AVIVA

News Release

8 August 2019

AVIVA PLC 2019 INTERIM RESULTS ANNOUNCEMENT*

Maurice Tulloch, Chief Executive Officer, said:

"Aviva has strong foundations to build upon but there is much to do to improve our performance.

Our performance is mixed, with operating earnings per share up 2%. We have delivered strong general insurance results with a combined ratio of 95.9%. In life insurance and asset management, operating profits declined due to challenging market conditions and the absence of a longevity reserve release.

In June we announced a plan to improve Aviva's performance and deliver an excellent experience for our customers. We have made a quick start; separating management of our life and general insurance businesses in the UK and bringing together UK Digital and UK General Insurance.

Our financial position remains strong with a capital surplus of £11.8 billion and £2.3 billion of cash at group. Maintaining such a healthy capital surplus is important as we continue to reduce our debt levels and safely navigate uncertain market conditions. Aviva is ready and resilient.

In line with our progressive dividend policy, the Board of Directors has increased the interim dividend by 3% to 9.50 pence per share.

I am working with the Board to refresh Aviva's strategy and we have decided to review the strategic options for our Asian businesses. Aviva's businesses in Asia have excellent growth and earnings potential and we are considering a range of options to help these businesses reach their potential.

I am confident that our combination of excellent insurance skills, a strong balance sheet and world class distribution and partners provide a strong foundation for Aviva's future success."

Profit	• Operating EPS[1,‡#] up 2% to 27.3 pence *(HY18: 26.8 pence)* • Operating profit[2,‡#] up 1% to £1,448 million *(HY18: £1,438 million)* • IFRS profit after tax £1,180 million *(HY18: £376 million)* • Basic EPS 28.2 pence *(HY18: 7.9 pence)*
Dividend	• Interim dividend per share up 3% to 9.50 pence *(HY18: 9.25 pence)*
Capital	• Solvency II cover ratio[3,‡] 194% *(2018: 204%)* • Solvency II capital surplus[3] £11.8 billion *(2018: £12.0 billion)* • Operating capital generation[#] £0.8 billion *(HY18: £0.9 billion)* • IFRS net asset value per share 432 pence *(2018: 424 pence)*
Cash	• Cash remittances[‡#] £1,582 million *(HY18: £1,493 million)* • Holding company liquidity £2.3 billion[4] *(February 2019: £1.6 billion)*

‡ Denotes Alternative Performance Measures (APMs) which are key performance indicators of the Group used to measure our performance and financial strength. Further details of this measure are included in the 'Other information' section of the Analyst Pack.
\# Denotes key performance indicators which are used by the Group to determine or modify remuneration. Further details of this measure are included in the 'Other information' section of the Analyst Pack.
1 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 Analyst Pack.
2 Group adjusted operating profit is a non-GAAP Alternative Performance Measure (APM) which is not bound by the requirements of IFRS. Further details of this measure are included in the 'Other information' section of the Analyst Pack.
3 The estimated Solvency II position represents the shareholder view as defined in section 8.i of the Analyst Pack.
4 Stated as at end July 2019 .

*This announcement contains inside information. The person responsible for making this announcement on behalf of the Group is Kirstine Cooper (Group Company Secretary).

Key financial metrics

Operating profit[1,‡#]

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Life business	**1,282**	1,392	(8)%	2,999
General insurance and health	**391**	302	29%	704
Fund management	**61**	74	(18)%	146
Other[2]	**(286)**	(330)	13%	(733)
Total	**1,448**	1,438	1%	3,116
Operating earnings per share[‡#]	**27.3p**	26.8p	2%	58.4p

Cash remittances[3,‡#]

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
United Kingdom[3]	**983**	1,216	(19)%	2,513
Canada	**15**	13	15%	28
Europe[3]	**503**	227	122%	483
Asia, Aviva Investors and Other	**81**	37	119%	113
Total	**1,582**	1,493	6%	3,137

Operating capital generation (OCG): Solvency II basis[3,#]

	6 months 2019 £bn	6 months 2018 £bn	Sterling % change	Full year 2018 £bn
United Kingdom[3]	**0.5**	0.9	(44)%	2.2
Canada	**0.1**	—	N/A	0.1
Europe[3]	**0.5**	0.4	25%	0.9
Asia & Aviva Investors	**—**	—	N/A	0.1
Other	**(0.3)**	(0.4)	25%	(0.1)
Total	**0.8**	0.9	(11)%	3.2

Expenses

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Operating expenses	**1,964**	1,929	2%	4,026
Operating expense ratio	**55.5%**	54.9%	0.6pp	54.2%

Value of new business: Adjusted Solvency II basis (VNB)[‡]

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
United Kingdom	**196**	198	(1)%	481
Europe	**237**	307	(23)%	517
Asia & Aviva Investors	**102**	98	4%	204
Total	**535**	603	(11)%	1,202

General insurance combined operating ratio (COR)[‡]

	6 months 2019	6 months 2018	Change	Full year 2018
United Kingdom	**95.7%**	94.3%	1.4pp	93.8%
Canada	**97.5%**	104.6%	(7.1)pp	102.4%
Europe	**92.9%**	93.5%	(0.6)pp	93.4%
Asia & Other	**111.2%**	125.0%	(13.8)pp	122.1%
Total	**95.9%**	97.4%	(1.5)pp	96.6%

Profit after tax

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
IFRS profit after tax	**1,180**	376	214%	1,687
Basic earnings per share	**28.2p**	7.9p	257%	38.2p

Interim dividend

	6 months 2019	6 months 2018	Sterling % change
Interim dividend per share	**9.50p**	9.25p	3%

Capital position

	30 June 2019	31 December 2018	Sterling % change	30 June 2018
Estimated shareholder Solvency II cover ratio[4,‡]	**194%**	204%	(10)pp	187%
Estimated Solvency II surplus[4]	**£11.8bn**	£12.0bn	(2)%	£11.0bn
Net asset value per share	**432p**	424p	2%	411p

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2 Other includes other operations, corporate centre costs and group debt and other interest costs.
3 Following the UK's decision to leave the European Union, the Ireland branches of the UK business have been transferred to Ireland effective March 2019. As a result the Ireland business is now reported within Europe instead of the United Kingdom for all metrics. Comparative balances have been restated accordingly.
4 The estimated Solvency II position represents the shareholder view only. See section 8i for more details.

Overview

In the first half of 2019, Aviva's operating profit[1,‡#] rose 1% to £1,448 million *(HY18: £1,438 million)*. Operating earnings per share[2,‡#] increased 2% to 27.3 pence *(HY18: 26.8 pence)* while basic earnings per share rose 3.6 times to 28.2 pence *(HY18: 7.9 pence)*.

The Board of Directors has declared an interim dividend of 9.50 pence per share, an increase of 3%. The interim dividend is consistent with our progressive dividend policy and reflects the underlying performance of the business.

Strong financial foundations

Aviva's priority is to maintain capital strength and balance sheet prudence, while further reducing debt leverage. Our progress on strengthening our balance sheet was recognised last month by Standard & Poor's, which upgraded our financial strength rating to AA-, and it is pleasing to note that all three of the major rating agencies rate Aviva in the AA range.

In the first half of 2019, our Solvency II surplus[3] remained strong at £11.8 billion *(2018: £12.0 billion)*. The solvency cover ratio[3,‡] declined by ten percentage points to 194% *(2018: 204%)*, primarily due to the fall in interest rates, with UK and European 10 year swap rates down 0.39% and 0.64% respectively.

Cash remittances[‡#] increased to £1,582 million *(HY18: £1,493 million)*, benefiting from changes in the timing of dividend payments from a number of business units. This underpinned an increase in centre liquidity to £2.3 billion[4] *(February 2019: £1.6 billion)*. Our centre cash position reinforces our strength and resilience and will provide capacity for our plans to reduce debt by at least £1.5 billion by the end of 2022.

Better fundamentals

Aviva's solid fundamentals are reflected in our results in the first half and they are also being recognised externally, with Aviva winning the Best of the Best Insurer at the Insurance Post British Insurance Awards. We are focused on further enhancing these fundamentals and ensuring the group works cohesively so that we can build and capitalise on our collective strength.

We have now moved to separate management structures for UK Life and UK General Insurance. We also completed the alignment of our UK Digital business under UK General Insurance, which will help us to capitalise on our leading digital capabilities and become more efficient in our direct to consumer and price comparison businesses.

Aviva continues to make progress in relation to its insurance fundamentals. We are extending our technical excellence in underwriting and data science across the group, delivering quantitative and behavioural insights that improve risk selection. Our progress on digital has allowed us to enhance customer experience, increase connectivity with our distribution partners and provide distinctive products and services that have helped to win and retain customers across our business.

However, more needs to be done. Our results reinforce Aviva's need to reduce complexity, improve efficiency and apply greater commercial rigour to how we run our business.

We are targeting a £300 million per annum net reduction in operating expenses[5] by 2022 and we are moving forward with this programme at pace. The transformation team is now fully in place and plans are mapped for savings across business units, functions and group centre. We have made some early progress; during the second quarter, the total number of contractors was reduced by nearly 7% and we also began to rationalise planned project expenditure. Accordingly, while operating expenses increased 2% to £1,964 million *(HY18: £1,929 million)* as we carried forward unacceptably higher run-rate costs from the second half of 2018 into the current year, we expect full year operating expenses to be lower in 2019 than the prior year.

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Performance

Aviva's half year results reinforced our solid operational foundations, providing evidence of our strengths in pricing and underwriting, distribution, asset management and administration.

In life and savings, we continued to see solid levels of customer activity despite the uncertain investment market environment, with Europe and our UK long-term savings businesses each generating £2.4 billion of net fund inflows[1]. Our UK annuity and equity release transaction pipeline point to another strong year in 2019, however, sales volumes in the first half were slightly below the prior period, which included our largest ever BPA transaction.

In general insurance we extended our track record of attractive group-wide underwriting results with a targeted approach to top-line growth and a combined operating ratio (COR)[‡] of 95.9% *(HY18: 97.4%)*, despite a 0.8% impact as UK Digital trading costs were recognised in UK General Insurance. Canada is recovering as expected as pricing and claims management initiatives earn through while our results also benefited from benign weather, partially offset by lower prior year development.

Despite these bright spots, there were challenges during the first half. We were adversely affected by market headwinds in savings and asset management. We also encountered intense competition in individual protection and personal lines general insurance where we chose to maintain pricing discipline rather than chase volume growth at unattractive margins.

I am completely focused on improving our insurance fundamentals and commercial rigour to set Aviva on a path of stronger financial performance. To compete more effectively and increase returns on capital, Aviva needs to be leaner, simpler and more effective. I am more than aware that we've said this before at Aviva and this time I am determined we deliver. In the first half, my focus has been on putting in place the strategy, structure, leadership and focus to run Aviva better, managing our costs strictly and turbo-charging the culture to grow in our key markets.

Strategy

Since my appointment, I have worked closely with the Board on refreshing Aviva's strategy. This work is progressing well and we will summarise our strategy, objectives and operational and financial targets at our capital markets day in November.

In conjunction with this process, we have decided to examine strategic options for our Asian businesses. These businesses have made significant progress in recent years, expanding distribution and new business production, increasing their in-force scale and growing operating profit. Our Asian operations are strategically and financially attractive, however, we are evaluating a range of options to enhance the value of the businesses to shareholders.

Conclusion

The first half was characterised by a challenging economic and political backdrop and significant levels of organisational and leadership change. Against this, we delivered steady results while working to further strengthen our fundamentals and improve commercial rigour. I am confident that we will succeed in making Aviva a simpler, stronger, better business that becomes recognised as a leader in its markets and a source of attractive shareholder returns.

One of Aviva's great strengths is its people, and I would like to thank all my colleagues for their diligence and support. Over the past nine months, Aviva has undergone a period of leadership change which brings associated uncertainty for our people. To their credit, they maintained their focus on serving customers and making disciplined trading decisions. This commitment is central to our strong foundations and underpins our ambitious plans for the future.

Maurice Tulloch
Chief Executive Officer

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IFRS result

In the first half of 2019, Aviva grew operating profit[1,‡#] 1% to £1,448 million *(HY18: £1,438 million)* and operating earnings per share[2,‡#] 2% to 27.3 pence *(HY18: 26.8 pence)*.

Profit and basic earnings per share rose materially to £1,180 million and 28.2 pence respectively *(HY18: £376 million and 7.9 pence)*. The increase reflected positive investment variances from both our life and general insurance businesses, which more than offset amortisation of acquired value of in-force and other intangibles. Investment variances primarily arise from our asset-liability position, which protects the Solvency II balance sheet.

IFRS net asset value per share (NAV) increased to 432 pence *(2018: 424 pence)*. The movement in NAV reflects the positive impact of basic earnings per share partly offset by payment of the 2018 final dividend and adoption of the IFRS 16 accounting standard relating to operating leases.

Dividend

Aviva's Board of Directors has declared an interim dividend of 9.50 pence per share. This represents an increase of 3% compared with the interim dividend in 2018. Following a five year period in which the dividend per share doubled, the process of normalising the payout ratio is complete. Accordingly, the trajectory of the dividend reflects the underlying performance of the business, taking into consideration the external environment, in line with our progressive dividend policy.

Capital & cash

Aviva's Solvency II capital surplus[3] at 30 June was £11.8 billion *(2018: £12.0 billion)*. Solvency II own funds[3] rose £0.8 billion whilst the solvency capital requirement[3] (SCR) increased by £1.0 billion during the first half. Despite the relative stability of the capital surplus, the expansion of the balance sheet (reflected in a larger SCR) resulted in a ten percentage point reduction in our Solvency cover ratio[3,‡] to 194% *(2018: 204%)*.

Operating capital generation[#] totalled £0.8 billion *(HY18: £0.9 billion)*. Underlying operating capital generation was stable at £0.7 billion. The contribution from other capital actions declined to £0.1 billion *(HY18: £0.2 billion)*, primarily owing to the longevity reserve release that benefited the prior period and a £0.1 billion reduction caused by moving our digital operations into the UK general insurance business.

Operating own funds generation of £0.9 billion and positive market, foreign exchange and other effects of £0.7 billion were partially offset by dividend payments of £0.8 billion. The Solvency II capital requirement (SCR) increased by £1.0 billion, incorporating £0.1 billion operating impact and £0.9 billion due to market and non-operating effects. The market related increase in SCR primarily arose due to the reduction in bond yields during the first half.

Cash remittances[‡#] to group centre were £1.6 billion in the first half, compared to £1.5 billion in HY18. The first half benefited from accelerated phasing of dividends from UK Life, France, Poland and Aviva Investors. However, the first half did not include special dividends, which contributed £500 million to remittances in the first half of 2018. In light of the strong first half remittances, Aviva's centre liquidity ended July at £2.3 billion. Our strong cash resources provide Aviva with considerable resilience to external shocks and underpin our medium term deleveraging plans.

Debt leverage

In the absence of either debt maturities or new issuance, our debt position remained unchanged in the first half of 2019. As a result, our Solvency II debt leverage ratio, which includes senior debt and commercial paper, remained stable at 33%.

In July, Standard & Poor's (S&P) published an updated Insurers Rating Methodology which included a new financial leverage ratio. According to the new calculation, our leverage ratio was calculated to be 35% at the end of 2018. This places Aviva in the "neutral" range, which is defined by S&P as being below 40%. This updated leverage assessment was included in S&P's recent review of Aviva's financial strength rating, which resulted in an upgrade to AA- (from A+). This is a welcome development that recognises the significant progress Aviva has made in recent years in improving its credit profile, earnings resilience and the robustness of the balance sheet to financial risks.

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Performance snapshot

In the first half of 2019, Aviva delivered steady results in what was a challenging period in terms of the macroeconomic and political backdrop. Equity markets began the year at two year lows, government 10-year bond yields fell sharply and investor sentiment remained subdued.

These challenges were most evident in our life and asset management businesses. In the first half, Aviva's life insurance operating profit[1,‡#] fell 8% to £1,282 million *(HY18: £1,392 million)*, while Aviva Investors operating profit declined to £62 million *(HY18: £76 million)*. Beyond the challenging investment market backdrop, our life insurance results included lower profitability from our protection portfolios in France, where claims experience deteriorated, and the UK, where we wrote lower new business volumes in an environment of competitive pricing and higher reinsurance costs. We also had fewer non-recurring benefits in the first half of 2019 compared with the prior period; given the absence of a longevity reserve release, the contribution from UK 'other' declined to £37 million *(HY18: £107 million)*. Our review of longevity reserves, incorporating detailed analysis of CMI tables, other industry data and experience of our own portfolio, will be completed later in 2019. UK annuities and equity release achieved small gains in operating profit as higher new business margins more than offset lower new business volumes.

Despite subdued sentiment weighing on investor activity levels, Aviva's modern savings businesses continued to generate healthy net fund flows[2]. Together with higher equity and bond market values, this contributed to increases in assets under management and administration[2] during HY19. In UK long-term savings, we have maintained attractive net flows[2] into workplace savings and advisor platform as a result of a solid pipeline of corporate pension scheme wins. The £2.4 billion of net flows in HY19 is consistent with the prior period and equated to 4% of opening managed assets on an annualised basis. In Europe, we achieved net flows of £2.4 billion, also an annualised rate of 4% of opening managed assets. Italy continued to make a strong contribution, despite our decision to temper sales volumes temporarily given the market volatility. Elsewhere in Europe, our net flows were supported by higher new business volumes, particularly in France where customer demand shifted from unit linked allocation to participating fund sales.

In general insurance, Aviva's operating profit rose 29% to £391 million *(HY18: £302 million)*. Net written premiums grew 1% to £4,725 million with targeted growth in commercial lines in the UK (+8%) and Canada (+4%) offset by a decline in personal lines in Canada (-6%) following our re-pricing of the motor portfolio. The growth in operating profit is reflected in the combined operating ratio, (COR)[‡] which improved to 95.9% *(HY18: 97.4%)*.

The recovery in Canada is gathering momentum, with the COR improving 7.1 percentage points to 97.5% *(HY18: 104.6%)*. With premium rate increases implemented in the motor portfolio in March 2019 still yet to earn through our results, we remain focused on achieving our objective of a sub-96% COR in Canada in 2020. Across all our general insurance businesses, benign weather has contributed to better results in HY19. Partly offsetting this was a smaller contribution from prior year reserve development and increase in earned expenses in the UK of £34 million which arose from the alignment of our digital operations under UK General Insurance.

Outlook

The challenging macro backdrop, particularly very low government bond yields, is expected to persist in the second half with ongoing uncertainty in the political environment and a softer outlook for economic growth in Europe and the UK. Despite this, our first half results have demonstrated that Aviva is growing its customer franchise in targeted product lines and maintaining discipline on pricing and operating margins. Looking forward we need to take decisive action on strategy, efficiency, and capital allocation as we seek to improve OCG[#], meet our cash flow targets, reduce operating expenses[2],lower debt leverage and ultimately capture the long-term opportunities in each of our markets.

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3 All percentage movements in this section are quoted in constant currency unless otherwise stated

Jason Windsor
Interim Chief Financial Officer

Notes to editors

All comparators are for the half year 2018 position unless otherwise stated.

Income and expenses of foreign entities are translated at average exchange rates while their assets and liabilities are translated at the closing rates on 30 June 2019. The average rates employed in this announcement are 1 euro = £0.88 (6 months to 30 June 2018: 1 euro = £0.88) and CAD$1 = £0.58 (6 months to 30 June 2018: CAD$1 = £0.57).

Growth rates in the press release have been provided in sterling terms unless stated otherwise. The following supplement presents this information on both a sterling and constant currency basis.

Cautionary statements:

This 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 referendum on UK membership of the European Union); 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 on our business activities and results of operations; our reliance on information and technology and third-party service providers for our operations and systems; the inability of reinsurers to meet obligations or unavailability of reinsurance coverage; increased competition in the UK and in other countries where we have significant operations; regulatory approval of extension of use of the Group's internal model for calculation of regulatory capital under the European Union's Solvency II rules; 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 in Aviva's most recent Annual 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 presentation 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.

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Contents

As a reminder

Throughout this report we use a range of financial metrics to measure our performance and financial strength. 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, including a reconciliation to the financial statements (where possible), can be found within the Other Information section.

All references to 'Operating profit' represent 'Group adjusted operating profit'.

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# denotes key financial performance indicators used as a base to determine or modify remuneration.

All percentages, including currency movements, are calculated on unrounded numbers so minor rounding differences may exist.

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

Key financial metrics

Operating profit‡#

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Life business	**1,282**	1,392	(8)%	2,999
General insurance and health	**391**	302	29%	704
Fund management	**61**	74	(18)%	146
Other[1]	**(286)**	(330)	13%	(733)
Total	**1,448**	1,438	1%	3,116
Operating earnings per share‡#	**27.3p**	26.8p	2%	58.4p

Cash remittances2,‡#

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
United Kingdom[2]	**983**	1,216	(19)%	2,513
Canada	**15**	13	15%	28
Europe[2]	**503**	227	122%	483
Asia, Aviva Investors and Other	**81**	37	119%	113
Total	**1,582**	1,493	6%	3,137

Operating capital generation (OCG): Solvency II basis2,#

	6 months 2019 £bn	6 months 2018 £bn	Sterling % change	Full year 2018 £bn
United Kingdom[2]	**0.5**	0.9	(44)%	2.2
Canada	**0.1**	—	N/A	0.1
Europe[2]	**0.5**	0.4	25%	0.9
Asia & Aviva Investors	**—**	—	N/A	0.1
Other	**(0.3)**	(0.4)	25%	(0.1)
Total	**0.8**	0.9	(11)%	3.2

Expenses

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Operating expenses	**1,964**	1,929	2%	4,026
Operating expense ratio	**55.5%**	54.9%	0.6pp	54.2%

Value of new business: Adjusted Solvency II basis (VNB)‡

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
United Kingdom	**196**	198	(1)%	481
Europe	**237**	307	(23)%	517
Asia & Aviva Investors	**102**	98	4%	204
Total	**535**	603	(11)%	1,202

General insurance combined operating ratio (COR)‡

	6 months 2019	6 months 2018	Change	Full year 2018
United Kingdom	**95.7%**	94.3%	1.4pp	93.8%
Canada	**97.5%**	104.6%	(7.1)pp	102.4%
Europe	**92.9%**	93.5%	(0.6)pp	93.4%
Asia & Other	**111.2%**	125.0%	(13.8)pp	122.1%
Total	**95.9%**	97.4%	(1.5)pp	96.6%

Profit after tax

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
IFRS profit after tax	**1,180**	376	214%	1,687
Basic earnings per share	**28.2p**	7.9p	257%	38.2p

Interim dividend

	6 months 2019	6 months 2018	Sterling % change
Interim dividend per share	**9.50p**	9.25p	3%

Capital position

	30 June 2019	31 December 2018	Sterling % change	30 June 2018
Estimated shareholder Solvency II cover ratio3,‡	**194%**	204%	(10)pp	187%
Estimated Solvency II surplus[3]	**£11.8bn**	£12.0bn	(2)%	£11.0bn
Net asset value per share	**432p**	424p	2%	411p

1 Other includes other operations, corporate centre costs and group debt and other interest costs.
2 Following the UK's decision to leave the European Union, the Ireland branches of the UK business have been transferred to Ireland effective March 2019. As a result the Ireland business is now reported within Europe instead of the United Kingdom for all metrics. Comparative balances have been restated accordingly.
3 The estimated Solvency II position represents the shareholder view only. See section 8i for more details.

1 – Operating profit‡#

For the six month period ended 30 June 2019

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Operating profit before tax attributable to shareholders' profits			
Life business			
United Kingdom	**722**	831	1,871
Europe	**403**	414	831
Asia	**161**	143	300
Other	**(4)**	4	(3)
Total life business	**1,282**	1,392	2,999
General insurance and health			
United Kingdom	**187**	209	453
Canada	**98**	(13)	46
Europe	**112**	112	220
Asia	**—**	(11)	(16)
Other	**(6)**	5	1
Total general insurance and health	**391**	302	704
Fund management			
Aviva Investors	**62**	76	150
Asia	**(1)**	(2)	(4)
Total fund management	**61**	74	146
Other[1]			
Europe	**(17)**	(18)	(40)
Asia	**(9)**	(12)	(18)
Other Group operations	**(34)**	(53)	(179)
Total other operations	**(60)**	(83)	(237)
Market operating profit	**1,674**	1,685	3,612
Corporate centre	**(97)**	(99)	(216)
Group debt costs and other interest	**(129)**	(148)	(280)
Operating profit before tax attributable to shareholders' profits	**1,448**	1,438	3,116
Tax attributable to shareholders' profits	**(319)**	(303)	(647)
Non-controlling interests	**(47)**	(46)	(100)
Preference dividends and other[2]	**(15)**	(15)	(53)
Operating profit attributable to ordinary shareholders	**1,067**	1,074	2,316
Operating earnings per share‡#	**27.3p**	26.8p	58.4p

1 Other operations relate to non-insurance activities and include costs associated with our Group and regional head offices, pension scheme expenses, as well as non-insurance income.
2 Other includes coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax).

Operating profit increased by 1% to £1,448 million *(HY18: £1,438 million)*. The life business delivered operating profit of £1,282 million *(HY18: £1,392 million)*. In the United Kingdom, life operating profit decreased by 13% to £722 million *(HY18: £831 million)* as the first half of 2018 included a beneficial impact of £200 million from longevity assumption changes which is not repeated in the first half of 2019. Longevity assumptions will be reassessed in the second half of the year. In Europe, operating profit decreased by £11 million to £403 million *(HY18: £414 million).* The decrease was driven by lower profits in France partly offset by Italy with the continued success of our hybrid savings product in 2018 increasing fee income on assets under management (AUM), and increased operating profit in Ireland following the acquisition of Friends First Life Assurance Company (Friends First). In Asia, operating profit increased to £161 million *(HY18: £143 million)*. Excluding FPI, Asia life operating profit increased by £4 million.

The general insurance and health business operating profit increased by 29% to £391 million *(HY18: £302 million).* In the United Kingdom, operating profit decreased by 11% to £187 million *(HY18: £209 million)* reflecting the alignment of UK digital business costs within UK General Insurance combined with lower prior year releases partly offset by lower weather costs. In Canada, operating profit improved to £98 million *(HY18: loss of £13 million)* as the benefits from the on-going profit remediation plans around pricing and risk selection that were put in place from late 2017 are starting to materialise, as well as favourable prior year development and favourable weather conditions when compared with the prior period. In Asia, operating profit improved as a result of improved performance in Singapore.

Fund management operating profit decreased to £61 million *(HY18: £74 million)* mainly due to Aviva Investors where fee income reduced due to the disposal of businesses in 2018 combined with lower average assets under management in 2019 compared to prior period.

Other operations relate to non-insurance activities and include costs associated with our Group and regional head offices, pension scheme expenses as well as non-insurance business. Total net loss in relation to non-insurance activities was £60 million *(HY18: net loss of £83 million)*.

Operating earnings per share increased by 0.5p to 27.3p *(HY18: 26.8p)* mainly due to a decrease in the weighted average number of shares in issue.

Cash

2.i – Cash remittances‡#

Sustainable cash remittances from the Group's businesses are a key financial priority. The table below reflects actual remittances received by the Group, comprising dividends and interest on internal loans paid by our operating segments. Cash remittances are eliminated on consolidation and hence are not directly reconcilable to the Group's IFRS statement of cash flows.

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
United Kingdom[1,2,3]	**983**	1,216	2,513
Canada	**15**	13	28
Europe[1,2,3]	**503**	227	483
Asia, Aviva Investors & Other	**81**	37	113
Total	**1,582**	1,493	3,137

1 Full year 2018 cash remittances for the United Kingdom include £314 million received from UK General Insurance and for Europe include £17 million received from Ireland General Insurance in February 2019 in respect of 2018 activity.
2 Following the UK's decision to leave the European Union, the Ireland branches of the UK business have been transferred to Ireland effective March 2019. As a result the Ireland business is now reported within Europe instead of the United Kingdom for all metrics. Comparative balances have been restated accordingly.
3 We use a wholly owned, UK domiciled reinsurance subsidiary for internal capital and cash management purposes. Some of the remittances otherwise attributable to the operating businesses arise from this internal reinsurance vehicle.

Cash continued

2.ii – Operating capital generation: Solvency II basis#

The active management of the generation and utilisation of capital is a primary Group focus, balancing new business investment and shareholder distribution to deliver cash flow plus growth for our shareholders.

Solvency II operating capital generation (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 fund business unit remittances and, in turn, the Group dividend as well as funding investment in initiatives that provide potential future growth.

6 months 2019 £bn	Life business OCG					
	Impact of new business	Earnings from existing business	Other[1]	Total Life	GI, Health, FM & Other OCG	Total OCG
United Kingdom Life[2]	**(0.1)**	**0.5**	**—**	**0.4**	**—**	**0.4**
United Kingdom General Insurance and Health[2,3]					**0.1**	**0.1**
Canada					**0.1**	**0.1**
Europe[2]	**—**	**0.2**	**0.2**	**0.4**	**0.1**	**0.5**
Asia & Aviva Investors	**—**	**—**	**—**	**—**	**—**	**—**
Group centre costs and Other	**—**	**—**	**—**	**—**	**(0.3)**	**(0.3)**
Total Group Solvency II operating capital generation	**(0.1)**	**0.7**	**0.2**	**0.8**	**—**	**0.8**

6 months 2018 £bn	Life business OCG					
	Impact of new business	Earnings from existing business	Other[1]	Total Life	GI, Health, FM & Other OCG	Total OCG
United Kingdom Life[2]	(0.1)	0.5	0.2	0.6	—	0.6
United Kingdom General Insurance and Health[2]					0.3	0.3
Canada					—	—
Europe[2]	—	0.3	—	0.3	0.1	0.4
Asia & Aviva Investors	—	—	—	—	—	—
Group centre costs and Other	—	—	—	—	(0.4)	(0.4)
Total Group Solvency II operating capital generation	(0.1)	0.8	0.2	0.9	—	0.9

Full year 2018 £bn	Life business OCG					
	Impact of new business	Earnings from existing business	Other[1]	Total Life	GI, Health, FM & Other OCG	Total OCG
United Kingdom Life[2]	(0.1)	1.0	0.9	1.8	—	1.8
United Kingdom General Insurance and Health[2]					0.4	0.4
Canada					0.1	0.1
Europe[2]	(0.1)	0.5	0.3	0.7	0.2	0.9
Asia & Aviva Investors	—	0.1	—	0.1	—	0.1
Group centre costs and Other	—	—	0.6	0.6	(0.7)	(0.1)
Total Group Solvency II operating capital generation	(0.2)	1.6	1.8	3.2	—	3.2

1 Other includes the impact of capital actions and non-economic assumption changes.
2 Following the UK's decision to leave the European Union, the Ireland branches of the UK business have been transferred to Ireland effective March 2019. As a result, the Ireland business is now reported within Europe instead of the United Kingdom for all metrics. Comparative balances have been restated accordingly.
3 Included in GI, Health, FM & Other is £(0.1) billion due to an increase in the solvency capital requirement as a result of the alignment of UK digital business costs within the UK General Insurance business. This is excluded from underlying OCG of £0.7 billion for the 6 months ended 30 June 2019 *(HY18: £0.7 billion)*. The additional capital requirement arises from differential capital treatment for insurance and non-insurance entities.

Solvency II OCG was £0.8 billion for the 6 months ended 30 June 2019 *(HY18: £0.9 billion)*.

In the UK, life business OCG has reduced by £0.2 billion to £0.4 billion as the first half of 2018 included a beneficial impact of £0.2 billion from longevity assumptions changes which is not included in the first half of 2019. Longevity assumptions will be reassessed in the second half of 2019.

In Europe, life business OCG has increased by £0.1 billion to £0.4 billion. Earnings from existing business has reduced by £0.1 billion in France partly due to the transfer of pensions business into a supplementary occupational pension fund (FRPS) in the second half of 2018. Other OCG increased by £0.2 billion due to modelling and assumptions changes in Italy and additional equity hedging in France.

The general insurance, health, fund management and other OCG remains unchanged at £nil. In Canada, there was an increase of £0.1 billion due to the impact of the profit remediation plan, including rate increases, from late 2017 starting to materialise and favourable weather experience relative to the first half of 2018. In the UK, there has been a reduction of £0.2 billion, which is partly offset in Group centre costs, primarily due to the alignment of UK digital business costs within the UK General Insurance business. This is due to an increase in the solvency capital requirement arising from differential capital treatment for insurance and non-insurance entities.

3 – Expenses

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
UK Life[1]	**442**	440	918
UK General Insurance and Health[1]	**407**	349	695
Canada	**238**	237	477
Europe	**431**	402	847
Asia	**95**	91	186
Aviva Investors	**203**	208	447
Other Group activities[1]	**148**	202	456
Operating expenses	**1,964**	1,929	4,026
Operating expense ratio	**55.5%**	54.9%	54.2%

1 As a result of the alignment of the UK digital business costs within UK Life and UK General Insurance business, UK includes an additional £54 million of expenses while there is a corresponding reduction of £54 million expenses in Other Group activities. This has no impact on overall Group operating expenses.

Operating expenses have increased by 2%, to £1,964 million *(HY18: £1,929 million)* but have decreased by 6% compared with the second half of 2018. The increase in operating expenses from the first half of 2018 mainly reflects higher expenditure on targeted simplification initiatives in IT and finance change, mandatory requirements such as IFRS 17, and increased regulatory levies in the UK and Ireland. These increases were partially offset by savings, including cost reduction programmes in the UK businesses.

The Group has commenced a programme to reduce expenses by £300 million, net of inflation, by 2022.

4 – New business

4.i – Value of new business on an adjusted Solvency II basis (VNB)‡

VNB 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 and to include the impact of 'look through profits' in service companies (where not included in Solvency II).

The methodology underlying the calculation of VNB remains unchanged from the prior year. For 2018, new business written contributed to the calculation of 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. Further details of the methodology are included in the Other information section.

A reconciliation between VNB and the Solvency II own funds impact of new business is provided below.

6 months 2019	UK £m	Europe £m	Asia & Other £m	Group £m
VNB (gross of tax and non-controlling interests)	**196**	**237**	**102**	**535**
Solvency II contract boundary restrictions – new business	**(23)**	**(64)**	**(16)**	**(103)**
Solvency II contract boundary restrictions – increments/renewals on in-force business	**68**	**39**	**9**	**116**
Businesses which are not in the scope of Solvency II own funds	**(60)**	**—**	**(14)**	**(74)**
Tax and Other[1]	**(51)**	**(96)**	**(15)**	**(162)**
Solvency II own funds impact of new business (net of tax and non-controlling interests)	**130**	**116**	**66**	**312**

6 months 2018	UK £m	Europe £m	Asia & Other £m	Group £m
VNB (gross of tax and non-controlling interests)	198	307	98	603
Solvency II contract boundary restrictions – new business	(22)	(80)	(13)	(115)
Solvency II contract boundary restrictions – increments/renewals on in-force business	77	54	4	135
Businesses which are not in the scope of Solvency II own funds	(65)	(1)	(15)	(81)
Tax and Other[1]	(40)	(130)	(12)	(182)
Solvency II own funds impact of new business (net of tax and non-controlling interests)	148	150	62	360

Full year 2018	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)	(23)	(327)
Solvency II own funds impact of new business (net of tax and non-controlling interests)	347	253	135	735

1 Other includes the impact of 'look through profits' in service companies (where not included in Solvency II) of £(29) million at HY19 *(HY18: £(34) million, 2018: £(63) million)* and the reduction in value when moving to a net of non-controlling interests basis of £(37) million at HY19 *(HY18: £(51) million, 2018: £(81) million).*

4.ii – Sales, VNB and new business margin analysis

The table below sets out the present value of new business premiums (PVNBP) written by the life and related businesses, VNB and the resulting margin, gross of tax and non-controlling interests, on an adjusted Solvency II basis. PVNBP is calculated using assumptions consistent with those used to determine VNB.

	PVNBP			VNB			New business margin		
Gross of tax and non-controlling interests	**6 months 2019 £m**	6 months 2018 £m	Full year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full year 2018 £m	**6 months 2019 %**	6 months 2018 %	Full year 2018 %
United Kingdom	**11,831**	12,550	23,946	**196**	198	481	**1.7%**	1.6%	2.0%
Europe	**7,398**	6,783	12,625	**237**	304	514	**3.2%**	4.5%	4.1%
Asia and Aviva Investors	**1,881**	1,948	3,728	**105**	100	206	**5.5%**	5.1%	5.5%
Total (excl. disposals)	**21,110**	21,281	40,299	**538**	602	1,201	**2.5%**	2.8%	3.0%
Disposals[1]	**181**	228	464	**(3)**	1	1	**(1.5)%**	0.3%	0.2%
Total	**21,291**	21,509	40,763	**535**	603	1,202	**2.5%**	2.8%	2.9%

1 Avipop (Italy) and Friends Provident International (FPI) (Asia).

Total new business margin has reduced to 2.5% *(HY18: 2.8%)*. In the UK, new business margin increased slightly to 1.7% *(HY18: 1.6%)* primarily driven by higher new business margin on bulk purchase annuities.

In Europe new business margins reduced to 3.2% *(HY18: 4.5%)* primarily reflecting higher volumes of lower margin with-profits savings business in France and lower margins on with-profits business in Italy.

Combined operating ratio

5 – General insurance combined operating ratio (COR)‡

	Net earned premiums			Claims ratio			Commission and expense ratio			Combined operating ratio		
	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m	**6 months 2019 %**	6 months 2018 %	Full year 2018 %	**6 months 2019 %**	6 months 2018 %	Full year 2018 %	**6 months 2019 %**	6 months 2018 %	Full year 2018 %
United Kingdom	**2,084**	2,014	4,106	**61.9**	61.6	62.5	**33.8**	32.7	31.3	**95.7**	94.3	93.8
Canada	**1,449**	1,450	2,955	**66.3**	74.1	71.8	**31.2**	30.5	30.6	**97.5**	104.6	102.4
Europe	**992**	991	1,963	**63.3**	64.7	64.4	**29.6**	28.8	29.0	**92.9**	93.5	93.4
Asia & Other[1]	**7**	11	6	**71.2**	80.4	81.7	**40.0**	44.6	40.4	**111.2**	125.0	122.1
Total	**4,532**	4,466	9,030	**63.8**	66.3	66.0	**32.1**	31.1	30.6	**95.9**	97.4	96.6

1 Includes Asia and Aviva Re.

Normalised accident year COR

The normalised accident year COR represents the COR adjusted to exclude the impact of prior year reserve development and weather variations versus expectations, gross of the impact of profit sharing arrangements. Dealing with each of these adjustments in turn:

- Prior year reserve development represents the change in the ultimate cost of the claims incurred in prior years; and
- Weather claims (under)/over long-term average represents the difference between the reported net incurred cost of claims that have occurred as a result of weather events and the equivalent long-term average expected net costs.

These adjustments are made so that the underlying performance of the Group can be assessed excluding factors that might distort the trend in the claims ratio on a year-on-year basis. A reconciliation between the reported and normalised accident year COR is provided below.

	UK			Canada			Europe			Total		
	6 months 2019 %	6 months 2018 %	Full year 2018 %	**6 months 2019 %**	6 months 2018 %	Full year 2018 %	**6 months 2019 %**	6 months 2018 %	Full year 2018 %	**6 months 2019 %**	6 months 2018 %	Full year 2018 %
Normalised accident year COR	**99.3**	96.1	97.0	**98.2**	101.9	103.4	**94.5**	91.9	94.5	**97.9**	97.1	98.8
Prior year reserve development	**(0.8)**	(2.0)	(2.5)	**(0.3)**	0.5	(1.3)	**(0.3)**	0.1	(2.8)	**(0.3)**	(0.8)	(2.3)
Weather claims (under)/over long-term average	**(2.8)**	0.2	(0.7)	**(0.4)**	2.2	0.3	**(1.3)**	1.5	1.7	**(1.7)**	1.1	0.1
Combined operating ratio	**95.7**	94.3	93.8	**97.5**	104.6	102.4	**92.9**	93.5	93.4	**95.9**	97.4	96.6

The Group normalised COR increased to 97.9% *(HY18: 97.1%)* of which 0.8pp relates to the alignment of UK digital business costs within the UK General Insurance business. This, together with a slight increase in large losses compared to the first half of 2018, contributed to the deterioration of the normalised COR in the UK to 99.3% *(HY18: 96.1%)*. The normalised COR in Europe has deteriorated to 94.5% *(HY18: 91.9%)* primarily due to large claim costs in France and a softening market and increased levies in Ireland. The performance in the UK and Europe was partially offset by an improvement in the normalised COR in Canada to 98.2% *(HY18: 101.9%)* due to the impact of the profit remediation plan, including rate increases, from late 2017 starting to materialise.

6 – Business unit performance
6.i – United Kingdom

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Operating profit‡#				
Life	**722**	831	(13)%	1,871
General Insurance	**172**	195	(12)%	415
Health	**15**	14	7%	38
	909	1,040	(13)%	2,324
Cash remitted to Group[1,2,‡#]				
Life	**892**	1,207	(26)%	2,152
General Insurance and Health	**91**	9	911%	361
	983	1,216	(19)%	2,513
Operating expenses				
Life	**442**	440	—	918
General Insurance and Health	**407**	349	17%	695
	849	789	8%	1,613
New business				
PVNBP	**11,831**	12,550	(6)%	23,946
VNB‡	**196**	198	(1)%	481
General Insurance				
COR‡	**95.7%**	94.3%	1.4pp	93.8%
Net written premium (NWP)	**2,158**	2,110	2%	4,193

1 In 2018 cash remittances include amounts of £314 million received from UK General Insurance in February 2019 in respect of 2018 activity.
2 Following the UK's decision to leave the European Union, the Ireland branches of the UK business have been transferred to Ireland effective March 2019. As a result the Ireland business is now reported within Europe instead of the United Kingdom for all metrics. Comparative balances have been restated accordingly.

Overview

UK Insurance operating profit decreased by 13% to £909 million *(HY18: £1,040 million)*. In the first half of 2019 there has been reduced benefit from one-off items, including no longevity releases. The first half of 2018 included a net £110 million benefit from longevity and provision movements. Longevity assumptions will be reassessed in the second half of the year. The headline result also reflects the alignment of UK digital business costs to UK General Insurance and UK Life, which is broadly neutral at Group level. Excluding the impact of these drivers, profitability in UK Life is broadly level and increased by 6% in UK General Insurance.

We continue to be selective in bulk purchase annuities (BPAs) and, as a result, sales are lower in the first half of 2019. Savings and protection markets are challenging due to adverse economic conditions and market uncertainties and legacy business profits have decreased slightly ahead of expectations.

Cash remittances of £983 million reflect ongoing capital generation and dividend payments from UK Life and UK General Insurance. Cash remittances for the first half of 2018 included a special cash remittance of £500 million arising as a result of the Friends Life Part VII transfer. After excluding the special remittances, the increase in cash remittances is due to an acceleration in the timing of cash dividends.

UK Insurance operating entities remain in a strong capital position.

Life – operating and financial performance
Operating profit‡# and new business

	6 months 2019 £m			6 months 2018 £m				Full year 2018 £m		
Operating profit‡#	New business	Existing business	Total	New business	Existing business	Total	Sterling % change	New business	Existing business	Total
Long-term savings[1]	**(52)**	**146**	**94**	(41)	147	106	(11)%	(96)	294	198
Annuities and equity release	**121**	**209**	**330**	108	214	322	2%	363	416	779
Protection	**40**	**64**	**104**	51	57	108	(4)%	91	135	226
Legacy[2]	**—**	**157**	**157**	—	188	188	(16)%	—	318	318
Other[3]	**—**	**37**	**37**	—	107	107	(65)%	—	350	350
Total life operating profit	**109**	**613**	**722**	118	713	831	(13)%	358	1,513	1,871

1 Includes pensions and the savings platform.
2 Legacy represents products no longer actively marketed, including with-profits and bonds.
3 Other life represents changes in assumptions and modelling, non-recurring items and non-product specific items.

UK Life operating profit decreased by 13% to £722 million *(HY18: £831 million)* reflecting the reduced benefit from reserve reassessments in the first half of 2019, including longevity.

‡ denotes APMs which are key performance indicators. There have been no changes to the APMs used by the Group during the period under review.
# denotes key financial performance indicators used as a base to determine or modify remuneration.

6.i – United Kingdom continued

Gross of tax and non-controlling interests	PVNBP 6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m	VNB‡ 6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Long-term savings	**8,377**	8,729	(4)%	16,829	**64**	81	(21)%	111
Annuities and equity release	**2,218**	2,631	(16)%	4,784	**33**	32	3%	196
Protection	**914**	892	2%	1,799	**76**	68	12%	140
Health and Other	**322**	298	8%	534	**23**	17	35%	34
Total	**11,831**	12,550	(6)%	23,946	**196**	198	(1)%	481

PVNBP decreased 6% to £11,831 million *(HY18: £12,550 million)* as growth in workplace pensions, group protection, and health was more than offset by lower annuities, platform and individual protection volumes. VNB decreased by 1% to £196 million *(HY18: £198 million)*, with the overall reduction driven by a fall in long-term savings.

Long-term savings

Long-term savings operating profit decreased by 11% to £94 million *(HY18: £106 million)* as new business strain increased, including the impact of increased workplace volumes. Existing business profits were also impacted by weak investment markets towards the end of 2018 reducing the asset values on which fees are based. Net inflows remained broadly stable at £2.4 billion *(HY18: £2.5 billion)*. Assets under management (AUM) in the first half of 2019 increased to £129 billion *(2018: £116 billion)*. We have delivered growth in workplace pension net flows, driven by new scheme wins with large corporates and improved retention, along with continued positive platform net flows of £1.6 billion *(HY18: £2.2 billion)*. Platform assets under management grew by 16% to £26.3 billion *(2018: £22.6 billion)* despite the uncertain market environment.

The reduction in long-term savings VNB is mainly driven by a reduction in savings platform VNB, as volumes were impacted by uncertain investment markets.

Annuities and equity release

Annuities and equity release operating profit increased by 2% to £330 million *(HY18: £322 million).* BPA volumes remained strong, although lower than the first half of 2018 which included Aviva's largest BPA deal to date. While BPA margins have reduced, new business profit improved reflecting the non-recurrence of the asset volume shortfall at half year 2018 that was addressed in the second half of 2018. Volumes in both individual annuities and equity release were marginally lower as we took a selective approach to trading to focus on margins. Existing business operating profit fell by £5 million to £209 million *(HY18: £214 million)* as there has been no repeat of the favourable longevity experience recognised in the first half of 2018.

Annuities and equity release VNB increased 3% to £33 million *(HY18: £32 million)* which reflects the timing difference at HY18 as we invested monies received in appropriate higher yielding investments in the second half of 2018 partly offset by lower BPA volumes in the first half of 2019. The result for individual annuities and BPAs has been adversely impacted in the first half of 2019 by the expected loss of temporary new business transitional benefits.

Protection

Protection operating profit decreased by 4% to £104 million *(HY18: £108 million)* reflecting continued competitive trading conditions, impacting both volumes and margins in the individual protection market, including the impact of hardening reinsurance rates. The first half of 2019 has also seen the stabilisation of claims experience following a period of benign claims experience in 2018 in group protection.

Protection VNB increased 12% to £76 million *(HY18: £68 million)* reflecting a 2% increase in volumes to £914 million *(HY18: £892 million)* and improved margins. This was driven by group protection demonstrating our focus on growth in products and customer segments with superior returns.

Legacy

Legacy contributed operating profit of £157 million *(HY18: £188 million)*. This decrease is slightly ahead of expectations from lower assets under management as policies mature. As per long-term savings, 2019 fee income was impacted by reduced asset values following weak investment markets towards the end of 2018.

Other

Other operating profit of £37 million in HY19 includes the net impact of reassessment of other liabilities. Other operating profit of £107 million in HY18 included the impact of a refinement in the application of our bulk annuity assumptions and an update for experience on individual annuities that led to a positive change to base mortality (£200 million), partly offset by an additional £90 million provision relating to potential redress for advised sales by Friends Provident, with over 90% of cases being pre-2002.

Health and Other VNB improved to £23 million *(HY18: £17 million),* despite a reduction in volumes, due to improved health margins.

Cash‡#

Cash remitted to Group was £892 million *(HY18: £1,207 million)*. HY18 included a £500 million special Friends Life integration remittance. Cash remittances reflect ongoing capital generation and the acceleration of timing of dividend payments.

Expenses

Operating expenses were broadly flat at £442 million *(HY18: £440 million)*, including the effect of the alignment of UK digital business costs to UK Life insurance. We have benefitted from a continued focus on efficiency while we continue to invest in growth and simplification initiatives including improvements to customer experience.

Business unit performance continued

6.i – United Kingdom continued

General Insurance and Health – operating and financial performance

Operating profit‡#

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Underwriting result	**90**	115	(22)%	253
Long-term investment return	**83**	79	5%	161
Other[1]	**(1)**	1	N/A	1
Total general insurance operating profit	**172**	195	(12)%	415
Total health operating profit	**15**	14	7%	38

1 Other general insurance includes unwind of discount and pension scheme net finance costs.

UK General Insurance operating profit was down 12% at £172 million *(HY18: £195 million)*. This reflects the alignment of UK digital business costs to UK General Insurance (£34 million earned impact), which is broadly neutral at Group level, combined with lower prior year releases, partly offset by lower weather costs (after adverse weather conditions in the first half of 2018). Excluding the impact of the UK digital business, operating profit improved by 6%.

Long-term investment return (LTIR) was up 5% at £83 million *(HY18: £79 million)*.

Following the announcement by the Lord Chancellor on 15 July 2019 to increase the Ogden discount rate from the minus 0.75% set in 2017 to minus 0.25%, balance sheet reserves in the UK have been calculated using a discount rate of minus 0.25% at 30 June 2019. At December 2018, balance sheet reserves were calculated using a rate 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 the operating result, a treatment which is consistent with the previous rate change. The Ogden discount rate is expected to be reviewed by the Lord Chancellor within five years.

Cash‡#

Cash remitted to Group was £91 million *(HY18: £9 million)*, with the increase reflecting the acceleration of dividend payments into the first half of 2019.

Expenses

Operating expenses increased by 17% to £407 million *(HY18: £349 million)*, with the main drivers of the increase being the alignment of UK digital business costs to UK General Insurance, higher levy costs, as well as the impact of continued investment in simplification initiatives including improvements to customer experience.

Net written premiums (NWP) and combined operating ratio (COR)‡

	Net written premiums				Combined operating ratio‡			
United Kingdom General Insurance	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m	6 months 2019 %	6 months 2018 %	Change	Full year 2018 %
Personal motor	**547**	559	(2)%	1,125				
Personal non-motor	**682**	687	(1)%	1,369				
UK personal lines	**1,229**	1,246	(1)%	2,494	**97.3%**	95.2%	2.1pp	92.4%
Commercial motor	**283**	270	5%	532				
Commercial non-motor	**646**	594	9%	1,167				
UK commercial lines	**929**	864	7%	1,699	**93.4%**	93.0%	0.4pp	96.1%
Total	**2,158**	2,110	2%	4,193	**95.7%**	94.3%	1.4pp	93.8%

NWP

NWP increased 2% to £2,158 million *(HY18: £2,110 million)*.

UK personal lines fell 1% reflecting slightly lower average premiums for motor and the continued run-off of the creditor book. Home premiums were stable.

UK commercial lines increased 7%, driven by a 9% increase in commercial non-motor with solid growth in SME and Global Corporate Specialty (GCS), while commercial motor increased 5%.

COR‡

UK General Insurance COR of 95.7% is a 1.4pp worsening on prior year, of which 1.6pp reflects the impact of the alignment of UK digital costs. The remaining difference reflects lower weather costs (after adverse weather conditions in the first half of 2018) partly offset by lower prior year reserve releases.

UK personal lines COR of 97.3% was 2.1pp higher year-on-year, of which 2.8pp reflects the alignment of UK digital costs. Excluding this, the difference reflects lower weather costs offset by lower prior year reserve releases.

UK commercial lines COR of 93.4% was 0.4pp higher year-on-year, as investment in growth and simplification initiatives were partly offset by lower weather costs.

Business unit performance continued

6.ii – International
(a) Canada

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
Operating profit/(loss)‡#	**98**	(13)	N/A	N/A	46
Cash remitted to Group‡#	**15**	13	15%	13%	28
Operating expenses	**238**	237	—	(1)%	477
COR‡	**97.5%**	104.6%	(7.1)pp	(7.1)pp	102.4%
NWP	**1,458**	1,483	(2)%	(3)%	2,928

Overview
During the first half of 2019, operating profit of £98 million has significantly improved compared with the prior period *(HY18: loss of £13 million)*. The benefits from the extensive profit remediation plans around pricing, indemnity management and risk selection are now flowing through the results. Catastrophe experience in the first half was favourable to prior period, and slightly better than our long-term average. The COR has improved from 104.6% in the first half of 2018 to 97.5% in the first half of 2019.

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

Operating and financial performance
Operating profit‡#

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
Underwriting result	**36**	(67)	154%	153%	(70)
Long-term investment return	**65**	56	16%	14%	121
Other[1]	**(3)**	(2)	3%	5%	(5)
Total operating profit/(loss)	**98**	(13)	N/A	N/A	46

1 Includes unwind of discount and pension scheme net finance costs.

In the first half of 2019, the underwriting result was a profit of £36 million *(HY18: loss of £67 million)*, mainly driven by favourable current year claims experience. The result has benefitted from profitability actions including premium rate increases, claims operational improvements and better risk selection, as well as favourable prior year development as a result of improved claims settlement outcomes, and more favourable catastrophe claims experience. Long-term investment return improved 14% due to higher yields on short-duration securities and actions to optimise returns within our fixed income portfolio.

Cash‡#
Cash remittances during the period of £15 million *(HY18: £13 million)* were broadly in line with prior year.

Expenses
Operating expenses remained broadly flat at £238 million *(HY18: £237 million)* as increased investment in claims personnel and processes as well as personal lines pricing sophistication were partially offset by savings as we fully migrated RBC insurance business to Aviva systems.

Net written premiums (NWP) and combined operating ratio (COR)‡

	Net written premiums					Combined operating ratio‡			
	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m	6 months 2019 %	6 months 2018 %	Change	Full year 2018 %
Personal lines	**1,018**	1,066	(4)%	(6)%	2,107	**96.8%**	107.3%	(10.5)pp	104.2%
Commercial lines	**440**	417	6%	4%	821	**99.3%**	97.8%	1.5pp	97.8%
Total	**1,458**	1,483	(2)%	(3)%	2,928	**97.5%**	104.6%	(7.1)pp	102.4%

NWP
Net written premiums were down 3% to £1,458 million *(HY18: £1,483 million)*, mainly due to a decline in personal lines new business volume as approved rate increases impacted our price competitiveness. Premium retention remains above 80% in personal lines. Commercial lines net written premiums increased slightly over the prior period due to hard market conditions, offset by a decline in retention as we tightened our underwriting risk appetite.

COR‡
The COR improved to 97.5% *(HY18: 104.6%)* due to the effect of profitability actions implemented from late 2017, favourable prior year development and lower natural catastrophe losses.

‡ denotes APMs which are key performance indicators. There have been no changes to the APMs used by the Group during the period under review.
# denotes key financial performance indicators used as a base to determine or modify remuneration.

Business unit performance continued

6.ii – International continued

(b) Europe

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
Operating profit[‡#]					
Life	**403**	414	(2)%	(2)%	831
General insurance & health	**112**	112	—	—	220
Other operations[1]	**(17)**	(18)	7%	7%	(40)
	498	508	(2)%	(1)%	1,011
Cash remitted to Group[2,3,‡#]	**503**	227	122%	122%	483
Operating expenses	**431**	402	7%	8%	847
New business					
PVNBP	**7,398**	6,799	9%	10%	12,641
VNB[‡]	**237**	307	(23)%	(22)%	517
General Insurance					
COR[‡]	**92.9%**	93.5%	(0.6)pp	(0.6)pp	93.4%
NWP	**1,102**	1,092	1%	1%	1,985

1 Mainly relates to regional holding company activities.
2 Following the UK's decision to leave the European Union, the Ireland branches of the UK business have been transferred to Ireland effective March 2019. As a result, the Ireland business is now reported within Europe instead of the United Kingdom for all metrics. Comparative balances have been restated accordingly.
3 In 2018 cash remittances include amounts of £17 million received from Ireland General Insurance in February 2019 in respect of 2018 activity.

Overview

On a reported basis, operating profit in Europe was down by 2% to £498 million *(HY18: £508 million)*. However, excluding disposals, Europe operating profit was up 2% to £498 million *(HY18: £491 million)*. In our life businesses, there was growth in Italy and a full period from Friends First in Ireland partly offset by lower life profits in France and Poland. In our general insurance businesses, growth in France was broadly offset by a decrease in profits in our other businesses.

In 2018, we completed the sales of our Spanish business and our shareholdings in Avipop Assicurazioni S.p.A and Avipop Vita S.p.A (collectively known as Avipop) in Italy. In Ireland, we completed our acquisition of Friends First in June 2018.

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

Operating and financial performance

Operating profit[‡#]

	Life					General insurance & health				
	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
France	**199**	229	(13)%	(13)%	436	**64**	50	28%	28%	110
Poland	**83**	86	(3)%	(1)%	170	**9**	9	(6)%	(4)%	20
Italy (excl. Avipop)	**89**	68	32%	32%	156	**12**	14	(13)%	(13)%	32
Ireland	**26**	13	104%	104%	44	**27**	37	(27)%	(27)%	56
Other Europe (excl. Spain)[1]	**6**	3	107%	166%	10	**—**	—	—	—	—
Total (excl. Avipop, Spain)	**403**	399	1%	2%	816	**112**	110	1%	1%	218
Disposals										
Avipop	**—**	6	N/A	N/A	6	**—**	2	N/A	N/A	2
Spain	**—**	9	N/A	N/A	9	**—**	—	—	—	—
Total	**403**	414	(2)%	(2)%	831	**112**	112	—	—	220

1 Includes Turkey.

Life operating profit

Excluding the impact of disposals, the operating profit of our life businesses grew by 2% to £403 million *(HY18: £399 million)*. Dealing with each of the markets in turn:

- In France, operating profit was £199 million *(HY18: £229 million)*, a decrease of 13%, mainly due to adverse protection claims experience and weak investment markets towards the end of 2018 impacting savings business.
- In Poland, operating profit was £83 million *(HY18: £86 million)*, with the reduction in profits mainly due to adverse mortality experience on protection and lower fee income on AUM as a result of weak equity markets towards the end of 2018.
- In Italy, operating profit grew by 32% to £89 million *(HY18: £68 million)*, with strong net inflows in 2018 increasing AUM driving higher fee income particularly due to the continued success of our hybrid savings product.
- In Ireland, operating profit increased to £26 million *(HY18: £13 million),* mainly due to inclusion of a full period of contribution from Friends First and realisation of synergies arising from the acquisition.

‡ denotes APMs which are key performance indicators. There have been no changes to the APMs used by the Group during the period under review.
# denotes key financial performance indicators used as a base to determine or modify remuneration.

Business unit performance continued

6.ii – International continued

General insurance operating profit

Excluding Avipop, the profit of our general insurance businesses grew by 1% to £112 million *(HY18: £110 million)*. Dealing with each of the markets in turn:

- In France, operating profit was £64 million *(HY18: £50 million)*, an increase of 28%, with growth in earned premiums, particularly in commercial lines. The result also benefitted from favourable weather which was offset partly by an increase in large losses.
- In Poland, operating profit was flat at £9 million *(HY18: £9 million)*. During the period there was premium growth in commercial lines, offset by higher large loss experience.
- In Italy, operating profit decreased to £12 million *(HY18: £14 million)* with lower long-term investment return, partially offset by an improved underwriting result benefitting from actions on our motor book.
- In Ireland, operating profit decreased to £27 million *(HY18: £37 million)* due to a softening market in motor lines driving average premiums down, and less favourable prior year development.

Cash‡#

Cash remitted to the Group was £503 million *(HY18: £227 million)* mainly reflecting higher dividends from France and phasing of the annual dividend from Poland, which was remitted in the first half of 2019 *(2018: remitted in the second half)*.

Expenses

Operating expenses of £431 million *(HY18: £402 million)* increased by 8%, mainly due to the inclusion of a full period of Friends First expenses and increased regulatory levies in Ireland, and higher expenses in France including a government mandated staff payment.

New business

	PVNBP					VNB[1]				
Gross of tax and non-controlling interests	**6 months 2019 £m**	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
France	**2,710**	2,159	26%	26%	4,335	**95**	123	(23)%	(23)%	210
Poland	**307**	217	41%	44%	486	**31**	25	21%	23%	58
Italy (excl. Avipop)	**3,468**	3,787	(8)%	(8)%	6,263	**99**	146	(32)%	(32)%	222
Ireland	**753**	433	74%	74%	1,208	**2**	2	4%	4%	11
Other Europe[1]	**160**	187	(15)%	10%	333	**10**	8	24%	60%	13
Total (excl. Avipop)	**7,398**	6,783	9%	10%	12,625	**237**	304	(22)%	(22)%	514
Avipop	**—**	16	N/A	N/A	16	**—**	3	N/A	N/A	3
Total	**7,398**	6,799	9%	10%	12,641	**237**	307	(23)%	(22)%	517

1 Includes Turkey.

Excluding disposals, PVNBP was up by 10% to £7,398 million *(HY18: £6,783 million)* and VNB decreased by 22% to £237 million *(HY18: £304 million)*. In France, PVNBP increased to £2,710 million *(HY18: £2,159 million)* but VNB decreased to £95 million *(HY18: £123 million)* due to higher sales of lower margin savings products. In Italy, VNB decreased to £99 million *(HY18: £146 million)*. We reduced volumes of standalone with-profits savings products, offsetting growth in volumes of our hybrid savings product. In Poland, VNB increased to £31 million *(HY18: £25 million)* driven by the performance of our protection product. In Ireland PVNBP increased mainly due to the inclusion of a full period of contribution from Friends First.

Net written premiums (NWP) and combined operating ratio (COR)‡

	Net written premiums					Combined operating ratio‡			
	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m	**6 months 2019 %**	6 months 2018 %	Change	Full year 2018 %
France	**669**	641	4%	4%	1,118	**93.2%**	95.5%	(2.3)pp	94.5%
Poland	**56**	52	8%	11%	106	**88.7%**	89.0%	(0.3)pp	87.0%
Italy (excl. Avipop)	**159**	162	(2)%	(2)%	317	**96.6%**	97.4%	(0.8)pp	95.1%
Ireland	**218**	223	(3)%	(3)%	430	**90.6%**	87.1%	3.5pp	91.5%
Total (excl. Avipop)	**1,102**	1,078	2%	2%	1,971	**92.9%**	93.6%	(0.7)pp	93.5%
Avipop	**—**	14	N/A	N/A	14	**—**	87.8%	N/A	87.8%
Total	**1,102**	1,092	1%	1%	1,985	**92.9%**	93.5%	(0.6)pp	93.4%

NWP

Excluding disposals, NWP increased by 2% to £1,102 million *(HY18: £1,078 million)*, with growth in France and Poland more than offsetting lower premiums in Italy and Ireland. In France, NWP grew to £669 million *(HY18: £641 million)* with growth across all major products and particularly in commercial lines. In Ireland, NWP decreased slightly due to rate reductions in a softening motor market. In Poland, NWP increased by 11% to £56 million *(HY18: £52 million)* primarily reflecting growth in commercial lines. In Italy, NWP decreased by 2% due to continued underwriting action taken on segments of the motor book.

COR‡

Excluding the disposal of Avipop, COR in Europe has improved by 0.7pp to 92.9%, due to favourable weather in France and the benefit of underwriting action on the motor book in Italy. This was partly offset by a higher COR in Ireland, which was impacted by rate reductions in a softening motor market.

Business unit performance continued

6.iii – Asia

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
Operating profit‡#					
Life	**161**	143	13%	11%	300
General insurance & health	**—**	(11)	N/A	N/A	(16)
Other operations[1]	**(9)**	(12)	18%	21%	(18)
	152	120	27%	25%	266
Cash remitted to Group‡#	**—**	—	—	—	6
Operating expenses[2]	**95**	91	4%	2%	186
New business					
PVNBP	**1,477**	1,327	11%	9%	2,656
VNB‡	**96**	91	6%	4%	189
General Insurance					
COR‡	**111.2%**	125.0%	(13.8)pp	(13.8)pp	122.1%
NWP	**7**	7	2%	(2)%	13

1 Mainly relates to regional holding company activities.
2 Operating expenses relate to subsidiaries only and exclude joint ventures and associates.

Overview

During the first half of 2019, Asia delivered growth in operating profit and continues to expand and strengthen its multi-distribution platform. Singapore has grown its distribution network with a total of 1,653 advisers on board at 30 June 2019. Aviva-COFCO, our joint venture in China, continues to strengthen its core agency channel and has made a positive start to 2019, recovering from regulatory tightening in 2018. Vietnam has maintained its focus on growth and continues to strengthen its relationship with Vietinbank and expand its agency channel with over 3,900 agents now on board.

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

Operating and financial performance

Operating profit‡#

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
Life operating profit					
Singapore	**54**	57	(5)%	(8)%	141
Other Asia (excl. Friends Provident International Limited (FPI))	**22**	15	49%	49%	8
Total life (excl. FPI)	**76**	72	7%	4%	149
General insurance & health operating profit	**—**	(11)	N/A	N/A	(16)
Total life, general insurance & health operating profit from continuing operations	**76**	61	27%	24%	133
Other operations[1]	**(9)**	(12)	18%	21%	(18)
FPI[2]	**85**	71	19%	19%	151
Total operating profit	**152**	120	27%	25%	266

1 Mainly relates to regional holding company activities.
2 In July 2017, Aviva announced the sale of FPI. The subsidiary has been classified as held for sale from July 2017, when management were committed to a plan to sell the business. The transaction is subject to regulatory approvals and is expected to complete in the second half of 2019.

Operating profit was £152 million *(HY18: £120 million)*. Excluding FPI and other operations, operating profit from our life, general insurance and health businesses increased by 24% to £76 million *(HY18: £61 million)*. Within this, overall profit in Singapore increased to £54 million *(HY18: £47 million)* with a significantly improved performance in general insurance and health, partially offset by slightly reduced profits from the life portfolio. China and India have both increased life operating profits.

Cash‡#

No dividends were remitted to Group *(HY18: £nil)* as we continue to reallocate capital to support business growth in the region.

Expenses

Total operating expenses for Asia were £95 million *(HY18: £91 million)*. Excluding FPI, operating expenses were £72 million *(HY18: £68 million)* as the business continues to support growth in distribution capabilities.

‡ denotes APMs which are key performance indicators. There have been no changes to the APMs used by the Group during the period under review.
# denotes key financial performance indicators used as a base to determine or modify remuneration.

Business unit performance continued

6.iii – Asia continued

New business

	PVNBP					VNB‡				
Gross of tax and non-controlling interests	**6 months 2019 £m**	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Sterling % change	Constant currency %	Full year 2018 £m
Singapore	**724**	583	24%	20%	1,279	**71**	62	14%	10%	152
Other Asia	**572**	532	7%	7%	929	**28**	31	(6)%	(2)%	39
Total life (excl. FPI)	**1,296**	1,115	16%	14%	2,208	**99**	93	7%	6%	191
FPI[1]	**181**	212	(15)%	(15)%	448	**(3)**	(2)	(45)%	(45)%	(2)
Total	**1,477**	1,327	11%	9%	2,656	**96**	91	6%	4%	189

1 In July 2017, Aviva announced the sale of FPI. The subsidiary has been classified as held for sale from July 2017, when management were committed to a plan to sell the business. The transaction is subject to regulatory approvals and is expected to complete in the second half of 2019.

PVNBP increased by 9% to £1,477 million *(HY18: £1,327 million)* and VNB increased by 4% to £96 million *(HY18: £91 million)*. Excluding FPI, PVNBP increased by 14% to £1,296 million *(HY18: £1,115 million)*, and VNB increased by 6% to £99 million *(HY18: £93 million)*, mainly driven by the performance in Singapore with PVNBP growth from savings and VNB growth from protection lines.

NWP

NWP contribution remains flat at £7 million *(HY18: £7 million)*.

COR‡

The COR improved by 13.8pp to 111.2% *(HY18: 125.0%)* mainly as a result of a change in business mix from loss making motor lines to travel and commercial lines of business.

Business unit performance continued

6.iv – Aviva Investors

	6 months 2019 £m	6 months 2018 £m	Sterling % change	Full year 2018 £m
Revenue	**264**	284	(7)%	597
Operating expenses[1]	**202**	208	(3)%	447
Operating profit‡#				
Fund management	**62**	76	(19)%	150
Cash remitted to Group‡#	**81**	37	119%	92

1 Operating expenses exclude £1 million *(HY18: £nil)* of operating expenses relating to Aviva Investors Pensions Limited business.

Overview

Despite challenging external market conditions, our investments in growing investment capabilities are making positive progress and we have experienced consistently improving investment performance in 2019. We also experienced significant new external client wins, which had not yet funded at 30 June, particularly in Real Assets and a win of $2.15 billion in US Credit which funded in July 2019. We expect this momentum to continue. Lower revenues and operating profit in the first half of 2019 were mainly caused by lower average assets under management compared to prior period and a business disposal in 2018.

Operating and financial performance

Revenue

Revenue decreased by 7% to £264 million driven by lower average assets under management compared to the prior period and 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.

Expenses

Operating expenses decreased to £202 million *(HY18: £208 million)*. We continue to invest in growth initiatives while strictly controlling non-critical business expenditure.

Operating profit‡#

Fund management operating profit decreased by £14 million to £62 million *(HY18: £76 million)* due mainly to the reduction in revenue described above. Strict cost control by the business helped mitigate the impact on profitability.

Cash‡#

Cash remitted to Group was £81 million during the first half of 2019 *(HY18: £37 million)*.

Net flows and assets under management and under administration

Assets under management represent all assets managed by Aviva Investors and third parties. These comprise assets which are included within the Group's statement of financial position and those belonging to external clients outside the Group which are not included in the statement of financial position. Internal legacy relates to assets managed by Aviva Investors on behalf of the Group relating to products that are no longer actively marketed.

Assets under administration comprise assets managed by Aviva Investors and by third parties on the platform administered by Aviva Investors.

	Internal legacy £m	Internal core £m	External £m	Total £m
Aviva Investors				
Assets under management at 1 January 2019	83,615	183,011	64,080	330,706
Total inflows	5,109	16,719	3,056	24,884
Total outflows	(7,735)	(18,030)	(3,970)	(29,735)
Net flows	(2,626)	(1,311)	(914)	(4,851)
Net flows into liquidity funds and cash	(1,805)	(238)	1,404	(639)
Transfers out to external managers	—	—	(3,223)	(3,223)
Market and foreign exchange movements	6,917	13,304	3,858	24,079
Assets under management at 30 June 2019	**86,101**	**194,766**	**65,205**	**346,072**
Externally managed assets under administration at 1 January 2019				29,104
Externally managed assets under administration net flows and other movements				4,485
Externally managed assets under administration at 30 June 2019				**33,589**
Assets under management and administration at 1 January 2019				359,810
Assets under management and administration at 30 June 2019				**379,661**

Assets under management increased by £15.4 billion to £346.1 billion *(2018: £330.7 billion)*. This is due to £24.1 billion of favourable market and foreign exchange movements partly offset by net outflows of £5.5 billion and £3.2 billion of assets transferred to an external manager. Assets under management and administration at 30 June 2019 were £379.7 billion *(2018: £359.8 billion)*.

‡ denotes APMs which are key performance indicators. There have been no changes to the APMs used by the Group during the period under review.
# denotes key financial performance indicators used as a base to determine or modify remuneration.

Profit drivers

7.i – Life business

Life business operating profit before shareholder tax decreased by 8% to £1,282 million *(HY18: £1,392 million)*, down by 8% on a constant currency basis.

Overall, total income decreased by 3% to £2,284 million *(HY18: £2,348 million)* and total expenses increased by 6% to £1,208 million *(HY18: £1,141 million)*. The resulting decrease in net income was partly offset by a higher benefit from 'Other' items.

	United Kingdom			Europe			Asia			Total		
	6 months 2019 £m	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m
New business income	**297**	342	772	**148**	163	309	**161**	141	300	**606**	646	1,381
Underwriting margin	**165**	191	382	**98**	92	196	**41**	57	103	**304**	340	681
Investment return	**648**	684	1,406	**607**	559	1,131	**119**	119	233	**1,374**	1,362	2,770
Total income	**1,110**	1,217	2,560	**853**	814	1,636	**321**	317	636	**2,284**	2,348	4,832
Acquisition expenses	**(192)**	(219)	(425)	**(171)**	(152)	(335)	**(121)**	(106)	(217)	**(484)**	(477)	(977)
Administration expenses	**(384)**	(356)	(798)	**(286)**	(262)	(523)	**(54)**	(46)	(100)	**(724)**	(664)	(1,421)
Total expenses	**(576)**	(575)	(1,223)	**(457)**	(414)	(858)	**(175)**	(152)	(317)	**(1,208)**	(1,141)	(2,398)
Other[1]	**188**	189	534	**7**	14	53	**15**	(22)	(19)	**210**	181	568
	722	831	1,871	**403**	414	831	**161**	143	300	**1,286**	1,388	3,002
Other business[2]										**(4)**	4	(3)
Total life business operating profit										**1,282**	1,392	2,999

1 Other represents changes in assumptions and modelling, non-recurring items and non-product specific items.
2 Other business includes the total result for Aviva Investors Pensions Limited and Aviva Life Reinsurance.

Income: New business income and underwriting margin

	United Kingdom			Europe[2]			Asia			Total[2]		
	6 months 2019 £m	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m[2]	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m[2]	Full Year 2018 £m
New business income	**297**	342	772	**148**	163	309	**161**	141	300	**606**	646	1,381
Acquisition expenses	**(192)**	(219)	(425)	**(171)**	(152)	(335)	**(121)**	(106)	(217)	**(484)**	(477)	(977)
Net contribution	**105**	123	347	**(23)**	11	(26)	**40**	35	83	**122**	169	404
APE[1]	**1,798**	1,659	3,444	**796**	740	1,381	**217**	174	359	**2,811**	2,573	5,184
As margin on APE (%)	**6%**	7%	10%	**(3)%**	1%	(2)%	**18%**	20%	23%	**4%**	7%	8%
Underwriting margin	**165**	191	382	**98**	92	196	**41**	57	103	**304**	340	681
Analysed by:												
Expenses	**32**	31	63	**27**	15	67	**42**	40	75	**101**	86	205
Mortality and longevity	**133**	160	319	**60**	71	122	**6**	18	30	**199**	249	471
Persistency	**—**	—	—	**11**	6	7	**(7)**	(1)	(2)	**4**	5	5

1 APE excludes UK Retail Fund Management and Health business in UK & Ireland and Asia.
2 Following a review of regular and single premiums in Ireland, Europe APE has been restated for HY18.

(a) Net contribution from new business

The net contribution from new business decreased by 28% to a profit of £122 million *(HY18: profit of £169 million)*. In the UK, the net contribution decreased to a profit of £105 million *(HY18: profit of £123 million)* mainly as a result of lower individual protection volumes partly offset by increased profits in annuities and group protection. In Europe, the net contribution decreased to a loss of £23 million *(HY18: profit of £11 million)* mainly due to a change in product mix in France as a result of higher sales of lower margin savings products and new business strain in Ireland due to increased volumes. In Asia, the net contribution increased to a profit of £40 million *(HY18: profit of £35 million)* as a result of higher sales of protection products in Singapore and China.

(b) Underwriting margin

The overall decrease in the underwriting margin was driven by the UK, which decreased to £165 million *(HY18: £191 million)* mainly as HY18 included favourable annuity experience which did not recur in 2019. In Europe, the underwriting margin increased to a profit of £98 million *(HY18: £92 million)* due to an increase in persistency and expense margins in Ireland partly offset by unfavourable mortality and morbidity experience in France. In Asia, the underwriting margin decreased to £41 million *(HY18: £57 million)* partly due to higher lapses than expected in Singapore.

7.i – Life business continued

Income: Investment return

	United Kingdom			Europe			Asia			Total		
	6 months 2019 £m	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m
Unit-linked margin	**413**	446	903	**301**	291	581	**108**	110	204	**822**	847	1,688
As annual management charge on average reserves (bps)	**59**	64	66	**140**	135	136	**248**	227	217	**86**	88	89
Average reserves (£bn)[1]	**140.3**	138.9	137.6	**42.9**	43.0	42.8	**8.7**	9.7	9.4	**191.9**	191.6	189.8
Participating business[2]	**68**	86	165	**257**	220	461	**(4)**	(4)	4	**321**	302	630
As bonus on average reserves (bps)	**35**	38	39	**72**	66	68	**(19)**	(20)	10	**56**	52	55
Average reserves (£bn)[1]	**39.0**	45.3	42.4	**71.2**	66.2	67.5	**4.3**	4.0	4.1	**114.5**	115.5	114.0
Spread margin	**149**	124	266	**4**	1	2	**3**	3	7	**156**	128	275
As spread margin on average reserves (bps)	**44**	38	40	**16**	5	4	**30**	30	37	**42**	36	38
Average reserves (£bn)[1]	**68.1**	64.5	65.8	**4.9**	4.3	4.5	**2.0**	2.0	1.9	**75.0**	70.8	72.2
Expected return on shareholder assets[3]	**18**	28	72	**45**	47	87	**12**	10	18	**75**	85	177
Total	**648**	684	1,406	**607**	559	1,131	**119**	119	233	**1,374**	1,362	2,770
Total Average reserves (£bn)[1]	**247.4**	248.7	245.8	**119.0**	113.5	114.8	**15.0**	15.7	15.4	**381.4**	377.9	376.0

1 An average of the insurance or investment contract liabilities over the reporting period, including managed pension business which is not consolidated within the statement of financial position.
2 The shareholders' share of the return on with-profits and other participating business.
3 The expected investment return based on opening economic assumptions applied to expected surplus assets over the reporting period that are not backing policyholder liabilities.

(c) Unit-linked margin

The unit-linked margin decreased to £822 million *(HY18: £847 million)* and the margin as a proportion of average reserves decreased to 86 bps *(HY18: 88 bps)*. In the UK, the unit-linked margin has decreased mainly due to adverse market movements towards the end of 2018. At the same time, the margin on average reserves decreased to 59 bps *(HY18: 64 bps)* due to a change in product mix. In Europe, the unit-linked margin increased to £301 million *(HY18: £291 million)* largely due the inclusion of Friends First and higher fee income in Italy due to the hybrid savings business. In Asia, the margin of £108 million *(HY18: £110 million)* is broadly stable.

(d) Participating business

Participating average reserves have decreased slightly to £115 billion *(HY18: £116 billion)*. Income from participating business increased to £321 million *(HY18: £302 million)*. In the UK, income from participating business decreased to £68 million *(HY18: £86 million)*, mainly due to higher than expected run-off and a higher number of maturing policies in 2018. In Europe, income increased to £257 million *(HY18: £220 million)* driven mainly by Italy, due to large positive net inflows since HY18 partly offset by weak investment markets in France.

(e) Spread margin

Spread business income mainly relates to annuities in the UK which increased during the period to £149 million *(HY18: £124 million)*, driven by higher yields on bulk purchase annuities, which increased the margin as a proportion of average reserves to 44 bps *(HY18: 38 bps)*.

(f) Expected return on shareholder assets

Expected returns, representing investment income on surplus funds, decreased to £75 million *(HY18: £85 million)* due mainly to the impact of increased hedging in the UK.

Expenses

	United Kingdom			Europe[3]			Asia			Total[3]		
	6 months 2019 £m	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m[3]	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m	Full Year 2018 £m	**6 months 2019 £m**	6 months 2018 £m[3]	Full Year 2018 £m
Acquisition expenses	**(192)**	(219)	(425)	**(171)**	(152)	(335)	**(121)**	(106)	(217)	**(484)**	(477)	(977)
APE[1]	**1,798**	1,659	3,444	**796**	740	1,381	**217**	174	359	**2,811**	2,573	5,184
As acquisition expense ratio on APE (%)	**11%**	13%	12%	**21%**	21%	24%	**56%**	61%	60%	**17%**	19%	19%
Administration expenses	**(384)**	(356)	(798)	**(286)**	(262)	(523)	**(54)**	(46)	(100)	**(724)**	(664)	(1,421)
As existing business expense ratio on average reserves (bps)	**31**	29	32	**48**	46	46	**72**	59	65	**38**	35	38
Total Average reserves (£bn)[2]	**247.4**	248.7	245.8	**119.0**	113.5	114.8	**15.0**	15.7	15.4	**381.4**	377.9	376.0

1 APE excludes Retail Fund Management and Health business in Asia.
2 An average of the insurance or investment contract liabilities over the reporting period, including managed pension business which is not consolidated within the statement of financial position.
3 Following a review of regular and single premiums in Ireland, Europe APE and acquisition expense ratio on APE, have been restated for HY18.

(g) Acquisition expenses

Acquisition expenses increased to £484 million *(HY18: £477 million)*. The increase in Europe is mainly due to the inclusion of Friends First expenses and the increase in Asia is due to new business growth and increased distribution costs in Singapore. This was partly offset by lower acquisition expenses in the UK, due to lower protection volumes which reduced commission levels.

(h) Administration expenses

The overall expense ratio increased to 38 bps *(HY18: 35 bps)* on average reserves of £381 billion *(HY18: £378 billion)*. The increase is driven by an increased investment in growth initiatives in the UK, inclusion of Friends First in Europe and an increased investment in growth in Asia, particularly, Singapore.

Profit drivers continued

7.ii – General insurance and health

6 months 2019	UK Personal £m	UK Commercial £m	**Total UK £m**	Canada Personal £m	Canada Commercial £m	**Total Canada £m**	**Europe £m**	**Asia & Other[1] £m**	**Total £m**
General insurance									
Gross written premiums	1,266	1,072	**2,338**	1,035	490	**1,525**	**1,151**	**7**	**5,021**
Net written premiums	1,229	929	**2,158**	1,018	440	**1,458**	**1,102**	**7**	**4,725**
Net earned premiums	1,233	851	**2,084**	1,033	416	**1,449**	**992**	**7**	**4,532**
Net claims incurred	(775)	(514)	**(1,289)**	(707)	(254)	**(961)**	**(629)**	**(11)**	**(2,890)**
Of which claims handling costs			***(78)***			***(58)***	***(34)***	***2***	***(168)***
Earned commission	(298)	(178)	**(476)**	(186)	(93)	**(279)**	**(186)**	**—**	**(941)**
Earned expenses	(126)	(103)	**(229)**	(107)	(66)	**(173)**	**(107)**	**(2)**	**(511)**
Underwriting result	34	56	**90**	33	3	**36**	**70**	**(6)**	**190**
Long-term investment return (LTIR)[2]			**83**			**65**	**36**	**—**	**184**
Other[3]			**(1)**			**(3)**	**—**	**—**	**(4)**
Operating profit (GI)			**172**			**98**	**106**	**(6)**	**370**
Health insurance									
Gross written premiums			**284**			**—**	**125**	**132**	**541**
Net written premiums			**284**			**—**	**125**	**112**	**521**
Underwriting result			**14**			**—**	**5**	**—**	**19**
Long-term investment return (LTIR)			**1**			**—**	**1**	**—**	**2**
Operating profit (Health)			**15**			**—**	**6**	**—**	**21**
Total operating profit (GI and Health)			**187**			**98**	**112**	**(6)**	**391**
Total gross written premiums			**2,622**			**1,525**	**1,276**	**139**	**5,562**
Total net written premiums			**2,442**			**1,458**	**1,227**	**119**	**5,246**
General insurance combined operating ratio									
Claims ratio	62.9%	60.4%	**61.9%**	68.4%	61.2%	**66.3%**	**63.3%**		**63.8%**
Commission ratio	24.2%	20.9%	**22.8%**	18.0%	22.3%	**19.2%**	**18.8%**		**20.8%**
Expense ratio	10.2%	12.1%	**11.0%**	10.4%	15.8%	**12.0%**	**10.8%**		**11.3%**
Combined operating ratio	97.3%	93.4%	**95.7%**	96.8%	99.3%	**97.5%**	**92.9%**		**95.9%**
Assets supporting general insurance and health business									
Debt securities			**2,428**			**4,755**	**2,449**	**72**	**9,704**
Equity securities			**720**			**236**	**23**	**—**	**979**
Investment property			**407**			**—**	**153**	**—**	**560**
Cash and cash equivalents			**478**			**139**	**308**	**71**	**996**
Other assets[4]			**1,859**			**174**	**365**	**—**	**2,398**
Assets at 30 June 2019			**5,892**			**5,304**	**3,298**	**143**	**14,637**
Debt securities			**2,367**			**4,445**	**2,387**	**72**	**9,271**
Equity securities			**568**			**208**	**90**	**—**	**866**
Investment property[5]			**380**			**—**	**148**	**—**	**528**
Cash and cash equivalents			**700**			**130**	**371**	**93**	**1,294**
Other assets[4,5]			**1,776**			**207**	**407**	**—**	**2,390**
Assets at 31 December 2018[5]			**5,791**			**4,990**	**3,403**	**165**	**14,349**
Average assets			**5,842**			**5,147**	**3,350**	**154**	**14,493**
Annualised LTIR as % of average assets			**2.9%**			**2.5%**	**2.2%**	**—**	**2.6%**

1 Asia & Other includes Aviva Re.
2 LTIR includes UK £22 million *(HY18: £19 million)* and Ireland £1 million *(HY18: £2 million)* relating to the internal loan.
3 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.
4 Includes loans and other financial investments.
5 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 period or equity. See note B2 for further information.

7.ii – General insurance and health continued

6 months 2018	UK Personal £m	UK Commercial £m	Total UK £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Europe £m	Asia & Other[1] £m	Total £m
General insurance									
Gross written premiums	1,285	981	2,266	1,082	453	1,535	1,135	6	4,942
Net written premiums	1,246	864	2,110	1,066	417	1,483	1,092	12	4,697
Net earned premiums	1,229	785	2,014	1,039	411	1,450	991	11	4,466
Net claims incurred	(769)	(472)	(1,241)	(825)	(250)	(1,075)	(641)	(5)	(2,962)
Of which claims handling costs			*(78)*			*(56)*	*(30)*	—	*(164)*
Earned commission	(312)	(164)	(476)	(185)	(85)	(270)	(189)	(1)	(936)
Earned expenses	(88)	(94)	(182)	(106)	(66)	(172)	(97)	(3)	(454)
Underwriting result	60	55	115	(77)	10	(67)	64	2	114
Long-term investment return (LTIR)[2]			79			56	44	2	181
Other[3]			1			(2)	—	—	(1)
Operating profit (GI)			195			(13)	108	4	294
Health insurance									
Gross written premiums			285			—	122	100	507
Net written premiums			285			—	122	85	492
Underwriting result			11			—	4	(10)	5
Long-term investment return (LTIR)			3			—	—	—	3
Operating profit (Health)			14			—	4	(10)	8
Total operating profit (GI and Health)			209			(13)	112	(6)	302
Total gross written premiums			2,551			1,535	1,257	106	5,449
Total net written premiums			2,395			1,483	1,214	97	5,189
General insurance combined operating ratio									
Claims ratio	62.6%	60.1%	61.6%	79.4%	60.9%	74.1%	64.7%		66.3%
Commission ratio	25.4%	20.9%	23.6%	17.7%	20.9%	18.6%	19.1%		20.9%
Expense ratio	7.2%	12.0%	9.1%	10.2%	16.0%	11.9%	9.7%		10.2%
Combined operating ratio	95.2%	93.0%	94.3%	107.3%	97.8%	104.6%	93.5%		97.4%
Assets supporting general insurance and health business									
Debt securities			2,745			4,186	2,470	175	9,576
Equity securities			489			234	108	—	831
Investment property			329			—	130	—	459
Cash and cash equivalents			475			163	428	28	1,094
Other assets[4]			1,795			269	376	1	2,441
Assets at 30 June 2018			5,833			4,852	3,512	204	14,401
Debt securities			3,020			4,273	2,592	169	10,054
Equity securities			492			247	33	—	772
Investment property			323			—	176	—	499
Cash and cash equivalents			546			140	399	30	1,115
Other assets[4]			1,763			252	481	2	2,498
Assets at 31 December 2017			6,144			4,912	3,681	201	14,938
Average assets			5,989			4,882	3,597	203	14,670
Annualised LTIR as % of average assets			2.7%			2.3%	2.4%	2.0%	2.5%

1 Asia & Other includes Aviva Re.
2 LTIR includes UK £19 million *(HY17: £25 million)* and Ireland £2 million *(HY17: £3 million)* relating to the internal loan.
3 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.
4 Includes loans and other financial investments.

7.ii – General insurance and health continued

Full year 2018	UK Personal £m	UK Commercial £m	Total UK £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Europe £m	Asia & Other[1] £m	Total £m
General insurance									
Gross written premiums	2,562	1,942	4,504	2,143	904	3,047	2,075	14	9,640
Net written premiums	2,494	1,699	4,193	2,107	821	2,928	1,985	8	9,114
Net earned premiums	2,493	1,613	4,106	2,116	839	2,955	1,963	6	9,030
Net claims incurred	(1,546)	(1,019)	(2,565)	(1,609)	(513)	(2,122)	(1,264)	(6)	(5,957)
Of which claims handling costs			*(159)*			*(110)*	*(60)*	*(1)*	*(330)*
Earned commission	(601)	(336)	(937)	(377)	(172)	(549)	(368)	1	(1,853)
Earned expenses	(156)	(195)	(351)	(218)	(136)	(354)	(203)	(4)	(912)
Underwriting result	190	63	253	(88)	18	(70)	128	(3)	308
Long-term investment return (LTIR)[2]			161			120	82	—	363
Other[3]			1			(4)	—	1	(2)
Operating profit (GI)			415			46	210	(2)	669
Health insurance									
Gross written premiums			485			—	204	190	879
Net written premiums			485			—	204	165	854
Underwriting result			33			—	9	(14)	28
Long-term investment return (LTIR)			5			—	1	1	7
Operating profit (Health)			38			—	10	(13)	35
Total operating profit (GI and Health)			453			46	220	(15)	704
Total gross written premiums			4,989			3,047	2,279	204	10,519
Total net written premiums			4,678			2,928	2,189	173	9,968
General insurance combined operating ratio									
Claims ratio	62.0%	63.2%	62.5%	76.1%	61.1%	71.8%	64.4%		66.0%
Commission ratio	24.1%	20.8%	22.8%	17.8%	20.5%	18.6%	18.7%		20.5%
Expense ratio	6.3%	12.1%	8.5%	10.3%	16.2%	12.0%	10.3%		10.1%
Combined operating ratio	92.4%	96.1%	93.8%	104.2%	97.8%	102.4%	93.4%		96.6%
Assets supporting general insurance and health business									
Debt securities			2,367			4,445	2,387	72	9,271
Equity securities			568			208	90	—	866
Investment property[5]			380			—	148	—	528
Cash and cash equivalents			700			130	371	93	1,294
Other assets[4,5]			1,776			207	407	—	2,390
Assets at 31 December 2018[5]			5,791			4,990	3,403	165	14,349
Debt securities			3,020			4,273	2,592	169	10,054
Equity securities			492			247	33	—	772
Investment property			323			—	176	—	499
Cash and cash equivalents			546			140	399	30	1,115
Other assets[4]			1,763			252	481	2	2,498
Assets at 31 December 2017			6,144			4,912	3,681	201	14,938
Average assets			5,968			4,951	3,542	183	14,644
Annualised LTIR as % of average assets			2.8%			2.4%	2.3%	0.5%	2.5%

1 Asia & Other includes Aviva Re.
2 LTIR includes UK £41 million *(2017: £52 million)* and Ireland £5 million *(2017: £6 million)* relating to the internal loan.
3 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.
4 Includes loans and other financial investments.
5 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 period or equity. See note B2 for further information.

Profit drivers continued

7.iii – Life business fund flows

Net flows is one of the measures of growth used by management and is a component of the movement in life and platform business managed assets (excluding UK with-profits) during the period. It is the difference between the inflows (being net written premiums plus deposits received under investment contracts) and outflows (being net paid claims plus redemptions and surrenders under investment contracts). It excludes market and other movements.

The table shown below sets out the life and platform business managed assets of the Group and excludes managed assets relating to our general insurance and health businesses. It includes managed assets of £22.7 billion *(2018: £19.5 billion)* which are excluded from the Group's statement of financial position which mainly relates to the platform business. For these reasons, the amounts disclosed are not directly reconcilable to the Aviva Investors assets under management and administration set out in section 6.iv.

	Managed assets at 1 January 2019 £m	Premiums and deposits, net of reinsurance £m	Claims and redemptions, net of reinsurance £m	Net flows[1,2] £m	Market and other movements £m	Managed assets at 30 June 2019 £m
Life and platform business						
UK – non-profit:						
– platform	22,643	2,656	(1,066)	1,590	2,055	**26,288**
– pensions and other long-term savings	93,060	4,198	(3,384)	814	9,084	**102,958**
– long-term savings[3]	115,703	6,854	(4,450)	2,404	11,139	**129,246**
– annuities and equity release	61,554	1,393	(1,394)	(1)	3,211	**64,764**
– other UK non-profit[4]	22,814	714	(1,323)	(609)	2,636	**24,841**
United Kingdom (excluding UK with-profits)	200,071	8,961	(7,167)	1,794	16,986	**218,851**
Europe[4]	118,502	6,449	(4,040)	2,409	7,209	**128,120**
Asia	14,775	356	(401)	(45)	87	**14,817**
Other markets	1,080	9	(131)	(122)	48	**1,006**
	334,428	15,775	(11,739)	4,036	24,330	**362,794**
UK – with-profits and other[4]	48,167					**48,816**
Total life and platform business[4]	382,595					**411,610**

1 Life business net flows in the table above are net of reinsurance.
2 For the period to 30 June 2019, net flows of £4.0 billion includes net flows of £1.8 billion that are included in the IFRS income statement within net written premiums and net paid claims.
3 Includes platform and pensions business and externally reinsured non-participating investment contracts.
4 Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been amended from those previously reported. The restatement has had no impact on the profit for the period or equity. See note B2 for further information.

United Kingdom (excluding UK with-profits)

UK long-term savings managed assets have increased to £129.2 billion *(2018: £115.7 billion)* during the period. Within this, net inflows were £0.8 billion *(HY18: £0.3 billion net inflows)* for pensions and other long-term savings and £1.6 billion *(HY18: £2.2 billion net inflows)* for the platform business. Platform assets under administration grew by 16% in the period to £26.3 billion *(2018: £22.6 billion)*.

UK annuities and equity release net flows were broadly flat *(HY18: £0.5 billion net inflows)*, including the impact of lower BPA volumes in 2019. Other non-profit net outflows were £0.6 billion *(HY18: £0.4 billion net outflows)* driven by the expected run off of the bond and savings book. Market and other movements include the favourable impact of equity movements and decreasing interest rates.

Europe

Net inflows in Europe of £2.4 billion *(HY18: £2.5 billion net inflows)* include the growth in sales of our hybrid savings product in Italy and savings products in France. Favourable market and other movements in Europe were £7.2 billion.

Asia and other markets

Net outflows in Asia were less than £0.1 billion *(HY18: £0.2 billion net inflows)*. Other business net outflows of £0.1 billion *(HY18: £0.1 billion net outflows)* primarily relate to Aviva Investors Pensions Limited business.

UK with-profits and other

UK with-profits and other assets have remained stable as the expected net outflows have been broadly offset by market and other movements.

8.i – Solvency II

The estimated Solvency II shareholder cover ratio is 194% at 30 June 2019. 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. 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 of £2.6 billion at 30 June 2019 *(2018: £2.6 billion)* and staff pension schemes in surplus of £1.1 billion at 30 June 2019 *(2018: £1.1 billion)* 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 30 June 2019 Solvency II position includes a notional reset (£0.2 billion increase in surplus) *(2018: £0.1 billion decrease in surplus)*. A formal reset of the TMTP will be required at 31 December 2019. A formal reset is required at least every two years or in the event of a material change in risk profile. The TMTP is amortised on a straight-line basis over 16 years from 1 January 2016 in line with the Solvency II rules.
- The 30 June 2019 Solvency II position includes two pro forma adjustments to reflect known or highly likely events that could materially impact the Group's solvency position post 30 June 2019. These pro forma adjustments are unchanged from 31 December 2018 and relate to the disposal of FPI (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 reduction in surplus as a result of an increase in SCR). These adjustments have been made in order to show a more representative view of the Group's solvency position.

Summary of Solvency II position

	30 June 2019 £bn	30 June 2018 £bn	31 December 2018 £bn
Own funds	**24.4**	23.6	23.6
Solvency capital requirement	**(12.6)**	(12.6)	(11.6)
Estimated Solvency II surplus at 30 June/31 December	**11.8**	11.0	12.0
Estimated Solvency II shareholder cover ratio‡	**194%**	187%	204%

Movement in Group Solvency II surplus

	6 months 2019 £bn	6 months 2018 £bn	Full year 2018 £bn
Group Solvency II surplus at 1 January	**12.0**	12.2	12.2
Operating capital generation	**0.8**	0.9	3.2
Non-operating capital generation	**(0.2)**	(0.4)	(0.9)
Dividends	**(0.8)**	(0.8)	(1.2)
Share buy-back	**—**	(0.6)	(0.6)
Foreign exchange variances	**—**	—	—
Hybrid debt repayments	**—**	(0.4)	(0.9)
Acquired/divested business	**—**	0.1	0.2
Estimated Solvency II surplus at 30 June/31 December	**11.8**	11.0	12.0

The estimated Solvency II surplus is £11.8 billion at 30 June 2019 *(2018: £12.0 billion)*, with a shareholder cover ratio of 194% *(2018: 204%)*. The decrease since 31 December 2018 is due to the beneficial impact from operating capital generation offset by non-operating capital generation and the payment of the Aviva plc dividend. Non-operating capital generation is primarily due to the impact of a fall in interest rates over the first half of 2019.

Capital continued

8.i – Solvency II continued

Summary of analysis of diversified Solvency Capital Requirement

	30 June 2019 £bn	30 June 2018[1] £bn	31 December 2018 £bn
Credit risk	**3.3**	3.3	3.0
Equity risk	**1.6**	1.7	1.2
Interest rate risk	**1.0**	0.4	1.0
Other market risk	**1.5**	1.6	1.4
Life insurance risk	**2.7**	2.9	2.5
General insurance risk	**0.7**	0.8	0.8
Operational risk	**1.1**	1.1	1.1
Other risk	**0.7**	0.8	0.6
Total	**12.6**	12.6	11.6

1 The methodology to allocate capital to risks was updated during 2018. The change does not impact total SCR. The 30 June 2018 allocations have been restated to reflect the updated methodology. This allocation has resulted in a change to individual risks mainly due to the reallocation of "Other risk".

The SCR has increased by £1.0 billion since 31 December 2018. The change in risk profile is driven by economic movements over the first half of 2019 increasing credit and equity risks. Credit risk increased by £0.3 billion due to the narrowing of corporate bond spreads which increase the exposure and hence sensitivity to spreads widening in the SCR. Equity risk has increased by £0.4 billion primarily due to a higher exposure following positive market conditions which is partially offset by additional equity hedging in France. Life insurance risk increased by £0.2 billion primarily due to increased longevity risk as a consequence of lower interest rates and narrowing of credit spreads reducing the impact of discounting.

Sensitivity analysis of Solvency II surplus

The following sensitivity analysis of Solvency II surplus allows for any consequential impact on the assets and liability valuations. All other assumptions remain unchanged for each sensitivity, except where these are directly affected by the revised economic conditions or where a management action that is allowed for in the SCR calculation is applicable for that sensitivity. For example, future bonus rates are automatically adjusted to reflect sensitivity changes to future investment returns.

TMTP are assumed to be recalculated in all sensitivities where its impact would be material.

The table below shows the absolute change in cover ratio under each sensitivity, e.g. a 2% positive impact would result in a cover ratio of 196%.

Sensitivities		Impact on cover ratio %
Changes in economic assumptions	25 bps increase in interest rate	**2%**
	50 bps increase in interest rate	**4%**
	100 bps increase in interest rate	**5%**
	25 bps decrease in interest rate	**(3)%**
	50 bps decrease in interest rate	**(9)%**
	50 bps increase in corporate bond spread[1]	**(3)%**
	100 bps increase in corporate bond spread[1]	**(6)%**
	50 bps decrease in corporate bond spread[1]	**2%**
	Credit downgrade on annuity portfolio[2]	**(4)%**
	10% increase in market value of equity	**2%**
	25% increase in market value of equity	**4%**
	10% decrease in market value of equity	**(1)%**
	25% decrease in market value of equity	**(4)%**
Changes in non-economic assumptions	10% increase in maintenance and investment expenses	**(7)%**
	10% increase in lapse rates	**(3)%**
	5% increase in mortality/morbidity rates – life assurance	**(2)%**
	5% decrease in mortality rates – annuity business	**(10)%**
	5% increase in gross loss ratios	**(3)%**

1 Credit spread movement for corporate bonds with credit rating A at a 10 year duration, with the other ratings and durations stressed by the same proportion relative to the stressed capital requirement.
2 An immediate full letter downgrade on 20% of the annuity portfolio bonds (e.g. from AAA to AA, from AA to A).

The Group has kept under review the allowance in our long-term assumptions for future property prices and rental income for the possible adverse impact of the decision for the UK to leave the European Union. This allowance has been determined in line with previous periods and is estimated at £0.4 billion as at 30 June 2019 *(2018: £0.4 billion)*. This allowance is already incorporated in our Solvency II surplus at 30 June 2019 and is equivalent to decreases in property values prevailing at 30 June 2019 of 12% for properties backing equity release mortgages and 14% for properties backing commercial mortgages, as a result the shareholder cover ratio is 5pp lower.

8.i – Solvency II continued

Limitations of sensitivity analysis

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

The sensitivity analysis does not take into consideration that the Group's assets and liabilities are actively managed. Additionally, the Solvency II 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 allocations, adjusting bonuses credited to policyholders and taking other protective action.

Other limitations in the above sensitivity analysis include the use of hypothetical market movements to demonstrate potential risk that only represent the 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.

Capital continued

8.ii – Net asset value

	30 June 2019 £m	pence per share[2]	30 June 2018 £m	pence per share[2]	31 December 2018 £m	pence per share[2]
Equity attributable to shareholders of Aviva plc at 1 January[1]	**16,558**	**424p**	16,969	423p	16,969	423p
Adjustment at 1 January for adoption of IFRS 16[3]	**(110)**	**(3)p**	—	—	—	—
Equity attributable to shareholders of Aviva plc at 1 January restated[1]	**16,448**	**421p**	16,969	423p	16,969	423p
Group adjusted operating profit	**1,448**	**37p**	1,438	36p	3,116	80p
Investment return variances and economic assumption changes on life and non-life business	**444**	**11p**	(654)	(17)p	(672)	(17)p
(Loss)/profit on the disposal and remeasurements of subsidiaries, joint ventures and associates	**(13)**	**—**	31	1p	102	2p
Goodwill impairment and amortisation of intangibles	**(118)**	**(3)p**	(101)	(3)p	(222)	(6)p
Amortisation and impairment of acquired value of in-force business	**(191)**	**(5)p**	(210)	(5)p	(426)	(11)p
Other[4]	**(47)**	**(1)p**	22	1p	231	6p
Tax on operating profit and on other activities	**(343)**	**(10)p**	(150)	(4)p	(442)	(11)p
Non-controlling interests	**(64)**	**(2)p**	(46)	(1)p	(119)	(3)p
Profit after tax attributable to shareholders of Aviva plc	**1,116**	**27p**	330	8p	1,568	40p
AFS securities fair value and other reserve movements	**40**	**1p**	(13)	—	(24)	(1)p
Ordinary dividends	**(812)**	**(21)p**	(764)	(19)p	(1,128)	(29)p
Direct capital instrument and tier 1 notes interest and preference share dividend	**(15)**	**—**	(15)	—	(53)	(1)p
Foreign exchange rate movements	**76**	**2p**	(99)	(2)p	(2)	—
Remeasurements of pension schemes	**50**	**1p**	113	3p	(236)	(6)p
Shares purchased in buy-back	**—**	**—**	(197)	(5)p	(600)	(15)p
Other net equity movements[5]	**37**	**1p**	40	3p	64	13p
Equity attributable to shareholders of Aviva plc at 31 December[1]	**16,940**	**432p**	16,364	411p	16,558	424p

1 Excluding preference shares of £200 million *(2018: £200 million)*.
2 Number of shares as at 30 June 2019: 3,917 million *(HY18: 3,983 million, 2018: 3,902 million)*.
3 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 retained earnings. See note B1 for further information.
4 Other includes a charge of £45 million *(HY18: £nil, 2018: £190 million gain)* in relation to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note B11), a charge of £2 million *(HY18: £36 million gain, 2018: £36 million gain)* relating to an adjustment to the Friends First acquisition balance sheet (see note A11), a charge of £nil *(HY18: £nil, 2018: £63 million charge)* relating to the UK defined pension scheme as a result of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension, a gain of £nil relating to the sale of Aviva USA in 2013 *(HY18: £nil, 2018: £78 million gain)* and a charge of £nil *(HY18: £14 million charge, 2018: £10 million charge)* relating to goodwill payments to preference shareholders which were announced on 30 April 2018.
5 In 2018, Other net equity movements per share included the effect of the reduction of the number of shares in issue by 119,491,188 in respect of shares acquired and cancelled under the share buy-back programme.

At 30 June 2019, IFRS net asset value per share was 432 pence *(2018: 424 pence)*. The increase was mainly due to operating profit and favourable investment return variances, offset by dividend payments to shareholders and tax on operating profit and on other activities. Further details of the investment return variances are shown in notes A4 and A5.

Capital continued

8.iii – Analysis of return on equity

6 months 2019	Operating return Before tax £m	Operating return After tax £m	Weighted average shareholders' funds including non-controlling interests £m	Return on equity %
United Kingdom	909	732	11,534	12.7%
Canada	98	72	1,374	10.5%
Europe	515	370	5,330	13.9%
Asia	161	151	1,738	17.4%
Fund management	61	43	526	16.3%
Corporate and other business[1]	(123)	(100)	5,848	N/A
Return on total capital employed	1,621	1,268	26,350	9.6%
Subordinated debt	(165)	(133)	(6,334)	4.2%
Senior debt	(8)	(6)	(1,363)	0.9%
Return on total equity	1,448	1,129	18,653	12.1%
Less: Non-controlling interests		(47)	(972)	9.7%
Direct capital instrument and tier 1 notes		(6)	(730)	4.9%
Preference capital		(9)	(200)	8.5%
Return on equity shareholders' funds		1,067	16,751	12.6%

1 The Corporate and other business loss before tax of £123 million comprises corporate costs of £97 million, other business operating loss of £70 million, partly offset by interest on internal lending arrangements of £6 million and finance income on the main UK pension scheme of £38 million.

6 months 2018	Operating return Before tax £m	Operating return After tax £m	Weighted average shareholders' funds including non-controlling interests £m	Return on equity %
United Kingdom	1,040	828	12,603	13.1%
Canada	(13)	(10)	1,325	(1.5)%
Europe	526	374	5,495	13.6%
Asia	132	128	1,596	16.0%
Fund management	74	53	527	20.1%
Corporate and other business[1]	(132)	(85)	5,597	N/A
Return on total capital employed	1,627	1,288	27,143	9.5%
Subordinated debt	(188)	(152)	(6,988)	4.4%
Senior debt	(1)	(1)	(1,417)	0.1%
Return on total equity	1,438	1,135	18,738	12.1%
Less: Non-controlling interests		(46)	(1,141)	8.1%
Direct capital instrument and tier 1 notes		(6)	(730)	4.9%
Preference capital		(9)	(200)	8.5%
Return on equity shareholders' funds		1,074	16,667	12.7%

1 The Corporate and other business loss before tax of £132 million comprises corporate costs of £99 million, other business operating loss of £74 million, partly offset by interest on internal lending arrangements of £5 million and finance income on the main UK pension scheme of £36 million.

Capital continued

8.iii – Analysis of return on equity continued

Full year 2018	Operating return Before tax £m	Operating return After tax £m	Weighted average shareholders' funds including non-controlling interests £m	Return on equity %
United Kingdom	2,324	1,899	12,209	15.6%
Canada	46	34	1,306	2.6%
Europe	1,051	752	5,406	13.9%
Asia	284	263	1,627	16.2%
Fund management	146	100	533	18.8%
Corporate and other business[1]	(367)	(281)	5,656	N/A
Return on total capital employed	3,484	2,767	26,737	10.3%
Subordinated debt	(364)	(295)	(6,767)	4.4%
Senior debt	(4)	(3)	(1,403)	0.2%
Return on total equity	3,116	2,469	18,567	13.3%
Less: Non-controlling interests		(100)	(1,074)	9.3%
Direct capital instrument and tier 1 notes		(36)	(730)	4.9%
Preference capital		(17)	(200)	8.5%
Return on equity shareholders' funds		2,316	16,563	14.0%

1 The Corporate and other business loss before tax of £367 million comprises corporate costs of £216 million, other business operating loss of £239 million, partially offset by interest on internal lending arrangements of £13 million and finance income on the main UK pension scheme of £75 million.

Capital continued

8.iv – Group capital under IFRS basis

The table below shows how our capital is deployed by market and how that capital is funded.

	30 June 2019 Capital employed £m	30 June 2018 Capital employed £m	31 December 2018 Capital employed £m
Life business			
United Kingdom	**9,934**	10,274	10,266
France	**2,570**	2,644	2,885
Poland	**226**	409	319
Italy	**756**	605	686
Other Europe	**622**	584	380
Europe	**4,174**	4,242	4,270
Asia	**1,787**	1,624	1,691
	15,895	16,140	16,227
General insurance & health			
United Kingdom General insurance[1]	**1,107**	1,356	1,509
United Kingdom Health	**132**	107	122
Canada	**1,457**	1,287	1,290
France	**600**	570	585
Poland	**122**	140	131
Italy	**168**	172	148
Other Europe	**275**	185	185
Europe	**1,165**	1,067	1,049
	3,861	3,817	3,970
Fund management	**505**	532	545
Corporate and other business[1,2]	**6,283**	6,021	5,412
Total capital employed	**26,544**	26,510	26,154
Financed by			
Equity shareholders' funds	**16,940**	16,364	16,558
Non-controlling interests	**979**	1,045	966
Direct capital instrument and tier 1 notes	**731**	731	731
Preference shares	**200**	200	200
Subordinated debt[3]	**6,333**	6,755	6,335
Senior debt	**1,361**	1,415	1,364
Total capital employed[4]	**26,544**	26,510	26,154

1 Capital employed for United Kingdom General Insurance excludes c.£0.9 billion *(2018: c.£0.9 billion)* of goodwill which does not support the general insurance business for capital purposes and is included in Corporate and other business.
2 Corporate and other business includes centrally held tangible net assets, the main UK staff pension scheme surplus and also reflects internal lending arrangements. These internal lending arrangements, which net out on consolidation, include the formal loan arrangement between Aviva Group Holdings Limited and Aviva Insurance Limited.
3 Subordinated debt excludes amounts held by Group companies of £nil million *(2018: £5 million)*.
4 Goodwill, AVIF and other intangibles are maintained within the capital base. Goodwill includes goodwill in subsidiaries of £1,871 million *(2018: £1,872 million)* and goodwill in joint ventures of £12 million *(2018: £13 million)*. AVIF and other intangibles comprise £3,024 million *(2018: £3,201 million)* of intangibles in subsidiaries and £30 million *(2018: £33 million)* of intangibles in joint ventures, net of deferred tax liabilities of £(445) million *(2018: £(475) million)* and the non-controlling interest share of intangibles of £(32) million *(2018: £(31) million)*.

Total capital employed is financed by a combination of equity shareholders' funds, preference capital, subordinated debt and other borrowings. At 30 June 2019 the Group had £26.5 billion *(2018: £26.2 billion)* of total capital employed in our trading operations measured on an IFRS basis.

At 30 June 2019 the market value of our external debt (subordinated debt and senior debt), preference shares (including both Aviva plc preference shares of £200 million and General Accident plc preference shares, within non-controlling interests, of £250 million), and direct capital instrument was £9,911 million *(2018: £9,278 million)*.

Financial supplement

In this section

A Income & expenses

Reconciliation of Group adjusted operating profit[‡#] to profit for the period

For the six month period ended 30 June 2019

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Group adjusted operating profit before tax attributable to shareholders' profits			
Life business			
United Kingdom	**722**	831	1,871
Europe	**403**	414	831
Asia	**161**	143	300
Other	**(4)**	4	(3)
Total life business	**1,282**	1,392	2,999
General insurance and health			
United Kingdom General Insurance	**172**	195	415
United Kingdom Health	**15**	14	38
Canada	**98**	(13)	46
Europe	**112**	112	220
Asia	**—**	(11)	(16)
Other	**(6)**	5	1
Total general insurance and health	**391**	302	704
Fund management			
Aviva Investors	**62**	76	150
Asia	**(1)**	(2)	(4)
Total fund management	**61**	74	146
Other			
Europe	**(17)**	(18)	(40)
Asia	**(9)**	(12)	(18)
Other Group operations	**(34)**	(53)	(179)
Total other operations (note A1)	**(60)**	(83)	(237)
Market adjusted operating profit	**1,674**	1,685	3,612
Corporate centre (note A2)	**(97)**	(99)	(216)
Group debt costs and other interest (note A3)	**(129)**	(148)	(280)
Group adjusted operating profit before tax attributable to shareholders' profits	**1,448**	1,438	3,116
Adjusted for the following:			
Life business: Investment variances and economic assumption changes (note A4)	**372**	(482)	(197)
Non-life business: Short-term fluctuation in return on investments (note A5)	**145**	(206)	(476)
General insurance and health business: Economic assumption changes (note A6)	**(73)**	34	1
Impairment of goodwill, joint ventures, associates and other amounts expensed (note A7)	**(11)**	—	(13)
Amortisation and impairment of intangibles (note A8)	**(107)**	(101)	(209)
Amortisation and impairment of acquired value of in-force business (note A9)	**(191)**	(210)	(426)
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates (note A10)	**(13)**	31	102
Other (note A11)	**(47)**	22	231
Adjusting items before tax	**75**	(912)	(987)
Profit before tax attributable to shareholders' profits	**1,523**	526	2,129
Tax on Group adjusted operating profit	**(319)**	(303)	(647)
Tax on other activities	**(24)**	153	205
	(343)	(150)	(442)
Profit for the period	**1,180**	376	1,687

Other Group adjusted operating profit Items
A1 – Other operations

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Europe	**(17)**	(18)	(40)
Asia	**(9)**	(12)	(18)
Other Group operations[1]	**(34)**	(53)	(179)
Total	**(60)**	(83)	(237)

1 Other Group operations include Group and head office costs and expenditure on UK digital business.

Other operations relate to non-insurance activities and include costs associated with our Group and regional head offices, pension scheme expenses, as well as non-insurance business. Total losses in relation to non-insurance activities were £60 million *(HY18: £83 million)*.

Other Group operations includes net expenses of £11 million *(HY18: £70 million, 2018: £152 million)* in relation to the Group's UK digital business. The reduction of £59 million from 30 June 2018 reflects the alignment of the UK digital business with the UK Life and UK General Insurance businesses during the period.

A2 – Corporate centre

	6 months 2019 £m	6 months 2018[1] £m	Full year 2018 £m
Project spend	**(30)**	(36)	(80)
Central spend and share award costs	**(67)**	(63)	(136)
Total	**(97)**	(99)	(216)

1 Following a review of corporate centre costs, comparative amounts for the first half of 2018 have been amended from those previously reported. The effect of this change is an increase in project spend of £12 million with an equal and opposite decrease in central spend and share award costs.

Corporate centre costs of £97 million *(HY18: £99 million)* decreased by £2 million mainly due to lower Group led project costs.

A3 – Group debt costs and other interest

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
External debt			
Subordinated debt	**(165)**	(188)	(364)
Other	**(8)**	(1)	(4)
Total external debt	**(173)**	(189)	(368)
Internal lending arrangements	**6**	5	13
Net finance income on main UK pension scheme	**38**	36	75
Total	**(129)**	(148)	(280)

The reduction in Group debt costs and other interest is mainly driven by the repayment of two subordinated debt instruments in full during 2018.

Financial supplement continued

Non-operating profit items

A4 – Life business: Investment variances and economic assumption changes

(a) Definitions

Group adjusted operating profit for life business is based on expected investment returns on financial investments backing shareholder and policyholder funds over the period, with consistent allowance for the corresponding expected movements in liabilities. Group adjusted operating profit includes the effect of variance between actual and expected 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.

(b) Economic volatility

The investment variances and economic assumption changes excluded from the life adjusted operating profit are as follows:

Life business	**6 months 2019 £m**	6 months 2018 £m	Full year 2018 £m
Investment variances and economic assumptions	**372**	(482)	(197)

Investment variances and economic assumption changes were £372 million positive in the period to 30 June 2019 *(HY18: £482 million negative)*, primarily due to reductions in yields and a narrowing of fixed income spreads, partially offset by the impact of increases in equities that reflects the fact that we hedge on an economic rather than on an IFRS basis.

The negative variance in the period to 30 June 2018 primarily arose from an increase in yields and a widening of fixed income spreads.

The Group has kept under review the allowance in our long-term assumptions for future property prices and rental income for the possible adverse impact of the decision for the UK to leave the European Union. This allowance has been determined in line with previous periods and is estimated at £0.4 billion as at 30 June 2019, unchanged from 31 December 2018.

(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 equities and properties are:

	Equities			Properties		
	6 months 2019 %	6 months 2018 %	Full year 2018 %	**6 months 2019 %**	6 months 2018 %	Full year 2018 %
United Kingdom	**4.9%**	4.8%	4.8%	**3.4%**	3.3%	3.3%
Eurozone	**4.3%**	4.4%	4.4%	**2.8%**	2.9%	2.9%

The expected return on equities and properties 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	**6 months 2019 %**	6 months 2018 %	Full year 2018 %
Equity risk premium	**3.5%**	3.5%	3.5%
Property risk premium	**2.0%**	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.

A5 – Non-life business: Short-term fluctuation in return on investments

General Insurance and health	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Analysis of investment income:			
– Net investment income	**427**	42	63
– Foreign exchange (losses)/gains and other charges	**(4)**	4	(8)
	423	46	55
Analysed between:			
– Long-term investment return, reported within Group adjusted operating profit	**186**	184	370
– Short-term fluctuations in investment return, reported outside Group adjusted operating profit	**237**	(138)	(315)
	423	46	55
Short-term fluctuations:			
– General insurance and health	**237**	(138)	(315)
– Other operations[1]	**(92)**	(68)	(161)
Total short-term fluctuations	**145**	(206)	(476)

1 Other operations represents short-term fluctuation on assets backing non-life business in Group centre investments, including the centre hedging programme.

The long-term investment return is calculated separately for each principal non-life market. In respect of equities and 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. It 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 is the actual income receivable for the period. Actual income and long-term investment return both contain the amortisation of the discount/premium arising on the acquisition of fixed income securities.

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.

Short-term fluctuations during the first half of 2019 of £145 million favourable were driven by falling interest rates increasing the value of fixed income securities and rising equity markets. These fluctuations were partly offset by losses on hedges held by the Group, including the centre hedging programme.

The short-term fluctuations during the first half of 2018 of £206 million adverse were mainly due to interest rate increases reducing the value of fixed income securities, and adverse market movements on Group centre holdings, including the centre hedging programme.

Total assets supporting the general insurance and health business, which contribute towards the long-term return, are:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Debt securities	**9,704**	9,576	9,271
Equity securities	**979**	831	866
Properties	**559**	459	584
Cash and cash equivalents	**996**	1,094	1,294
Other[1]	**2,398**	2,441	2,349
Assets supporting general insurance and health business	**14,636**	14,401	14,364
Assets supporting other non-long-term business[2]	**760**	808	812
Total assets supporting non-long-term business	**15,396**	15,209	15,176

1 Other includes the internal loan to Group from UK General Insurance.
2 Assets supporting other non-long-term business represents assets backing non-life business in Group centre investments, including the centre hedging programme.

The principal assumptions underlying the calculation of the long-term investment return are:

	Long-term rates of return on equities			Long-term rates of return on property		
	6 months 2019 %	6 months 2018 %	Full year 2018 %	6 months 2019 %	6 months 2018 %	Full year 2018 %
United Kingdom	**4.9%**	4.8%	4.8%	**3.4%**	3.3%	3.3%
Eurozone	**4.3%**	4.4%	4.4%	**2.8%**	2.9%	2.9%
Canada	**6.0%**	5.9%	5.9%	**4.5%**	4.4%	4.4%

The long-term rates of return on equities and 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 are shown in note A4(c).

A6 – General insurance and health business: Economic assumption changes

In the general insurance and health business, there is a negative impact of £73 million *(HY18: £34 million positive)* primarily as a result of a decrease in the interest rates used to discount claim reserves for both periodic payment orders and latent claims.

A7 – Impairment of goodwill, joint ventures, associates and other amounts expensed

Impairment of goodwill, joint ventures and associates is a charge of £11 million *(HY18: £nil)*. This includes a £9 million impairment charge relating to the Group's associate in India.

A8 – Amortisation and impairment of intangibles

The amortisation and impairment of intangible assets increased to £107 million *(HY18: £101 million),* mainly due to an increase in the amortisation charge on software costs which were capitalised during the second half of 2018 and the first half of 2019.

A9 – Amortisation and impairment of acquired value of in-force business

Amortisation and impairment of acquired value of in-force business is a charge of £191 million *(HY18: £210 million)*, which relates mainly to amortisation in respect of the Group's subsidiaries and joint ventures. Impairment charges of £19 million in relation to Friends Provident International (FPI) remeasurement losses are recorded within profit/loss on disposal and remeasurement of subsidiaries, joint ventures and associates. See note A10.

A10 – Profit/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates

The total Group loss on disposal and remeasurement of subsidiaries, joint ventures and associates is £13 million *(HY18: £31 million profit)*. This consists of £6 million of gains on small disposals, and a £19 million remeasurement loss in relation to FPI. See note A9. Further details of these items are provided in note B5.

A11 – Other

Other items 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. At 30 June 2019, other items is a charge of £47 million *(HY18: net gain of £22 million)* and consists of the following:

- 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. Following the announcement by the Lord Chancellor on 15 July 2019 to increase the Ogden discount rate from the minus 0.75% set in 2017 to minus 0.25%, balance sheet reserves in the UK have been calculated using a discount rate of minus 0.25% at 30 June 2019. At 31 December 2018, balance sheet reserves were calculated using a rate of 0.00%. See note B11; and
- A charge of £2 million relating to the negative goodwill which arose on the acquisition of Friends First on 1 June 2018. An adjustment to the acquisition balance sheet of £2 million has been made in 2019, resulting in a corresponding decrease in the negative goodwill previously recognised.

Financial supplement continued

IFRS financial statements

In this section

Financial supplement continued

Condensed consolidated income statement

For the six month period ended 30 June 2019

	Note	6 months 2019 £m	Restated[1] 6 months 2018 £m	Restated[1] full year 2018 £m
Income				
Gross written premiums		**15,211**	15,180	28,659
Premiums ceded to reinsurers		**(1,442)**	(1,096)	(2,326)
Premiums written net of reinsurance		**13,769**	14,084	26,333
Net change in provision for unearned premiums		**(273)**	(299)	(81)
Net earned premiums		**13,496**	13,785	26,252
Fee and commission income		**1,011**	1,042	2,178
Net investment income/(expense)		**28,014**	(801)	(10,912)
Share of profit after tax of joint ventures and associates		**62**	24	112
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	B5(a)	**(13)**	31	102
		42,570	14,081	17,732
Expenses				
Claims and benefits paid, net of recoveries from reinsurers		**(11,824)**	(11,506)	(23,142)
Change in insurance liabilities, net of reinsurance	B10(b)	**(5,448)**	1,832	6,246
Change in investment contract provisions		**(15,927)**	(1,703)	5,321
Change in unallocated divisible surplus		**(2,838)**	1,508	3,237
Fee and commission expense		**(2,648)**	(1,808)	(3,326)
Other expenses		**(1,552)**	(1,706)	(3,843)
Finance costs		**(285)**	(266)	(573)
		(40,522)	(13,649)	(16,080)
Profit before tax		**2,048**	432	1,652
Tax attributable to policyholders' returns	B7	**(525)**	94	477
Profit before tax attributable to shareholders' profits		**1,523**	526	2,129
Tax (expense)/credit	B7	**(868)**	(56)	35
Less: tax attributable to policyholders' returns	B7	**525**	(94)	(477)
Tax attributable to shareholders' profits	B7	**(343)**	(150)	(442)
Profit for the period		**1,180**	376	1,687
Attributable to:				
Equity holders of Aviva plc		**1,116**	330	1,568
Non-controlling interests		**64**	46	119
Profit for the period		**1,180**	376	1,687
Earnings per share	B8			
Basic (pence per share)		**28.2p**	7.9p	38.2p
Diluted (pence per share)		**27.9p**	7.8p	37.8p

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 period or equity. See note B2 for further information.

Condensed consolidated statement of comprehensive income

For the six month period ended 30 June 2019

	Note	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Profit for the period		**1,180**	376	1,687
Other comprehensive income:				
Items that may be reclassified subsequently to income statement				
Investments classified as available for sale				
Fair value gains/(losses)		**48**	(3)	57
Fair value gains transferred to profit on disposals		**(3)**	(2)	(78)
Share of other comprehensive income of joint ventures and associates		**9**	(9)	(10)
Foreign exchange rate movements		**79**	(81)	5
Aggregate tax effect – shareholder tax on items that may be reclassified subsequently to income statement	B7(b)	**(18)**	4	8
Items that will not be reclassified to income statement				
Owner-occupied properties – fair value gains		**1**	—	1
Remeasurements of pension schemes	B17(b)	**70**	137	(279)
Aggregate tax effect – shareholder tax on items that will not be reclassified subsequently to income statement	B7(b)	**(20)**	(24)	43
Total other comprehensive income, net of tax		**166**	22	(253)
Total comprehensive income for the period		**1,346**	398	1,434
Attributable to:				
Equity holders of Aviva plc		**1,282**	362	1,310
Non-controlling interests		**64**	36	124
		1,346	398	1,434

Condensed consolidated statement of changes in equity

For the six month period ended 30 June 2019

	Note	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Balance at 1 January as reported		**18,455**	19,135	19,135
Adjustment at 1 January for adoption of IFRS 16[1]		**(110)**	—	—
Balance at 1 January restated[1]		**18,345**	19,135	19,135
Profit for the period		**1,180**	376	1,687
Other comprehensive income		**166**	22	(253)
Total comprehensive income for the period		**1,346**	398	1,434
Dividends and appropriations	B9	**(828)**	(780)	(1,189)
Non-controlling interests' share of dividends declared in the period		**(50)**	(46)	(90)
Shares purchased in buy-back[2]		**—**	(197)	(600)
Transfer to profit on disposal of subsidiaries, joint ventures and associates		**—**	(31)	(4)
Changes in non-controlling interests in subsidiaries		**(1)**	(178)	(312)
Reserves credit for equity compensation plans		**30**	35	64
Shares issued under equity compensation plans		**6**	—	2
Capital contributions from non-controlling interests		**—**	2	3
Forfeited dividend income		**—**	—	4
Aggregate tax effect – shareholder tax		**2**	2	8
Balance at 30 June/31 December		**18,850**	18,340	18,455

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 retained earnings. See note B1 for further information.
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. This was completed in 2018. In the period ended 30 June 2019 £nil *(HY18: £197 million, 2018: £600 million)* was purchased and shares with a nominal value of £nil *(HY18: £10 million, 2018: £30 million)* cancelled, giving rise to additional capital redemption reserve of an equivalent amount.

Condensed consolidated statement of financial position

As at 30 June 2019

	Note	30 June 2019 £m	Restated[1] 30 June 2018 £m	Restated[1] 31 December 2018 £m
Assets				
Goodwill		**1,871**	1,881	1,872
Acquired value of in-force business and intangible assets	B23	**3,024**	3,375	3,201
Interests in, and loans to, joint ventures		**1,226**	1,226	1,214
Interests in, and loans to, associates		**311**	362	304
Property and equipment		**972**	531	548
Investment property		**11,471**	11,151	11,482
Loans		**39,452**	36,413	36,184
Financial investments		**343,858**	328,410	319,825
Reinsurance assets	B13	**12,414**	13,831	11,755
Deferred tax assets		**171**	156	185
Current tax assets		**81**	118	76
Receivables		**9,767**	9,120	8,639
Deferred acquisition costs		**3,215**	2,943	2,965
Pension surpluses and other assets		**3,522**	3,626	3,341
Prepayments and accrued income		**3,050**	3,303	3,149
Cash and cash equivalents		**15,296**	16,992	15,926
Assets of operations classified as held for sale	B5	**8,524**	9,665	8,855
Total assets		**458,225**	443,103	429,521
Equity				
Capital				
Ordinary share capital		**979**	996	975
Preference share capital		**200**	200	200
		1,179	1,196	1,175
Capital reserves				
Share premium		**1,225**	1,210	1,214
Capital redemption reserve		**44**	24	44
Merger reserve		**8,974**	8,974	8,974
		10,243	10,208	10,232
Treasury shares		**(18)**	(16)	(15)
Currency translation reserve		**1,192**	1,028	1,122
Other reserves		**(251)**	(289)	(279)
Retained earnings		**4,795**	4,437	4,523
Equity attributable to shareholders of Aviva plc		**17,140**	16,564	16,758
Direct capital instrument and tier 1 notes		**731**	731	731
Equity excluding non-controlling interests		**17,871**	17,295	17,489
Non-controlling interests		**979**	1,045	966
Total equity		**18,850**	18,340	18,455
Liabilities				
Gross insurance liabilities	B11	**150,413**	147,811	144,077
Gross liabilities for investment contracts	B12	**218,881**	208,397	202,468
Unallocated divisible surplus	B15	**8,841**	7,605	5,949
Net asset value attributable to unitholders		**16,764**	17,078	16,338
Pension deficits and other provisions		**1,338**	1,406	1,399
Deferred tax liabilities		**2,305**	2,342	1,885
Current tax liabilities		**526**	128	254
Borrowings	B16	**9,234**	9,786	9,420
Payables and other financial liabilities		**19,818**	18,085	17,681
Other liabilities		**3,065**	3,029	3,074
Liabilities of operations classified as held for sale	B5	**8,190**	9,096	8,521
Total liabilities		**439,375**	424,763	411,066
Total equity and liabilities		**458,225**	443,103	429,521

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 period or equity. See note B2 for further information.

Condensed consolidated statement of cash flows

For the six month period ended 30 June 2019

	Note	6 months 2019 £m	Restated[1] 6 months 2018 £m	Restated[1] full year 2018 £m
Cash flows from operating activities[2]				
Cash generated from operating activities		**824**	5,044	5,848
Tax paid		**(173)**	(292)	(447)
Total net cash from operating activities		**651**	4,752	5,401
Cash flows from investing activities				
Acquisitions of, and additions to, subsidiaries, joint ventures and associates, net of cash acquired		**(13)**	191	192
Disposals of subsidiaries, joint ventures and associates, net of cash transferred		**12**	218	381
Repayment of loans to joint ventures and associates		**5**	—	—
Purchases of property and equipment		**(52)**	(21)	(87)
Proceeds on sale of property and equipment		**3**	1	15
Purchases of intangible assets		**(32)**	(20)	(64)
Total net cash (used in)/from investing activities		**(77)**	369	437
Cash flows from financing activities				
Proceeds from issue of ordinary shares		**12**	6	8
Shares purchased in buy-back		**—**	(197)	(600)
Treasury shares purchased for employee trusts		**(6)**	—	(4)
New borrowings drawn down, net of expenses		**187**	900	3,148
Repayment of borrowings[3]		**(358)**	(1,377)	(4,181)
Net repayment of borrowings		**(171)**	(477)	(1,033)
Interest paid on borrowings		**(274)**	(253)	(551)
Preference dividends paid	B9	**(9)**	(9)	(17)
Ordinary dividends paid	B9	**(812)**	(764)	(1,128)
Forfeited dividend income		**—**	—	4
Coupon payments on direct capital instrument and tier 1 notes	B9	**(7)**	(7)	(44)
Capital contributions from non-controlling interests of subsidiaries		**—**	2	3
Dividends paid to non-controlling interests of subsidiaries		**(50)**	(46)	(90)
Other[4]		**—**	—	(13)
Total net cash used in financing activities		**(1,317)**	(1,745)	(3,465)
Total net (decrease)/increase in cash and cash equivalents		**(743)**	3,376	2,373
Cash and cash equivalents at 1 January[1]		**16,051**	13,617	13,617
Effect of exchange rate changes on cash and cash equivalents		**11**	4	61
Cash and cash equivalents at 30 June/31 December	B21	**15,319**	16,997	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 period or equity. See note B2 for further information.
2 Cash flows from operating activities includes interest received of £2,876 million *(HY18: £2,720 million restated, 2018: £5,469 million restated)* and dividends received of £2,748 million *(HY18: £2,608 million restated, 2018: £4,881 million restated)*.
3 The first half of 2018 includes the redemption of €500 million 6.875% subordinated notes. Full year 2018 includes, in addition, the redemption of $575 million 7.875% undated subordinated notes and the maturity of €350 million 0.100% senior notes.
4 Full year 2018 includes £10 million related to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs and a £3 million donation of forfeited dividend income to a charitable foundation.

B1 – Basis of preparation

The condensed consolidated interim financial statements for the six months to 30 June 2019 have been prepared in accordance with IAS 34 *Interim Financial Reporting*, as endorsed by the European Union (EU), and the Disclosure Rules and Transparency Rules of the Financial Conduct Authority.

The results for the six months to 30 June 2019 are unaudited but have been reviewed by the Auditor, PricewaterhouseCoopers LLP. The interim results do not constitute statutory accounts as defined in Section 434 of the Companies Act 2006. The comparative results for the full year 2018 have been taken from the Group's 2018 annual report and accounts as amended for prior period restatements which are described in note B2. Therefore, these interim financial statements should be read in conjunction with the 2018 annual report and accounts that were prepared in accordance with IFRS, as endorsed by the EU, and those parts of the Companies Act 2006 applicable to those reporting under IFRS. PricewaterhouseCoopers LLP reported on the 2018 financial statements and their report was unqualified and did not contain a statement under section 498 (2) or (3) of the Companies Act 2006. The Group's 2018 annual report and accounts has been filed with the Registrar of Companies.

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 over a period of at least twelve months from the date of approval of the interim financial statements. For this reason, they continue to adopt the going concern basis in preparing the interim financial statements.

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 condensed consolidated financial statements are stated in pounds sterling, which is the Company's functional and presentational currency. Unless otherwise noted, the amounts shown in the financial statements are in millions of pounds sterling (£m).

Except as described below, the accounting policies applied in the condensed consolidated interim financial statements are the same as those applied in Aviva plc's 2018 annual report and accounts.

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 lessees. The standard has introduced a definition of a lease with a single lessee accounting model, eliminating the previous classification as either operating or finance leases. Lessees are required to recognise lease assets and liabilities in the statement of financial position for all leases, with the exception of short-term and low-value leases. Depreciation on lease assets and interest on lease liabilities is recognised in the income statement, replacing the previous model whereby expenses on operating leases were recognised on a straight-line basis over the life of the lease.

The Group has chosen to adopt the modified retrospective approach on transition as permitted under 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. This 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 lease liabilities, net of any associated 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 as 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 the Group's operating leases brought onto the balance sheet at 1 January 2019 following the adoption of IFRS 16 were £550 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 payable under service contracts that were included as a commitment in prior periods, but do not meet the definition of a lease under IFRS 16.

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 that has a lease term of 12 months or less. Lease payments associated with such arrangements continue to be recognised in the Income Statement as an expense on a straight-line basis.

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.

B2 – Presentation changes

Following a review of the Group's presentation of consolidated investment funds, corrections to previous reported values in 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 within fee and commission expense, net investment expense and fee and commission income for the periods ended 30 June 2018 and 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 periods presented is shown below:

	6 months 2018			Full year 2018		
	As reported £m	Effect of changes £m	Restated £m	As reported £m	Effect of changes £m	Restated £m
Fee and commission income	1,042	—	1,042	2,180	(2)	2,178
Net investment expense	(492)	(309)	(801)	(10,847)	(65)	(10,912)
Fee and commission expense	(2,117)	309	(1,808)	(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:

	30 June 2018			31 December 2018		
	As reported £m	Effect of changes £m	Restated £m	As reported £m	Effect of changes £m	Restated £m
Assets						
Loans	27,717	8,696	36,413	28,785	7,399	36,184
Financial investments	309,403	19,007	328,410	297,585	22,240	319,825
Receivables	9,352	(232)	9,120	8,879	(240)	8,639
Prepayments and accrued income	3,129	174	3,303	2,947	202	3,149
Cash and cash equivalents	44,443	(27,451)	16,992	46,484	(30,558)	15,926
Other	48,865	—	48,865	45,798	—	45,798
Total assets	**442,909**	**194**	**443,103**	**430,478**	**(957)**	**429,521**
Liabilities						
Net asset value attributable to unitholders	17,778	(700)	17,078	18,125	(1,787)	16,338
Payables and other financial liabilities	17,271	814	18,085	16,882	799	17,681
Other liabilities	2,949	80	3,029	3,043	31	3,074
Other	386,571	—	386,571	373,973	—	373,973
Total liabilities	**424,569**	**194**	**424,763**	**412,023**	**(957)**	**411,066**
Total equity	**18,340**	**—**	**18,340**	**18,455**	**—**	**18,455**

The impact of the changes above on the following captions in the statement of cash flows for the prior periods presented is shown below:

	6 months 2018			Full year 2018		
	As reported £m	Effect of changes £m	Restated £m	As reported £m	Effect of changes £m	Restated £m
Cash generated from operating activities	2,572	2,472	5,044	6,405	(557)	5,848
Total net cash from operating activities	**2,280**	**2,472**	**4,752**	**5,958**	**(557)**	**5,401**
Total net increase in cash and cash equivalents	904	2,472	3,376	2,930	(557)	2,373
Cash and cash equivalents at 1 January[1]	43,587	(29,970)	13,617	43,587	(29,970)	13,617
Effect of exchange rate changes on cash and cash equivalents	(43)	47	4	92	(31)	61
Cash and cash equivalents at 30 June/31 December[1]	**44,448**	**(27,451)**	**16,997**	**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 B19. 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 *(HY18: £38,621 million)*.

B3 – Exchange rates

The Group's principal overseas operations during the period were located within the eurozone, Canada and Poland. The results and cash flows of these operations have been translated into pounds sterling at the average rates for the period and the assets and liabilities have been translated at the period end rates as follows:

	6 months 2019	6 months 2018	Full year 2018
Eurozone			
Average rate (€1 equals)	**£0.88**	£0.88	£0.88
Period end rate (€1 equals)	**£0.89**	£0.88	£0.90
Canada			
Average rate ($CAD1 equals)	**£0.58**	£0.57	£0.58
Period end rate ($CAD1 equals)	**£0.60**	£0.58	£0.57
Poland			
Average rate (PLN1 equals)	**£0.20**	£0.21	£0.21
Period end rate (PLN1 equals)	**£0.21**	£0.20	£0.21

B4 – Subsidiaries, joint ventures and associates – acquisitions

The Group completed minor acquisitions in Canada and the UK in the first half of 2019. The aggregate consideration paid in these transactions was £13 million. With the exception of the acquisition of an associate in Canada, the acquired entities are all consolidated subsidiaries.

Friends First

During 2019, an adjustment of £2 million was made to the acquisition balance sheet of Friends First which became a wholly owned subsidiary on 1 June 2018. This resulted in a £2 million reduction to the £36 million of negative goodwill that arose on acquisition. The negative goodwill was recognised immediately in the 2018 income statement as required by IFRS 3 *Business Combinations*. The £2 million adjustment has been recognised in the income statement for the period ended 30 June 2019. This amendment to the acquisition balance sheet is permitted under IFRS 3 as it falls within 12 months of the acquisition date.

Financial supplement continued

B5 – 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 period, together with the details of business held for sale at the period end.

(a) Summary

The profit on disposal and remeasurement of subsidiaries, joint ventures and associates comprises:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Disposals	**6**	33	113
Held for sale remeasurements	**(19)**	(4)	(13)
Remeasurements due to change in control status	**—**	2	2
Total (loss)/profit on disposal and remeasurements	**(13)**	31	102

The loss on the disposal and remeasurement of subsidiaries, joint ventures and associates during the period of £13 million *(HY18: profit of £31 million)* consists of £6 million of gains relating to small disposals and a £19 million remeasurement loss relating to Friends Provident International (FPI). See note B5 (b).

(b) Assets and liabilities of operations classified as held for sale

The assets and liabilities of operations classified as held for sale as at 30 June 2019 are as follows:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Assets			
Goodwill, acquired value of in-force business and intangible assets	**576**	950	660
Property and equipment	**5**	5	5
Financial investments	**6,909**	7,747	7,251
Reinsurance assets	**53**	46	45
Other assets	**283**	210	206
Cash and cash equivalents	**698**	707	688
Total assets	**8,524**	9,665	8,855
Liabilities			
Gross insurance liabilities	**118**	509	121
Gross liabilities for investment contracts	**8,022**	8,437	8,341
Unallocated divisible surplus	**—**	19	—
Other liabilities	**50**	131	59
Total liabilities	**8,190**	9,096	8,521
Net assets	**334**	569	334

Assets and liabilities of operations classified as held for sale as at 30 June 2019 and 31 December 2018 relate to the expected disposal of the international operations of FPI. Assets and liabilities of operations classified as held for sale as at 30 June 2018 relate to Spain, which was disposed of in 2018, and 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. The conditions defined in IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* 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. The transaction remains subject to regulatory approvals and is now expected to complete in the second half of 2019. As such, the subsidiary continues to be classified as held for sale and has been remeasured at fair value based on the expected sales price less costs to sell, calculated as £334 million. This resulted in losses on remeasurement of £118 million in 2017, £13 million in 2018 and an additional remeasurement loss of £19 million at 30 June 2019. The business remains a consolidated subsidiary of Aviva at the balance sheet date.

(c) Remeasurements due to change in control status

In 2018 a £2 million remeasurement gain arose due to the change in control status of the Hong Kong business. There were no such remeasurements in 2019.

B6 – 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 provided by business activity. This note provides segmental information on the income statement and the statement of financial position.

(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 includes Friends First, which was acquired on 1 June 2018. The comparative results include our operations within Spain, the principal activity of which was the sale of accident and health insurance and a selection of savings products. The comparative results include the entities 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) and the results of 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, Vietnam, Indonesia and FPI (see note B5(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', along with central core structural borrowings and certain tax balances in the segmental statement of financial position. The results of our internal reinsurance and digital broker 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.

B6 – 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 non-operating items outside the segment management's control, including investment market performance and fiscal policy changes.

(a) (i) Segmental income statement for the six month period ended 30 June 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	3,509	2,338	1,525	3,407	311	3,377	744	—	—	15,211
Premiums ceded to reinsurers	(814)	(180)	(67)	(40)	(5)	(70)	(266)	—	—	(1,442)
Internal reinsurance revenue	—	—	—	—	—	—	(4)	—	4	—
Premiums written net of reinsurance	2,695	2,158	1,458	3,367	306	3,307	474	—	4	13,769
Net change in provision for unearned premiums	(37)	(74)	(9)	(121)	—	(12)	(20)	—	—	(273)
Net earned premiums	2,658	2,084	1,449	3,246	306	3,295	454	—	4	13,496
Fee and commission income	450	60	10	142	50	30	109	159	1	1,011
	3,108	2,144	1,459	3,388	356	3,325	563	159	5	14,507
Net investment income	19,469	181	128	4,582	67	2,561	353	35	638	28,014
Inter-segment revenue	—	—	—	—	—	—	—	118	—	118
Share of profit of joint ventures and associates	33	—	—	4	—	6	32	—	(13)	62
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	6	—	—	—	(19)	—	—	(13)
Segmental income[1]	22,610	2,325	1,593	7,974	423	5,892	929	312	630	42,688
Claims and benefits paid, net of recoveries from reinsurers	(4,844)	(1,329)	(928)	(2,434)	(200)	(1,588)	(480)	—	(21)	(11,824)
Change in insurance liabilities, net of reinsurance	(3,696)	(59)	(36)	(792)	2	(814)	(60)	—	7	(5,448)
Change in investment contract provisions	(11,948)	—	—	(2,018)	1	(2,043)	116	(35)	—	(15,927)
Change in unallocated divisible surplus	311	—	—	(1,994)	(1)	(970)	(184)	—	—	(2,838)
Fee and commission expense	(255)	(624)	(401)	(418)	(77)	(164)	(114)	(15)	(580)	(2,648)
Other expenses	(506)	(174)	(79)	(122)	(51)	(90)	(134)	(204)	(192)	(1,552)
Inter-segment expenses	(104)	(3)	(3)	(2)	(2)	(4)	—	—	—	(118)
Finance costs	(69)	(2)	(4)	(1)	—	(3)	(2)	—	(204)	(285)
Segmental expenses	(21,111)	(2,191)	(1,451)	(7,781)	(328)	(5,676)	(858)	(254)	(990)	(40,640)
Profit/(loss) before tax	1,499	134	142	193	95	216	71	58	(360)	2,048
Tax attributable to policyholders' returns	(519)	—	—	—	—	(6)	—	—	—	(525)
Profit/(loss) before tax attributable to shareholders' profits	980	134	142	193	95	210	71	58	(360)	1,523
Adjusting items:										
Reclassification of corporate costs and unallocated interest	—	(9)	17	24	—	—	—	2	(34)	—
Life business: Investment variances and economic assumption changes	(400)	—	—	86	(2)	(39)	(17)	—	—	(372)
Non-life business: Short-term fluctuation in return on investments	—	(70)	(77)	(71)	(1)	(28)	—	—	102	(145)
General insurance and health business: Economic assumption changes	—	54	3	16	—	—	—	—	—	73
Impairment of goodwill, joint ventures, associates and other amounts expensed	—	—	2	—	—	—	9	—	—	11
Amortisation and impairment of intangibles	36	18	17	2	3	2	6	2	21	107
Amortisation and impairment of AVIF	121	—	—	1	—	5	63	—	1	191
(Profit)/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	(6)	—	—	—	19	—	—	13
Other[3]	—	45	—	—	—	2	—	—	—	47
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	737	172	98	251	95	152	151	62	(270)	1,448

1 Total reported income, excluding inter-segment revenue, includes £25,004 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 are written.
2 Other Group activities include Group reinsurance and net expenses of £11 million in relation to the UK Digital business.
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 B11(c)) and a charge of £2 million relating to the negative goodwill that arose on acquisition of Friends First (see note B4).

B6 – Segmental information continued

(a) (ii) Segmental income statement for the six month period ended 30 June 2018 – restated[1]

	United Kingdom			Europe						
	Life £m	GI £m	Canada[3] £m	France £m	Poland £m	Italy, Ireland, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities[4] £m	Total £m
Gross written premiums	3,941	2,266	1,535	2,828	297	3,769	544	—	—	15,180
Premiums ceded to reinsurers	(737)	(150)	(52)	(38)	(5)	(51)	(63)	—	—	(1,096)
Internal reinsurance revenue	—	(6)	—	—	—	(1)	(4)	—	11	—
Premiums written net of reinsurance	3,204	2,110	1,483	2,790	292	3,717	477	—	11	14,084
Net change in provision for unearned premiums	(34)	(96)	(33)	(124)	6	(6)	(12)	—	—	(299)
Net earned premiums	3,170	2,014	1,450	2,666	298	3,711	465	—	11	13,785
Fee and commission income	447	59	8	137	46	45	114	186	—	1,042
	3,617	2,073	1,458	2,803	344	3,756	579	186	11	14,827
Net investment income/(expense)	143	25	22	(138)	(95)	(441)	(269)	28	(76)	(801)
Inter-segment revenue	—	—	—	—	—	—	—	118	—	118
Share of profit/(loss) of joint ventures and associates	71	—	—	(5)	—	3	1	—	(46)	24
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	1	—	25	5	—	—	31
Segmental income[2]	3,831	2,098	1,480	2,661	249	3,343	316	332	(111)	14,199
Claims and benefits paid, net of recoveries from reinsurers	(5,150)	(1,357)	(962)	(2,231)	(183)	(1,333)	(271)	—	(19)	(11,506)
Change in insurance liabilities, net of reinsurance	1,915	144	(112)	124	143	(348)	(51)	—	17	1,832
Change in investment contract provisions	672	—	—	(581)	—	(1,947)	183	(30)	—	(1,703)
Change in unallocated divisible surplus	130	—	—	590	6	680	102	—	—	1,508
Fee and commission expense	(336)	(620)	(377)	(254)	(66)	(191)	(87)	(21)	144	(1,808)
Other expenses	(710)	(117)	(95)	(133)	(50)	(55)	(135)	(209)	(202)	(1,706)
Inter-segment expenses	(106)	(3)	(3)	—	(2)	(3)	—	—	(1)	(118)
Finance costs	(78)	(1)	(3)	—	—	(2)	(3)	—	(179)	(266)
Segmental expenses	(3,663)	(1,954)	(1,552)	(2,485)	(152)	(3,199)	(262)	(260)	(240)	(13,767)
Profit/(loss) before tax	168	144	(72)	176	97	144	54	72	(351)	432
Tax attributable to policyholders' returns	95	—	—	—	—	—	(1)	—	—	94
Profit/(loss) before tax attributable to shareholders' profits	263	144	(72)	176	97	144	53	72	(351)	526
Adjusting items:										
Reclassification of corporate costs and unallocated interest	—	(8)	16	24	—	—	—	2	(34)	—
Life business: Investment variances and economic assumption changes	401	—	—	44	2	35	—	—	—	482
Non-life business: Short-term fluctuation in return on investments	—	71	23	23	(1)	26	—	—	64	206
General insurance and health business: Economic assumption changes	—	(27)	(1)	(6)	—	—	—	—	—	(34)
Impairment of goodwill, joint ventures, associates and other amounts expensed	—	—	—	—	—	—	—	—	—	—
Amortisation and impairment of intangibles	38	15	22	1	3	1	6	2	13	101
Amortisation and impairment of AVIF	143	—	—	1	—	—	64	—	2	210
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	(1)	—	(25)	(5)	—	—	(31)
Other[5]	—	—	—	—	—	(36)	—	—	14	(22)
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	845	195	(12)	262	101	145	118	76	(292)	1,438

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 period or equity. See note B2 for further information. 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 (£46 million reclassified to Other Group Activities, which predominantly includes net investment expense (£23 million) and finance costs (£25 million)). This segmental restatement has had no impact on the condensed consolidated income statement.
2 Total reported income, excluding inter-segment revenue, includes £6,054 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 are written.
3 Canada adjusted operating profit includes £1 million profit relating to non-insurance activities.
4 Other Group activities include Group reinsurance and net expenses of £70 million in relation to the UK Digital business.
5 Other includes a gain of £36 million relating to negative goodwill on the acquisition of Friends First and a charge of £14 million relating to goodwill payments to preference shareholders which were announced on 30 April 2018 and associated administration costs.

B6 – Segmental information continued

(a) (iii) Segmental income statement for the year ended 31 December 2018 – restated[1]

	United Kingdom			Europe						
	Life £m	GI £m	Canada[3] £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[2]	(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	73	32	46	2	7	3	13	3	30	209
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	1,909	415	47	511	199	301	262	151	(679)	3,116

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 period or equity. See note B2 for further information. 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 predominantly 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 condensed consolidated income statement.
2 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 are written.
3 Canada adjusted operating profit includes £1 million profit relating to non-insurance activities.
4 Aviva Investors adjusted operating profit includes £1 million profit relating to the Aviva Investors Pensions Limited business.
5 Other Group activities include Group reinsurance and net expenses of £152 million 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 (see note B17) and a charge of £10 million relating to goodwill payments to preference shareholders, which was announced on 30 April 2018, and associated administration costs.

B6 – Segmental information continued

(a) (iv) Segmental statement of financial position as at 30 June 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[1] £m	Total £m
Goodwill	663	927	79	—	27	124	51	—	—	1,871
Acquired value of in-force business and intangible assets	2,270	148	217	100	70	94	24	3	98	3,024
Interests in, and loans to, joint ventures and associates	1,442	—	9	117	—	51	530	—	(612)	1,537
Property and equipment	62	79	126	271	17	28	17	7	365	972
Investment property	5,432	407	—	3,758	—	767	—	530	577	11,471
Loans	28,620	—	145	678	—	295	36	—	9,678	39,452
Financial investments	187,637	4,004	5,019	81,513	3,382	37,425	5,591	353	18,934	343,858
Deferred acquisition costs	1,443	535	385	392	135	312	13	—	—	3,215
Other assets	35,563	5,065	1,301	4,440	289	4,784	1,026	1,253	(9,420)	44,301
Assets of operations classified as held for sale	—	—	—	—	—	—	8,524	—	—	8,524
Total assets	**263,132**	**11,165**	**7,281**	**91,269**	**3,920**	**43,880**	**15,812**	**2,146**	**19,620**	**458,225**
Insurance liabilities										
Long-term business and outstanding claims provisions	97,926	4,978	3,640	17,498	3,088	13,456	4,482	—	5	145,073
Unearned premiums	250	2,192	1,603	624	110	426	119	—	—	5,324
Other insurance liabilities	—	16	—	—	—	—	—	—	—	16
Gross liabilities for investment contracts	136,006	—	—	56,048	3	25,881	—	943	—	218,881
Unallocated divisible surplus	1,932	—	—	5,542	56	911	400	—	—	8,841
Net asset value attributable to unitholders	—	—	—	3,350	—	—	—	—	13,414	16,764
External borrowings	1,278	—	—	—	—	43	—	—	7,913	9,234
Other liabilities, including inter-segment liabilities	14,832	106	1,069	5,672	274	1,284	798	618	2,399	27,052
Liabilities of operations classified as held for sale	—	—	—	—	—	—	8,190	—	—	8,190
Total liabilities	**252,224**	**7,292**	**6,312**	**88,734**	**3,531**	**42,001**	**13,989**	**1,561**	**23,731**	**439,375**
Total equity										**18,850**
Total equity and liabilities										**458,225**

1 Other Group activities includes elimination entries for certain inter-segment transactions and group consolidation adjustments.

(a) (v) Segmental statement of financial position as at 30 June 2018 – restated[1]

	United Kingdom			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Ireland, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities[2] £m	Total £m
Goodwill	663	924	82	—	28	123	53	—	8	1,881
Acquired value of in-force business and intangible assets	2,602	144	236	88	73	103	27	6	96	3,375
Interests in, and loans to, joint ventures and associates	1,511	—	9	134	—	55	462	—	(583)	1,588
Property and equipment	1	29	46	253	4	5	7	4	182	531
Investment property	5,626	329	—	3,339	—	643	—	774	440	11,151
Loans	26,066	—	199	701	—	211	35	—	9,201	36,413
Financial investments	180,116	3,960	4,490	78,427	3,466	32,079	5,099	384	20,389	328,410
Deferred acquisition costs	1,351	505	378	356	116	226	11	—	—	2,943
Other assets	38,983	5,524	1,355	3,291	310	4,787	754	1,193	(9,051)	47,146
Assets of operations classified as held for sale	—	—	—	—	—	706	8,959	—	—	9,665
Total assets	256,919	11,415	6,795	86,589	3,997	38,938	15,407	2,361	20,682	443,103
Insurance liabilities										
Long-term business and outstanding claims provisions	97,888	5,188	3,447	17,031	2,982	11,973	4,125	—	16	142,650
Unearned premiums	263	2,111	1,576	581	107	417	91	—	—	5,146
Other insurance liabilities	—	15	—	—	—	—	—	—	—	15
Gross liabilities for investment contracts	130,131	—	—	53,917	4	23,176	—	1,169	—	208,397
Unallocated divisible surplus	2,383	—	—	4,625	60	300	237	—	—	7,605
Net asset value attributable to unitholders	—	—	—	2,611	—	—	—	—	14,467	17,078
External borrowings	1,352	—	—	—	—	34	—	—	8,400	9,786
Other liabilities, including inter-segment liabilities	13,640	(96)	948	5,384	255	989	664	575	2,631	24,990
Liabilities of operations classified as held for sale	—	—	—	—	—	470	8,626	—	—	9,096
Total liabilities	245,657	7,218	5,971	84,149	3,408	37,359	13,743	1,744	25,514	424,763
Total equity										18,340
Total equity and liabilities										443,103

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 period or equity. See note B2 for further information. 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 (net assets of £927 million reclassified to Other Group Activities, which predominantly includes loans (£505 million), investment property (£534 million) and borrowings (£222 million)). This segmental restatement has had no impact on the condensed consolidated statement of financial position.
2 Other Group activities includes elimination entries for certain inter-segment transactions and group consolidation adjustments.

B6 – Segmental information continued

(a) (vi) Segmental statement of financial position as at 31 December 2018 – restated[1]

	United Kingdom			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Ireland, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities[2] £m	Total £m
Goodwill	663	924	82	—	27	125	51	—	—	1,872
Acquired value of in-force business and intangible assets	2,424	154	220	98	72	96	25	5	107	3,201
Interests in, and loans to, joint ventures and associates	1,475	—	8	117	—	55	479	—	(616)	1,518
Property and equipment	—	29	50	258	4	5	5	4	193	548
Investment property	5,595	380	—	3,595	—	746	—	616	550	11,482
Loans	26,914	—	164	710	—	255	37	—	8,104	36,184
Financial investments	169,778	3,673	4,696	76,941	3,423	32,893	5,422	343	22,656	319,825
Deferred acquisition costs	1,361	489	367	354	124	259	11	—	—	2,965
Other assets	38,129	5,306	1,225	3,317	304	4,834	525	1,267	(11,836)	43,071
Assets of operations classified as held for sale	—	—	—	—	—	—	8,855	—	—	8,855
Total assets	246,339	10,955	6,812	85,390	3,954	39,268	15,410	2,235	19,158	429,521
Insurance liabilities										
Long-term business and outstanding claims provisions	94,181	4,914	3,455	16,778	3,068	12,646	4,069	—	4	139,115
Unearned premiums	214	2,104	1,517	501	109	410	91	—	—	4,946
Other insurance liabilities	—	16	—	—	—	—	—	—	—	16
Gross liabilities for investment contracts	123,406	—	—	54,159	4	23,874	—	1,025	—	202,468
Unallocated divisible surplus	2,244	—	—	3,518	55	(78)	210	—	—	5,949
Net asset value attributable to unitholders	—	—	—	2,427	—	—	—	—	13,911	16,338
External borrowings	1,448	—	—	—	—	35	—	—	7,937	9,420
Other liabilities, including inter-segment liabilities	13,661	(260)	1,011	5,350	230	939	801	589	1,972	24,293
Liabilities of operations classified as held for sale	—	—	—	—	—	—	8,521	—	—	8,521
Total liabilities	235,154	6,774	5,983	82,733	3,466	37,826	13,692	1,614	23,824	411,066
Total equity										18,455
Total equity and liabilities										429,521

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 period or equity. See note B2 for further information. 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 (net assets of £1,219 million reclassified to Other Group Activities, which predominantly includes loans (£705 million), investment property (£585 million) and borrowings (£222 million)) and Europe property funds (net assets of £51 million reclassified to Other Group Activities which predominantly includes investment property (£61 million)). This segmental restatement has had no impact on the condensed consolidated statement of financial position.
2 Other Group activities includes elimination entries for certain inter-segment transactions and group consolidation adjustments.

(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.

B6 – Segmental information continued

(b) (i) Segmental income statement – products and services for the six month period ended 30 June 2019

	Long-term business £m	General insurance and health[2] £m	Fund management £m	Other[3] £m	Total £m
Gross written premiums[1]	9,649	5,562	—	—	15,211
Premiums ceded to reinsurers	(1,126)	(316)	—	—	(1,442)
Premiums written net of reinsurance	8,523	5,246	—	—	13,769
Net change in provision for unearned premiums	—	(273)	—	—	(273)
Net earned premiums	8,523	4,973	—	—	13,496
Fee and commission income	687	65	158	101	1,011
	9,210	5,038	158	101	14,507
Net investment income/(expense)	26,973	427	—	614	28,014
Inter-segment revenue	—	—	120	—	120
Share of profit of joint ventures and associates	75	—	—	(13)	62
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(19)	6	—	—	(13)
Segmental income	36,239	5,471	278	702	42,690
Claims and benefits paid, net of recoveries from reinsurers	(8,613)	(3,211)	—	—	(11,824)
Change in insurance liabilities, net of reinsurance	(5,325)	(123)	—	—	(5,448)
Change in investment contract provisions	(15,927)	—	—	—	(15,927)
Change in unallocated divisible surplus	(2,838)	—	—	—	(2,838)
Fee and commission expense	(691)	(1,304)	(14)	(639)	(2,648)
Other expenses	(748)	(349)	(207)	(248)	(1,552)
Inter-segment expenses	(112)	(7)	—	(1)	(120)
Finance costs	(72)	(6)	—	(207)	(285)
Segmental expenses	(34,326)	(5,000)	(221)	(1,095)	(40,642)
Profit/(loss) before tax	1,913	471	57	(393)	2,048
Tax attributable to policyholders' returns	(525)	—	—	—	(525)
Profit/(loss) before tax attributable to shareholders' profits	1,388	471	57	(393)	1,523
Adjusting items	(106)	(80)	4	107	(75)
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	1,282	391	61	(286)	1,448

1 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £79 million relating to property and liability insurance.
2 General insurance and health business segment includes gross written premiums of £541 million relating to health business. The remaining business relates to property and liability insurance.
3 Other includes net expenses of £11 million in relation to the UK Digital business.

(b) (ii) Segmental income statement – products and services for the six month period ended 30 June 2018 – restated[1]

	Long-term business £m	General insurance and health[3] £m	Fund management £m	Other[4] £m	Total £m
Gross written premiums[2]	9,731	5,449	—	—	15,180
Premiums ceded to reinsurers	(836)	(260)	—	—	(1,096)
Premiums written net of reinsurance	8,895	5,189	—	—	14,084
Net change in provision for unearned premiums	—	(299)	—	—	(299)
Net earned premiums	8,895	4,890	—	—	13,785
Fee and commission income	715	61	184	82	1,042
	9,610	4,951	184	82	14,827
Net investment (expense)/income	(742)	42	(2)	(99)	(801)
Inter-segment revenue	—	—	120	—	120
Share of profit/(loss) of joint ventures and associates	71	(1)	—	(46)	24
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	30	1	—	—	31
Segmental income	8,969	4,993	302	(63)	14,201
Claims and benefits paid, net of recoveries from reinsurers	(8,267)	(3,239)	—	—	(11,506)
Change in insurance liabilities, net of reinsurance	1,843	(11)	—	—	1,832
Change in investment contract provisions	(1,703)	—	—	—	(1,703)
Change in unallocated divisible surplus	1,508	—	—	—	1,508
Fee and commission expense	(619)	(1,275)	(20)	106	(1,808)
Other expenses	(911)	(307)	(213)	(275)	(1,706)
Inter-segment expenses	(113)	(7)	—	—	(120)
Finance costs	(81)	(3)	—	(182)	(266)
Segmental expenses	(8,343)	(4,842)	(233)	(351)	(13,769)
Profit/(loss) before tax	626	151	69	(414)	432
Tax attributable to policyholders' returns	94	—	—	—	94
Profit/(loss) before tax attributable to shareholders' profits	720	151	69	(414)	526
Adjusting items	672	151	5	84	912
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	1,392	302	74	(330)	1,438

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 period or equity. See note B2 for further information. 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 (£46 million reclassified from Long-term business to Other, which predominantly includes net investment expense (£23 million) and finance costs (£25 million)). This segmental restatement has had no impact on the condensed consolidated income statement.
2 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £51 million relating to property and liability insurance.
3 General insurance and health business segment includes gross written premiums of £507 million relating to health business. The remaining business relates to property and liability insurance.
4 Other includes net expenses of £70 million in relation to the UK Digital business.

B6 – Segmental information continued

(b) (iii) Segmental income statement – products and services for the year ended 31 December 2018 – restated[1]

	Long-term business £m	General insurance and health[3] £m	Fund management £m	Other[4] £m	Total £m
Gross written premiums[2]	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	591	222	(16)	190	987
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits	2,999	704	146	(733)	3,116

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 period or equity. See note B2 for further information. 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 predominantly 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 condensed consolidated income statement.
2 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £56 million which all relates to property and liability insurance.
3 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.
4 Other includes net expenses of £152 million in relation to the UK Digital business.

(b) (iv) Segmental statement of financial position – products and services as at 30 June 2019

	Long-term business £m	General insurance and health £m	Fund management £m	Other[1] £m	Total £m
Goodwill	722	1,088	—	61	1,871
Acquired value of in-force business and intangible assets	2,525	395	3	101	3,024
Interests in, and loans to, joint ventures and associates	2,131	8	—	(602)	1,537
Property and equipment	278	282	7	405	972
Investment property	10,334	560	—	577	11,471
Loans	29,628	146	—	9,678	39,452
Financial investments	312,939	11,930	52	18,937	343,858
Deferred acquisition costs	2,034	1,181	—	—	3,215
Other assets	42,499	9,505	1,124	(8,827)	44,301
Assets of operations classified as held for sale	8,524	—	—	—	8,524
Total assets	411,614	25,095	1,186	20,330	458,225
Gross insurance liabilities	133,389	17,024	—	—	150,413
Gross liabilities for investment contracts	218,881	—	—	—	218,881
Unallocated divisible surplus	8,841	—	—	—	8,841
Net asset value attributable to unitholders	3,350	—	—	13,414	16,764
External borrowings	1,321	—	—	7,913	9,234
Other liabilities, including inter-segment liabilities	20,902	1,869	604	3,677	27,052
Liabilities of operations classified as held for sale	8,190	—	—	—	8,190
Total liabilities	394,874	18,893	604	25,004	439,375
Total equity					18,850
Total equity and liabilities					458,225

1 Other includes elimination entries for certain inter-segment transactions and group consolidation adjustments.

B6 – Segmental information continued

(b) (v) Segmental statement of financial position – products and services as at 30 June 2018 – restated[1]

	Long-term business £m	General insurance and health £m	Fund management £m	Other[2] £m	Total £m
Goodwill	721	1,082	3	75	1,881
Acquired value of in-force business and intangible assets	2,869	407	6	93	3,375
Interests in, and loans to, joint ventures and associates	2,146	8	—	(566)	1,588
Property and equipment	189	136	4	202	531
Investment property	10,252	459	—	440	11,151
Loans	27,013	199	—	9,201	36,413
Financial investments	296,530	11,581	66	20,233	328,410
Deferred acquisition costs	1,811	1,132	—	—	2,943
Other assets	44,817	9,739	1,095	(8,505)	47,146
Assets of operations classified as held for sale	9,665	—	—	—	9,665
Total assets	396,013	24,743	1,174	21,173	443,103
Gross insurance liabilities	130,996	16,815	—	—	147,811
Gross liabilities for investment contracts	208,397	—	—	—	208,397
Unallocated divisible surplus	7,605	—	—	—	7,605
Net asset value attributable to unitholders	2,611	—	—	14,467	17,078
External borrowings	1,386	—	—	8,400	9,786
Other liabilities, including inter-segment liabilities	18,874	1,645	561	3,910	24,990
Liabilities of operations classified as held for sale	9,096	—	—	—	9,096
Total liabilities	378,965	18,460	561	26,777	424,763
Total equity					18,340
Total equity and liabilities					443,103

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 period or equity. See note B2 for further information. 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 (net assets of £927 million reclassified from Long-term business to Other, which predominantly includes loans (£505 million), investment property (£534 million) and borrowings (£222 million)). This segmental restatement has had no impact on the condensed consolidated statement of financial position.
2 Other includes elimination entries for certain inter-segment transactions and group consolidation adjustments.

(b) (vi) Segmental statement of financial position – products and services as at 31 December 2018 – restated[1]

	Long-term business £m	General insurance and health £m	Fund management £m	Other[2] £m	Total £m
Goodwill	722	1,083	—	67	1,872
Acquired value of in-force business and intangible assets	2,688	403	5	105	3,201
Interests in, and loans to, joint ventures and associates	2,118	8	—	(608)	1,518
Property and equipment	189	147	4	208	548
Investment property	10,405	528	—	549	11,482
Loans	27,915	165	—	8,104	36,184
Financial investments	285,776	11,325	66	22,658	319,825
Deferred acquisition costs	1,877	1,088	—	—	2,965
Other assets	44,161	9,238	1,117	(11,445)	43,071
Assets of operations classified as held for sale	8,855	—	—	—	8,855
Total assets	384,706	23,985	1,192	19,638	429,521
Gross insurance liabilities	127,709	16,368	—	—	144,077
Gross liabilities for investment contracts	202,468	—	—	—	202,468
Unallocated divisible surplus	5,949	—	—	—	5,949
Net asset value attributable to unitholders	2,427	—	—	13,911	16,338
External borrowings	1,483	—	—	7,937	9,420
Other liabilities, including inter-segment liabilities	19,112	1,368	574	3,239	24,293
Liabilities of operations classified as held for sale	8,521	—	—	—	8,521
Total liabilities	367,669	17,736	574	25,087	411,066
Total equity					18,455
Total equity and liabilities					429,521

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 period or equity. See note B2 for further information. 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 property funds (net assets of £1,224 million have been reclassified from Long-term business to Other, which predominantly includes loans (£705 million), investment property (£590 million) and borrowings (£223 million). Net assets of £46 million have been reclassified from General insurance and Health to Other which predominantly includes investment property (£56 million)). This segmental restatement has had no impact on the condensed consolidated statement of financial position.
2 Other includes elimination entries for certain inter-segment transactions and group consolidation adjustments.

Financial supplement continued

B7 – Tax

This note analyses the tax charge for the period and explains the factors that affect it.

(a) Tax charged/(credited) to the income statement

(i) The total tax charge/(credit) comprises:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Current tax			
For the period	**532**	144	559
Prior period adjustments	**(54)**	(4)	(49)
Total current tax	**478**	140	510
Deferred tax			
Origination and reversal of temporary differences	**393**	(81)	(531)
Changes in tax rates or tax laws	**(6)**	—	(13)
Write down/(back) of deferred tax assets	**3**	(3)	(1)
Total deferred tax	**390**	(84)	(545)
Total tax charged/(credited) to income statement	**868**	56	(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 insurance policyholders' returns is included in the tax charge. The tax charge attributable to policyholders' returns included in the charge above is £525 million *(HY18: £94 million credit, 2018: £477 million credit)*.

(iii) The tax charge above, comprising current and deferred tax, can be analysed as follows:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
UK tax	**699**	(39)	(236)
Overseas tax	**169**	95	201
	868	56	(35)

(b) Tax charged/(credited) to other comprehensive income

(i) The total tax charge/(credit) comprises:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Current tax			
In respect of pensions and other post-retirement obligations	**(29)**	(26)	(59)
In respect of foreign exchange movements	**4**	(4)	(1)
	(25)	(30)	(60)
Deferred tax			
In respect of pensions and other post-retirement obligations	**49**	50	16
In respect of unrealised gains/(losses) on investments	**14**	—	(7)
	63	50	9
Total tax charged/(credited) to other comprehensive income	**38**	20	(51)

(ii) The tax charge attributable to policyholders' returns included above is £nil *(HY18: £nil, 2018: £nil)*.

Financial supplement continued

B7 – Tax continued

(c) Tax credited to equity

Tax credited directly to equity in the period in respect of coupon payments on the direct capital instrument and tier 1 notes amounted to £2 million *(HY18: £2 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**	**6 months 2019 £m**	Shareholder £m	Policyholder £m	6 months 2018 £m	Shareholder £m	Policyholder £m	Full year 2018 £m
Total profit before tax	**1,523**	**525**	**2,048**	526	(94)	432	2,129	(477)	1,652
Tax calculated at standard UK corporation tax rate of 19.00% *(2018: 19.00%)*	**289**	**100**	**389**	100	(18)	82	405	(91)	314
Reconciling items									
Different basis of tax – policyholders	**—**	**426**	**426**	—	(76)	(76)	—	(385)	(385)
Adjustment to tax charge in respect of prior periods	**(3)**	**—**	**(3)**	(8)	—	(8)	(16)	—	(16)
Non-assessable income and items not taxed at the full statutory rate	**6**	**—**	**6**	8	—	8	(4)	—	(4)
Non-taxable profit on sale of subsidiaries and associates	**—**	**—**	**—**	(3)	—	(3)	(59)	—	(59)
Disallowable expenses	**17**	**—**	**17**	37	—	37	50	—	50
Different local basis of tax on overseas profits	**42**	**(1)**	**41**	20	—	20	71	(1)	70
Movement in deferred tax not recognised	**(3)**	**—**	**(3)**	(6)	—	(6)	(3)	—	(3)
Tax effect of profit from joint ventures and associates	**(6)**	**—**	**(6)**	(1)	—	(1)	(6)	—	(6)
Other	**1**	**—**	**1**	3	—	3	4	—	4
Total tax charged/(credited) to income statement	**343**	**525**	**868**	150	(94)	56	442	(477)	(35)

The tax charge attributable to policyholders' 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 profit 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 attributable to policyholders included in the total tax charge.

The rate of corporation tax in the UK will be reduced from 19% to 17% from 1 April 2020. In addition, the French government has introduced a stepped reduction to the French corporation tax rate from 34.43% to 25.83% from 1 January 2022. These reduced rates were used in the calculation of deferred tax assets and liabilities in the UK and France at 31 December 2018 and 30 June 2019.

B8 – 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:

			6 months 2019			6 months 2018			Full year 2018
	Group adjusted operating profit £m	**Adjusting items £m**	**Total £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	**1,448**	**75**	**1,523**	1,438	(912)	526	3,116	(987)	2,129
Tax attributable to shareholders' profit	**(319)**	**(24)**	**(343)**	(303)	153	(150)	(647)	205	(442)
Profit for the period	**1,129**	**51**	**1,180**	1,135	(759)	376	2,469	(782)	1,687
Amount attributable to non-controlling interests	**(47)**	**(17)**	**(64)**	(46)	—	(46)	(100)	(19)	(119)
Cumulative preference dividends for the year	**(9)**	**—**	**(9)**	(9)	—	(9)	(17)	—	(17)
Coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax)	**(6)**	**—**	**(6)**	(6)	—	(6)	(36)	—	(36)
Profit attributable to ordinary shareholders	**1,067**	**34**	**1,101**	1,074	(759)	315	2,316	(801)	1,515

(ii) Basic earnings per share is calculated as follows:

			6 months 2019			6 months 2018			Full year 2018
	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	Before tax £m	Net of tax, NCI, preference dividends and DCI[1] £m	Per share p
Group adjusted operating profit attributable to ordinary shareholders	**1,448**	**1,067**	**27.3**	1,438	1,074	26.8	3,116	2,316	58.4
Adjusting items:									
Investment variances and economic assumption changes	**372**	**292**	**7.5**	(482)	(419)	(10.5)	(197)	(198)	(5.0)
Non-life business: Short-term fluctuation in return on investments	**145**	**121**	**3.1**	(206)	(160)	(4.0)	(476)	(378)	(9.6)
General insurance and health business: Economic assumption changes	**(73)**	**(58)**	**(1.4)**	34	27	0.7	1	(1)	—
Impairment of goodwill, joint ventures, associates and other amounts expensed	**(11)**	**(11)**	**(0.3)**	—	—	—	(13)	(13)	(0.3)
Amortisation and impairment of intangibles	**(107)**	**(91)**	**(2.3)**	(101)	(82)	(2.0)	(209)	(172)	(4.3)
Amortisation and impairment of acquired value of in-force business	**(191)**	**(167)**	**(4.3)**	(210)	(178)	(4.4)	(426)	(371)	(9.4)
Profit on disposal and remeasurement of subsidiaries, joint ventures and associates	**(13)**	**(14)**	**(0.4)**	31	31	0.8	102	102	2.6
Other[2]	**(47)**	**(38)**	**(1.0)**	22	22	0.5	231	230	5.8
Profit attributable to ordinary shareholders	**1,523**	**1,101**	**28.2**	526	315	7.9	2,129	1,515	38.2

1 DCI includes the direct capital instrument and tier 1 notes.
2 Other includes a charge of £45 million *(HY18: £nil, 2018: £190 million gain)* in relation to a change in the discount rate used for estimating lump sum payments in settlement of bodily injury claims (see note B11), a charge of £2 million *(HY18: £36 million gain, 2018: £36 million gain)* relating to an adjustment to the Friends First acquisition balance sheet resulting in a corresponding decrease in the negative goodwill previously recognised, a charge of £nil *(HY18: £nil, 2018: £63 million charge)* relating to the UK defined pension scheme as a results of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension, a gain of £nil relating to the sale of Aviva USA in 2013 *(HY18:£nil, 2018: £78 million gain)* and a charge of £nil *(HY18: £14 million charge, 2018: £10 million charge)* relating to goodwill payments to preference shareholders which were announced on 30 April 2018.

(iii) The calculation of basic earnings per share uses a weighted average of 3,907 million *(HY18: 4,009 million, 2018: 3,963 million)* ordinary shares in issue, after deducting treasury shares. The actual number of shares in issue at 30 June 2019 was 3,917 million *(HY18: 3,983 million, 2018: 3,902 million)* or 3,913 million *(HY18: 3,980 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.

B8 – Earnings per share continued

(b) Diluted earnings per share

(i) Diluted earnings per share is calculated as follows:

	6 months 2019			6 months 2018			Full year 2018		
	Total £m	**Weighted average number of shares million**	**Per share p**	Total £m	Weighted average number of shares million	Per share p	Total £m	Weighted average number of shares million	Per share p
Profit attributable to ordinary shareholders	**1,101**	**3,907**	**28.2**	315	4,009	7.9	1,515	3,963	38.2
Dilutive effect of share awards and options	**—**	**43**	**(0.3)**	—	54	(0.1)	—	47	(0.4)
Diluted earnings per share	**1,101**	**3,950**	**27.9**	315	4,063	7.8	1,515	4,010	37.8

(ii) Diluted earnings per share on Group adjusted operating profit attributable to ordinary shareholders is calculated as follows:

	6 months 2019			6 months 2018			Full year 2018		
	Total £m	**Weighted average number of shares million**	**Per share p**	Total £m	Weighted average number of shares million	Per share p	Total £m	Weighted average number of shares million	Per share p
Group adjusted operating profit attributable to ordinary shareholders	**1,067**	**3,907**	**27.3**	1,074	4,009	26.8	2,316	3,963	58.4
Dilutive effect of share awards and options	**—**	**43**	**(0.3)**	—	54	(0.4)	—	47	(0.6)
Diluted group adjusted operating profit per share	**1,067**	**3,950**	**27.0**	1,074	4,063	26.4	2,316	4,010	57.8

B9 – Dividends and appropriations

	6 months 2019 £m	6 months 2018 £m	Full year 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	764
Interim 2018 – 9.25 pence per share, paid on 24 September 2018	**—**	—	364
	812	764	1,128
Preference dividends declared and charged to equity in the period	**9**	9	17
Coupon payments on DCI and tier 1 notes	**7**	7	44
	828	780	1,189

Subsequent to 30 June 2019, the directors declared an interim dividend for 2019 of 9.50 pence per ordinary share *(HY18: 9.25 pence)*, amounting to £372 million *(HY18: £364 million)*. The dividend will be paid on 26 September 2019 and will be accounted for as an appropriation of retained earnings in the year ending 31 December 2019.

Interest on the DCI and tier 1 notes is treated as an appropriation of retained earnings and, accordingly, is accounted for when paid. Tax relief is obtained at a rate of 19% *(2018: 19%)*.

B10 – 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 B11 covers insurance liabilities
- Note B12 covers liabilities for investment contracts
- Note B13 details the associated reinsurance assets on these liabilities
- Note B14 shows the effects of changes in the assumptions on the liabilities

(a) Carrying amount

The following is a summary of the contract liabilities and related reinsurance assets as at 30 June/31 December.

	30 June 2019			30 June 2018			31 December 2018		
	Gross provisions £m	Reinsurance assets £m	Net £m	Gross provisions £m	Reinsurance assets £m	Net £m	Gross provisions £m	Reinsurance assets £m	Net £m
Long-term business									
Insurance liabilities	**(131,347)**	**6,202**	**(125,145)**	(129,447)	5,494	(123,953)	(125,829)	5,836	(119,993)
Liabilities for participating investment contracts	**(94,575)**	**1**	**(94,574)**	(89,604)	1	(89,603)	(90,455)	1	(90,454)
Liabilities for non-participating investment contracts	**(132,328)**	**4,285**	**(128,043)**	(127,230)	6,356	(120,874)	(120,354)	4,009	(116,345)
	(358,250)	**10,488**	**(347,762)**	(346,281)	11,851	(334,430)	(336,638)	9,846	(326,792)
Outstanding claims provisions	**(2,160)**	**81**	**(2,079)**	(2,058)	91	(1,967)	(2,001)	89	(1,912)
	(360,410)	**10,569**	**(349,841)**	(348,339)	11,942	(336,397)	(338,639)	9,935	(328,704)
General insurance and health									
Outstanding claims provisions	**(9,130)**	**724**	**(8,406)**	(9,127)	851	(8,276)	(9,046)	789	(8,257)
Provisions for claims incurred but not reported	**(2,554)**	**891**	**(1,663)**	(2,527)	832	(1,695)	(2,360)	822	(1,538)
	(11,684)	**1,615**	**(10,069)**	(11,654)	1,683	(9,971)	(11,406)	1,611	(9,795)
Provision for unearned premiums	**(5,324)**	**283**	**(5,041)**	(5,146)	252	(4,894)	(4,946)	254	(4,692)
Provision arising from liability adequacy tests[1]	**(16)**	**—**	**(16)**	(15)	—	(15)	(16)	—	(16)
	(17,024)	**1,898**	**(15,126)**	(16,815)	1,935	(14,880)	(16,368)	1,865	(14,503)
Total	**(377,434)**	**12,467**	**(364,967)**	(365,154)	13,877	(351,277)	(355,007)	11,800	(343,207)
Less: Amounts classified as held for sale	**8,140**	**(53)**	**8,087**	8,946	(46)	8,900	8,462	(45)	8,417
	(369,294)	**12,414**	**(356,880)**	(356,208)	13,831	(342,377)	(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 30 June 2019 this provision is £79 million *(2018: £nil)* for the life operations and has been included in unallocated divisible surplus.

B10 – Contract liabilities and associated reinsurance continued

(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 in the income statement, to the change in insurance liabilities recognised as an expense in the relevant movement tables in the following notes.

6 months 2019	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note B11(b))	**5,517**	**(362)**	**5,155**
Change in provision for outstanding claims	**162**	**8**	**170**
	5,679	**(354)**	**5,325**
General insurance and health			
Change in insurance liabilities (note B11(c) and B13(c))[1]	**123**	**2**	**125**
Less: Unwind of discount	**(7)**	**5**	**(2)**
	116	**7**	**123**
Total change in insurance liabilities	**5,795**	**(347)**	**5,448**

6 months 2018	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note B11(b))	(2,466)	390	(2,076)
Change in provision for outstanding claims	246	(13)	233
	(2,220)	377	(1,843)
General insurance and health			
Change in insurance liabilities (note B11(c) and B13(c))	(23)	35	12
Less: Unwind of discount	(5)	4	(1)
	(28)	39	11
Total change in insurance liabilities	(2,248)	416	(1,832)

Full year 2018	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note B11(b))	(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 B11(c) and B13(c))[2]	(313)	111	(202)
Less: Unwind of discount	(8)	8	—
	(321)	119	(202)
Total change in insurance liabilities	(6,415)	169	(6,246)

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%.
2 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 the investment contract provisions shown on the income statement consists of the attributed investment return. For participating investment contracts, the change in the investment contract provisions on the income statement primarily consists of the movement in participating investment contract liabilities (net of reinsurance) over the reporting period.

B11 – Insurance liabilities

(a) Carrying amount

Insurance liabilities (gross of reinsurance) comprised:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Long-term business			
Participating insurance liabilities[1]	**48,204**	47,716	46,768
Unit-linked non-participating insurance liabilities	**15,147**	15,977	14,480
Other non-participating insurance liabilities[1]	**67,996**	65,754	64,581
	131,347	129,447	125,829
Outstanding claims provisions	**2,160**	2,058	2,001
	133,507	131,505	127,830
General insurance and health			
Outstanding claims provisions	**9,130**	9,127	9,046
Provision for claims incurred but not reported	**2,554**	2,527	2,360
	11,684	11,654	11,406
Provision for unearned premiums	**5,324**	5,146	4,946
Provision arising from liability adequacy tests[2]	**16**	15	16
	17,024	16,815	16,368
Total	**150,531**	148,320	144,198
Less: Amounts classified as held for sale	**(118)**	(509)	(121)
	150,413	147,811	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 30 June 2019 this provision is £79 million *(2018: £nil)* for the life operations and has been included in unallocated divisible surplus.

(b) Movements in long-term business liabilities

The following movements have occurred in the long-term business liabilities (gross of reinsurance) during the period:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Carrying amount at 1 January	**125,829**	130,972	130,972
Liabilities in respect of new business	**2,816**	3,353	6,190
Expected change in existing business	**(3,628)**	(4,082)	(7,952)
Variance between actual and expected experience	**2,945**	(67)	(1,844)
Impact of operating assumption changes	**—**	(199)	(1,456)
Impact of economic assumption changes	**3,009**	(1,389)	(959)
Other movements recognised as an expense[1]	**375**	(82)	(263)
Change in liability recognised as an expense (note B10(b))	**5,517**	(2,466)	(6,284)
Effect of portfolio transfers, acquisitions and disposals[2]	**—**	1,144	788
Foreign exchange rate movements	**2**	(197)	413
Other movements[3]	**(1)**	(6)	(60)
Carrying amount at 30 June/31 December	**131,347**	129,447	125,829

1 Other movements during 2019 relate to a special bonus distribution to with-profits policyholders in UK Life and the reclassification of health liabilities in Singapore. The movement in 2018 relates to a special bonus distribution to with-profits policyholders in UK Life.
2 The movement during the first 6 months of 2018 includes the acquisition of Friends First in Ireland offset by the disposal of Avipop in Italy, while full year 2018 also includes the disposal of remaining business in Spain.
3 Other movements during 2018 include the reclassification in France from insurance to participating investment contracts (£(56) million).

For many types of long-term business, including unit-linked and participating funds, movement in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit. The gross long-term business liabilities increased by £5.5 billion in the first half of 2019 *(HY18: £1.5 billion decrease, 2018: £5.1 billion decrease)* mainly driven by the variance between actual and expected experience of £2.9 billion, which was mainly due to higher than expected equity returns in the UK and France; and economic assumption changes of £3.0 billion, which reflects a reduction in valuation interest rates in response to decreasing interest rates and narrowing credit spreads, primarily in respect of immediate annuity and participating insurance 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 on profit. Where assumption changes impact profit, these are included in the effect of changes in assumptions and estimates during the period (shown in note B14), together with the impact of movements in related non-financial assets.

B11 – Insurance liabilities continued

(c) Movements in general insurance and health liabilities

The following changes have occurred in the general insurance and health claims liabilities (gross of reinsurance) during the period:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Carrying amount at 1 January	**11,406**	11,801	11,801
Impact of changes in assumptions	**115**	(66)	(22)
Claim losses and expenses incurred in the current year	**3,408**	3,490	7,158
Decrease in estimated claim losses and expenses incurred in prior periods	**(58)**	(83)	(544)
Incurred claims losses and expenses	**3,465**	3,341	6,592
Less:			
Payments made on claims incurred in the current year	**(1,440)**	(1,461)	(3,927)
Payments made on claims incurred in prior periods	**(2,097)**	(2,080)	(3,343)
Recoveries on claim payments	**188**	172	357
Claims payments made in the period, net of recoveries	**(3,349)**	(3,369)	(6,913)
Unwind of discounting	**7**	5	8
Changes in claims reserve recognised as an expense (note B10(b))	**123**	(23)	(313)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	(29)	(29)
Foreign exchange rate movements	**153**	(96)	(53)
Other movements	**2**	1	—
Carrying amount at 30 June/31 December	**11,684**	11,654	11,406

1 The movement during 2018 relates to the disposal of Avipop in Italy.

Subsequent event

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 minus 0.75% set in 2017 to minus 0.25%, balance sheet reserves in the UK have been calculated using a discount rate of minus 0.25% at 30 June 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.

B12 – Liabilities for investment contracts

(a) Carrying amount

The liabilities for investment contracts (gross of reinsurance) comprised:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Long-term business			
Liabilities for participating investment contracts	**94,575**	89,604	90,455
Liabilities for non-participating investment contracts	**132,328**	127,230	120,354
Total	**226,903**	216,834	210,809
Less: Amounts classified as held for sale	**(8,022)**	(8,437)	(8,341)
	218,881	208,397	202,468

Of the non-participating investment contracts measured at fair value, £131,332 million at 30 June 2019 *(HY18: £126,186 million, 2018: £119,402 million)* are unit-linked in structure and the fair value liability is equal to the current fund value, including any unfunded units, plus if required additional non-unit reserves based on a discounted cash flow analysis.

(b) Movements in participating investment contracts

The following movements have occurred in these liabilities (gross of reinsurance) during the period:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Carrying amount at 1 January	**90,455**	87,654	87,654
Liabilities in respect of new business	**3,795**	3,743	6,301
Expected change in existing business	**(2,660)**	(2,112)	(4,491)
Variance between actual and expected experience	**2,833**	397	(1,441)
Impact of operating assumption changes	**—**	—	59
Impact of economic assumption changes	**139**	(443)	(40)
Other movements recognised as an expense[1]	**161**	153	152
Change in liability recognised as an expense[2]	**4,268**	1,738	540
Effect of portfolio transfers, acquisitions and disposals[3]	**—**	428	427
Foreign exchange rate movements	**(148)**	(216)	774
Other movements[4]	**—**	—	1,060
Carrying amount at 30 June/31 December	**94,575**	89,604	90,455

1 Other movements during 2018 and 2019 primarily relate 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 £3,341 million *(HY18: £189 million, 2018: £(419) million)*.
3 The movement during 2018 relates to the acquisition of Friends First in Ireland.
4 The movements during 2018 relate 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).

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 of £2.8 billion in the period to 30 June 2019 is primarily the result of increased equity returns in the UK and France.

The impact of assumption changes in the above 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 B14), together with the impact of movements in related non-financial assets.

(c) Movements in non-participating investment contracts

The following movements have occurred in these liabilities (gross of reinsurance) during the period:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Carrying amount at 1 January	**120,354**	124,995	124,995
Liabilities in respect of new business	**2,552**	2,659	4,869
Expected change in existing business	**(2,110)**	(2,567)	(5,509)
Variance between actual and expected experience	**11,545**	(394)	(5,539)
Impact of operating assumption changes	**—**	—	(10)
Impact of economic assumption changes	**—**	6	(81)
Other movements recognised as an expense	**2**	21	6
Change in liability	**11,989**	(275)	(6,264)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	2,494	2,494
Foreign exchange rate movements	**(15)**	(7)	133
Other movements[2]	**—**	23	(1,004)
Carrying amount at 30 June/31 December	**132,328**	127,230	120,354

1 The movement during 2018 relates to the acquisition of Friends First in Ireland.
2 Other movements during 2018 relate 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).

B12 – Liabilities for investment contracts continued

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 of £11.5 billion in the period to 30 June 2019 is primarily the result of the impact of positive equity returns in the UK.

The impact of assumption changes in the above analysis shows the resulting movement in the carrying value of the 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 as set out in note B14, which combines participating and non-participating investment contracts together with the impact of movements in related non-financial assets.

B13 – Reinsurance assets

(a) Carrying amount

The reinsurance assets comprised:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Long-term business			
Insurance contracts	**6,202**	5,494	5,836
Participating investment contracts	**1**	1	1
Non-participating investment contracts[1]	**4,285**	6,356	4,009
	10,488	11,851	9,846
Outstanding claims provisions	**81**	91	89
	10,569	11,942	9,935
General insurance and health			
Outstanding claims provisions	**724**	851	789
Provisions for claims incurred but not reported	**891**	832	822
	1,615	1,683	1,611
Provisions for unearned premiums	**283**	252	254
	1,898	1,935	1,865
	12,467	13,877	11,800
Less: Amounts classified as held for sale	**(53)**	(46)	(45)
Total	**12,414**	13,831	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. During the first half of 2019, £277 million of reinsurance assets (UK Life) have been reclassified as collective investments in unit-linked funds following a restructure of a reinsurance treaty. This is a continuation of activity undertaken in 2018 (£3,840 million).

(b) Movements in long-term business liabilities

The following movements have occurred in the reinsurance assets on our insurance and investment contracts liabilities during the period:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Carrying amount at 1 January	**9,846**	11,565	11,565
Assets in respect of new business	**555**	1,100	1,766
Expected change in existing business assets	**22**	90	(22)
Variance between actual and expected experience	**(32)**	(104)	431
Impact of non-economic assumption changes	**—**	—	(460)
Impact of economic assumption changes	**131**	(110)	21
Other movements[1]	**(38)**	(1,105)	(3,877)
Change in assets[2]	**638**	(129)	(2,141)
Effect of portfolio transfers, acquisitions and disposals[3]	**—**	409	399
Foreign exchange rate movements	**4**	6	23
Carrying amount at 30 June/31 December	**10,488**	11,851	9,846

1 Other movements during 2019 primarily relate to the reclassification of health reinsurance assets in Singapore and collective investments in unit-linked funds following a restructure of a reinsurance treaty. The latter part is a continuation of activity undertaken in 2018 (£3,840 million).
2 Change in assets does not reconcile with values in note B10(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.

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 period (shown in note B14), together with the impact of movements in related liabilities and other non-financial assets.

B13 – Reinsurance assets continued

(c) Movements in general insurance and health claims liabilities

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Carrying amount at 1 January	**1,611**	1,729	1,729
Impact of changes in assumptions	**41**	(33)	(22)
Reinsurers' share of claim losses and expenses			
Incurred in current year	**89**	86	176
Incurred in prior years	**(2)**	39	40
Reinsurers' share of incurred claim losses and expenses	**87**	125	216
Less:			
Reinsurance recoveries received on claims			
Incurred in current year	**(6)**	(7)	(54)
Incurred in prior years	**(129)**	(124)	(259)
Reinsurance recoveries received in the period	**(135)**	(131)	(313)
Unwind of discounting	**5**	4	8
Change in reinsurance asset recognised as income (note B10(b))	**(2)**	(35)	(111)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	(9)	(9)
Foreign exchange rate movements	**6**	(2)	2
Carrying amount at 30 June/31 December	**1,615**	1,683	1,611

1 The movement during 2018 relates to the proportion of reinsurance assets held by Avipop which was sold in 2018.

B14 – Effect of changes in assumptions and estimates during the period

This note analyses the impact of changes in estimates and assumptions 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 6 months 2019 £m	Effect on profit 6 months 2018 £m	Effect on profit Full year 2018 £m
Assumptions			
Long-term insurance business			
Interest rates	**(2,504)**	907	1,061
Expenses	—	(1)	9
Persistency rates	**—**	—	23
Mortality and morbidity for assurance contracts	**—**	—	24
Mortality for annuity contracts	**—**	200	780
Tax and other assumptions	**—**	—	18
Long-term investment business			
Expenses	—	—	(1)
General insurance and health business			
Change in discount rate assumptions	**(73)**	34	1
Total	**(2,577)**	1,140	1,915

In the first half of 2019 the impact of interest rates on long-term insurance business relates primarily to annuities in the UK (including any change in credit default and reinvestment risk provisions), where a reduction in the valuation interest rate, in response to decreasing risk-free rates and narrowing of credit spreads, has increased liabilities.

In the first half of 2018 the impact of mortality for annuity contracts on long-term insurance business related to the UK with a reduction in reserves of £200 million arising from changes in base mortality assumptions. These changes included a refined financial estimate of the impact of longevity experience for bulk annuities (£145 million) and the impact of completing our review of prior period longevity experience for individual annuities (£55 million).

In the general insurance and health business, a negative impact of £(73) million *(HY18: £34 million positive)* has arisen primarily as a result of a decrease in the interest rates used to discount claim reserves for both periodic payment orders (PPOs) and latent claims. During the first half of 2018, the estimated future inflation rate used to value PPOs decreased and there was an increase in the interest rates used to discount claim reserves for both PPOs and latent claims.

B15 – 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.

The amount of UDS at 30 June 2019 has increased to £8.8 billion (HY18: £7.6 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 negative UDS balances at the participating fund-level within each life entity in the current period, whereas there was negative UDS in one fund in UK Life *(HY18: £15 million, 2018: no negative UDS)* and five funds in Italy *(HY18: £30 million, 2018: £355 million)* in the comparative periods.

B16 – 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 of each type.

(a) Analysis of total borrowings:

Total borrowings comprise:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Core structural borrowings, at amortised cost	**7,694**	8,170	7,699
Operational borrowings, at amortised cost	**313**	417	496
Operational borrowings, at fair value	**1,227**	1,199	1,225
	1,540	1,616	1,721
	9,234	9,786	9,420

(b) Core structural borrowings

The carrying amounts of these borrowings are:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Subordinated debt			
6.125% £700 million subordinated notes 2036	**694**	694	694
6.125% £800 million undated subordinated notes	**797**	796	797
6.875% £600 million subordinated notes 2058	**594**	594	594
12.000% £162 million subordinated notes 2021	**185**	197	191
8.250% £500 million subordinated notes 2022	**555**	572	563
6.625% £450 million subordinated notes 2041	**449**	448	449
7.875% $575 million undated subordinated notes	**—**	441	—
6.125% €650 million subordinated notes 2043	**580**	573	582
3.875% €700 million subordinated notes 2044	**623**	615	625
5.125% £400 million subordinated notes 2050	**395**	395	395
3.375% €900 million subordinated notes 2045	**797**	787	799
4.500% C$450 million subordinated notes 2021	**270**	257	257
4.375% £400 million subordinated notes 2049	**394**	394	394
	6,333	6,763	6,340
Senior notes			
0.100% €350 million senior notes 2018	**—**	309	—
0.625% €500 million senior notes 2023	**445**	440	446
1.875% €750 million senior notes 2027	**665**	—	667
	1,110	749	1,113
Commercial paper	**251**	666	251
	7,694	8,178	7,704
Less: Amount held by Group companies	**—**	(8)	(5)
Total	**7,694**	8,170	7,699

(c) Operational borrowings

The carrying amounts of these borrowings are:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Amounts owed to financial institutions			
Loans	**313**	417	496
Securitised mortgage loan notes			
UK lifetime mortgage business[1]	**1,227**	1,199	1,225
Total	**1,540**	1,616	1,721

1 The fair value of these loan notes is calculated using similar techniques to the related securitised mortgage assets discussed in note C5.

B17 – Pension obligations and other provisions

(a) Carrying amounts

(i) Provisions in the condensed consolidated statement of financial position

In the condensed consolidated statement of financial position, provisions include pension scheme deficits and comprise:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Total IAS 19 obligations to the main staff pension schemes	**692**	662	693
Deficits in other staff pension schemes	**66**	63	65
Total IAS 19 obligations to staff pension schemes	**758**	725	758
Restructuring provisions	**60**	71	64
Other provisions	**520**	617	577
	1,338	1,413	1,399
Less: Amounts classified as held for sale	**—**	(7)	—
Total	**1,338**	1,406	1,399

Other provisions shown above primarily include amounts set aside throughout the Group relating to product governance rectification and staff entitlements.

(ii) Pension obligations

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 schemes as at 30 June/31 December are shown below.

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Total fair value of scheme assets	**19,472**	18,388	18,083
Present value of defined benefit obligation	**(16,696)**	(15,473)	(15,520)
Net IAS 19 surplus in the schemes	**2,776**	2,915	2,563
Surpluses included in other assets[1]	**3,468**	3,577	3,256
Deficits included in provisions	**(692)**	(662)	(693)
Net IAS 19 surplus in the schemes	**2,776**	2,915	2,563

1 Pension surpluses and other assets totalling £3,522 million *(HY18: £3,626 million, 2018: £3,341 million)* includes pension surpluses of £3,468 million *(HY18: £3,577 million, 2018: £3,256 million)* and other assets of £54 million *(HY18: £49 million, 2018: £85 million)*.

B17 – Pension obligations and other provisions continued

(b) Movements in the schemes' surpluses and deficits

Movements in the pension schemes' surpluses and deficits since 31 December comprise:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Net IAS 19 surplus in the schemes at 1 January	**2,563**	2,635	2,635
Past service costs – amendments[1]	**—**	—	(63)
Administrative expenses	**(9)**	(10)	(19)
Total pension cost charged to net operating expenses	**(9)**	(10)	(82)
Net interest credited to investment income/(finance costs)[2]	**34**	31	67
Total recognised in income statement	**25**	21	(15)
Remeasurements:			
Actual return on these assets	**1,575**	(79)	(182)
Less: Interest income on scheme assets	**(240)**	(220)	(442)
Return on scheme assets excluding amounts in interest income	**1,335**	(299)	(624)
(Losses)/gains from change in financial assumptions	**(1,277)**	449	622
Losses from change in demographic assumptions	**(10)**	—	(185)
Experience gains/(losses)	**22**	(13)	(93)
Total remeasurements recognised in other comprehensive income[3]	**70**	137	(280)
Acquisitions	**—**	(8)	(9)
Employer contributions	**119**	129	236
Administrative expenses paid from scheme assets	—	(2)	(4)
Foreign exchange rate movements	**(1)**	3	—
Net IAS 19 surplus in the schemes at 30 June/31 December	**2,776**	2,915	2,563

1 2018 past service costs included a charge of £63 million relating to the estimated additional liability arising in the UK defined benefit pension schemes as a result of the requirement to equalise members' benefits for the effects of Guaranteed Minimum Pension (GMP). This additional liability arose following the High Court judgement in October 2018 in the case involving Lloyds Banking Group.
2 Net interest income of £46 million *(HY18: £43 million, 2018: £89 million)* has been credited to investment income and net interest expense of £12 million *(HY18: £12 million, 2018: £22 million)* has been charged to finance costs in HY19.
3 Net remeasurements of pension schemes recorded in the consolidated statement of comprehensive income of £70 million gain *(HY18: £137 million gain, 2018: £279 million loss)* includes £70 million of remeasurement gains *(HY18: £137 million gain, 2018: £280 million loss)* on the main pension schemes and £nil gains in relation to other schemes *(HY18: £nil, 2018: £1 million gain)*.

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 Aviva Staff Pension Scheme (ASPS) via a reduction to future employer contributions for defined contribution members, which could theoretically be paid from the surplus funds in the ASPS. In the RAC 2003 Pension Scheme (RAC) and Friends Provident Pension Scheme (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 increase in the surplus during the period is primarily due to employer contributions into the schemes and remeasurements recognised in other comprehensive income. The remeasurements recognised are principally a result of positive equity and property performance in the UK, as well as falling interest rates over the period. This has been partly offset by narrowing corporate bond spreads in the UK.

B18 – Related party transactions

During the period, there have been no changes in the nature of the related party transactions from those described in the Group's annual report and accounts for the year ended 31 December 2018. There were no transactions with related parties that had a material effect on the result for the period ended 30 June 2019, 30 June 2018 or 31 December 2018.

B19 – Fair value

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. Therefore, 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.

The majority of the Group's assets and liabilities measured at fair value are based on quoted market information or observable market data. 16.6% of assets and 3.1% of liabilities measured at fair value 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 period compared to those described in the 2018 annual report and accounts.

Financial supplement continued

B19 – Fair value continued

(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 asset or liability is carried on a measurement basis other than fair value, e.g. amortised cost.

	30 June 2019		Restated[1] 30 June 2018		Restated[1] 31 December 2018	
	Fair value £m	**Carrying amount £m**	Fair value £m	Carrying amount £m	Fair value £m	Carrying amount £m
Financial assets						
Loans[2]	**39,417**	**39,452**	36,362	36,413	36,130	36,184
Financial investments	**343,858**	**343,858**	328,410	328,410	319,825	319,825
Fixed maturity securities	**204,307**	**204,307**	193,276	193,276	193,876	193,876
Equity securities	**94,743**	**94,743**	94,395	94,395	88,227	88,227
Other investments (including derivatives)	**44,808**	**44,808**	40,739	40,739	37,722	37,722
Financial liabilities						
Non-participating investment contracts	**124,306**	**124,306**	118,793	118,793	112,013	112,013
Net asset value attributable to unitholders	**16,764**	**16,764**	17,078	17,078	16,338	16,338
Borrowings[2]	**10,213**	**9,234**	10,456	9,786	9,826	9,420
Derivative liabilities	**7,041**	**7,041**	6,520	6,520	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 restatement has had no impact on the profit for the period or equity. See note B2 for further information.
2 Within the fair value total, the estimated fair value has been provided for the portion of the loans and borrowings that are carried at amortised cost.

Fair value of the following assets and liabilities approximate to their carrying amounts:
- Receivables
- Cash and cash equivalents
- Payables and other financial liabilities

(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.

At 30 June 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	—	—	**11,471**	**11,471**	—	**11,471**
Loans	—	—	**27,279**	**27,279**	**12,173**	**39,452**
Financial investments measured at fair value						
Fixed maturity securities	**70,238**	**114,929**	**19,140**	**204,307**	—	**204,307**
Equity securities	**94,267**	—	**476**	**94,743**	—	**94,743**
Other investments (including derivatives)	**32,296**	**8,161**	**4,351**	**44,808**	—	**44,808**
Financial assets of operations classified as held for sale	**5,075**	**20**	**1,814**	**6,909**	—	**6,909**
Total	**201,876**	**123,110**	**64,531**	**389,517**	**12,173**	**401,690**
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	**124,260**	**46**	—	**124,306**	—	**124,306**
Net asset value attributable to unit holders	**16,742**	—	**22**	**16,764**	—	**16,764**
Borrowings	—	—	**1,227**	**1,227**	**8,007**	**9,234**
Derivative liabilities	**304**	**6,054**	**683**	**7,041**	—	**7,041**
Financial liabilities of operations classified as held for sale	**5,075**	**20**	**2,927**	**8,022**	—	**8,022**
Total	**146,381**	**6,120**	**4,859**	**157,360**	**8,007**	**165,367**

1 In addition to the balances in this table, included within reinsurance assets in the condensed statement of financial position and note B13 are £4,285 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.

At 30 June 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	—	—	**362**	**362**
Total	—	—	**362**	**362**

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 30 June 2019 was £362 million *(HY18: £337 million; 2018: £352 million)*, stated at their revalued amounts in line with the requirements of IAS 16, *Property, Plant and Equipment*.

B19 – Fair value continued

(d) Fair value hierarchy analysis continued

Restated[1] At 30 June 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	—	—	11,151	11,151	—	11,151
Loans	—	437	23,885	24,322	12,091	36,413
Financial investments measured at fair value						
Fixed maturity securities	64,409	112,936	15,931	193,276	—	193,276
Equity securities	93,886	1	508	94,395	—	94,395
Other investments (including derivatives)	30,001	7,105	3,633	40,739	—	40,739
Financial assets of operations classified as held for sale	5,740	7	2,000	7,747	—	7,747
Total	194,036	120,486	57,108	371,630	12,091	383,721
Financial liabilities measured at fair value						
Non-participating investment contracts[2]	118,594	199	—	118,793	—	118,793
Net asset value attributable to unit holders	17,057	—	21	17,078	—	17,078
Borrowings	—	—	1,199	1,199	8,587	9,786
Derivative liabilities	435	5,674	411	6,520	—	6,520
Financial liabilities of operations classified as held for sale	5,283	23	3,147	8,453	—	8,453
Total	141,369	5,896	4,778	152,043	8,587	160,630

1 Following a review of the Group's presentation of the consolidated investment funds, comparative amounts have been restated from those previously reported. The restatement has had no impact on the profit for the period or equity. See note B2 for further information.
2 In addition to the balances in this table, included within reinsurance assets in the condensed statement of financial position and note B13 are £6,356 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.

At 30 June 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	—	—	337	337
Total	—	—	337	337

Restated[1] At 31 December 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	—	—	11,482	11,482	—	11,482
Loans	—	518	25,008	25,526	10,658	36,184
Financial investments measured at fair value						
Fixed maturity securities	65,996	110,302	17,578	193,876	—	193,876
Equity securities	87,813	—	414	88,227	—	88,227
Other investments (including derivatives)	26,237	7,378	4,107	37,722	—	37,722
Financial assets of operations classified as held for sale	5,240	19	1,992	7,251	—	7,251
Total	185,286	118,217	60,581	364,084	10,658	374,742
Financial liabilities measured at fair value						
Non-participating investment contracts[2]	111,966	47	—	112,013	—	112,013
Net asset value attributable to unit holders	16,313	—	25	16,338	—	16,338
Borrowings	—	—	1,225	1,225	8,195	9,420
Derivative liabilities	466	5,478	534	6,478	—	6,478
Financial liabilities of operations 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 restatement has had no impact on the profit for the period or equity. See note B2 for further information.
2 In addition to the balances in this table, included within reinsurance assets in the condensed statement of financial position and note B13 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.

At 31 December 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

B19 – Fair value continued

(e) 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 Level 2 investments during the six month period ended 30 June 2019.

Transfers to/from Level 3

The table below shows the movement in the Level 3 assets and liabilities measured at fair value.

Transfers into Level 3 of £0.8 billion and transfers out of Level 3 of £0.2 billion relate principally to debt securities held in the UK. 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 also transfers into Level 3 of £0.5 billion relating to commercial mortgage loans held by our UK business which are valued using discounted cash flow models.

	Assets								Liabilities		
At 30 June 2019	**Investment property £m**	**Loans £m**	**Debt securities £m**	**Equity securities £m**	**Other investments (including derivatives) £m**	**Financial assets of operations 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 of operations classified as held for sale £m**
Opening balance at 1 January 2019	**11,482**	**25,008**	**17,578**	**414**	**4,107**	**1,992**	**—**	**(25)**	**(534)**	**(1,225)**	**(3,100)**
Total net gains/(losses) recognised in the income statement[1]	**34**	**688**	**583**	**3**	**97**	**34**	**—**	**—**	**(168)**	**(10)**	**(34)**
Total net gains/(losses) recognised in other comprehensive income	**—**	**—**	**—**	**—**	**—**	**8**	**—**	**—**	**—**	**—**	**—**
Purchases	**753**	**1,802**	**1,200**	**95**	**493**	**36**	**(68)**	**—**	**(62)**	**—**	**(40)**
Issuances	**—**	**80**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Disposals	**(788)**	**(818)**	**(852)**	**(29)**	**(321)**	**(163)**	**68**	**3**	**83**	**8**	**162**
Transfers into Level 3	**—**	**519**	**848**	**(8)**	**8**	**1**	**—**	**—**	**—**	**—**	**(8)**
Transfers out of Level 3	**—**	**—**	**(197)**	**—**	**(32)**	**(94)**	**—**	**—**	**—**	**—**	**93**
Foreign exchange rate movements	**(10)**	**—**	**(20)**	**1**	**(1)**	**—**	**—**	**—**	**(2)**	**—**	**—**
Balance at 30 June 2019	**11,471**	**27,279**	**19,140**	**476**	**4,351**	**1,814**	**—**	**(22)**	**(683)**	**(1,227)**	**(2,927)**

1 Total net gains/(losses) recognised in the income statement includes realised gains/(losses) on disposals.

	Assets								Liabilities		
At 30 June 2018	Investment property £m	Loans £m	Debt securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets of operations 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 of operations classified as held for sale £m
Opening balance at 1 January 2018	10,797	23,949	15,137	776	2,863	2,093	—	(13)	(358)	(1,180)	(3,306)
Total net gains/(losses) recognised in the income statement[1]	163	(309)	(80)	(11)	(6)	(37)	—	—	(89)	(20)	37
Total net gains/(losses) recognised in other comprehensive income	—	—	—	—	—	—	—	—	—	—	—
Purchases	531	631	798	124	940	56	—	—	—	—	(56)
Issuances	—	51	—	—	—	—	—	—	—	—	—
Disposals	(319)	(437)	(411)	(544)	(157)	(78)	—	(8)	36	1	144
Transfers into Level 3	5	—	1,322	165	158	15	—	—	—	—	(15)
Transfers out of Level 3	—	—	(802)	(2)	(161)	(49)	—	—	—	—	49
Foreign exchange rate movements	(26)	—	(33)	—	(4)	—	—	—	—	—	—
Balance at 30 June 2018	11,151	23,885	15,931	508	3,633	2,000	—	(21)	(411)	(1,199)	(3,147)

1 Total net (losses)/gains recognised in the income statement includes realised gains/(losses) on disposals.

Financial supplement continued

B19 – Fair value continued

(e) Transfers between Levels of the fair value hierarchy continued

	Assets										Liabilities
At 31 December 2018	Investment property £m	Loans £m	Debt securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets of operations 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 of operations classified as held for sale £m
Opening balance at 1 January 2018	10,797	23,949	15,137	776	2,863	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
Total net gains/(losses) recognised in other comprehensive income	—	—	—	—	—	—	—	—	—	—	—
Purchases	1,185	3,451	3,175	189	1,761	201	(108)	—	(59)	—	(95)
Issuances	—	200	—	—	—	—	—	—	—	—	—
Disposals	(927)	(2,065)	(1,221)	(544)	(554)	(191)	108	(12)	20	36	189
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	17,578	414	4,107	1,992	—	(25)	(534)	(1,225)	(3,100)

1 Total net gains/(losses) recognised in the income statement includes realised gains/(losses) on disposals.

(f) Further information on Level 3 assets and liabilities

Total net gains recognised in the income statement in the first half of 2019 in respect of Level 3 assets measured at fair value amounted to £1.4 billion *(HY18: net losses of £0.3 billion)* with net losses in respect of liabilities of £0.2 billion *(HY18: net losses of £0.1 billion)*.

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 option 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 and 195 bps *(2018: between 65 bps and 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 30 June 2019 the illiquidity premium used in the discount rate was 180 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 cash flows. The base property growth rate assumption is RPI +0.75% which equates to a long-term average growth rate of 4.2% pa at 30 June 2019 *(2018: 4.3% pa)*. After applying the cost of capital charge, dilapidations and the stochastic distribution, the effective net long-term growth rate equates to 0.7% pa *(2018: 0.6% pa)*.
- 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.
- 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. The liquidity premium used in the discount rate is 55 bps *(2018: 65 bps)*.

(iii) Debt securities

- Structured bond-type and non-standard debt products held by our business in France and bonds held by our UK business 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 included a significant unobservable liquidity adjustment, or (ii) differences between the valuation provided by the counterparty and broker quotes and the validation model were sufficiently significant to result in a Level 3 classification.

B19 – Fair value continued

(f) Further information on Level 3 assets and liabilities continued

(iii) Debt securities

- Privately placed notes held by our UK Life business have been valued using broker quotes or a discounted cash flow model using discount rates based on swap curves of similar maturity, plus internally derived spreads for credit risk. As these spreads have been deemed to be unobservable these notes have been classified as Level 3.
- Debt securities held by our French, UK and Asia 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.

(iv) Equity securities

- Equity securities which primarily comprise of 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 £1.2 billion *(2018: £1.4 billion)* and debt securities which are not traded in an active market and have been valued using third party or counterparty valuations of £0.4 billion *(2018: £0.4 billion)*. 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:

- £2.9 billion *(2018: £3.1 billion)* of non-participating investment contract liabilities, classified as held for sale, are classified as Level 3, either because the underlying unit funds are classified as Level 3 assets 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.
- 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.

B19 – Fair value continued

(f) Further information on Level 3 assets and liabilities continued

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:

	30 June 2019 Fair value £bn	Most significant unobservable input	Reasonable alternative	Sensitivities Positive Impact £bn	Sensitivities Negative Impact £bn
Investment property	**11.5**	Equivalent rental yields	+/- 5-10%	**0.9**	**(0.9)**
Loans					
Commercial mortgage loans and Primary Healthcare loans	**12.3**	Illiquidity premium	+/- 20 bps	**0.2**	**(0.2)**
Equity release mortgage loans	**10.5**	Base property growth rate	+/- 10%	**0.2**	**(0.2)**
		Current property market values	+/- 10%	**0.3**	**(0.4)**
Infrastructure and Private Finance Initiative (PFI) loans	**4.1**	Illiquidity premium	+/- 25 bps[1]	**0.2**	**(0.2)**
Other	**0.4**	Illiquidity premium	+/- 25 bps[1]	**—**	**—**
Debt securities					
Structured bond-type and non-standard debt products	**6.8**	Market spread (credit, liquidity and other)	+/- 25 bps	**0.1**	**(0.1)**
Privately placed notes	**1.5**	Credit spreads	+/- 25 bps[1]	**—**	**—**
Other debt securities	**11.2**	Credit and liquidity spreads	+/- 20-25 bps	**0.5**	**(0.5)**
Equity securities	**0.5**	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)	**4.9**	Market multiples applied to net asset values	+/- 10-40%[2]	**0.7**	**(0.5)**
Liabilities					
Non-participating investment contract liabilities	**(2.9)**	Fair value of the underlying unit funds	+/- 20-25%	**0.4**	**(0.4)**
Borrowings	**(1.2)**	Illiquidity premium	+/- 50 bps	**—**	**—**
Other liabilities (including derivatives)	**(0.7)**	Independent valuation vs counterparty	N/A	**—**	**—**
Total Level 3 investments	**59.7**			**3.6**	**(3.5)**

1 On discount spreads.
2 Dependent on investment category.

	31 December 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]	—	—
Debt 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	9.8	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)	4.9	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.

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.

Financial supplement continued

B20 – Risk management

As a global insurance group, risk management is at the heart of what we do and is a source of value creation as well as a vital form of control. It is an integral part of managing and maintaining financial strength and stability for our customers, shareholders and other stakeholders.

Our sustainability and financial strength are underpinned by an effective risk management process which helps us identify major risks to which we may be exposed, establish appropriate controls and take mitigating actions for the benefit of our customers and investors. The Group's risk strategy is to invest its available capital to optimise the balance between return and risk while maintaining an appropriate level of economic (i.e. risk-based) capital and regulatory capital. Consequently, our risk management goals are to:

- Embed rigorous risk management throughout the business, based on setting clear risk appetites and staying within these;
- Allocate capital where it will make the highest returns on a risk-adjusted basis; and
- Meet the expectations of our customers, investors and regulators that we will maintain sufficient capital surpluses to meet our liabilities even if a number of extreme risks materialise.

Aviva's risk management framework has been designed and implemented to support these objectives. The key elements of our risk management framework comprise our 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.

Risk environment

During the first half of 2019 concerns over global economic growth have softened the monetary policy stance of Central Banks. Markets now expect the US Federal Reserve will cut interest rates in the second half of the year. This change in sentiment has helped boost US equity market indices to close on record highs, while underpinning equity values in Europe including the UK. However, negative yield curves for government treasury securities, which are normally a precursor to an economic recession, are now evident in many major developed economies. In the UK, constrained consumer spending, continued central government fiscal restraint and subdued investment spend due to on-going uncertainty over the outcome of the UK's decision to leave the EU continues to result in lacklustre economic growth and negatively impact the pound sterling exchange rate. Aviva regularly monitors our exposures and employs both formal and ad-hoc processes to evaluate changing market conditions which enables us to respond in a timely and appropriate manner.

The Group's operational preparations for the UK's withdrawal from the EU, currently due on 31 October 2019, are now largely complete. We have addressed the potential loss of our ability in the future 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 European Economic Area (EEA) asset management clients and funds, while we will have amended contractual terms for data sharing and transfers to allow continued uninterrupted flow of personal data between our EU businesses and the UK by 31 October 2019.

The European Commission's Solvency II review is expected to continue until 2021, covering among other things a review of the Long-Term Guarantee measures. We will continue to monitor developments in this area. The Prudential Regulation Authority (PRA) continues to publish consultations and supervisory statements that set out its expectations relating to elements of the Solvency II regime, recent consultations include papers on equity release mortgages (CP7/19) and transitional measures on technical provisions (CP11/19). The 30 June 2019 Solvency II shareholder position includes a proforma adjustment of a £0.2 billion reduction in surplus as a result of an increase in SCR for the potential impact of this expected change.

In the UK the Financial Conduct Authority (FCA) is currently undertaking a market study on general insurance pricing, with potential implications for renewal pricing in particular. With a view to ensuring existing Aviva customers are treated fairly on renewal over the last few years the Group has improved its renewal pricing practices, including in the first half of 2019 launching AvivaPlus, rewarding loyal customers. We expect fair treatment of customers and operational resilience to continue to be the focus of UK regulators during the remainder of 2019. Similarly, in the EU the European Insurance and Occupational Pension Authority (EIOPA) is focused on the convergence of supervision within the EU with the aim of achieving comparable levels of consumer protection.

The Group is in the process of implementing the new international accounting standard for insurance contracts, IFRS 17 Insurance Contracts. The standard currently applies to reporting periods beginning on or after 1 January 2021. However, while it is expected the International Accounting Standards Board (IASB) will defer the effective date to 1 January 2022 this remains subject to the IASB's consultation on recommended changes to the standard and has not yet been endorsed by the EU. Given that industry practice and interpretation of the standard is still developing, the likely full impact of implementing the standard remains uncertain.

B20 – Risk management continued

Risk profile

We continue to manage our risk profile to reflect Aviva's objective of maintaining financial strength and reducing capital volatility, and reallocating capital in line with the Group's strategy. Measures to maintain the resilience of the Group's capital position include putting in place a number of foreign exchange, credit and equity hedges. These are used to mitigate the Group's foreign exchange, credit and equity risk exposure, and enable the Group to accept other credit risks offering better risk adjusted returns while remaining within appetite. In addition, we renewed our Group-wide catastrophe reinsurance programme to reduce the Group's potential loss to an extreme insurance loss event.

Going forward, the Group's focus will continue to be on sustainable growth in cash flow and capital generation, to invest in growth opportunities and increasing returns to shareholders, while maintaining a strong balance sheet with limited volatility and external leverage at a level commensurate with an AA financial strength rating.

Material risks and uncertainties

In accordance with the requirements of the FCA Handbook (DTR 4.2.7) we provide an update here on the material risks and uncertainties facing the Group. The types of risks to which the Group is exposed have not changed significantly during the first half of the year and remain credit, market, life insurance, general insurance (including health insurance), liquidity, asset management, operational and reputational risks. These risks are described below. Further detail on these risks is given within note 59 of the Aviva plc Annual Report and Accounts 2018.

(a) 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 in changes in expectations related to these risks. Aviva has a strong record of managing credit risk and we see credit as an area where we can make a good return for the benefit of both our policyholders and shareholders.

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. The Group continues to hold a series of macro credit hedges to reduce the overall credit risk exposure.

During the first half of 2019 the credit rating profile of our debt securities portfolio has remained strong. At 30 June 2019, the proportion of our shareholder debt securities that are investment grade has increased slightly to 91.8% *(2018: 91.4%)*. Of the remaining 8.2% of shareholder debt securities that do not have an external rating of BBB or higher, 85.7% have been internally assessed as being of investment grade quality applying an internal rating methodology largely consistent with that adopted by an external rating agency.

(b) 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.

We continue to limit our direct equity exposure. A rolling central equity hedging strategy remains in place to help control the Group's overall direct and indirect exposure to equities. The Group continues to hold a series of macro equity hedges to reduce the overall shareholder equity risk exposure.

We have a limited appetite for interest rate risk as we do not believe it is currently adequately rewarded. Our conservative and disciplined approach to asset and liability management and pricing limit our exposure to interest rate and guarantee risk. Asset and liability durations across the Group are generally well matched and actions have been taken to manage guarantee risk in the current low interest rate environment. In particular, a key objective is to match the duration and expected cash flows of our annuity liabilities with assets of the same duration and cash flow. 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 hedges are used to manage asymmetric interest rate exposures in some of our life insurance businesses as well as an efficient way to manage cash flow and duration matching (the most material examples relate to guaranteed annuity exposures in both UK and Ireland). These hedges are used to protect against interest rate falls and are sufficient in scale to materially reduce the Group's interest rate exposure.

At a Group level we actively seek to manage currency risk primarily by matching assets and liabilities in functional currencies at the business unit level. Planned foreign currency remittances from subsidiaries and disposal proceeds are often hedged using foreign exchange forwards to provide certainty regarding the sterling value to be received by the Group, while foreign exchange swaps are in place to hedge certain non-sterling borrowings. Hedges may also be used to protect the Group's capital against a significant depreciation in local currency versus sterling. At 30 June 2019, hedges with notional values of £1.7 billion (Canadian dollar £0.9bn, Euro £0.4bn and US dollar £0.4bn) were in place.

B20 – Risk management continued

(c) 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 or that can easily be turned into cash.

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. The Group seeks to ensure that it maintains sufficient liquid financial resources to meet its obligations as they fall due through the application of a Group liquidity risk policy and business standard. 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. The Group centre's main sources of liquidity are liquid assets held within Aviva plc and its subsidiary, Aviva Group Holdings Limited (AGH), 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 Group and Company maintain significant undrawn committed borrowing facilities (30 June 2019: £1.65 billion) from a range of leading international banks to further mitigate this risk.

(d) Life insurance risk

The profile of our life insurance risks, primarily longevity, persistency, mortality and expense risk, has remained stable during the first half of 2019. Longevity risk remains the Group's most significant life insurance risk due to the Group's annuity portfolio and is amplified by the current low level of interest rates. 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 currently approximately £5 billion of pensioner in payment scheme liabilities. Persistency risk remains significant and continues to have a volatile outlook, with underlying performance linked to economic conditions. Businesses across the Group mitigate this risk through a range of customer retention activities. The Group has continued to write substantial volumes of life protection business, and to utilise reinsurance to reduce exposure to potential mortality losses. All life insurance risks benefit from significant diversification against other risks in the portfolio, limiting the impact on the Group's aggregate risk profile.

Provisions made for insurance liabilities are inherently uncertain. Due to this uncertainty, life insurance reserves are regularly reviewed by qualified and experienced actuaries at the business unit and Group level in accordance with the Group's reserving framework. This and other risks are subject to an overarching risk management framework and various mechanisms to govern and control our risks and exposures.

(e) General insurance and health insurance risk

The Group writes a balanced portfolio of general insurance risk (including personal motor; household; commercial motor; property and liability) across a geographically diversified spread of markets including UK; Ireland; Canada; France; Italy; Singapore and Poland, as well as a growing global exposure to corporate specialty risks. This risk is taken on, in line with our underwriting and pricing expertise, to provide an appropriate level of return for an acceptable level of risk. Underwriting discipline and a robust governance process is at the core of the Group's underwriting strategy.

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.

Provisions made for insurance liabilities are inherently uncertain. Due to this uncertainty, general and health insurance reserves are regularly reviewed by qualified and experienced actuaries at the business unit and Group level in accordance with the Group's reserving framework. These and other key risks, including the occurrence of unexpected claims from a single source or cause and inadequate reinsurance protection/risk transfer, are subject to an overarching risk management framework and various mechanisms to govern and control our risks and exposures. We recognise that the severity and frequency of weather-related events has the potential to adversely impact provisions for insurance liabilities and our earnings, with the result that there is some seasonality in our results from period to period. Large catastrophic (CAT) losses arising as a result of these events are explicitly considered in our economic capital modelling to ensure we are resilient to such CAT scenarios.

During the first half of 2019, Aviva's general insurance and health insurance risk profile has remained stable. As with life insurance risks, general and health insurance risks also benefit from the significant diversification that arises from being part of a large and diverse portfolio, limiting the impact on the Group's aggregate risk profile.

(f) Asset management risk

Asset management risk is the failure to provide expected investment outcomes for clients resulting in reduced new business and loss of sustainable earnings. The risk arises through loss of client business due to poor investment performance or fund liquidity, product competitiveness, talent retention and capability.

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 managed via investment performance reviews, recruitment and retention of specialist investment professionals and leadership, product development capabilities, fund liquidity management, competitive margins, client retention strategies, and proactive responses to regulatory developments. Funds invested in illiquid assets such as real estate and infrastructure projects are particularly exposed to liquidity risk. These key risks are monitored on an ongoing basis with issues escalated to the Aviva Investors Risk Management Committee and ultimately to the Aviva Investors Holdings Limited Board Risk Committee.

Financial supplement continued

B20 – Risk management continued

(g) Operational risk

The Group continues to operate, validate and enhance its key operational controls and purchase insurance to minimise losses arising from inadequate or ineffective internal processes, people and systems or from external events. Aviva continues to invest in simplifying and strengthening our technology estate to improve the resilience of our systems and in our IT security to protect ours and our customers' data. The Group maintains constructive relationships with its regulators around the world and developments in relation to key regulatory changes, such as requirements for Global Systemically Important Insurers (G-SII), are monitored closely.

(h) Brand and reputation risk

Our success and results are, to a certain extent, dependent on the strength of our brands, the brands of our partners and our reputation with customers, agents, regulators, rating agencies, investors and analysts. While we are well recognised, we are vulnerable to adverse market and customer perception. 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 well founded, or the customer's expectations for the product have changed. We monitor this risk and have controls in place to limit our exposure.

(i) Sensitivity test analysis

The Group uses a number of sensitivity tests to understand the volatility of its earnings and 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.

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.

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. The test allows for any consequential impact on liability valuations.
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 (long-term 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%.

B20 – Risk management continued

(i) Sensitivity test analysis continued

Long-term business sensitivities

30 June 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	20	(195)	(15)	(90)	100	(25)	5	(5)
Insurance non-participating	(975)	1,105	(790)	(115)	95	(200)	(120)	(895)
Investment participating	(40)	45	(5)	(5)	(5)	(10)	—	—
Investment non-participating	—	—	—	10	(10)	(5)	—	—
Assets backing life shareholders' funds	(95)	110	(25)	20	(20)	—	—	—
Total	(1,090)	1,065	(835)	(180)	160	(240)	(115)	(900)

30 June 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	20	(195)	(15)	(90)	100	(25)	5	(5)
Insurance non-participating	(975)	1,105	(790)	(115)	95	(200)	(120)	(895)
Investment participating	(40)	45	(5)	(5)	(5)	(10)	—	—
Investment non-participating	—	—	—	10	(10)	(5)	—	—
Assets backing life shareholders' funds	(145)	155	(30)	25	(25)	—	—	—
Total	(1,140)	1,110	(840)	(175)	155	(240)	(115)	(900)

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 31 December 2018 and 30 June 2019 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

30 June 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	(250)	250	(120)	190	(190)	(75)	(150)
Net of reinsurance	(305)	290	(120)	190	(190)	(75)	(145)

30 June 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	(250)	250	(120)	190	(190)	(25)	(150)
Net of reinsurance	(305)	290	(120)	190	(190)	(25)	(145)

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.

B20 – Risk management continued

(i) Sensitivity test analysis continued

Fund management and non-insurance business sensitivities

30 June 2019 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**	**25**	**—**	**5**

30 June 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	**(20)**	**15**	**25**	**—**	**5**

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.

B21 – Cash and cash equivalents

Cash and cash equivalents in the statement of cash flows at 30 June/31 December comprised:

	30 June 2019 £m	Restated[1] 30 June 2018 £m	Restated[1] 31 December 2018 £m
Cash and cash equivalents	**15,296**	16,992	15,926
Cash and cash equivalents of operations classified as held for sale	**698**	707	688
Bank overdrafts	**(675)**	(702)	(563)
Net cash and cash equivalents at 30 June/31 December	**15,319**	16,997	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 period or equity. See note B2 for further information.

B22 – Contingent liabilities and other risk factors

During the period, there have been no material changes in the main areas of uncertainty over the calculation of our liabilities from those described in note 55 of the Group's 2018 Annual report and accounts. An update on material risks is provided in note B20 Risk management.

B23 – Acquired value of in-force business and intangible assets

Acquired value of in-force (AVIF) business and intangible assets presented in the statement of financial position is comprised of:

	30 June 2019 £m	30 June 2018 £m	31 December 2018 £m
Acquired value of in-force business on insurance contracts[1]	**1,339**	1,510	1,418
Acquired value of in-force business on investment contracts[2]	**1,367**	1,631	1,498
Intangible assets	**894**	1,160	945
	3,600	4,301	3,861
Less: Amounts classified as held for sale	**(576)**	(926)	(660)
Total	**3,024**	3,375	3,201

1 On insurance and participating investment contracts.
2 On non-participating investment contracts.

The AVIF on insurance and investment contracts has reduced in the period primarily due to an amortisation charge of £191 million *(HY18: £210 million charge, 2018: £426 million charge).* There was also an impairment of AVIF on investment contracts of £19 million in the period relating to FPI *(HY18: £4 million, 2018: £13 million)* recorded as a remeasurement loss, as FPI is held for sale. See note B5 (b).

The decrease in intangible assets is mainly due to the amortisation charge of £107 million *(HY18: £101 million charge, 2018: £209 million charge),* partly offset by additions to intangible assets relating to the capitalisation of software costs.

B24 – Subsequent events

On 15 July 2019 the Lord Chancellor announced an increase in the Ogden rate from minus 0.75% set in 2017 to minus 0.25%. At 31 December 2018, balance sheet reserves were calculated using a rate of 0.00%. At 30 June 2019 balance sheet reserves in the UK have been calculated using a rate of minus 0.25%. Details of the impact are set out in note B11 (c).

Directors' responsibility statement

The directors confirm that these condensed consolidated interim financial statements have been prepared in accordance with IAS 34, *Interim Financial Reporting,* as endorsed by the EU and that the interim management report includes a fair review of the information required by DTR 4.2.7 and DTR 4.2.8, namely:

- an indication of important events that have occurred during the first six months and their impact on the condensed set of financial statements, and a description of the principal risks and uncertainties for the remaining six months of the financial year; and
- material related-party transactions in the first six months and any material changes in the related-party transactions described in the last annual report.

Information on the current directors responsible for providing this statement can be found on the Company's website at: http://www.aviva.com/investor-relations/corporate-governance/board-of-directors/

By order of the Board

Sir Adrian Montague
Chairman
7 August 2019

Maurice Tulloch
Group Chief Executive Officer

Independent review report to Aviva plc

Report on the condensed consolidated financial statements

Our conclusion

We have reviewed Aviva plc's condensed consolidated financial statements (the "interim financial statements") in the half year report of Aviva plc for the 6 month period ended 30 June 2019. Based on our review, nothing has come to our attention that causes us to believe that the interim financial statements are not prepared, in all material respects, in accordance with International Accounting Standard 34, 'Interim Financial Reporting', as adopted by the European Union and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

What we have reviewed

The interim financial statements comprise:

- the condensed consolidated statement of financial position as at 30 June 2019;
- the condensed consolidated income statement and condensed consolidated statement of comprehensive income for the period then ended;
- the condensed consolidated statement of cash flows for the period then ended;
- the condensed consolidated statement of changes in equity for the period then ended; and
- the explanatory notes to the interim financial statements.

The interim financial statements included in the half year report have been prepared in accordance with International Accounting Standard 34, 'Interim Financial Reporting', as adopted by the European Union and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

As disclosed in note B1 to the interim financial statements, the financial reporting framework that has been applied in the preparation of the full annual financial statements of the Group is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union.

Responsibilities for the interim financial statements and the review

Our responsibilities and those of the directors

The half year report, including the interim financial statements, is the responsibility of, and has been approved by, the directors. The directors are responsible for preparing the half year report in accordance with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

Our responsibility is to express a conclusion on the interim financial statements in the half year report based on our review. This report, including the conclusion, has been prepared for and only for the company for the purpose of complying with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and for no other purpose. We do not, in giving this conclusion, 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.

What a review of interim financial statements involves

We conducted our review in accordance with International Standard on Review Engagements (UK and Ireland) 2410, 'Review of Interim Financial Information Performed by the Independent Auditor of the Entity' issued by the Auditing Practices Board for use in the United Kingdom. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures.

A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) and, consequently, does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

We have read the other information contained in the half year report and considered whether it contains any apparent misstatements or material inconsistencies with the information in the interim financial statements.

PricewaterhouseCoopers LLP
Chartered Accountants
London

7 August 2019

Financial supplement continued

Analysis of assets

As an insurance business, the Group holds a variety of assets to match the characteristics and duration of its insurance liabilities. Appropriate and effective asset liability matching (on an economic basis) is the principal way in which Aviva manages its investments. To support this, we use a variety of hedging and other risk management strategies to mitigate any residual mismatch risk that is outside of our risk appetite.

This section provides an analysis of the Group's assets with a focus on financial investments backing liabilities held by the shareholder fund.

C1 – Summary of total assets by fund

30 June 2019	Policyholder assets £m	Participating fund assets £m	Shareholder assets £m	Total assets analysed £m	Less assets of operations classified as held for sale £m	Balance sheet total £m
Goodwill and acquired value of in-force business and intangible assets	—	—	**5,471**	**5,471**	**(576)**	**4,895**
Interests in joint ventures and associates	—	**994**	**543**	**1,537**	—	**1,537**
Property and equipment	—	**206**	**771**	**977**	**(5)**	**972**
Investment property	**7,044**	**3,669**	**758**	**11,471**	—	**11,471**
Loans	**2,602**	**6,559**	**30,291**	**39,452**	—	**39,452**
Financial investments						
Debt securities	**39,779**	**108,406**	**56,538**	**204,723**	**(416)**	**204,307**
Equity securities	**79,088**	**14,268**	**1,600**	**94,956**	**(213)**	**94,743**
Other investments	**39,203**	**8,559**	**3,326**	**51,088**	**(6,280)**	**44,808**
Reinsurance assets	**4,281**	**502**	**7,684**	**12,467**	**(53)**	**12,414**
Deferred tax assets	—	—	**171**	**171**	—	**171**
Current tax assets	—	—	**81**	**81**	—	**81**
Receivables and other financial assets	**674**	**2,774**	**6,399**	**9,847**	**(80)**	**9,767**
Deferred acquisition costs and other assets	**51**	**613**	**6,271**	**6,935**	**(198)**	**6,737**
Prepayments and accrued income	**360**	**1,379**	**1,316**	**3,055**	**(5)**	**3,050**
Cash and cash equivalents	**6,557**	**3,237**	**6,200**	**15,994**	**(698)**	**15,296**
Assets of operations classified as held for sale	—	—	—	—	**8,524**	**8,524**
Total	**179,639**	**151,166**	**127,420**	**458,225**	—	**458,225**
Total %	**39.2%**	**33.0%**	**27.8%**	**100.0%**	—	**100.0%**
FY18 Total[1]	164,858	142,609	122,054	429,521	—	429,521
FY18 Total %[1]	38.4%	33.2%	28.4%	100.0%	—	100.0%

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 period or equity. See note B2 for further information.

C2 – Summary of valuation bases for total shareholders assets

30 June 2019	Fair value £m	Amortised cost £m	Equity accounted/ tax assets[1] £m	Total £m
Goodwill and acquired value of in-force business and intangible assets	—	5,471	—	5,471
Interests in joint ventures and associates	—	—	543	543
Property and equipment	252	519	—	771
Investment property	758	—	—	758
Loans	27,236	3,055	—	30,291
Financial Investments				
Debt securities	56,538	—	—	56,538
Equity securities	1,600	—	—	1,600
Other investments	3,326	—	—	3,326
Reinsurance assets	10	7,674	—	7,684
Deferred tax assets	—	—	171	171
Current tax assets	—	—	81	81
Receivables and other financial assets	—	6,399	—	6,399
Deferred acquisition costs and other assets	—	6,271	—	6,271
Prepayments and accrued income	—	1,316	—	1,316
Cash and cash equivalents	6,200	—	—	6,200
Total	**95,920**	**30,705**	**795**	**127,420**
Total %	**75.3%**	**24.1%**	**0.6%**	**100.0%**
Assets of operations classified as held for sale	201	827	—	1,028
Total (excluding assets held for sale)	**95,719**	**29,878**	**795**	**126,392**
Total % (excluding assets held for sale)	**75.8%**	**23.6%**	**0.6%**	**100.0%**
FY18 Total[2]	91,421	29,853	780	122,054
FY18 Total %[2]	74.9%	24.5%	0.6%	100.0%

1 Within the Group's statement of financial position, assets are recognised for deferred tax and current tax. The valuation basis of these does not directly fall within any of the categories outlined above. As such, these assets have been reported together with equity accounted items within the analysis of the Group's assets.
2 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 period or equity. See note B2 for further information.

Financial supplement continued

C3 – Analysis of financial investments by fund

The asset allocation as at 30 June 2019 across the Group, split according to the type of the liability the assets are backing, is shown in the table below.

Carrying value in the statement of financial position	Shareholder business assets: General insurance & health & other[1] £m	Shareholder business assets: Annuity and non-profit £m	Total shareholder assets £m	Policyholder (unit-linked assets) £m	Participating fund assets: UK style with-profits £m	Participating fund assets: Continental European-style £m	Total assets analysed £m	Less assets of operations classified as held for sale £m	Carrying value in the statement of financial position £m
Debt securities (note C4)									
Government bonds	**6,565**	**18,043**	**24,608**	**16,479**	**15,392**	**33,466**	**89,945**	**(20)**	**89,925**
Corporate bonds	**5,533**	**24,137**	**29,670**	**16,360**	**16,349**	**29,898**	**92,277**	**(396)**	**91,881**
Other	**287**	**1,973**	**2,260**	**6,940**	**700**	**12,601**	**22,501**	**—**	**22,501**
	12,385	**44,153**	**56,538**	**39,779**	**32,441**	**75,965**	**204,723**	**(416)**	**204,307**
Loans (note C5)									
Mortgage loans	**—**	**20,772**	**20,772**	**—**	**42**	**—**	**20,814**	**—**	**20,814**
Other loans	**1,346**	**8,173**	**9,519**	**2,602**	**5,366**	**1,151**	**18,638**	**—**	**18,638**
	1,346	**28,945**	**30,291**	**2,602**	**5,408**	**1,151**	**39,452**	**—**	**39,452**
Equity securities (note C6)	**1,142**	**458**	**1,600**	**79,088**	**10,672**	**3,596**	**94,956**	**(213)**	**94,743**
Investment property (note C7)	**581**	**177**	**758**	**7,044**	**2,032**	**1,637**	**11,471**	**—**	**11,471**
Other investments (note C8)	**1,100**	**2,226**	**3,326**	**39,203**	**6,241**	**2,318**	**51,088**	**(6,280)**	**44,808**
Total as at 30 June 2019	**16,554**	**75,959**	**92,513**	**167,716**	**56,794**	**84,667**	**401,690**	**(6,909)**	**394,781**
FY18 Total[2]	16,673	72,556	89,229	152,158	54,549	78,806	374,742	(7,251)	367,491

1 Of the £16.6 billion of assets 24% relates to other shareholder business assets.
2 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 period or equity. See note B2 for further information.

C4 –Analysis of shareholder debt securities

Fair value hierarchy

To provide further information on the valuation techniques we use to measure assets carried at fair value, we have categorised the measurement basis for assets carried at fair value into a 'fair value hierarchy' described as follows, based on the lowest level input that is significant to the valuation as a whole:

- Inputs to Level 1 fair values are quoted prices (unadjusted) in active markets for identical assets
- Inputs to Level 2 fair values are inputs other than quoted prices included within Level 1 that are observable for the asset, either directly or indirectly. If the asset has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset
- Inputs to Level 3 fair values are unobservable inputs for the asset. 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 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. Unobservable inputs reflect the assumptions the business unit considers that market participants would use in pricing the asset. Examples are investment property and commercial and equity release mortgage loans.

	Fair value hierarchy			
30 June 2019	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
UK Government	9,501	1,382	464	11,347
Non-UK government	3,066	7,981	2,214	13,261
Europe	2,942	3,384	1,643	7,969
North America	79	3,825	272	4,176
Asia Pacific & Other	45	772	299	1,116
Corporate bonds – Public utilities	95	4,207	1,586	5,888
Other corporate bonds	781	19,929	3,072	23,782
Other	77	1,775	408	2,260
Total	**13,520**	**35,274**	**7,744**	**56,538**
Total %	**23.9%**	**62.4%**	**13.7%**	**100.0%**
Assets of operations classified as held for sale	19	—	—	19
Total (excluding assets held for sale)	**13,501**	**35,274**	**7,744**	**56,519**
Total % (excluding assets held for sale)	**23.9%**	**62.4%**	**13.7%**	**100.0%**
FY18 Total[1]	13,207	35,721	6,805	55,733
FY18 Total %[1]	23.7%	64.1%	12.2%	100.0%

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 period or equity. See note B2 for further information.

External ratings

	External ratings						
30 June 2019	AAA £m	AA £m	A £m	BBB £m	Less than BBB £m	Non-rated £m	Total £m
Government							
UK Government	—	10,783	191	—	—	183	11,157
UK local authorities	—	135	—	—	—	55	190
Non-UK Government	5,744	4,549	1,213	917	49	789	13,261
	5,744	15,467	1,404	917	49	1,027	24,608
Corporate							
Public utilities	—	108	2,025	2,642	8	1,105	5,888
Other corporate bonds	2,485	5,212	8,886	5,010	155	2,034	23,782
	2,485	5,320	10,911	7,652	163	3,139	29,670
Certificates of deposits	—	—	—	—	—	31	31
Structured							
Residential Mortgage Backed Security non-agency prime	1	—	2	5	1	8	17
Commercial Mortgage Backed Security	252	41	80	56	—	16	445
Asset Backed Security	—	356	255	55	29	—	695
	253	397	337	116	30	24	1,157
Wrapped credit	—	14	466	70	5	38	593
Other	11	38	62	207	161	—	479
Total	**8,493**	**21,236**	**13,180**	**8,962**	**408**	**4,259**	**56,538**
Total %	**15.0%**	**37.6%**	**23.3%**	**15.9%**	**0.7%**	**7.5%**	**100.0%**
Assets of operations classified as held for sale	10	8	—	1	—	—	19
Total (excluding assets held for sale)	**8,483**	**21,228**	**13,180**	**8,961**	**408**	**4,259**	**56,519**
Total % (excluding assets held for sale)	**15.0%**	**37.6%**	**23.3%**	**15.9%**	**0.7%**	**7.5%**	**100.0%**
FY18 Total[1]	8,190	21,781	12,269	8,680	495	4,318	55,733
FY18 Total %[1]	14.7%	39.1%	22.0%	15.6%	0.9%	7.7%	100.0%

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 period or equity. See note B2 for further information.

C5 – Analysis of loans

(a) Overview

The Group's loan portfolio of £39.5 billion *(2018 restated: £36.2 billion)* is principally made up of the following:

- Policy loans of £0.7 billion *(2018: £0.8 billion)*, which are generally collateralised by a lien or charge over the underlying policy;
- Loans and advances to banks of £10.8 billion *(2018 restated: £9.3 billion)*, which primarily relate to loans of cash collateral received in stock lending transactions and are therefore fully collateralised by other securities. Following a review of the Group's presentation of consolidated investment funds, comparative amounts have been amended from those previously reported to reclassify certain stock lending transactions from cash and cash equivalents to loans and advances to bank. The restatement has had no impact on the profit for the period or equity. See note B2 for further information;
- Mortgage loans collateralised by property assets of £20.8 billion *(2018: £19.9 billion)*; and
- Healthcare, infrastructure and private financial initiative (PFI) loans of £6.2 billion *(2018: £5.4 billion)*.

Loans with fixed maturities, including policy loans and loans and advances to banks, are recognised when cash is advanced to borrowers. These 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 using the effective interest rate method.

For certain mortgage loans, the Group has taken advantage of the fair value option under IAS 39 *Financial Instruments: Recognition Measurement* to present the mortgages, associated borrowings, other liabilities and derivative financial instruments at fair value, since they are managed together on a fair value basis. These mortgage loans are not traded in active markets and are classified within Level 3 of the fair value hierarchy as the significant valuation assumptions and inputs are not deemed to be market observable. Of the Group's total loan portfolio, 53% *(2018 restated: 55%)* is invested in mortgage loans. The shareholder risk relating to these loans is discussed further below.

Primary healthcare, infrastructure and PFI loans included within shareholder assets are £6.2 billion *(2018: £5.4 billion)*. These loans are secured against the income from healthcare and education premises and as such are not considered further in this section.

(b) Analysis of shareholder mortgage loans

Mortgage loans included within shareholder assets are £20.8 billion *(2018: £19.8 billion)* and are almost entirely held in the UK. The narrative below focuses on explaining the risks arising as a result of these exposures.

30 June 2019	Total £m
Non-securitised mortgage loans	
– Residential (Equity release)	**8,047**
– Commercial	**7,363**
– Healthcare, Infrastructure and PFI mortgage loans	**2,894**
	18,304
Securitised mortgage loans	**2,468**
Total	**20,772**
Assets of operations classified as held for sale	**—**
Total (excluding assets held for sale)	**20,772**
FY18 Total	19,813

Non-securitised mortgage loans

Residential

The UK non-securitised residential mortgage portfolio has a total value as at 30 June 2019 of £8.0 billion *(2018: £7.3 billion)*. The movement in the period is due to £0.3 billion of new lending and an increase in the fair value of £0.4 billion. Additional accrued interest in the period offsets with the value of redemptions. These mortgages are all in the form of equity release, whereby homeowners mortgage their property to release cash equity. Due to the structure of equity release mortgages, whereby interest amounts due are not paid in cash but instead rolled into the amount outstanding, they predominantly have a current Loan to Value (LTV) of below 70%. The average LTV across the portfolio is 26.4% *(2018: 26.8%)*.

Commercial

Gross exposure by loan to value and arrears of UK non-securitised commercial mortgages is shown in the table below.

30 June 2019	>120% £m	115–120% £m	110–115% £m	105–110% £m	100–105% £m	95–100% £m	90–95% £m	80–90% £m	70–80% £m	<70% £m	Total £m
Not in arrears	—	—	—	—	—	**355**	**10**	**171**	**555**	**6,272**	**7,363**
Total	**—**	**—**	**—**	**—**	**—**	**355**	**10**	**171**	**555**	**6,272**	**7,363**

Of the £7.4 billion *(2018: £7.2 billion)* of mortgage loans in the shareholder fund, £6.6 billion are used to back annuity liabilities and are stated on a fair value basis. The UK loan exposures are calculated on a discounted cash flow basis, and include a risk adjustment through the use of a Credit Risk Adjusted Value (CRAV).

For commercial mortgages, loan service collection ratios, a key indicator of mortgage portfolio performance, reduced to 2.41x *(2018: 2.43x)*. Loan Interest Cover (LIC), which is defined as the annual net rental income (including rental deposits less ground rent) divided by the annual loan interest service, remained the same at 2.75x *(2018: 2.75x)*. Average mortgage LTV increased by 1pp, from 55% in 2018 to 56%. There are no loans in arrears *(2018: nil)*.

Commercial mortgages and Healthcare, Infrastructure and PFI loans are held at fair value on the asset side of the statement of financial position. The related insurance liabilities are valued using a discount rate derived from the gross yield on assets, with adjustments to allow for risk. £15.4 billion of shareholder loan assets are backing annuity liabilities and comprise of commercial mortgage loans (£6.6 billion), Healthcare, Infrastructure and PFI mortgage loans (£2.9 billion) and Primary Healthcare, Infrastructure and PFI other loans (£5.9 billion).

C5 – Analysis of loans continued

(b) Analysis of shareholder mortgage loans continued

Non-securitised mortgage loans continued

Commercial continued

The Group carries a valuation allowance within insurance liabilities against the risk of default of commercial mortgages of £0.5 billion which equates to 38 bps at 30 June 2019 *(2018: 41 bps)*. The total valuation allowance held on business transferred in from Aviva Annuity UK Limited in respect of corporate bonds and mortgages is £1.2 billion *(2018: £1.3 billion)* over the remaining term of the UK corporate bond and mortgage portfolio.

The UK portfolio remains well diversified in terms of property type, location and tenants as well as the spread of loans written over time. The risks in commercial mortgages are addressed through several layers of protection with the mortgage risk profile being primarily driven by the ability of the underlying tenant rental in income to cover loan interest and amortisation. Should any single tenant default on their rental payment, rental from other tenants backing the same loan often ensures the loan interest cover does not fall below 1.0x. Where there are multiple loans to a single borrower further protection may be achieved through cross-charging (or pooling) such that any single loan is also supported by rents received within other pool loans. Additionally, there may be support provided by the borrower of the loan itself and further loss mitigation from any general floating charge held over assets within the borrower companies.

If the LIC falls below 1.0x and the borrower defaults then Aviva retains the option of selling the security or restructuring the loans and benefiting from the protection of the collateral. A combination of these benefits and the high recovery levels afforded by property collateral (compared to corporate debt or other uncollateralised credit exposures) results in the economic exposure being significantly lower than the gross exposure reported above. We will continue to actively manage this position.

Healthcare, Infrastructure and PFI

Primary Healthcare, Infrastructure and PFI mortgage loans included within shareholder assets of £2.9 billion *(2018: £2.8 billion)* are secured against primary health care premises (including General Practitioner surgeries), education, social housing and 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 provides considerable comfort of an ongoing business model and low risk of default.

On a market value basis, we estimate the average LTV of these mortgages to be 71% *(2018: 72%)*, although this is not considered to be a key risk indicator due to the Government support noted above and the social need for these premises. We therefore consider these loans to be lower risk relative to other mortgage loans.

Securitised mortgage loans

As at 30 June 2019, the Group has £2.5 billion *(2018: £2.4 billion)* of securitised mortgage loans held within shareholder assets. Funding for the securitised residential mortgage assets was obtained by issuing loan note securities. Of these loan notes approximately £235 million *(2018: £239 million)* are held by Group companies. The remainder is held by third parties external to Aviva. As any cash shortfall arising once all mortgages have been redeemed is borne by the loan note holders, the majority of the credit risk of these mortgages is borne by third parties rather than by shareholders. The average LTV across the securitised mortgage loans is 44.8% *(2018: 45.2%)*.

C6 – Analysis of shareholder equity securities

	30 June 2019				Restated[1] 31 December 2018			
	Fair value hierarchy				Fair value hierarchy			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Public utilities	**11**	**—**	**—**	**11**	14	—	—	14
Banks, trusts and insurance companies	**123**	**—**	**110**	**233**	149	—	101	250
Industrial miscellaneous and all other	**1,148**	**—**	**5**	**1,153**	1,068	—	7	1,075
Non-redeemable preferred shares	**203**	**—**	**—**	**203**	177	—	—	177
Total	**1,485**	**—**	**115**	**1,600**	1,408	—	108	1,516
Total %	**92.8%**	**—**	**7.2%**	**100.0%**	92.9%	—	7.1%	100.0%
Assets of operations classified as held for sale	**—**	**—**	**—**	**—**	—	—	1	1
Total (excluding assets held for sale)	**1,485**	**—**	**115**	**1,600**	1,408	—	107	1,515
Total % (excluding assets held for sale)	**92.8%**	**—**	**7.2%**	**100.0%**	92.9%	—	7.1%	100.0%

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 period or equity. See note B2 for further information.

C7 – Analysis of shareholder investment property

	30 June 2019				31 December 2018			
	Fair value hierarchy				Fair value hierarchy			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Leased to third parties under operating leases	**—**	**—**	**758**	**758**	—	—	730	730
Vacant investment property/held for capital appreciation	**—**	**—**	**—**	**—**	—	—	—	—
Total	**—**	**—**	**758**	**758**	—	—	730	730
Total %	**—**	**—**	**100.0%**	**100.0%**	—	—	100.0%	100.0%
Assets of operations classified as held for sale	**—**	**—**	**—**	**—**	—	—	—	—
Total (excluding assets held for sale)	**—**	**—**	**758**	**758**	—	—	730	730
Total % (excluding assets held for sale)	**—**	**—**	**100.0%**	**100.0%**	—	—	100.0%	100.0%

C8 – Analysis of shareholder other financial investments

	30 June 2019				Restated[1] 31 December 2018			
	Fair value hierarchy				Fair value hierarchy			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Unit trusts and other investment vehicles	**507**	**2**	**70**	**579**	532	1	66	599
Derivative financial instruments	**8**	**1,997**	**484**	**2,489**	156	1,447	461	2,064
Deposits with credit institutions	**10**	**—**	**—**	**10**	13	—	—	13
Minority holdings in property management undertakings	**—**	**33**	**215**	**248**	—	28	211	239
Other	**—**	**—**	**—**	**—**	16	—	—	16
Total	**525**	**2,032**	**769**	**3,326**	717	1,476	738	2,931
Total %	**15.8%**	**61.1%**	**23.1%**	**100.0%**	24.5%	50.3%	25.2%	100.0%
Assets of operations classified as held for sale	**2**	**—**	**—**	**2**	16	—	—	16
Total (excluding assets held for sale)	**523**	**2,032**	**769**	**3,324**	701	1,476	738	2,915
Total % (excluding assets held for sale)	**15.7%**	**61.2%**	**23.1%**	**100.0%**	24.0%	50.7%	25.3%	100.0%

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 period or equity. See note B2 for further information.

C9 – Summary of exposure to peripheral European countries

The Group's direct sovereign exposures to Greece, Ireland, Portugal, Italy and Spain (net of non-controlling interests, excluding policyholder assets) is summarised below:

	Participating		Shareholder		Total	
	30 June 2019 £bn	31 December 2018 £bn	**30 June 2019 £bn**	31 December 2018 £bn	**30 June 2019 £bn**	31 December 2018 £bn
Greece	**—**	—	**—**	—	**—**	—
Ireland	**0.9**	0.8	**0.3**	0.2	**1.2**	1.0
Portugal[1]	**0.1**	0.1	**—**	—	**0.1**	0.1
Italy[1]	**8.0**	6.8	**0.7**	0.6	**8.7**	7.4
Spain[1]	**0.7**	0.6	**0.1**	0.1	**0.8**	0.7
Total Greece, Ireland, Portugal, Italy and Spain	**9.7**	8.3	**1.1**	0.9	**10.8**	9.2

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 period or equity. See note B2 for further information.

Included in our debt securities and other financial assets are exposures to peripheral European countries. All of these assets are valued on a mark-to-market basis under IAS 39, and therefore our statement of financial position and income statement already reflect any reduction in value between the date of purchase and the balance sheet date. 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.

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 reported to the Chief Decision Maker and 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 important information to enhance the understanding of our financial performance. However, APMs should be viewed as complementary to, rather than as a substitute for, the figures 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. These metrics are reviewed annually and updated as appropriate to ensure they remain an effective measurement that underpins the objectives for the Group.

This section includes a definition of each APM and additional information, including a reconciliation to the relevant amounts in the IFRS Financial Statements, and where appropriate, commentary on the material reconciling items.

There are no new APMs or changes to existing APMs in 2019.

Annual premium equivalent (APE)

Annual premium equivalent is a measure of sales in our life insurance businesses. APE is calculated as the sum of new regular premiums plus 10% of new single premiums written in the period. While not a key performance metric of the Group, the APE measure provides useful information on sales and new business when considered alongside other measures such as the present value of new business premiums (PVNBP) or value of new business on an adjusted Solvency II basis (VNB).

Assets under management (AUM) and assets under administration (AUA)

Assets under management (AUM) represent all assets managed or administered by or on behalf of the Group, including those assets managed 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, assets under administration (AUA) comprise AUM plus 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 AUM to amounts appearing in the Group's statement of financial position is shown below.

	30 June 2019 £bn	Restated[1] 30 June 2018 £bn	Restated[1] Full year 2018 £bn
AUM managed on behalf of Group companies			
Assets included in statement of financial position[2]			
Financial investments	**351**	336	327
Investment properties	**11**	11	11
Loans	**39**	36	36
Cash and cash equivalents	**16**	18	17
Other	**2**	1	1
	419	402	392
Less: third party funds included above	**(18)**	(18)	(17)
	401	384	375
AUM managed on behalf of third parties[3]			
Aviva Investors	**65**	71	64
UK Platform[4]	**26**	23	23
Other	**9**	10	9
	100	104	96
Total AUM	**501**	488	471

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 period or equity. See note B2 for further information.
2 Includes assets classified as held for sale.
3 AUM managed on behalf of third parties cannot be directly reconciled to the financial statements.
4 UK Platform relates to the assets under management in the UK long-term savings business.

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.

‡ denotes APMs which are key performance indicators. There have been no changes to the APMs used by the Group during the period under review.
# denotes key financial performance indicators used as a base to determine or modify remuneration.

Other information continued

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.

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.

The Group reported COR is shown below.

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Incurred claims – GI & Health (as per B6)[1]	**(3,334)**	(3,250)	(6,400)
Adjusted for the following:			
Incurred claims – Health	**326**	322	633
Change in discount rate assumptions	**73**	(34)	—
Impact of change in the discount rate used in settlement of bodily injury claims	**45**	—	(190)
Total Incurred claims (included in COR)	**(2,890)**	(2,962)	(5,957)
Total commission and expenses (included in COR)[2]	**(1,452)**	(1,390)	(2,765)
Total underwriting costs	**(4,342)**	(4,352)	(8,722)
Net earned premiums – GI & Health (as per B6)	**4,973**	4,890	9,887
Adjusted for:			
Net earned premiums – Health	**(441)**	(424)	(857)
Net earned premiums (included in COR)	**4,532**	4,466	9,030
Combined operating ratio	**95.9%**	97.4%	96.6%

1 Corresponds to the sum of claims and benefits paid, net of recoveries from reinsurers and the change in insurance liabilities, net of reinsurance as per note B6.
2 Commission and expenses consists of fee and commission income, fee and commission expense and other operating expenses included within the general insurance & health segmental income statement (per note B6) adjusted to an earned basis and to remove the health business.

The normalised accident year combined operating ratio is derived from the COR (as defined in this section) with adjustments made to exclude the impact of prior year reserve development and weather claims variations versus expectations on claims, gross of the impact of profit sharing arrangements. These adjustments are made so that the underlying performance of the Group can be assessed excluding factors that might distort the trend in the claims ratio on a year-on-year basis.

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 previous COR table.

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 previous COR table.

Group adjusted operating profit‡#

Group adjusted operating profit is a non-GAAP APM determined for the purpose of decision making and internal performance management of the Group's operating segments and 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.

The various items excluded from Group adjusted operating profit, but included in IFRS profit before tax, are:

Investment variances, economic assumptions changes and short-term fluctuation in return on investments

Group adjusted operating profit incorporates an expected return on investments supporting the life and non-life insurance businesses but excludes short-term investment variances to reflect 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 factors, to provide a comparable measure year-on-year.

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 risks. 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. This would include movements in liabilities due to changes in discount rate arising from discretionary management decisions that impact on product profitability over the lifetime of products. 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 is the actual income receivable for the period.

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.

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 intangibles; 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.

Other information continued

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 are disclosed in section A11.

The table below presents a reconciliation between our consolidated Group adjusted operating profit and profit before tax attributable to shareholders' profits.

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
United Kingdom – Life	**737**	845	1,909
United Kingdom – General Insurance	**172**	195	415
Canada	**98**	(12)	47
Europe	**498**	508	1,011
Asia	**151**	118	262
Aviva Investors	**62**	76	151
Other Group activities	**(270)**	(292)	(679)
Group adjusted operating profit before tax attributable to shareholders' profit	**1,448**	1,438	3,116
Adjusted for the following:			
Investment return variances and economic assumption changes on long-term business	**372**	(482)	(197)
Short-term fluctuation in return on investments on non long-term business	**145**	(206)	(476)
Economic assumption changes on general insurance and health business	**(73)**	34	1
Impairment of goodwill, associates and joint ventures and other amounts expensed	**(11)**	—	(13)
Amortisation and impairment of intangibles	**(107)**	(101)	(209)
Amortisation and impairment of acquired value of in-force business	**(191)**	(210)	(426)
(Loss)/profit on the disposal and re-measurement of subsidiaries, joint ventures and associates	**(13)**	31	102
Other	**(47)**	22	231
Adjusting items before tax	**75**	(912)	(987)
Profit before tax attributable to shareholders' profits	**1,523**	526	2,129

Net asset value (NAV) per share

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 as at the balance sheet date.

NAV per share is used to monitor the value generated by the Company in terms of the equity shareholders' face value per share investment.

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.

Operating expenses

The day-to-day expenses involved in running the business are classified as operating expenses. A reconciliation of operating expenses to the IFRS consolidated income statement is set out below:

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Other expenses (IFRS income statement)	**1,552**	1,706	3,843
Less: amortisation and impairment	**(298)**	(311)	(658)
Less: foreign exchange (losses)/gains	**(9)**	7	(28)
Other acquisition costs	**505**	414	954
Claims handling costs	**170**	166	336
Less: other costs	**44**	(53)	(421)
Operating expenses	**1,964**	1,929	4,026

Operating expenses exclude impairment of goodwill, associates and joint ventures; amortisation and impairment of other intangible assets; 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 the operating expenses APM as this is principally used to manage the performance of our operating segments.

Other acquisition costs and claims handling costs are included as these are considered to be controllable by the operating segments and directly impact their performance.

Operating expenses excludes other costs based on management's assessment of their nature or incidence that are not representative of underlying operating expenses and would distort the year-on-year operating expenses trend. Other costs represent a reallocation based on management's assessment of ongoing maintenance of business units and full year 2018 includes 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 advised sales by Friends Provident, of which over 90% of cases relate to pre-2002.

Operating expense ratio

The operating expense ratio expresses operating expenses as a percentage of operating income.

Operating income is calculated as Group adjusted operating profit before Group debt costs and operating expenses.

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 used by management to determine the dividend payout ratio target and hence a useful APM for the users of the financial statements. A reconciliation between Operating EPS and Basic EPS can be found in note B8.

Other information continued

Present value of new business premiums (PVNBP)

PVNBP measures the additional value to shareholders of sales in the Group's life insurance businesses. 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 value of new business on an adjusted Solvency II basis (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.

	6 months 2019 £m	6 months 2018 £m	Full year 2018 £m
Present value of new business premiums	**21,291**	21,509	40,763
Investment sales	**1,986**	2,708	4,799
General insurance and health net written premiums	**5,246**	5,189	9,968
Long-term health and collectives business	**(1,678)**	(2,084)	(3,840)
Total sales	**26,845**	27,322	51,690
Effect of capitalisation factor on regular premium long-term business[1]	**(7,413)**	(6,401)	(12,726)
JVs and associates[2]	**(159)**	(160)	(257)
Annualisation impact of regular premium long-term business[3]	**(332)**	(129)	(247)
Deposits[4]	**(4,899)**	(5,355)	(10,329)
Investment sales[5]	**(1,986)**	(2,708)	(4,799)
IFRS gross written premiums from existing long-term business[6]	**2,839**	2,351	4,776
Long-term insurance and savings business premiums ceded to reinsurers	**(1,126)**	(836)	(1,775)
Total IFRS net written premiums	**13,769**	14,084	26,333
Analysed as:			
Long-term insurance and savings net written premiums	**8,523**	8,895	16,365
General insurance and health net written premiums	**5,246**	5,189	9,968
	13,769	14,084	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 are 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.

Investment sales

This measure comprises retail sales mutual fund-type products such as unit trusts, individual savings accounts (ISAs) and open ended investment companies (OEICs). We earn fees on the investment and management of these funds which are recorded separately in the IFRS income statement as 'fees and commissions received' and are not included in statutory premiums.

Return on capital employed (ROCE)

ROCE indicates the efficiency with which a company uses its assets to generate profits. Usually calculated as pre-tax profit divided by capital employed (total assets minus current liabilities) and expressed as a percentage.

Return on Equity (RoE)#

The 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) as shown in section 8.iii.

Solvency II

Available capital resources determined under Solvency II are referred to as 'own funds'. This includes the excess of assets over liabilities in the Solvency II balance sheet, calculated on best estimate, market consistent assumptions and net of transitional measures on technical provisions (TMTP), subordinated liabilities that qualify as capital under Solvency II, and off-balance sheet own funds.

The Solvency II regime requires insurers to hold own funds in excess of the solvency capital requirement (SCR). 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.

	30 June 2019 £bn	30 June 2018 £bn	31 December 2018 £bn
Total Group equity on an IFRS basis	**18.9**	18.3	18.5
Elimination of goodwill and other intangible assets[1]	**(7.9)**	(9.1)	(7.8)
Liability valuation differences (net of transitional deductions)[2]	**19.5**	21.5	19.2
Inclusion of risk margin (net of transitional deductions)	**(3.4)**	(3.0)	(3.3)
Net deferred tax[3]	**(1.1)**	(1.3)	(1.1)
Revaluation of subordinated liabilities and other accounting differences[4]	**(0.7)**	(0.7)	(0.9)
Estimated Solvency II net assets (gross of non-controlling interests)	**25.3**	25.7	24.6
Difference between Solvency II net assets and own funds[5]	**(0.9)**	(2.1)	(1.0)
Estimated Solvency II own funds[6]	**24.4**	23.6	23.6

1 Includes £1.8 billion *(HY18: £1.9 billion; 2018: £1.8 billion)* of goodwill and £6.1 billion *(HY18: £7.2 billion; 2018 £6.0 billion)* of other intangible assets comprising acquired value of in-force business of £2.7 billion *(HY18: £3.1 billion; 2018: £2.9 billion)*, deferred acquisition costs (net of deferred income) of £3.1 billion *(HY18: £2.9 billion; 2018: £2.8 billion)* and other intangibles of £0.3 billion *(HY18: £1.2 billion; 2018: £0.3 billion)*.
2 Includes the adjustments required to reflect market consistent principles under Solvency II whereby non-insurance assets and liabilities are measured using market value and liabilities arising from insurance contracts are 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 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 and non-controlling interests, net of adjustments to represent Solvency II own funds on the shareholder view basis.
6 The estimated Solvency II position represents the shareholder view only. See section 8i for more details.

A number of key performance metrics relating to Solvency II are utilised to measure and monitor the Group's performance and financial strength:

- Solvency II shareholder cover ratio‡
- Value of new business on an adjusted Solvency II basis (VNB)‡
- Operating Capital Generation (OCG)#

Definitions and additional details in respect of each of these metrics is published within this section.

Other information continued

Solvency II shareholder cover ratio‡

The estimated Solvency II shareholder cover ratio is one of the indicators of the Group's balance sheet strength which is derived from own funds divided by the SCR using 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, 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. A formal reset of the TMTP will be required at 31 December 2019. A formal reset is required at least every two years or in the event of a material change in risk profile. 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 material 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 have been made in order to show a more representative view of the Group's solvency position.

A summary of the Group's Solvency II position and movement in the Group surplus during the period is shown in section 8.i.

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 as shown in section 4.i to:

i) remove the impact of the contract boundary restrictions under Solvency II;
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
iii) reflect a gross of tax and non-controlling interests basis and to include the impact of 'look through profits' in service companies (where not included in Solvency II).

Operating assumptions

The operating assumptions used are derived from an analysis of recent operating experience to give a best estimate of future experience. When these assumptions are updated, the year-to-date VNB will capture the impact of the assumption change on all business sold that year.

Economic assumptions

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. Dealing with each of the principal economic assumptions in turn:

- The risk-free interest rate curves used to calculate VNB reflect the basic risk-free interest rate curves (including the credit risk adjustment) published by EIOPA on their website.
- The volatility adjustment is intended to reflect temporary distortions in spreads on fixed interest assets based on rates prescribed by EIOPA.
- The matching adjustment (MA) is an increase applied to the risk-free rate used to value insurance liabilities where the cash flows are relatively fixed and well matched by assets intended to be held to maturity with relatively fixed cash flows (resulting in additional yield from illiquidity risk).

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 MA used for UK new business written in the first half of 2019 (where applicable) was 96 bps *(HY18: 95 bps, 2018: 105 bps)*.

New business income

New business income represents the impact on Group adjusted operating profit of new business written in the period. New business income comprises income arising from premiums written during the period less initial reserves, expenses and commission. Expense and commission are shown net of deferred acquisition costs. While not a key performance metric of the Group, new business income provides useful information on sales and new business when considered alongside other measures such as PVNBP or VNB.

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.

Operating capital generation (OCG)#

OCG is the Solvency II surplus movement in the period due to operating items. The calculation of OCG is consistent with previous years.

For life business, OCG is split into the impact of new business, earnings from existing business and other OCG, where other OCG includes the impact of capital actions and non-economic assumption changes. OCG excludes economic variances and economic assumption changes. The expected investment returns assumed within earnings from existing business are consistent with the returns within Group adjusted operating profit.

An analysis of the components of OCG is presented below:

	6 months 2019 £bn	6 months 2018 £bn	Full year 2018 £bn
Adjusted Solvency II VNB (gross of tax and non-controlling interests)	**0.5**	0.6	1.2
Solvency II contract boundary restrictions – new business	**(0.1)**	(0.1)	(0.2)
Solvency II contract boundary restrictions – increments/renewals on in-force business	**0.1**	0.1	0.2
Differences due to change in business in scope	**(0.1)**	(0.1)	(0.2)
Tax & Other[1]	**(0.1)**	(0.1)	(0.3)
Solvency II Own Funds impact of new business (net of tax and non-controlling interests)	**0.3**	0.4	0.7
Solvency II SCR impact of new business	**(0.4)**	(0.5)	(0.9)
Solvency II surplus impact of new business	**(0.1)**	(0.1)	(0.2)
Life earnings from existing business	**0.7**	0.8	1.6
Life Other OCG[2]	**0.2**	0.2	1.8
Life Solvency II OCG	**0.8**	0.9	3.2
GI, Health, FM & Other Solvency II OCG	**—**	—	—
Total Solvency II OCG	**0.8**	0.9	3.2

1 Other includes the impact of 'look through profits' in service companies (where not included in Solvency II) and the reduction in value when moving to a net of non-controlling interests basis.
2 Other OCG includes the impact of capital actions and non-economic assumption changes.

Underlying operating capital generation (underlying OCG)

Underlying OCG is the operating capital generated from the following items:
- Contribution from new business
- Earnings from existing business
- Contribution from general insurance, fund management and other non-insurance businesses
- Group centre costs and debt interest payments

It excludes items that are typically non-recurring in nature, e.g. non-economic assumption changes and capital actions.

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. While not a key performance metric of the Group; the underwriting margin is a useful measure of the financial performance of our life insurance business when considered alongside other financial metrics.

Unit-linked margin

The unit-linked margin represents the annual management charges on unit-linked business. While not a key performance metric of the Group, the unit-linked margin is a useful indicator of the return arising on this business.

Shareholder services

2019 financial year calendar

Ordinary interim ex-dividend date	15 August 2019
Interim dividend record date	16 August 2019
Last day for Dividend Reinvestment Plan and currency election	5 September 2019
Interim dividend payment date[1]	26 September 2019
Full year results announcement[2]	5 March 2020

1 Please note that the ADR dividend payment date will be 2 October 2019.
2 This date is provisional and subject to change.

Dividend payment options

Shareholders are able to 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 Single Euro Payment Area to elect to receive their dividends or interest payments in a choice of over 125 international currencies
- The Dividend Reinvestment Plan enables eligible shareholders to reinvest their dividends 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 dividend payments from Aviva.

Manage your shareholding online

www.aviva.com/shareholders:
General information for shareholders

www.aviva.com/online:
You can access Computershare online services directly using your Computershare details to:

- Change your address
- Change your payment options
- Switch to electronic communications
- View your shareholding
- View any outstanding payments

Annual General Meeting (AGM)

The voting results for the 2019 AGM, including proxy votes and votes withheld, can be viewed on our website at www.aviva.com/agm. There, you'll also find a webcast of the formal business of the meeting and information relating to past general meetings.

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 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're open Monday to Friday, 8.30am to 5.30pm US Eastern Standard Time, excluding public holidays. Please call +1 781 575 4555 if you are calling from outside 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
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