 16 *Property, Plant and Equipment.*

The disclosure above relates to those owner-occupied properties which have been measured at fair value. Owner-occupied properties held under lease arrangements are stated at amortised cost and are amortised on a straight-line basis over the lease term. For further information on the Group's lease arrangements see note 23.

Restated[1] 2018	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Sub-total Fair value £m	Amortised cost £m	Total carrying value £m
Recurring fair value measurements						
Investment property (note 22)	—	—	11,482	11,482	—	11,482
Loans (note 25(a))	—	518	25,008	25,526	10,658	36,184
Financial investments measured at fair value (note 28(a))						
Fixed maturity securities[2]	65,996	109,176	16,503	191,675	—	191,675
Equity securities	87,813	—	414	88,227	—	88,227
Other investments (including derivatives)[2]	29,971	4,770	5,182	39,923	—	39,923
Financial assets classified as held for sale	5,240	19	1,992	7,251	—	7,251
Total	189,020	114,483	60,581	364,084	10,658	374,742
Financial liabilities measured at fair value						
Non-participating investment contracts[3] (note 45(a))	111,966	47	—	112,013	—	112,013
Net asset value attributable to unit holders	16,313	—	25	16,338	—	16,338
Borrowings (note 53(a))	—	—	1,225	1,225	8,195	9,420
Derivative liabilities (note 61(b))	466	5,478	534	6,478	—	6,478
Financial liabilities classified as held for sale	5,241	—	3,100	8,341	—	8,341
Total	133,986	5,525	4,884	144,395	8,195	152,590

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as loans, fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1a for further information.
2 Following a review of the classification of financial assets, comparative amounts have been restated from those previously reported. The effect of this change is to reclassify £2,201 million of assets from fixed maturity securities to other investments and £3,734 million of assets from fair value hierarchy level 2 to level 1.
3 In addition to the balances in this table, included within reinsurance assets in the statement of financial position and note 47 are £4,009 million of non-participating investment contracts, which are legally reinsurance but do not meet the definition of a reinsurance contract under IFRS. These assets are financial instruments measured at fair value through profit and loss and are classified as Level 1 assets

24 – Fair value methodology continued

2018	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement				
Properties occupied by Group companies	—	—	352	352
Total	—	—	352	352

(e) Valuation approach for fair value assets and liabilities classified as Level 2

Please see note 24(a) for a description of typical Level 2 inputs.

Debt securities, in line with market practice, are generally valued using an independent pricing service. These valuations are determined using independent external quotations from multiple sources and are subject to a number of monitoring controls, such as monthly price variances, stale price reviews and variance analysis. Pricing services, where available, are used to obtain the third-party broker quotes. Where pricing services providers are used, a single valuation is obtained and applied. When prices are not available from pricing services, quotes are sourced from brokers.

Over-the-counter derivatives are valued using broker quotes or models such as option pricing models, simulation models or a combination of models. The inputs for these models include a range of factors which are deemed to be observable, including current market and contractual prices for underlying instruments, period to maturity, correlations, yield curves and volatility of the underlying instruments.

Unit Trusts and other investment funds included under the other investments category are valued using net asset values which are not subject to a significant adjustment for restrictions on redemption or for limited trading activity.

(f) Transfers between levels of the fair value hierarchy

For financial instruments that are recognised at fair value on a recurring basis, the Group determines whether transfers have occurred between levels of the fair value hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of the reporting period.

Transfers between Level 1 and Level 2

There were no significant transfers between Level 1 and 2 during the year.

Transfers to/from Level 3

£1.5 billion of assets transferred into Level 3 and £1.2 billion of assets transferred out of Level 3 relate principally to debt securities held by our businesses in the UK and France. These are transferred between Levels 2 and 3 depending on the availability of observable inputs and whether the counterparty and broker quotes are corroborated using valuation models with observable inputs.

There were no significant transfers of liabilities into and out of Level 3 during the year.

(g) Further information on Level 3 assets and liabilities

The table below shows movement in the Level 3 assets and liabilities measured at fair value.

2019	Assets: Investment Property £m	Loans £m	Fixed maturity securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets classified as held for sale £m	Non participating investment contracts £m	Net asset value attributable to unitholders £m	Liabilities: Derivative liabilities £m	Borrowings £m	Financial liabilities classified as held for sale £m
Opening balance at 1 January 2019	**11,482**	**25,008**	**16,503**	**414**	**5,182**	**1,992**	**—**	**(25)**	**(534)**	**(1,225)**	**(3,100)**
Total net gains/(losses) recognised in the income statement[1]	151	844	505	(66)	6	134	—	—	(86)	(52)	(134)
Purchases	1,131	3,461	2,090	427	1,350	185	(100)	(56)	(128)	—	(134)
Issuances	—	190	12	—	—	—	—	—	—	—	—
Disposals	(1,294)	(1,170)	(1,454)	(39)	(532)	(262)	100	(31)	88	44	261
Settlements	—	—	(50)	—	—	—	—	—	—	—	—
Transfers into Level 3	—	—	1,449	1	—	49	—	—	—	—	(49)
Transfers out of Level 3	—	—	(919)	—	(142)	(112)	—	—	—	—	111
Foreign exchange rate movements	(267)	(14)	(541)	(17)	(191)	—	—	—	5	—	—
Balance at 31 December 2019	**11,203**	**28,319**	**17,595**	**720**	**5,673**	**1,986**	**—**	**(112)**	**(655)**	**(1,233)**	**(3,045)**

1 Total net gains/(losses) recognised in the income statement includes realised gains/(losses) on disposals.

24 – Fair value methodology continued

2018	Assets								Liabilities		
	Investment Property £m	Loans £m	Fixed maturity securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets classified as held for sale £m	Non participating investment contracts £m	Net asset value attributable to unitholders £m	Derivative liabilities £m	Borrowings £m	Financial liabilities classified as held for sale £m
Opening balance at 1 January 2018	10,797	23,949	14,100	776	3,900	2,093	—	(13)	(358)	(1,180)	(3,306)
Total net gains/(losses) recognised in the income statement[1]	376	(530)	(363)	(102)	(69)	(73)	—	—	(136)	(81)	74
Purchases	1,185	3,451	3,137	189	1,799	201	(108)	—	(59)	—	(95)
Issuances	—	200	—	—	—	—	—	—	—	—	—
Disposals	(927)	(2,065)	(1,221)	(544)	(554)	(191)	108	(12)	20	36	189
Settlements[2]	—	—	—	—	—	—	—	—	—	—	—
Transfers into Level 3	—	—	1,242	95	77	20	—	—	—	—	(20)
Transfers out of Level 3	—	—	(503)	(2)	—	(58)	—	—	—	—	58
Foreign exchange rate movements	51	3	111	2	29	—	—	—	(1)	—	—
Balance at 31 December 2018	11,482	25,008	16,503	414	5,182	1,992	—	(25)	(534)	(1,225)	(3,100)

1 Total net gains/(losses) recognised in the income statement includes realised gains/(losses) on disposals.
2 Following a review of the classification of financial assets, comparative amounts have been restated from those previously reported. The effect of the change is to classify £2,201 million of assetsfrom fixed maturity securities to other investments.

Total net gains recognised in the income statement in the year ended 31 December 2019 in respect of Level 3 assets measured at fair value amounted to £1,574 million *(2018: net losses of £761 million)* with net losses in respect of liabilities of £272 million *(2018: net losses of £143 million)*. Net gains of £1,427 million *(2018: net losses of £529 million)* attributable to assets and net losses of £271 million *(2018: net losses of £178 million)* attributable to liabilities relate to those still held at the end of the year.

The principal assets classified as Level 3, and the valuation techniques applied to them, are described below.

(i) Investment property

- Investment property is valued in the UK at least annually by external chartered surveyors in accordance with guidance issued by The Royal Institution of Chartered Surveyors and using estimates during the intervening period. Outside the UK, valuations are produced by external qualified professional appraisers in the countries concerned. Investment properties are valued on an income approach that is based on current rental income plus anticipated uplifts at the next rent review, lease expiry, or break options taking into consideration lease incentives and assuming no further growth in the estimated rental value of the property. The uplift and discount rates are derived from rates implied by recent market transactions on similar properties. These inputs are deemed unobservable.

(ii) Loans

- Commercial mortgage loans and Primary Healthcare loans held by our UK Life business are valued using a Portfolio Credit Risk Model. This model calculates a Credit Risk Adjusted Value for each loan. The risk adjusted cash flows are discounted using a yield curve, taking into account the term dependent gilt yield curve and global assumptions for the liquidity premium. Loans valued using this model have been classified as Level 3 as the liquidity premium is deemed to be non-market observable. The liquidity premium used in the discount rate ranges between 65 bps to 80 bps *(2018: 65 bps to 195 bps)*.
- Equity release mortgage loans held by our UK Life business 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 2019 the illiquidity premium used in the discount rate was 160 bps *(2018: 210 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 cashflows. The base property growth rate assumption is RPI +0.75% which equates to a long-term average growth rate of 4.0% pa at 31 December 2019 *(2018: 4.3%)*. After applying the cost of capital charge, dilapidations and the stochastic distribution, the effective net long-term growth rate equates to 0.5% pa *(2018: 0.6%)*.
- Mortgage loan assumptions for future property prices and rental income also include an allowance for the possible adverse impact of the decision for the UK to leave the European Union (see note 9).
- Infrastructure and Private Finance Initiative (PFI) loans held by our UK Life business are valued using a discounted cash flow model. This adds spreads for credit and illiquidity to a risk-free discount rate. Credit spreads used in the discount rate are calculated using an internally developed methodology which depends on the credit rating of each loan, credit spreads on publicly traded bonds and an estimated recovery rate in event of default and are deemed to be unobservable.

(iii) Fixed maturity securities

- Structured bond-type and non-standard debt products held by our business in France have no active market. These debt securities are valued either using counterparty or broker quotes and validated against internal or third-party models. These bonds have been classified as Level 3 because either (i) the third-party models include a significant unobservable liquidity adjustment, or (ii) differences between the valuation provided by the counterparty and broker quotes and the validation model are sufficiently significant to result in a Level 3 classification.
- Non-standard debt products and privately placed bonds held by our businesses in the UK do not trade in an active market. These debt securities are valued using discounted cash flow models, designed to appropriately reflect the credit and illiquidity risk of the instrument. These bonds have been classified as Level 3 because the valuation approach includes significant unobservable inputs and an element of subjectivity in determining appropriate credit and illiquidity spreads.
- Debt securities held by our French and Asian businesses which are not traded in an active market have been valued using third party or counterparty valuations. These prices are considered to be unobservable due to infrequent market transactions.

24 – Fair value methodology continued

(iv) Equity securities

- Equity securities which primarily comprise private equity holdings held in the UK are valued by a number of third party specialists. These are valued using a range of techniques, including earnings multiples, forecast cash flows and price/earnings ratios which are deemed to be unobservable.

(v) Property Funds

- Property funds are valued based on external valuation reports received from fund managers.

(vi) Financial assets of operations classified as held for sale

- Financial assets of operations classified as held for sale are held by our Asia business and consist primarily of discretionary managed funds of £1,404 million *(2018: £1,398 million)* and debt securities which are not traded in an active market and have been valued using third party or counterparty valuations of £401 million *(2018: £360 million).* These assets are included within the relevant asset category within the sensitivity table below.

(vii) Liabilities

The principal liabilities classified as Level 3, and the valuation techniques applied to them, are:

- £3,045 million *(2018: £3,100 million)* of non-participating investment contract liabilities which are included within financial liabilities of operations classified as held for sale. These are classified as Level 3, either because the underlying unit funds are classified as Level 3 or because the liability relates to unfunded units or other non-unit adjustments which are based on a discounted cash flow analysis using unobservable market data and assumptions. These liabilities are included within the relevant asset category within the sensitivity table below.
- Securitised mortgage loan notes, presented within Borrowings, are valued using a similar technique to the related Level 3 securitised mortgage assets.

Where these valuations are at a date other than the balance sheet date, as in the case of some private equity funds, adjustments are made to reflect items such as subsequent drawdowns and distributions and the fund manager's carried interest.

Sensitivities

Where possible, the Group tests the sensitivity of the fair values of Level 3 assets and liabilities to changes in unobservable inputs to reasonable alternatives. Level 3 valuations are sourced from independent third parties when available and, where appropriate, validated against internally-modelled valuations, third-party models or broker quotes. Where third-party pricing sources are unwilling to provide a sensitivity analysis for their valuations, the Group undertakes, where feasible, sensitivity analysis on the following basis:

- For third-party valuations validated against internally-modelled valuations using significant unobservable inputs, the sensitivity of the internally-modelled valuation to changes in unobservable inputs to a reasonable alternative is determined.
- For third-party valuations either not validated or validated against a third-party model or broker quote, the third-party valuation in its entirety is considered an unobservable input. Sensitivities are determined by flexing inputs of internal models to a reasonable alternative, including the yield, NAV multiple or other suitable valuation multiples of the financial instrument implied by the third-party valuation. For example, for a fixed income security the implied yield would be the rate of return which discounts the security's contractual cash flows to equal the third-party valuation.

The tables below show the sensitivity of the fair value of Level 3 assets and liabilities to changes in unobservable inputs to a reasonable alternative:

				Sensitivities	
	2019 Fair value £bn	Most significant unobservable input	Reasonable alternative	Positive Impact £bn	Negative Impact £bn
Investment property	**11.2**	Equivalent rental yields	+/- 5-10%	**0.9**	**(0.9)**
Loans					
Commercial mortgage loans and Primary Healthcare loans	**12.9**	Illiquidity premium	+/- 20 bps	**0.2**	**(0.2)**
Equity release mortgage loans	**11.0**	Base property growth rate	+/- 10%	**0.3**	**(0.4)**
		Current property market values	+/- 10%	**0.2**	**(0.2)**
Infrastructure and Private Finance Initiative (PFI) loans	**4.0**	Illiquidity premium	+/- 25 bps[1]	**0.2**	**(0.2)**
Other	**0.4**	Illiquidity premium	+/- 25 bps[1]	**—**	**—**
Fixed maturity securities					
Structured bond-type and non-standard debt products	**6.4**	Market spread (credit, liquidity and other)	+/- 25 bps	**0.1**	**(0.1)**
Privately placed notes	**1.7**	Credit spreads	+/- 25 bps[1]	**0.1**	**(0.1)**
Other debt securities	**9.9**	Credit and liquidity spreads	+/- 20-25 bps	**0.5**	**(0.5)**
Equity securities	**0.8**	Market spread (credit, liquidity and other)	+/- 25 bps	**—**	**(0.1)**
Other investments					
Property Funds	**0.8**	Market multiples applied to net asset values	+/- 15-20%	**0.1**	**(0.1)**
Other investments (including derivatives)	**6.4**	Market multiples applied to net asset values	+/- 10-40%[2]	**0.8**	**(0.6)**
Liabilities					
Non-participating investment contract liabilities	**(3.0)**	Fair value of the underlying unit funds	+/- 20-25%	**0.4**	**(0.4)**
Borrowings	**(1.2)**	Illiquidity premium	+/- 50 bps	**—**	**—**
Other liabilities (including derivatives)	**(0.8)**	Independent valuation vs counterparty	N/A	**—**	**—**
Total Level 3 investments	**60.5**			**3.8**	**(3.8)**

1 On discount spreads.
2 Dependent on investment category.

24 – Fair value methodology continued

	2018 Fair value £bn	Most significant unobservable input	Reasonable alternative	Sensitivities Positive Impact £bn	Sensitivities Negative Impact £bn
Investment property	11.6	Equivalent rental yields	+/- 5-10%	0.9	(0.9)
Loans					
Commercial mortgage loans and Primary Healthcare loans	11.5	Illiquidity premium	+/- 20 bps	0.2	(0.2)
Equity release mortgage loans	9.7	Base property growth rate[3]	+/- 10%	0.3	(0.3)
		Current property market values	+/- 10%	0.3	(0.4)
Infrastructure and Private Finance Initiative (PFI) loans	3.4	Illiquidity premium	+/- 25 bps[1]	0.1	(0.1)
Other	0.4	Illiquidity premium	+/- 25 bps[1]	—	—
Fixed maturity securities					
Structured bond-type and non-standard debt products	6.6	Market spread (credit, liquidity and other)	+/- 25 bps	0.1	(0.1)
Privately placed notes	1.6	Credit spreads	+/- 25 bps[1]	0.1	—
Other debt securities[4]	8.7	Credit and liquidity spreads	+/- 20-25 bps	0.4	(0.4)
Equity securities	0.3	Market spread (credit, liquidity and other)	+/- 25 bps	—	—
Other investments					
Property Funds	0.8	Market multiples applied to net asset values	+/- 15-20%	0.1	(0.1)
Other investments (including derivatives)[4]	6.0	Market multiples applied to net asset values	+/- 10-40%[2]	0.7	(0.6)
Liabilities					
Non-participating investment contract liabilities	(3.1)	Fair value of the underlying unit funds	+/- 20-25%	0.4	(0.4)
Borrowings	(1.2)	Illiquidity premium	+/- 50 bps	—	—
Other liabilities (including derivatives)	(0.6)	Independent valuation vs counterparty	N/A	—	—
Total Level 3 investments	55.7			3.6	(3.5)

1 On discount spreads.
2 Dependent on investment category.
3 Following a review of the sensitivities of equity release mortgage loans to base property growth rates, the 2018 comparative amounts have been restated from those previously reported.
4 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

The above tables demonstrate the effect of a change in one unobservable input while other assumptions remain unchanged. In reality, there may be a correlation between the unobservable inputs and other factors. It should also be noted that some of these sensitivities are non-linear, and larger or smaller impacts should not be interpolated or extrapolated from these results.

(h) Liabilities not carried at fair value for which fair value is disclosed

The table below shows the fair value and fair value hierarchy for those liabilities not carried at fair value.

2019	Notes	**As recognised in the consolidated statement of financial position line item £m**	**Fair value hierarchy Level 1 £m**	**Fair value hierarchy Level 2 £m**	**Fair value hierarchy Level 3 £m**	**Total fair value £m**
Liabilities not carried at fair value						
Borrowings	53(a)	**7,834**	**8,583**	**235**	**217**	**9,035**

2018	Notes	As recognised in the consolidated statement of financial position line item £m	Fair value hierarchy Level 1 £m	Fair value hierarchy Level 2 £m	Fair value hierarchy Level 3 £m	Total fair value £m
Liabilities not carried at fair value						
Borrowings	53(a)	8,195	7,979	213	409	8,601

25 – Loans

This note analyses the loans our Group companies have made, the majority of which are mortgage loans.

(a) Carrying amounts

The carrying amounts of loans at 31 December 2019 and 2018 were as follows:

	2019			Restated[1] 2018		
	At fair value through profit or loss other than trading £m	**At amortised cost £m**	**Total £m**	At fair value through profit or loss other than trading £m	At amortised cost £m	Total £m
Policy loans	**1**	**684**	**685**	1	769	770
Loans to banks	**302**	**8,528**	**8,830**	303	9,019	9,322
Healthcare, infrastructure and PFI other loans	**6,467**	**—**	**6,467**	5,358	—	5,358
UK securitised mortgage loans (see note 26)	**2,432**	**—**	**2,432**	2,437	—	2,437
Non-securitised mortgage loans	**19,117**	**—**	**19,117**	17,427	—	17,427
Other loans	**—**	**1,049**	**1,049**	—	870	870
Total	**28,319**	**10,261**	**38,580**	25,526	10,658	36,184
Less: Assets classified as held for sale	**—**	**(1)**	**(1)**	—	—	—
	28,319	**10,260**	**38,579**	25,526	10,658	36,184

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents that are now presented as loans to banks carried at amortised cost in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Of the above total loans, £28,938 million *(2018: £26,696 million)* are due to be recovered in more than one year after the statement of financial position date.

Loans at fair value

Fair values have been calculated by using cash flow models appropriate for each portfolio of mortgages. Further details of the fair value methodology and models utilised are given in note 24(g).

The cumulative change in fair value of loans attributable to changes in credit risk to 31 December 2019 was a £1,224 million loss (*2018: £1,304 million loss*).

Non-securitised mortgage loans include £8,558 million (*2018: £7,315 million*) of residential equity release mortgages, £7,681 million (*2018: £7,283 million*) of commercial mortgages and £2,878 million (*2018: £2,829 million*) relating to UK primary healthcare and PFI businesses. The healthcare and PFI mortgage loans are secured against General Practitioner premises, other primary health-related premises or other emergency services related premises. For all such loans, government support is provided through either direct funding or reimbursement of rental payments to the tenants to meet income service and provide for the debt to be reduced substantially over the term of the loan. Although the loan principal is not government-guaranteed, the nature of these businesses and premises provides considerable comfort of an ongoing business model and low risk of default.

Healthcare, infrastructure and PFI other loans of £6,467 million *(2018: £5,358 million)* are secured against the income from healthcare and educational premises.

Loans at amortised cost

The carrying amount of these loans at both 31 December 2019 and 31 December 2018 was a reasonable approximation for their fair value.

(b) Analysis of loans carried at amortised cost

	2019			Restated[1] 2018		
	Amortised Cost £m	**Impairment £m**	**Carrying Value £m**	Amortised Cost £m	Impairment £m	Carrying Value £m
Policy loans	**684**	**—**	**684**	769	—	769
Loans to banks	**8,528**	**—**	**8,528**	9,019	—	9,019
Non-securitised mortgage loans	**12**	**(12)**	**—**	9	(9)	—
Other loans	**1,050**	**(1)**	**1,049**	871	(1)	870
Total	**10,274**	**(13)**	**10,261**	10,668	(10)	10,658

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents that are now presented as loans to banks carried at amortised cost in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

The movements in the impairment provisions on these loans for the years ended 31 December 2019 and 2018 were as follows:

	2019 £m	2018 £m
At 1 January	**(10)**	(9)
Increase during the year	**(4)**	(1)
Foreign exchange rate movements	**1**	—
At 31 December	**(13)**	(10)

25 – Loans continued

(c) Collateral

Loans to banks include cash collateral received under stock lending arrangements (see note 62 for further discussion regarding these collateral positions). The obligation to repay this collateral is included in payables and other financial liabilities (see note 54).

The Group holds collateral in respect of loans where it is considered appropriate in order to reduce the risk of non-recovery. This collateral generally takes the form of liens or charges over properties and, in the case of policy loans, the underlying policy for the majority of the loan balances above. In all other situations, the collateral must be in a readily realisable form, such as listed securities, and is held in segregated accounts.

26 – Securitised mortgages and related assets

The Group, in its UK Life business, has loans receivable, secured by mortgages, which have then been securitised through non-recourse borrowings. This note gives details of the relevant transactions.

(a) Description of current arrangements

In a UK long-term business subsidiary, Aviva Equity Release UK Limited (AER), the beneficial interest in certain portfolios of lifetime mortgages has been transferred to five special purpose securitisation companies (the ERF companies), in return for initial consideration and, at later dates, deferred consideration. The deferred consideration represents receipts accrued within the ERF companies after meeting all their obligations to the note holders, loan providers and other third parties in the priority of payments. The purchases of the mortgages were funded by the issue of fixed and floating rate notes by the ERF companies.

All the shares in the ERF companies are held by independent companies, whose shares are held on trust. Although AER does not own, directly or indirectly, any of the share capital of the ERF companies or their parent companies, it has control of the securitisation companies, and they have therefore been treated as subsidiaries in the consolidated financial statements. AER has no right to repurchase the benefit of any of the securitised mortgage loans, other than in certain circumstances where AER is in breach of warranty or loans are substituted in order to effect a further advance.

AER has purchased subordinated notes and granted subordinated loans to some of the ERF companies. In addition, Group companies have invested £224 million *(2018: £239 million)* in loan notes issued by the ERF companies. These have been eliminated on consolidation through offset against the borrowings of the ERF companies in the statement of financial position.

In all of the above transactions, the Company and its subsidiaries are not obliged to support any losses that may be suffered by the note holders and do not intend to provide such support. Additionally, the notes were issued on the basis that note holders are only entitled to obtain payment, of both principal and interest, to the extent that the available resources of the respective special purpose securitisation companies, including funds due from customers in respect of the securitised loans, are sufficient and that note holders have no recourse whatsoever to other companies in the Aviva Group.

(b) Carrying values

The following table summarises the securitisation arrangements:

	2019		2018	
	Securitised assets £m	**Securitised liabilities £m**	Securitised assets £m	Securitised liabilities £m
Securitised mortgage loans (note 25) and loan notes issued	**2,432**	**(1,457)**	2,437	(1,464)
Other securitisation assets/(liabilities)	**282**	**(1,257)**	266	(1,239)
	2,714	**(2,714)**	2,703	(2,703)

Loan notes held by third parties are as follows:

	2019 £m	2018 £m
Total loan notes issued, as above	**1,457**	1,464
Less: Loan notes held by Group companies	**(224)**	(239)
Loan notes held by third parties (note 53(c)(i))	**1,233**	1,225

27 – Interests in structured entities

A structured entity is defined as an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only, or when the relevant activities are directed by means of contractual arrangements. The Group has interests in both consolidated and unconsolidated structured entities as described below.

The Group holds redeemable shares or units in investment vehicles, which consist of:

- Debt securities comprising securitisation vehicles that Aviva does not originate. These investments are comprised of a variety of debt instruments, including asset-backed securities and other structured securities.
- Investment funds which include: hedge funds, liquidity funds, private equity funds, unit trusts, mutual funds and Private Finance Initiatives (PFIs).
- Specialised investment vehicles include Open Ended Investment Companies (OEICs), Property Limited Partnerships (PLPs), Sociétés d'Investissement a Capital Variable (SICAVs), Tax Transparent Funds (TTFs) and other investment vehicles.

The Group's holdings in investment vehicles are subject to the terms and conditions of the respective investment vehicle's offering documentation and are susceptible to market price risk arising from uncertainties about future values of those investment vehicles. The investment manager makes investment decisions after extensive due diligence of the underlying investment vehicle including consideration of its strategy and the overall quality of the underlying investment vehicle's manager.

All of the investment vehicles in the investment portfolio are managed by portfolio managers who are compensated by the respective investment vehicles for their services. Such compensation generally consists of an asset-based fee and a performance-based incentive fee, and is reflected in the valuation of the investment vehicles.

(a) Interests in consolidated structured entities

The Group has determined that where it has control over investment vehicles, these investments are consolidated structured entities. As at 31 December 2019 the Group has granted loans to consolidated PLPs for a total of £64 million *(2018: £84 million)*. The purpose of these loans is to assist the consolidated PLPs to purchase or construct properties. The Group has also provided support, without having a contractual obligation to do so, to certain consolidated PLPs via letters of support amounting to £57 million *(2018: £51 million)*. The Group has no commitments to provide funding to consolidated structured entities *(2018: £nil)*.

The Group has also given support to five special purpose securitisation companies (the ERF companies) that are consolidated structured entities. As set out in note 26, at the inception of the securitisation vehicles, the UK subsidiary, Aviva Equity Release UK Limited (AER), has granted subordinated loan facilities to some of the ERF companies. AER receives various fees in return for the services provided to the entities. AER receives cash management fees based on the outstanding loan balance at the start of each quarter for the administration of the loan note liabilities. AER receives portfolio administration fees as compensation for managing the mortgage assets. Refer to note 26 for details of securitised mortgages and related assets as at 31 December 2019.

As at the reporting date, the Group has no intentions to provide financial or other support in relation to any other investment vehicles.

(b) Interests in unconsolidated structured entities

As part of its investment activities, the Group invests in unconsolidated structured entities. As at 31 December 2019, the Group's total interest in unconsolidated structured entities was £58,519 million *(2018 restated: £53,617 million)* on the Group's statement of financial position. The Group's total interest in unconsolidated structured entities is classified as 'Interests in and loans to joint ventures and associates' and 'financial investments held at fair value through profit or loss'. The Group does not sponsor any of the unconsolidated structured entities.

As at 31 December 2019, a summary of the Group's interest in unconsolidated structured entities is as follows:

	2019 £m					Restated[1] 2018 £m				
	Interest in, and loans to, joint ventures	Interest in, and loans to, associates	Financial investments	Loans	Total assets	Interest in, and loans to, joint ventures	Interest in, and loans to, associates	Financial investments	Loans	Total assets
Structured debt securities[2]	—	—	4,746	—	4,746	—	—	4,662	—	4,662
Other investments and equity securities	792	209	44,669	—	45,670	797	217	41,055	—	42,069
Analysed as:										
Unit trust and other investment vehicles	—	—	41,836	—	41,836	—	—	38,604	—	38,604
PLPs and property funds	792	209	2,395	—	3,396	797	217	1,975	—	2,989
Other (Including other funds and equity securities)	—	—	438	—	438	—	—	476	—	476
Loans[3]	—	—	—	8,103	8,103	—	—	—	6,886	6,886
Total	**792**	**209**	**49,415**	**8,103**	**58,519**	797	217	45,717	6,886	53,617

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented as unit trusts and other investment vehicles that are either now presented as structured debt securities or which are no longer presented as unconsolidated structured entities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.
2 Primarily reported within 'other debt securities' in note 28(a).
3 Loans include Healthcare, infrastructure & PFI other loans along with certain non-securitised mortgage loans.

The Group's maximum exposure to loss related to the interests in unconsolidated structured entities is £58,519 million *(2018 restated: £53,617 million)*.

The majority of debt securities above are investment grade securities held by the UK business. In some cases, the Group may be required to absorb losses from an unconsolidated structured entity before other parties when and if Aviva's interest is more subordinated with respect to other owners of the same security.

For commitments to property management joint ventures and associates, please refer to notes 19 and 20, respectively. The Group has not provided any other financial or other support in addition to that described above as at the reporting date, and there are no intentions to provide support in relation to any other unconsolidated structured entities in the foreseeable future.

27 – Interests in structured entities continued

In relation to risk management, disclosures on debt securities and investment vehicles are given in note 60(b)(ii) 'Risk management'. In relation to other guarantees and commitments that the Group provides in the course of its business, please see note 56(f) 'Contingent liabilities and other risk factors'.

Aviva's interest in unconsolidated structured entities that it also manages at 31 December 2019 is £1,919 million *(2018: £2,146 million)* and the total funds under management relating to these investments at 31 December 2019 is £15,454 million *(2018: £16,794 million)*.

(c) Other interests in unconsolidated structured entities

The Group receives management fees and other fees in respect of its asset management businesses. The Group does not sponsor any of the funds or investment vehicles from which it receives fees. Management fees received for investments that the Group manages, but does not have a holding in, also represent an interest in unconsolidated structured entities. As these investments are not held by the Group, the investment risk is borne by the external investors and therefore the Group's maximum exposure to loss relates to future management fees. The table below shows the assets under management of entities that the Group manages but does not have a holding in and the fees earned from those entities.

	2019		2018	
	Assets Under Management £m	**Investment Management Fees £m**	Assets Under Management £m	Investment Management Fees £m
Investment funds[1]	**6,885**	**32**	7,473	38
Specialised investment vehicles:	**3,108**	**10**	3,541	6
Analysed as:				
OEICs	**33**	**—**	944	1
PLPs	**3,075**	**10**	2,597	5
Total	**9,993**	**42**	11,014	44

1 Investment funds relate primarily to the Group's Polish pension funds.

28 – Financial investments

This note analyses our financial investments by type and shows their cost and fair value. These will change from one period to the next as a result of new business written, claims paid and market movements.

(a) Carrying amount

Financial investments comprise:

	2019				Restated[1] 2018			
	At fair value through profit or loss				At fair value through profit or loss			
	Trading £m	Other than trading £m	Available for sale £m	Total £m	Trading £m	Other than trading £m	Available for sale £m	Total £m
Fixed maturity securities[2]								
Debt securities								
UK government	—	27,044	—	27,044	—	29,203	—	29,203
UK local authorities	—	202	—	202	—	191	—	191
Non-UK government (note 28(d))	—	60,569	1,133	61,702	—	55,168	1,287	56,455
Corporate bonds								
Public utilities	—	10,252	14	10,266	—	10,573	17	10,590
Other corporate	—	77,999	308	78,307	—	74,110	291	74,401
Convertibles and bonds with warrants attached	—	35	6	41	—	270	—	270
Other	—	7,378	—	7,378	—	6,710	—	6,710
	—	183,479	1,461	184,940	—	176,225	1,595	177,820
Certificates of deposit	—	14,541	—	14,541	—	14,167	85	14,252
	—	198,020	1,461	199,481	—	190,392	1,680	192,072
Equity securities								
Ordinary shares								
Public utilities	—	2,883	—	2,883	—	2,369	—	2,369
Banks, trusts and insurance companies	—	20,635	1	20,636	—	19,742	1	19,743
Industrial miscellaneous and all other	—	76,082	14	76,096	—	66,129	—	66,129
	—	99,600	15	99,615	—	88,240	1	88,241
Non-redeemable preference shares	—	211	—	211	—	196	—	196
	—	99,811	15	99,826	—	88,436	1	88,437
Other investments[2]								
Unit trusts and other investment vehicles	—	41,835	1	41,836	—	38,603	1	38,604
Derivative financial instruments (note 61)	7,097	—	—	7,097	5,357	—	—	5,357
Deposits with credit institutions	—	169	—	169	—	155	—	155
Minority holdings in property management undertakings	—	2,395	—	2,395	—	1,975	—	1,975
Other investments – long-term	—	437	—	437	—	475	—	475
Other investments – short-term	—	—	1	1	—	1	—	1
	7,097	44,836	2	51,935	5,357	41,209	1	46,567
Total financial investments	7,097	342,667	1,478	351,242	5,357	320,037	1,682	327,076
Less: Assets classified as held for sale								
Fixed maturity securities	—	(649)	—	(649)	—	(397)	—	(397)
Equity securities	—	(256)	—	(256)	—	(210)	—	(210)
Other investments	—	(6,919)	—	(6,919)	—	(6,644)	—	(6,644)
	—	(7,824)	—	(7,824)	—	(7,251)	—	(7,251)
	7,097	334,843	1,478	343,418	5,357	312,786	1,682	319,825

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.
2 Following a review of the classification of financial assets, comparative amounts have been amended from those previously reported. The effect of this change is to reclassify £2,201 million of assets from fixed maturity securities to other investments.

Of the above total, £172,649 million *(2018 restated: £154,746 million)* is due to be recovered in more than one year after the statement of financial position date.

Other debt securities of £7,378 million *(2018 restated: £6,710 million)* include residential and commercial mortgage-backed securities, as well as other structured credit securities.

28 – Financial investments continued

(b) Cost, unrealised gains and fair value

The following is a summary of the cost/amortised cost, gross unrealised gains and losses and fair value of financial investments:

	2019				Restated[1] 2018			
	Cost/ amortised cost £m	**Unrealised gains £m**	**Unrealised losses and impairments £m**	**Fair value £m**	Cost/ amortised cost £m	Unrealised gains £m	Unrealised losses and impairments £m	Fair value £m
Fixed maturity securities[2]	**186,753**	**20,040**	**(7,312)**	**199,481**	184,934	15,733	(8,595)	192,072
Equity securities	**87,436**	**16,835**	**(4,445)**	**99,826**	87,007	9,339	(7,909)	88,437
Other investments[2]								
Unit trusts and other investment vehicles	**34,872**	**7,648**	**(684)**	**41,836**	33,093	10,203	(4,692)	38,604
Derivative financial instruments	**3,413**	**4,517**	**(833)**	**7,097**	1,547	4,942	(1,132)	5,357
Deposits with credit institutions	**169**	**—**	**—**	**169**	155	—	—	155
Minority holdings in property management undertakings	**2,226**	**259**	**(90)**	**2,395**	1,784	241	(50)	1,975
Other investments – long-term	**404**	**63**	**(30)**	**437**	473	33	(31)	475
Other investments – short-term	**1**	**—**	**—**	**1**	1	—	—	1
	315,274	**49,362**	**(13,394)**	**351,242**	308,994	40,491	(22,409)	327,076
These are further analysed as follows:								
At fair value through profit or loss	**313,893**	**49,264**	**(13,393)**	**349,764**	307,392	40,406	(22,404)	325,394
Available for sale	**1,381**	**98**	**(1)**	**1,478**	1,602	85	(5)	1,682
	315,274	**49,362**	**(13,394)**	**351,242**	308,994	40,491	(22,409)	327,076

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

2 Following a review of the classification of financial assets, comparative amounts have been amended from those previously reported. The effect of this change is to reclassify £2,201 million of assets from fixed maturity securities to other investments.

All unrealised gains and losses and impairments on financial investments classified as fair value through profit or loss have been recognised in the income statement.

Unrealised gains and losses on financial investments classified as at fair value through profit or loss, recognised in the income statement in the year, were a net gain of £18,398 million *(2018 restated: £29,885 million net loss)*. Of this net gain, £17,920 million net gain *(2018 restated: £28,801 million net loss)* related to investments designated as other than trading and £478 million net gain *(2018 restated: £1,084 million net loss)* related to financial investments designated as trading.

The movement in the unrealised gain/loss position reported in the statement of financial position during the year, shown in the table above, includes foreign exchange movements on the translation of unrealised gains and losses on financial investments held by foreign subsidiaries, which are recognised in other comprehensive income, as well as transfers due to the realisation of gains and losses on disposal and the recognition of impairment losses.

(c) Financial investment arrangements

(i) Stock lending arrangements

The Group has entered into stock lending arrangements in the UK and overseas in accordance with established market conventions. The majority of the Group's stock lending transactions occur in the UK, where investments are lent to EEA-regulated, locally domiciled counterparties and governed by agreements written under English law.

The Group receives collateral in order to reduce the credit risk of these arrangements, either in the form of securities or cash. See note 62 for further discussion regarding collateral positions held by the Group.

(ii) Other arrangements

In carrying on its bulk purchase annuity business, the Group's UK Life operation is required to place certain investments in trust on behalf of the policyholders. Amounts become payable from the trust funds to the trustees if the Group were to be in breach of its payment obligations in respect of policyholder benefits. At 31 December 2019, £2,472 million *(2018: £2,313 million)* of financial investments were restricted in this way.

Certain financial investments are also required to be deposited under local laws in various overseas countries as security for the holders of policies issued in those countries. Other investments are pledged as security collateral for bank letters of credit.

28 – Financial investments continued

(d) Non-UK Government debt securities (gross of non-controlling interests)

The following is a summary of non-UK government debt by issuer as at 31 December 2019, analysed by policyholder, participating and shareholder funds.

	Policyholder		Participating		Shareholder		Total	
Non-UK Government debt securities	2019 £m	Restated[1] 2018 £m	2019 £m	Restated[1] 2018 £m	2019 £m	Restated[1] 2018 £m	2019 £m	Restated[1] 2018 £m
Austria	**66**	21	**434**	590	**215**	167	**715**	778
Belgium	**166**	53	**877**	905	**336**	268	**1,379**	1,226
France	**698**	426	**14,537**	14,464	**1,878**	2,036	**17,113**	16,926
Germany	**305**	212	**1,795**	1,831	**455**	490	**2,555**	2,533
Greece	**1**	1	**—**	1	**—**	—	**1**	2
Ireland	**75**	55	**774**	920	**389**	138	**1,238**	1,113
Italy	**801**	379	**10,849**	9,848	**194**	772	**11,844**	10,999
Netherlands	**53**	53	**562**	637	**318**	340	**933**	1,030
Poland	**674**	727	**655**	715	**581**	541	**1,910**	1,983
Portugal	**71**	73	**175**	215	**160**	—	**406**	288
Spain	**627**	251	**688**	776	**229**	94	**1,544**	1,121
European supranational debt	**512**	226	**1,837**	1,770	**1,968**	1,763	**4,317**	3,759
Other European countries	**553**	444	**944**	1,595	**1,051**	652	**2,548**	2,691
Europe	**4,602**	2,921	**34,127**	34,267	**7,774**	7,261	**46,503**	44,449
Canada	**93**	27	**111**	120	**3,143**	2,947	**3,347**	3,094
United States	**1,672**	688	**524**	250	**1,021**	737	**3,217**	1,675
North America	**1,765**	715	**635**	370	**4,164**	3,684	**6,564**	4,769
Singapore	**12**	5	**784**	658	**374**	342	**1,170**	1,005
Other	**2,932**	2,072	**3,862**	3,331	**671**	829	**7,465**	6,232
Asia Pacific and other	**2,944**	2,077	**4,646**	3,989	**1,045**	1,171	**8,635**	7,237
Total	**9,311**	5,713	**39,408**	38,626	**12,983**	12,116	**61,702**	56,455
Less: Assets classified as held for sale	**(23)**	(9)	**—**	—	**(93)**	(1)	**(116)**	(10)
Total	**9,288**	5,704	**39,408**	38,626	**12,890**	12,115	**61,586**	56,445

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as Non-UK Government debt securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

At 31 December 2019, the Group's total government (non-UK) debt securities stood at £61,702 million *(2018 restated: £56,455 million)*. The significant majority of these holdings are within our participating funds where the risk to our shareholders is governed by the nature and extent of our participation within those funds.

Our direct shareholder asset exposure to government (non-UK) debt securities amounts to £12,983 million *(2018 restated: £12,116 million)*. The primary exposures, relative to total shareholder (non-UK) government debt exposure, are to Canadian (24%), French (14%), US (8%), Polish (4%), German (4%) and Irish (3%) government debt securities.

The participating funds exposure to (non-UK) government debt amounts to £39,408 million *(2018 restated: £38,626 million)*. The primary exposures, relative to total (non-UK) government debt exposures included within our participating funds, are to the (non-UK) government debt securities of France (37%), Italy (28%), Germany (5%), Belgium (2%), Singapore (2%) and Ireland (2%).

29 – Receivables

This note analyses our total receivables.

	2019 £m	Restated[1] 2018 £m
Amounts owed by contract holders	**2,187**	2,142
Amounts owed by intermediaries	**1,379**	1,318
Deposits with ceding undertakings	**68**	93
Amounts due from reinsurers	**347**	311
Amounts due from brokers for investment sales	**274**	181
Amounts receivable for collateral pledged	**2,786**	2,752
Amounts due from government, social security and taxes	**812**	741
Other receivables	**1,211**	1,112
Total	**9,064**	8,650
Less: Assets classified as held for sale	**(69)**	(11)
	8,995	8,639
Expected to be recovered in less than one year	**9,032**	8,615
Expected to be recovered in more than one year	**32**	35
	9,064	8,650

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Exposure to significant concentrations of credit risk is limited due to the regulations applicable in most markets and the Group credit policy and limits framework, which limits investments in individual assets and asset classes.

30 – Deferred acquisition costs

(a) Deferred acquisition costs – carrying amount

The carrying amount of deferred acquisition costs was as follows:

	2019 £m	2018 £m
Deferred acquisition costs in respect of:		
Insurance contracts – Long-term business	**993**	931
Insurance contracts – General insurance and health business	**1,141**	1,088
Participating investment contracts – Long-term business	**116**	101
Non-participating investment contracts – Long-term business	**1,108**	1,036
Total	**3,358**	3,156
Less: Classified as held for sale	**(202)**	(191)
	3,156	2,965

Deferred acquisition costs (DAC) on long-term business are generally recoverable in more than one year whereas such costs on general insurance and health business are generally recoverable within one year. Of the above total, £1,751 million *(2018: £1,879 million)* is expected to be recovered in more than one year after the statement of financial position date. For long-term business where amortisation of the DAC balance depends on projected profits, the amount expected to be recovered is estimated and actual experience will differ.

(b) Deferred acquisition costs – movements in the year

The movements in deferred acquisition costs during the year were:

	Long-term business					
2019	Insurance contracts £m	Participating investment contracts £m	Non-participating investment contracts £m	General insurance and health business £m	Retail fund management business £m	Total £m
Carrying amount at 1 January	**931**	**101**	**1,036**	**1,088**	**—**	**3,156**
Acquisition costs deferred during the year	**248**	**13**	**174**	**2,543**	**—**	**2,978**
Amortisation	**(149)**	**2**	**(90)**	**(2,482)**	**—**	**(2,719)**
Impact of assumption changes	**(16)**	**4**	**—**	**—**	**—**	**(12)**
Effect of portfolio transfers, acquisitions and disposals	**—**	**—**	**—**	**—**	**—**	**—**
Foreign exchange rate movements	**(20)**	**(4)**	**(9)**	**(8)**	**—**	**(41)**
Other movements	**(1)**	**—**	**(3)**	**—**	**—**	**(4)**
Carrying amount at 31 December	**993**	**116**	**1,108**	**1,141**	**—**	**3,358**
Less: Classified as held for sale	**—**	**—**	**(202)**	**—**	**—**	**(202)**
	993	**116**	**906**	**1,141**	**—**	**3,156**

	Long-term business					
2018	Insurance contracts £m	Participating investment contracts £m	Non-participating investment contracts £m	General insurance and health business £m	Retail fund management business £m	Total £m
Carrying amount at 1 January	858	33	1,071	1,110	2	3,074
Acquisition costs deferred during the year	265	13	87	2,279	—	2,644
Amortisation	(141)	(9)	(140)	(2,282)	(2)	(2,574)
Impact of assumption changes	14	1	16	—	—	31
Effect of portfolio transfers, acquisitions and disposals	(5)	—	—	(10)	—	(15)
Foreign exchange rate movements	2	1	2	(9)	—	(4)
Other movements[1]	(62)	62	—	—	—	—
Carrying amount at 31 December	931	101	1,036	1,088	—	3,156
Less: Classified as held for sale	—	—	(191)	—	—	(191)
	931	101	845	1,088	—	2,965

1 Following the adoption of IFRS 15, the categorisation of DAC balances was analysed resulting in a transfer of £62 million from insurance contracts to participating investment contracts.

DAC for long-term business increased over 2019 mainly due to new business sales across the UK and European markets. DAC for general insurance and health business increased over 2019 mainly due to business growth in the UK and Canada.

Where amortisation of the DAC balance depends on projected profits, changes to economic conditions may lead to a movement in the DAC balance and a corresponding impact on profit. It is estimated that the movement in the DAC balance would reduce profit by £29 million *(2018: £40 million)* if market yields on fixed income investments were to increase by 1% and increase profit by £36 million *(2018: £39 million)* if yields were to reduce by 1%.

At both 31 December 2019 and 31 December 2018 the DAC balance has been restricted by the value of projected future profits.

31 – Pension surpluses, other assets, prepayments and accrued income

(a) Pension surpluses and other assets – carrying amount

The carrying amount comprises:

	2019 £m	2018 £m
Surpluses in the staff pension schemes (note 52(a))	**2,746**	3,256
Other assets	**53**	85
Total	**2,799**	3,341

Surpluses in the staff pension schemes and £1 million *(2018: £1 million)* of other assets are recoverable more than one year after the statement of financial position date.

(b) Prepayments and accrued income

Prepayments and accrued income of £3,151 million *(2018 restated: £3,153 million)* include assets classified as held for sale of £8 million *(2018: £4 million)* and £30 million *(2018: £9 million)* that is expected to be recovered more than one year after the statement of financial position date.

32 – Assets held to cover linked liabilities

The assets which back unit-linked liabilities are included within the relevant balances in the statement of financial position, while the liabilities are included within insurance and investment contract provisions. This note analyses the carrying values of assets backing these liabilities.

	2019 £m	Restated[1] 2018 £m
Loans	**2,111**	2,008
Fixed maturity securities[2]	**42,350**	37,181
Equity securities	**83,035**	73,229
Reinsurance assets	**4,003**	4,099
Cash and cash equivalents	**8,353**	7,571
Units trusts and other investment vehicles[2]	**37,822**	32,392
Other	**8,508**	8,378
Total	**186,182**	164,858
Less: Assets classified as held for sale	**(8,170)**	(7,784)
	178,012	157,074

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as loans, fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

2 Following a review of the classification of financial assets, comparative amounts have been amended from those previously reported. The effect of this change is to reclassify £1,444 million of assets from other investments to fixed maturity securities.

The reinsurance assets balance in the table above includes £4,006 million *(2018: £4,009 million)* of non-participating investment contracts, which are legally reinsurance but do not meet the definition of a reinsurance contract under IFRS. These assets are financial instruments measured at fair value through profit and loss and are classified as Level 1 assets.

33 – Ordinary share capital

This note gives details of Aviva plc's ordinary share capital and shows the movements during the year.

(a) Details of the Company's ordinary share capital are as follows:

	2019 £m	2018 £m
The allotted, called up and fully paid share capital of the Company at 31 December 2019 was: 3,921,129,145 *(2018: 3,902,352,211)* ordinary shares of 25 pence each	**980**	975

At the 2019 Annual General Meeting, the Company was authorised to allot up to a further maximum nominal amount of:

- £652,537,894 of which £326,268,947 can be in connection with an offer by way of a rights issue
- £100 million of new ordinary shares in relation to any issue of Solvency II compliant capital instruments

(b) During 2019, a total of 18,776,934 were allotted and issued by the Company as follows:

	2019				2018			
	Number of shares	**Share capital £m**	**Capital redemption reserve £m**	**Share premium £m**	Number of shares	Share capital £m	Capital redemption reserve £m	Share premium £m
At 1 January	**3,902,352,211**	**975**	**44**	**1,214**	4,012,682,691	1,003	14	1,207
Shares issued under the Group's Employee and Executive Share Option Schemes	**18,776,934**	**5**	**—**	**25**	9,160,708	2	—	7
Shares cancelled through buy-back	**—**	**—**	**—**	**—**	(119,491,188)	(30)	30	—
At 31 December	**3,921,129,145**	**980**	**44**	**1,239**	3,902,352,211	975	44	1,214

Ordinary shares in issue in the Company rank pari passu with any new ordinary shares issued in the Company. All the ordinary shares in issue carry the same right to receive all dividends and other distributions declared, made or paid by the Company.

On 18 September 2018, the Company announced that it had successfully completed the share buy-back programme (the 2018 programme) which was notified to the market on 1 May 2018. As a result of the 2018 programme, Aviva acquired 119,491,188 shares at an average price of £5.0213 per share. These shares with a nominal value of £30 million were bought back and subsequently cancelled during the year, giving rise to a capital redemption reserve of an equivalent amount as required by the Companies Act 2006. The aggregate consideration paid was £600 million which is reflected in retained earnings (see note 40).

34 – Group's share plans

This note describes various equity compensation plans operated by the Group, and shows how the Group values the options and awards of shares in the Company.

(a) Description of the plans

The Group maintains a number of active share option and award plans and schemes (the Group's share plans). These are as follows:

(i) Savings-related options

These are options granted under the tax-advantaged Save As You Earn (SAYE) share option scheme in the UK and Irish revenue-approved SAYE share option scheme in Ireland. The SAYE allows eligible employees to acquire options over the Company's shares at a discount of up to 20% of their market value at the date of grant.

Options are normally exercisable during the six month period following either the third or fifth anniversary of the start of the relevant savings contract. Seven year contracts were offered prior to 2012. Savings contracts are subject to the statutory savings limits of £500 per month in the UK and €500 per month in Ireland. A limit of £250 per month was applied to contracts in the UK prior to 2016.

(ii) Aviva long-term incentive plan awards

These awards have been made under the Aviva Long-Term Incentive Plan 2011 (LTIP), and are described in section (b) below and in the directors' remuneration report.

(iii) Aviva annual bonus plan awards

These awards have been made under the Aviva Annual Bonus Plan 2011 (ABP), and are described in section (b) below and in the directors' remuneration report.

(iv) Aviva recruitment and retention share plan awards

These are conditional awards granted under the Aviva Recruitment and Retention Share Award plan (RRSAP) in relation to the recruitment or retention of senior managers excluding executive directors. The awards vest in tranches on various dates and vesting is conditional upon the participant being employed by the Group on the vesting date and not having served notice of resignation. Some awards can be subject to performance conditions. If a participant's employment is terminated due to resignation or dismissal, any tranche of the award which has vested within the 12 months prior to the termination date will be subject to clawback and any unvested tranches of the award will lapse in full.

(v) Aviva Investors deferred share award plan awards

These awards have been made under the Aviva Investors Deferred Share Award Plan (AI DSAP), where employees can choose to have the deferred element of their bonus deferred into awards over Aviva shares. The awards vest in three equal tranches on the second, third and fourth year following the year of grant.

(vi) Aviva Investors long-term incentive plan awards

These awards have been made under the Aviva Investors Long-Term Incentive Plan 2015 (AI LTIP)

(vii) Various all employee share plans

The Company maintains a number of active stock option and share award voluntary schemes:

a) The global matching share plan
b) Aviva Group employee share ownership scheme
c) Aviva France employee profit sharing scheme.

No new Aviva plc ordinary shares will be issued to satisfy awards made under plans iv, v, vi, vii b) or vii c).

(b) Outstanding options

The following table summarises information about options outstanding at 31 December 2019:

Range of exercise prices	Outstanding options Number	Weighted average remaining contractual life Years	Weighted average exercise price p
£2.66 – £3.16	**26,589,056**	**3**	**284.00**
£3.17 – £3.67	**5,066,836**	**1**	**351.00**
£3.68 – £4.19	**7,634,402**	**1**	**395.52**

The comparative figures as at 31 December 2018 were:

Range of exercise prices	Outstanding options Number	Weighted average remaining contractual life Years	Weighted average exercise price p
£2.66 – £3.16	420,791	1	296.80
£3.17 – £3.67	10,944,996	2	351.00
£3.68 – £4.19	17,292,239	2	392.43

34 – Group's share plans continued

(c) Movements in the year

A summary of the status of the option and share plans as at 31 December 2018 and 2019, and changes during the years ended on those dates, is shown below.

	2019			2018		
	Number of options	Weighted average exercise price p	Number of awards	Number of options	Weighted average exercise price p	Number of awards
Outstanding at 1 January	**28,658,026**	**375.13**	**40,574,481**	25,096,578	370.81	39,524,150
Granted during the year	**26,798,392**	**284.00**	**17,713,898**	8,139,367	387.00	16,213,056
Exercised/ released during the year	**(7,340,420)**	**359.44**	**(12,308,712)**	(2,111,514)	361.96	(7,653,460)
Forfeited during the year	**(8,112,308)**	**382.94**	**(10,557,632)**	(1,855,638)	385.00	(7,509,266)
Cancelled during the year	**(240,979)**	**372.02**	**—**	(495,646)	364.93	—
Expired during the year	**(472,417)**	**379.66**	**—**	(115,121)	381.97	—
Outstanding at 31 December	**39,290,294**	**314.31**	**35,442,035**	28,658,026	375.20	40,574,481
Exercisable at 31 December	**7,100,956**	**370.06**	**—**	3,457,732	369.88	—

(d) Expense charged to the income statement

The total expense recognised for the year arising from equity compensation plans was as follows:

	2019 £m	2018 £m
Equity-settled expense	**62**	64
Total (note 11(b))	**62**	64

(e) Fair value of options and awards granted after 7 November 2002

The weighted average fair values of options and awards granted during the year, estimated by using the Binomial option pricing model and Monte Carlo Simulation model, were £0.50 and £3.86 *(2018: £0.78 and £4.84)* respectively.

(i) Share options

The fair value of the options was estimated on the date of grant, based on the following weighted average assumptions:

Weighted average assumption	2019	2018
Share price	**394p**	480p
Exercise price	**284p**	387p
Expected volatility	**20.22%**	24.85%
Expected life	**3.80 years**	3.67 years
Expected dividend yield	**7.68%**	5.88%
Risk-free interest rate	**0.23%**	1.05%

The expected volatility used was based on the historical volatility of the share price over a period equivalent to the expected life of the option prior to its date of grant. The risk-free interest rate was based on the yields available on UK government bonds as at the date of grant. The bonds chosen were those with a similar remaining term to the expected life of the options. 7,340,420 options granted after 7 November 2002 were exercised during the year *(2018: 2,111,514)*.

(ii) Share awards

The fair value of the awards was estimated on the date of grant based on the following weighted average assumptions:

Weighted average assumption	2019	2018
Share price	**405p**	500p
Expected volatility[1]	**23%**	25%
Expected volatility of comparator companies' share price[1]	**23%**	25%
Correlation between Aviva and comparator competitors' share price[1]	**53%**	64%
Expected life[1]	**2.77 years**	2.64 years
Expected dividend yield	**0.00%**	0.00%
Risk-free interest rate[1]	**0.63%**	0.80%

1 For awards with market-based performance conditions only.

The expected volatility used was based on the historical volatility of the share price over a period equivalent to the expected life of the share award prior to its date of grant. The risk-free interest rate was based on the yields available on UK government bonds as at the date of grant. The bonds chosen were those with a similar remaining term to the expected life of the share awards.

35 – Treasury shares

The following table summarises information about treasury shares at 31 December 2019:

	2019 Number	2019 £m	2018 Number	2018 £m
Shares held by employee trusts	**1,714,288**	**7**	455,986	2
Shares held by subsidiary companies	**—**	**—**	2,435,983	13
	1,714,288	**7**	2,891,969	15

(a) Shares held by employee trusts

Prior to 2014, we satisfied awards and options granted under the Group's share plans primarily through shares purchased in the market and held by employee share trusts. From 2014 we primarily issue new shares except where it is necessary to use shares held by an employee share trust. This note gives details of the shares held in these trusts. Movements in the carrying value of shares held by employee trusts comprise:

	2019 Number	2019 £m	2018 Number	2018 £m
Cost debited to 'shareholders' funds				
At 1 January	**455,986**	**2**	295,906	1
Acquired in the year	**2,165,032**	**9**	765,582	4
Distributed in the year	**(906,730)**	**(4)**	(605,502)	(3)
Balance at 31 December	**1,714,288**	**7**	455,986	2

The shares are owned by employee share trusts with an undertaking to satisfy awards of shares in the Company under the Company's share plans and schemes. Details of the features of the plans can be found in the directors' remuneration report and/or in note 34.

These shares were either purchased in the market or, in 2015, new shares were issued to the trust and are carried at weighted average cost. At 31 December 2019, they had an aggregate nominal value of £428,572 *(2018: £113,997)* and a market value of £7,177,724 *(2018: £1,712,227)*. The trustees have waived their rights to dividends on the shares held in the trusts.

(b) Shares held by subsidiary companies

At 31 December 2019, the balance of shares held by subsidiary companies of nil *(2018: 2,435,983 shares)* had an aggregate nominal value of £nil *(2018: £608,996)* and a market value of £nil *(2018: £9,148,336)*.

36 – Preference share capital

This note gives details of Aviva plc's preference share capital.

The preference share capital of the Company at 31 December was:

	2019 £m	2018 £m
Issued and paid up		
100,000,000 8.375% cumulative irredeemable preference shares of £1 each	**100**	100
100,000,000 8.75% cumulative irredeemable preference shares of £1 each	**100**	100
	200	200

The issued preference shares are non-voting except where their dividends are in arrears, on a winding up or where their rights are altered.

On a winding up, they carry a preferential right of return of capital ahead of the ordinary shares. Holders are entitled to receive dividends out of the profits available for distribution and resolved to be distributed in priority to the payment of dividends to holders of ordinary shares. The Company does not have a contractual obligation to deliver cash or other financial assets to the preference shareholders and therefore the directors may make dividend payments at their discretion.

At the end of 2019, the fair value of Aviva plc's preference share capital was £299 million *(2018: £264 million).*

Following our statement at the full year 2017 results that we "have the ability to cancel our preference shares", Aviva listened to the views of investors, who expressed concerns, and as a result Aviva subsequently announced on 23 March 2018 that it had decided to take "no action to cancel its preference shares". Under current regulation the preference shares will no longer count as regulatory capital in 2026. Aviva will work towards obtaining regulatory approval for the preference shares, or a suitable substitute, to qualify as capital from 2026 onwards. If as we approach 2026 Aviva needs to reconsider this position, it will do so after taking into account the fair market value of the preference shares at that time.

On 30 April 2018 Aviva announced a charge of £14 million relating to a provision for the goodwill payment scheme to those preference shareholders who sold preference shares in the period from 8 and 22 March (inclusive) at a share price that was lower than the price that the preference shares returned to following the announcement on 23 March 2018. The total cost of the goodwill payment scheme was £10 million relating to the goodwill payments to preference shareholders, and associated administration costs, against our initial estimate of £14 million. The nature of these costs and the restricted time-period that defines eligibility to receive a payment demonstrates that they were non-recurrent and were not reflective of the Group's ongoing financial performance.

At the 2015 Annual General Meeting, the Company was authorised to allot sterling new preference shares, as defined in the Company's articles of association, up to a maximum nominal value of £500 million.

37 – Direct capital instrument and tier 1 notes

Notional amount	2019 £m	2018 £m
5.9021% £500 million direct capital instrument – Issued November 2004	**500**	500
6.875% £210 million STICS – Issued November 2003	**—**	231
Total	**500**	731

The direct capital instrument (the DCI) was issued on 25 November 2004. The DCI has no fixed redemption date but the Company may, at its sole option, redeem all (but not part) of the principal amount on 27 July 2020, at which date the interest rate changes to a variable rate, or on any respective coupon payment date thereafter. The variable rate will be the six month sterling deposit rate plus margin.

The Step-up Tier one Insurance Capital Securities ('STICS') were issued on 21 November 2003 by Friends Life Holdings plc, substituted as issuer by Aviva plc on 1 October 2015. These had no fixed redemption date, however, on 17 October 2019 notification was given that the Group would redeem the tier one notes at the first call date on 21 November 2019. On the notification date the instruments were reclassified as a financial liability of £210 million, representing the fair value and redemption cost at that date. The resulting difference of £21 million between the carrying amount of £231 million and fair value of £210 million has been charged to retained earnings. The instruments were cancelled on 25 November 2019.

The Company has the option to defer coupon payments on the DCI on any relevant payment date. Deferred coupons shall only be satisfied should the Company exercise its sole option to redeem the instruments.

No interest will accrue on any deferred coupon on the DCI. Deferred coupons on the DCI will be satisfied by the issue and sale of ordinary shares in the Company at their prevailing market value, to a sum as near as practicable to (and at least equal to) the relevant deferred coupons. In the event of any coupon deferral, the Company will not declare or pay any dividend on its ordinary or preference share capital. These instruments have been treated as equity. Please refer to accounting policy AE.

At the end of 2019 the fair value of the DCI was £514 million (*2018 DCI: £506 million, STICS: £216 million*).

38 – Merger reserve

Prior to 1 January 2004, certain significant business combinations were accounted for using the 'pooling of interests method' (or merger accounting), which treats the merged groups as if they had been combined throughout the current and comparative accounting periods. Merger accounting principles for these combinations gave rise to a merger reserve in the consolidated statement of financial position, being the difference between the nominal value of new shares issued by the Parent Company for the acquisition of the shares of the subsidiary and the subsidiary's own share capital and share premium account.

The merger reserve is also used where more than 90% of the shares in a subsidiary are acquired and the consideration includes the issue of new shares by the Company, thereby attracting merger relief under the Companies Act 1985 and, from 1 October 2009, the Companies Act 2006.

The balance of the merger reserve at 31 December 2019 is £8,974 million *(2018: £8,974 million)*.

39 – Currency translation and other reserves

This note gives details of the currency translation and other reserves forming part of the Group's consolidated equity and shows the movements during the year net of non-controlling interests:

		Other reserves				
	Currency translation reserve (see accounting policy E) £m	Owner occupied properties reserve (see accounting policy P) £m	Investment valuation reserve (see accounting policy T) £m	Hedging instruments reserve (see accounting policy U) £m	Equity compensation reserve (see accounting policy AB) £m	Total £m
Balance at 1 January 2018	1,141	26	65	(476)	111	(274)
Arising in the year through other comprehensive income:						
Fair value gains	—	1	57	—	—	58
Fair value gains transferred to profit on disposals	—	—	(78)	—	—	(78)
Share of other comprehensive income of joint ventures and associates	—	—	(10)	—	—	(10)
Foreign exchange rate movements[1]	27	—	—	(27)	—	(27)
Aggregate tax effect – shareholders' tax	1	—	7	—	—	7
Total other comprehensive income for the year	28	1	(24)	(27)	—	(50)
Fair value gains transferred to retained earnings on disposals	—	—	—	—	—	—
Transfer to profit on disposal of subsidiaries, joint ventures and associates	(40)	—	(1)	37	—	36
Changes in non-controlling interests in subsidiaries	(7)	—	—	—	—	—
Reserves credit for equity compensation plans	—	—	—	—	64	64
Shares issued under equity compensation plans	—	—	—	—	(55)	(55)
Balance at 31 December 2018	**1,122**	**27**	**40**	**(466)**	**120**	**(279)**
Arising in the year through other comprehensive income:						
Fair value gains	**—**	**3**	**39**	**—**	**—**	**42**
Fair value gains transferred to profit on disposals	**—**	**—**	**(19)**	**—**	**—**	**(19)**
Share of other comprehensive income of joint ventures and associates	**—**	**—**	**22**	**—**	**—**	**22**
Foreign exchange rate movements[1]	**(318)**	**—**	**—**	**138**	**—**	**138**
Aggregate tax effect – shareholders' tax	**10**	**(1)**	**(4)**	**—**	**—**	**(5)**
Total other comprehensive income for the year	**(308)**	**2**	**38**	**138**	**—**	**178**
Fair value gains transferred to retained earnings on disposals	**—**	**—**	**—**	**—**	**—**	**—**
Transfer to profit on disposal of subsidiaries, joint ventures and associates	**—**	**—**	**—**	**—**	**—**	**—**
Transfers to non-controlling interests	**—**	**—**	**—**	**—**	**—**	**—**
Changes in non-controlling interests in subsidiaries	**—**	**—**	**—**	**—**	**—**	**—**
Reserves credit for equity compensation plans	**—**	**—**	**—**	**—**	**62**	**62**
Shares issued under equity compensation plans	**—**	**—**	**—**	**—**	**(62)**	**(62)**
Balance at 31 December 2019	**814**	**29**	**78**	**(328)**	**120**	**(101)**

1 Foreign exchange rate movements recorded in the consolidated statement of comprehensive income of £(219) million *(2018: £5 million)* relate to the currency translation reserve of £(318) million *(2018: £27 million)*, the hedging instrument reserve of £138 million *(2018: £(27) million)* and non-controlling interests (see note 41) of £(39) million *(2018: £5 million)*.

40 – Retained earnings

This note analyses the movements in the consolidated retained earnings during the year.

	2019 £m	2018 £m
Balance at 1 January	**4,523**	4,918
Adjustment at 1 January for adoption of IFRS 16	**(110)**	—
Balance at 1 January restated	**4,413**	4,918
Profit for the year attributable to equity shareholders	**2,548**	1,568
Remeasurements of pension schemes[1] (note 52)	**(867)**	(279)
Dividends and appropriations (note 16)	**(1,244)**	(1,189)
Shares purchased in buy-back (note 33)	**—**	(600)
Net shares issued under equity compensation plans	**55**	49
Effect of changes in non-controlling interests in existing subsidiaries	**—**	1
Forfeited dividend income[2]	**4**	4
Change in equity accounted option	**22**	—
Reclassification of tier 1 notes to financial liabilities[3] (note 37)	**21**	—
Aggregate tax effect	**113**	51
Balance at 31 December	**5,065**	4,523

1 Net remeasurements of pension schemes recorded in the consolidated statement of comprehensive income of £867 million loss *(2018: £279 million loss)* includes £867 million of remeasurement losses *(2018: £280 million losses)* on the main pension schemes (see note 52) with a small amount of gains in relation to other schemes.
2 The Group has commenced a shareholder forfeiture programme, where the shares of shareholders with whom Aviva has lost contact over the last 12 years will be forfeited and sold on. Any associated unclaimed dividends will be reclaimed by the Group. After covering administration costs, the majority of the money will be put into a charitable foundation.
3 On 17 October 2019, notification was given that the Group would redeem the 6.875% £210 million tier 1 notes. At that date, the instrument was reclassified as a financial liability of £210 million, representing its fair value at that date. On 21 November 2019 the instrument was redeemed in full at a cost of £210 million. The difference of £21 million between its carrying amount of £231 million and fair value of £210 million has been charged to retained earnings. See note 37 for further details.

The Group's regulated subsidiaries are required to hold sufficient capital to meet acceptable solvency levels based on applicable local regulations. Their ability to transfer retained earnings to the UK parent companies is therefore restricted to the extent these earnings form part of local regulatory capital.

41 – Non-controlling interests

This note gives details of the Group's non-controlling interests and shows the movements during the year.

Non-controlling interests at 31 December comprised:

	2019 £m	2018 £m
Equity shares in subsidiaries	**273**	288
Share of earnings	**441**	415
Share of other reserves	**13**	13
	727	716
Preference shares in General Accident plc	**250**	250
	977	966

Movements in the year comprised:

	2019 £m	2018 £m
Balance at 1 January	**966**	1,235
Profit for the year attributable to non-controlling interests	**115**	119
Foreign exchange rate movements	**(39)**	5
Total comprehensive income attributable to non-controlling interests	**76**	124
Capital contributions from non-controlling interests	**—**	3
Non-controlling interests' share of dividends declared in the year	**(63)**	(90)
Changes in non-controlling interests in subsidiaries[1]	**(2)**	(306)
Balance at 31 December	**977**	966

1 Changes in non-controlling interests in 2018 primarily relate to the sale of the Group's shareholdings in Avipop (Italy), the sale of the life insurance and pension joint ventures Caja Murcia Vida and Caja Granada Vida (Spain) and the change in control status of Hong Kong.

The Group has no subsidiaries whose non-controlling interest is material on the basis of their share of profit or loss.

42 – Contract liabilities and associated reinsurance

The Group's liabilities for insurance and investment contracts it has sold, and the associated reinsurance, is covered in the following notes:

- Note 43 covers insurance liabilities;
- Note 44 covers the methodology and assumptions used in calculating the insurance liabilities;
- Note 45 covers liabilities for investment contracts;
- Note 46 details the financial guarantees and options on certain contracts;
- Note 47 details the associated reinsurance assets on these liabilities; and
- Note 48 shows the effects of changes in the assumptions on the liabilities.

42 – Contract liabilities and associated reinsurance continued

(a) Carrying amount

The following is a summary of the contract liabilities and related reinsurance assets as at 31 December.

	2019 Gross provisions £m	2019 Reinsurance assets £m	2019 Net £m	2018 Gross provisions £m	2018 Reinsurance assets £m	2018 Net £m
Long-term business						
Insurance liabilities	**(131,182)**	**6,369**	**(124,813)**	(125,829)	5,836	(119,993)
Liabilities for participating investment contracts	**(92,762)**	**1**	**(92,761)**	(90,455)	1	(90,454)
Liabilities for non-participating investment contracts	**(137,689)**	**4,006**	**(133,683)**	(120,354)	4,009	(116,345)
	(361,633)	**10,376**	**(351,257)**	(336,638)	9,846	(326,792)
Outstanding claims provisions	**(2,187)**	**93**	**(2,094)**	(2,001)	89	(1,912)
	(363,820)	**10,469**	**(353,351)**	(338,639)	9,935	(328,704)
General insurance and health						
Outstanding claims provisions	**(8,831)**	**683**	**(8,148)**	(9,046)	789	(8,257)
Provisions for claims incurred but not reported	**(2,672)**	**1,004**	**(1,668)**	(2,360)	822	(1,538)
	(11,503)	**1,687**	**(9,816)**	(11,406)	1,611	(9,795)
Provision for unearned premiums	**(5,138)**	**275**	**(4,863)**	(4,946)	254	(4,692)
Provision arising from liability adequacy tests[1]	**(15)**	**—**	**(15)**	(16)	—	(16)
	(16,656)	**1,962**	**(14,694)**	(16,368)	1,865	(14,503)
Total	**(380,476)**	**12,431**	**(368,045)**	(355,007)	11,800	(343,207)
Less: Liabilities classified as held for sale	**9,011**	**(75)**	**8,936**	8,462	(45)	8,417
	(371,465)	**12,356**	**(359,109)**	(346,545)	11,755	(334,790)

1 Provision arising from liability adequacy tests relates to general insurance business only. Liability adequacy test provisions for life operations, where applicable, are included in other line items. At 31 December 2019 this provision is £nil *(2018: £nil)* for the life operations.

(b) Change in contract liabilities, net of reinsurance, recognised as an expense

The purpose of the following table is to reconcile the change in insurance liabilities, net of reinsurance, shown on the income statement (note 7), to the change in insurance liabilities recognised as an expense in the relevant movement tables in the following notes. The components of the reconciliation are the change in provision for outstanding claims on long-term business (which is not included in a separate movement table), and the unwind of discounting on general insurance reserves (which is included within finance costs in the income statement). For general insurance and health, the change in the provision for unearned premiums is not included in the reconciliation as, within the income statement, this is included within earned premiums.

2019	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note 43(b)(iii))	**6,600**	**(1,030)**	**5,570**
Change in provision for outstanding claims	**4**	**(8)**	**(4)**
	6,604	**(1,038)**	**5,566**
General insurance and health			
Change in insurance liabilities (note 43(c)(iv) and 47(c)(ii))[1]	**234**	**(94)**	**140**
Less: Unwind of discount	**(14)**	**10**	**(4)**
	220	**(84)**	**136**
Total change in insurance liabilities (note 7)	**6,824**	**(1,122)**	**5,702**

1 Includes £45 million in the UK General Insurance and Health business relating to a change in the discount rate used for estimating lump sum payments of bodily injury claims from 0.00% to -0.25%.

2018	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities(note 43(b)(iii))	(6,284)	61	(6,223)
Change in provision for outstanding claims	190	(11)	179
	(6,094)	50	(6,044)
General insurance and health			
Change in insurance liabilities (note 43(c)(iv) and 47(c)(ii))[1]	(313)	111	(202)
Less: Unwind of discount	(8)	8	—
	(321)	119	(202)
Total change in insurance liabilities (note 7)	(6,415)	169	(6,246)

1 Includes £(190) million in the UK General Insurance and Health business relating to a change in the discount rate used for estimating lump sum payments of bodily injury claims from -0.75% to 0.00%.

For non-participating investment contracts, deposits collected and amounts withdrawn are not shown on the income statement, but are accounted for directly through the statement of financial position as an adjustment to the gross liabilities for investment contracts. The associated change in investment contract provisions shown on the income statement consists of the attributed investment return. For participating investment contracts, the change in investment contract provisions on the income statement primarily consists of the movement in participating investment contract liabilities (net of reinsurance) over the reporting period.

43 – Insurance liabilities

This note analyses the Group's gross insurance contract liabilities for the long-term and general insurance and health business, describes how the Group calculates these liabilities and presents the movement in these liabilities during the year.

(a) Carrying amount

Insurance liabilities (gross of reinsurance) at 31 December comprised:

	2019 £m	Restated[1] 2018 £m
Long-term business		
Participating insurance liabilities[1]	**47,344**	46,768
Unit-linked non-participating insurance liabilities	**14,707**	14,480
Other non-participating insurance liabilities[1]	**69,131**	64,581
	131,182	125,829
Outstanding claims provisions	**2,187**	2,001
	133,369	127,830
General insurance and health		
Outstanding claims provisions	**8,831**	9,046
Provision for claims incurred but not reported	**2,672**	2,360
	11,503	11,406
Provision for unearned premiums	**5,138**	4,946
Provision arising from liability adequacy tests[2]	**15**	16
	16,656	16,368
Total	**150,025**	144,198
Less: Liabilities classified as held for sale	**(687)**	(121)
	149,338	144,077

1 Comparative amounts at full year 2018 have been revised. In the UK, £5,928 million has been reclassified from other non-participating insurance liabilities to participating insurance liabilities.
2 Provision arising from liability adequacy tests relates to general insurance business only. Liability adequacy test provisions for life operations, where applicable, are included in other line items. At 31 December 2019 this provision is £nil *(2018: £nil)* for the life operations.

(b) Long-term business liabilities

(i) Business description

The Group underwrites long-term business in a number of countries as follows:

- In the UK, long-term business is mainly written in the 'Non-Profit' fund and in a number of 'With-Profits' sub-funds. In the 'Non-Profit' fund shareholders are entitled to 100% of the distributed profits. In the 'With-Profits' sub-funds the with-profits policyholders are entitled to between 40% and 100% of distributed profits, depending on the fund rules. There is also the Reattributed Inherited Estate External Support Account (RIEESA), which does not itself underwrite any business, but provides capital support to one of the with-profits sub-funds and receives any surplus or deficit emerging from it. In the RIEESA, shareholders are entitled to 100% of the distributed profits, but these cannot be distributed until the 'lock-in' criteria set by the Reattribution Scheme have been met;
- In France, the majority of policyholders' benefits are determined by investment performance, subject to certain guarantees, and shareholders' profits are derived largely from management fees. In addition, a substantial number of policies participate in investment returns, with the balance being attributable to shareholders; and
- In other operations in Europe and Asia, a range of long-term insurance and savings products are written.

(ii) Group practice

The long-term business liabilities are calculated separately for each of the Group's life operations. The provisions for overseas subsidiaries have generally been included on the basis of local regulatory requirements, modified where necessary to reflect the requirements of the Companies Act 2006.

Material judgement is required in calculating the liabilities and is exercised particularly through the choice of assumptions where discretion is permitted. In turn, the assumptions used depend on the circumstances prevailing in each of the life operations. Provisions are most sensitive to assumptions regarding discount rates, mortality and morbidity rates. Where discount rate assumptions are based on current market yields on fixed interest securities, allowance is made for default risk implicit in the yields on the underlying assets.

Bonuses paid during the year are reflected in claims paid, whereas those allocated as part of the bonus declaration are included in the movements in the long-term business liabilities.

A description of the main methodology and most material valuation assumptions has been provided (see note 44).

43 – Insurance liabilities continued

(iii) Movements in long-term business liabilities

The following movements have occurred in the gross long-term business liabilities during the year:

	2019 £m	2018 £m
Carrying amount at 1 January	**125,829**	130,972
Liabilities in respect of new business	**6,988**	6,190
Expected change in existing business	**(6,452)**	(7,952)
Variance between actual and expected experience	**3,212**	(1,844)
Impact of operating assumption changes	**(961)**	(1,456)
Impact of economic assumption changes	**3,766**	(959)
Other movements recognised as an expense[1]	**47**	(263)
Change in liability recognised as an expense (note 42(b))	**6,600**	(6,284)
Effect of portfolio transfers, acquisitions and disposals[2]	**—**	788
Foreign exchange rate movements	**(1,775)**	413
Other movements[3]	**528**	(60)
Carrying amount at 31 December	**131,182**	125,829

1 Other movements recognised as an expense during 2019 relate primarily to: a special bonus distribution to with-profits policyholders and model changes in UK Life; the reclassification of health liabilities in Singapore; and methodology changes in Ireland. The movement in 2018 relates to a special bonus distribution to with-profits policyholders in UK Life.
2 The movement during 2018 includes the acquisition of Friends First in Ireland offset by the disposal of Spain and Avipop in Italy.
3 Other movements during 2019 mainly relate to the reclassification in UK from participating investment contracts to insurance contracts (£972 million) and following a review of the presentation of negative reinsurance assets in the UK, £(427) million of negative reinsurance assets have been reclassified from insurance liabilities to reinsurance assets. 2018 includes the reclassification in France from insurance to participating investment contracts (£(56) million).

For many types of long-term business, including unit-linked and participating insurance liabilities, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit. The gross long-term business liabilities increased by £5.4 billion during 2019 (*2018: £5.1 billion decrease*) mainly driven by:

- Variance between actual and expected experience of £3.2 billion, which was mainly due to higher than expected equity returns in the UK and France;
- Impact of non-economic assumption changes of £(1.0) billion mainly due to updates to longevity assumptions (with the impact on profit partially offset by a corresponding reduction in reinsurance assets) in the UK; and
- Economic assumption changes of £3.8 billion, which reflects a reduction in valuation interest rates in response to decreasing interest rates and narrowing of credit spreads, primarily in respect of annuity contracts in the UK.

For participating insurance liabilities, a movement in liabilities is generally offset by a corresponding adjustment to the unallocated divisible surplus and does not impact profit. Where assumption changes impact profit, these are included in the effect of changes in assumptions and estimates during the year (see note 48), together with the impact of movements in related non-financial assets.

(c) General insurance and health liabilities

(i) Business description

The Group underwrites general insurance and health business in a number of countries as follows:

- In the UK, providing individual and corporate customers with a wide range of insurance products;
- In Canada, providing a range of personal and commercial lines products; and
- In Europe and Asia, providing a range of general insurance and health products.

(ii) Group practice

Delays occur in the notification and settlement of claims and a substantial measure of experience and judgement is involved in assessing outstanding liabilities, the ultimate cost of which cannot be known with certainty at the statement of financial position date. The liabilities for general insurance and health business are based on information currently available. However, it is inherent in the nature of the business written that the ultimate liabilities may vary as a result of subsequent developments.

Provisions for outstanding claims are established to cover the outstanding expected ultimate liability for losses and loss adjustment expenses (LAE) in respect of all claims that have already occurred. The provisions established cover reported claims and associated LAE, as well as claims incurred but not yet reported and associated LAE.

The Group only establishes reserves for losses that have already occurred. The Group therefore does not establish catastrophe equalisation reserves that defer a share of income in respect of certain lines of business from years in which a catastrophe does not occur to future periods in which catastrophes may occur. When calculating reserves, the Group takes into account estimated future recoveries from salvage and subrogation, and a separate asset is recorded for expected future recoveries from reinsurers after considering their collectability.

(iii) Provisions for Outstanding Claims

The table below shows the total general insurance and health liabilities split by outstanding claim provisions and provision for claims incurred but not reported (IBNR provisions), gross of reinsurance, by major line of business.

	As at 31 December 2019			As at 31 December 2018		
	Outstanding claim provisions £m	IBNR provisions £m	Total claim provisions £m	Outstanding claim provisions £m	IBNR provisions £m	Total claim provisions £m
Motor	**4,836**	**1,115**	**5,951**	5,019	963	5,982
Property	**1,823**	**155**	**1,978**	1,833	104	1,937
Liability	**1,864**	**1,277**	**3,141**	1,856	1,164	3,020
Creditor	**5**	**6**	**11**	4	7	11
Other	**303**	**119**	**422**	334	122	456
	8,831	**2,672**	**11,503**	9,046	2,360	11,406

43 – Insurance liabilities continued

The gross outstanding claims provision before discounting was £11,205 million *(2018: £10,955 million)*. Details of the range of discount rates used along with other material assumptions are available (see note 44(b)).

(iv) Movements in general insurance and health claims liabilities

The following changes have occurred in the general insurance and health claims liabilities during the year:

	2019 £m	2018 £m
Carrying amount at 1 January	**11,406**	11,801
Impact of changes in assumptions	**126**	(22)
Claim losses and expenses incurred in the current year	**7,045**	7,158
Decrease in estimated claim losses and expenses incurred in prior periods	**(186)**	(544)
Incurred claims losses and expenses	**6,985**	6,592
Less:		
Payments made on claims incurred in the current year	**(3,834)**	(3,927)
Payments made on claims incurred in prior periods	**(3,327)**	(3,343)
Recoveries on claim payments	**396**	357
Claims payments made in the period, net of recoveries	**(6,765)**	(6,913)
Unwind of discounting	**14**	8
Changes in claims reserve recognised as an expense (note 42(b))	**234**	(313)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	(29)
Foreign exchange rate movements	**(138)**	(53)
Other movements	**1**	—
Carrying amount at 31 December	**11,503**	11,406

1 The movement during 2018 relates to the disposal of Avipop in Italy.

(v) Movements in general insurance and health unearned premiums

The following changes have occurred in the liabilities for unearned premiums (UPR) during the year:

	2019 £m	2018 £m
Carrying amount at 1 January	**4,946**	4,980
Premiums written during the year	**10,908**	10,519
Less: Premiums earned during the year	**(10,677)**	(10,421)
Changes in UPR recognised as an expense	**231**	98
Gross portfolio transfers and acquisitions[1]	**—**	(103)
Foreign exchange rate movements	**(39)**	(29)
Carrying amount at 31 December	**5,138**	4,946

1 The movement during 2018 relates to the disposal of Avipop in Italy.

43 – Insurance liabilities continued

(vi) Analysis of general insurance and health claims development

The tables that follow present the development of claims payments and the estimated ultimate cost of claims for the accident years 2010 to 2019. The upper half of the tables shows the cumulative amounts paid during successive years related to each accident year, while the lower section of the tables shows the original estimated ultimate cost of claims and how these original estimates have increased or decreased, as more information becomes known about the individual claims and overall claim frequency and severity.

Key elements of the development of prior accident year general insurance and health net provisions during 2019 were:

- £134 million release from the UK due to favourable claims experience in personal and commercial motor partly offset by a strengthening in commercial property and a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (for further details see note 44);
- £58 million release from Canada primarily due to favourable claims experience on personal and commercial motor and large reinsurance recoverable on two catastrophe events from August 2018 in personal and commercial property lines; and
- £83 million release from Europe mainly due to favourable claims development in France.

Key elements of the development of prior accident year general insurance and health net provisions during 2018 were:

- £372 million release from the UK due to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (for further details see note 44) and favourable claims experience in personal and commercial motor;
- £78 million release from Canada primarily due to favourable claims experience on personal motor and aligning RBC claims practices with that of the Aviva book; and
- £127 million release from Europe mainly due to continued favourable development in France.

Gross of reinsurance

Before the effect of reinsurance, the loss development table is:

Accident year	All prior years £m	2010 £m	2011 £m	2012 £m	2013 £m	2014 £m	2015 £m	2016 £m	2017 £m	2018 £m	**2019 £m**	**Total £m**
Gross cumulative claim payments												
At end of accident year		(3,502)	(3,420)	(3,055)	(3,068)	(3,102)	(2,991)	(3,534)	(3,517)	(3,769)	(3,617)	
One year later		(5,466)	(4,765)	(4,373)	(4,476)	(4,295)	(4,285)	(4,972)	(4,952)	(5,239)		
Two years later		(5,875)	(5,150)	(4,812)	(4,916)	(4,681)	(4,710)	(5,435)	(5,388)			
Three years later		(6,163)	(5,457)	(5,118)	(5,221)	(4,974)	(4,997)	(5,781)				
Four years later		(6,405)	(5,712)	(5,376)	(5,467)	(5,244)	(5,198)					
Five years later		(6,564)	(5,864)	(5,556)	(5,645)	(5,406)						
Six years later		(6,649)	(5,978)	(5,635)	(5,739)							
Seven years later		(6,690)	(6,032)	(5,718)								
Eight years later		(6,718)	(6,078)									
Nine years later		(6,740)										
Estimate of gross ultimate claims												
At end of accident year		6,911	6,428	6,201	6,122	5,896	5,851	6,947	6,894	7,185	6,979	
One year later		7,006	6,330	6,028	6,039	5,833	5,930	6,931	6,796	7,175		
Two years later		6,950	6,315	6,002	6,029	5,865	5,912	6,864	6,756			
Three years later		6,914	6,292	5,952	6,067	5,842	5,814	6,817				
Four years later		6,912	6,262	6,002	6,034	5,772	5,785					
Five years later		6,906	6,265	5,979	5,996	5,756						
Six years later		6,926	6,265	5,910	5,956							
Seven years later		6,913	6,223	5,902								
Eight years later		6,877	6,205									
Nine years later		6,861										
Estimate of gross ultimate claims		6,861	6,205	5,902	5,956	5,756	5,785	6,817	6,756	7,175	6,979	
Cumulative payments		(6,740)	(6,078)	(5,718)	(5,739)	(5,406)	(5,198)	(5,781)	(5,388)	(5,239)	(3,617)	
	2,341	121	127	184	217	350	587	1,036	1,368	1,936	3,362	**11,629**
Effect of discounting	(280)	(18)	(1)	—	1	—	—	—	—	—	—	**(298)**
Present value	2,061	103	126	184	218	350	587	1,036	1,368	1,936	3,362	**11,331**
Cumulative effect of foreign exchange movements	—	(3)	(2)	1	4	19	71	(16)	(23)	(19)	—	**32**
Effect of acquisitions	8	1	7	9	12	23	42	38	—	—	—	**140**
Present value recognised in the statement of financial position	**2,069**	**101**	**131**	**194**	**234**	**392**	**700**	**1,058**	**1,345**	**1,917**	**3,362**	**11,503**

43 – Insurance liabilities continued

Net of reinsurance

After the effect of reinsurance, the loss development table is:

Accident year	All prior years £m	2010 £m	2011 £m	2012 £m	2013 £m	2014 £m	2015 £m	2016 £m	2017 £m	2018 £m	2019 £m	**Total £m**
Net cumulative claim payments												
At end of accident year		(3,386)	(3,300)	(2,925)	(2,905)	(2,972)	(2,867)	(3,309)	(3,483)	(3,718)	(3,565)	
One year later		(5,242)	(4,578)	(4,166)	(4,240)	(4,079)	(4,061)	(4,591)	(4,843)	(5,117)		
Two years later		(5,637)	(4,963)	(4,575)	(4,649)	(4,432)	(4,452)	(5,012)	(5,255)			
Three years later		(5,905)	(5,263)	(4,870)	(4,918)	(4,720)	(4,725)	(5,329)				
Four years later		(6,137)	(5,485)	(5,110)	(5,159)	(4,973)	(4,919)					
Five years later		(6,278)	(5,626)	(5,289)	(5,324)	(5,132)						
Six years later		(6,361)	(5,740)	(5,371)	(5,417)							
Seven years later		(6,411)	(5,798)	(5,439)								
Eight years later		(6,440)	(5,842)									
Nine years later		(6,458)										
Estimate of net ultimate claims												
At end of accident year		6,650	6,202	5,941	5,838	5,613	5,548	6,489	6,714	6,997	6,774	
One year later		6,751	6,103	5,765	5,745	5,575	5,635	6,458	6,591	6,944		
Two years later		6,685	6,095	5,728	5,752	5,591	5,608	6,377	6,569			
Three years later		6,644	6,077	5,683	5,733	5,559	5,517	6,334				
Four years later		6,634	6,034	5,717	5,689	5,490	5,495					
Five years later		6,614	6,005	5,680	5,653	5,472						
Six years later		6,624	6,003	5,631	5,612							
Seven years later		6,615	5,967	5,600								
Eight years later		6,590	5,952									
Nine years later		6,569										
Estimate of net ultimate claims		6,569	5,952	5,600	5,612	5,472	5,495	6,334	6,569	6,944	6,774	
Cumulative payments		(6,458)	(5,842)	(5,439)	(5,417)	(5,132)	(4,919)	(5,329)	(5,255)	(5,117)	(3,565)	
	922	111	110	161	195	340	576	1,005	1,314	1,827	3,209	**9,770**
Effect of discounting	(121)	(15)	3	(1)	5	—	—	—	—	—	—	**(129)**
Present value	801	96	113	160	200	340	576	1,005	1,314	1,827	3,209	**9,641**
Cumulative effect of foreign exchange movements	—	(3)	(2)	1	4	18	70	(15)	(23)	(17)	—	**33**
Effect of acquisitions	10	1	7	9	12	23	42	38	—	—	—	**142**
Present value recognised in the statement of financial position	**811**	**94**	**118**	**170**	**216**	**381**	**688**	**1,028**	**1,291**	**1,810**	**3,209**	**9,816**

In the loss development tables shown above, the cumulative claim payments and estimates of cumulative claims for each accident year are translated into sterling at the exchange rates that applied at the end of that accident year. The impact of using varying exchange rates is shown at the bottom of each table. Disposals are dealt with by treating all outstanding and IBNR claims of the disposed entity as 'paid' at the date of disposal.

The loss development tables above include information on asbestos and environmental pollution claims provisions from business written more than 10 years ago. The undiscounted claim provisions, net of reinsurance, in respect of this business at 31 December 2019 were £88 million *(2018: £94 million)*. The movement in the year reflects a reduction of £7 million due to favourable claims development, claim payments net of reinsurance recoveries and foreign exchange movements.

44 – Insurance liabilities methodology and assumptions

(a) Long-term business

The main method used for the actuarial valuation of long-term insurance liabilities is the gross premium method which involves the discounting of projected future cash flows. The cash flows are calculated using the contractual premiums payable together with explicit assumptions for investment returns, discount rates, inflation, mortality, morbidity, persistency and future expenses. These assumptions can vary by contract type and reflect current and expected future experience with an allowance for prudence.

The methodology and assumptions described below relate to the UK and France insurance businesses only.

(i) UK

Non-profit business

The valuation of non-profit business is based on grandfathered regulatory requirements under IFRS 4 prior to the adoption of Solvency II, adjusted to remove certain regulatory reserves and margins in assumptions, notably for annuity business. Conventional non-profit contracts, including those written in the with-profits funds, are valued using the gross premium method. For non-profit business in the ex. Friends Life with-profits funds, the liabilities are measured on a realistic basis with implicit recognition of the present value of future profits.

For unit-linked and some unitised with-profits business, the provisions are valued by adding a prospective non-unit reserve to the bid value of units. The prospective non-unit reserve is calculated by projecting the future non-unit cash flows using prudent assumptions and on the assumption that future premiums cease, unless it is more onerous to assume that they continue.

Discount rates

Valuation discount rate assumptions are set with regard to yields on the supporting assets and the general level of long-term interest rates as measured by gilt yields. An explicit allowance for risk is included by making a deduction from the yields on corporate bonds, mortgages and deposits, based on historical default experience of each asset class. For equity release assets, the risk allowances are consistent with those used in the fair value asset methodology (see note 24). A further margin for risk is then deducted for all asset classes.

Valuation discount rates for business in the non-profit funds are as follows:

Valuation discount rates (Gross of investment expenses)	**2019**	2018
Assurances		
Life conventional non-profit	**0.5% to 2.1%**	0.9% to 2.6%
Pensions conventional non-profit	**0.6% to 1.6%**	1.1% to 2.1%
Annuities		
Conventional immediate and deferred annuities	**0.9% to 2.3%**	1.2% to 3.0%
Non-unit reserves on unit-linked business		
Life	**0.9%**	0.9% to 1.3%
Pensions	**1.1%**	0.9% to 1.6%
Income Protection		
Active lives	**0.6% to 2.1%**	1.1% to 2.6%
Claims in payment (level and index linked)	**1.1%**	1.3% to 1.6%

The valuation discount rates are after a reduction for risk, but before allowance for investment expenses. For conventional immediate annuity business, the allowance for risk comprises long-term assumptions on a prudent basis for defaults or, in the case of equity release assets, expected losses arising from the No-Negative-Equity Guarantee. These allowances vary by asset category and for some asset classes by rating.

The risk allowances made for corporate bonds (including overseas government bonds and structured finance assets), mortgages (including healthcare mortgages, commercial mortgages and infrastructure assets), and equity release equated to 45-47 bps, 31-35 bps, and 124 bps respectively at 31 December 2019 *(2018: 50 bps, 39-41 bps, and 112 bps respectively)*.

The total valuation allowance in respect of corporate bonds and mortgages, including healthcare mortgages but excluding equity release, was £1.8 billion *(2018: £1.9 billion)* over the remaining term of the portfolio at 31 December 2019. The total valuation allowance in respect of equity release assets was £1.5 billion at 31 December 2019 *(2018: £1.3 billion)*. Total liabilities for the annuity business were £57.6 billion at 31 December 2019 *(2018: £53.7 billion)*.

Expenses

Maintenance expense assumptions for non-profit business are generally expressed as a per policy charge set with regards to an allocation of current year expense levels by broad category of business and using the policy counts for in-force business. The assumptions also include an allowance for prudence and increase by future expense inflation over the lifetime of each contract. Expense inflation is assumed to be in line with RPI, and in line with external agreements for business administered externally. An additional liability is held if projected per-policy expenses in future years are expected to exceed current assumptions. Further, explicit project expense liabilities are held for non-discretionary project costs that typically relate to mandatory requirements. Expense-related liabilities are only held where expenses are not covered by anticipated future profits in the liability methodology, notably for unit-linked contracts. Investment expense assumptions are generally expressed as a proportion of the assets backing the liabilities.

44 – Insurance liabilities methodology and assumptions continued

Mortality

Mortality assumptions for non-profit business are set with regard to recent Company experience and general industry trends. The mortality tables used in the valuation are summarised below:

Mortality tables used	2019	2018
Assurances		
Non-profit	**AM00/AF00 or TM08/TF08 adjusted for smoker status and age/sex specific factors**	AM00/AF00 or TM08/TF08 adjusted for smoker status and age/sex specific factors
Pure endowments and deferred annuities before vesting	**AM00/AF00 adjusted**	AM00/AF00 adjusted
Annuities in payment		
Pensions business and general annuity business	**PMA08 HAMWP /PFA08 HAMWP adjusted plus allowance for future mortality improvement**	PMA08 HAMWP /PFA08 HAMWP adjusted plus allowance for future mortality improvement
Bulk purchase annuities	**CV3**	CV2

For the largest portfolio of pensions annuity business, the underlying mortality assumptions for males are 105.4% of PMA08 HAMWP adjusted *(2018: 105.8% of PMA08 HAMWP adjusted)* with base year 2008; for females the underlying mortality assumptions are 99.5% of PFA08 HAMWP adjusted *(2018: 99.0% of PFA08 HAMWP adjusted)* with base year 2008.

Improvements are based on 'CMI_2018 (S=7.25) Advanced with adjustments' *(2018: 'CMI_2017 (S=7.5) Advanced with adjustments')* with a long-term improvement rate of 1.75% *(2018: 1.75%)* for males and 1.5% *(2018: 1.5%)* for females, both with an additional improvement for prudence of 0.5% *(2018: 0.5%)* to all future annual improvement adjustments. The CMI_2018 tables have been adjusted by adding 0.25% *(2018: 0.25%)* and 0.35% *(2018: 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_2018 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). The tapering approach is unchanged from that used at 2018. In addition, on a significant proportion of individual annuity business, 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.

With-profits business

The Group's UK with-profits funds are evaluated by reference to FRS 27, which was grandfathered under IFRS 4, prior to the adoption of Solvency II. This uses an approach of calculating the realistic liabilities for the contracts. The realistic liabilities include the with-profits benefit reserve (WPBR), and an additional provision for the expected cost of any guarantees and options in excess of the WPBR.

The WPBR for an individual contract is generally calculated on a retrospective basis, and represents the accumulation of the premiums paid on the contract, allowing for investment return, taxation, expenses and any other charges levied on the contract.

Provisions for guarantees and options within realistic liabilities are measured using market-consistent stochastic models. A stochastic approach includes measuring the time value of guarantees and options, which represents the additional cost arising from uncertainty surrounding future economic conditions. Non-market-related assumptions (for example, persistency, mortality and expenses) are assessed on a best estimate basis with reference to Company and wider industry experience, adjusted to take into account future trends.

The with-profits business is valued by adjusting Solvency II Best Estimate Liabilities and results in a valuation in accordance with FRS 27.

Future investment return

A risk-free rate equal to the spot yield on UK swaps is used for the valuation of with-profits business. The rates vary according to the outstanding term of the policy, with a typical rate as at 31 December 2019 of 1.02% *(2018: 1.44%)* for a policy with ten years outstanding.

Volatility of investment return

Volatility assumptions are set with reference to implied volatility data on traded market instruments, where available, or on a best estimate basis where not.

Volatility	2019	2018
Equity returns	**16.2%**	18.0%
Property returns	**15.8%**	15.8%

The equity volatility used depends on term, money-ness and region. The figure shown is for a sample UK equity, at the money, with a ten-year term.

44 – Insurance liabilities methodology and assumptions continued

Future regular bonuses

Annual bonus assumptions for 2020 have been set consistently with the year-end 2019 declaration. Future annual bonus rates reflect the principles and practices of each fund. In particular, the level is set with regard to the projected margin for final bonus and the change from one year to the next is limited to a level consistent with past practice.

Mortality

Mortality assumptions for with-profits business are set with regard to recent Company experience and general industry trends. The mortality tables used in the valuation are summarised below:

Mortality table used	2019	2018
Assurances, pure endowments and deferred annuities before vesting	**Nil or Axx00 adjusted**	Nil or Axx00 adjusted
Pensions business after vesting and pensions annuities in payment	**PMA08 HAMWP/PFA08 HAMWP adjusted plus allowance for future mortality improvement**	PMA08 HAMWP/PFA08 HAMWP adjusted plus allowance for future mortality improvement

Allowance for future mortality improvement is in line with the rates for non-profit business.

Expenses

Maintenance fee assumptions for with-profits business are generally expressed as a fixed per policy charge in line with a memorandum of understanding between the with-profits funds and the non-profit fund within the company. The memorandum of understanding specifies the charges for a five-year period ending in 2023, and specifies a level of charge inflation during that period of CPI+2% or CPI+3% depending on the product type. After the end of the period covered by the memorandum of understanding we assume that the charges will remain unchanged, and a level of charge inflation of RPI+1% for all products will apply. Any excess of expenses charged by Aviva Life Services UK Limited (UKLS) to Aviva Life & Pensions UK Limited (AVLAP) over the charges specified by the memorandum of understanding is borne by the non-profit fund.

As at 31 December 2018 maintenance expense assumptions for with-profits business were generally expressed as a fixed per policy charge in line with agreements between UKLS and AVLAP. The assumptions increased by a future inflation charge over the lifetime of each contract, which was 50% RPI, 100% RPI or 100% RPI + 1% depending on product type. Any excess of expenses charged by UKLS to AVLAP over the charges specified by the agreements was borne by the non-profit business.

Guarantees and options

The provisions held in respect of guaranteed annuity options for the with-profits and the non-profit business are a prudent assessment of the additional liability incurred under the option on a basis and method consistent with that used to value basic policy liabilities, and includes a prudent assessment of the proportion of policyholders who will choose to exercise the option. For further details see note 46.

(ii) France

The majority of reserves arise from single premium savings products and are based on the accumulated fund values, adjusted to maintain consistency with the value of the assets backing the policyholder liabilities. For traditional business, the net premium method is used for prospective valuations, in accordance with local regulation, where the valuation assumptions depend on the date of issue of the contract. The valuation discount rate also depends on the original duration of the contract and mortality rates are based on industry tables.

	Valuation discount rates		Mortality tables used
	2019	2018	**2019 and 2018**
Life assurances	**0% to 4.5%**	0% to 4.5%	TD73-77,TD88-90,TH00-02 TF00-02, H_AVDBS,F_AVDBS H_SSDBS, F_SSDBS
Annuities	**0% to 1.5%**	0% to 2%	TGF05/TGH05

(b) General insurance and health

Outstanding claims provisions are estimated based on known facts at the date of estimation. Case estimates are set by skilled claims technicians and established case setting procedures. Claims above certain limits are referred to senior claims handlers for estimate authorisation.

No adjustments are made to the claims technicians' case estimates included in booked claim provisions, except for rare occasions when the estimated ultimate cost of individual large or unusual claims may be adjusted, subject to internal reserve committee approval, to allow for uncertainty regarding, for example, the outcome of a court case. The ultimate cost of outstanding claims is then estimated by using a range of standard actuarial claims projection techniques, such as the Chain Ladder and Bornhuetter-Ferguson methods. Historical claims development is mainly analysed by accident period, although underwriting or notification period is also used where this is considered appropriate.

The assumptions used in most non-life actuarial projection techniques, including future rates of claims inflation or loss ratio assumptions, are implicit in the historical claims development data on which the projections are based. Additional qualitative judgement is used to assess the extent to which past trends may not apply in the future in order to arrive at a point estimate for the ultimate cost of claims that represents the likely outcome, from a range of possible outcomes, taking account of all the uncertainties involved. The range of possible outcomes does not, however, result in the quantification of a reserve range.

The following explicit assumptions are made which could materially impact the level of booked net reserves:

44 – Insurance liabilities methodology and assumptions continued

Discounting

Outstanding claims provisions are based on undiscounted estimates of future claim payments, except for the following classes of business for which discounted provisions are held:

	Discount rate		Mean term of liabilities	
Class	**2019**	2018	**2019**	2018
Reinsured London Market business	**0.8% to 2.2%**	1.0% to 2.9%	**9 years**	10 years
Latent claims	**0.8% to 2.2%**	1.0% to 2.6%	**10 to 12 years**	11 to 18 years
Structured settlements	**-0.2% to 2.7%**	1.0% to 3.0%	**11 to 35 years**	9 to 37 years

The period of time which will elapse before the liabilities are settled has been estimated by modelling the settlement patterns of the underlying claims.

The discount rate that has been applied to latent claims reserves, structured settlements and reinsured London Market business is based on the swap curve in the relevant currency at the reporting date, having regard to the duration of the expected settlement dates of the claims. The range of discount rates used depends on the duration of the claims and is given in the table above. The duration of the claims span over 35 years, with the average duration being between 9 and 12 years depending on the geographical region.

At 31 December 2019, it is estimated that a 1% fall in the discount rates used would increase net claim reserves by approximately £120 million *(2018: £100 million)*, excluding the offsetting effect on asset values as assets are not hypothecated across classes of business.

UK mesothelioma claims

The level of uncertainty associated with latent claims is considerable due to the relatively small number of claims and the long-tail nature of the liabilities. UK mesothelioma claims account for a large proportion of the Group's latent claims. The key assumptions underlying the estimation of these claims include claim numbers, the base average cost per claim, future inflation in the average cost of claims and legal fees.

The best estimate of the liabilities reflects the latest available market information and studies. Many different scenarios can be derived by flexing these key assumptions and applying different combinations of these assumptions. An upper and lower scenario can be derived by making reasonably likely changes to these assumptions, resulting in an estimate of £25 million *(2018: £20 million)* greater than the best estimate, or £35 million *(2018: £30 million)* lower than the best estimate. These scenarios do not, however, constitute an upper or lower bound on these liabilities.

Allowance for risk and uncertainty

The uncertainties involved in estimating loss reserves are allowed for in the reserving process and by the estimation of explicit reserve uncertainty distributions. The reserve estimation basis requires all non-life businesses to calculate booked claim provisions as the best estimate of the cost of future claim payments, plus an explicit allowance for risk and uncertainty. The allowance for risk and uncertainty is calculated by each business unit in accordance with the requirements of the Group non-life reserving policy, taking into account the risks and uncertainties specific to each line of business and type of claim in that territory. The requirements of the Group non-life reserving policy also seek to ensure that the allowance for risk and uncertainty is set consistently across both business units and reporting periods.

Lump sum payments in settlement of bodily injury claims that are decided by the UK courts are calculated in accordance with the Ogden Tables and discount rate. The Ogden discount rate is set by the Lord Chancellor and is applied when calculating the present value of future care costs and loss of earnings for claims settlement purposes. Following the announcement by the Lord Chancellor on 15 July 2019 to increase the Ogden discount rate from the -0.75% set in 2017 to -0.25% (rate retained at -0.75% in Scotland), balance sheet reserves in the UK have been calculated using a discount rate of -0.25% at 31 December 2019. This has resulted in a strengthening of claims reserves in the UK of £45 million. At December 2018, balance sheet reserves were calculated using a rate of 0.00%. The Ogden discount rate is expected to be reviewed by the Lord Chancellor within five years.

45 – Liabilities for investment contracts

This note analyses our gross liabilities for investment contracts by type of product and describes the calculation of these liabilities.

(a) Carrying amount

The liabilities for investment contracts (gross of reinsurance) at 31 December comprised:

	2019 £m	2018 £m
Long-term business		
Liabilities for participating investment contracts	**92,762**	90,455
Liabilities for non-participating investment contracts	**137,689**	120,354
Total	**230,451**	210,809
Less: Liabilities classified as held for sale	**(8,324)**	(8,341)
	222,127	202,468

(b) Group practice

Investment contracts are those that do not transfer significant insurance risk from the contract holder to the issuer, and are therefore treated as financial instruments under IFRS.

Many investment contracts contain a discretionary participation feature in which the contract holder has a contractual right to receive additional benefits as a supplement to guaranteed benefits. These are referred to as participating contracts and are measured according to the methodology for long-term business liabilities (see note 44). They are not measured at fair value as there is currently no agreed definition of fair valuation for discretionary participation features under IFRS. In the absence of such a definition, it is not possible to provide a range of estimates within which a fair value is likely to fall. The IASB deferred consideration of participating contracts to the IFRS 17 insurance standard, which is expected to apply to annual reporting periods beginning on or after 1 January 2022.

For participating business, the discretionary participation feature is recognised separately from the guaranteed element and is classified as a liability, referred to as unallocated divisible surplus, except for the with-profits sub-fund supported by the RIEESA. Guarantees on long-term investment products are discussed in note 46.

Investment contracts that do not contain a discretionary participation feature are referred to as non-participating contracts and the liability is measured at either fair value or amortised cost. We currently have no non-participating investment contracts measured at amortised cost.

Of the non-participating investment contracts measured at fair value, £137,040 million at 31 December 2019 *(2018: £119,402 million)* are unit-linked in structure and the fair value liability is equal to the current unit fund value, including any unfunded units, plus if required, additional non-unit reserves based on a discounted cash flow analysis. These contracts are generally classified as Level 1 in the fair value hierarchy, as the unit reserve is calculated as the publicly quoted unit price multiplied by the number of units in issue, and any non-unit reserve is insignificant.

For unit-linked business, a deferred acquisition cost asset and deferred income reserve liability are recognised in respect of transaction costs and front-end fees respectively, that relate to the provision of investment management services, and which are amortised on a systematic basis over the contract term. The amount of the related deferred acquisition cost asset is shown in note 30 and the deferred income liability is shown in note 55.

For non-participating investment contracts acquired in a business combination, an acquired value of in-force business asset is recognised in respect of the fair value of the investment management services component of the contracts, which is amortised on a systematic basis over the useful lifetime of the related contracts. The amount of the acquired value of in-force business asset is shown in note 18, which relates primarily to the acquisition of Friends Life in 2015 and Friends First in 2018.

(c) Movements in the year

The following movements have occurred in the gross provisions for investment contracts in the year:

(i) Participating investment contracts

	2019 £m	2018 £m
Carrying amount at 1 January	**90,455**	87,654
Liabilities in respect of new business	**6,991**	6,301
Expected change in existing business	**(4,857)**	(4,491)
Variance between actual and expected experience	**4,751**	(1,441)
Impact of operating assumption changes	**173**	59
Impact of economic assumption changes	**204**	(40)
Other movements recognised as an expense[1]	**103**	152
Change in liability recognised as an expense[2]	**7,365**	540
Effect of portfolio transfers, acquisitions and disposals[3]	**—**	427
Foreign exchange rate movements	**(4,054)**	774
Other movements[4]	**(1,004)**	1,060
Carrying amount at 31 December	**92,762**	90,455

1 Other movements recognised as an expense during 2019 relate primarily to a special bonus distribution to with-profits policyholders and the recognition of unitised with-profits annual management charges in UK Life. The movement in 2018 primarily relates to a special bonus distribution to with-profits policyholders in UK Life.
2 Total interest expense for participating investment contracts recognised in profit or loss is £5,269 million *(2018: £(419) million)*.
3 The movement during 2018 relates to the acquisition of Friends First in Ireland.
4 Other movements during 2019 include the reclassification in UK from participating investment to insurance contracts (£(972) million) and from participating investment to outstanding claims reserves (£(32) million). The movement during 2018 relates to the reclassification in France from non-participating investment contracts to participating investment contracts (£151 million) and from insurance to participating investment contracts (£56 million) and to a reclassification from non-participating investment contracts to participating investment contracts in the UK (£853 million).

45 – Liabilities for investment contracts continued

For many types of long-term business, including unit-linked and participating funds, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit.

The variance between actual and expected experience in 2019 of £4.8 billion is primarily the result of the impact of strong global equity performance.

The impact of assumption changes in the analysis shows the resulting movement in the carrying value of participating investment contract liabilities. For participating business, a movement in liabilities is generally offset by a corresponding adjustment to the unallocated divisible surplus and does not impact profit. Where assumption changes do impact profit, these are included in the effect of changes in assumptions and estimates during the year shown in note 48, together with the impact of movements in related non-financial assets.

(ii) Non-participating investment contracts

	2019 £m	2018 £m
Carrying amount at 1 January	**120,354**	124,995
Liabilities in respect of new business	**5,520**	4,869
Expected change in existing business	**(3,742)**	(5,509)
Variance between actual and expected experience	**16,345**	(5,539)
Impact of operating assumption changes	**(22)**	(10)
Impact of economic assumption changes	**(1)**	(81)
Other movements recognised as an expense	**2**	6
Change in liability	**18,102**	(6,264)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	2,494
Foreign exchange rate movements	**(575)**	133
Other movements[2]	**(192)**	(1,004)
Carrying amount at 31 December	**137,689**	120,354

1 The movement during 2018 relates to the acquisition of Friends First in Ireland.
2 Other movements during 2019 mainly relate to the reclassification in UK from non-participating investment to outstanding claims reserves (£(180) million). Other movements during 2018 relates to the reclassification in France from non-participating investment contracts to participating investment contracts (£(151) million) and to a reclassification from non-participating investment contracts to participating investment contracts in the UK (£(853) million).

For unit-linked investment contracts, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit. The variance between actual and expected experience in 2019 of £16.3 billion is primarily the result of the impact of strong global equity performance.

The impact of assumption changes in the above analysis shows the resulting movement in the carrying value of non-participating investment contract liabilities. The impacts of assumption changes on profit are included in the effect of changes in assumptions and estimates during the year shown in note 48, which combines participating and non-participating investment contracts together with the impact of movements in related non-financial assets.

46 – Financial guarantees and options

This note details the financial guarantees and options inherent in some of our insurance and investment contracts.

As a part of their operating activities, various Group companies have provided guarantees and options, including investment return guarantees, on certain long-term insurance and fund management products.

(a) UK non-profit business

The Group's UK non-profit funds are evaluated by reference to statutory reserving rules, which are based on the UK regulatory requirements (grandfathered under IFRS 4), prior to the adoption of Solvency II, adjusted to remove certain regulatory reserves and margins in assumptions, notably for annuity business.

(i) Guaranteed annuity options

The Group's UK non-profit funds have written contracts which contain guaranteed annuity rate options (GAOs), where the policyholder has the option to take the benefits from a policy in the form of an annuity based on guaranteed conversion rates. Provision for these guarantees do not materially differ from a provision based on a market-consistent stochastic model, and amounts to £82 million at 31 December 2019 *(2018: £87 million)*.

(ii) Guaranteed unit price on certain products

Certain pension products linked to long-term life insurance funds provide policyholders with guaranteed benefits at retirement or death. No additional provision is made for this guarantee as the investment management strategy for these funds is designed to ensure that the guarantee can be met from the fund, mitigating the impact of large falls in investment values and interest rates.

(iii) Return of premium guarantees

German pension products sold in Friends Life between 2006 and 2014 are subject to a return of premium guarantee whereby the product guarantees to return the maximum of the unit fund value or total premiums paid (before deductions). Provisions for this guarantee are calculated using a market-consistent stochastic model and amount to £178 million at 31 December 2019 *(2018: £153 million)*.

(b) UK with-profits business

The Group's UK with-profits liabilities are evaluated by reference to FRS 27, which was grandfathered under IFRS 4, prior to the adoption of Solvency II. Under the PRA's rules, provisions for guarantees and options within realistic liabilities are measured using market-consistent stochastic models. A stochastic approach includes measuring the time value of guarantees and options, which represents the additional cost arising from uncertainty surrounding future economic conditions.

The material guarantees and options relating to this provision are:

(i) Maturity value and death benefit guarantees

Significant conventional and unitised with-profits business have minimum maturity (and in some cases death benefit) values reflecting the sum assured plus declared annual bonus. For some unitised with-profits life contracts the amount paid after the fifth policy anniversary is guaranteed to be at least as high as the premium paid increased in line with the rise in retail price index (RPI) or consumer price index (CPI).

(ii) No market valuation reduction (MVR) guarantees

For unitised business, there are circumstances where a 'no MVR' guarantee is applied, for example on certain policy anniversaries, guaranteeing that no market value reduction will be applied to reflect the difference between the accumulated value of units and the market value of the underlying assets.

(iii) Guaranteed annuity options

The Group's UK with-profits funds have written individual and group pension contracts which contain GAOs, where the policyholder has the option to take the benefits from a policy in the form of an annuity based on guaranteed conversion rates. The Group also has exposure to GAOs and similar options on deferred annuities.

Realistic liabilities for GAOs in the UK with-profits funds were £1,628 million at 31 December 2019 *(2018: £1,644 million)*. With the exception of the with-profits sub-fund supported by the RIEESA, movements in the realistic liabilities in the with-profits funds are offset by a corresponding movement in the unallocated divisible surplus, with no net impact on IFRS profit. Realistic liabilities for GAOs in the with-profits sub-fund supported by the RIEESA were £129 million at 31 December 2019 *(2018: £155 million)*.

(iv) Guaranteed minimum pension

The Group's UK with-profits funds also have certain policies that contain a guaranteed minimum level of pension as part of the condition of the original transfer from state benefits to the policy.

(v) Guaranteed minimum maturity payments on mortgage endowments

The with-profits funds made promises to certain policyholders in relation to their with-profits mortgage endowments. Top-up payments will be made on these policies at maturity to meet the mortgage value up to a maximum of the 31 December 1999 illustrated shortfall.

46 – Financial guarantees and options continued

(c) Overseas life businesses

In addition to guarantees written in the Group's UK businesses, our overseas businesses have also written contracts containing guarantees and options. Details of the significant guarantees and options provided by overseas life businesses are set out below.

(i) France

Guaranteed surrender value guaranteed minimum bonuses and options

Aviva France has written a number of contracts with a guaranteed surrender value and guaranteed minimum bonuses. The guaranteed surrender value is the accumulated value of the contract including accrued bonuses. Bonuses are based on accounting income from amortised bond portfolios, where the duration of bond portfolios is set in relation to the expected duration of the policies, plus income and releases from realised gains on equity-type investments. Policy reserves are equal to guaranteed surrender values. Local statutory accounting envisages the establishment of a reserve, 'Provision pour Aléas Financiers' (PAF), when accounting income is less than 125% of guaranteed minimum credited returns. No PAF was established at full year 2019 *(2018: no PAF was established)*.

The most significant of these contracts is the AFER Eurofund which has total liabilities of £37 billion at 31 December 2019 *(2018: £39 billion)*. The guaranteed minimum bonus is agreed between Aviva France and the AFER association at the end of each year, in respect of the following year. The bonus was 1.85% for 2019 *(2018: 2.25%)* compared with an accounting income from the fund of 2.34% *(2018: 2.74%)*.

Non-AFER contracts with guaranteed surrender values had liabilities of £11 billion at 31 December 2019 *(2018: £11 billion)* and all guaranteed annual bonus rates are between 0% and 4.5% *(2018: 0% to 4.5%)*. For non-AFER business the accounting income return exceeded guaranteed bonus rates in 2019 *(2018: the accounting income return exceeded guaranteed bonus rates)*.

In addition, there are a small proportion of contracts with a switch-loss option. Consistent with previous years, the risks associated with switch-loss options are allowed for in the liabilities in accordance with local regulations and IFRS 4.

Guaranteed death and maturity benefits

The Group has also sold a small proportion of unit-linked policies where the death and/or maturity benefit is guaranteed to be at least equal to the premiums paid. The reserve held in the Group's consolidated statement of financial position is calculated on a prudent basis and is in excess of the economic liability.

(ii) Italy

Guaranteed investment returns and guaranteed surrender values

The Group has written contracts containing guaranteed investment returns and guaranteed surrender values in Italy. Liabilities are generally taken as the face value of the contract plus, if required, an explicit provision for guarantees calculated in accordance with local regulations and IFRS 4.

(iii) Ireland

Guaranteed annuity options and guaranteed maturity values

As in the UK, the Group's with-profits liabilities in Ireland are measured on a realistic basis, including realistic liabilities for guarantees and options. Guarantees and options in Ireland include GAOs, minimum maturity values on conventional with-profits business, guaranteed minimum bonus rates on unitised with profits business, and a 'no MVR' guarantee that may apply at certain policy anniversaries.

47 – Reinsurance assets

This note details the reinsurance assets on our insurance and investment contract liabilities.

(a) Carrying amount

The reinsurance assets at 31 December comprised:

	2019 £m	2018 £m
Long-term business		
Insurance contracts	**6,369**	5,836
Participating investment contracts	**1**	1
Non-participating investment contracts[1]	**4,006**	4,009
	10,376	9,846
Outstanding claims provisions	**93**	89
	10,469	9,935
General insurance and health		
Outstanding claims provisions	**683**	789
Provisions for claims incurred but not reported	**1,004**	822
	1,687	1,611
Provisions for unearned premiums	**275**	254
	1,962	1,865
	12,431	11,800
Less: Assets classified as held for sale	**(75)**	(45)
Total	**12,356**	11,755

1 Balances in respect of all reinsurance treaties are included under reinsurance assets, regardless of whether they transfer significant insurance risk. The reinsurance assets classified as non-participating investment contracts are financial instruments measured at fair value through profit or loss.

Of the above total, £10,943 million *(2018: £10,800 million)* is expected to be recovered more than one year after this statement of financial position.

(b) Assumptions

The assumptions, including discount rates, used for reinsurance contracts follow those used for insurance liabilities. Reinsurance assets are valued net of an allowance for recoverability.

(c) Movements

The following movements have occurred in the reinsurance assets during the year:

(i) Long-term business liabilities

	2019 £m	2018 £m
Carrying amount at 1 January	**9,846**	11,565
Assets in respect of new business	**954**	1,766
Expected change in existing business assets	**(185)**	(22)
Variance between actual and expected experience	**274**	431
Impact of non-economic assumption changes	**(175)**	(460)
Impact of economic assumption changes	**193**	21
Other movements recognised as an expense[1]	**(37)**	(3,877)
Change in assets[2]	**1,024**	(2,141)
Effect of portfolio transfers, acquisitions and disposals[3]	**—**	399
Foreign exchange rate movements	**(73)**	23
Other movements[4]	**(421)**	—
Carrying amount at 31 December	**10,376**	9,846

1 Other movements recognised as an expense during 2019 primarily relate to the ceding of reinsurance for annuity business offset by basis methodology changes in Ireland, the reclassification of health reinsurance assets in Singapore and collective investments in unit-linked funds in the UK following a restructure of a reinsurance treaty. The latter part is a continuation of activity undertaken in 2018.
2 Change in assets does not reconcile with values in note 42(b) due to the inclusion of reinsurance assets classified as non-participating investment contracts where, for such contracts, deposit accounting is applied on the income statement.
3 The movement during 2018 primarily relates to the acquisition of Friends First in Ireland.
4 Following a review of the presentation of negative reinsurance assets in the UK, £(427) million of negative reinsurance assets have been reclassified from insurance liabilities to reinsurance assets.

The impact of assumption changes in the above analysis shows the resulting movement in the carrying value of reinsurance assets, with corresponding movements in gross insurance contract liabilities. For participating businesses, a movement in reinsurance assets is generally offset by a corresponding adjustment to the unallocated divisible surplus and does not impact profit. Where assumption changes impact profit, these are included in the effect of changes in assumptions and estimates during the year (see note 48), together with the impact of movements in related liabilities and other non-financial assets.

47 – Reinsurance assets continued

(ii) General insurance and health claims liabilities

	2019 £m	2018 £m
Carrying amount at 1 January	**1,611**	1,729
Impact of changes in assumptions	**73**	(22)
Reinsurers' share of claim losses and expenses		
Incurred in current year	**195**	176
Incurred in prior years	**96**	40
Reinsurers' share of incurred claim losses and expenses	**291**	216
Less:		
Reinsurance recoveries received on claims		
Incurred in current year	**(53)**	(54)
Incurred in prior years	**(227)**	(259)
Reinsurance recoveries received in the year	**(280)**	(313)
Unwind of discounting	**10**	8
Change in reinsurance asset recognised as income (note 42(b))	**94**	(111)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	(9)
Foreign exchange rate movements	**(15)**	2
Other movements	**(3)**	—
Carrying amount at 31 December	**1,687**	1,611

1 The movement during 2018 relates to the proportion of reinsurance assets held by Avipop which was sold by Italy in 2018.

(iii) General insurance and health unearned premiums

	2019 £m	2018 £m
Carrying amount at 1 January	**254**	257
Premiums ceded to reinsurers in the year	**683**	392
Less: Reinsurers' share of premiums earned during the year	**(661)**	(375)
Changes in reinsurance asset recognised as income	**22**	17
Reinsurers' share of portfolio transfers and acquisitions[1]	**—**	(21)
Foreign exchange rate movements	**(1)**	1
Carrying amount at 31 December	**275**	254

1 The movement during 2018 relates to the proportion of Avipop sold by Italy in 2018 that was ceded to reinsurers.

48 – Effect of changes in assumptions and estimates during the year

This note analyses the impact of changes in estimates and assumptions from 2018 to 2019, on liabilities for insurance and investment contracts, and related assets and liabilities, such as unallocated divisible surplus, reinsurance, deferred acquisition costs and acquired value of in-force business and does not allow for offsetting movements in the value of backing financial assets.

	Effect on profit 2019 £m	Effect on profit 2018 £m
Assumptions		
Long-term insurance business		
Interest rates	**(2,978)**	1,061
Expenses	**(47)**	9
Persistency rates	**(124)**	23
Mortality and morbidity for assurance contracts	**(38)**	24
Mortality for annuity contracts	**830**	780
Tax and other assumptions	**9**	18
Long-term investment business		
Expenses	**—**	(1)
General insurance and health business		
Change in discount rate assumptions	**(54)**	1
Total	**(2,402)**	1,915

The impact of interest rates on long-term business relates primarily to annuities in the UK (including any change in credit default and reinvestment risk provisions), where a reduction in the discount rate, in response to decreasing interest rates and narrowing credit spreads, has increased liabilities.

The impact of expenses on long-term business relates primarily to the UK and Ireland, where reserves have increased by £55 million following a review of recent experience including the margin for prudence. This has been offset slightly by £8 million due to favourable expense experience in Singapore.

The impact of persistency on long-term business relates primarily to the UK. Reserves have increased by £127 million following a review of recent experience, driven by the introduction of age-dependent retirement rates for pension business and unfavourable lapse experience.

The impact of mortality for annuitant contracts on long-term business relates primarily to the UK. In 2019, there has been a reduction in reserves due to longevity assumptions and modelling which include:

- Updates to base mortality to reflect recent experience for individual annuities of £81 million;
- Updates to the rate of mortality improvements for individual annuities, including CMI 2018 and a change in smoothing parameter, of £410 million;
- Refinements to modelling of bulk purchase annuities together with a change to base mortality, improvements and a change in smoothing parameter, of £231 million;
- Refinements to modelling of enhanced annuities of £58 million; and
- Other less significant movements of £19 million.

In Ireland there was a slight reduction in the reserves of £31 million following a review of recent experience.

In 2018 the impact of mortality for annuitant contracts on long-term business relates primarily to the UK. This resulted in a reduction in reserves due to longevity assumptions and modelling which included:

- Updates to base mortality to reflect recent experience including the 2008 series tables for individual annuities of £345 million;
- Updates to the rate of mortality improvements including CMI 2017 of £251 million;
- Refinements to modelling of bulk purchase annuities together with a change to base mortality and improvements of £132 million; and
- Other less significant movements of £24 million.

In Ireland and Singapore there was a slight reduction in the reserves of £28 million following a review of recent experience.

In the general insurance and health business, a negative impact of £(54) million *(2018: £1 million positive)* has arisen primarily as a result of a decrease in the interest rates used to discount claim reserve for both periodic payment orders and latent claims.

49 – Unallocated divisible surplus

An unallocated divisible surplus (UDS) is established where the nature of policy benefits is such that the division between shareholder reserves and policyholder liabilities is uncertain at the reporting date. Therefore, the expected duration for settlement of the UDS is undefined.

This note shows the movements in the UDS during the year.

	2019 £m	2018 £m
Carrying amount at 1 January	**5,949**	9,101
Change in participating fund assets	**9,411**	(4,139)
Change in participating fund liabilities	**(5,426)**	902
Change in liability recognised as an expense	**3,985**	(3,237)
Effect of portfolio transfers, acquisition and disposals[1]	**—**	48
Foreign exchange rate movements	**(337)**	37
Carrying amount at 31 December	**9,597**	5,949

1 The movement during 2018 relates to the acquisition of Friends First (£66 million), and the disposal of the remainder of the Spanish business (£18 million).

The amount of UDS at 31 December 2019 has increased to £9.6 billion *(2018: £5.9 billion)*. The increase is mainly due to market movements in Europe as a result of decreasing interest rates, narrowing credit spreads and increasing equity returns.

Where the aggregate amount of participating assets is less than the participating liabilities within a fund then the shortfall may be held as negative UDS, subject to recoverability testing as part of the liability adequacy requirements of IFRS 4. There are no material negative UDS balances at the participating fund-level within each life entity in the current period *(2018: £355 million negative UDS within five funds in Italy).*

50 – Tax assets and liabilities

This note analyses the tax assets and liabilities that appear in the statement of financial position and explains the movements in these balances in the year.

(a) Current tax

Current tax assets recoverable and liabilities payable in more than one year are £104 million and £9 million *(2018: £24 million and £9 million)*, respectively.

The Group is party to the CFC & Dividend Group Litigation Order, which challenged the tax treatment of dividends received from non-UK entities before 2009. The Group is attempting to recover claims from HMRC covered by this judgement. The uncertainty in respect of the claims resulted in no recoverable amounts being recognised at 31 December 2018. As a result of recent progress made with the claims a recoverable balance of £99 million is included within current tax assets at 31 December 2019.

(b) Deferred tax

(i) The balances at 31 December comprise:

	2019 £m	2018 £m
Deferred tax assets	**162**	185
Deferred tax liabilities	**(2,155)**	(1,885)
Net deferred tax liability	**(1,993)**	(1,700)
Less: Classified as held for sale	**(11)**	—
	(2,004)	(1,700)

Amounts classified as held for sale include £11 million of deferred tax assets. *(2018: £nil).*

(ii) The net deferred tax liability arises on the following items:

	2019 £m	2018 £m
Long-term business technical provisions and other insurance items	**1,752**	663
Deferred acquisition costs	**(198)**	(199)
Unrealised gains on investments	**(2,875)**	(1,430)
Pensions and other post-retirement obligations	**(425)**	(499)
Unused losses and tax credits	**103**	147
Subsidiaries, associates and joint ventures	**(13)**	(9)
Intangibles and additional value of in-force long-term business	**(413)**	(475)
Provisions and other temporary differences	**76**	102
Net deferred tax liability	**(1,993)**	(1,700)
Less: Classified as held for sale	**(11)**	—
	(2,004)	(1,700)

(iii) The movement in the net deferred tax liability was as follows:

	2019 £m	2018 £m
Net liability at 1 January	**(1,700)**	(2,416)
Adjustment at 1 January for adoption of IFRS 16	**24**	—
Net liability at 1 January restated	**(1,676)**	(2,416)
Acquisition and disposal of subsidiaries[1]	**—**	184
Amounts (charged)/credited to income statement (note 14(a))	**(387)**	545
Amounts credited/(charged) to other comprehensive income (note 14(b))	**50**	(9)
Foreign exchange rate movements	**23**	(10)
Other movements	**(3)**	6
Net liability at 31 December	**(1,993)**	(1,700)

1 The movement during 2018 relates mainly to the disposal of Avipop Assicurazioni SpA and Avipop Vita SpA.

Deferred tax assets are recognised to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilised. In entities where there is a history of tax losses, deferred tax assets are only recognised in excess of deferred tax liabilities if there is convincing evidence that future taxable profits will be available. Where this is the case, the directors have relied on business plans supporting future profits.

The Group has unrecognised gross tax losses (excluding capital losses) and other temporary differences of £1,270 million *(2018: £798 million)* to carry forward against future taxable income of the necessary category in the companies concerned. Of these, trading losses of £38 million will expire within the next 20 years. The remaining losses have no expiry date.

In addition, the Group has unrecognised gross capital losses of £612 million *(restated 2018: £604 million)*. These have no expiry date.

There are no temporary differences in respect of unremitted overseas retained earnings for which deferred tax liabilities have not been recognised at 31 December 2019 *(2018: £nil)*.

51 – Pension deficits and other provisions

This note details the non-insurance provisions that the Group holds, and shows the movements in these during the year.

(a) Carrying amounts

	2019 £m	2018 £m
Total IAS 19 obligations to main staff pension schemes (note 52(a))	**770**	693
Deficits in other staff pension schemes	**66**	65
Total IAS 19 obligations to staff pension schemes	**836**	758
Restructuring provisions	**29**	64
Other provisions	**700**	577
Total provisions	**1,565**	1,399

Other provisions primarily include amounts set aside throughout the Group relating to product governance rectification and staff entitlements.

(b) Movements on restructuring and other provisions

	2019			2018		
	Restructuring provisions £m	Other provisions £m	Total £m	Restructuring provisions £m	Other provisions £m	Total £m
At 1 January	**64**	**577**	**641**	92	515	607
Additional provisions	**2**	**302**	**304**	1	269	270
Provisions released during the period	**—**	**(57)**	**(57)**	—	(128)	(128)
Charge to income statement	**2**	**245**	**247**	1	141	142
Utilised during the year	**(37)**	**(118)**	**(155)**	(29)	(89)	(118)
Acquisition of subsidiaries	**—**	**—**	**—**	—	5	5
Foreign exchange rate movements	**—**	**(4)**	**(4)**	—	5	5
At 31 December	**29**	**700**	**729**	64	577	641

Of the total restructuring and other provisions, £569 million *(2018: £402 million)* is expected to be settled more than one year after the statement of financial position date.

Other provisions include a £229 million provision *(2018: £250 million)* in respect of a product governance issue in our UK Life business. This provision relates to a historical issue with over 90% of cases identified being pre-2002 and is limited to advised sales by Friends Provident, where a number of external defined benefit pension arrangements transferred into Friends Provident pension arrangements. We have completed a thorough and detailed review of the suitability of the advice given, and we will ensure that no affected customers are financially disadvantaged. There has been no significant change to the provision estimate or estimation methodology since 31 December 2018. The most significant assumption in relation to the calculation of the provision is the estimated average redress per customer. Each 10% reduction/increase in the average redress per customer would reduce/increase the estimate of the provision by £23 million. The valuation of this provision involves a high degree of judgement due to the time that has elapsed since the advice was given (in particular the assumptions used to calculate how external defined benefit pension arrangements specific to each impacted policyholder would have performed over time), and therefore the possible range of outcomes is significant. The reduction in the value of the provision during 2019 of £21 million is due to utilisation in the period. The issue does not affect any other part of our business. The Group has notified its professional indemnity insurers and intends to make a claim on its insurance to mitigate the financial impact.

Other provisions have increased during the year mainly due to the recognition of a new product governance provision in our UK Life business of £175 million. This provision relates to past communications to a specific sub-set of pension policyholders, that may not have adequately informed them of switching options into with-profit funds that were available to them. This issue is restricted to a product originally sold between 1985 and 1989 and acquired by Aviva through the purchase of Friends Life. It does not affect any other part of our business. We are completing a review to identify and contact affected customers to ensure they are not disadvantaged. The most significant assumption in relation to the calculation of the provision is the estimated rates of customer switching. Each 10% reduction/increase in the rates of switching would reduce/increase the estimate of the provision by £40 million. The valuation of the provision involves a high degree of judgement and estimation uncertainty due to the dependence on decisions made by customers, and therefore the possible range of outcomes is significant.

The remainder of the increase in other provisions of £127 million largely relates to a number of relatively small new provisions including provisions relating to product governance rectification, warranty claims and litigation. This increase is offset by utilisation in the year of £118 million.

52 – Pension obligations

(a) Introduction

The Group operates a number of defined benefit and defined contribution pension schemes. The material defined benefit schemes are in the UK, Ireland and Canada. The assets and liabilities of these defined benefit schemes as at 31 December 2019 are shown below.

	2019				2018			
	UK £m	Ireland £m	Canada £m	Total £m	UK £m	Ireland £m	Canada £m	Total £m
Total fair value of scheme assets (see b(ii) below)	**17,671**	**833**	**264**	**18,768**	17,059	775	249	18,083
Present value of defined benefit obligation	**(15,416)**	**(1,035)**	**(341)**	**(16,792)**	(14,246)	(950)	(324)	(15,520)
Net IAS 19 surpluses/(deficits) in the schemes	**2,255**	**(202)**	**(77)**	1,976	2,813	(175)	(75)	2,563
Surpluses included in other assets (note 31)	**2,746**	**—**	**—**	**2,746**	3,256	—	—	3,256
Deficits included in provisions (note 51)	**(491)**	**(202)**	**(77)**	**(770)**	(443)	(175)	(75)	(693)
Net IAS 19 surpluses/(deficits) in the schemes	**2,255**	**(202)**	**(77)**	**1,976**	2,813	(175)	(75)	2,563

This note relates to the defined benefit pension schemes included in the table above. There are a number of smaller schemes that are also measured under IAS 19. These are included as a total within Deficits in other staff pension schemes (see note 51). Similarly, while the charges to the income statement for the main schemes are shown in section (b)(i) below, the total charges for all pension schemes are disclosed in section (d) below.

Under the IAS 19 valuation basis, the Group applies the principles of IFRIC 14, 'IAS 19 – The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction', whereby a surplus is only recognised to the extent that the Company is able to access the surplus either through an unconditional right of refund to the surplus or through reduced future contributions relating to ongoing service, which have been substantively enacted or contractually agreed. The Group has determined that it can derive economic benefit from the surplus in the ASPS via a reduction to future employer contributions for DC members, which could theoretically be paid from the surplus funds in the ASPS. In the RAC and FPPS, the Group has determined that the rules set out in the schemes' governing documentation provide for an unconditional right to a refund from any future surplus funds in the schemes.

The assets of the UK, Irish and Canadian schemes are held in separate trustee-administered funds to meet long-term pension liabilities to past and present employees. In all schemes, the appointment of trustees of the funds is determined by their trust documentation and they are required to act in the best interests of the schemes' beneficiaries. The long-term investment objectives of the trustees and the employers are to limit the risk of the assets failing to meet the liabilities of the schemes over the long term, and to maximise returns consistent with an acceptable level of risk so as to control the long-term costs of these schemes.

A funding actuarial valuation of each of the defined benefit schemes is carried out at least every three years for the benefit of scheme trustees and members. Actuarial reports have been submitted for each scheme within this period, using appropriate methods for the respective countries on local funding bases.

The number of scheme members was as follows:

	United Kingdom		Ireland		Canada	
	2019 Number	2018 Number	2019 Number	2018 Number	2019 Number	2018 Number
Deferred members	**45,748**	47,977	**2,479**	2,544	**467**	519
Pensioners	**39,038**	38,433	**895**	897	**1,313**	1,318
Total members	**84,786**	86,410	**3,374**	3,441	**1,780**	1,837

All schemes are closed to future accrual. Closure of the schemes has removed the volatility associated with additional future accrual for active members.

(i) UK schemes

In the UK, the Group operates three main pension schemes, the Aviva Staff Pension Scheme (ASPS), the RAC (2003) Pension Scheme, which was retained after the sale of RAC Limited in September 2011, and the Friends Provident Pension Scheme (FPPS), which was acquired as part of the Friends Life acquisition in 2015. As the defined benefit sections of the UK schemes are now closed to both new members and future accrual, existing deferred members in active service and new entrants participate in the defined contribution section of the ASPS. The UK schemes operate within the UK pensions' regulatory framework.

(ii) Other schemes

In Ireland, the Group operates two main pension schemes, the Aviva Ireland Staff Pension Fund (AISPF) and the Friends First Group Retirement and Death Benefits Scheme (FFPS) which was acquired as part of the Friends First acquisition in June 2018. Future accruals for the AISPF and FFPS schemes ceased with effect from 30 April 2013 and 1 April 2014 respectively. The Irish schemes are regulated by the Pensions Authority in Ireland.

The Canadian defined benefit schemes ceased accruals with effect from 31 December 2011. The main Canadian plan is a Registered Pension Plan in Canada and as such is registered with the Canada Revenue Agency and Financial Services Regulatory Authority of Ontario and is required to comply with the Income Tax Act of Canada and the various provincial Pension Acts within Canada.

52 – Pension obligations continued

(b) IAS 19 disclosures

Disclosures under IAS 19 for the material defined benefit schemes in the UK, Ireland and Canada are given below. Where schemes provide both defined benefit and defined contribution pensions, the assets and liabilities shown exclude those relating to defined contribution pensions.

(i) Movements in the scheme surpluses and deficits

Movements in the pension schemes' surpluses and deficits comprise:

2019	Fair Value of scheme assets £m	Present Value of defined benefit obligation £m	IAS 19 Pensions net surplus/ (deficits) £m
Net IAS 19 surplus in the schemes at 1 January	**18,083**	**(15,520)**	**2,563**
Administrative expenses[1]	**—**	**(19)**	**(19)**
Total pension cost charged to net operating expenses	**—**	**(19)**	**(19)**
Net interest credited/(charged) to investment income/(finance costs)[2]	**479**	**(406)**	**73**
Total recognised in income	**479**	**(425)**	**54**
Remeasurements:			
Actual return on these assets	**1,141**	**—**	**1,141**
Less: Interest income on scheme assets	**(479)**	**—**	**(479)**
Return on scheme assets excluding amounts in interest income	**662**	**—**	**662**
Losses from change in financial assumptions	**—**	**(1,824)**	**(1,824)**
Gains from change in demographic assumptions	**—**	**165**	**165**
Experience gains	**—**	**130**	**130**
Total recognised in other comprehensive income	**662**	**(1,529)**	**(867)**
Employer contributions	**215**	**—**	**215**
Plan participant contributions	**4**	**(4)**	**—**
Benefits paid	**(612)**	**612**	**—**
Administrative expenses paid from scheme assets[1]	**(19)**	**19**	**—**
Foreign exchange rate movements	**(44)**	**55**	**11**
Net IAS 19 surplus in the schemes at 31 December	**18,768**	**(16,792)**	**1,976**

1 Administrative expenses are expensed as incurred.
2 Net interest income of £96 million has been credited to investment income and net interest expense of £23 million has been charged to finance costs (see note 8).

The present value of unfunded post-retirement benefit obligations included in the table above is £118 million at 31 December 2019 *(2018: £115 million)*. During the period the ASPS completed a bulk annuity buy-in transaction with Aviva Life & Pensions UK Limited, a Group Company. Due to different measurement bases applying for accounting purposes, the premium paid by the scheme exceeded the valuation of the plan asset recognised. This is the primary reason for the reduction in the scheme surplus over the year and has been recognised as an actuarial loss in the actual return on assets within other comprehensive income. The plan asset recognised is transferable and so has not been subject to consolidation within the Group's financial statements.

2018	Fair Value of scheme assets £m	Present Value of defined benefit obligation £m	IAS 19 Pensions net surplus/ (deficits) £m
Net IAS 19 surplus in the schemes at 1 January	18,678	(16,043)	2,635
Past service costs – amendments[1]	—	(63)	(63)
Administrative expenses[2]	—	(19)	(19)
Total pension cost charged to net operating expenses	—	(82)	(82)
Net interest credited/(charged) to investment income/(finance costs)[3]	442	(375)	67
Total recognised in income	442	(457)	(15)
Remeasurements:			
Actual return on these assets	(182)	—	(182)
Less: Interest income on scheme assets	(442)	—	(442)
Return on scheme assets excluding amounts in interest income	(624)	—	(624)
Gains from change in financial assumptions	—	622	622
Losses from change in demographic assumptions	—	(185)	(185)
Experience losses	—	(93)	(93)
Total recognised in other comprehensive income	(624)	344	(280)
Acquisitions	87	(96)	(9)
Employer contributions	236	—	236
Plan participant contributions	9	(9)	—
Benefits paid	(724)	724	—
Administrative expenses paid from scheme assets[2]	(23)	19	(4)
Foreign exchange rate movements	2	(2)	—
Net IAS 19 surplus in the schemes at 31 December	18,083	(15,520)	2,563

1 Past service costs include a charge of £63 million relating to the estimated additional liability arising in the UK defined benefit schemes as a result of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension (GMP). This additional liability has arisen following the High Court judgement in October 2018 in the case involving Lloyds Banking Group.
2 Administrative expenses are expensed as incurred.
3 Net interest income of £89 million has been credited to investment income and net interest expense of £22 million has been charged to finance costs (see note 8).

52 – Pension obligations continued

(ii) Scheme assets

Scheme assets are stated at their fair values at 31 December 2019.

Total scheme assets are comprised by country as follows:

	UK £m 2019	Ireland £m 2019	Canada £m 2019	Total £m 2019	UK £m 2018	Ireland £m 2018	Canada £m 2018	Total £m 2018
Bonds								
Fixed interest	**6,745**	**439**	**141**	**7,325**	6,121	493	148	6,762
Index-linked	**10,598**	**284**	**—**	**10,882**	10,409	293	—	10,702
Property	**392**	**—**	**—**	**392**	353	—	—	353
Pooled investment vehicles	**4,497**	**283**	**122**	**4,902**	4,738	555	100	5,393
Derivatives	**60**	**4**	**—**	**64**	(65)	4	—	(61)
Insurance Policies	**1,977**	**—**	**—**	**1,977**	776	—	—	776
Cash and other[1]	**(5,952)**	**(177)**	**1**	**(6,128)**	(4,653)	(570)	1	(5,222)
Total fair value of scheme assets	**18,317**	**833**	**264**	**19,414**	17,679	775	249	18,703
Less: consolidation elimination for non-transferable Group insurance policy[2]	**(646)**	**—**	**—**	**(646)**	(620)	—	—	(620)
Total IAS 19 fair value of scheme assets	**17,671**	**833**	**264**	**18,768**	17,059	775	249	18,083

1 Cash and other assets comprise cash at bank, receivables, payables and repurchase agreements. At 31 December 2019, cash and other assets primarily consist of repurchase agreements of £3,078 million *(2018: £3,741 million)*.
2 As at 31 December 2019, the FPPS asset includes an insurance policy of £646 million *(2018: £620 million)* issued by a Group company that is not transferable under IAS 19 and is consequently eliminated from the Group's IAS 19 scheme assets. Insurance policies issued by other Group companies of £1,331 million as at 31 December 2019 *(2018: £156 million)* included in the ASPS asset are transferable and so are not subject to consolidation.

IAS 19 plan assets include investments in Group-managed funds in the consolidated statement of financial position of £2,575 million *(2018: £2,730 million)* and transferable insurance policies with other Group companies of £1,331 million *(2018: £156 million)* in the ASPS. Where the investments are in segregated funds with specific asset allocations, they are included in the appropriate line in the table above, otherwise they appear in 'Cash and other'. There are no significant judgements involved in the valuation of the scheme assets. Insurance policies are valued on the same basis as the pension scheme liabilities, as required by IAS19.

(iii) Assumptions on scheme liabilities

The valuations used for accounting under IAS 19 have been based on the most recent funding actuarial valuations, updated to take account of the standard's requirements in order to assess the liabilities of the material schemes at 31 December 2019.

The projected unit credit method

The inherent uncertainties affecting the measurement of scheme liabilities require these to be measured on an actuarial basis. This involves discounting the best estimate of future cash flows to be paid out by the scheme using the projected unit credit method. This is an accrued benefits valuation method which calculates the past service liability to members and makes allowance for their projected future earnings. It is based on a number of actuarial assumptions, which vary according to the economic conditions of the countries in which the relevant businesses are situated, and changes in these assumptions can materially affect the measurement of the pension obligations.

52 – Pension obligations continued

Financial assumptions

The main financial assumptions used to calculate scheme liabilities under IAS 19 are:

	UK		Ireland		Canada	
	2019	2018	**2019**	2018	**2019**	2018
Inflation rate[1]	**3.0%/2.2%**	3.3%/2.2%	**1.5%**	1.6%	**2.0%**	2.0%
General salary increases[2]	**4.8%**	5.1%	**3.0%**	3.1%	**2.5%**	2.5%
Pension increases[3]	**3.0%/2.2%**	3.3%/2.2%	**0.35%**	0.4%	**1.25%**	1.25%
Deferred pension increases[3]	**3.0%/2.2%**	3.3%/2.2%	**1.5%**	1.6%	**—**	—
Discount rate[4, 5]	**1.9% (non-insured members) 1.9% (insured members – ASPS) 1.8% (insured members – FPPS)**	2.7%/ 2.6%(pensioners)/ 2.7%(deferred)	**1.1%/1.2%**	1.8%/1.9%	**3.00%**	3.75%
Basis of discount rate		AA-rated corporate bonds		AA-rated corporate bonds		AA-rated corporate bonds

1 For the UK schemes, assumptions are provided for RPI/CPI. In the UK, relevant RPI/CPI swap curves are used, which are equivalent to the single rates shown. In 2019, CPI is now derived as RPI less 100bps pre 2030 and RPI less 60bps post 2030 *(2018: RPI less 110bps at all terms)*.
2 In the UK, the only remaining linkage between pension benefits and general salary increases is in respect of a small amount of Guaranteed Minimum Pension benefits, in line with National Average Earnings.
3 For the UK schemes, assumptions are provided for RPI/CPI. In the UK, relevant RPI/CPI swap curves are used, which are equivalent to the single rates shown. The assumptions are also adjusted to reflect the relevant caps/floors and the inflation volatility.
4 To calculate scheme liabilities in the UK, a single discount rate is used in the RAC scheme, whereas for ASPS and FPPS, separate discount rates are used for the defined benefit obligation for members included / not included in annuity policies held by the scheme.
5 For the Irish schemes, a discount rate of 1.1% and 1.2% is used for AISPF and FFPS respectively, reflecting the differences in the duration of the liabilities between the two schemes.

The discount rate and pension increase rate are the two assumptions that have the largest impact on the value of the liabilities, with the difference between them being known as the net discount rate. For each country, the discount rate is based on current average yields of high-quality debt instruments taking account of the maturities of the defined benefit obligations.

Mortality assumptions

Mortality assumptions are material in measuring the Group's obligations under its defined benefit schemes. The assumptions used are summarised in the table below and have been selected to reflect the characteristics and experience of the membership of these schemes.

The mortality tables, average life expectancy and pension duration used at 31 December 2019 for scheme members are as follows:

			Life expectancy/(pension duration) at NRA of a male		Life expectancy/(pension duration) at NRA of a female	
Mortality table		Normal retirement age (NRA)	Currently aged NRA	20 years younger than NRA	Currently aged NRA	20 years younger than NRA
UK – ASPS	SAPS tables as a proxy for Club Vita pooled experience, including an allowance for future improvements	60	88.2 (28.2)	90.0 (30.0)	89.6 (29.6)	91.9 (31.9)
– RAC	SAPS, including allowances for future improvement	65	86.9 (21.9)	88.9 (23.9)	89.5 (24.5)	91.4 (26.4)
– FPPS	SAPS, including allowances for future improvement	60	87.6 (27.6)	90.0 (30.0)	90.1 (30.1)	92.2 (32.2)
Ireland – AISPF	73%/81% PNA00 with allowance for future improvements	61	89.7 (28.7)	92.7 (31.7)	91.4 (30.4)	94.3 (33.3)
– FFPS	88%/91% ILT15 with allowance for future improvements	65	86.6 (21.6)	89.0 (24.0)	89.0 (24.0)	91.1 (26.1)
Canada	Canadian Pensioners' Mortality 2014 Private Table, including allowance for future improvements	65	87.0 (22.0)	88.5 (23.5)	89.5 (24.5)	90.9 (25.9)

The assumptions above are based on commonly used mortality tables. The tables make allowance for observed variations in such factors as age, gender, pension amount, salary and postcode-based lifestyle group, and have been adjusted to reflect recent research into mortality experience. However, the extent of future improvements in longevity is subject to considerable uncertainty and judgement is required in setting this assumption. For the ASPS, which is the most material scheme to the Group, the allowance for mortality improvement is per the actuarial profession's 'CMI_2018 (S=7.25) Advanced with adjustments' model *(2018: 'CMI_2017 (S=7.5) Advanced with adjustments')*, with a long-term improvement rate of 1.75% per annum *(2018: 1.75% per annum)* for males and 1.5% per annum *(2018: 1.5% per annum)* for females. The CMI_2018 tables have been adjusted by adding 0.25% per annum *(2018: 0.25% per annum)* and 0.35% per annum *(2018: 0.35% per annum)* to the initial rate of mortality improvements for males and females respectively (to allow for greater mortality improvements in the pension scheme membership relative to the general population on which CMI_2018 is based), and uses the advanced parameters to taper the long-term improvement rates to zero between ages 90 and 115 *(2018: long-term improvement rates taper to zero between ages 90 and 115)* (the 'core' parameters taper the long-term improvement rates to zero between ages 85 and 110).

52 – Pension obligations continued

Sensitivity analysis

Significant actuarial assumptions for the determination of the defined benefit obligation are discount rate, inflation rate and mortality. The sensitivity analysis below has been determined by changing the respective assumptions while holding all other assumptions constant. The following table summarises how the defined benefit obligation would have increased/(decreased) as a result of the change in the respective assumptions:

Impact on present value of defined benefit obligation

	Increase in discount rate +1% £m	Decrease in discount rate -1% £m	Increase in inflation rate +1% £m	Decrease in inflation rate -1% £m	1 year younger[1] £m
Impact on present value of defined benefit obligation at 31 December 2019	**(2,786)**	**3,713**	**2,627**	**(2,037)**	**613**
Impact on present value of defined benefit obligation at 31 December 2018	(2,502)	3,317	2,275	(1,788)	536

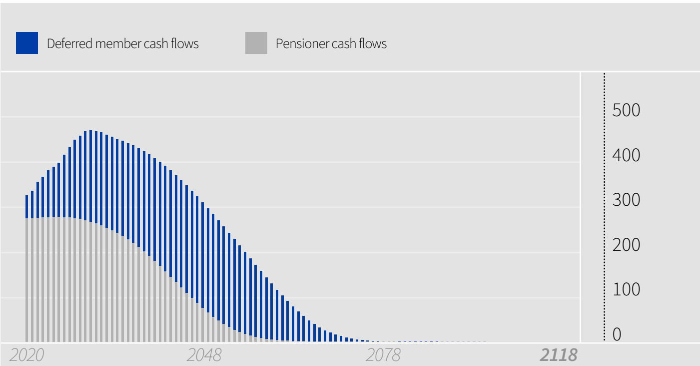
1 The effect of assuming all members in the schemes were one year younger.

It is unlikely that the changes in assumptions would occur in isolation of one another as some of the assumptions may be correlated. Furthermore, the present value of the defined benefit obligation has been calculated using the projected unit credit method, which is the same as that applied in calculating the defined benefit obligation recognised within the consolidated statement of financial position. In addition, the sensitivities shown are for liabilities only and ignore the impact on assets, which would significantly mitigate the net interest rate and inflation sensitivity impact on the net surplus, as well as the longevity sensitivity impact due to the insurance policy and longevity swap assets held by the UK schemes.

Maturity profile of the defined benefit obligation

The discounted scheme liabilities have an average duration of 19 years in ASPS, 21 years in FPPS, 19 years in the RAC scheme, 19 years in AISPF, 28 years in FFPS and 11 years in the Canadian scheme. The expected undiscounted benefits payable from the main UK defined benefit scheme, ASPS, is shown in the chart below:

Undiscounted benefit payments (£m)



(iv) Risk management and asset allocation strategy

As noted above, the investment objectives of the trustees and the employers are to limit the risk of the assets failing to meet the liabilities of the schemes over the long-term, and to maximise returns consistent with an acceptable level of risk so as to control the long-term costs of these schemes. To meet these objectives, the schemes' assets are invested in a portfolio, consisting primarily of debt securities as detailed in section (b)(ii). The investment strategy will continue to evolve over time and is expected to match the liability profile increasingly closely with swap overlays to improve interest rate and inflation matching. The schemes are generally matched to interest rate risk relative to the funding bases.

Main UK scheme

The Company works closely with the trustee, who is required to consult with the Company on the investment strategy.

Interest rate and inflation rate risks are managed using a combination of liability-matching assets and swaps. Exposure to equity risk has been reducing over time and credit risk is managed within risk appetite. Currency risk is relatively small and is largely hedged. The other principal risk is longevity risk. This risk has reduced due to the ASPS entering into a longevity swap in 2014 covering approximately £5 billion of pensioner in payment scheme liabilities.

In October 2019 the ASPS completed a bulk annuity buy-in transaction with Aviva Life & Pensions UK Limited, a Group Company. This covered approximately £1.1 billion of liabilities related to deferred pensioners and current pensioners, removing the investment and longevity risk for these members from the scheme.

Other schemes

The other schemes are considerably less material but their risks are managed in a similar way to those in the main UK scheme. In 2015, the RAC pension scheme entered into a longevity swap covering approximately £0.6 billion of pensioner in payment scheme liabilities.

52 – Pension obligations continued

(v) Funding

Formal actuarial valuations normally take place every three years and where there is a deficit, the Group and the trustees would agree a deficit recovery plan. The assumptions adopted for triennial actuarial valuations are determined by the trustees and agreed with the Group and are normally more prudent than the assumptions adopted for IAS19 purposes, which are best estimate.

For the ASPS, following the latest formal actuarial valuation (with an effective date of 31 March 2018) a schedule of contributions was agreed with the trustees, even though the ASPS was fully funded on its technical provisions basis consistent with the requirements of the UK pension regulations.

Total employer contributions for all defined benefit schemes in 2020 are currently expected to be £0.2 billion.

(c) Defined contribution (money purchase) section of the ASPS

The trustees have responsibility for selecting a range of suitable funds in which the members can choose to invest and for monitoring the performance of the available investment funds. Members are responsible for reviewing the level of contributions they pay and the choice of investment fund to ensure these are appropriate to their risk appetite and their retirement plans. Members of this section contribute at least 2% of their pensionable salaries, and depending on the percentage chosen, the Group contributes up to a maximum 14%, together with the cost of the death-in-service benefits. These contribution rates remained unchanged until June 2017. From 1 July 2017, for every 1% additional employee contribution, the Group will contribute an additional 0.1% employer contribution. The amount recognised as an expense for defined contribution schemes is shown in section (d) below.

(d) Charge to staff costs in the income statement

The total pension charge to staff costs for all of the Group's defined benefit and defined contribution schemes were:

	2019 £m	2018 £m
Continuing operations		
UK defined benefit schemes	**21**	22
Overseas defined benefit schemes	**1**	1
Total defined benefit schemes (note 11(b))	**22**	23
UK defined contribution schemes	**143**	143
Overseas defined contribution schemes	**21**	20
Total defined contribution schemes (note 11(b))	**164**	163
Total charge for pension schemes	**186**	186

There were no significant contributions payable or prepaid in the consolidated statement of financial position as at either 31 December 2019 or 2018.

53 – Borrowings

Our borrowings are classified as either core structural borrowings, which are included within the Group's capital employed, or operational borrowings drawn by operating subsidiaries. This note shows the carrying values and contractual maturity amounts of each type, and explains their main features and movements during the year.

(a) Analysis of total borrowings

Total borrowings comprise:

	2019 £m	2018 £m
Core structural borrowings, at amortised cost	**7,496**	7,699
Operational borrowings, at amortised cost	**338**	496
Operational borrowings, at fair value	**1,233**	1,225
	1,571	1,721
	9,067	9,420
Less: Liabilities classified as held for sale	**(28)**	—
	9,039	9,420

(b) Core structural borrowings

(i) The carrying amounts of these borrowings are:

	2019 £m	2018 £m
Subordinated debt		
6.125% £700 million subordinated notes 2036	**695**	694
6.125% £800 million undated subordinated notes	**797**	797
6.875% £600 million subordinated notes 2058	**594**	594
12.000% £162 million subordinated notes 2021	**179**	191
8.250% £500 million subordinated notes 2022	**545**	563
6.625% £450 million subordinated notes 2041	**449**	449
6.125% €650 million subordinated notes 2043	**549**	582
3.875% €700 million subordinated notes 2044	**591**	625
5.125% £400 million subordinated notes 2050	**395**	395
3.375% €900 million subordinated notes 2045	**756**	799
4.500% C$450 million subordinated notes 2021	**261**	257
4.375% £400 million subordinated notes 2049	**395**	394
	6,206	6,340
Senior notes		
0.625% €500 million senior notes 2023	**422**	446
1.875% €750 million senior notes 2027	**630**	667
	1,052	1,113
Commercial paper	**238**	251
	7,496	7,704
Less: Amount held by Group companies	**—**	(5)
Total	**7,496**	7,699

53 – Borrowings continued

(ii) The contractual maturity dates of undiscounted cash flows for these borrowings are:

	2019 Principal £m	2019 Interest £m	2019 Total £m	2018 Principal £m	2018 Interest £m	2018 Total £m
Within one year	**238**	**372**	**610**	251	376	627
1 to 5 years	**1,347**	**1,255**	**2,602**	1,370	1,353	2,723
5 to 10 years	**636**	**1,451**	**2,087**	673	1,490	2,163
10 to 15 years	**—**	**1,417**	**1,417**	—	1,441	1,441
Over 15 years	**5,257**	**2,636**	**7,893**	5,365	2,923	8,288
Total contractual undiscounted cash flows	**7,478**	**7,131**	**14,609**	7,659	7,583	15,242

Borrowings are considered current if the contractual maturity dates are within a year. Where subordinated debt is undated or loan notes are perpetual, the interest payments have not been included beyond 15 years. Annual interest payments in future years for these borrowings are £49 million *(2018: £49 million)*.

Contractual undiscounted interest payments are calculated based on underlying fixed interest rates or prevailing market floating rates as applicable. Year-end exchange rates have been used for interest projections on loans in foreign currencies.

(c) Operational borrowings

(i) The carrying amounts of these borrowings are:

	2019 £m	2018 £m
Amounts owed to financial institutions		
Loans	**338**	496
Securitised mortgage loan notes		
UK lifetime mortgage business (note 26(b))	**1,233**	1,225
Total	**1,571**	1,721

All the above borrowings are stated at amortised cost, except for the loan notes issued in connection with the UK lifetime mortgage business of £1,233 million *(2018: £1,225 million)*. These loan notes are carried at fair value, their values are modelled on risk-adjusted cash flows for defaults discounted at a risk-free rate plus a market-determined liquidity premium, and are therefore classified as 'Level 3' in the fair value hierarchy. The risk allowances are consistent with those used in the fair value asset methodology, as described in note 24. These have been designated at fair value through profit and loss in order to present the relevant mortgages, borrowings and derivative financial instruments at fair value, since they are managed as a portfolio on a fair value basis. This presentation provides more relevant information and eliminates any accounting mismatch.

The securitised mortgage loan notes are at various fixed, floating and index-linked rates. Further details about these notes are given in note 26.

(ii) The contractual maturity dates of undiscounted cash flows for these borrowings are:

	2019 Principal £m	2019 Interest £m	2019 Total £m	2018 Principal £m	2018 Interest £m	2018 Total £m
Within one year	**294**	**46**	**340**	257	49	306
1 to 5 years	**392**	**173**	**565**	535	185	720
5 to 10 years	**559**	**148**	**707**	555	163	718
10 to 15 years	**59**	**116**	**175**	180	142	322
Over 15 years	**212**	**109**	**321**	136	154	290
Total contractual undiscounted cash flows	**1,516**	**592**	**2,108**	1,663	693	2,356

Contractual undiscounted interest payments are calculated based on underlying fixed interest rates or prevailing market floating rates as applicable. Year-end exchange rates have been used for interest projections on loans in foreign currencies.

53 – Borrowings continued

(d) Description and features

(i) Subordinated debt

A description of each of the subordinated notes is set out in the table below:

Notional amount	Issue date	Redemption date	Callable at par at option of the Company from	In the event the Company does not call the notes, the coupon will reset at each applicable reset date to
£700 million	14 Nov 2001	14 Nov 2036	16 Nov 2026	5 year Benchmark Gilt + 2.85%
£800 million	29 Sep 2003	Undated	29 Sep 2022	5 year Benchmark Gilt + 2.40%
£600 million	20 May 2008	20 May 2058	20 May 2038	3 month LIBOR + 3.26%
£162 million	21 May 2009	21 May 2021	N/A	N/A
£500 million	21 April 2011	21 April 2022	N/A	N/A
£450 million	26 May 2011	3 June 2041	3 June 2021	6 Month LIBOR + 4.136%
€650 million	5 July 2013	5 July 2043	5 July 2023	5 year EUR mid-swaps + 5.13%
€700 million	3 July 2014	3 July 2044	3 July 2024	5 year EUR mid-swaps + 3.48%
£400 million	4 June 2015	4 June 2050	4 December 2030	3 month LIBOR + 4.022%
€900 million	4 June 2015	4 December 2045	4 December 2025	3 month Euribor + 3.55%
C$450 million	9 May 2016	10 May 2021	N/A	N/A
£400 million	12 September 2016	12 September 2049	12 September 2029	3 month LIBOR + 4.721%

Subordinated notes issued by the Company rank below its senior obligations and ahead of its preference shares and ordinary share capital. The dated subordinated notes rank ahead of the undated subordinated notes. The fair value of notes at 31 December 2019 was £7,211 million *(2018: £6,610 million)*, calculated with reference to quoted prices.

(ii) Senior notes

All senior notes are at fixed rates and their total fair value at 31 December 2019 was £1,134 million *(2018: £1,113 million)*.

(iii) Commercial paper

The commercial paper consists of £238 million issued by the Company *(2018: £251 million)* and is considered core structural funding. The fair value of the commercial paper is considered to be the same as its carrying value and all issuances are repayable within one year.

(iv) Loans

Loans owed to financial institutions comprise:

	2019 £m	2018 £m
Non-recourse		
Loans to property partnerships	**64**	61
UK Life reassurance	**—**	177
Other non-recourse loans	**52**	52
	116	290
Other loans	**222**	206
	338	496

As explained in accounting policy D, the UK long-term business policyholder funds have invested in a number of property funds and structures (the 'Property Funds'), some of which have raised external debt, secured on the relevant Property Fund's property portfolio. The lenders are only entitled to obtain payment of interest and principal to the extent there are sufficient resources in the relevant Property Fund and they have no recourse whatsoever to the policyholder or shareholders' funds of any companies in the Group. Loans of £64 million *(2018: £61 million)* included in the table above relate to Property Funds.

At 31 December 2019 the obligations to repay third parties arising out of financial reinsurance operations were nil *(2018: £177 million)*.

Other non-recourse loans primarily include external debt raised by special purpose vehicles in the UK long-term business. The lenders have no recourse whatsoever to the shareholders' funds of any companies in the Group. The outstanding balance of these loans at 31 December 2019 was £52 million *(2018: £52 million)*.

Other loans of £222 million *(2018: £206 million)* include external debt raised by overseas long-term businesses to fund operations.

(v) Securitised mortgage loan notes

Loan notes have been issued by special purpose securitisation companies in the UK. Details are given in note 26.

53 – Borrowings continued

(e) Movements during the year

Movements in borrowings during the year were:

	2019 Core Structural £m	2019 Operational £m	2019 Total £m	2018 Core Structural £m	2018 Operational £m	2018 Total £m
New borrowings drawn down, excluding commercial paper, net of expenses	—	75	75	649	126	775
Repayment of borrowings, excluding commercial paper[1]	(210)	(231)	(441)	(1,178)	(211)	(1,389)
Movement in commercial paper[2]	19	—	19	(419)	—	(419)
Net cash outflow	(191)	(156)	(347)	(948)	(85)	(1,033)
Foreign exchange rate movements	(204)	(28)	(232)	42	6	48
Borrowings reclassified/(loans repaid) for non-cash consideration[1]	210	(4)	206	—	65	65
Fair value movements	—	38	38	—	89	89
Amortisation of discounts and other non-cash items	(23)	—	(23)	(35)	—	(35)
Movements in debt held by Group companies[3]	5	—	5	—	—	—
Movements in the year	(203)	(150)	(353)	(941)	75	(866)
Balance at 1 January	7,699	1,721	9,420	8,640	1,646	10,286
Balance at 31 December	**7,496**	**1,571**	**9,067**	7,699	1,721	9,420

1 On 17 October 2019, notification was given that the Group would redeem the 6.875% £210 million tier 1 notes. At that date, the instruments were reclassified as a financial liability of £210 million, representing the fair value at that date. On 21 November 2019 the instruments were redeemed in full at a cost of £210 million. The difference of £21 million between the carrying amount of £231 million and fair value of £210 million has been charged to retained earnings. See note 37 for further details.
2 Gross issuances of commercial paper were £505 million in 2019 *(2018: £2,372 million)*, offset by repayments of £486 million *(2018: £2,791 million)*.
3 Certain subsidiary companies have purchased subordinated notes and securitised loan notes issued by Group companies as part of their investment portfolios. In the consolidated statement of financial position, borrowings are shown net of these holdings but movements in such holdings over the year are reflected in the tables above.

All movements in fair value in 2018 and 2019 on securitised mortgage loan notes designated as fair value through profit or loss were attributable to changes in market conditions.

(f) Undrawn borrowings

The Group has the following undrawn committed central borrowing facilities available to them, which are used to support the commercial paper programme:

	2019 £m	2018 £m
Expiring within one year	—	—
Expiring beyond one year	1,650	1,650
	1,650	1,650

54 – Payables and other financial liabilities

This note analyses our payables and other financial liabilities at the end of the year.

	2019 £m	Restated[1] 2018 £m
Payables arising out of direct insurance	1,503	1,374
Payables arising out of reinsurance operations	348	464
Deposits and advances received from reinsurers	78	129
Bank overdrafts (see below)	870	563
Derivative liabilities (note 61)	6,517	6,478
Amounts due to brokers for investment purchases	314	240
Obligations for repayment of cash collateral received	6,329	6,714
Lease liabilities (note 23(iii))	572	—
Other financial liabilities	1,634	1,745
Total	**18,165**	17,707
Less: Liabilities classified as held for sale	(27)	(26)
	18,138	17,681
Expected to be settled within one year	13,856	11,599
Expected to be settled in more than one year	4,309	6,108
	18,165	17,707

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Bank overdrafts amount to £536 million *(2018: £153 million)* in life business operations and £334 million *(2018: £410 million)* in general insurance business and other operations.

All payables and other financial liabilities are carried at cost, which approximates to fair value, except for derivative liabilities which are carried at their fair values and lease liabilities which are carried at the present value of the outstanding lease payments.

55 – Other liabilities

This note analyses our other liabilities at the end of the year.

	2019 £m	Restated[1] 2018 £m
Deferred income	**135**	138
Reinsurers' share of deferred acquisition costs	**23**	19
Accruals	**1,197**	1,265
Other liabilities	**1,799**	1,685
Total	**3,154**	3,107
Less: Liabilities as held for sale	**(60)**	(33)
	3,094	3,074
Expected to be settled within one year	**2,399**	2,482
Expected to be settled in more than one year	**755**	625
	3,154	3,107

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

56 – Contingent liabilities and other risk factors

This note sets out the main areas of uncertainty over the calculation of our liabilities.

(a) Uncertainty over claims provisions

Note 44 gives details of the estimation techniques used by the Group to determine the general insurance business outstanding claims provisions and of the methodology and assumptions used in determining the long-term business provisions. These approaches are designed to allow for the appropriate cost of policy-related liabilities, with a degree of prudence, to give a result within the normal range of outcomes. However, the actual cost of settling these liabilities may differ, for example because experience may be worse than that assumed, or future general insurance business claims inflation may differ from that expected, and hence there is uncertainty in respect of these liabilities.

(b) Asbestos, pollution and social environmental hazards

In the course of conducting insurance business, various companies within the Group receive general insurance liability claims, and become involved in actual or threatened related litigation arising therefrom, including claims in respect of pollution and other environmental hazards. Amongst these are claims in respect of asbestos production and handling in various jurisdictions, including Europe, Canada and Australia. Given the significant delays that are experienced in the notification of these claims, the potential number of incidents they cover and the uncertainties associated with establishing liability, the ultimate cost cannot be determined with certainty. However, on the basis of current information having regard to the level of provisions made for general insurance claims and substantial reinsurance cover now in place, the directors consider that any additional costs arising are not likely to have a material impact on the financial position of the Group.

(c) Guarantees on long-term savings products

As a normal part of their operating activities, various Group companies have given guarantees and options, including interest rate guarantees, in respect of certain long-term insurance and investment products. Note 46 gives details of these guarantees and options. In providing these guarantees and options, the Group's capital position is sensitive to fluctuations in financial variables including foreign currency exchange rates, interest rates, 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. 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. The directors continue to believe that the existing provisions for such guarantees and options are sufficient.

(d) Regulatory compliance

The Group's insurance and investment business is subject to local regulation in each of the countries in which it operates. A number of the Group's UK subsidiaries are dual regulated (directly authorised by both the PRA (for prudential regulation) and the FCA (for conduct regulation)) while others are solo regulated (regulated solely by the FCA for both prudential and 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 Group's regulators outside the UK typically have similar powers, but in some cases they also operate a system of 'prior product approval'.

The Group's regulated businesses have 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 (whether in the UK or overseas) could have a negative impact on the Group's reported results or on its relations with current and potential customers. Regulatory action against a member of the Group could result in adverse publicity for, or negative perceptions regarding, the Group, or could have a material adverse effect on the business of the Group, its results, operations and/or financial condition and divert management's attention from the day-to-day management of the business.

56 – Contingent liabilities and other risk factors continued

(e) Structured settlements

The Group has purchased annuities from licensed Canadian life insurers to provide for fixed and recurring payments to claimants. As a result of these arrangements, the Group is exposed to credit risk to the extent that any of the life insurers fail to fulfill their obligations. The Group's maximum exposure to credit risk for these types of arrangements is approximately £707 million as at 31 December 2019 *(2018: £710 million)*. Credit risk is managed by acquiring annuities from a diverse portfolio of life insurers with proven financial stability. This risk is reduced to the extent of coverage provided by Assuris, the Canadian life insurance industry compensation plan. As at 31 December 2019, no information has come to the Group's attention that would suggest any weakness or failure in life insurers from which it has purchased annuities and consequently no provision for credit risk is required.

(f) Other

In the course of conducting insurance and investment business, various Group companies receive liability claims, and become involved in actual or threatened related litigation. In the opinion of the directors, adequate provisions have been established for such claims and no material loss will arise in this respect.

In addition, in line with standard business practice, various Group companies have given guarantees, indemnities and warranties in connection with disposals in recent years of subsidiaries and associates to parties outside the Aviva Group. In the opinion of the directors, no material unprovisioned loss will arise in respect of these guarantees, indemnities and warranties.

There are a number of charges registered over the assets of Group companies in favour of other Group companies or third parties. In addition, certain of the Company's assets are charged in favour of certain of its subsidiaries as security for intra-Group loans.

57 – Capital commitments

This note gives details of our commitments to capital expenditure. See note 23 for further information on lease commitments.

Contractual commitments for acquisitions or capital expenditures of infrastructure loans, equity funds, investment property and property and equipment, which have not been recognised in the financial statements, are as follows:

	2019 £m	2018 £m
Infrastructure loan advances	**853**	898
Investment property	**115**	42
Property and equipment	**62**	77
Other investment vehicles[1]	**241**	266
	1,271	1,283

1 Represents commitments for further investment in certain private equity vehicles. Such commitments do not expose the Group to the risk of future losses in excess of its investment.

Notes 19 and 20 set out the commitments the Group has to its joint ventures and associates.

58 – Group capital management

(a) Group capital

The Group is required to measure and monitor its capital resources on a regulatory basis and to comply with the minimum capital requirements of regulators in each territory in which it operates. At a Group level, we have to comply with the requirements established by the Solvency II Framework Directive, as adopted by the PRA at the balance sheet date.

The Group Solvency II capital requirements are calculated using a Partial Internal Model (PIM) which assesses the risks the Group is exposed to on an Internal Model basis approved by the PRA. The Solvency II capital regime requires insurers to calculate regulatory capital adequacy at both individual regulated subsidiaries and an aggregate Group level. Non-EEA entities have been included in Group solvency in line with Solvency II requirements. Other financial sector entities (including fund management) are included at their proportional share of the capital requirement according to the relevant sectoral values. In addition, non-EEA businesses including Canada, Hong Kong and Singapore, are subject to the locally applicable capital requirements in the jurisdictions in which they operate.

At our Capital Markets Day in November 2019, we announced robust financial targets focussed on economic value. However, Group capital continues to be represented by Solvency II own funds. The Solvency II position disclosed is based on a 'shareholder view'. The shareholder view is considered by management to be more representative of the shareholders' risk exposure and the Group's ability to cover the solvency capital requirement (SCR) with eligible own funds and aligns with management's approach to dynamically manage its capital position.

58 – Group capital management continued

In arriving at the shareholder position, the following adjustments are typically made to the regulatory Solvency II own funds:

- The contribution to the Group's SCR and own funds of the most material fully ring fenced with-profits funds of £2,501 million at 31 December 2019 *(2018: £2,634 million)* and staff pension schemes in surplus of £1,181 million at 31 December 2019 *(2018: £1,142 million)* are excluded. These exclusions have no impact on Solvency II surplus as these funds are self-supporting on a Solvency II capital basis with any surplus capital above SCR not recognised.
- A notional reset of the transitional measure on technical provisions (TMTP), calculated using the same method as used for formal TMTP resets. This presentation avoids step changes to the Solvency II position that arise only when the formal TMTP reset points are triggered. The 31 December 2019 position is based on a formal reset of the TMTP, in line with the requirement to reset the TMTP at least every two years and hence no adjustment is required. The 31 December 2018 Solvency II position includes a notional reset (£127 million reduction in own funds). The TMTP is amortised on a straight-line basis over 16 years from 1 January 2016 in line with the Solvency II rules.
- The 31 December 2019 Solvency II position includes three pro forma adjustments. These relate to the disposal of FPI (£111 million reduction in own funds), the disposal of Hong Kong (£6 million reduction in own funds) and the potential impact of an expected change to Solvency II regulations on the treatment of equity release mortgages (£nil impact on own funds). The 31 December 2018 Solvency II position includes the pro forma impact of the disposals of FPI (£113 million reduction in own funds) and the potential impact of an expected change to Solvency II regulations on the treatment of equity release mortgages (£nil impact on own funds).

	Own funds 2019 £m	Own funds 2018 £m
Estimated Solvency II regulatory own funds as at 31 December[1]	**28,347**	27,567
Adjustments for:		
Fully ring-fenced with-profits funds	**(2,501)**	(2,634)
Staff pension schemes in surplus	**(1,181)**	(1,142)
Notional reset of TMTP	**—**	(127)
Pro forma adjustments	**(117)**	(113)
Estimated Solvency II shareholder own funds at 31 December	**24,548**	23,551

1 Regulation was introduced in France that allows French insurers to place the Provision pour Participation aux Excedents (PPE) into Solvency II own funds. The PPE has been included in the France local regulatory own funds in 2019 but it is not included in the Group regulatory own funds.

Solvency II own funds are comprised of a combination of shareholders' funds, preference share capital, direct capital instruments, tier 1 notes, subordinated debt, and deferred tax assets measured on a Solvency II basis. During the year, the Group redeemed its £210 million 6.875% Step-Up Tier I Insurance Capital Securities subordinated debt instruments in full.

Solvency II surplus at the Group level represents the excess of eligible Solvency II own funds over the Group's solvency capital requirements calculated in accordance with Solvency II requirements. The Group maintained capital in excess of the SCR at all times during 2019. All regulated subsidiaries complied with their capital requirements throughout the year.

Further information on the Group's Solvency II position (shareholder view), including a reconciliation between IFRS equity and own funds can be found in the Other information section. This information is estimated and is therefore subject to change. It is also unaudited.

(b) Risks and capital management objectives

The primary objective of capital management is to maintain an efficient capital structure, in a manner consistent with our risk profile and the regulatory and market requirements of our business. Capital is a primary consideration across a wide range of business activities, including product development, pricing, business planning, merger and acquisition transactions and asset and liability management. A Capital Management Standard, applicable Group-wide, sets out minimum standards and guidelines over responsibility for capital management including considerations for capital management decisions and requirements for management information, capital monitoring, reporting, forecasting, planning and overall governance.

The Group manages capital in conjunction with solvency capital requirements, and seeks to, on a consistent basis:

- Match the profile of our assets and liabilities, taking into account the risks inherent in each business;
- Maintain sufficient, but not excessive, financial strength in accordance with risk appetite, to support new business growth and satisfy the requirements of our regulators and other stakeholders giving both our customers and shareholders assurance of our financial strength. See note 60 for more information about the Group's risk management approach;
- Retain financial flexibility by maintaining strong liquidity, access to a range of capital markets and significant unutilised committed credit lines;
- Allocate capital rigorously to support value adding growth and repatriate excess capital where appropriate; and
- Declare dividends with reference to factors including growth in cash flow and earnings.

59 – Statement of cash flows

This note gives further detail behind the figures in the statement of cash flows.

(a) The reconciliation of profit before tax to the net cash inflow from operating activities is:

	2019 £m	Restated[1] 2018 £m
Profit before tax	**3,933**	1,652
Adjustments for:		
Share of profits of joint ventures and associates	**(85)**	(112)
Dividends received from joint ventures and associates	**81**	43
(Profit)/loss on sale of:		
Investment property	**(58)**	(69)
Property and equipment	**2**	1
Subsidiaries, joint ventures and associates	**22**	(102)
Investments	**(10,537)**	(7,319)
	(10,571)	(7,489)
Fair value (gains)/losses on:		
Investment property	**(93)**	(307)
Investments	**(18,428)**	29,792
Borrowings	**38**	89
	(18,483)	29,574
Depreciation of property and equipment	**98**	40
Equity compensation plans, equity settled expense	**62**	64
Impairment and expensing of:		
Goodwill on subsidiaries	**6**	13
Financial investments, loans and other assets	**14**	10
Acquired value of in-force business and intangibles	**13**	—
Non-financial assets	**22**	—
	55	23
Amortisation of:		
Premium/discount on debt securities	**109**	587
Premium/discount on borrowings	**(23)**	(35)
Premium/discount on non-participating investment contracts	**226**	243
Financial instruments	**23**	16
Acquired value of in-force business and intangibles	**392**	392
	727	1,203
Change in unallocated divisible surplus	**3,985**	(3,237)
Interest expense on borrowings	**553**	551
Net finance income on pension schemes	**(73)**	(67)
Foreign currency exchange losses/(gains)	**345**	(164)
Changes in working capital		
(Increase)/decrease in reinsurance assets	**(1,141)**	2,191
Increase in deferred acquisition costs	**(244)**	(98)
Increase/(decrease) in insurance liabilities and investment contracts[2]	**32,535**	(12,031)
Increase in other assets[2]	**(435)**	(2,884)
	30,715	(12,822)
Net purchases of operating assets		
Net purchases of investment property	**(1,131)**	(791)
Net proceeds on sale of investment property	**1,294**	959
Net purchases of financial investments	**(4,988)**	(3,579)
	(4,825)	(3,411)
Total cash generated from operating activities	**6,517**	5,848

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents that are now presented as loans and financial investments. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.
2 Comparative amounts have been reclassified from those previously reported to disclose the impact of the change in the Ogden discount rate from Increase in other assets to Increase/(decrease) in insurance liabilities and investment contracts.

The cash flows presented in this statement cover all the Group's activities and include flows from both policyholder and shareholder activities. Operating cash flows reflect the movement in both policyholder and shareholder controlled cash and cash equivalent balances.

During the year the net operating cash inflow reflects a number of factors, including the level of premium income, payments of claims, creditors and surrenders and purchases and sales of operating assets including financial investments. It also includes changes in the size and value of consolidated cash investment funds and changes in the Group participation in these funds.

(b) Cash flows in respect of the acquisition of, and additions to, subsidiaries, joint ventures and associates comprised:

	2019 £m	2018 £m
Cash consideration for subsidiaries, joint ventures and associates acquired and additions	**(20)**	(165)
Less: Cash and cash equivalents acquired with subsidiaries	**1**	357
Total cash flow on acquisitions and additions	**(19)**	192

59 – Statement of cash flows continued

(c) Cash flows in respect of the disposal of subsidiaries, joint ventures and associates comprised:

	2019 £m	2018 £m
Cash proceeds from disposal of subsidiaries, joint ventures and associates	**12**	441
Less: Net cash and cash equivalents divested with subsidiaries	**—**	(60)
Total cash flow on disposals	**12**	381

The above figures form part of cash flows from investing activities.

(d) Cash and cash equivalents in the statement of cash flows at 31 December comprised:

	2019 £m	Restated[1] 2018 £m
Cash at bank and in hand	**6,722**	5,620
Cash equivalents	**13,582**	10,994
	20,304	16,614
Bank overdrafts	**(870)**	(563)
	19,434	16,051

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Cash and cash equivalents reconciles to the statement of financial position as follows:

	2019 £m	Restated[1] 2018 £m
Cash and cash equivalents (excluding bank overdrafts)	**20,304**	16,614
Less: Assets classified as held for sale	**(780)**	(688)
	19,524	15,926

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

60 – Risk management

This note sets out the major risks our businesses and our shareholders face and describes the Group's approach to managing these. It also gives sensitivity analysis around the major economic and non-economic assumptions that can cause volatility in the Group's earnings and capital position.

(a) Risk management framework

The risk management framework in Aviva forms an integral part of the management and Board processes and decision-making framework across the Group. The key elements of our risk management framework comprise risk appetite; risk governance, including risk policies and business standards, risk oversight committees and roles and responsibilities; and the processes we use to identify, measure, manage, monitor and report risks, including the use of our risk models and stress and scenario testing.

For the purposes of risk identification and measurement, and aligned to Aviva's risk policies, risks are usually grouped by risk type: credit, market, liquidity, life insurance (including long-term health), general insurance (including short-term health), asset management 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 we deliver to our customers and the service to our customers and distributors, which can be categorised as risks to our brand and reputation or as conduct risk.

To promote a consistent and rigorous approach to risk management across all businesses we have a set of risk policies and business standards which set out the risk strategy, appetite, framework and minimum requirements for the Group's worldwide operations. The business chief executive officers make an annual declaration supported by an opinion from the business chief risk officers that the system of governance and internal controls was effective and fit for purpose for their business throughout the year.

A regular top-down key risk identification and assessment process is carried out by the risk function. This includes the consideration of emerging risks and is supported by deeper thematic reviews. This process is replicated at the business unit level. The risk assessment processes are used to generate risk reports which are shared with the relevant risk committees.

Risk models are an important tool in our measurement of risks and are used to support the monitoring and reporting of the risk profile and in the consideration of the risk management actions available. We carry out a range of stress (where one risk factor, such as equity returns, is assumed to vary) and scenario (where combinations of risk factors are assumed to vary) tests to evaluate their impact on the business and the management actions available to respond to the conditions envisaged. For those risk types managed through the holding of capital, being our principal risk types except for liquidity risk, we measure and monitor our risk profile on the basis of the SCR.

60 – Risk management continued

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. Line management in the business is accountable for risk management, including the implementation of the risk management framework and embedding of the risk culture. The risk function is accountable for quantitative and qualitative oversight and challenge of the risk identification, measurement, monitoring, management and reporting processes and for developing the risk management framework. Internal Audit provides an independent assessment of the risk framework and internal control processes.

Board oversight of risk and risk management across the Group is maintained on a regular basis through its Risk Committee and Customer, Conduct and Reputation Committee. 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 relative to capital and liquidity at Group and in the business units.

Risk appetites, requiring management action if breached, are also set for interest rate and foreign exchange risk (calculated on the basis of the SCR), and liquidity risk (based on stressing forecast central liquid assets and cash inflows and outflows over a specified time horizon). For other risk types the Group sets Solvency II capital tolerances. The Group's position against risk appetite and capital tolerances is monitored and reported to the Board on a regular basis. Long-term sustainability depends upon the protection of franchise value and good customer relationships. As such, Aviva has a risk preference that we will not accept risks that materially impair the reputation of the Group and requires that customers are always treated with integrity. The oversight of risk and risk management at the Group level is supported by the Asset Liability Committee, which focuses on business and financial risks, and the Operational Risk Committee which focuses on operational and reputational risks. Similar committee structures with equivalent terms of reference exist in the business units.

The risk management framework of a small number of our joint ventures and strategic equity holdings differs from the Aviva framework outlined in this note. We work with these entities to understand how their risks are managed and to align them, where possible, with Aviva's framework.

Further information on the types and management of specific risk types is given in sections (b) to (h) below.

(b) Credit risk

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 Aviva, or variations in market values as a result of changes in expectations related to these risks. Credit risk is taken so that we can provide the returns required to satisfy policyholder liabilities and to generate returns for our shareholders. In general we prefer to take credit risk over equity and property risks, due to the better expected risk adjusted return, our credit risk analysis capability and the structural investment advantages conferred to insurers with long-dated, relatively illiquid liabilities.

Our approach to managing credit risk recognises that there is a risk of adverse financial impact resulting from fluctuations in credit quality of third parties including default, rating transition and credit spread movements. Our credit risks arise principally through exposures to debt security investments, structured asset investments, bank deposits, derivative counterparties, mortgage lending and reinsurance counterparties.

The Group manages its credit risk at business unit and Group level. All business units are required to implement credit risk management processes (including limits frameworks), operate specific risk management committees, and ensure detailed reporting and monitoring of their exposures against pre-established risk criteria. At Group level, we manage and monitor all exposures across our business units on a consolidated basis, and operate a Group limit framework that must be adhered to by all.

A detailed breakdown of the Group's current credit exposure by credit quality is shown below.

(i) Financial exposures by credit ratings

Financial assets are graded according to current external credit ratings issued. AAA is the highest possible rating. Investment grade financial assets are classified within the range of AAA to BBB ratings. Financial assets which fall outside this range are classified as sub-investment grade. The following table provides information regarding the aggregated credit risk exposure of the Group for financial assets with external credit ratings. 'Not rated' assets capture assets not rated by external ratings agencies.

As at 31 December 2019	AAA	AA	A	BBB	Below BBB	Not rated	Carrying value including held for sale £m	Less: Assets classified as held for sale £m	Carrying value £m
Fixed maturity securities	**10.7%**	**34.1%**	**19.7%**	**23.0%**	**8.0%**	**4.5%**	**199,481**	**(649)**	**198,832**
Reinsurance assets	**3.3%**	**75.8%**	**9.2%**	**7.8%**	**—**	**3.9%**	**12,431**	**(75)**	**12,356**
Other investments	**0.2%**	**—**	**0.3%**	**0.1%**	**—**	**99.4%**	**51,935**	**(6,919)**	**45,016**
Loans	**18.3%**	**3.8%**	**0.1%**	**—**	**—**	**77.8%**	**38,580**	**(1)**	**38,579**
Total							**302,427**	**(7,644)**	**294,783**

Restated[1] as at 31 December 2018	AAA	AA	A	BBB	Below BBB	Not rated	Carrying value including held for sale £m	Less: Assets classified as held for sale £m	Carrying value £m
Fixed maturity securities[2]	10.0%	36.6%	18.1%	23.9%	5.9%	5.5%	192,072	(397)	191,675
Reinsurance assets	—	83.1%	10.0%	2.7%	—	4.2%	11,800	(45)	11,755
Other investments[2]	0.2%	0.1%	0.4%	0.1%	—	99.2%	46,567	(6,644)	39,923
Loans	17.4%	7.5%	—	—	—	75.1%	36,184	—	36,184
Total							286,623	(7,086)	279,537

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as loans and fixed maturity securities in the table above. The restatement has had no impact on the profit for the period or equity. See note 1(a) for further information.
2 Following a review of the classification of financial assets, comparative amounts have been amended from those previously reported. The effect of this change is to reclassify £2,201 million of assets from fixed maturity securities to other investments.

60 – Risk management continued

The majority of non-rated debt securities within shareholder assets are held by our businesses in the UK. Of these securities most are allocated an internal rating using a methodology largely consistent with that adopted by an external rating agency, and are considered to be of investment grade credit quality; these include £4,095 million (*2018: £3,640 million*) of debt securities held in our UK Life business, predominantly made up of private placements and other corporate bonds, which have been internally rated as investment grade.

The following table provides information on the Group's exposure by credit ratings to financial assets that meet the definition of 'solely payment of principal and interest' (SPPI).

As at 31 December 2019	AAA £m	AA £m	A £m	BBB £m	Below BBB £m	Not rated £m
Loans	**7,065**	**1,443**	**—**	**—**	**—**	**1,071**
Receivables	**—**	**144**	**338**	**259**	**4**	**5,044**
Accrued income and interest	**—**	**—**	**—**	**—**	**—**	**265**
Other financial assets	**—**	**—**	**5**	**—**	**—**	**—**
Total	**7,065**	**1,587**	**343**	**259**	**4**	**6,380**

Restated[1] as at 31 December 2018	AAA £m	AA £m	A £m	BBB £m	Below BBB £m	Not rated £m
Loans	6,299	2,720	—	—	—	894
Receivables	6	213	294	214	—	4,882
Accrued income and interest	—	—	18	—	—	175
Other financial assets	—	—	10	—	—	—
Total	6,305	2,933	322	214	—	5,951

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents that are now presented as loans in the table above. The restatement has had no impact on the profit for the period or equity. See note 1(a) for further information.

At the period end, the Group held cash and cash equivalents of £15,344 million *(2018 restated: £11,249 million)* that met the SPPI criteria, of which £15,322 million *(2018 restated: £11,234 million)* is placed with financial institutions with issuer ratings within the range of AAA to BBB. Further information on the extent to which unrated receivables, including those that meet the SPPI criteria, are past due may be found in section (ix) of this note.

The Group continues to hold a series of macro credit hedges to reduce the overall credit risk exposure. The Group's maximum exposure to credit risk of financial assets, without taking collateral or these hedges into account, is represented by the carrying value of the financial instruments in the statement of financial position. These comprise debt securities, reinsurance assets, derivative assets, loans and receivables. The carrying values of these assets are disclosed in the relevant notes: financial investments (note 28), reinsurance assets (note 47), loans (note 25) and receivables (note 29). The collateral in place for these credit exposures is disclosed in note 62 Financial assets and liabilities subject to offsetting, enforceable master netting agreements and similar agreements.

(ii) Other investments

Other investments (including assets of operations classified as held for sale) include unit trusts and other investment vehicles; derivative financial instruments, representing positions to mitigate the impact of adverse market movements; and other assets, including deposits with credit institutions and minority holdings in property management undertakings.

The credit quality of the underlying debt securities within investment vehicles is managed by the safeguards built into the investment mandates for these funds which determine the funds' risk profiles. At the Group level, we also monitor the asset quality of unit trusts and other investment vehicles against Group set limits.

A proportion of the assets underlying these investments are represented by equities and so credit ratings are not generally applicable. Equity exposures are managed against agreed benchmarks that are set with reference to overall appetite for market risk.

(iii) Loans

The Group loan portfolio principally comprises:
- Policy loans which are generally collateralised by a lien or charge over the underlying policy;
- Loans and advances to banks which primarily relate to loans of cash collateral received in stock lending transactions. These loans are fully collateralised by other securities;
- Healthcare, infrastructure and PFI loans secured against healthcare, education, social housing and emergency services related premises; and
- Mortgage loans collateralised by property assets.

We use loan to value, interest and debt service cover, and diversity and quality of the tenant base metrics to internally monitor our exposures to mortgage loans. We use credit quality, based on dynamic market measures, and collateralisation rules to manage our stock lending activities. Policy loans are loans and advances made to policyholders, and are collateralised by the underlying policies.

(iv) Credit concentration risk

The long-term and general insurance businesses are generally not individually exposed to significant concentrations of credit risk due to the regulations applicable in most markets and the Group credit policy and limits framework, which limit investments in individual assets and asset classes. Credit concentrations are monitored as part of the regular credit monitoring process and are reported to the Group Asset Liability Committee (ALCO). With the exception of government bonds the largest aggregated counterparty exposure within shareholder assets is to the Swiss Reinsurance Company Ltd (including subsidiaries), representing approximately 2.4% of the total shareholder assets.

60 – Risk management continued

(v) Reinsurance credit exposures

The Group is exposed to concentrations of risk with individual reinsurers due to the nature of the reinsurance market and the restricted range of reinsurers that have acceptable credit ratings. The Group operates a policy to manage its reinsurance counterparty exposures, by limiting the reinsurers that may be used and applying strict limits to each reinsurer. Reinsurance exposures are aggregated with other exposures to ensure that the overall risk is within appetite. The Group Capital and Group Risk teams have an active monitoring role with escalation to the Chief Financial Officer (CFO), Chief Risk Officer (CRO), Group ALCO and the Board Risk Committee as appropriate.

The Group's largest reinsurance counterparty is Swiss Reinsurance Company Ltd (including subsidiaries). At 31 December 2019, the reinsurance asset recoverable, including debtor balances, from Swiss Reinsurance Company Ltd was £3,097 million *(2018: £2,835 million)*.

(vi) Securities finance

The Group has significant securities financing operations within the UK and smaller operations in some other businesses. The risks within this activity are mitigated by collateralisation and minimum counterparty credit quality requirements.

(vii) Derivative credit exposures

The Group is exposed to counterparty credit risk through derivative trades. This risk is generally mitigated through holding collateral for most trades. Residual exposures are captured within the Group's credit management framework.

(viii) Unit-linked business

In 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.

(ix) Impairment of financial assets

In assessing whether financial assets carried at amortised cost or classified as available for sale are impaired, due consideration is given to the factors outlined in accounting policies (T) and (V). The following table provides information regarding the carrying value of financial assets subject to impairment testing that have been impaired and the ageing of those assets that are past due but not impaired. The table excludes assets carried at fair value through profit or loss and held for sale.

		Financial assets that are past due but not impaired					
As at 31 December 2019	**Neither past due nor impaired £m**	**0–3 months £m**	**3–6 months £m**	**6 months–1 year £m**	**Greater than 1 year £m**	**Financial assets that have been impaired £m**	**Carrying value £m**
Fixed maturity securities	**1,455**	**—**	**—**	**6**	**—**	**—**	**1,461**
Reinsurance assets	**8,361**	**—**	**—**	**—**	**—**	**—**	**8,361**
Other investments	**2**	**—**	**—**	**—**	**—**	**—**	**2**
Loans	**10,260**	**—**	**—**	**—**	**—**	**—**	**10,260**
Receivables and other financial assets	**8,911**	**51**	**14**	**10**	**9**	**—**	**8,995**

		Financial assets that are past due but not impaired					
Restated[1] as at 31 December 2018	Neither past due nor impaired £m	0–3 months £m	3–6 months £m	6 months–1 year £m	Greater than 1 year £m	Financial assets that have been impaired £m	Carrying value £m
Fixed maturity securities	1,675	—	—	5	—	—	1,680
Reinsurance assets	7,791	—	—	—	—	—	7,791
Other investments	1	—	—	—	—	—	1
Loans	10,658	—	—	—	—	—	10,658
Receivables and other financial assets	8,536	74	16	11	2	—	8,639

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents that are now presented as loans in the table above. The restatement has had no impact on the profit for the period or equity. See note 1(a) for further information.

Excluded from the tables above are financial and reinsurance assets carried at fair value through profit or loss that are not subject to impairment testing, as follows: £198,020 million of debt securities *(2018 restated: £190,392 million)*, £44,836 million of other investments *(2018 restated: £41,209 million)*, £28,319 million of loans *(2018: £25,526 million)* and £4,006 million of reinsurance assets *(2018: £4,006 million)*.

Where assets have been classed as 'past due and impaired', an analysis is made of the risk of default and a decision is made whether to seek to mitigate the risk. There were no material financial assets that would have been past due or impaired had the terms not been renegotiated.

60 – Risk management continued

(c) Market risk

Market risk is the risk of adverse financial impact resulting, directly or indirectly from fluctuations in interest rates, inflation, foreign currency exchange rates, equity and property prices. Market risk arises in business units due to fluctuations in both the value of liabilities and the value of investments held. At Group level, it also arises in relation to the overall portfolio of international businesses and in the value of investment assets owned directly by the shareholders. We actively seek some market risks as part of our investment and product strategy. However, we have limited appetite for interest rate risk as we do not believe it is adequately rewarded.

The management of market risk is undertaken at business unit and at Group level. Businesses manage market risks locally using the Group market risk framework and within local regulatory constraints. Group Capital is responsible for monitoring and managing market risk at Group level and has established criteria for matching assets and liabilities to limit the impact of mismatches due to market movements.

In addition, where the Group's long-term savings businesses have written insurance and investment products where the majority of investment risks are borne by its policyholders, these risks are managed in line with local regulations and marketing literature, in order to satisfy the policyholders' risk and reward objectives. The Group writes unit-linked business in a number of its operations. The shareholders' exposure to market risk on this business is limited to the extent that income arising from asset management charges is based on the value of assets in the fund.

The most material types of market risk that the Group is exposed to are described below.

(i) Equity price risk

The Group is subject to direct equity price risk arising from changes in the market values of its equity securities portfolio. Our most material indirect equity price risk exposures are to policyholder unit-linked funds, which are exposed to a fall in the value of the fund thereby reducing the fees we earn on those funds, and participating contracts, which are exposed to a fall in the value of the funds thereby increasing our costs for policyholder guarantees. We also have some equity exposure in shareholder funds through equities held to match inflation-linked liabilities.

We continue to limit our direct equity exposure in line with our risk preferences. At a business unit level, investment limits and local investment regulations require that business units hold diversified portfolios of assets thereby reducing exposure to individual equities. The Group does not have material holdings of unquoted equity securities.

Equity risk is also managed using a variety of derivative instruments, including futures and options. Businesses actively model the performance of equities through the use of risk models, in particular to understand the impact of equity performance on guarantees, options and bonus rates. An equity hedging strategy remains in place to help control the Group's overall direct and indirect exposure to equities. At 31 December 2019 the Group continues to hold a series of macro equity hedges to reduce the overall shareholder equity risk exposure.

Sensitivity to changes in equity prices is given in section (i) Risk and capital management, below.

(ii) Property price risk

The Group is subject to property price risk directly due to holdings of investment properties in a variety of locations worldwide and indirectly through investments in mortgages and mortgage backed securities. Investment in property is managed at business unit level, and is subject to local regulations on investments, liquidity requirements and the expectations of policyholders.

As at 31 December 2019, no material derivative contracts had been entered into to mitigate the effects of changes in property prices. Exposure to property risk on equity release mortgages from sustained underperformance in the UK House Price Index (HPI) is mitigated by capping loan to value on origination at low levels and regularly monitoring the performance of the mortgage portfolio.

Sensitivity to changes in property prices is given in section (i) Risk and capital management, below.

(iii) Interest rate risk

Interest rate risk arises primarily from the Group's investments in long-term debt and fixed income securities and their movement relative to the value placed on the insurance liabilities. A number of policyholder product features have an influence on the Group's interest rate risk. The major features include guaranteed surrender values, guaranteed annuity options, and minimum surrender and maturity values. Details of material guarantees and options are given in note 46.

Exposure to interest rate risk is monitored through several measures that include duration, capital modelling, sensitivity testing and stress and scenario testing. The impact of exposure to sustained low interest rates is considered within our scenario testing.

The Group typically manages interest rate risk by investing in fixed interest securities which closely match the interest rate sensitivity of the liabilities where such investments are available. In particular, a key objective is to at least match the duration of our annuity liabilities with assets of the same duration, and in some cases where appropriate cash flow matching has been used. These assets include corporate bonds, residential mortgages and commercial mortgages. Should they default before maturity, it is assumed that the Group can reinvest in assets of a similar risk and return profile, which is subject to market conditions. Interest rate risk is also managed in some business units using a variety of derivative instruments, including futures, options, swaps, caps and floors.

Some of the Group's products, principally participating contracts, expose us to the risk that changes in interest rates will impact on profits through a change in the interest spread (the difference between the amounts that we are required to pay under the contracts and the investment income we are able to earn on the investments supporting our obligations under those contracts). Markets where Aviva is primarily exposed to this risk are the UK, France, Italy and some other Asian business units.

60 – Risk management continued

The low interest rate environment in a number of markets around the world has resulted in our current investment yields being lower than the overall current portfolio yield, primarily in our investments in fixed income securities. We anticipate that interest rates may remain below historical averages for an extended period of time and that financial markets may continue to have periods of high volatility. Investing activity will continue to decrease the portfolio yield as long as market yields remain below the current portfolio level. We expect the decline in portfolio yield will result in lower net investment income in future periods.

Other product lines of the Group, such as protection, are not significantly sensitive to interest rate or market movements. For unit-linked business, the shareholder margins emerging are typically a mixture of annual management fees and risk/expense charges. Risk and expense margins will be largely unaffected by low interest rates. Annual management fees may increase in the short term as the move towards low interest rates increases the value of unit funds. However, in the medium term, unit funds will grow at a lower rate which will reduce fund charges. For the UK annuities business interest rate exposure is mitigated by closely matching the duration of liabilities with assets of the same duration.

The UK participating business includes contracts with features such as guaranteed surrender values, guaranteed annuity options, and minimum surrender and maturity values. These liabilities are managed through duration matching of assets and liabilities and the use of derivatives, including swaptions. As a result, the Group's exposure to sustained low interest rates on this portfolio is not material. The Group's key exposure to low interest rates arises through its other participating contracts, principally in Italy and France. Some of these contracts also include features such as guaranteed minimum bonuses, guaranteed investment returns and guaranteed surrender values. In a low interest rate environment there is a risk that the yield on assets might not be sufficient to cover these obligations. For certain of its participating contracts the Group is able to amend guaranteed crediting rates. Our ability to lower crediting rates may be limited by competition, bonus mechanisms and contractual arrangements.

Details of material guarantees and options are given in note 46. In addition, the following table summarises the weighted average minimum guaranteed crediting rates and weighted average book value yields on assets as at 31 December 2019 for our Italian and French participating contracts, where the Group's key exposure to sustained low interest rates arises.

	Weighted average minimum guaranteed crediting rate	Weighted average book value yield on assets	Participating contract liabilities £m
France	0.67%	2.47%	69,057
Italy	0.29%	3.50%	20,660
Other[1]	N/A	N/A	50,389
Total	**N/A**	**N/A**	**140,106**

1 'Other' includes UK participating business

Profit before tax on General Insurance and Health Insurance business is generally a mixture of insurance, expense and investment returns. The asset portfolio is invested primarily in fixed income securities. The portfolio investment yield and average total invested assets in our general insurance and health business are set out in the table below.

	Portfolio investment yield[1]	Average assets £m
2017	2.07%	14,770
2018	2.28%	14,651
2019	2.21%	14,350

1 Before realised and unrealised gains and losses and investment expenses

The nature of the business means that prices in certain circumstances can be increased to maintain overall profitability. This is subject to the competitive environment in each market. To the extent that there are further falls in interest rates the investment yield would be expected to decrease further in future periods.

Sensitivity to changes in interest rates is given in section (i) Risk and capital management, below.

(iv) Inflation risk

Inflation risk arises primarily from the Group's exposure to general insurance claims inflation, to inflation linked benefits within the defined benefit staff pension schemes and within the UK annuity portfolio and to expense inflation. Increases in long-term inflation expectations are closely linked to long-term interest rates and so are frequently considered with interest rate risk. Exposure to inflation risk is monitored through capital modelling, sensitivity testing and stress and scenario testing. The Group 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.

(v) Currency risk

The Group has minimal exposure to currency risk from financial instruments held by business units in currencies other than their functional currencies, as nearly all such holdings are backing either unit-linked or with-profits contract liabilities or are hedged. As a result the foreign exchange gains and losses on investments are largely offset by changes in unit-linked and with-profits liabilities and fair value changes in derivatives attributable to changes in foreign exchange rates recognised in the income statement.

60 – Risk management continued

The Group operates internationally and as a result is exposed to foreign currency exchange risk arising from fluctuations in exchange rates of various currencies. Approximately 58% of the Group's premium income arises in currencies other than sterling and the Group's net assets are denominated in a variety of currencies, of which the largest are sterling, euro and Canadian dollars (CAD$). The Group does not hedge foreign currency revenues as these are substantially retained locally to support the growth of the Group's business and meet local regulatory and market requirements. However, the Group does use foreign currency forward contracts to hedge planned dividends from its subsidiaries.

Businesses aim to maintain sufficient assets in local currency to meet local currency liabilities, however movements may impact the value of the Group's consolidated shareholders' equity which is expressed in sterling. This aspect of foreign exchange risk is monitored and managed centrally, against pre-determined limits. These exposures are managed by aligning the deployment of regulatory capital by currency with the Group's regulatory capital requirements by currency. Currency borrowings and derivatives are used to manage exposures within the limits that have been set. Except where the Group has applied net investment hedge accounting (see note 61(a)), foreign exchange gains and losses on foreign currency borrowings are recognised in the income statement, whereas foreign exchange gains and losses arising on consolidation from the translation of assets and liabilities of foreign subsidiaries are recognised in other comprehensive income. At 31 December 2019 and 2018, the Group's total equity deployment by currency including assets 'held for sale' was:

	Sterling £m	Euro £m	CAD$ £m	Other £m	Total £m
Capital 31 December 2019	**16,036**	**819**	**397**	**1,433**	**18,685**
Capital 31 December 2018	15,720	611	311	1,813	18,455

A 10% change in sterling to euro/CAD$ period-end foreign exchange rates would have had the following impact on total equity.

	10% increase in sterling / euro rate £m	10% decrease in sterling / euro rate £m	10% increase in sterling / CAD$ rate £m	10% decrease in sterling / CAD$ rate £m
Net assets at 31 December 2019	**(82)**	**82**	**(40)**	**40**
Net assets at 31 December 2018	(61)	77	(31)	31

A 10% change in sterling to euro/CAD$ average foreign exchange rates applied to translate foreign currency profits would have had the following impact on profit before tax, including resulting gains and losses on foreign exchange hedges.

	10% increase in sterling/ euro rate £m	10% decrease in sterling/ euro rate £m	10% increase in sterling/ CAD$ rate £m	10% decrease in sterling/ CAD$ rate £m
Impact on profit before tax 31 December 2019	**(67)**	**82**	**(18)**	**22**
Impact on profit before tax 31 December 2018	(60)	85	8	(9)

The balance sheet changes arise from retranslation of business unit statements of financial position from their functional currencies into sterling, with above movements being taken through the currency translation reserve. These balance sheet movements in exchange rates therefore have no impact on profit. Net asset and profit before tax figures are stated after taking account of the effect of currency hedging activities.

(vi) Derivatives risk

Derivatives are used by a number of the businesses. Derivatives are primarily used for efficient investment management, risk hedging purposes, or to structure specific retail savings products. Activity is overseen by the Group Capital and Group Risk teams, which monitor exposure levels and approve large or complex transactions.

The Group applies strict requirements to the administration and valuation processes it uses, and has a control framework that is consistent with market and industry practice for the activity that is undertaken.

(vii) Correlation risk

The Group 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 internal capital model and in scenario analysis.

(d) Liquidity risk

Liquidity risk is the risk of not being able to make payments as they become due because there are insufficient assets in cash form. The relatively illiquid nature of insurance liabilities is a potential source of additional investment return by allowing us to invest in higher yielding, but less liquid assets such as commercial mortgages and infrastructure loans. The Group seeks to ensure that it maintains sufficient financial resources to meet its obligations as they fall due through the application of a Group liquidity risk policy and business standard and through the development of its liquidity risk management plan. At Group and business unit level, there is a liquidity risk appetite which requires that sufficient liquid resources be maintained to cover net outflows in a stress scenario. In addition to the existing liquid resources and expected inflows, the Group maintains significant undrawn committed borrowing facilities (£1,650 million) from a range of leading international banks to further mitigate this risk.

Maturity analyses

The following tables show the maturities of our insurance and investment contract liabilities, and of the financial and reinsurance assets held to meet them. A maturity analysis of the contractual amounts payable for borrowings and non-hedge derivatives is given in notes 53 and 61, respectively. Contractual obligations under leases and capital commitments are given in note 23 and note 57.

60 – Risk management continued

(i) Analysis of maturity of insurance and investment contract liabilities

For non-linked insurance business, the following table shows the gross liability at 31 December 2019 and 2018 analysed by remaining duration. The total liability is split by remaining duration in proportion to the cash-flows expected to arise during that period, as permitted under IFRS 4, Insurance Contracts.

Almost all linked business and non-linked investment contracts may be surrendered or transferred on demand. For such contracts, the earliest contractual maturity date is therefore the current statement of financial position date, for a surrender amount approximately equal to the current statement of financial position liability. However, we expect surrenders, transfers and maturities to occur over many years, and therefore the tables below reflect the expected cash flows for these contracts, rather than their contractual maturity date. This table includes amounts held for sale.

As at 31 December 2019	Total £m	On demand or within 1 year £m	1-5 years £m	5-15 years £m	Over 15 years £m
Long-term business					
Insurance contracts – non-linked	**111,731**	**8,811**	**27,184**	**41,728**	**34,008**
Investment contracts – non-linked	**74,641**	**5,978**	**19,532**	**28,313**	**20,818**
Linked business	**177,448**	**16,226**	**26,002**	**58,601**	**76,619**
General insurance and health	**16,656**	**7,136**	**6,665**	**2,258**	**597**
Total contract liabilities	**380,476**	**38,151**	**79,383**	**130,900**	**132,042**

As at 31 December 2018	Total £m	On demand or within 1 year £m	1-5 years £m	5-15 years £m	Over 15 years £m
Long-term business					
Insurance contracts – non-linked	106,622	8,421	25,940	40,548	31,713
Investment contracts – non-linked	75,158	5,547	19,199	28,572	21,840
Linked business	156,859	15,559	23,901	52,656	64,743
General insurance and health	16,368	6,859	6,758	2,217	534
Total contract liabilities	355,007	36,386	75,798	123,993	118,830

(ii) Analysis of maturity of financial assets

The following table provides an analysis, by maturity date of the principal, of the carrying value of financial assets which are available to fund the repayment of liabilities as they crystallise. This table excludes assets held for sale.

As at 31 December 2019	Total £m	On demand or within 1 year £m	1-5 years £m	Over 5 years £m	No fixed term (perpetual) £m
Fixed maturity securities	**198,832**	**42,644**	**47,983**	**106,981**	**1,224**
Equity securities	**99,570**	**—**	**—**	**—**	**99,570**
Other investments	**45,016**	**38,817**	**25**	**5,365**	**809**
Loans	**38,579**	**9,641**	**4,643**	**24,293**	**2**
Cash and cash equivalents	**19,524**	**19,524**	**—**	**—**	**—**
Total	**401,521**	**110,626**	**52,651**	**136,639**	**101,605**

Restated[1] as at 31 December 2018	Total £m	On demand or within 1 year £m	1-5 years £m	Over 5 years £m	No fixed term (perpetual) £m
Fixed maturity securities[2]	191,675	42,764	47,936	99,670	1,305
Equity securities	88,227	—	—	—	88,227
Other investments[2]	39,923	34,782	77	4,301	763
Loans	36,184	9,488	4,236	22,457	3
Cash and cash equivalents	15,926	15,926	—	—	—
Total	371,935	102,960	52,249	126,428	90,298

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents and other investments that are now presented as loans, fixed maturity securities and equity securities in the table above. The restatement has had no impact on the profit for the period or equity. See note 1(a) for further information.

2 Following a review of the classification of financial assets, comparative amounts have been amended from those previously reported. The effect of this change is to reclassify £2,201 million of assets from fixed maturity securities to other investments.

The assets above are analysed in accordance with the earliest possible redemption date of the instrument at the initiation of the Group. Where an instrument is transferable back to the issuer on demand, such as most unit trusts or similar types of investment vehicle, it is included in the 'On demand or within 1 year' column. Debt securities with no fixed contractual maturity date are generally callable at the option of the issuer at the date the coupon rate is reset under the contractual terms of the instrument. The terms for resetting the coupon are such that we expect the securities to be redeemed at this date, as it would be uneconomic for the issuer not to do so, and for liquidity management purposes we manage these securities on this basis. The first repricing and call date is normally ten years or more after the date of issuance. Most of the Group's investments in equity securities and fixed maturity securities are market traded and therefore, if required, can be liquidated for cash at short notice.

60 – Risk management continued

(e) Life and health insurance risk

Life insurance risk in the Group arises through its exposure to mortality risk and exposure to worse than anticipated operating experience on factors such as persistency levels, exercising of policyholder options and management and administration expenses. The Group's health insurance business (including private health insurance, critical illness cover, income protection and personal accident insurance, as well as a range of corporate healthcare products) exposes the Group to morbidity risk (the proportion of our customers falling sick) and medical expense inflation. The Group chooses to take measured amounts of life and health insurance risk provided that the relevant business has the appropriate core skills to assess and price the risk and adequate returns are available. The Group's underwriting strategy and appetite is communicated via specific policy statements, related business standards and guidelines. Life insurance risk is managed primarily at business unit level with oversight at the Group level.

The underlying risk profile of our life and health insurance risks, primarily persistency, longevity, mortality and expense risk, has remained stable during 2019. We are also exposed to longevity risk through the Aviva Staff Pension Scheme, to which our economic exposure has been reduced since 2014 by entering into a longevity swap covering approximately £5 billion of pensioner in payment scheme liabilities. Longevity risk remains the Group's most significant life insurance risk, while persistency risk remains significant and continues to have a volatile outlook with underlying performance linked to some degree to economic conditions. We purchased reinsurance for longevity risk for our annuity business, including the bulk annuity buy-in transaction with the Aviva Staff Pension scheme (see note 52). Group has continued to write considerable volumes of life protection business, and to utilise reinsurance to reduce exposure to potential losses. More generally, life insurance risks are believed to provide a significant diversification against other risks in the portfolio. Life insurance risks are modelled within the internal capital model and subject to sensitivity and stress and scenario testing.

The assumption and management of life and health insurance risks is governed by the Group-wide business standards covering underwriting, pricing, product design and management, in-force management, claims handling, and reinsurance. The individual life and health insurance risks are managed as follows:

- Mortality and morbidity risks are mitigated by use of reinsurance. The Group allows businesses to select reinsurers, from those approved by the Group, based on local factors, but retains oversight of the overall exposures and monitors that the aggregation of risk ceded is within credit risk appetite.
- Longevity risk and internal experience analysis are monitored against the latest external industry data and emerging trends. While individual businesses are responsible for reserving and pricing for annuity business, the Group monitors the exposure to this risk and any associated capital implications. The Group has used reinsurance solutions to reduce the risks from longevity and continually monitors and evaluates emerging market solutions to mitigate this risk further.
- Persistency risk is managed at a business unit level 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. Where possible the financial impact of lapses is reduced through appropriate product design. Businesses also implement specific initiatives to improve the retention of policies which may otherwise lapse. The Group has developed guidelines on persistency management.
- Expense risk is primarily managed by the business units through the assessment of business unit profitability and frequent monitoring of expense levels.

Embedded derivatives

The Group is exposed to the risk of changes in policyholder behaviour due to the exercise of options, guarantees and other product features embedded in its long-term savings products. These product features offer policyholders varying degrees of guaranteed benefits at maturity or on early surrender, along with options to convert their benefits into different products on pre-agreed terms. The extent of the impact of these embedded derivatives differs considerably between business units and exposes Aviva to changes in policyholder behaviour in the exercise of options as well as market risk.

Examples of each type of embedded derivative affecting the Group are:

- Options: call, put, surrender and maturity options, guaranteed annuity options, options to cease premium payment, options for withdrawals free of market value adjustment, annuity options, and guaranteed insurability options.
- Guarantees: embedded floor (guaranteed return), maturity guarantee, guaranteed death benefit, and guaranteed minimum rate of annuity payment;and
- Other: indexed interest or principal payments, maturity value, loyalty bonus.

The impact of these is reflected in the capital model and managed as part of the asset liability framework. Further disclosure on financial guarantees and options embedded in contracts and their inclusion in insurance and investment contract liabilities is provided in note 45.

(f) General insurance risk

Types of risk

General insurance risk in the Group arises from:

- Fluctuations in the timing, frequency and severity of claims and claim settlements relative to expectations;
- Unexpected claims arising from a single source or cause;
- Inaccurate pricing of risks or inappropriate underwriting of risks when underwritten; and
- Inadequate reinsurance protection or other risk transfer techniques.

The majority of the general insurance business underwritten by the Group continues to be short tail in nature such as motor, household and commercial property insurances. The Group's underwriting strategy and appetite is communicated via specific policy statements, related business standards and guidelines. General insurance risk is managed primarily at business unit level with oversight at the Group level. Claims reserving is undertaken by local actuaries in the various general insurance businesses and is also subject to periodic external reviews. Reserving processes are further detailed in note 43.

The vast majority of the Group's general insurance business is managed and priced in the same country as the domicile of the customer.

60 – Risk management continued

Management of general insurance risks

Significant insurance risks will be reported under the risk management framework. Additionally, the capital model is used to assess the risks that each general insurance business unit, and the Group as a whole, is exposed to, quantifying their impact and calculating appropriate capital requirements.

Business units have developed mechanisms that identify, quantify and manage accumulated exposures to contain them within the limits of the appetite of the Group. The business units are assisted by the General Insurance Council which provides technical input for major decisions which fall outside individual delegated limits or escalations outside group risk preferences, group risk accumulation, concentration and profitability limits.

Reinsurance strategy

Significant reinsurance purchases are reviewed annually at both business unit and Group level to verify that the levels of protection being bought reflect any developments in exposure and the risk appetite of the Group. The basis of these purchases is underpinned by analysis of capital, earnings and capital volatility, cash flow and liquidity and the Group's franchise value.

Detailed actuarial analysis is used to calculate the Group's extreme risk profile and then design cost and capital efficient reinsurance programmes to mitigate these risks to within agreed appetites. For businesses writing general insurance we analyse the natural catastrophe exposure using our own internal probabilistic catastrophe model which is benchmarked against external catastrophe models widely used by the rest of the (re)insurance industry.

The Group cedes much of its worldwide catastrophe risk to third-party reinsurers through excess of loss and aggregate excess of loss structures. The Group purchases a Group-wide catastrophe reinsurance programme to protect against catastrophe losses exceeding a 1 in 200 year return period. The total Group potential retained loss from its most concentrated catastrophe exposure peril (Northern Europe Windstorm) is approximately £150 million on a per occurrence basis and £175 million on an annual aggregate basis. Any losses above these levels are covered by the group-wide catastrophe reinsurance programme to a level in excess of a 1 in 200 year return period. In addition the Group purchases a number of GI business line specific reinsurance programmes with various retention levels to protect both capital and earnings, and has reinsured 100% of its latent exposures to its historic UK employers' liability and public liability business written prior to 31 December 2000.

(g) Asset management risk

Aviva is directly exposed to the risks associated with operating an asset management business through its ownership of Aviva Investors. The underlying risk profile of our asset management risk is derived from investment performance, specialist investment professionals and leadership, product development capabilities, fund liquidity, margin, client retention, regulatory developments, fiduciary and contractual responsibilities. Funds invested in illiquid assets such as commercial property are particularly exposed to liquidity risk. The risk profile is regularly monitored.

A client relationship team is in place to manage client retention risk, while all new asset management products undergo a review and approval process at each stage of the product development process, including approvals from legal, compliance and risk functions. Investment performance against client objectives relative to agreed benchmarks is monitored as part of our investment performance and risk management process, and subject to further independent oversight and challenge by a specialist risk team, reporting directly to the Aviva Investors' Chief Risk Officer.

(h) Operational risk

Operational risk is the risk of direct or indirect loss, arising from inadequate or failed internal processes, people and systems, or external events including changes in the regulatory environment. We have limited appetite for operational risk and aim to reduce these risks as far as is commercially sensible.

Our business units are primarily responsible for identifying and managing operational risks within their businesses, within the Group-wide operational risk framework including the risk and control self-assessment process. Businesses must be satisfied that all material risks falling outside our risk tolerances are being mitigated, monitored and reported to an appropriate level. Any risks with a high potential impact are monitored centrally on a regular basis. Businesses use key indicator data to help monitor the status of the risk and control environment. They also identify and capture loss events, taking appropriate action to address actual control breakdowns and promote internal learning.

The importance of digital interaction with our customers and advanced data analytics, the conduct, data protection and financial crime agenda of the European institutions, the FCA and other regulators, as well as the increasing cyber security threat, as evidenced by continuing instances of high profile cyber security breaches for other corporates in the UK and elsewhere, mean the Group has inherent risk exposure to data theft, conduct regulatory breaches (including financial crime) and customer service interruption due to IT systems failure. During 2019 we have continued to take action to reduce our residual exposure to these risks and improve our operational resilience through our conduct risk management framework, financial crime risk mitigation programme and significant investment in upgrading our IT infrastructure and security.

We are exposed to the risk that litigation, employee misconduct, operational failures, the outcome of regulatory investigations, media speculation and negative publicity, disclosure of confidential client information, inadequate services, whether or not founded, could impact our brands or reputation. Any of our brands or our reputation could also be affected if products or services recommended by us (or any of our intermediaries) do not perform as expected (whether or not the expectations are founded) or customers' expectations for the product change. We seek to reduce this risk to as low a level as commercially sensible.

60 – Risk management continued

The FCA regularly considers whether we are meeting the requirement to treat our customers fairly and we make use of various metrics to assess our own performance, including customer advocacy, retention and complaints. Failure to meet these requirements could also impact our brands or reputation.

If we do not manage the perception of our brands and reputation successfully, it could cause existing customers or agents to withdraw from our business and potential customers or agents to choose not to do business with us.

(i) Risk and capital management

(i) Sensitivity test analysis

The Group 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 Group's key financial performance metrics to inform the Group's decision making and planning processes, and as part of the framework for identifying and quantifying the risks to which each of its business units, and the Group as a whole, are exposed.

(ii) Life insurance and investment contracts

The nature of long-term business is such that a number of assumptions are made in compiling these financial statements. Assumptions are made about investment returns, expenses, mortality rates and persistency in connection with the in-force policies for each business unit. Assumptions are best estimates based on historic and expected experience of the business. A number of the key assumptions for the Group's central scenario are disclosed elsewhere in these statements.

(iii) General insurance and health business

General insurance and health claim liabilities are estimated by using standard actuarial claims projection techniques. These methods extrapolate the claims development for each accident year based on the observed development of earlier years. In most cases, no explicit assumptions are made as projections are based on assumptions implicit in the historic claims.

(iv) Sensitivity test results

Illustrative results of sensitivity testing for long-term business, general insurance and health business and the fund management and non-insurance business are set out below. For each sensitivity test the impact of a reasonably possible change in a single factor is shown, with other assumptions left unchanged. Each test allows for any consequential impact on the asset and liability valuations.

Sensitivity factor	Description of sensitivity factor applied
Interest rate and investment return	The impact of a change in market interest rates by a 1% increase or decrease. The test allows consistently for similar changes to investment returns and movements in the market value of backing fixed interest securities.
Credit spreads	The impact of a 0.5% increase in credit spreads over risk-free interest rates on corporate bonds and other non-sovereign credit assets.
Equity/property market values	The impact of a change in equity/property market values by ± 10%.
Expenses	The impact of an increase in maintenance expenses by 10%.
Assurance mortality/morbidity (life insurance only)	The impact of an increase in mortality/morbidity rates for assurance contracts by 5%.
Annuitant mortality (long-term insurance only)	The impact of a reduction in mortality rates for annuity contracts by 5%.
Gross loss ratios (non-long-term insurance only)	The impact of an increase in gross loss ratios for general insurance and health business by 5%.

Long-term business
Sensitivities as at 31 December 2019

31 December 2019 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%	Expenses +10%	Assurance mortality +5%	Annuitant mortality -5%
Insurance participating	—	5	(10)	(65)	60	(50)	10	(5)
Insurance non-participating	(985)	1,265	(800)	(120)	105	(240)	(145)	(955)
Investment participating	(85)	55	(5)	(5)	5	(25)	—	—
Investment non-participating	—	5	—	5	(5)	(5)	—	—
Assets backing life shareholders' funds	(150)	170	(35)	(35)	30	—	—	—
Total	**(1,220)**	**1,500**	**(850)**	**(220)**	**195**	**(320)**	**(135)**	**(960)**

31 December 2019 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%	Expenses +10%	Assurance mortality +5%	Annuitant mortality -5%
Insurance participating	—	5	(10)	(65)	60	(50)	10	(5)
Insurance non-participating	(985)	1,265	(800)	(120)	105	(240)	(145)	(955)
Investment participating	(85)	55	(5)	(5)	5	(25)	—	—
Investment non-participating	—	5	—	5	(5)	(5)	—	—
Assets backing life shareholders' funds	(190)	205	(30)	(30)	30	—	—	—
Total	**(1,260)**	**1,535**	**(845)**	**(215)**	**195**	**(320)**	**(135)**	**(960)**

60 – Risk management continued

Sensitivities as at 31 December 2018

31 December 2018 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%	Expenses +10%	Assurance mortality +5%	Annuitant mortality -5%
Insurance participating	(75)	35	(15)	(105)	70	(20)	(5)	(5)
Insurance non-participating	(975)	1,130	(695)	(125)	105	(210)	(115)	(865)
Investment participating	(40)	40	(10)	(15)	(15)	(15)	—	—
Investment non-participating	—	—	—	10	(25)	(20)	—	—
Assets backing life shareholders' funds	(95)	105	(25)	20	(20)	—	—	—
Total	(1,185)	1,310	(745)	(215)	115	(265)	(120)	(870)

31 December 2018 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%	Expenses +10%	Assurance mortality +5%	Annuitant mortality -5%
Insurance participating	(75)	35	(15)	(105)	70	(20)	(5)	(5)
Insurance non-participating	(975)	1,130	(695)	(125)	105	(210)	(115)	(865)
Investment participating	(40)	40	(10)	(15)	(15)	(15)	—	—
Investment non-participating	—	—	—	10	(25)	(20)	—	—
Assets backing life shareholders' funds	(145)	150	(25)	25	(25)	—	—	—
Total	(1,235)	1,355	(745)	(210)	110	(265)	(120)	(870)

Changes in sensitivities between 2019 and 2018 reflect underlying movements in the value of assets and liabilities, the relative duration of assets and liabilities and asset liability management actions. The sensitivities to economic and demographic movements relate mainly to business in the UK.

General insurance and health business sensitivities as at 31 December 2019

31 December 2019 Impact on profit before tax £m	**Interest rates +1%**	**Interest rates -1%**	**Credit spreads +0.5%**	**Equity/ property +10%**	**Equity/ property -10%**	**Expenses +10%**	**Gross loss ratios +5%**
Gross of reinsurance	**(210)**	**165**	**(115)**	**185**	**(175)**	**(140)**	**(315)**
Net of reinsurance	**(270)**	**215**	**(115)**	**185**	**(175)**	**(140)**	**(300)**

31 December 2019 Impact on shareholders' equity before tax £m	**Interest rates +1%**	**Interest rates -1%**	**Credit spreads +0.5%**	**Equity/ property +10%**	**Equity/ property -10%**	**Expenses +10%**	**Gross loss ratios +5%**
Gross of reinsurance	**(210)**	**165**	**(115)**	**185**	**(175)**	**(25)**	**(315)**
Net of reinsurance	**(270)**	**215**	**(115)**	**185**	**(175)**	**(25)**	**(300)**

Sensitivities as at 31 December 2018

31 December 2018 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%	Expenses +10%	Gross loss ratios +5%
Gross of reinsurance	(240)	235	(115)	165	(165)	(120)	(325)
Net of reinsurance	(305)	295	(115)	165	(165)	(120)	(315)

31 December 2018 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%	Expenses +10%	Gross loss ratios +5%
Gross of reinsurance	(240)	235	(115)	170	(170)	(25)	(325)
Net of reinsurance	(305)	295	(115)	170	(170)	(25)	(315)

For general insurance and health, the impact of the expense sensitivity on profit also includes the increase in ongoing administration expenses, in addition to the increase in the claims handling expense provision.

60 – Risk management continued

Fund management and non-insurance business sensitivities as at 31 December 2019

31 December 2019 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	**(20)**	**15**	**40**	**(10)**	**15**

31 December 2019 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	**(15)**	**15**	**40**	**(10)**	**15**

Sensitivities as at 31 December 2018

31 December 2018 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	(25)	20	30	(20)	35

31 December 2018 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	(20)	15	30	(20)	30

Limitations of sensitivity analysis

The above tables demonstrate 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 analyses do not take into consideration that the Group's assets and liabilities are actively managed. Additionally, the financial position of the Group may vary at the time that any actual market movement occurs. For example, the Group'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.

A number of the business units use passive assumptions to calculate their long-term business liabilities. Consequently, a change in the underlying assumptions may not have any impact on the liabilities, whereas assets held at market value in the statement of financial position will be affected. In these circumstances, the different measurement bases for liabilities and assets may lead to volatility in shareholder equity. Similarly, for general insurance liabilities, the interest rate sensitivities only affect profit and equity where explicit assumptions are made regarding interest (discount) rates or future inflation.

Other limitations in the above sensitivity analyses include the use of hypothetical market movements to demonstrate potential risk that only represent the Group's view of possible near-term market changes that cannot be predicted with any certainty, and the assumption that all interest rates move in an identical fashion.

61 – Derivative financial instruments and hedging

This note gives details of the various financial instruments the Group uses to mitigate risk.

The Group uses a variety of derivative financial instruments, including both exchange traded and over-the-counter instruments, in line with the Group's overall risk management strategy. The objectives include managing exposure to market, foreign currency and/or interest rate risk on existing assets or liabilities, as well as planned or anticipated investment purchases.

In the narrative and tables below, figures are given for both the notional amounts and fair values of these instruments. The notional amounts reflect the aggregate of individual derivative positions on a gross basis and so give an indication of the overall scale of the derivative transaction. The fair values represent the gross carrying values at the year end for each class of derivative contract held (or issued) by the Group.

The fair values do not provide an indication of credit risk, as many over-the-counter transactions are contracted and documented under ISDA (International Swaps and Derivatives Association, Inc.) master agreements or their equivalent. Such agreements are designed to provide a legally enforceable set-off in the event of default, which reduces credit exposure. In addition, the Group has collateral agreements in place between the individual Group entities and relevant counterparties. See note 62 for further information on collateral and net credit risk of derivative instruments.

(a) Instruments qualifying for hedge accounting

The Group has formally assessed and documented the hedge effectiveness for financial instruments designated as hedge instruments in accordance with IAS 39, *Financial Instruments: Recognition and Measurement.*

Net investment hedges

To reduce its exposure to foreign currency risk, the Group has designated a portion of its euro denominated debt as hedge instruments to hedge a net investment in its European subsidiaries. No material disposals are expected prior to the maturity of the euro denominated debt and the hedge effectiveness is prospectively expected to remain between 80% and 125%. The carrying value of the debt at 31 December 2019 was £2,331 million *(2018: £2,468 million)* and its fair value at that date was £2,604 million *(2018: £2,515 million)*.

Foreign exchange gains of £137 million *(2018: losses of £27 million)* on translation of the debt to sterling at the statement of financial position date in respect of the effective portion have been recognised in the hedging instruments reserve in shareholders' equity. The hedge has been fully effective during the year. A gain of £4 million was recognised in the income statement in the prior year due to the termination of a net investment hedge.

61 – Derivative financial instruments and hedging continued

(b) Derivatives not qualifying for hedge accounting

Certain derivatives either do not qualify for hedge accounting under IAS 39 or the option to designate them as hedge instruments has not been taken. These are referred to below as non-hedge derivatives.

(i) The Group's non-hedge derivatives at 31 December 2019 and 2018 were as follows:

	2019			Restated[1] 2018		
	Contract/ notional amount £m	**Fair value asset £m**	**Fair value liability £m**	Contract/ notional amount £m	Fair value asset £m	Fair value liability £m
Foreign exchange contracts						
OTC						
Forwards	**54,269**	**1,094**	**(438)**	43,247	148	(256)
Interest rate and currency swaps	**6,937**	**141**	**(316)**	7,908	29	(708)
Options	**—**	**—**	**—**	1,256	10	—
Total	**61,206**	**1,235**	**(754)**	52,411	187	(964)
Interest rate contracts						
OTC						
Forwards	**688**	**63**	**(35)**	283	34	(23)
Swaps	**50,549**	**4,685**	**(2,727)**	64,323	3,756	(2,266)
Options	**213**	**2**	**(8)**	203	19	(20)
Swaptions	**944**	**151**	**(2)**	18,853	419	(64)
Exchange traded						
Futures	**11,438**	**52**	**(85)**	6,007	56	(39)
Total	**63,832**	**4,953**	**(2,857)**	89,669	4,284	(2,412)
Equity/Index contracts						
OTC						
Options	**13,712**	**74**	**(30)**	18,050	63	(36)
Exchange traded						
Futures	**8,583**	**74**	**(73)**	12,067	8	(594)
Options	**2,427**	**225**	**(4)**	3,490	441	(14)
Total	**24,722**	**373**	**(107)**	33,607	512	(644)
Credit contracts	**10,088**	**18**	**(324)**	11,055	22	(288)
Other	**14,136**	**518**	**(2,475)**	17,543	352	(2,170)
Total at 31 December	**173,984**	**7,097**	**(6,517)**	204,285	5,357	(6,478)

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Fair value assets of £7,097 million *(2018 restated: £5,357 million)* are recognised as 'Derivative financial instruments' in note 28(a), while fair value liabilities of £6,517 million *(2018 restated: £6,478 million)* are recognised as 'Derivative liabilities' in note 54.

The Group's derivative risk management policies are outlined in note 60.

(ii) The contractual undiscounted cash flows in relation to non-hedge derivative liabilities have the following maturities:

	2019 £m	Restated[1] 2018 £m
Within 1 year	**1,098**	2,132
Between 1 and 2 years	**593**	512
Between 2 and 3 years	**448**	445
Between 3 and 4 years	**434**	384
Between 4 and 5 years	**358**	301
After 5 years	**3,996**	3,359
	6,927	7,133

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

(c) Collateral

Certain derivative contracts, primarily interest rate and currency swaps, involve the receipt or pledging of cash and non-cash collateral. The amounts of cash collateral receivable or repayable are included in notes 29 and 54 respectively. Collateral received and pledged by the Group is detailed in note 62.

62 – Financial assets and liabilities subject to offsetting, enforceable master netting agreements and similar arrangements

(a) Offsetting arrangements

Financial assets and liabilities are offset in the statement of financial position when the Group has a legally enforceable right to offset and has the intention to settle the asset and liability on a net basis, or to realise the asset and settle the liability simultaneously.

Aviva mitigates credit risk in derivative contracts by entering into collateral agreements, where practical, and into ISDA master netting agreements for each of the legal entities to facilitate its right to offset credit risk exposure. The credit support agreement will normally dictate the threshold over which collateral needs to be pledged by Aviva or its counterparty.

Derivative transactions requiring Aviva or its counterparty to post collateral are typically the result of over-the-counter derivative trades, comprised mostly of interest rate swaps, currency swaps and credit default swaps. These transactions are conducted under terms that are usual and customary to standard long-term borrowing, derivative, securities lending and securities borrowing activities. The derivative assets and liabilities in the table below are made up of the contracts described in detail in note 61.

Aviva participates in a number of stock lending and repurchase arrangements. In some of these arrangements cash is exchanged by Aviva for securities and a related receivable is recognised within 'Loans to banks' in note 25. These arrangements are reflected in the tables below. In instances where the collateral is recognised on the statement of financial position, the obligation for its return is included within 'Payables and other financial liabilities' in note 54.

In other arrangements, securities are exchanged for other securities. The collateral received must be in a readily realisable form such as listed securities and is held in segregated accounts. Transfer of title always occurs for the collateral received. In many instances, however, no market risk or economic benefit is exchanged and these transactions are not recognised on the statement of financial position in accordance with our accounting policies, and accordingly not included in the tables below.

	Amounts subject to enforceable netting arrangements						
	Offset under IAS 32				Amounts under a master netting agreement but not offset under IAS 32		
31 December 2019	Gross amounts £m	Amounts offset £m	Net amounts reported in the statement of financial position £m	Financial instruments £m	Cash collateral £m	Securities collateral received / pledged £m	Net amount £m
Financial assets							
Derivative financial assets	**6,570**	—	**6,570**	**(4,646)**	**(999)**	**(164)**	**761**
Loans to banks and repurchase arrangements	**8,830**	—	**8,830**	—	**(300)**	**(2,980)**	**5,550**
Total financial assets	**15,400**	—	**15,400**	**(4,646)**	**(1,299)**	**(3,144)**	**6,311**
Financial liabilities							
Derivative financial liabilities	**(5,682)**	—	**(5,682)**	**3,961**	**40**	**1,130**	**(551)**
Other financial liabilities	**(2,671)**	—	**(2,671)**	—	—	**2,671**	—
Total financial liabilities	**(8,353)**	—	**(8,353)**	**3,961**	**40**	**3,801**	**(551)**

62 – Financial assets and liabilities subject to offsetting, enforceable master netting agreements and similar arrangements continued

	Amounts subject to enforceable netting arrangements						
	Offset under IAS 32			Amounts under a master netting agreement but not offset under IAS 32			
Restated[1] 31 December 2018	Gross amounts £m	Amounts offset £m	Net amounts reported in the statement of financial position £m	Financial instruments £m	Cash collateral £m	Securities collateral received / pledged £m	Net amount £m
Financial assets							
Derivative financial assets	4,447	—	4,447	(2,934)	(1,023)	(186)	304
Loans to banks and repurchase arrangements	9,322	—	9,322	—	(300)	(1,614)	7,408
Total financial assets	13,769	—	13,769	(2,934)	(1,323)	(1,800)	7,712
Financial liabilities							
Derivative financial liabilities	(5,609)	—	(5,609)	3,435	376	1,288	(510)
Other financial liabilities	(3,314)	—	(3,314)	—	—	3,314	—
Total financial liabilities	(8,923)	—	(8,923)	3,435	376	4,602	(510)

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported. The review identified amounts presented within cash and cash equivalents that are now presented as loans to banks and repurchase arrangements in the table above. The restatement has had no impact on the profit for the year or equity. See note 1(a) for further information.

Derivative assets are recognised as 'Derivative financial instruments' in note 28(a), while fair value liabilities are recognised as 'Derivative liabilities' in note 54. £527 million *(2018 restated: £910 million)* of derivative assets and £835 million *(2018 restated: £869 million)* of derivative liabilities are not subject to master netting agreements and are therefore excluded from the table above.

Amounts receivable related to securities lending and reverse-repurchase arrangements totalling £8,830 million *(2018 restated: £9,322 million)* are recognised within 'Loans to banks' in note 25.

Other financial liabilities presented above represent liabilities related to repurchase arrangements recognised within 'Obligations for repayment of cash collateral received' in note 54.

(b) Collateral

In the tables above, the amounts of assets or liabilities presented in the consolidated statement of financial position are offset first by financial instruments that have the right of offset under master netting or similar arrangements with any remaining amount reduced by the amount of cash and securities collateral. The actual amount of collateral may be greater than amounts presented in the tables above in the case of over collateralisation.

The total amount of collateral received which the Group is permitted to sell or repledge in the absence of default, excluding collateral related to balances recognised within 'Loans to banks' disclosed in note 25, was £20,984 million *(2018 restated: £19,870 million)*, all of which other than £7,567 million *(2018 restated: £5,650 million)* is related to securities lending arrangements. Collateral of £1,547 million *(2018: £1,914 million)* has been received related to balances recognised within 'Loans to banks' in note 25. The value of collateral that was actually sold or repledged in the absence of default was £nil *(2018: £nil)*.

The level of collateral held is monitored regularly, with further collateral obtained where this is considered necessary to manage the Group's risk exposure.

63 – Related party transactions

This note gives details of the transactions between Group companies and related parties which comprise our joint ventures, associates and staff pension schemes.

The Group undertakes transactions with related parties in the normal course of business. Loans to related parties are made on normal arm's-length commercial terms.

Services provided to, and by related parties

	2019				2018			
	Income earned in the year £m	Expenses incurred in the year £m	Payable at year end £m	Receivable at year end £m	Income earned in the year £m	Expenses incurred in the year £m	Payable at year end £m	Receivable at year end £m
Associates	1	—	—	4	1	—	—	2
Joint ventures	54	—	—	4	49	—	(1)	2
Employee pension schemes	9	—	—	6	10	—	—	7
	64	—	—	14	60	—	(1)	11

Transactions with joint ventures in the UK relate to the property management undertakings, the most material of which are listed in note 19(a)(iii). The Group has equity interests in these joint ventures, together with the provision of administration services and financial management to many of them. Our fund management companies also charge fees to these joint ventures for administration services and for arranging external finance.

Key management personnel of the Company may from time to time purchase insurance, savings, asset management or annuity products marketed by group companies on equivalent terms to those available to all employees of the Group. In 2019, other transactions with key management personnel were not deemed to be significant either by size or in the context of their individual financial positions.

Our UK fund management companies manage most of the assets held by the Group's main UK staff pension scheme, for which they charge fees based on the level of funds under management. The main UK scheme holds investments in Group-managed funds and insurance policies with other group companies, as explained in note 52(b)(ii). As at 31 December 2019, the Friends Provident Pension Scheme ('FPPS'), acquired in 2015 as part of the acquisition of the Friends Life business, held an insurance policy of £646 million *(2018: £620 million)* issued by a group company, which eliminates on consolidation.

The related parties' receivables are not secured and no guarantees were received in respect thereof. The receivables will be settled in accordance with normal credit terms.

During the period, the ASPS completed a bulk annuity buy-in transaction with Aviva Life & Pensions UK Limited (AVLAP), a Group company. At inception, the buy-in insured approximately 4,300 deferred and 1,500 current pensioner liabilities. A premium of £1,665 million was paid by the scheme to AVLAP, with AVLAP recognising gross insurance liabilities of £1,334 million. The difference between the premium and the gross liabilities implies a profit of £331 million, which does not include costs incurred by the Group associated with the transaction, and is driven primarily by differences between the measurement bases used to calculate the premium and the accounting value of the associated gross liabilities. The ASPS recognised a plan asset of £1,126 million, with the difference between the plan asset recognised and the premium paid being recognised as an actuarial loss through Other Comprehensive Income. As at 31 December 2019, AVLAP recognised technical provisions of £1,243 million in relation to the buy-in which have been included within the Group's gross insurance liabilities, and the ASPS held a transferable plan asset of £1,144 million which does not eliminate on consolidation.

Key management compensation

The total compensation to those employees classified as key management, being those having authority and responsibility for planning, directing and controlling the activities of the Group, including the executive and non-executive directors is as follows:

	2019 £m	2018 £m
Salary and other short-term benefits	12.3	7.9
Other long-term benefits	3.2	8.6
Post-employment benefits	1.3	1.5
Equity compensation plans	12.7	10.5
Termination benefits	1.0	—
Total	30.5	28.5

Information concerning individual directors' emoluments, interests and transactions is given in the Directors' Remuneration Report.

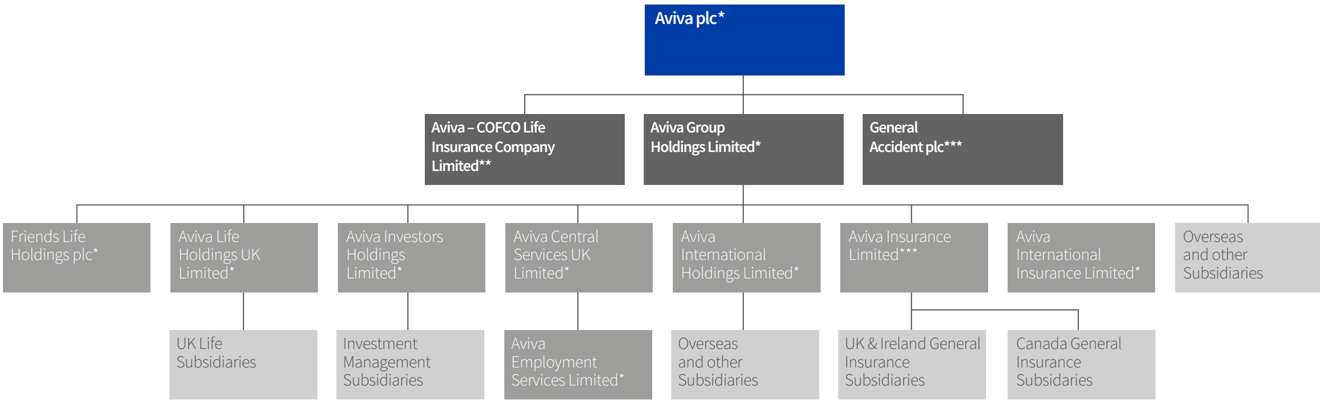
64 – Organisational structure

The following chart shows, in simplified form, the organisational structure of the Group as at 31 December 2019. Aviva plc is the holding company of the Group.

Parent company
Aviva plc

Subsidiaries
The principal subsidiaries of the Company at 31 December 2019 are listed below by country of incorporation.

A complete list of the Group's related undertakings comprising of subsidiaries, joint ventures, associates and other significant holdings is contained within note 65.



* Incorporated in England and Wales
** Incorporated in People's Republic of China.
*** Incorporated in Scotland

United Kingdom
Aviva Central Services UK Limited
Aviva Employment Services Limited
Aviva Equity Release UK Limited
Aviva Health UK Limited
Aviva Insurance Limited
Aviva International Insurance Limited
Aviva Investors Global Services Limited
Aviva Investors Pensions Limited
Aviva Investors UK Fund Services Limited
Aviva Life & Pensions UK Limited
Aviva Life Services UK Limited
Aviva Pension Trustees UK Limited
Aviva UK Digital Limited
Aviva Wrap UK Limited
Gresham Insurance Company Limited
The Ocean Marine Insurance Company Limited
Aviva Management Services UK Limited
Aviva Administration Limited
Friends Provident International Limited[1]

Barbados
Victoria Reinsurance Company Ltd

Bermuda
Aviva Re Limited

Canada
Aviva Canada Inc. and its principal subsidiaries:
Aviva Insurance Company of Canada
Aviva General Insurance Company
Elite Insurance Company
Pilot Insurance Company
Scottish & York Insurance Co. Limited
S&Y Insurance Company
Traders General Insurance Company

France
Aviva France SA (99.99%) and its principal subsidiaries:
Aviva Assurances SA (99.9%)
Aviva Investors France SA (99.9%)
Aviva Investors Real Estate France SA (99.9%)
Aviva Solutions (99.9%)
Aviva Vie SA (99.9%)
Locamat SAS (99.9%)
NEWCO (99.9%)

Ireland
Aviva Life and Pensions Ireland Designated Activity Company
Aviva Insurance Ireland Designated Activity Company

1 See note 4(b) for further details in respect of operations classified as held for sale

64 – Organisational structure continued

Italy

Aviva Italia Holding S.p.A and its principal subsidiaries:
Aviva S.p.A (51%)
Aviva Italia S.p.A
Aviva Life S.p.A
Aviva Vita S.p.A (80%)

Lithuania

Uždaroji akcinė gyvybės draudimo ir pensijų bendrovė 'Aviva Lietuva' (90%)

Poland

Aviva PowsBlackbirdzechne Towarzystwo Emerytalne Aviva Santander S.A. (81%)
Aviva Towarzystwo Ubezpieczen na Zycie S.A. (90%)
Aviva Towarzystwo Ubezpieczen Ogolnych S.A. (90%)
Santander Aviva Towarzystwo Ubezpieczeń S.A. (51%)
Santander Aviva Towarzystwo Ubezpieczeń na Życie S.A. (51%)

Singapore

Aviva Ltd

Vietnam

Aviva Vietnam Life Insurance Company Limited

Branches

The Group also operates through branches, the most significant of which is based in Ireland.

Associates and joint ventures

The Group has ongoing interests in the following operations that are classified as joint ventures or associates. Further details of those operations that were most significant in 2019 are set out in notes 19 and 20 to the financial statements.

United Kingdom

The Group has interests in several property limited partnerships. Further details are provided in notes 19, 20 and 27 to the financial statements.

China

Aviva-COFCO Life Insurance Company Limited (50%)

Hong Kong

Aviva Life Insurance Company Limited (40%) [1]

India

Aviva Life Insurance Company India Limited (49%)

Indonesia

PT Astra Aviva Life (50%)

Turkey

AvivaSA Emeklilik ve HayatA.S (40%)

1 See note 4(b) for further details in respect of operations classified as held for sale

65 – Related Undertakings

The Companies Act 2006 requires disclosure of certain information about the Group's related undertakings which is set out in this note. Related undertakings comprise subsidiaries, joint ventures, associates and other significant holdings. Significant holdings are where the Group either has a shareholding greater than or equal to 20% of the nominal value of any share class, or a book value greater than 20% of the Group's assets.

The definition of a subsidiary undertaking in accordance with the Companies Act 2006 is different from the definition under IFRS. As a result, the related undertakings included within the list below may not be the same as the undertakings consolidated in the Group IFRS financial statements. See accounting policies (D) Consolidation principles for further detail on principles of consolidation and definition of joint ventures.

The Group's related undertakings along with the country of incorporation, the registered address, the classes of shares held and the effective percentage of equity owned at 31 December 2019 are disclosed below.

The direct related undertakings of the Company as at 31 December 2019 are listed below:

Name of undertaking	Country of incorporation	Registered address	Share class[1]	% held
Aviva-COFCO Life Insurance Company Ltd[2]	China	12/F, Block A, Landgent Centre, 20 East Third Ring Middle Road, Beijing, 100022	Ordinary shares	50
General Accident plc	United Kingdom	Pitheavlis, Perth, Perthshire, PH2 0NH	Ordinary shares	100
Aviva Group Holdings Limited	United Kingdom	St Helen's, 1 Undershaft, London, EC3P 3DQ	Ordinary shares	100

The indirect related undertakings of the Company as at 31 December 2019 are listed below:

Company name	Share Class1	% held
Australia		
c/o TMF Corporate Services (Aust) Pty Ltd, 201 Elizabeth Street, Australia 2000		
Aviva Investors Pacific Pty Ltd	Ordinary	100
Barbados		
c/o USA Risk Group (Barbados) Ltd., 6th Floor, CGI Tower, Warrens, St. Michael, BB22026		
Victoria Reinsurance Company Ltd.	Common Shares	100
Belgium		
Avenue Louise 326, Boîte 30, 1050 Ixelles		
Parnasse Square Invest	Ordinary Shares	99
Bermuda		
Cumberland House, 7th Floor 1 Victoria Street, Bermuda		
Aviva Re Limited	Ordinary	100
The Vallis Building, No 58 Par-la-Ville Road, Hamilton HM11 Bermuda		
Lend Lease JEM Partners Fund Limited	Ordinary	22
Canada		
10 Aviva Way, Suite 100, Markham On L6G 0G1		
9543864 Canada Inc.	Common	100
Aviva Canada Inc.	Voting Interest	100
Aviva General Insurance Company	Common	100
Aviva Insurance Company of Canada	Common	100
Aviva Warranty Services Inc.	Common	100
Bay-Mill Specialty Insurance Adjusters Inc.	Common	100
Elite Insurance Company	Common	100
Insurance Agent Service Inc.	Common	100
National Home Warranty Group Inc.	Common	100
Nautimax Ltd	Ordinary	100
OIS Ontario Insurance Service Limited	Common	100
Pilot Insurance Company	Common	100
S&Y Insurance Company	Common	100
Scottish & York Insurance Co. Limited	Common Preference	100
Traders General Insurance Company	Common	100
Wayfarer Insurance Brokers Limited	Common	100
100 King Street West, Suite 4900, Toronto On M5X 2A2		
Aviva Investors Canada Inc.	Common	100
480 University Avenue, Suite 800, Toronto On M5G 1V2		
Prolink Limited	Common A	34
555 Chabanel Ouest, Bureau 900, Montreal QC H2N 2H8		
Aviva Agency Services Inc.	Common A	100
Cayman Islands		
Victory Arcadia Fund	OEIC	46
China		
Units 1805-1807, 18th Floor, Block H Office Building, Phoenix Land Plaza, No. A5 Yard, Shuguangxili, Chaoyang District, Beijing		
Aviva-Cofco Yi Li Asset Management Co Ltd[2]	Ordinary Shares	21
12F, 15F Block A, 27F Block B Landgent Centre, 20 East Third Ring Middle Road, Beijing, China		
Aviva-Cofco Life Insurance Co. Ltd	Ordinary	50
Czech Republic		
5/482 Ve Svahu, Prague 4, 14700, Czech Republic		
AIEREF Renewable Energy s.r.o		
France		
3 Boulevard Saint Martin		
Aviva Impact Investing France	Ordinary	100
128 Boulevard Raspail, 75006, Paris		
UFF Oblicontext 2021-A (UFFo21A)	FCP	98

Company name	Share Class1	% held
UFF Oblicontext 2023 A (UFFo23A)	FCP	98
UFF Obligations 3-5 A	FCP	86
UFF Allocation Strategies A	FCP	73
13 Rue du Moulin Bailly, 92270, Bois Colombes		
Agents 3A	Ordinary	50
Aviva Assurances, Société Anonyme d'Assurances Incendie, Accidents et Risques Divers	Ordinary	100
13, Avenue Lebrun, 92188, Antony Cedex		
Pierrevenus	Ordinary	74
14 Rue Roquépine, 75008, Paris		
AFER – SFER	Ordinary	100
Global Allocation M	FCP	85
Aviva Investors Euro Credit Bonds ISR	FCP	100
Aviva Investors Euro Credit Bonds 1-3	FCP	95
Aviva Investors Euro Crédit Bonds 1-3 HDR	FCP	100
Afer Actions Amerique	FCP	100
Afer Actions Monde	FCP	100
Afer Diversifie Durable	FCP	100
Afer Marches Emergents Fcp	FCP	100
Afer Multi Foncier	FCP	100
Afer Oblig Monde Entreprisese	FCP	100
Afer Patrimoine	FCP	100
Afer-Flore	FCP	97
Afer Actions Euro ISR	FCP	100
AFer Actions Monde	FCP	100
Afer Avenir Senior	SICAV	100
After Convertibles	FCP	100
Aviva Actions Convex	FPS	100
Aviva Actions Croissance	FCP	100
Aviva Actions Euro	FCP	100
Aviva Actions Europe ISR	FCP	100
Aviva Actions France	FCP	79
Aviva Amerique	FCP	100
Aviva Asie	FCP	100
Aviva Convertibles	Ordinary	97
Aviva Conviction Opportunites	FCP	100
Aviva Conviction Patrimoine	FCP	100
Aviva Croissance Durable ISR	FCP	100
Aviva Developpement	SICAV	99
Aviva Diversifié	SICAV	94
Aviva Europe	SICAV	96
Aviva Flexible (AVIFLEX)	FPS	100
Aviva Flexible Emergents A FCP	FCP	100
Aviva France Opportunites	FCP	91
Aviva Grandes Marques ISR	FCP	99
Aviva Interoblig	FCP	100
Aviva Investors Actions Euro	FCP	93
Aviva Investors Alpha Taux A	FCP	100
Aviva Investors Alpha Yield	FCP	96
Aviva Investors Britannia	SICAV	98
Aviva Investors Conviction	FCP	98
Aviva Investors Euro Aggregate	FCP	75
Faraday	FCP	100
Aviva Investors Euro Crédit Bonds 1-3	FCP	96
Aviva Investors France S.A	Ordinary	100
Aviva Investors Japon ISR	FCP	95
Aviva Investors Portefeuille	FCP	100
Aviva Investors Reference Diversifie	FCP	100
Aviva Investors Repo (avirepo)	FCP	100

Company name	Share Class1	% held
Aviva Investors Selection	FCP	100
Aviva Investors Valeurs	FCP	100
Aviva Investors Valeurs Europe	FCP	80
Aviva Investors Yield Curve Abs Rt R	FCP	100
Aviva Monetaire Isr (A)	FCP	98
Aviva Multigestion	FCP	98
Aviva Oblig International	SICAV	89
Aviva Oblirea	Ordinary	97
Aviva Patrimoine	SICAV	96
Aviva Performance	FCP	100
Aviva Rebond	FCP	82
Aviva Rendement Europe	Ordinary	82
Aviva Selection Opportunites	FCP	99
Aviva Selection Patrimoine	FCP	98
Aviva Signatures Europe	FCP	100
Aviva Structure Index 1.	FCP	99
Aviva Structure Index 2	FCP	100
Aviva Structure Index 4.	FIPS	100
Aviva Structure Index5	FCP	100
Aviva Small & Mid Caps Euro ISR	FCP	100
Aviva Valeurs Francaises	Ordinary	96
Aviva Valeurs Immobilieres	Ordinary	83
Aviva Valorisation Opportunite	FCP	97
Aviva Valorisation Patrimoine	FCP	97
FPE Aviva Investors Euro Corporate Senior Debts	FPE	24
FPE Aviva Small & Midcap ASAM	FCP	100
UFF Cap Defensif	FCP	100
UFF Euro-Valeur 0-100 A	FCP	98
UFF Obligations 5-7 A	FCP	99
Obligations 5-7M	FCP	81
Rendement Diversifie M	FCP	96
UFF Rendement Diversifie A	FCP	100
24-26 Rue De La Pépinière, 75008, Paris		
100 Courcelles	Ordinary	100
AFER Immo	Ordinary	100
AFER Immo 2	Ordinary	100
Aviva Commerce Europe	Ordinary	100
Aviva Immo Selection	Ordinary	100
Aviva Investors Real Estate France S.A.	Ordinary	100
Aviva Investors Real Estate France SGP	Ordinary	100
Aviva Patrimoine Immobilier	Ordinary	100
Logiprime Europe	Ordinary	100
Primotel Europe	Ordinary/Preference	99
SCI La Coupole Des Halles	Ordinary	100
SCI Pergola	Ordinary	100
Société Civile Immobilière Thomas Edison	Ordinary	50
Société Civile Immobilière Pleyel R2	Ordinary	50
Sapphire Ile de France SCI	SPV	100
Aviva Investors Experimmo Propco 1	Ordinary	100
Aviva Investors Experimmo Propco 2	Ordinary	100
153, Boulevard Haussmann, 75008, Paris		
Selectus	FCP	97
159 rue Montmartre, France 75002		
Mamann Invest	Ordinary	100
SACAF	Ordinary	100
20 Place Vendome, 75001 Paris		

Company name	Share Class1	% held
AXA Lbo Fund IV Feeder	Private Equity Fund	38
AXA UK Infrastructure Investment SAS	Ordinary Shares	100
Croissance Pme A C.	FCP	100
29 Avenue de Messine, 75008, Paris		
Afer Premium	SICAV	100
32, Avenue d'Iéna, 75116 Paris		
CGP Entrepreneurs	Ordinary	74
Aviva Capital Planete	FCP	100
UFF Grandes Marques A	FCP	99
Myria Asset Management	Ordinary	74
UFF Selection Alpha-A (Ufselaa)	FCP	98
UFF Actions France-Aeur (UFFacfa)	FCP	99
UFF Allocation Optimum	FCP	98
UFF Cap Diversifie (UCAPDIV)	FCP	50
UFF Capital Planete A (Aviufcp)	FCP	98
UFF Croissance Pme A (Ucapcro)	FCP	100
UFF Emergence-A (UFFemga)	FCP	99
UFF Europe Opportunites-Aeur (UFFgeua)	FCP	99
UFF Euro Valeur A	FCP	100
UFF Global Allocation A	FCP	100
UFF Global Foncieres-A (Ufgf70A)	FCP	98
UFF Global Multi-Strategie-A (Ufglmsa)	FCP	99
UFF Global Obligations-A (Ufgf30A)	FCP	95
UFF Global Reactif-A (Ufgf10A)	FCP	95
UFF Selection Premium A (Uavfran)	FCP	98
Ufifrance Gestion	Ordinary	74
Ufifrance Patrimoine	Ordinary	74
UFF Privilège A	FCP	69
Union Financière de France Banque	Ordinary	74
36 Rue De Naples 75008 Paris		
Ufifrance Immobilier	SCI	20
37 Avenue des Champs Elysées, 75008, Paris		
Bellatrix	SICAV	99
Betelgeuse	SICAV	92
Europe Israel Croissance	SICAV	85
Société Française de Gestion et d'Investissement	Ordinary	67
Sirius	SICAV	99
41 Rue Capitaine Guynemer, 92400, Courbevoie		
Logipierre 1	Ordinary	44
47 Rue du Faubourg Saint-Honoré, 75008, Paris		
CGU Equilibre	FCP	100
Aviva Selection	FCP	100
Diapason 1	FCP	84
UFF Global Convertibles A	FCP	98
UFF Oblicontext Moyen Terme A	FCP	94
53 Avenue d'Iéna		
UFF Valeurs Pme-A (Fintrma)	FCP	98
59 Avenue Pierre Mendes, France 75013, Paris		
Aviva La Fabrique Impact ISR	FCP	100
7 Rue Auber, 75009, Paris		
Vip Conseils	Ordinary	34

Company name	Share Class1	% held
70 Avenue De L'Europe, 92270 Bois-Colombes		
Aviva Epargne Retraite	Ordinary	100
Aviva France Ventures	Ordinary	100
Aviva Investissements	Ordinary	100
Aviva Retraite Professionnelle	Ordinary	100
Aviva Vie, Société Anonyme d'Assurances Vie et de Capitalisation	Ordinary	100
Epargne Actuelle	Ordinary	100
Newco 5	Ordinary	100
Newco 6	Ordinary	100
SCI Pesaro	Ordinary	79
Carpe Diem Société Civile Immobilière	Ordinary	50
Societe Civile Immobiliere Charles Hermite	Ordinary	100
Societe Civile Immobiliere Montaigne	Ordinary	100
Zelmis	Ordinary	100
Aviva Developpement Vie	Ordinary	100
80 Avenue De L'Europe, 92270 Bois-Colombes		
Aviva France	Ordinary	100
Aviva Solutions	Ordinary	100
Croissance Pierre II	Ordinary	100
Groupement D'Interet Economique du Groupe Aviva France	Ordinary	100
Locamat SAS	Ordinary	100
Newco	Ordinary	100
Selectinvie – Societe Civile Immobiliere	Ordinary	100
Selectipierre – Société Civile	Ordinary	100
Societe Concessionaire des Immeubles de la Pepiniere	Ordinary	100
Victoire Immo 1- Société Civile	Ordinary	100
Voltaire S.A.S	Ordinary	100
90 Boulevard Pasteur, 75015, Paris		
Aviva Actions S2 C.	FCP	100
Aviva Couventure Actions	FPS	100
91-93 Boulevard Pasteur, 75015, Paris		
SCI Campus Medicis St Denis	Ordinary	30
SCI Campus Rimbaud St Denis	Ordinary	30
9 Rue Newton, 75116 Paris		
Pretons Ensemble	FPS	30
Pretons Ensemble 2	FPS	30
1 Boulevard Haussman, 75009 Paris		
Afer Actions PME	FCP	100
Aviva Investors Euro Commercial Real Estate Debt II	FCT	34
Aviva Perspective 2021-2025	FCP	100
Aviva Perspective 2026-2030	FCP	100
Aviva Perspective 2031-2035	FCP	100
Aviva Perspective 2036-2040	FCP	100

Germany

Company name	Share Class1	% held
c/o Wswp Weinert GmbH, Theatinerstr. 31, 80333, Munich		
FPB Holdings GmbH	Series A Shares, Series B Shares	100
Speditionstrasse 23, Germany 40221		
Projektgesellschaft Hafenspitze	Ordinary	94
Max-Planck-Strasse, 3,85609 Ascheim-Dornach, Germany		

Company name	Share Class1	% held
ASF German Retail GmbH & Co KG	Ordinary	98
German Retail I GmbH	Ordinary	98
German Retail II GmbH	Ordinary	98
German Retail III GmbH	Ordinary	98
German Retail Investment Properties Sarl	Ordinary	98
German Retail IV GmbH	Ordinary	98
German Retail IX GmbH	Ordinary	98
German Retail V GmbH	Ordinary	98
German Retail VII GmbH	Ordinary	98
German Retail VIII GmbH	Ordinary	98
Sachsenfonds GmbH	Ordinary	98
Eschenheimer Anlage 1, 60315 Frankfurt		
Reschop Carre Hattingen GmbH	Ordinary	95
Reschop Carre Marketing GmbH	Ordinary	100

Guernsey

Company name	Share Class1	% held
PO Box 255, Trafalgar Court, Les Banques, St. Peter Port, GY1 3QL		
AXA Property Trust Ltd	Ordinary	28
BMO Commercial Property Trust Ltd	Ordinary	47
PO Box 34, St Martin's House, Le Bordage, Guernsey CY1 4AU		
Paragon Insurance Company Guernsey Limited	Ordinary	46
Marlborough International Management Limited, First Floor, Tudor House, Le Bordage, St Peter Port, Guernsey, Channel Islands GY1 1 DB		
Marlborough International Fund PCC Limited re: Marlborough Balanced Cell	OEIC	27
PO Box 287, 4th Floor, West Wing, Trafalgar Court, Admiral Park		
WSF Asian Pacific Fund	OEIC	33
Hong Kong		
21st Floor, Chater House, 8 Connaught Road Central		
JPMorgan Indonesia Fund	Unit Trust	37
30/F, One Kowloon, 1 Wang Yuen Street, Kowloon Bay, Hong Kong		
Aviva Life Insurance Company Limited	Ordinary	40

India

Company name	Share Class1	% held
2nd Floor, Prakash Deep Building 7, Tolstoy Marg, New Delhi, Delhi, 110001		
Aviva Life Insurance Company India Limited[2]	Ordinary	49
A-47 (L.G.F), Hauz Khas, New Delhi, Delhi		
Sesame Group India Private Limited	Ordinary	100
Pune Office Addresses 103/P3, Pentagon, Magarpatta City, Hadapsar, Pune – 411013		
A.G.S. Customer Services (India) Private Limited	Ordinary	100

Indonesia

Company name	Share Class1	% held
Pondok Indah Office Tower 3, 1st Floor, Jl. Sultan Iskandar Muda Kav. V-TA, Pondok Indah, Jakarta Selatan, Jakarta, 12310		
PT Astra Aviva Life[2]	Ordinary	50

Ireland

Company name	Share Class1	% held
25/28 North Wall Quay, Dublin		
Aviva Investors Euro Liquidity Fund	Liquidity Fund	95
Aviva Investors Sterling Government Liquidity Fund	Liquidity Fund	94
Aviva Investors Sterling Liquidity Fund	Liquidity Fund	77
Aviva Investors Sterling Liquidity Plus Fund	Liquidity Fund	78
Georges Court, 54-62 Townsend Street, Dublin 2		
FPPE Fund Public Limited Company	Shares Of No Par Value Shares, 1 Subscriber Euro €1 Shares	100
EM LC Gov Bond Index Fund (B14)	OEIC	23
GAM Fund Management Limited, "George Court, 54-62 Townsend Street	OEIC	23
Guild House, Guild Street, IFRS, Dublin 1		
Aviva Irl Merrion Exempt Trust - Managed Fund	Unit Trust	60
Aviva Irl Merrion Multi Asset 30	Unit Trust	100
Aviva Irl Merrion Multi Asset 50	Unit Trust	100
One Park Place, Hatch Street, Dublin 2		
Area Life International Assurance dac	A Shares, B Shares	100
Aviva DB Trustee Company Ireland Designated Activity Company	Ordinary	100
Aviva DC Trustee Company Ireland Designated Activity Company	Ordinary	100
Aviva Direct Ireland Limited	Ordinary	100
Aviva Driving School Ireland Limited	Ordinary	100
Aviva Group Services Ireland Limited	Ordinary	100
Aviva Insurance Ireland Designated Activity Company	Ordinary	100
Aviva Life & Pensions Ireland Designated Activity Company	Ordinary	100
Aviva Life Services Ireland Limited	Ordinary	100
Peak Re Designated Activity Company	Ordinary	100
Charlotte House, Charlemount Street		
Mercer Diversified Retirement Fund	OEIC	26
Mercer Multi Asset Defensive Fund	OEIC	37
Mercer Multi Asset Growth Fund	OEIC	33
Mercer Multi High Growth Fund	OEIC	24
Mercer Multi Asset Moderate Growth Fund	OEIC	46
3rd Floor, 2 Harbourmaster Place, IFSC		

Company name	Share Class1	% held
KBI Institutional Fund ICAV – KBI Institutional Eurozone Equity Fund	OEIC	37
Behan House 10 Mount Street Lower Dublin 2, Ireland		
CALM Eurozone Equity Sub Fund	OEIC	99
AG10 Currency Fund	OEIC	95
78 Sir John Rogersons Quay Dublin 2 Ireland		
State Street IUT Balanced Fund S30	Unit Trust	31
Russell Investment Company Plc – Acadian Multi-Asset Absolute Return UCITS	OEIC	28
SSgA GRU Euro Index Equity Fund	Unit Trust	46
One Coleman Street, London EC2R 5AA		
Legal & General ICAV – L&G World Equity Index Fund	OEIC	64
Legal & General ICAV – L&G Multi-Index EUR V Fund	OEIC	100
Legal & General ICAV – L&G Multi-Index EUR IV Fund	OEIC	100
Legal & General ICAV – L&G Multi-Index EUR III Fund	OEIC	100
Friends First House Cherrywood Science & Technology Park Loughlinstown Co. Dublin Ireland		
Ashtown Management Company Limited	Ordinary	50
Friends First US Property Company Limited	Ordinary	100
1211 Avenue of the Americas (Proxy)		
Annaly Credit Opportunities Ireland ICAV	Alternative Investment	100
2nd Floor, IFSC House, Int'l Financial Services Centre, Custom House Docks		
Barings International Umbrella Fund – Barings International Bond Fund	Unit Trust	26
1 Custom House Plaza, IFSC		
Blackrock Emerging markets Bond Hard Currency Fam Fund	OEIC	23
Eurizon Flexible Equity Strategy FAM Fd	OEIC	26
JP Morgan European Equity FAM Fund	OEIC	28
Nordea Stable Performance FAM Fd	OEIC	21
Vontobel Global Equity FAM Fd	OEIC	22
JP Morgan House, International Financial Services Centre		
BlackRock Index Selection Fund Market Advantage Strategy	Unit Trust	27
Trafalgar Court, Admiral Park		
CGWM Affinity Fund	OEIC	36
CGWM Diversity Fund	OEIC	25
CGWM Opportunity Fund	OEIC	45
13-18 City Quay, Ireland		

Company name	Share Class1	% held
Friends First Managed Pensions Funds Designated Activity Company	Ordinary	100
25 Cabot Square, Canary Wharf		
FundLogic Alternatives plc	OEIC	30
MDO Management Company SA, 19 rue de Bitbourg		
Kensington Diversified Balanced Fund	OEIC	20
Kensington Diversified Growth Fund	OEIC	27
One Iron Street		
SPDR FTSE EPRA Europe ex UK Real Estate UCITS ETF	OIEC	24
3rd Floor, 2 Harbourmaster, IFSC		
KBI Institutional Fund ICAV – KBI Institutional Eurozone Equity Fund	OEIC	36

Isle of Man

Company name	Share Class1	% held
Royal Court, Castletown, IM9 1RA		
Friends Provident International Limited	Ordinary B Shares, Ordinary Shares	100
Friends Provident International Services Limited	Ordinary Shares	100

Italy

Company name	Share Class1	% held
Piazzetta Guastalla 1, 20122, Milan		
Banca Network Investimenti SPA	Ordinary	25
Via Scarsellini 14, 20161, Milan		
Aviva Italia Holding S.p.A	Ordinary	100
Aviva Italia S.p.A	Ordinary	100
Aviva Italia Servizi Scarl	Ordinary	92
Aviva Life SPA	Ordinary	100
Aviva SPA	Ordinary	51
Aviva Vita Spa	Ordinary	80
Milano, Piazza Lina Bo Bardi n. 3		
Aviva Immobiliare	Real Estate Fund	100

Jersey

Company name	Share Class1	% held
19-21 Broad Street, St Helier, JE1 3PB		
11-12 Hanover Square UT[2]	Unit Trust	50
130 Fenchurch Street UT[2]	Unit Trust	50
30-31 Golden Square UT[2]	Unit Trust	50
Barratt House UT[2]	Unit Trust	50
Chancery House Unit Trust	Unit Trust	50
Irongate House UT	Unit Trust	50
New Broad Street House UT	Unit Trust	50
Pegasus House and Nuffield House UT[2]	Unit Trust	50
W Nine Unit Trust	Unit Trust	50
3rd Floor Walker House, 28-34 Hill Street, St Helier, JE4 8PN		
1 Fitzroy Place Jersey Unit Trust[2]	Unit Trust	50
2 Fitzroy Place Jersey Unit Trust[2]	Unit Trust	50
Lime Grove House , Green Street, St Helier, JE1 2ST		
20 Gracechurch Unit Trust	Unit Trust	100
Designer Retail Outlet Centres Unit Trust	Unit Trust	97

Company name	Share Class1	% held
COW Real Estate Investment Unit Trust	Unit Trust	100
Quantum Unit Trust	Unit Trust	50
Southgate Unit Trust	Unit Trust	50
The Designer Outlet Centres (Mansfield) Unit Trust	Unit Trust	97
The Designer Outlet Centres (York) Unit Trust	Unit Trust	97
The Designer Retail Outlet Centres Unit Trust	Unit Trust	97
3rd Floor, One The Esplanade, Jersey, JE2 3QA		
Crieff Road Limited	Ordinary	100
FF UK Select Limited	Ordinary	100

Lithuania

Company name	Share Class1	% held
Lvovo g. 25, Vilnius, LT-09320		
Uždaroji akcinė gyvybės draudimo ir pensijų bendrovė "Aviva Lietuva" (Joint Stock Limited Life Insurance and Pension Company Aviva Lietuva)	Ordinary	90

Luxembourg

Company name	Share Class1	% held
15 Rue du Fort Bourbon, L-1249		
Aviva Investors European Secondary Infrastructure Credit SV S.A	Ordinary	67
16 Avenue de la Gare, 1610		
Aviva Investors Luxembourg Services S.a.r.l	Ordinary	100
AFRP Sarl	Ordinary	100
Aviva Investors European Renewable Energy SA	Ordinary	100
Victor Hugo 1 Sarl	Ordinary	100
Aviva Investors Polish Retail S.à r.l.	Ordinary	100
MPS L14 Sarl	Unit Trust	100
2 rue Edward Steichen, L – 2540, Luxembourg, LU		
VAM Managed Funds (Lux) – VAM Balanced Fund	SICAV	53
VAM Managed Funds (Lux) – International Real Estate Equity Fund	SICAV	34
1c Rue Gabriel Lippmann, L -5365, Munsbach, LU		
Patriarch Classic B&W Global Freestyle	FCP	31
2 Rue de Bitbourg, L-1273		
Janus Henderson Horizon – European Growth Fund	SICAV	32
2 Rue du Fort Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
AFRP Sarl	Ordinary	100
AIEREF Holdings 1 Sarl	Equity Shares	44
AIEREF Holdings 2 Sarl	Ordinary	100
Aviva Investors Alternative Income Solutions General Partner Sarl	Ordinary	100
Aviva Investors Alternative Income Solutions Investment SA	Ordinary	100
Centaurus CER (Aviva Investors) Sarl	Sarl	100
EP Megaron GmbH & Co KG	KG	100
EP Megaron GP GmbH	GP	100

Company name	Share Class1	% held
EP Megaron Holding Sarl	Ordinary	100
European Properties Sarl	Ordinary	98
Sapphire Ile de France 1 Sarl	Ordinary	100
Sapphire Ile de France 2 Sarl	Ordinary	100
Aviva Investors Perpetual Capital	Alternative Investment Fund	50
Aviva Investors Alternative Income Solutions SCSp	Ordinary	55
Aviva Investors Alternative, FCP-RAIF	FCP	57
Aviva Investors Asian Equity Income Fund	SICAV	99
Aviva Investors Cells Fund	Alternative Investment	100
Aviva Investors CELLs Danone Sarl	Ordinary	100
Aviva Investors CELLs Holdings	Ordinary	100
Aviva Investors CELLS Stern Sarl	Ordinary	100
Aviva Investors CELLS SCSp	Ordinary	100
Aviva Investors EBC Sarl	Ordinary	100
Aviva Investors Climate Transition Equity Fund	SICAV	99
Aviva Investors European Corporate Bond Fund	SICAV	64
Aviva Investors Emerging Markets Equity Small Cap Fund	SICAV	85
Aviva Investors Emerging Markets Bond Fund	SICAV	82
Aviva Investors Emerging Corporate Bond Fund	SICAV	84
Aviva Investors Emerging Equity Income Fund	SICAV	99
Aviva Investors Emerging Markets Local Currency Bond Fund	SICAV	90
Aviva Investors European Equity Fund	SICAV	67
Aviva Investors Equity Income Fund	SICAV	100
Aviva Investors European Real Estate Securities Fund	SICAV	66
Aviva Investors Global Aggregate Bond Fund	SICAV	96
Aviva Investors Global Convertibles Absolute Return Fund	SICAV	77
Aviva Investors Global Convertibles Fund	SICAV	76
Aviva Investors Global Emerging Markets Equity Unconstrained Fund	SICAV	100
Aviva Investors Global Emerging Markets Index Fund	SICAV	89
Aviva Investors Global Equity Endurance Fund	SICAV	99
Aviva Investors Global Equality Unconstrained Fund	SICAV	100
Aviva Investors Global High Yield Bond Fund	SICAV	68
Aviva Investors Global Investment Grade Corporate Bond Fund	SICAV	88
Aviva Investors Investment Solutions Emerging Markets Debt Fund	SICAV	100
Aviva Investors Luxembourg	Ordinary	100
Aviva Investors Multi-Strategy Fixed Income Fund	SICAV	29

Company name	Share Class1	% held
Aviva Investors Multi-strategy Target Income Fund	SICAV	75
Aviva Investors Multi-strategy Target Return Fund	SICAV	48
Aviva Investors Short Duration Global High Yield Bond Fund	SICAV	41
Aviva Investors Sustainable Income & Growth Fund	SICAV	98
Aviva Investors UK Equity Focus Fund	SICAV	94
Aviva Investors US Equity Income Fund	SICAV	68
German Retail Investment Property Fund	FCP	98
Hexagone.S.a.r.l	SICAV	100
3 Rue des Labours, L-1912		
Haspa Trendkonzept	FCP	55
42 Rue de la Vallée, L-2661, Luxembourg LU		
World Investment Opportunities Funds – China Performance Fund	SICAV	35
World Investment Funds – India Performance Fund	SICAV	34
46a Avenue John F Kennedy, L-1855, Luxembourg, Grand Duchy of Luxembourg		
Centaurus CER (Aviva Investors) Sarl	Ordinary	100
EPI NU Sarl	Ordinary	100
47 Avenue John F Kennedy, L-1855 Luxembourg		
Goodman European Business Park Fund (Lux) S.àr.l.	Ordinary	50
49 Avenue J-F Kennedy, L-1855, Luxembourg LU		
BMO European Growth & Income Fund	SICAV	100
BMO Diversified Growth Fund	SICAV	90
BMO Global Total Return Bond Fund	SICAV	63
2 Boulevard Konrad Adenauer, L-1115, Luxembourg		
Aviva Infrastructure Debt Europe SA	Fund	100
DWS Global Aribusiness	FCP	20
Xtrackers II Eurozone Government Bond 15-30 UCITS ETF	SICAV	27
5, Allée Scheffer, L-2520		
Pramerica Pan-European Real Estate Fund	Alternative Investment Fund	59
Pramerica Pan-European Estate Fund II	Alternative Investment Fund	25
Tikehau Italy Retail Fund II Scsp-Area12	Alternative Investment Fund	20
Tikehau Senior Loans III	Alternative Investment Fund	20
5 rue Heienhaff, L-1736 Senningerberg, Grand Duchy of Luxembourg		
The Jupiter Global Fund - Jupiter Financial Innovation	SICAV	26
2C rue Albert Borschette, L-1246, Luxembourg		
AQR Systematic Total Return Fund II	SICAV	62
4 Rue Albert Borschette, 1246 Luxembourg		

Company name	Share Class1	% held
Negentrophy – Debt Select Fund	Alternative Investment Funde	32
14 Porte de France		
Aviva Investors Cells Fund	Alternative Investment Fund	64
15 rue du Bourbon, L-1249 Luxembourg, Grand Duchy of Luxembourg		
Aviva Investors European Secondary Infrastructure Credit SV S.A	Fund	68
2-4 Rue, Eugene Ruppert – 2453, Luxembourg LU		
Invesco Funds – Invesco Emerging Markets Equity Fund	SICAV	28
Invesco Funds – Invesco Global Care Fund	SICAV	35
Invesco Funds – Invesco Global Opportunities Fund	SICAV	30
Invesco Funds – Invesco UK Equity Fund	SICAV	36
Invesco Funds – Invesco US Fund	SICAV	42
562 rue de Neudorf, L – 2220 Luxembourg LU		
Nordea 1 – Swedish Bond Fund	SICAV	32
Nordea 1 – Swedish Short-Term Bond Fund	SICAV	32
11 rue Aldringen, L1118, Luxwmbourg LU		
KMG Sicav – SIF Devere Global Frontier Markets Fund	SICAV	22
KMG Sicav – SIF Devere Medical Opportunities Fund	SICAV	20
6 H route de Treves, L – 2633, Senningerberg, LUK		
Momentum Global Funds Harmony Portfolios Asian Growth Fund	SICAV	20
Momentum Global Funds Harmony Portfolios Euro Diversifed Fund	SICAV	24
6 Route de Treves, L – 2633, Senningerberg, LU		
JPMorgan Funds – USD Money Market VNAV Fund	SICAV	24
Malta		
Central North Business Centre, Level 1, Sqaq il-Fawwara, Sliema (Proxy)		
Herakles	Alternative Investment Fund	47
Herakles II	Alternative Investment Fund	100
Mauritius		
4th Floor, Raffles Tower, 19 Cybercity, Ebene		
Reliance Emergent India Fund	OEIC	88
Norway		
Tollbugate 27,0157 Oslo Norway		
Aviva Investors CELLs Norway AS	Cells Fund	100
Aviva CELLS Norway Holding AS	Cells Fund	100
Kongsgard Alle 20 AS	Cells Fund	100
Poland		
Inflancka 4b, 00-189 Warszawa		
AdRate Sp z.o.o	Ordinary	90

Company name	Share Class1	% held
Aviva Investors FIO Aktywnej Alokacji	UCITS	23
Aviva Investors Fio Depozyt Plus	UCITS	42
Aviva Investors Fio Malych Spolek	UCITS	68
Aviva Investors Fio Nowoczesnych Technologii	UCITS	79
Aviva Investors Fio Obligacji	UCITS	79
Aviva Investors Fio Polskich Akcji	UCITS	57
Aviva Investors Sfio Akcyjny	Non UCITS	100
Aviva Investors Sfio Aviva Lokacyjny	Non UCITS	71
Aviva Investors Sfio Dluzny	Non UCITS	100
Aviva Investors Sfio Dluzny Spotek	Non UCITS	100
Aviva Investors Sfio Pap Nieskarbowych	Non UCITS	99
Aviva Investors Sfio Pieniezny	Non UCITS	100
Aviva Investors Sfio Spolek Dywidend	Non UCITS	100
Aviva Services Spolka z organisczona odpowiedzialnoscia	Non UCITS	90
Expander Advisors Sp z.o.o	Ordinary	90
Life Plus Sp z.o.o	Ordinary	90
Aviva Poland Towarzystwo Funduszy Investycyjnych SA	Ordinary	95
Aviva Powszenchne Towarzystwo Emerytaine Aviva Santander SA	Ordinary	81
Aviva Towarzystwo Ubezpieczen NA Zycie SA	Ordinary	90
Aviva Towarzystwo Ubezpieczen Ogolnych SA	Ordinary	95
Santander Aviva Towarzystwo Ubezpieczen na Zycie Spolka Akcyjna	Ordinary	51
Santander Aviva Towarzystwo Ubezpieczen Spolka Akcyjna	Ordinary	51
Porowneo pl Sp z.o.o	Ordinary	90
Aviva Sfio Subfundusz Aviva Oszczednosciowy	Non UCITS (AIF)	100
Aviva Spolka z ograniczona odpowiedzialnoscia	Ordinary	90
Prosta 69 Poland 00-383		
Proowneo.pl Sp zoo	Ordinary	90
Al Jana Powla		
Wroclaw BC Sp Zoo	Ordinary	100

Saudi Arabia

Company name	Share Class1	% held
Riyad Capital, 6775 Takhassusi Street – Olaya, Riyadh 12331 – 3712		
Riyad Al Jarei Fund (SAR)	Mutual Fund	28
Riyad Al Jarei Sharia Fund (SAR)	Mutual Fund	67
Riyad Al Mutahafedh Sharia Fund (SAR)	Mutual Fund	89
Riyad Al Mutawazen Sharia Fund (SAR)	Mutual Fund	80
Riyad Al Shujia'a Fund (SAR	Mutual Fund	22
Riyad Al Shujia'a Sharia Fund	Mutual Fund	90

Singapore

Company name	Share Class1	% held
12 Marina View, #18-02 Asia Square Tower 2, 018961		
Nikko AM Shenton Asia Pacific Fund	Unit Trust	66
Nikko AM Shenton Income Fund	Unit Trust	53
Nikko AM Shenton Global Green Bond Fund	Unit Trust	45
4 Shenton Way, #01-01 SGX Centre 2, Singapore, 068807		
Aviva Ltd	Ordinary	100
Navigator Investment Services Limited	Ordinary	100
6 Shenton Way, #09-08, OUE Downtown, 068809		
Professional Advisory Holdings Ltd.	Ordinary A	92
Professional Investment Advisory Services Pte Ltd	Ordinary A	92
1 Raffles Quay #27-13 South Tower 4, Singapore 048583		
Aviva Investors Asia Pte Limited	Ordinary	100
6 Temasek Boulevard, #29-00, Suntec Tower 4, 038986		
Aviva Asia Digital Pte. Ltd.	Ordinary	100
Aviva Asia Pte Ltd	Ordinary	100
Aviva Financial Advisers Pte. Ltd	Ordinary	100
Aviva Global Services (Management Services) Private Ltd.	Ordinary	100

Spain

Company name	Share Class1	% held
Avda Andalucia, 10-12, Malaga		
Ahorro Andaluz, S.A	Ordinary	50
Avda de Bruselas – Numero 13, Edificio, America, Piso 1, Puerto d, Alcobendas 28-Madrid		
Eolica Almatret SL	Ordinary	45
Nanclares de Oca, numero 1-B Spain 28022		
San Ramon Hoteles	Ordinary	100
Todo Real Est Investments	Ordinary	100

Switzerland

Company name	Share Class1	% held
Stockerstrasse, 38 8002 , Zurich		
Aviva Investors Schweiz GmbH	Interest	100

Turkey

Company name	Share Class1	% held
Saray Mah., Adnan Büyüjdeniz Cad. No:12 34768 Umraniye, Istanbul		
AvivaSA Emeklilik ve Hayat	Ordinary	40

United Kingdom

Company name	Share Class1	% held
No 1 Dorset Street, Southampton, Hampshire SO15 2DP		
Mill NU Properties Limited	Ordinary A	100
Building a Future (Newham Schools) Limited	Ordinary	100
NU Local Care Centres (Bradford) Limited	Ordinary	100
NU Local Care Centres (Chichester No.1) Limited	Ordinary	100
NU Local Care Centres (Chichester No.2) Limited	Ordinary	100
NU Local Care Centres (Chichester No.3) Limited	Ordinary	100
NU Local Care Centres (Chichester No.4) Limited	Ordinary	100

Company name	Share Class[1]	% held
NU Local Care Centres (Chichester No.5) Limited	Ordinary	100
NU Local Care Centres (Chichester No.6) Limited	Ordinary	100
Argyll House, All Saints Passage, London SW18		
Freetricity Southeast Limited	Ordinary	100
Centrium 1, Griffiths Way St Albans, United Kingdom, AL1 2RD		
Opal (UK) Holdings Limited	Ordinary	28
Opal Information Systems Limited	Ordinary	28
Outsourced Professional Administration Limited	Ordinary	28
Synergy Financial Products Limited	Ordinary	28
29 Queen Anne's Gate, London SW1H 9BU		
LF Bentley Global Growth	OEIC	58
LF Bentley Sterling Balanced Fund	OEIC	33
30 Finsbury Square, London, EC2P 2YU		
The Designer Retail Outlet Centres (General Partners) Limited	GP	50
42 Dingwall Road, Croydon, Surrey, CR0 2NE		
Health & Case Management Limited	Ordinary Preference	25
Ballard Investment Company Limited	Ordinary	25
4th Floor, New London House, 6 London Street, London, EC3R 7LP		
Polaris U.K. Limited	Ordinary	39
The Green Easter Park, Benyon Road, Reading RG7 2PQ		
Homesun 2 Limited	Ordinary	100
Homesun 3 Limited	Ordinary	100
Homesun 4 Limited	Ordinary	100
Homesun 5 Limited	Ordinary	100
Homesun Limited	Ordinary	100
Anesco Mid Devon Limited	Ordinary	100
Anesco South West Limited	Ordinary	100
Free Solar (Stage 1) Limited	Ordinary	100
New Energy Residential Solar Limited	Ordinary	100
Norton Energy SLS Limited	Ordinary	100
TGHC Limited	Ordinary	100
5 Lister Hill, Horsforth, Leeds, LS18 5AZ		
Aspire Financial Management Limited	Ordinary	47
Living in Retirement Limited	Ordinary	47
Tenet Business Solutions Limited	Ordinary	47
Tenet Client Services Limited	Ordinary	47
Tenet Financial Services Limited	A Ordinary Redeemable Ordinary	37
Tenet Group Limited	Ordinary B	47
Tenet Limited	Ordinary	47
Tenet Platform Services Limited	Ordinary A	47
TenetConnect Limited	Ordinary	47
TenetConnect Services Limited	Ordinary	47
TenetFinancial Solutions Limited	Ordinary	47

Company name	Share Class[1]	% held
TenetLime Limited	Ordinary	47
TenetSelect Limited	Ordinary	47
5 Old Broad Street, London EC2N 1A		
Architas Multi-Manager Diversified Protector 70	OEIC	50
Architas Multi-Manager Diversified Protector 80	OEIC	37
50 Stratton Street, London, W1J 8LL		
Lazard Multicap UK Income Fund	OEIC	50
7 Lochside View, Edinburgh, EH12 9DH		
Origo Services Limited	Ordinary	22
7 Newgate Street, EC1A 7NX		
AXA Ethical Distribution Fund	OEIC	32
AXA Rosenberg American Fund	OEIC	89
AXA Rosenberg Asia Pacific Ex Japan Fund	OEIC	97
AXA Rosenberg Global Fund	OEIC	88
AXA Rosenberg Japan Fund	OEIC	95
8 Surrey Street, Norwich, Norfolk, NR1 3NG		
Aviva Central Services UK Limited	Ordinary	100
Aviva Consumer Products UK Limited	Ordinary	100
Aviva Health UK Limited	Ordinary	100
Aviva Insurance UK Limited	Ordinary	100
Aviva UKGI Investments Limited	Ordinary	100
Gresham Insurance Company Limited	Ordinary	100
Healthcare Purchasing Alliance Limited[2]	Ordinary A	50
London and Edinburgh Insurance Company Limited	Ordinary	100
RAC Pension Trustees Limited	Ordinary	100
Solus (London) Limited	Ordinary	100
Synergy Sunrise (Broadlands) Limited	Ordinary	100
East Farmhouse, Cams Hall Estate, Fareham, PO16 8UT		
IQUO Limited	Ordinary A Shares	67
Exchange House, Primrose Street, EC2A 2HS		
BMO Emerging Markets Equity Fund	OEIC	35
BMO MM Navigator Balanced Fund	OEIC	20
BMO Global Total Return Bond (GBP Hdg) Fund	Private Equity	30
Calton Square, 1 Greenside Row		
Baillie Gifford Investment Funds II ICVC-Baillie Gifford UK Equity Core Fund	OEIC	20
12 Throgmorton Avenue		
BlackRock Market Advantage Fund	Unit Trust	32
Pitheavlis, Perth, Perthshire, PH2 0NH		
Aviva Investors Private Equity Programme 2008 Partnership	LP	40
Aviva (Peak No.1) UK Limited	Ordinary	100
Aviva Insurance Limited	Ordinary	100
Aviva Investors (FP) Limited	Ordinary	100
Aviva Investors (FP) LP	LP	100
General Accident plc	Ordinary	100

Company name	Share Class1	% held
Aviva Investors (GP) Scotland Limited	GP	100
Pixham End, Dorking, Surrey, RH4 1QA		
Aviva Administration Limited	Ordinary	100
Aviva Investment Solutions UK Limited	Ordinary	100
Aviva Management Services UK Limited	Ordinary	100
Bankhall Support Services Limited	Ordinary	100
Friends AEL Trustees Limited	Ordinary	100
Friends AELLAS Limited	Ordinary	100
Friends AELRIS Limited	£1 Stock	100
Friends Life and Pensions Limited	Ordinary	100
Friends Life Assurance Society Limited	Ordinary	100
Friends Life Company Limited	Ordinary	100
Friends Life Distribution Limited	Ordinary	100
Friends Life FPG Limited	Ordinary	100
Friends Life FPL Limited	Ordinary	100
Friends Life FPLMA Limited	Ordinary	100
Friends Life Holdings plc	Ordinary	100
Friends Life Limited	Ordinary	100
Friends Life WL Limited	Ordinary	100
Friends Provident Distribution Holdings Limited	Ordinary	100
Friends Provident Investment Holdings Limited	Ordinary A	100
Friends Provident Life Assurance Limited	Ordinary	100
Friends Provident Managed Pension Funds Limited	Ordinary	100
Friends SL Nominees Limited	Ordinary	100
Friends SLUA Limited	Ordinary	100
Gateway Specialist Advice Services Limited	Ordinary	100
London and Manchester Group Limited	Ordinary	100
Premier Mortgage Service Limited	Ordinary	100
SB Loan Administration Limited	Ordinary	100
Sesame Bankhall Group Limited	Ordinary	100
Sesame Bankhall Valuation Services Limited	Ordinary A	75
Sesame General Insurance Services Limited	Ordinary	100
Sesame Limited	Ordinary	100
Sesame Regulatory Services Limited	Ordinary	100
Sesame Services Limited	Ordinary A	100
Suntrust Limited	Ordinary	100
Undershaft FAL Limited	Ordinary	100
Undershaft FPLLA Limited	Ordinary	100
Undershaft SLPM Limited	Ordinary	100
Wealth Limited	Ordinary	100
St Helen's, 1 Undershaft, London, EC3P 3DQ		
1 Fitzroy Place Limited	Ordinary	50
1 Liverpool Street General Partner Limited	Ordinary	100
1 Liverpool Street Nominee 1 Limited	Ordinary	100
1 Liverpool Street Nominee 2 Limited	Ordinary	100
10-11 GNS Limited (Great Newport Street)	Ordinary	100
11-12 Hanover Square LP	LP	50
11-12 Hanover Square Nominee 1 Limited	Ordinary	50
11-12 Hanover Square Nominee 2 Limited	Ordinary	50
130 Fenchurch Street General Partner Limited	GP	50
130 Fenchurch Street Nominee 1 Limited	Ordinary	50
130 Fenchurch Street LP	Limited Partnership	50
130 Fenchurch Street Nominee 2 Limited	Ordinary	50
1-5 Lowndes Square Management Company Limited	Ordinary	100
2 Fitzroy Place Limited Partnership	Limited Partnership	100
20 Lowndes Square Management Company Limited	Ordinary	50
20 Gracechurch (General Partner) Limited	GP	100
20 Gracechurch Limited Partnership	Limited Partnership	100
2-10 Mortimer Street (GP No1) Limited	GP	50
2-10 Mortimer Street GP Limited	Ordinary	50
2-10 Mortimer Street Limited Partnership	Limited Partnership	50
30 Station Road Nominee 1 Limited	Ordinary	50
30 Station Road Nominee 2 Limited	Ordinary	50
30 Station Road Unit Trust – Closed Ended Fund	Unit Trust	50
30 Warwick Street LP	Limited Partnership	50
30 Warwick Street Nominee 1 Limited	Ordinary	50
30 Warwick Street Nominee 2 Limited	Ordinary	50
30-31 Golden Square Nominee LP	Ordinary	50
30-31 Golden Square Nominee 1 Ltd	Ordinary	50
30-31 Golden Square Nominee 2 Ltd	Ordinary	50
41-42 Lowndes Square Management Company Limited	Ordinary	100
43 Lowndes Square Management Company Limited	Ordinary	100
44-49 Lowndes Square Management Company Limited	Ordinary	100
50-60 Station Road Nominee 1 Limited	Ordinary	50
50-60 Station Road Nominee 2 Limited	Ordinary	50
6-10 Lowndes Square Management Company Limited	Ordinary	100
AI Special PFI SPV Limited	Ordinary	100
Atlas Park Management Company Limited	Limited by Guarantee	100
AEP Feeder Fund V	Unit Trust	100
Asl Infrastructure Equity Npv	Ordinary	100

Company name	Share Class[1]	% held
Aviva Plc	Ordinary	100
Aviva Investors 40 Spring Gardens (General Partner) Limited	GP	100
Aviva Investors Commercial Asset GP Limited	GP	100
Aviva Investors Pensions Limited	Ordinary	100
Aviva Investors Energy Centres No 1 Limited Partnership	GP	100
Aviva Investors Ground Rent Holdco Limited	Ordinary	100
Aviva Investors Infrastructure GP Limited	GP	100
Aviva Investors Infrastructure Income No 1 Limited	Ordinary	100
Aviva Investors Infrastructure Income No 2 Limited	Ordinary	100
Aviva Investors Infrastructure Income No 3 Limited	Ordinary	100
Aviva Investors Infrastructure Income No 4A Limited	Ordinary	100
Aviva Investors Infrastructure Income No 4B Limited	Ordinary	100
Aviva Investors Polish Retail GP Limited	GP	100
Aviva Investors Polish Retail Limited Partnership	Limited Partnership	100
Aviva Investors Property Fund Management Limited	Ordinary	100
Ascot Real Estate Investments LP2	Limited Partnership	50
Ascot Real Estate Investments GP LLP[2]	Limited Partnership	50
Aviva Group Holdings Limited	Ordinary	100
Aviva Staff Pension Trustee Limited	Ordinary	100
Aviva Brands Limited	Ordinary	100
Aviva Commercial Finance Limited	Ordinary	100
Aviva Company Secretarial Services Limited	Ordinary	100
Aviva Credit Services UK Limited	Ordinary	100
Aviva Employment Services Limited	Ordinary	100
Aviva Europe SE	Ordinary	100
Aviva Insurance Services UK Limited	Ordinary	100
Aviva International Holdings Limited	Ordinary	100
Aviva International Insurance Limited	Ordinary	100
Aviva Investors Global Services Limited	Ordinary	100
Aviva Investors Ground Rent GP Limited	Ordinary	100
Aviva Investors Holdings Limited	Ordinary	100
Aviva Investors EBC Limited Partnership	LP	100
Aviva Investors EBC GP Limited	GP	100
Aviva Investors UK Fund Services Limited	Ordinary	100
Aviva Investors UK Funds Limited	Ordinary	100
Aviva Overseas Holdings Limited	Ordinary	100
Aviva Public Private Finance Limited	Ordinary	100

Company name	Share Class1	% held
Aviva UK Digital Limited	Ordinary	100
Aviva UKLAP De-risking Limited	Ordinary	100
Aviva Investors Real Estate Limited	Ordinary	100
Aviva Investors Realm Energy Centres GP Limited	GP	100
Aviva Investors Social Housing Limited	Ordinary	100
Aviva Investors Social Housing GP Limited	Ordinary	100
Aviva Investors UK CRESD GP Limited	GP	100
Aviva Investors UK Equity Ex Tobacco	Collective Investment Scheme	100
Aviva Investors 30 70 Global Equ Ccy Hedged Ind Fund	Collective Investment Scheme	100
Aviva Investors 40 60 Global Equity Index Fund	Collective Investment Scheme	100
Aviva Investors 50 50 Global Equity Index Fund	Collective Investment Scheme	100
Aviva Investors 60 40 Global Equity Index Fund	Collective Investment Scheme Collective Investment Scheme	100
Aviva Investors Asia Pacific ex Japan Fund	Collective Investment Scheme Collective	100
Aviva Investors Asia Pacific Property Fund	OEIC	80
Aviva Investors Balanced Life Fund	Collective Investment Scheme Collective	100
Aviva Investors Balanced Pension Fund	Collective Investment Scheme Collective	100
Aviva Investors Cautious Pension Fund	Collective Investment Scheme Collective	100
Aviva Investors Continental Euro Equity Index Fund	Collective Investment Scheme Collective	100
Aviva Investors Continental European Eq Alpha Fund	Collective Investment Scheme Collective	100
Aviva Investors Corporate Bond Fund	OEIC	93
Aviva Investors Dev Asia Pacific Ex Japan Eq Ind Fund	Collective Investment Scheme Collective	100
Aviva Investors Dev Euro Ex UK Equity Index Fund	Collective Investment Scheme Collective	100
Aviva Investors Dev World Ex UK Equity Index Fund	Collective Investment Scheme Collective	100
Aviva Investors Developd Overseas Gov Bd Ex UK Ind Fd	Collective Investment Scheme Collective	100
Aviva Investors Distribution Life Fund	Collective Investment Scheme Collective	100
Aviva Investors Europe Equity ex UK Fund	Collective Investment Scheme Collective	100
Aviva Investors European Property Fund	OEIC	77
Aviva Investors Global Equity Alpha Fund	Collective Investment Scheme Collective	100
Aviva Investors Global Equity Endurance Fund	OEIC	100
Aviva Investors Global Equity Fund	Collective Investment Scheme Collective	100
Aviva Investors Equity Income Fund	OEIC	78
Aviva Investors High Yield Bond Fund	OEIC	40
Aviva Investors Index Linked Gilt Fund	Collective Investment Scheme	100
Aviva Investors Idx-Lkd Gilts Ovr 5 Yrs Idx Fund	Collective Investment Scheme	100
Aviva Investors International Index Tracking Fund	Collective Investment Scheme	70
Aviva Investors Japan Equity Alpha Fund	Collective Investment Scheme	100

Company name	Share Class1	% held
Aviva Investors Japan Equity Fund	Collective Investment Scheme	100
Aviva Investors Japan Equity MoM 1 Fund	Collective Investment Scheme	100
Aviva Investors Japanese Equity Index Fund	OEIC	100
Aviva Investors Managed High Income Fund	OEIC	62
Aviva Investors Money Market VNAV Fund	Collective Investment Scheme	100
Aviva Investors Multi-Asset 40 85 Shares Index Fund	Collective Investment Scheme	100
Aviva Investors Multi-Asset III Fund	OEIC	50
Aviva Investors Multi-Asset V Fund	OEIC	75
Aviva Investors Multi-Manager 20-60% Shares Fund	OEIC	75
Aviva Investors Multi-Manager 40-85% Shares Fund	OEIC	82
Aviva Investors Multi-Manager Flexible Fund	OEIC	82
Aviva Investors Multi-Strategy Target Income Fund – OEIC	OEIC	88
Aviva Investors Multi-Strategy Target Return Fund - OEIC	OEIC	48
Aviva Investors Non-Gilt Bond All Stocks Index Fund	Collective Investment Scheme	100
Aviva Investors Non-Gilt Bond Over 15 Yrs Index Fund	Collective Investment Scheme	100
Aviva Investors Non-Gilt Bond up to 15 Yrs Index Fund	Collective Investment Scheme	100
Aviva North American Equity Fund	Collective Investment Scheme	100
Aviva Investors North American Equity Index Fund	Collective Investment Scheme	100
Aviva Investors Pacific Ex Japan Equity Index Fund	Collective Investment Scheme	100
Aviva Investors Pre-Annuity Fixed Interest Fund	Collective Investment Scheme	100
Aviva Investors Sterling Corporate Bond Fund	Collective Investment Scheme	100
Aviva Investors Sterling Gilt Fund	Collective Investment Scheme	100
Aviva Investors Stewardship Fixed Interest Fund	Collective Investment Scheme	100
Aviva Stewardship International Equity Fund	Collective Investment Scheme	100
Aviva Investors Stewardship UK Equity Fund	Collective Investment Scheme	100
Aviva Investors Strategic Bond Fund	OEIC	43
Aviva Investors Strategic Global Equity Fund	Collective Investment Scheme	100
Aviva Investors UK Eq Ex Aviva Inv Trusts Index Fund	Collective Investment Scheme	100
Aviva Investors UK Equity Alpha Fund	Collective Investment Scheme	100
Aviva Investors UK Equity Dividend Fund	Collective Investment Scheme	100
Aviva Investors UK Equity Fund	Collective Investment Scheme	100
Aviva Investors UK Equity Index Fund	Collective Investment Scheme	100
Aviva Investors UK Gilts All Stocks Index Fund	Collective Investment Scheme	100
Aviva Investors UK Gilts Over 15 Years Index Fund	Collective Investment Scheme	100
Aviva Investors UK Gilts Up to 5 Yrs Index Fund	Collective Investment Scheme	100

Company name	Share Class1	% held
Aviva Investors UK Index Tracking Fund	OEIC	60
Aviva Investors UK Listed Equity Income Fund	OEIC	47
Aviva Investors UK Listed MoM 1 Fund	OEIC	100
Aviva Investors UK Listed High Alpha Fund	OEIC	94
Aviva Investors US Equity Index Fund	Collective Investment Scheme	100
Aviva Investors US Large Cap Equity Fund	Collective Investment Scheme	100
Aviva Special PFI GP Limited	Ordinary	100
Aviva Special PFI Limited Partnership	Limited Partnership	94
Axcess 10 Management Limited	Ordinary	100
Axa Sun Life Private	Unit Trust	100
Barratt House LP	Limited Partnership	50
Barratt House Nominee 1 Limited	Nominee	50
Barratt House Nominee 2 Limited	Ordinary	50
Barwell Business Park Nominee Limited	Ordinary	100
Biomass UK No 2 Limited	Ordinary	100
Biomass UK No 3 Limited	Ordinary	100
Biomass UK No 1 Limited	Ordinary	100
Boston Biomass Limited	Ordinary	100
Boston Wood Recovery Limited	Ordinary	100
Cambridge Research + Innovation	Ordinary	100
Cannock Designer Outlet (GP Holdings) Limited	Nominee	100
Cannock Designer Outlet (GP) Limited	GP	100
Cannock Designer Outlet (Nominee 1) Limited	Ordinary	100
Cannock Designer Outlet (Nominee 2) Limited	Nominee	100
Capital Residential Fund	Ordinary	88
Cardiff Bay GP Limited	Ordinary	100
Chesterford Park (General Partner) Limited	Limited Partnership	50
CGU International Holdings BV	Ordinary	100
Commercial Union Corporate Member Limited	Ordinary	100
Commercial Union Life Assurance Company Limited	Ordinary	100
Commercial Union Trustees Limited	Ordinary	100
Cornerford Limited	Ordinary	100
Chesterford Park Limited Partnership	Ordinary	50
Chesterford Park (Nominee) Limited	Ordinary	100
COW Real Estate Investment Nominee Limited	Ordinary	100
DIF Infrastructure III Off-Shore Open Ended	Unit Trust	100
EES Operations 1 Limited	Ordinary	100
EIF USPF IV Blocker Fund Closed	Unit Trust	100
Friends Life Funds Limited	Ordinary	100
Fitzroy Place GP 2 Limited	Ordinary	50
Fitzroy Place Management Co Limited	Ordinary	50
Fitzroy Place Residential Limited	Ordinary	50
Fppe Private Equity	Unit Trust	100

Company name	Share Class1	% held
General Accident Executor and Trustee Company Limited	Ordinary	100
Gobafoss General Partner Limited	Ordinary	100
Gobafoss Partnership Nominee No 1 Limited	Ordinary	100
GS Mezzainine Partners V Offshore LP	Unit Trust	100
Hemel Hempstead Estate Management Limited	Ordinary	100
Hillswood Management Limited	Ordinary	24
Houlton Commercial Management Company Limited	Limited by Guarantee	50
Houlton Community Management Company Limited	Limited by Guarantee	50
Igloo Regeneration (Nominee) Limited	Nominee	50
Igloo Regeneration Developments (General Partner) Limited	Ordinary	50
Igloo Regeneration Developments (Nominees) Limited	Ordinary	50
Igloo Regeneration Developments LP	Ordinary	50
Igloo Regeneration Partnership LP	Ordinary	40
Igloo Regeneration Property Unit Trust	Ordinary	50
Igloo Regeneration (Butcher Street) Limited	Ordinary	50
Igloo Regeneration (General Partner) Limited	Ordinary	50
Irongate House LP2	Limited Partnership	50
Irongate House Nominee 1 Limited2	Ordinary	50
Irongate House Nominee 2 Limited	Ordinary	50
Lime Property Fund (General Partner) Limited	Ordinary	100
Lime Property Fund (Nominee) Limited	Ordinary	100
Lombard (London) 1 Limited	Ordinary	100
Lombard (London) 2 Limited	Ordinary	100
Matthew Parker Street (Nominee No1) Limited	Ordinary	100
Matthew Parker Street (Nominee No 2) Limited	Ordinary	100
Medium Scale Wind No 1 Limited	Ordinary	100
Mortimer Street Associated Co 1 Limited	Ordinary	50
Mortimer Street Associated Co 2 Limited	Ordinary	50
Mortimer Street Nominee 1 Limited	Ordinary	50
Mortimer Street Nominee 2 Limited	Ordinary	50
Mortimer Street Nominee 3 Limited	Ordinary	50
New Broad Street House LP	Ordinary	50
New Broad Street House Nominee 1 Limited	Ordinary	50
New Broad Street Nominee 2 Limited	Ordinary	50
Norwich Union (Shareholder GP) Limited	Ordinary	100

Company name	Share Class1	% held
Norwich Union Public Private Partnership Fund	Ordinary	100
NU 3PS Limited	Ordinary	100
NU Developments (Brighton) Limited	Ordinary	100
NU Library For Brighton Limited	Ordinary	100
NU Offices for Redcar Limited	Ordinary	100
NU Schools for Redbridge Limited	Ordinary	100
NU Technology and Learning Centres (Hackney) Limited	Ordinary	100
NUPPP (Care Technology and Learning Centres) Limited	Ordinary	100
NUPPP (GP) Limited	Ordinary	100
NUPPP Nominees Limited	Ordinary	100
Opus Park Management Limited	Limited By Guarantee	100
Paddington Central III Limited Partnership	Limited Partnership	100
Paddington Central III (GP) Limited	Ordinary	100
Porth Teigr Management Company Limited	Ordinary	50
Pegasus House and Nuffield House LP	Ordinary	50
Pegasus House and Nuffield House Nominee 1 Ltd	Ordinary	50
Pegasus House and Nuffield House Nominee 2 Limited	Ordinary	50
Property Management Company (Croydon) Limited	Ordinary	100
NU Local Care Centres (Farnham) Limited	Ordinary	100
Quaryvale One Limited	Ordinary	100
Quaryvale Three Limited	Ordinary	100
Renewable Clean Energy Limited	Ordinary	100
Rugby Radio Station (General Partner) Limited	Ordinary	50
Rugby Radio Station Limited Partnership2	Limited Partnership	50
Rugby Radio Station (Nominee) Limited	Ordinary	50
Capital Residential Fund	Limited Partnership	88
Slas Axa Private Equity	Unit Trust	100
Slas Venture Capital Ye Cash	Ordinary	100
Solar Clean Energy Limited	Ordinary	100
Southgate General Partner Limited	Ordinary	50
Southgate Limited Partnership	Ordinary	50
Southgate LP (Nominee 1) Limited	Ordinary	50
Southgate LP (Nominee 2) Limited	Ordinary	50
Station Road Cambridge LP NPV	Unit Trust	50
Stonebridge Cross Management Limited	Limited by Guarantee	100
Swan Valley Management Limited	Ordinary	100
SUE Developments Limited Partnership	Limited Partnership	50
SUE GP Nominee Limited	Nominee	50
SUE GP LLP	GP	50
Stonebridge Cross Management Limited	Limited by Guarantee	100
Southgate LP (Nominee 2) Limited	Ordinary	50

Company name	Share Class1	% held
Stichting Aviva Infrastructure Debt Europe 1	Ordinary	100
Stichting European Secondary Infrastructure Credit	Ordinary	100
The Designer Retail Outlet Centres (Mansfield) General Partner Limited	Ordinary	100
The Designer Retail Outlet Centres (Mansfield) Limited Partnership	Ordinary	97
The Designer Retail Outlet Centres (York) General Partner Limited	Ordinary	100
The Designer Retail Outlet Centres (York) Limited Partnership	Ordinary	97
The Gobafoss Partnership	Ordinary	100
The Ocean Marine Insurance Company Limited	Ordinary	100
The Square Brighton Limited	Ordinary	100
Tyne Assets (No2) Limited	Ordinary	100
Tyne Assets Limited	Ordinary	100
Undershaft Limited	Ordinary	100
W Nine LP	Limited Partnership	50
W Nine Nominee 1 Limited	Ordinary	50
W Nine Nominee 2 Limited	Ordinary	50
The Welsh Insurance Corporation Limited	Ordinary	100
The Yorkshire Insurance Company Limited	Ordinary	100
Swan Court Waterman's Business Park, Kingsbury Crescent, Staines, Surrey, TW18 3BA		
Healthcode Limited	Ordinary C, Ordinary E	20
Wellington Row, York, YO90 1WR		
Aviva (Peak No.2) UK Limited	Ordinary	100
Aviva Annuity UK Limited	Ordinary	100
Aviva Client Nominees UK Limited	Ordinary	100
Aviva Equity Release UK Limited	Ordinary	100
Aviva ERFA 15 UK Limited	Ordinary	100
Aviva Life & Pensions UK Limited	Ordinary	100
Aviva Life Holdings UK Limited	Ordinary	100
Aviva Life Investments International (Recovery) Limited	Ordinary	100
Aviva Life International (General Partner) Limited	Ordinary	100
Aviva Life Services UK Limited	Ordinary	100
Aviva Pension Trustees UK Limited	Ordinary	100
Aviva Trustees UK Limited	Ordinary	100
Aviva Wrap UK Limited	Ordinary	100
CGNU Life Assurance Limited	Ordinary	100
Friends Provident Pension Scheme Trustees Limited	Ordinary	100
IFSL Tilney Bestinvest Global Income Portfolio	OEIC	22
The Lancashire and Yorkshire Reversionary Interest Company Limited	Ordinary	100
The Norwich Union Life Insurance Company Limited	Ordinary	100
Synergy Sunrise (Sentinel House) Limited	Ordinary	100

Company name	Share Class1	% held
Undershaft (NULLA) Limited	Ordinary	100
Voyager Park South Management Company Limited	Ordinary	52
12 Throgmorton Avenue		
BlackRock Market Advantage Fund	Unit Trust	52
Artemis Fund Managers Limited, 57-59 St James's Street, London SW1A 1LD		
Artemis UK Special Situations Fund	Unit Trust	24
Liontrust Fund Partners LLP, 2 Savoy Court London WC2R 0EZ		
Liontrust Sustainable Future Corporate Bond Fund	OEIC	36
Liontrust Sustainable Future UK Growth Fund	OEIC	47
Liontrust Sustainable Future Global Growth Fund	OEIC	45
Liontrust Sustainable Future Absolute Growth Fund	OEIC	53
Liontrust UK Ethical Fund	OEIC	68
Liontrust Future European Growth Fund	OEIC	56
Liontrust Sustainable Furture Managed Fund	OEIC	68
47 Bermondsey Street, London SE1 3XT		
Neos Venures Limited	Ordinary	91
1020 Eskdale Road, Winnersh, Wokingham RG41 5TS		
Serviced Offices UK GP Limited	GP	50
Norwich Union Life Insurance Company Limited	Ordinary	100
Synergy Sunrise (Sentinel House) Limited	Ordinary	100
1 London Wall Place, London, UK		
Schroder QEP US Core Fund	Unit Trust	40
BlackRock Pensions, 33 King William Street		
Undrly Aquila Cnt CcyH Glb Eq108010 2L	OEIC	65
Samuel House , 6 St Albans Street, 4th Floor, SW1Y 4SQ		
Acre Platforms Limited	Ordinary	40
15 Canada Square, E14 5GL		
LUC Holdings Limited	Ordinary	20
Tec Marina Terra Nova Way, Penarth, Wales United Kingdom CF64 1SA		
Wealthify Group Limited	A Ordinary B Ordinary	60
Wealthify Limited	Ordinary	60

United States

1209 Orange Street, City of Wilmington DE 19801,		
Aviva Investors Americas LLC	Sole Member	100
2222 Grand Avenue, Des Moines IA 50312		
Aviva Investors North America Holdings, Inc	Common Stock Of No Par Value Shares	100
2711 Centreville Road, Suite 400, Wilmington, New Castle, DE, 19808		
UKP Holdings Inc.	Common Stock Shares	100

Company name	Share Class1	% held
AI-RECAP GP I, LLC	Limited Partnership	100
National Corporate Research Limited, 850 New Burton Road, Suite 201, Dover, Delaware Kent County 19904		
Exeter Properties Inc.	Common Stock Wpv Shares	95
Winslade Investments Inc.	Common Stock Wpv Shares	100

Vietnam

10th Floor, Handi Resco Building, No. 521 Kim Ma, Ba Dinh, Hanoi		
Aviva Vietnam Life Insurance Company Limited	Non-listed Shares	100

1 Investment Company with Variable Capital ('ICVC')
Fond Common de Placement ('FCP')
Open Ended Investment Fund ('OEIC')
Société d 'Investment à Capital Variable ('SICAV')
Undertaking for Collective Investment in Transferrable Securities ('UCITS')
Irish Collective Asset Management Vehicle ('ICAV')
Authorised Contractual Scheme ('ACS')
Organisme de Placement Collectif Immobilier ('OPCI')
Sociétés Civiles de Placement Immobilier ('SCPI')

2 Please see accounting policies (D) Consolidation principles, for further details on Joint Ventures and the factors on which joint management is based.

66 – Subsequent events

2020 has begun with the outbreak of a new strain of the Coronavirus (COVID-19) in China, with confirmed cases in more than 50 countries, including all of those in which Aviva has material businesses. There is a risk of a significant global pandemic and economic disruption. We have reviewed the exposure of our balance sheet and are taking actions to further reduce our sensitivity to economic shocks. Notwithstanding our robust capital and liquidity position and the operational and financial actions that we are taking, a deterioration in the situation would have adverse implications for our businesses arising from the potential impacts on financial markets, our insurance exposures and our operations. As the situation is rapidly evolving it is not practicable to quantify the potential financial impact of the outbreak on the Group.

Income statement
For the year ended 31 December 2019

	Note	2019 £m	2018 £m
Income			
Net investment income	A	**1,688**	2,874
		1,688	2,874
Expenses			
Operating expenses	B	**(195)**	(246)
Other expenses[1]		**—**	(8)
Finance costs	C	**(537)**	(519)
		(732)	(773)
Profit for the year before tax		**956**	2,101
Tax credit	D	**92**	96
Profit for the year after tax		**1,048**	2,197

1 Other expenses in 2018 include a charge of £8 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018 and associated administration costs (see note 36).

Statement of comprehensive income
For the year ended 31 December 2019

	Note	2019 £m	2018 £m
Profit for the year		**1,048**	2,197
Items that will not be reclassified to income statement			
Remeasurements of pension schemes	H	**(1)**	2
Forfeited dividend income	H	**4**	4
Other comprehensive income, net of tax		**3**	6
Total comprehensive income for the year		**1,051**	2,203

Where applicable, the accounting policies of the Company are the same as those of the Group on pages 117 to 131. The notes identified alphabetically on pages 268 to 273 are an integral part of these separate financial statements. Where the same items appear in the Group financial statements, reference is made to the notes (identified numerically) on pages 139 to 263.

Statement of changes in equity

For the year ended 31 December 2019

	Note	Ordinary share capital £m	Preference share capital £m	Share premium £m	Capital redemption reserve £m	Merger reserve £m	Equity compensation reserve £m	Retained earnings £m	Direct capital instrument and fixed rate tier 1 notes £m	Total equity £m
Balance at 1 January		**975**	**200**	**1,214**	**44**	**6,438**	**120**	**4,026**	**724**	**13,741**
Profit for the year		**—**	**—**	**—**	**—**	**—**	**—**	**1,048**	**—**	**1,048**
Other comprehensive income		**—**	**—**	**—**	**—**	**—**	**—**	**3**	**—**	**3**
Total comprehensive income for the year		**—**	**—**	**—**	**—**	**—**	**—**	**1,051**	**—**	**1,051**
Dividends and appropriations	16	**—**	**—**	**—**	**—**	**—**	**—**	**(1,244)**	**—**	**(1,244)**
Reserves credit for equity compensation plans	34	**—**	**—**	**—**	**—**	**—**	**62**	**—**	**—**	**62**
Shares issued under equity compensation plans	33	**5**	**—**	**25**	**—**	**—**	**(62)**	**55**	**—**	**23**
Shares purchased in buy-back	33	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Reclassification of tier 1 notes to financial liabilities[1]	37,L	**—**	**—**	**—**	**—**	**—**	**—**	**14**	**(224)**	**(210)**
Aggregate tax effect	D	**—**	**—**	**—**	**—**	**—**	**—**	**8**	**—**	**8**
Balance at 31 December		**980**	**200**	**1,239**	**44**	**6,438**	**120**	**3,910**	**500**	**13,431**

1 On 17 October 2019, notification was given that the Group would redeem the £210 million tier 1 notes. At that date, the instrument was reclassified as a financial liability of £210 million, representing its fair value at that date. On 21 November 2019 the instrument was redeemed in full at a cost of £210 million. See note 37 for further details.

For the year ended 31 December 2018

	Note	Ordinary share capital £m	Preference share capital £m	Share premium £m	Capital redemption reserve £m	Merger reserve £m	Equity compensation reserve £m	Retained earnings £m	Direct capital instrument and fixed rate tier 1 notes £m	Total equity £m
Balance at 1 January		1,003	200	1,207	14	6,438	111	3,555	724	13,252
Profit for the year		—	—	—	—	—	—	2,197	—	2,197
Other comprehensive loss		—	—	—	—	—	—	6	—	6
Total comprehensive income for the year		—	—	—	—	—	—	2,203	—	2,203
Dividends and appropriations	16	—	—	—	—	—	—	(1,189)	—	(1,189)
Reserves credit for equity compensation plans	34	—	—	—	—	—	64	—	—	64
Shares issued under equity compensation plans	33	2	—	7	—	—	(55)	49	—	3
Shares purchased in buy-back[1]	33	(30)	—	—	30	—	—	(600)	—	(600)
Reclassification of tier 1 notes to financial liabilities	37,L	—	—	—	—	—	—	—	—	—
Aggregate tax effect	D	—	—	—	—	—	—	8	—	8
Balance at 31 December		975	200	1,214	44	6,438	120	4,026	724	13,741

1 On 1 May 2018, the Group announced a share buyback of ordinary shares for an aggregate purchase price of up to £600 million. On completion in 2018 of this buy-back, £600 million of shares had been purchased and shares with a nominal value of £30 million have been cancelled, giving rise to an additional capital redemption reserve of an equivalent amount. See note 33 for further details of the shares purchase in buy-back.

Where applicable, the accounting policies of the Company are the same as those of the Group on pages 117 to 131. The notes identified alphabetically on pages 268 to 273 are an integral part of these separate financial statements. Where the same items appear in the Group financial statements, reference is made to the notes (identified numerically) on pages 139 to 263.

Statement of financial position

As at 31 December 2019

	Note	2019 £m	2018 £m
Assets			
Non-current assets			
Investments in subsidiaries	E	**31,788**	31,788
Investment in joint venture	E	**123**	123
Receivables and other financial assets	F	**5,025**	5,401
Deferred tax assets	G	**9**	9
Current tax assets	G	**85**	89
		37,030	37,410
Current assets			
Receivables and other financial assets	F	**241**	414
Prepayments and accrued income		**13**	10
Cash and cash equivalents		**74**	15
Total assets		**37,358**	37,849
Equity			
Ordinary share capital	33	**980**	975
Preference share capital	36	**200**	200
Called up capital		**1,180**	1,175
Share premium	33(b)	**1,239**	1,214
Capital redemption reserve	33(b)	**44**	44
Merger reserve	H	**6,438**	6,438
Equity compensation reserve	H	**120**	120
Retained earnings	H	**3,910**	4,026
Direct capital instrument and tier 1 notes	37,L	**500**	724
Total equity		**13,431**	13,741
Liabilities			
Non-current liabilities			
Borrowings	J	**6,534**	6,699
Payables and other financial liabilities	K	**12,675**	12,815
Pension deficits and other provisions	I	**47**	45
		19,256	19,559
Current liabilities			
Borrowings	J	**238**	251
Payables and other financial liabilities	K	**4,344**	4,206
Other liabilities		**89**	92
Total liabilities		**23,927**	24,108
Total equity and liabilities		**37,358**	37,849

Approved by the Board on 4 March 2020

Jason Windsor
Chief Financial Officer

Where applicable, the accounting policies of the Company are the same as those of the Group on pages 117 to 131. The notes identified alphabetically on pages 268 to 273 are an integral part of these separate financial statements. Where the same items appear in the Group financial statements, reference is made to the notes (identified numerically) on pages 139 to 263.

Statement of cash flows

For the year ended 31 December 2019

All the Company's operating cash requirements are met by subsidiary companies and settled through intercompany loan accounts. As the direct method of presentation has been adopted for these activities, no further disclosure is required. In respect of financing and investing activities, the following items pass through the Company's own bank accounts.

	2019 £m	2018 £m
Cash flows from investing activities		
Dividends received from subsidiaries	**5**	—
Net cash from investing activities	**5**	—
Cash flows from financing activities		
Proceeds from issue of ordinary shares	**27**	8
Shares purchased in buy-back	**—**	(600)
Treasury shares purchased for employee trusts	**(9)**	(4)
New borrowings drawn down, net of expenses	**505**	3,023
Repayment of borrowings[1]	**(696)**	(3,536)
Net repayment of borrowings	**(191)**	(513)
Interest paid on borrowings	**(316)**	(335)
Preference dividends paid	**(17)**	(17)
Ordinary dividends paid	**(1,184)**	(1,128)
Forfeited dividend income	**4**	4
Coupon payments on direct capital instrument and tier 1 notes	**(43)**	(44)
Funding provided from subsidiaries	**1,807**	2,564
Other[2]	**(5)**	(13)
Net cash generated from/(used in) financing activities	**73**	(78)
Net increase/(decrease) in cash and cash equivalents	**78**	(78)
Cash and cash equivalents at 1 January	**15**	87
Exchange gains on cash and cash equivalents	**(19)**	6
Cash and cash equivalents at 31 December	**74**	15

1 2019 includes redemption of 6.875% £210 million tier 1 notes.
2 2019 includes a £5 million *(2018: £3 million)* donation of forfeited dividend income to a charitable foundation. 2018 also includes £10 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs (see note 36).

Where applicable, the accounting policies of the Company are the same as those of the Group on pages 117 to 131. The notes identified alphabetically on pages 268 to 273 are an integral part of these separate financial statements. Where the same items appear in the Group financial statements, reference is made to the notes (identified numerically) on pages 139 to 263.

A – Net investment income

	Note	2019 £m	2018 £m
Dividends received from subsidiaries	O(iii)	**1,595**	2,780
Interest receivable from group company loans held at amortised cost	O(i)	**92**	92
Other income		**1**	2
Total		**1,688**	2,874

B – Operating expenses

(i) Operating expenses

Operating expenses comprise:

	2019 £m	2018 £m
Staff costs and other employee related expenditure (see (ii) below)	**19**	19
Other operating costs	**175**	227
Net foreign exchange losses	**1**	—
Total	**195**	246

(ii) Staff costs

Total staff costs were:

	2019 £m	2018 £m
Equity compensation plans (see (iii) below)	**19**	19
Total	**19**	19

The Company is no longer charged staff costs directly by the UK employing entity. Staff costs are included within other operating costs as part of the overall recharges from the service company within the Group.

(iii) Equity compensation plans

All transactions in the Group's equity compensation plans, which involve options and awards for ordinary shares of the Company, are included in other operating costs. Full disclosure of these plans is given in the Group consolidated financial statements, note 34. The cost of such options and awards is borne by all participating businesses and, where relevant, the Company bears an appropriate charge. As the majority of the charge to the Company relates to directors' options and awards, for which full disclosure is made in the directors' remuneration report, no further disclosure is given here.

C – Finance costs

	Note	2019 £m	2018 £m
Interest payable on borrowings		**325**	325
Interest payable to group companies	O(ii)	**212**	194
Total		**537**	519

D – Tax

(i) Tax credited to the income statement

The total tax credit comprises:

	2019 £m	2018 £m
Current tax		
For this year	**(90)**	(94)
Prior year adjustments	**(2)**	(2)
Total current tax	**(92)**	(96)
Total tax credited to income statement	**(92)**	(96)

(ii) Tax credited to other comprehensive income

There was no tax credited or charged to other comprehensive income in either 2019 or 2018.

(iii) Tax credited to equity

Tax credited directly to equity in the year, in respect of coupon payments on the direct capital instrument and fixed rate tier 1 notes, amounted to £8 million *(2018: £8 million)*.

Where applicable, the accounting policies of the Company are the same as those of the Group on pages 117 to 131. The notes identified alphabetically on pages 268 to 273 are an integral part of these separate financial statements. Where the same items appear in the Group financial statements, reference is made to the notes (identified numerically) on pages 139 to 263.

D – Tax continued

(iv) Tax reconciliation

The tax on the Company's profit before tax differs from the theoretical amount that would arise using the tax rate of the home country of the Company as follows:

	2019 £m	2018 £m
Profit before tax	**956**	2,101
Tax calculated at standard UK corporation tax rate of 19.00% (2018: 19.00%)	**182**	399
Reconciling items		
Adjustment to tax charge in respect of prior years	**(2)**	(2)
Non-assessable dividend income	**(303)**	(528)
Disallowable expenses	**—**	7
Losses surrendered intra-group for nil value	**31**	28
Total tax credited to income statement	**(92)**	(96)

Finance Act 2016, which received Royal Assent on 15 September 2016, will reduce the rate of corporation tax to 17% from 1 April 2020. The reduction in rate from 19% to 17% has been used in the calculation of the Company's deferred tax assets and liabilities at 31 December 2019.

During 2019, the UK Government indicated that it would reverse the reduction in the rate of corporation tax to 17% due from 1 April 2020. As at 31 December 2019 this measure has not been substantively enacted and therefore no impact is reflected in the calculation of the Company's deferred tax assets and liabilities at 31 December 2019.

E – Investments in subsidiaries and joint venture

(i) Subsidiaries

At 31 December 2019, the Company has two wholly owned subsidiaries, both incorporated in the UK. These are General Accident plc and Aviva Group Holdings Limited. Aviva Group Holdings Limited is an intermediate holding company, while General Accident plc has preference shares listed on the London Stock Exchange. At 31 December 2019, the Company's investments in subsidiaries have a cost of £31,788 million *(2018: £31,788 million)*. The principal subsidiaries of the Aviva Group at 31 December 2019 are set out in note 64 to the Group consolidated financial statements.

(ii) Joint venture

At 31 December 2019, the Company's investment in the joint venture, Aviva-COFCO Life Insurance Co. Limited has a cost of £123 million *(2018: £123 million)*.

F – Receivables and other financial assets

	Note	2019 £m	2018 £m
Loans due from subsidiaries held at amortised cost	O(i)	**5,025**	5,401
Amount due from subsidiaries held at amortised cost	O(iii)	**241**	414
Total		**5,266**	5,815
Expected to be recovered in less than one year		**241**	414
Expected to be recovered in more than one year		**5,025**	5,401
		5,266	5,815

Fair value of these assets approximate to their carrying amounts.

G – Tax assets and liabilities

(i) Current tax

Current tax assets recoverable in more than one year are £85 million *(2018: £89 million)*.

(ii) Deferred tax

(a) The balance at 31 December comprises:

	2019 £m	2018 £m
Deferred tax assets	**9**	9
Net deferred tax assets	**9**	9

(b) The net deferred tax asset arises on the following items:

	2019 £m	2018 £m
Pensions and other post retirement obligations	**9**	9
Net deferred tax assets	**9**	9

Where applicable, the accounting policies of the Company are the same as those of the Group on pages 117 to 131. The notes identified alphabetically on pages 268 to 273 are an integral part of these separate financial statements. Where the same items appear in the Group financial statements, reference is made to the notes (identified numerically) on pages 139 to 263.

H – Reserves

	Merger reserve £m	Equity compensation reserve[1] £m	Retained earnings £m
Balance at 1 January 2018	6,438	111	3,555
Arising in the year:			
Profit for the year	—	—	2,197
Remeasurements of pension schemes	—	—	2
Forfeited dividend income[2]	—	—	4
Dividends and appropriations	—	—	(1,189)
Reserves credit for equity compensation plans	—	64	—
Issue of share capital under equity compensation scheme	—	(55)	49
Shares purchased in buy-back	—	—	(600)
Reclassification of tier 1 notes to financial liabilities (note L)	—	—	—
Aggregate tax effect	—	—	8
Balance at 31 December 2018	**6,438**	**120**	**4,026**
Arising in the year:			
Profit for the year	**—**	**—**	**1,048**
Remeasurements of pension schemes	**—**	**—**	**(1)**
Forfeited dividend income[2]	**—**	**—**	**4**
Dividends and appropriations	**—**	**—**	**(1,244)**
Reserves credit for equity compensation plans	**—**	**62**	**—**
Issue of share capital under equity compensation scheme	**—**	**(62)**	**55**
Shares purchased in buy-back	**—**	**—**	**—**
Reclassification of tier 1 notes to financial liabilities[3] (note L)	**—**	**—**	**14**
Aggregate tax effect	**—**	**—**	**8**
Balance at 31 December 2019	**6,438**	**120**	**3,910**

1 See notes 34(d) and 39 for further details of balances included in the equity compensation reserve.
2 The Company has commenced a shareholder forfeiture programme, where the shares of shareholders who Aviva has lost contact with over the last 12 years will be forfeited and sold on. Any associated unclaimed dividends will be reclaimed by the Company. After covering administration costs, the majority of the money will be put into a charitable foundation.
3 On 17 October 2019, notification was given that the Group would redeem the 6.875% £210 million tier 1 notes. At that date, the instrument was reclassified as a financial liability of £210 million, representing its fair value at that date. On 21 November 2019 the instrument was redeemed in full at a cost of £210 million. The difference of £14 million between its carrying amount of £224 million and fair value of £210 million has been charged to retained earnings. See note L for further details.

The tax effect of £8 million *(2018: £8 million)* is recognised in respect of coupon payments of £43 million *(2018: £44 million)* on the direct capital instrument and tier 1 notes.

I – Pension deficits and other provisions

(i) Carrying amounts

	2019 £m	2018 £m
Total IAS 19 obligations to staff pension schemes	**47**	45
Total provisions	**47**	**45**

J – Borrowings

The Company's borrowings comprise:

	2019 £m	2018 £m
Subordinated debt	**5,482**	5,586
Senior notes	**1,052**	1,113
Commercial paper	**238**	251
Total	**6,772**	6,950

All the above borrowings are stated at amortised cost.

J – Borrowings continued

Maturity analysis of contractual undiscounted cash flows:

	2019 Principal £m	2019 Interest £m	2019 Total £m	2018 Principal £m	2018 Interest £m	2018 Total £m
Within 1 year	**238**	**311**	**549**	251	315	566
1 – 5 years	**686**	**1,194**	**1,880**	708	1,231	1,939
5 – 10 years	**635**	**1,451**	**2,086**	673	1,490	2,163
10 – 15 years	**—**	**1,417**	**1,417**	—	1,441	1,441
Over 15 years	**5,251**	**2,636**	**7,887**	5,365	2,923	8,288
Total contractual undiscounted cash flows	**6,810**	**7,009**	**13,819**	6,997	7,400	14,397

Where subordinated debt is undated, the interest payments have not been included beyond 15 years. Annual interest payments in future years for these borrowings are £49 million *(2018: £49 million)*.

The fair value of the subordinated debt at 31 December 2019 was £6,446 million *(2018: £5,831 million)*, calculated with reference to quoted prices. The fair value of the senior debt at 31 December 2019 was £1,134 million *(2018: £1,113 million)*, calculated with reference to quoted prices. The fair value of the commercial paper is considered to be the same as its carrying value.

Further details of these borrowings and undrawn committed facilities can be found in the Group consolidated financial statements, note 53, with details of the fair value hierarchy in relation to these borrowings in note 24.

K – Payables and other financial liabilities

	Note	2019 £m	2018 £m
Loans due to subsidiaries	O(ii)	**12,675**	12,815
Amount due to subsidiaries	O(iii)	**4,344**	4,206
Total		**17,019**	17,021
Expected to be recovered in less than one year		**4,344**	4,206
Expected to be recovered in more than one year		**12,675**	12,815
		17,019	17,021

L – Direct capital instrument and tier 1 notes

The 6.875% £210 million tier 1 notes were redeemed on 21 November 2019 at a cost of £210 million, see details in note 37. These were reflected in the Company financial statements at a value of £224 million following the transfer at fair value from Friends Life Holdings plc on 1 October 2015. The resulting difference of £14 million between their carrying amount of £224 million and fair value of £210 million has been charged to the Company retained earnings. These were cancelled on 25 November 2019.

M – Contingent liabilities

Details of the Company's contingent liabilities are given in the Group consolidated financial statements, note 56.

N – Risk management

Risk management in the context of the Group is considered in the Group consolidated financial statements, note 60.

The business of the Company is managing its investments in subsidiaries and joint venture operations. Its risks are considered to be the same as those in the operations themselves, and full details of the major risks and the Group's approach to managing these are given in the Group consolidated financial statements, note 60. Such investments are held by the Company at cost in accordance with accounting policy D.

Financial assets, other than investments in subsidiaries and joint ventures, largely consist of amounts due from subsidiaries. As at the balance sheet date, these receivable amounts were neither past due nor impaired. The credit quality of receivables and other financial assets is monitored by the Company, and provisions are made for expected credit losses. There are no material expected credit losses over the lifetime of the financial assets.

Financial liabilities owed by the Company as at the balance sheet date are largely in respect of borrowings (details of which are provided in note J and the Group consolidated financial statements, note 53) and loans owed to subsidiaries. Loans owed to subsidiaries were within agreed credit terms as at the balance sheet date.

Interest rate risk

Loans to and from subsidiaries are at either fixed or floating rates of interest, with the latter being exposed to fluctuations in these rates. The choice of rates is designed to match the characteristics of financial investments (which are also exposed to interest rate fluctuations) held in both the Company and the relevant subsidiary, to mitigate as far as possible each company's net exposure.

All of the Company's long-term external borrowings are at fixed rates of interest and are therefore not exposed to changes in these rates. However, for short term commercial paper, the Company is affected by changes in these rates to the extent the redemption of these borrowings is funded by the issuance of new commercial paper or other borrowings. Further details of the Company's borrowings are provided in note J and the Group consolidated financial statements, note 53.

N – Risk management continued

Interest rate risk continued

The effect of a 100 basis point increase/decrease in interest rates on floating rate loans due to and from subsidiaries and on refinancing short term commercial paper as it matures would be a decrease/increase in profit before tax of £104 million *(2018: decrease/increase of £104 million)*. The net asset value of the Company's financial resources is not materially affected by fluctuations in interest rates.

Currency risk

The Company's direct subsidiaries are exposed to foreign currency risk arising from fluctuations in exchange rates during the course of providing insurance and asset management services around the world. The exposure of the subsidiaries to currency risk is considered from a Group perspective in the Group consolidated financial statements, note 60(c)(v).

The Company faces exposure to foreign currency risk through some of its borrowings which are denominated in Euros. However, most of these borrowings have been on-lent to a subsidiary which holds investments in Euros, generating the net investment hedge described in the Group consolidated financial statements, note 61(a).

Liquidity risk

Liquidity risk is the risk of not being able to make payments as they become due because there are insufficient assets in cash form. The Company's main sources of liquidity are liquid assets held within the Company and its subsidiary Aviva Group Holdings Limited, and dividends received from the Group's insurance and asset management businesses. Sources of liquidity in normal markets also include a variety of short and long-term instruments including commercial papers and medium and long-term debt. In addition to the existing liquid resources and expected inflows, the Company maintains significant undrawn committed borrowing facilities from a range of leading international banks to further mitigate this risk.

Maturity analysis of external borrowings and amounts due to and by subsidiaries are provided in notes J and F respectively.

O – Related party transactions

The Company had the following related party transactions.

Loans to and from subsidiaries are made on normal arm's-length commercial terms. The maturity analysis of the related party loans is as follows:

(i) Loans owed by subsidiaries

Maturity analysis	**2019 £m**	2018 £m
1 – 5 years	**3,792**	3,485
Over 5 years	**1,233**	1,916
Total	**5,025**	5,401

The interest received on these loans is £92 million *(2018: £92 million)*. See note A.

On 1 January 2013, Aviva International Holdings Limited, an indirect subsidiary, transferred an unsecured loan with the Company of €250 million to Aviva Group Holdings Limited, its direct subsidiary. The loan, originally entered into on 7 May 2003, accrues interest at a fixed rate of 5.5% with settlement to be paid at maturity in May 2033. As at the statement of financial position date, the total amount drawn down on the facility was £212 million *(2018: £224 million)*.

On 23 December 2014, the Company provided an unsecured revolving credit facility of £2,000 million to Aviva Group Holdings Limited, its subsidiary, with an initial maturity date of 3 September 2018 which was subsequently extended to 31 December 2023. The facility accrues interest at 75 basis points above 6 month LIBOR. As at the statement of financial position date, the total amount drawn down on the facility was £1,563 million *(2018: £1,752 million)*.

On 27 June 2016, the Company provided an unsecured loan of C$446 million to Aviva Group Holdings Limited, its subsidiary, with a maturity date of 27 June 2046. The loan accrues interest at 348 basis points above 6 month CDOR. As at the statement of financial position date, the total amount drawn was £259 million *(2018: £256 million)*.

On 30 September 2016, the Company provided the following loans to Aviva Group Holdings Limited, its subsidiary:
- An unsecured loan of €850 million with a maturity date of 30 September 2021. The loan accrues interest at 115 basis points above 12 month EURIBOR with settlement to be paid at maturity. As at the statement of financial position date, the total amount drawn was £661 million *(2018: £700 million)*.
- An unsecured loan of €650 million with a maturity date of 5 July 2023. The loan accrues interest at a fixed rate of 1.54% with settlement to be paid at maturity. As at the statement of financial position date, the total amount drawn down on the facility was £551 million *(2018: £584 million)*.
- An unsecured loan of €700 million with a maturity date of 3 July 2024. The loan accrues interest at a fixed rate of 1.64% with settlement to be paid at maturity. As at the statement of financial position date, the total amount drawn down on the facility was £593 million *(2018: £628 million)*.
- An unsecured loan of €900 million with a maturity date of 4 December 2025. The loan accrues interest at a fixed rate of 1.74% with settlement to be paid at maturity. As at the statement of financial position date, the total amount drawn down on the facility was £762 million *(2018: £808 million)*.

O – Related party transactions continued

(i) Loans owed by subsidiaries continued

On 21 November 2016, the Company provided an unsecured loan of €500 million to Aviva Group Holdings Limited, its subsidiary, with a maturity date of 27 October 2023. The loan accrues interest at a fixed rate of 1.75% with settlement to be paid at maturity. As at the statement of financial position date, the total amount drawn was £424 million *(2018: £449 million)*.

(ii) Loans owed to subsidiaries

			2019			2018
Maturity analysis of contractual undiscounted cash flows:	**Principal £m**	**Interest £m**	**Total £m**	Principal £m	Interest £m	Total £m
Within 1 year	**—**	**182**	**182**	—	131	131
1 – 5 years	**12,675**	**395**	**13,070**	12,815	514	13,329
Total	**12,675**	**577**	**13,252**	12,815	645	13,460

The interest paid on these loans is £212 million *(2018: £194 million)*. See note C.

On 3 September 2013 Aviva Group Holdings Limited, its subsidiary, provided an unsecured rolling credit facility of £5,000 million to the Company, accruing interest at 75 basis points above 6 month LIBOR and with an initial maturity date of 3 September 2018, which was subsequently extended to 31 December 2023. The total amount drawn down on the facility at 31 December 2019 was £3,045 million *(2018: £3,045 million)*.

On 14 December 2017, the Company renewed its facility with GA plc, its subsidiary, of £9,990 million and the Board approved the extension of the maturity of the loan by five years from 31 December 2017 to 31 December 2022. The other terms of the loan will remain unchanged, including the rate of interest payable by the Company to GA plc (65 basis points above 3 month LIBOR and in the event that the LIBOR rate is less than zero, the rate shall be deemed to be zero). As at 31 December 2019, the loan balance outstanding was £9,630 million *(2018: £9,770 million)*. This loan is secured against the ordinary share capital of Aviva Group Holdings Limited. The loan agreement also includes a penalty interest charge of 1% above the interest rate if any amounts payable under the loan agreement remain outstanding.

(iii) Other transactions

Services provided to related parties

		2019		2018
	Income earned in year £m	**Receivable at year end £m**	Income earned in year £m	Receivable at year end £m
Subsidiaries	**1,595**	**241**	2,780	414

Income earned relates to dividends. The Company incurred expenses in the year of £0.5 million *(2018: £0.5 million)* representing audit fees paid by the Company on behalf of subsidiaries. The Company did not recharge subsidiaries for these expenses.

The related parties' receivables are not secured and no guarantees were received in respect thereof. The receivables will be settled in accordance with normal credit terms.

Services provided by related parties

		2019		2018
	Expense incurred in year £m	**Payable at year end £m**	Expense incurred in year £m	Payable at year end £m
Subsidiaries	**175**	**4,344**	224	4,206

Expenses incurred relates to operating expenses. All the Company's operating cash requirements are met by subsidiary companies and settled through intercompany loans.

The related parties' payables are not secured and no guarantees were given in respect thereof. The payables will be settled in accordance with normal credit terms. Details of guarantees, indemnities and warranties given by the Company on behalf of related parties are given in note 56(f).

Key management

The directors and key management of the Company are considered to be the same as for the Group. Information on both the Company and Group key management compensation can be found in note 63.

P – Subsequent events

There are no subsequent events to report.

Other information

Alternative Performance Measures

In order to fully explain the performance of our business, we discuss and analyse our results in terms of financial measures which include a number of Alternative Performance Measures (APMs). APMs are non-GAAP measures which are used to supplement the disclosures prepared in accordance with other regulations such as International Financial Reporting Standards (IFRS) and Solvency II. We believe these measures provide useful information to enhance the understanding of our financial performance. However, APMs should be viewed as complementary to, rather than as a substitute for, the amounts determined according to other regulations.

The APMs utilised by Aviva may not be the same as those used by other insurers and may change over time.

At our capital markets day in November 2019, we announced new financial targets focussed on economic value, to measure our progress in meeting our key strategic initiatives. Consequently, we have introduced four APMs in 2019, that are based on Solvency II:

- Solvency II return on equity (ROE)‡
- Operating own funds generation
- Solvency II net asset value (NAV) per share‡
- Solvency II debt leverage ratio

These capital measures provide useful information as they are based on economic value which is used by the Group to assess performance and growth.

In addition, we have made certain changes to existing APMs to ensure that they remain relevant and useful for stakeholders.

The Group adjusted operating profit APM has been amended and now includes amortisation and impairment of internally generated intangible assets to provide more relevant information by better reflecting their operational nature. 2018 comparatives have been restated. For consistency with the change in Group adjusted operating profit, the combined operating ratio, operating earnings per share, operating expenses and IFRS return on equity have also been amended.

Furthermore, controllable costs is a new APM in 2019, based on operating expenses adjusted to exclude premium related costs such as premium based taxes, fees and levies that vary directly with premium volumes.

Further details on APMs derived from IFRS measures and APMs derived from Solvency II measures including changes that have been made in 2019, are provided in the following sections. A further section describes Other APMs.

APMs derived from IFRS measures

A number of APMs relating to IFRS are utilised to measure and monitor the Group's performance. Definitions and additional information, including reconciliations to the relevant amounts in the IFRS Financial Statements and, where appropriate, commentary on the material reconciling items are included within this section.

Group adjusted operating profit‡#

Group adjusted operating profit is an APM that supports decision making and internal performance management of the Group's operating segments that incorporates an expected return on investments supporting the life and non-life insurance businesses. The Group considers this measure meaningful to stakeholders as it enhances the understanding of the Group's operating performance over time by separately identifying non-operating items. The various items excluded from Group adjusted operating profit, but included in IFRS profit before tax, are:

Investment variances, economic assumption changes and short-term fluctuation in return on investments

Group adjusted operating profit for the life insurance business is based on expected investment returns on financial investments backing shareholder and policyholder funds over the reporting period, with allowance for the corresponding expected movements in liabilities. The expected rate of return is determined using consistent assumptions between operations, having regard to local economic and market forecasts of investment return and asset classification.

For fixed interest securities classified as fair value through profit or loss, the expected investment returns are based on average prospective yields for the actual assets held less an adjustment for credit risk. Where such securities are classified as available for sale the expected return comprises interest or dividend payments and amortisation of the premium or discount at purchase. The expected return on equities and properties is calculated by reference to the opening 10-year swap rate in the relevant currency plus an appropriate risk margin.

Group 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 separately outside Group adjusted operating profit.

Group adjusted operating profit for the non-life insurance business is based on expected investment returns on financial investments backing shareholder funds over the period. Expected investment returns are calculated for equities and properties by multiplying the opening market value of the investments, adjusted for sales and purchases during the year, by the long-term rate of return. This rate of return is the same as that applied for the long-term business expected returns. The long-term return for other investments (including debt securities) is the actual income receivable for the period. Actual income and long-term investment return both contain the amortisation of the discounts/premium arising on the acquisition of fixed income securities.

‡ denotes APMs which are key performance indicators.
# denotes key performance indicators used as a base to determine or modify remuneration.

Changes due to market value movements and interest rate changes, which give rise to variances between actual and expected investment returns, are disclosed separately outside Group adjusted operating profit. The impact of changes in the discount rate applied to claims provisions is also disclosed outside Group adjusted operating profit.

The exclusion of short-term investment variances from this APM reflects the long-term nature of much of our business. The Group adjusted operating profit which is used in managing the performance of our operating segments excludes the impact of economic variances, to provide a comparable measure year on year.

Impairment, amortisation and profit or loss on disposal

Group adjusted operating profit also excludes impairment of goodwill, associates and joint ventures; amortisation and impairment of other intangible assets acquired in business combinations; amortisation and impairment of acquired value of in-force business; and the profit or loss on disposal and remeasurement of subsidiaries, joint ventures and associates. These items principally relate to merger and acquisition activity which we view as strategic in nature, hence they are excluded from the Group adjusted operating profit APM as this is principally used to manage the performance of our operating segments when reporting to the Group chief operating decision maker.

In 2019, the Group adjusted operating profit APM has been amended and now includes amortisation and impairment of internally generated intangible assets to provide more relevant information by better reflecting their operational nature. These assets include advisor platforms, digital distribution channels and claims and policy administration systems which are used to support operational activities. Comparative amounts have been restated resulting in a reduction in the prior year Group adjusted operating profit of £112 million. Amortisation and impairment of intangible assets acquired in business combinations will continue to be excluded from the Group adjusted operating profit as these relate to merger and acquisition activity.

In addition, integration and restructuring costs are now included in Group adjusted operating profit. There is no impact on 2018 comparative figures.

Other items

These items are, in the Directors' view, required to be separately disclosed by virtue of their nature or incidence to enable a full understanding of the Group's financial performance. Other items at 2019 comprise:

- A charge of £45 million relating to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note 44(b)). Consistent with the presentation of the change in the Ogden discount rate in 2016 and 2018, this is disclosed outside of Group adjusted operating profit; and
- A charge of £2 million relating to the negative goodwill which arose on the acquisition of Friends First in 2018, which is excluded from Group adjusted operating profit for consistency with the treatment of impairment of goodwill.

Other items at 2018 comprised:

- A movement in the discount rate used for estimating lump sum payments in settlement of bodily injury claims which resulted in a gain of £190 million (see note 44 (b)). Consistent with the presentation of the change in the Ogden discount rate in 2016, this was disclosed outside of Group adjusted operating profit;
- A charge of £63 million relating to the UK defined benefit pension scheme as a result of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension (see note 52(b)). This was disclosed outside of Group adjusted operating profit as the additional liability arose as a consequence of a High Court judgement in October 2018 in the case involving Lloyds Banking Group; and does not reflect the financial performance of the Group for the year;
- A charge of £10 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs (see note 35);
- A release of a provision of £78 million relating to the sale of Aviva USA in 2013, which represents the reversal of an item previously excluded from Group adjusted operating profit; and
- A gain of £36 million relating to negative goodwill on the acquisition of Friends First (see note 3), which was excluded from Group adjusted operating profit for consistency with the treatment of impairment of goodwill.

The Group adjusted operating profit APM should be viewed as complementary to IFRS measures. It is important to consider Group adjusted operating profit and profit before tax together to understand the performance of the business in the period.

The table below presents a reconciliation between our consolidated operating profit and profit before tax attributable to shareholders' profits.

	2019 £m	Restated[1] 2018 £m
United Kingdom – Life	**1,855**	1,886
United Kingdom – General Insurance	**250**	383
Canada	**191**	27
Europe	**981**	1,008
Asia	**275**	261
Aviva Investors	**96**	148
Other Group activities	**(464)**	(709)
Group adjusted operating profit before tax attributable to shareholders' profit	**3,184**	3,004
Adjusted for the following:		
Investment return variances and economic assumption changes on long-term business	**654**	(197)
Short-term fluctuation in return on investments on non long-term business	**167**	(476)
Economic assumption changes on general insurance and health business	**(54)**	1
Impairment of goodwill, associates and joint ventures and other amounts expensed	**(15)**	(13)
Amortisation and impairment of intangibles acquired in business combinations	**(87)**	(97)
Amortisation and impairment of acquired value of in-force business	**(406)**	(426)
(Loss)/profit on the disposal and re-measurement of subsidiaries, joint ventures and associates	**(22)**	102
Other	**(47)**	231
Adjusting items before tax	**190**	(875)
Profit before tax attributable to shareholders' profits	**3,374**	2,129

1 During 2019 the Group adjusted operating profit APM has been revised, and now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets (see note 1 (b)). Group adjusted operating profit continues to exclude amortisation and impairment of intangible assets acquired in business combinations. Comparative amounts have been restated resulting in a reduction in the prior period Group adjusted operating profit of £112 million. There is no impact on profit before tax.

Combined operating ratio (COR)‡

A financial measure of general insurance underwriting profitability calculated as total underwriting costs in our insurance entities expressed as a percentage of net earned premiums. A COR below 100% indicates profitable underwriting.

In 2018 and 2019, the COR does not include the impact of any changes in the discount rate used for estimating lump sum payments in settlement of bodily injury claims.

In 2019, following the change in the definition of Group adjusted operating profit, the COR has been amended to include the amortisation and impairment of internally generated intangible assets to better reflect their operational nature. Comparative amounts have been restated resulting in an increase in the prior year underwriting costs of £53 million and an increase in COR of 0.6%. Amortisation and impairment of intangible assets acquired in business combinations will continue to be excluded from the COR as these relate to merger and acquisition activity.

The Group COR is shown below.

	2019 £m	Restated[1] 2018 £m
Incurred claims – GI & Health (as per note 5)[2]	**(6,620)**	(6,400)
Adjusted for the following:		
Incurred claims – Health	**651**	633
Change in discount rate assumptions	**54**	—
Impact of change in the discount rate used in settlement of bodily injury claims	**45**	(190)
Total Incurred claims (included in COR)[3]	**(5,870)**	(5,957)
Commission and expenses – GI & Health (as per note 5)[4]	**(3,321)**	(3,188)
Adjusted for the following:		
Amortisation and impairment of intangibles acquired in business combinations	**19**	31
Foreign exchange gains/losses	**(45)**	7
Commission income	**20**	19
Other	**5**	4
Commission and Expenses – Health & Other Non GI	**300**	309
Total commission and expenses (included in COR)[5]	**(3,022)**	(2,818)
Total underwriting costs	**(8,892)**	(8,775)
Net earned premiums – GI & Health (as per note 5)	**10,015**	9,887
Adjusted for:		
Net earned premiums – Health	**(895)**	(857)
Net earned premiums (included in COR)[6]	**9,120**	9,030
Combined operating ratio	**97.5%**	97.2%

1 Following the change in the definition of Group adjusted operating profit, COR now includes the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets. Comparative amounts have been restated resulting in an increase in the prior period underwriting costs of £(53) million and an increase in COR of 0.6%.
2 Corresponds to the sum of claims and benefits paid, net of recoveries from reinsurers and the change in insurance liabilities, net of reinsurance per note 5.
3 Includes £(6) million *(2018: £1 million)* relating to incurred claims for Aviva Re.
4 Commission and expenses consists of fee and commission expense and other operating expenses included within the general insurance & health segmental income statement (per note 5) adjusted to an earned basis and to remove the health business.
5 Includes £(1) million *(2018: £3 million)* relating to commission and expenses for Aviva Re.
6 Includes £nil *(2018: £(5) million)* relating to net earned premiums for Aviva Re.

Claims ratio
A financial measure of the performance of our general insurance business which is calculated as incurred claims expressed as a percentage of net earned premiums, which can be derived from the COR table above.

Commission and expense ratio
A financial measure of the performance of our general insurance business which is derived from the sum of earned commissions and expenses expressed as a percentage of net earned premiums from the COR table above.

Operating earnings per share (EPS)‡#
Operating EPS is calculated based on the Group adjusted operating profit attributable to ordinary shareholders net of tax, deducting non-controlling interests, preference dividends and the direct capital instrument (DCI) and tier 1 note coupons divided by the weighted average number of ordinary shares in issue, after deducting treasury shares. Operating EPS is considered meaningful to stakeholders because it enhances the understanding of the Group's operating performance over time by adjusting for the effects of non-operating items.

Following the change in the definition of the Group adjusted operating profit APM in 2019, operating EPS has been amended and the 2018 comparative amount has been restated resulting in a reduction in the prior year from 58.4 pence to 56.2 pence.

A reconciliation between operating EPS and basic EPS can be found in note 15.

Controllable costs‡ and operating expenses
Controllable costs are the controllable operational overheads associated with maintaining our businesses. Controllable costs are calculated as operating expenses, less premium based taxes, fees and levies that vary directly with premiums. These costs are by their nature a direct cost incurred as a result of generating premium income, and therefore not a controllable operational overhead. Operating expenses continues to be a useful measure alongside controllable costs.

Following the change in the definition of Group adjusted operating profit, operating expenses has been amended to include the amortisation and impairment of internally generated intangible assets to better reflect their operational nature. Comparative amounts have been restated resulting in an increase in prior year operating expenses of £112 million. Amortisation and impairment of intangible assets acquired in business combinations will continue to be excluded from operating expenses as these relate to merger and acquisition activity.

A reconciliation of other expenses in the IFRS consolidated income statement to operating expenses (restated) and controllable costs is set out below:

	2019 £m	2018 £m
Other expenses (IFRS income statement)	**3,329**	3,843
Less: impairment of goodwill, associates and joint ventures and other amounts expensed	**(15)**	(13)
Less: amortisation and impairment of intangibles acquired in business combinations[1]	**(87)**	(97)
Less: amortisation and impairment of acquired value of in-force business	**(406)**	(426)
Less: foreign exchange gains/(losses)	**109**	(28)
Add: other acquisition costs	**1,001**	954
Add: claims handling costs	**339**	336
Less: other costs	**(151)**	(431)
Operating expenses[1]	**4,119**	4,138
Less: premium based income taxes, fees and levies	**(180)**	(170)
Controllable costs	**3,939**	3,968

1 Following the change in the definition of Group adjusted operating profit, operating expenses now include the amortisation and impairment of internally generated intangible assets to better reflect the operational nature of these assets. Comparative amounts have been restated resulting in an increase in the prior period operating expenses of £112 million.

Operating expenses exclude impairment of goodwill, associates and joint ventures; amortisation and impairment of other intangible assets acquired in business combinations; amortisation and impairment of acquired value of in-force business; and the profit or loss on disposal and remeasurement of subsidiaries, joint ventures and associates. These items relate to merger and acquisition activity which we view as strategic in nature, hence they are excluded from operating expenses as this is principally used to manage the performance of our operating segments.

Operating expenses include indirect acquisition costs, such as underwriting overheads, and claims handling costs. These are considered to be controllable by the operating segments and are therefore also included in controllable costs.

Operating expenses exclude other amounts that, in management's view, are not representative of underlying day-to-day expenses involved in running the business, and that would distort the year on year operating expenses trend, including historical product governance costs and GI instalment income. In 2019 other costs includes an additional £175 million product governance provision in our UK Life business relating to past communications to a specific sub-set of pension policyholders that may not have adequately informed them of switching options into with-profits funds that were available to them (see note 51).

Other costs in 2018 included movements in provisions set aside in respect of ongoing regulatory compliance as well as an increase of £175 million product governance provision relating to a historical issue over pension arrangement sales by Friends Provident (of which over 90% of cases related to pre-2002).

IFRS Return on Equity (RoE)

The IFRS RoE calculation is based on Group adjusted operating profit after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity (excluding non-controlling interests, preference share capital and direct capital instrument and tier 1 notes).

Following the change in the definition of the Group adjusted operating profit APM in 2019, IFRS RoE has been amended and the 2018 comparative amount has been restated resulting in a reduction in the prior year from 13.3% to 12.8%.

IFRS net asset value (NAV) per share

IFRS NAV per share is calculated as the equity attributable to shareholders of Aviva plc, less preference share capital (both within the consolidated statement of financial position), divided by the actual number of shares in issue at the balance sheet date. IFRS NAV per share monitors the value generated by the Company in terms of the equity shareholders' face value per share investment.

Assets Under Management (AUM) and Assets Under Administration (AUA)

AUM represent all assets managed or administered by or on behalf of the Group, including those assets managed by Aviva Investors and by third parties. AUM include managed assets that are reported within the Group's statement of financial position and those assets belonging to external clients outside the Aviva Group which are therefore not included in the Group's statement of financial position.

Consistent with previous years, Aviva Investors AUA comprises AUM plus £36 billion *(2018: £29 billion)* of assets managed by third parties on platforms administered by Aviva Investors.

Both AUM and AUA are monitored as they reflect the potential earnings arising from investment returns and fee and commission income and measure the size and scale of the Group's fund management business.

A reconciliation of amounts appearing in the Group's statement of financial position to AUM is shown below:

	2019 £bn	Restated[1] 2018 £bn
Assets managed on behalf of Group companies		
Assets included in statement of financial position[2]		
Financial investments	**351**	327
Investment properties	**11**	11
Loans	**39**	36
Cash and cash equivalents	**20**	17
Other	**1**	1
	422	392
Less: third party funds included above	**(17)**	(17)
	405	375
Assets managed on behalf of third parties[4]		
Aviva Investors	**67**	64
UK Platform[5]	**29**	23
Other	**9**	9
	105	96
Total AUM[3]	**510**	471

1 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been restated from those previously reported.
2 Includes assets classified as held for sale.
3 Includes AUM of £346 billion *(2018: £331 billion)* managed by Aviva Investors.
4 AUM managed on behalf of third parties cannot be directly reconciled to the financial statements.
5 UK Platform relates to the assets under management in the UK long-term savings business.

Net fund flows

Net fund flows is one of the measures of growth used by management and is a component of the movement in the life and platform business managed assets (excluding UK with-profits) during the period. It is the difference between the inflows (being IFRS net written premiums plus deposits received under investment contracts) and outflows (being IFRS net paid claims plus redemptions and surrenders under investment contracts). It excludes market and other movements.

APMs derived from Solvency II measures

The Solvency II regime requires insurers to hold own funds in excess of the Solvency Capital Requirement (SCR). Own funds are available capital resources determined under Solvency II. This includes the excess of assets over liabilities in the Solvency II balance sheet, calculated on best estimate, market consistent assumptions and include transitional measures on technical provisions (TMTP), subordinated liabilities that qualify as capital under Solvency II, and off-balance sheet own funds.

The SCR is calculated at Group level using a risk-based capital model which is calibrated to reflect the cost of mitigating the risk of insolvency to a 99.5% confidence level over a one-year time horizon – equivalent to a 1 in 200 year event – against financial and non-financial shocks. As a number of subsidiaries utilise the standard formula rather than a risk-based capital model to assess capital requirements, the overall Group SCR is calculated using a partial internal model, and it is shown after the impact of diversification benefit.

The reconciliation from total Group equity on an IFRS basis to Solvency II own funds is presented below.

	2019 £m	2018 £m
Total Group equity on an IFRS basis	**18,685**	18,455
Elimination of goodwill and other intangible assets[1]	**(8,424)**	(7,828)
Insurance assets and liabilities valuation differences (net of transitional deductions)[2]	**19,564**	19,293
Inclusion of risk margin (net of transitional deductions)	**(3,122)**	(3,256)
Net deferred tax on valuation differences[3]	**(1,220)**	(1,149)
Revaluation of subordinated liabilities[4]	**(716)**	(649)
Other accounting differences[4]	**(99)**	(286)
Estimated Solvency II net assets (gross of non-controlling interests)	**24,668**	24,580
Difference between Solvency II net assets and own funds[5]	**3,679**	2,987
Estimated Solvency II regulatory own funds[6]	**28,347**	27,567

1 Includes £1,855 million *(2018: £1,872 million)* of goodwill and £6,569 million *(2018: £5,956 million)* of other intangible assets comprising acquired value of in-force business of £2,479 million *(2018: £2,916 million)*, deferred acquisition costs (net of deferred income) of £3,221 million *(2018: £2,858 million)* and other intangibles of £869 million *(2018: £182 million)*.
2 Includes valuation adjustments to reflect insurance assets and liabilities valued on a best estimate basis using market-implied assumptions.
3 Net deferred tax includes the tax effect of all other reconciling items in the table above which are shown gross of tax.
4. Includes valuation adjustments and the impact of the difference between consolidation methodologies under Solvency II and IFRS.
5 Regulatory adjustments to bridge from Solvency II net assets to own funds include recognition of subordinated debt capital, non-controlling interests and adjustments for ring-fenced funds restrictions.
6 Regulation was introduced in France that allows French insurers to place the Provision pour Participation aux Excedents (PPE) into Solvency II own funds. The PPE has been included in the France local regulatory own funds in 2019 but it is not included in the Group regulatory own funds.

A number of APMs relating to Solvency II are utilised to measure and monitor the Group's performance, growth and financial strength:

- Solvency II shareholder cover ratio‡
- Value of new business on an adjusted Solvency II basis (VNB)‡
- Operating Capital Generation (OCG) ‡#
- Operating own funds generation
- Solvency II return on equity (ROE)‡
- Solvency II net asset value (NAV) per share‡
- Solvency II debt leverage ratio

Solvency II shareholder cover ratio‡

The estimated Solvency II shareholder cover ratio, which is derived from own funds divided by the SCR using a 'shareholder view', is one of the indicators of the Group's balance sheet strength. The shareholder view is considered by management to be more representative of the shareholders' risk-exposure and the Group's ability to cover the SCR with eligible own funds and aligns with management's approach to dynamically manage its capital position. In arriving at the shareholder position, the following adjustments are typically made to the regulatory Solvency II position:

- The contribution to the Group's SCR and own funds of the most material fully ring fenced with-profits funds and staff pension schemes in surplus are excluded. These exclusions have no impact on Solvency II surplus as these funds are self-supporting on a Solvency II capital basis with any surplus capital above SCR not recognised.
- A notional reset of the transitional measure on technical provisions (TMTP), calculated using the same method as used for formal TMTP resets. This presentation avoids step changes to the Solvency II position that arise only when the formal TMTP reset points are triggered. The 31 December 2019 position is based on a formal reset of the TMTP, in line with the requirement to reset the TMTP at least every two years and hence no adjustment is required. The TMTP is amortised on a straight-line basis over 16 years from 1 January 2016 in line with the Solvency II rules.
- Pro forma adjustments are made if the Solvency II shareholder cover ratio does not fully reflect the effect of transactions or capital actions that are known as at each reporting date. Such adjustments may be required in respect of planned acquisitions and disposals, group reorganisations and adjustments to the Solvency II valuation basis arising from changes to the underlying regulations or updated interpretations provided by EIOPA. These adjustments are made in order to show a more representative view of the Group's solvency position.

A reconciliation of the Solvency II regulatory surplus to the Solvency II shareholder surplus is provided below:

2019	Own funds 2019 £m	SCR 2019 £m	Surplus 2019 £m
Estimated Solvency II regulatory surplus	**28,347**	**(15,517)**	**12,830**
Adjustments for:			
Fully ring-fenced with-profit funds	**(2,501)**	**2,501**	**—**
Staff pension schemes in surplus	**(1,181)**	**1,181**	**—**
Notional reset of TMTP	**—**	**—**	**—**
Pro forma adjustments[1]	**(117)**	**(75)**	**(192)**
Estimated Solvency II shareholder surplus	**24,548**	**(11,910)**	**12,638**

1 The 31 December 2019 Solvency II position includes three pro forma adjustments that relate to the disposal of FPI (£nil impact on surplus), the disposal of Hong Kong (£nil impact on surplus) and the potential impact of an expected change to Solvency II regulations on the treatment of equity release mortgages (£0.2 billion decrease in surplus as a result of an increase in SCR).

2018	Own funds 2018 £m	SCR 2018 £m	Surplus 2018 £m
Estimated Solvency II regulatory surplus	27,567	(15,339)	12,228
Adjustments for:			
Fully ring-fenced with-profit funds	(2,634)	2,634	—
Staff pension schemes in surplus	(1,142)	1,142	—
Notional reset of TMTP	(127)	—	(127)
Pro forma adjustments[1]	(113)	(6)	(119)
Estimated Solvency II shareholder surplus	23,551	(11,569)	11,982

1 The 31 December 2018 Solvency II position includes the pro forma impact of the disposals of FPI (£0.1 billion increase in surplus) and the potential impact of an expected change to Solvency II regulations on the treatment of equity release mortgages (£0.2 billion reduction in surplus as a result of an increase in SCR).

A summary of the shareholder view of the Group's Solvency II position is shown in the table below:

	2019 £m	2018 £m
Own Funds	**24,548**	23,551
Solvency Capital Requirement	**(11,910)**	(11,569)
Estimated Solvency II Shareholder Surplus at 31 December	**12,638**	11,982
Estimated Shareholder Cover Ratio	**206%**	204%

Value of new business on an adjusted Solvency II basis (VNB)‡

VNB measures the additional value to shareholders created through the writing of new life business in the period. It reflects Solvency II assumptions and allowance for risk, and is defined as the increase in Solvency II own funds resulting from life business written in the period, including the impact of interactions between in-force and new business, adjusted to:

- remove the impact of the contract boundary restrictions under Solvency II;
- include businesses which are not within the scope of Solvency II own funds (e.g. UK and Asia Healthcare, Retail fund management and UK equity release); and
- reflect a gross of tax and non-controlling interests basis, include the impact of 'look through profits' in service companies (where not included in Solvency II) and reflect the difference between locally applicable capital requirements for the smaller Asian markets (Indonesia, Vietnam, Hong Kong) and the value of new business on an adjusted Solvency II basis.

A reconciliation between VNB and the Solvency II own funds impact of new business is provided below:

2019	UK £m	Europe £m	Asia & Other £m	Group £m
VNB (gross of tax and non-controlling interests)	**592**	**414**	**218**	**1,224**
Solvency II contract boundary restrictions – new business	**(71)**	**(148)**	**(45)**	**(264)**
Solvency II contract boundary restrictions – increments / renewals on in-force business	**98**	**73**	**25**	**196**
Businesses which are not in the scope of Solvency II own funds	**(138)**	**(1)**	**(19)**	**(158)**
Tax and Other[1]	**(100)**	**(171)**	**(68)**	**(339)**
Solvency II own funds impact of new business (net of tax and non-controlling interests)	**381**	**167**	**111**	**659**

2018[1] Restated	UK £m	Europe £m	Asia & Other £m	Group £m
VNB (gross of tax and non-controlling interests)	481	517	204	1,202
Solvency II contract boundary restrictions – new business	(51)	(131)	(31)	(213)
Solvency II contract boundary restrictions – increments / renewals on in-force business	126	83	21	230
Businesses which are not in the scope of Solvency II own funds	(117)	(4)	(36)	(157)
Tax and Other[1]	(92)	(212)	(69)	(373)
Solvency II own funds impact of new business (net of tax and non-controlling interests)	347	253	89	689

1 Other includes the impact of 'look through profits' in service companies (where not included in Solvency II) of £(78) million (2018: £(63) million), the reduction in value when moving to a net of non-controlling interests basis of £(57) million (2018: £(81) million) and the difference between locally applicable capital requirements for the smaller Asian markets (Indonesia, Vietnam, Hong Kong) and the value of new business on an adjusted Solvency II basis of £(37) million (2018 restated: £(46) million).

The methodology underlying the calculation of VNB remains unchanged from the prior year. For 2018, new business written contributed to the calculation of the UK Life's transitional measures (in line with the clarification issued by the PRA in 2017), but this is no longer applicable to the Group in 2019.

VNB is calculated using economic assumptions as at the point of sale, taken as those appropriate to the start of each quarter. For contracts that are repriced more frequently, weekly or monthly economic assumptions have been used. The economic assumptions follow Solvency II rules for risk-free rates, volatility adjustment and matching adjustment. The operating assumptions are consistent with the Solvency II balance sheet, when these assumptions are updated, the year-to-date VNB will capture the impact of the assumption change on all business sold that year.

Matching Adjustment (MA)

A MA is applied to certain obligations based on the expected allocation of assets backing new business at each year-end date. This allocation may be different to the MA applied at the portfolio level. Aviva applies a MA to certain obligations in UK Life, using methodology which is set out in the Solvency and Financial Condition Report.

The matching adjustment used for 2019 UK new business (where applicable) was 95 bps *(2018: 105 bps)*.

New business margin

New business margin is calculated as value of new business on an adjusted Solvency II basis (VNB) divided by the present value of new business premiums (PVNBP) and expressed as a percentage.

Present value of new business premiums (PVNBP)

PVNBP measures sales in the Group's life insurance business. PVNBP is derived from the present value of new regular premiums expected to be received over the term of the new contracts plus 100% of single premiums from new business written in the financial period and is expressed at the point of sale. The discounted value of regular premiums is calculated using the same methodology as for VNB. PVNBP also includes any changes to existing contracts which were not anticipated at the outset of the contract that generate additional shareholder risk and associated premium income of the nature of a new policy.

The table below presents a reconciliation of sales to IFRS net written premiums:

	2019 £m	2018 £m
Present value of new business premiums	**45,665**	40,763
Investment sales	**4,621**	4,799
General insurance and health net written premiums	**10,224**	9,968
Long-term health and collectives business	**(3,563)**	(3,840)
Total sales	**56,947**	51,690
Effect of capitalisation factor on regular premium long-term business[1]	**(15,294)**	(12,726)
JVs and associates[2]	**(286)**	(257)
Annualisation impact of regular premium long-term business[3]	**(327)**	(247)
Deposits[4]	**(10,917)**	(10,329)
Investment sales[5]	**(4,621)**	(4,799)
IFRS gross written premiums from existing long-term business[6]	**5,057**	4,776
Long-term insurance and savings business premiums ceded to reinsurers	**(2,879)**	(1,775)
Total IFRS net written premiums	**27,680**	26,333
Analysed as:		
Long-term insurance and savings net written premiums	**17,456**	16,365
General insurance and health net written premiums	**10,224**	9,968
	27,680	26,333

1 Discounted value of regular premiums expected to be received over the term of the new contract, adjusted for expected levels of persistency.
2 Total long-term new business sales include our share of sales from joint ventures and associates. Under IFRS, premiums from these sales are excluded.
3 The impact of annualisation is removed in order to reconcile the non-GAAP new business sales to IFRS premiums.
4 Under IFRS, only the margin earned from non-participating investment contracts is recognised in the IFRS income statement.
5 Investment sales included in total sales represent the cash inflows received from customers investing in mutual fund type products such as unit trusts and OEICs.
6 The non-GAAP measure of sales focuses on new business written in the period under review while the IFRS income statement includes premiums received from all business, both new and existing.

Operating capital generation (OCG)[‡#]

OCG measures the amount of Solvency II capital the Group generates from operating activities and incorporates an expected return on investments supporting the life and non-life insurance businesses. The Group considers this measure meaningful to stakeholders as it enhances the understanding of the Group's operating performance over time by separately identifying non-operating items. The calculation of OCG is consistent with previous periods.

The expected investment returns assumed within OCG are consistent with the returns used for Group adjusted operating profit.

OCG includes the effect of variances in experience for non-economic items, such as mortality, persistency and expenses, the effect of changes in non-economic assumptions (for example, longevity), model changes that are non-economic in nature and the impact of capital actions, for example, strategic changes in asset mix including changes in hedging exposure. Consistent with the Group adjusted operating profit APM, OCG is determined on start of period economic assumptions and therefore excludes economic variances and economic assumption changes.

An analysis of the components of OCG is presented below, including an analysis of Solvency II operating own funds generation which is the own funds component of OCG (see the section below):

	2019 £m	2018 £m
Solvency II own funds impact of new business (net of tax and non-controlling interests)	**659**	689
Operating own funds generation from Life existing business	**507**	835
Operating own funds generation from non-life	**431**	299
Other own funds generation[1]	**944**	497
Group debt costs	**(284)**	(298)
Solvency II operating own funds generation	**2,257**	2,022
Solvency II operating SCR impact	2	1,176
Solvency II OCG	**2,259**	3,198

1 Other includes the impact of capital actions and non-economic assumption changes.

OCG is a key component of the movement in Solvency II shareholder surplus. The tables below provide an analysis of the change in Solvency II shareholder surplus.

2019 Shareholder view	Own funds 2019 £m	SCR 2019 £m	Surplus 2019 £m
Group Solvency II shareholder surplus at 1 January	**23,551**	**(11,569)**	**11,982**
Operating capital generation	**2,257**	**2**	**2,259**
Non-operating capital generation	**178**	**(362)**	**(184)**
Dividends[1]	**(1,222)**	**—**	**(1,222)**
Share buy-back	**—**	**—**	**—**
Hybrid debt repayments	**(210)**	**—**	**(210)**
Acquired/divested business	**(6)**	**19**	**13**
Estimated Solvency II shareholder surplus at 31 December	**24,548**	**(11,910)**	**12,638**

1 Dividends includes £17 million *(2018: £17 million)* of Aviva plc preference dividends and £21 million *(2018: £21 million)* of General Accident plc preference dividends.

2018 Shareholder view	Own funds 2018 £m	SCR 2018 £m	Surplus 2018 £m
Group Solvency II shareholder surplus at 1 January	24,737	(12,506)	12,231
Operating capital generation	2,022	1,176	3,198
Non-operating capital generation	(777)	(231)	(1,008)
Dividends[1]	(1,166)	—	(1,166)
Share buy-back	(600)	—	(600)
Hybrid debt repayments	(875)	—	(875)
Acquired/divested business	210	(8)	202
Estimated Solvency II shareholder surplus at 31 December	23,551	(11,569)	11,982

1 Dividends includes £17 million *(2018: £17 million)* of Aviva plc preference dividends and £21 million *(2018: £21 million)* of General Accident plc preference dividends.

Solvency II future surplus emergence

Solvency II future surplus emergence is a projection of the capital generation from existing long-term in-force life business. The projection is a static analysis as at a point in time and hence it does not include the potential impact of future new business or the potential impact of active management of the business (for example, active management of market, demographic and expense risk through investment, hedging, risk transfer, operational risk and expense management), which may affect the actual amount of OCG earned from existing business in future periods.

For business subject to short contract boundaries under Solvency II, allowance has been made for the impact of renewal premiums as and when they are expected to occur.

The projected surplus, which is primarily expected to arise from the release of risk margin (including transitional measures) and solvency capital requirement as the business runs off over time, is expected to emerge through OCG in future years. The cash flows are real-world cash flows, i.e. they are based on best estimate non-economic assumptions used in the Solvency II valuation and real-world investment returns rather than risk-free. The expected investment returns are consistent with the returns used in IFRS.

Operating own funds generation

Operating own funds generation measures the amount of Solvency II own funds generated from operating activities. Operating own funds generation is the own funds component of OCG and follows the methodology and assumptions outlined in OCG.

Solvency II Return on Equity (RoE)[‡]

Solvency II ROE is calculated as:

- Operating own funds generation less preference dividends, direct capital instrument (DCI) and tier 1 note coupons divided by;
- Opening value of unrestricted tier 1 shareholder own funds

Unrestricted tier 1 shareholder own funds represents the highest quality tier of capital and includes instruments with principal loss absorbing features such as permanence, subordination, undated, absence of redemption incentives, mandatory costs and encumbrances. The tables below provide a summary of the Group's regulatory Solvency II own funds by tier and a reconciliation between unrestricted tier 1 regulatory own funds and unrestricted tier 1 shareholder own funds:

Regulatory view	2019 £m	2018 £m
Unrestricted regulatory tier 1 own funds	**20,377**	19,312
Restricted Tier 1	**1,839**	2,096
Tier 2	**5,794**	5,811
Tier 3[1]	**337**	348
Estimated Solvency II regulatory own funds[2]	**28,347**	27,567

1 Tier 3 regulatory own funds at 31 December 2019 consists of £259 million subordinated debt *(2018: £253 million)* plus £78 million net deferred tax assets *(2018: £95 million)*.
2 Regulation was introduced in France that allows French insurers to place the Provision pour Participation aux Excedents (PPE) into Solvency II own funds. The PPE has been included in the France local regulatory own funds in 2019 but it is not included in the Group regulatory own funds.

Shareholder view	2019 £m	2018 £m
Unrestricted regulatory tier 1 own funds	**20,377**	19,312
Adjustments for:		
Fully ring-fenced with-profit funds	**(2,501)**	(2,634)
Staff pension schemes in surplus	**(1,181)**	(1,142)
Notional reset of TMTP	**—**	(127)
Pro forma adjustments[1]	**(117)**	(113)
Unrestricted shareholder tier 1 own funds	**16,579**	15,296

1 The 31 December 2019 Solvency II position includes two pro forma adjustments that relate to the disposal of FPI (£0.1 billion reduction in own funds) and the disposal of Hong Kong (£nil impact on own funds). The 31 December 2018 Solvency II position includes the pro forma impact of the disposal of FPI (£0.1 billion reduction in own funds).

Solvency II RoE provides useful information as it is used as an economic value measure by the Group to assess growth and performance.

The Solvency II return on equity is shown below:

	2019 £m	2018 £m
Solvency II operating own funds generation	**2,257**	2,022
Less preference share dividends	**(38)**	(38)
Less DCI and tier 1 note coupons	**(34)**	(36)
	2,185	1,948
Opening Unrestricted tier 1 shareholder Solvency II own funds	**15,296**	15,550
Solvency II Return on Equity	**14.3%**	12.5%

Solvency II return on capital (unlevered)
Solvency II return on capital (unlevered) is calculated as operating own funds generation excluding interest costs divided by opening shareholder Solvency II own funds. It is used as an economic value measure by business divisions to assess growth and performance.

Solvency II net asset value (NAV) per share‡
Solvency II NAV per share is used to monitor the value generated by the Group in terms of the equity shareholders' face value per share investment. This is calculated as the unrestricted tier 1 Solvency II shareholder own funds, divided by the actual number of shares in issue as at the balance sheet date. Consistent with Solvency II ROE, it is an economic value measure used by the Group to assess growth.

The Solvency II NAV per share is shown below:

	2019	2018
Unrestricted tier 1 shareholder Solvency II own funds (£m)	**16,579**	15,296
Number of shares in issue at 31 December (in millions)	**3,921**	3,902
Solvency II NAV per share	**423p**	392p

Solvency II debt leverage ratio
Solvency II debt leverage ratio is calculated as Solvency II debt expressed as a percentage of Solvency II regulatory own funds plus senior debt and commercial paper. Where Solvency II debt includes subordinated debt, preference share capital and direct capital instrument and tier 1 notes. The Solvency II debt leverage ratio provides a measure of the Group's financial strength.

	2019 £m	2018 £m
Solvency II regulatory debt	**7,892**	8,160
Senior notes	**1,052**	1,113
Commercial paper	**238**	251
Total Solvency II debt	**9,182**	9,525
Estimated Solvency II regulatory own funds, senior debt and commercial paper	**29,637**	28,931
Solvency II debt leverage	**31%**	33%

A reconciliation from IFRS sub-ordinated debt to Solvency II regulatory debt is provided below:

	2019 £m	2018 £m
IFRS borrowings	**9,067**	9,420
Less borrowings not classified as Solvency II regulatory debt		
Senior notes	**(1,052)**	(1,113)
Commercial paper	**(238)**	(251)
Operational borrowings	**(1,571)**	(1,721)
Less: Amounts held by Group Companies	**—**	5
IFRS sub-ordinated debt	**6,206**	6,340
Revaluation of subordinated liabilities	**716**	649
Other movements	**20**	(10)
Solvency II subordinated debt	**6,942**	6,979
Preference share capital, deferred capital instrument and tier 1 notes	**950**	1,181
Solvency II regulatory debt	**7,892**	8,160

Other APMs
Cash remittances‡
Cash paid by our operating businesses to the Group, comprised of dividends and interest on internal loans. Dividend payments by operating businesses may be subject to insurance regulations that restrict the amount that can be paid. The business monitors total cash remittances at a Group level and in each of its markets.

Cash remittances eliminate on consolidation and hence are not directly reconcilable to the Group's IFRS consolidated statement of cash flows.

Centre liquidity
Centre liquidity represents cash remitted by the business units to the Group centre less centre operating expenses and debt financing costs. It includes cash disposal proceeds and capital injections. This provides meaningful information because it shows the liquidity at the Group centre available to meet debt interest and central costs and to pay dividends to shareholders.

Excess centre cash flow
This represents the cash remitted by business units to the Group centre less central operating expenses and debt financing costs. Excess centre cash flow is a measure of the cash available to pay dividends, reduce debt or invest back into our business. Excess centre cash flow does not include cash movements such as disposal proceeds or capital injections.

These amounts eliminate on consolidation and hence are not directly reconcilable to the Group's IFRS consolidated statement of cash flows.

Annual Premium Equivalent (APE)
APE is a measure of sales in our life insurance business. APE is calculated as the sum of new regular premiums plus 10% of new single premiums written in the period. This provides useful information on sales and new business when considered alongside VNB.

Operating expense ratio
The operating expense ratio expresses expenses as a percentage of operating income.

Operating income is calculated as Group adjusted operating profit before Group debt costs and operating expenses.

Spread margin

The spread margin represents the return made on the Group's annuity and other non-linked business, based on the expected investment return, less amounts credited to policyholders. While not a key performance metric of the Group, the spread margin is a useful indicator of the expected investment return arising on this business.

Underwriting margin

The underwriting margin represents the release of reserves held to cover claims, surrenders and administrative expenses less the cost of actual claims and surrenders in the period.

Unit-linked margin

The unit-linked margin represents the annual management charges on unit-linked business. This is an indicator of the return arising on this business.

Shareholder services

2020 Financial Calendar

Ordinary dividend timetable:	Final	Interim**
Ordinary ex-dividend date	23 April 2020	13 August 2020
Dividend record date	24 April 2020	14 August 2020
Last day for Dividend Reinvestment Plan and currency election	11 May 2020	3 September 2020
Dividend payment date*	2 June 2020	24 September 2020
Other key dates:		
Annual General Meeting		1:30pm on 26 May 2020
2020 interim results announcement		6 August 2020

* Please note that the ADR local payment date will be approximately four business days after the proposed dividend date for ordinary shares.
** These dates are provisional and subject to change

Dividend payment options

Shareholders can receive their dividends in the following ways:

- Directly into a nominated UK bank account;
- Directly into a nominated Eurozone bank account;
- The Global Payment Service provided by our Registrar, Computershare Investor Services PLC (Computershare). This enables shareholders living outside of the UK and the Single Euro Payments Area to elect to receive their dividends or interest payments in a choice of over 125 international currencies; or
- The Dividend Reinvestment Plan enables eligible shareholders to reinvest their cash dividend in additional Aviva ordinary shares.

You can find further details regarding these payment options at www.aviva.com/dividends and register your choice by contacting Computershare using the contact details opposite, online at www.aviva.com/online or by returning a dividend mandate form. You must register for one of these payment options to receive any dividend payments from Aviva.

Manage your shareholding online

www.aviva.com/shareholders
General information for shareholders.

www.aviva.com/online
Log in to the Computershare Investor Centre to:

- Change your address
- Change payment options
- Switch to electronic communications
- View your shareholding
- View any outstanding payments

Annual General Meeting (AGM)

The 2020 AGM will be held at The Queen Elizabeth II Centre, Broad Sanctuary, Westminster, London SW1P 3EE, on Tuesday, 26 May 2020, at 1.30pm.

Details of each resolution to be considered at the meeting and voting instructions are provided in the Notice of AGM, which is available on the Company's website at www.aviva.com/agm

The voting results of the 2020 AGM will be accessible on the Company's website at www.aviva.com/agm shortly after the meeting.

Aviva plc Strategic report

The Strategic report sets out a review of Aviva's business, addressing key issues such as its business model, strategy and principal risks and uncertainties facing the business. The Strategic report forms part of the annual report and accounts. However, shareholders can also elect to receive Aviva's standalone Strategic report as an alternative to the full annual report and accounts by contacting Computershare using the contact details below.

Shareholder contacts:

Ordinary and preference shares – Contact:

For any queries regarding your shareholding, please contact Computershare:

- **By telephone:** 0371 495 0105
  We're open Monday to Friday, 8.30am to 5.30pm UK time, excluding public holidays. Please call +44 117 378 8361 if calling from outside of the UK.
- **By email:** AvivaSHARES@computershare.co.uk
- **In writing:** Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol, BS99 6ZZ.

American Depositary Receipts (ADRs) – Contact:

For any queries regarding Aviva ADRs, please contact Citibank Shareholder Services (Citibank):

- **By telephone:** 1 877 248 4237 (1 877-CITI-ADR)
  We are open Monday to Friday, 8.30am to 6pm US Eastern Standard Time, excluding public holidays. Please call +1 781 575 4555 if calling from outside of the US.
- **By email:** Citibank@shareholders-online.com
- **In writing:** Citibank Shareholder Services, PO Box 43077, Providence, Rhode Island, 02940-3077 USA.

Group Company Secretary

Shareholders may contact the Group Company Secretary:

- **By email:** Aviva.shareholders@aviva.com
- **In writing:** Kirstine Cooper, Group Company Secretary, St Helen's, 1 Undershaft, London, EC3P 3DQ.
- **By telephone:** +44 (0)20 7283 2000

Cautionary statement

This document should be read in conjunction with the documents distributed by Aviva plc (the 'Company' or 'Aviva') through The Regulatory News Service (RNS).

This announcement contains, and we may make other verbal or written 'forward-looking statements' with respect to certain of Aviva'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. Aviva 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 outcome of the negotiations on the future economic relationship between the UK and the EU); the effect of credit spread volatility on the net unrealised value of the investment portfolio; 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 cause policyholders to surrender their contracts, reduce the value of our portfolio and impact our asset and liability matching; 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 options and guarantees embedded in some of our life insurance products and the value of the assets backing their 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 mortality and morbidity trends, lapse rates and policy renewal rates), longevity and endowments; a cyclical downturn of the insurance industry; the impact of natural and man-made catastrophic events (including the impact of COVID-19) 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; the impact of actual experience differing from estimates used in valuing and amortising deferred acquisition costs (DAC) and acquired value of in-force business (AVIF); 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, including joint ventures; 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 systems errors or regulatory changes on the calculation of unit prices or deduction of charges for our unit-linked products that may require retrospective compensation to our customers; 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, including decreased demand for annuities in the UK due to changes in UK law; the inability to protect our intellectual property; the effect of undisclosed liabilities, integration issues and other risks associated with our acquisitions; and the timing/regulatory approval impact, integration risk and other uncertainties, such as non-realisation of expected benefits or diversion of management attention and other resources, relating to announced acquisitions and pending disposals and relating to future acquisitions, combinations or disposals within relevant industries, the policies, decisions and actions of government or regulatory authorities in the UK, the EU, 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 'Risk and risk management' section of the strategic report.

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

This report has been prepared for, and only for, the members of the Company, as a body, and no other persons. 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.

Produced by MerchantCantos
www.merchantcantos.com

The cover of this report is printed on Revive Silk 100 and the text on Revivce Offset, made from 100% genuine de-inked post consumer waste and is FSC® certified. This report was printed using vegetable oil based inks by Pureprint Group a CarbonNeutral® printer certified to ISO 14001 environmental management system.

100% FSC www.fsc.org
RECYCLED
Paper made from recycled material
FSC® C022913

Aviva plc
St Helen's, 1 Undershaft
London EC3P 3DQ
+44 (0)20 7283 2000
www.aviva.com

Registered in England
Number 2468686