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News
Release

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AVIVA PLC 2017 INTERIM RESULTS ANNOUNCEMENT

Mark Wilson, Group Chief Executive Officer, said:

"Aviva is delivering. For the fourth year in a row we have grown operating profit, up 11%, reflecting positive performances across Aviva's businesses world-wide. As a result, we are increasing the interim dividend per share by 13% to 8.4p.

The benefits of our geographic and product diversity are clear and Aviva has numerous sources of growth. In the first half of 2017 we increased sales right across the group and delivered strong growth in operating profit in the UK, Europe and Aviva Investors.

We are growing and investing in the UK. We have grown top line sales and bottom line profit in UK general insurance, pensions, annuities and protection. Our digital business continues to make progress, making insurance simpler and more convenient for customers.

We are getting the basics right. Serving customers well, keeping a tight control on costs and investing in our businesses.

Please click here to see a short film with Mark Wilson talking about today's results"

Profit	• Operating profit up 11% to £1,465 million *(HY16: £1,325 million)* • Operating EPS up 15% to 25.8p *(HY16: 22.4p)* • IFRS profit after tax £716 million *(HY16: £201 million)*
Capital	• Solvency II coverage ratio of 193%[1] *(FY16: 189%)* • Capital surplus £11.4 billion[1] *(FY16: £11.3 billion)* • Operating capital generation £1.1 billion *(HY16: £1.2 billion)* • IFRS net asset value per share 412p (*FY16: 414p)*
Cash	• Interim dividend up 13% to 8.4p *(HY16: 7.42p*) • Cash remittances up 56% to £1,170 million *(HY16: £752 million)* • UK Life special remittance of £315 million, on track towards £1 billion target by end 2018 with £565 million total special to date • Holding company liquidity £1.7 billion[2] (*February 2017: £1.8 billion*)
Growth	• General insurance net written premiums up 11%[3] to £4,688 million *(HY16: £3,991 million)* • Value of new business up 27%[3] to £596 million (*HY16: £448 million)* • Aviva Investors fund management operating profit up 45% to £71 million *(HY16: £49 million)* • UK Life platform funds up 27% to £16.5 billion *(FY16: £13.0 billion)* • Total group assets under management £475 billion *(FY16: £450 billion)*
Combined ratio	• General insurance combined operating ratio 94.5%[4] *(HY16: 95.7%)*

1 Represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion *(FY16: £2.9 billion)* and staff pension schemes in surplus £1.2 billion *(FY16: £1.1 billion)*. Includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions (TMTP) to reflect interest rates at 30 June 2017 £0.5 billion decrease to surplus *(FY16: £0.4 billion)*. Also included are the pro forma impacts of the disposal of the Spanish joint ventures and retail life insurance business (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the buy-back of the remaining £0.2 billion share capital out of the £0.3 billion announced on 25 May 2017. The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting tax relief (£0.4 billion decrease to surplus).
2 As at end of July 2017. It excludes amounts set aside to meet our £300 million share repurchase programme.
3 In constant currency.
4 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change.

Operating profit

	6 months 2017 £m	6 months 2016 £m	Sterling% change	Full year 2016[3] £m
Life business	**1,319**	1,226	8%	2,642
General insurance and health	**417**	334	25%	833
Fund management	**69**	49	41%	138
Other[1]	**(340)**	(284)	(20)%	(603)
Total[2]	**1,465**	1,325	11%	3,010
Operating earnings per share[2,4]	**25.8p**	22.4p	15%	51.1p

Cash remittances and Operating capital generation: Solvency II basis

	6 months 2017		6 months 2016		Full year 2016	
	Cash Remittances £m	Operating Capital Generation £bn	Cash Remittances £m	Operating Capital Generation £bn	Cash Remittances £m	Operating Capital Generation £bn
United Kingdom & Ireland Life	**922**	**0.6**	577	0.7	1,096	2.5
United Kingdom & Ireland General Insurance and Health	**8**	**0.2**	—	0.1	91	0.3
Canada	**13**	**0.1**	4	0.1	130	0.3
Europe	**190**	**0.4**	169	0.6	449	1.0
Asia, Aviva Investors & Other	**37**	**(0.2)**	2	(0.3)	39	(0.6)
Total	**1,170**	**1.1**	752	1.2	1,805	3.5

Expenses

	6 months 2017 £m	6 months 2016 £m	Sterling% change	Full year 2016 £m
Operating expenses	**1,851**	1,696	9%	3,408
Integration & restructuring costs	**52**	105	(50)%	212
Expense Base	**1,903**	1,801	6%	3,620
Operating expense ratio	**53.3%**	53.4%	(0.1)pp	50.5%

Value of new business: Adjusted SII basis

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
United Kingdom & Ireland	**270**	205	32%	441
Europe	**243**	188	29%	417
Asia & Aviva Investors	**83**	55	51%	134
Total	**596**	448	33%	992

General insurance combined operating ratio[5]

	6 months 2017	6 months 2016	Change	Full year 2016
United Kingdom & Ireland[6]	**92.5%**	93.8%	(1.3)pp	105.2%
Canada	**98.9%**	95.9%	3.0pp	93.0%
Europe	**92.7%**	98.9%	(6.2)pp	95.8%
Combined operating ratio	**94.5%**	95.7%	(1.2)pp	100.1%

Profit after tax

	6 months 2017 £m	6 months 2016 £m	Sterling% change	Full year 2016 £m
Profit after tax[2]	**716**	201	256%	859
Basic earnings per share[2]	**14.9p**	2.5p	496%	15.3p

Interim dividend

	6 months 2017	6 months 2016	Sterling% change
Interim dividend per share	**8.40p**	7.42p	13%

Capital position

	30 June 2017	31 December 2016	Sterling change	30 June 2016
Estimated Solvency II cover ratio[7,8,9]	**193%**	189%	4.0pp	174%
Estimated Solvency II surplus[8,9]	**£11.4bn**	£11.3bn	1%	£9.5bn
Net asset value per share	**412p**	414p	(0)%	412p

1 Other includes other operations, corporate centre costs and group debt and other interest costs.
2 Operating profit is a non-GAAP measure used by management. Refer to the 'Financial supplement' for the reconciliation of Group operating profit to profit after tax and refer to note B7 – Earnings per share for a reconciliation of operating earnings per share to basic earnings per share.
3 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL) and the impact of the exceptional Ogden charge.
4 Operating EPS is shown net of tax, non-controlling interests, preference dividends, and coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax).
5 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.
6 FY16 includes the impact of the change in the Ogden discount rate, which had an impact of 5.9pp, and excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
7 The estimated Solvency II position represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion *(FY16: £2.9 billion; HY16: £2.7 billion)* and staff pension schemes in surplus £1.2 billion *(FY16: £1.1 billion; HY16: £0.9 billion)* – these exclusions have no impact on Solvency II surplus.
8 The estimated Solvency II position includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017, £0.5 billion decrease to surplus *(FY16: £0.4 billion; HY16: £nil)*. Also included are the pro forma impacts of the disposal of the Spanish joint ventures Unicorp Vida and Caja Espana Vida and its retail life insurance business Aviva Vida y Pensiones (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the remaining £0.2 billion of the share buy-back announced on 25 May 2017.
9 The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius to Sogecap which completed on 5 April 2017 (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting the tax relief that can be claimed in respect of tax losses (£0.4 billion decrease to surplus). However, under the amended tax rules published on 13 July 2017, this restriction will not be material, and as a result no corresponding pro forma impact is included in the estimated 30 June 2017 Solvency II position.

Overview

In the first half of 2017, Aviva has grown operating profit, maintained capital strength and delivered on its strategic agenda.

Operating profit increased 11% to £1,465 million *(HY16: £1,325 million)*, underlining the quality of our franchises and the benefits of our product and geographic diversity. Operating earnings per share (EPS) increased 15% to 25.8p *(HY16: 22.4p)*.

Our Solvency II coverage ratio increased to 193%[1] *(FY16: 189%)* and remains above our 150% to 180% working range. Operating capital generation was £1.1 billion *(HY16: £1.2 billion)* and cash remittances rose 56% to £1,170 million *(HY16: £752 million)*.

We have increased our interim dividend by 13% to 8.4p per share *(HY16: 7.42p).*

Capital reallocation initiatives continued in the first half of 2017. We announced the withdrawal of capital from Spain and the sale of the Friends Provident International business and acquired a 100% interest in our Vietnamese venture with VietinBank. We also commenced a £300 million share buy-back programme.

We have extended our track record of growth while maintaining a disciplined approach to capital allocation. Our performance in the first half of 2017 reflects the foundations built over recent years and we continue to invest in our businesses to secure consistent growth in the future.

Operating profit

Operating profit increased 11% to £1,465 million *(HY16: £1,325 million)* and operating EPS rose 15% to 25.8p *(HY16: 22.4p)*.

Life insurance operating profit grew 8% to £1,319 million *(HY16: £1,226 million)*. In UK life, each of the core product segments of long-term savings, protection and annuities and equity release delivered double digit growth in operating profit. In our European life businesses, improved performances in France and Poland plus positive foreign exchange effects more than offset a lower contribution from the disposed Antarius business in France. In Asia, our life businesses delivered modest growth in operating profits, primarily driven by a strong performance from our joint venture in China.

Operating profit from general insurance and health increased 25% to £417 million *(HY16: £334 million)*. General insurance net written premiums grew 17% to £4,688 million *(HY16: £3,991 million)* reflecting a combination of underlying growth, the acquisition of RBC Insurance in Canada in July 2016 and foreign exchange benefits. The general insurance underwriting result increased 50% to £244 million *(HY16: £163 million)* as improved normalised accident year combined ratios across all regions and benign weather in the UK and Europe more than offset heightened catastrophe costs and modest levels of adverse prior year development in our Canadian business.

Aviva Investors fund management operating profit increased 45% to £71 million. Revenues increased 13% to £273 million *(HY16: £241 million)* due to higher average assets under management, income from asset origination and continued expansion of the AIMS range of funds to £12 billion *(FY16: £9 billion)*. Operating expenses increased 5%, leading to an improvement in the cost to income ratio to 74% *(HY16: 80%)*.

Capital

At 30 June 2017, our Solvency II capital ratio was 193%[1] *(FY16: 189%)* with a surplus of £11.4[1] billion *(FY16: £11.3 billion)*. We have maintained a prudent approach to capital management, with our solvency ratio having modest sensitivity to movements in interest rates and equity markets.

In May 2017, we announced the commencement of a £300 million share buy-back. At the end of July, we had completed over one third of the programme, with the remainder to be completed by the end of 2017. As highlighted in our 2016 results, we have the option to reduce hybrid debt during 2017.

1 Represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion *(FY16: £2.9 billion)* and staff pension schemes in surplus £1.2 billion *(FY16: £1.1 billion)*. Includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017 £0.5 billion decrease to surplus *(FY16: £0.4 billion)*. Also included are the pro forma impacts of the disposal of the Spanish joint ventures and retail life insurance business (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the buy-back of the remaining £0.2 billion share capital out of the £0.3 billion announced 25 May 2017. The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting tax relief (£0.4 billion decrease to surplus).

Oaks, acorns and apple-trees

During the first half of 2017, Aviva announced a number of initiatives that improve focus, support future growth and facilitate capital reallocation.

Oaks are businesses that provide consistent, sustainable growth in profits and cash. Our oak markets have delivered on both of these metrics in the first half of 2017. Today, we have announced a 10 year extension of our distribution relationship with HSBC, which will deliver significant further growth in our UK business. We also continue to work on our plans to combine the management of the UK business under the leadership of Andy Briggs to unlock the potential of our unique position as a large scale composite. In France, we installed new leadership in late 2016 and progress to date has been encouraging.

In our acorn markets, we continue to invest to secure long-term growth. In Vietnam, we acquired 100% ownership of the insurance operations and have secured a long-term distribution partnership with VietinBank. Our investment in the growth strategy for Aviva Investors is bearing fruit. An enhanced range of outcome orientated solutions and an expanded distribution capability is leading to us winning a growing number of external asset management clients. In Singapore, we have further developed our Aviva Financial Advisors network, which now exceeds 500. Meanwhile, in Hong Kong, we are seeking regulatory approval of our new joint digital venture with Tencent and Hillhouse.

Apple tree businesses are those requiring simplification and restructuring. In the first half of 2017, we took decisions to withdraw capital from a number of these markets. We announced the sale of the majority of our Spanish business for €475 million. We also recently announced the sale of Friends Provident International Limited (FPIL) for £340 million. These transactions simplify our portfolio of businesses and provide capital that can be invested to grow our core businesses or used for debt reduction and other capital returns.

Digital

In digital, the first half is all about development of our intellectual property. Our "ask it never" proposition will allow us to price products without asking any questions, making it possible for customers to buy insurance, just as they would any other product. A key part of our business model is rewarding customer loyalty and there will be greater emphasis on this as we develop new propositions in the digital channel.

Our UK digital business has made further progress in the first half of 2017. We have seen encouraging trends in trading results in the UK, with general insurance premium growth of 13% and an increase in new business sales being made to existing customers in the digital channel.

We remain focused on encouraging our existing customers to take advantage of the simplicity, convenience and good value offered by MyAviva. Digital registrations have increased to 6 million *(FY16: 4.7 million)* and we are targeting further growth as we engage with our 4 million Friends Life customers in conjunction with the Part VII transfer that merge the legal entities in our UK Life business.

Outlook

We have made a good start to 2017, delivering growth in operating profit and dividends, maintaining capital strength and reallocating capital towards our businesses with the greatest potential. As a group, Aviva is getting leaner and stronger and we are confident in our ability to sustain growth in the coming years.

Mark Wilson
Group Chief Executive Officer

Overview

Results in the first six months of 2017 demonstrate the strength of our franchises and our focus on delivering cash flow and earnings growth. Operating profit grew 11% to £1,465 million, operating EPS increased 15% to 25.8p and cash remittances were 56% higher at £1,170 million. In light of these results, the interim dividend has increased 13% to 8.4 pence per share.

Operating profit was £1,465 million *(HY16: £1,325 million)*, up 6% in constant currency, with strong performances from UK and Ireland General Insurance, Aviva Investors and Europe while UK Life delivered double-digit growth across its three core product lines of long-term savings, protection and annuities and equity release. Operating EPS increased 15% to 25.8p *(HY16: 22.4p)* helped by favourable foreign exchange movements while operating EPS after integration and restructuring costs grew 22% to 24.8p *(HY16: 20.3p)* as restructure costs were halved over the period.

IFRS profit after tax rose to £716 million *(HY16: £201 million)*, benefiting from profits on disposals, a reduction in adverse investment variances and lower restructuring costs. Net asset value per share was broadly stable at 412p *(FY16: 414p)* as the contribution from IFRS profit after tax was offset by the payment of 2016 final dividend.

The Solvency II cover ratio increased to 193%[1] *(FY16: 189%)*. Operating capital generation remained broadly stable at £1.1 billion *(HY16: £1.2 billion)* and included a modest increase in underlying generation to £0.9 billion *(HY16: £0.8 billion)*. Cash remittances increased to £1,170 million *(HY16: £752 million)* and included £315 million of special dividends from the UK life business. In total, UK Life has paid £565 million of special dividends over the past 12 months, putting it comfortably on track to achieve its target of £1 billion of special dividends by the end of 2018.

In line with our "Not Everywhere" strategy, we have continued to reallocate capital to focus and strengthen Aviva. We completed the sale of Antarius in France and recently announced the disposals of the majority of our Spanish business as well as Friends Provident International Limited (FPIL). Meanwhile, we have invested in Vietnam, increasing our ownership of the business to 100% and improving alignment with our long-term partner, VietinBank. We also announced a £300 million share buyback programme and a reduction in hybrid debt balances later this year remains an option.

Aviva has made a strong start to 2017, once again highlighting both the quality of our franchises and the benefits of our diversity. We continue to target mid-single digit growth in operating EPS over the medium term and remain on track to increase our dividend payout ratio to 50% for 2017.

Business unit performance

Our UK and Ireland Life business grew life operating profit 6%, value of new business (VNB) 32% and paid a £922 million interim remittance to Group, including a further £315 million of special remittance. In the UK, life operating profit increased 7% to £750 million *(HY16: £699 million)* with double-digit growth across our three core product segments more than offsetting a reduction in other actions to £32 million *(HY16: £83 million)* and a modest runoff in profit from our Legacy book. In our annuities and equity release business, operating profit increased 26% to £309 million *(HY16: £246 million)* due to higher sales volumes across both product lines and back book asset mix optimisation. Operating profit from Protection grew 17% to £133 million *(HY16: £114 million)* reflecting strong sales in individual protection together with expense efficiencies. Long-term savings achieved operating profit of £89 million *(HY16: £64 million)*, the 39% increase driven by higher assets under administration, which grew to £109 billion *(HY16: £95 billion; FY16: £105 billion)* as a result of net inflows in our platform and workplace businesses together with favourable market movements.

Aviva Investors increased fund management operating profit by 45% to £71 million *(HY16: £49 million)* with 13% growth in revenues and a 5% increase in operating expenses. Revenue in the period was £273 million *(HY16: £241 million)* with increased income from the origination of infrastructure assets, the benefits of the Friends Life assets on-boarded in the second half of 2016 and a higher contribution from external clients at 35% of total revenue *(HY16: 30%)*. Assets under management increased to £351 billion *(FY16: £345 billion)* due to favourable market movements and net inflows while Aviva Investors Multi-Strategy (AIMS) assets under management reached £12 billion *(FY16: £9 billion)*.

Our UK and Ireland general insurance and health business delivered 17% growth in operating profit to £259 million *(HY16: £222 million)*[2] and improved its combined ratio (COR) to 92.5%[3] *(HY16: 93.8%)*. Revenue growth, improved performance as well as sustained benign weather were only partly offset by lower reserve releases compared with the prior period. General insurance net written premiums increased 7% to £2,326 million *(HY16: £2,180 million)*, reflecting growth across the majority of our product lines, including a 13% increase in our UK Digital channel.

1 Represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion (FY16: £2.9 billion) and staff pension schemes in surplus £1.2 billion (FY16: £1.1 billion). Includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017 £0.5 billion decrease to surplus (FY16: £0.4 billion). Also included are the pro forma impacts of the disposal of the Spanish joint ventures and retail life insurance business (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the buy-back of the remaining £0.2 billion share capital out of the £0.3 billion announced 25 May 2017. The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting tax relief (£0.4 billion decrease to surplus).

2 HY16 comparatives have been rebased for the reduction in the internal loan.

3 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change.

Business unit performance continued

In Canada, general insurance operating profit was £71 million *(HY16: £88 million)*. This was a disappointing result as continued adverse weather experience and unfavourable prior year development more than offset favourable foreign exchange movements, the benefit of a six month contribution from the RBCI business acquired on 1 July 2016 and improvement in the normalised accident year COR to 96.9%[3] *(HY16: 98.8%)*. The movement of prior year reserves reflects the absence in HY17 of the large releases that benefited the prior year (much of which were due to Ontario motor insurance) coupled with revisions in case estimates for a modest number of large claims. Net written premiums were £1,477 million *(HY16: £1,049 million)*, a 25% increase in local currency mainly as a result of the RBCI acquisition. Excluding RBCI and FX, net written premiums gained 3%.

Our European insurance businesses grew operating profit 9% in constant currency to £518 million *(HY16: £430 million)*, VNB 18% to £243 million *(HY16: £188 million)*, while COR improved to 92.7%[3] *(HY16: 98.9%)*. Excluding the benefit from foreign exchange and the adverse impact from the disposal of Antarius in France, life operating profit increased 5% mostly driven by growth in unit-linked and protection businesses in France, Poland and Italy, together with favourable equity market movements. Our general insurance and health operating profit grew to £85 million *(HY16: £35 million)* primarily due to improved weather experience and favourable prior year development in France as well as a benefit from foreign exchange.

In our Asian insurance businesses, operating profit remained broadly stable in constant currency at £115 million *(HY16: £112 million)* with new business growth generated from our financial advisory channel in Singapore and our agency and broker channels in China partly offset by investment in disruptive strategies across the region.

Capital management

At 30 June 2017, our Solvency II capital surplus was £11.4 billion[1] *(FY16: £11.3 billion)*, representing a cover ratio of 193%[1] *(FY16: 189%)*. The first half of 2017 included a £1.1 billion contribution from operating capital *(HY16: £1.2 billion)* and a further £0.2 billion benefit from disposals. This was offset by payment of the 2016 final dividend and the impact from our 2017 share buyback programme.

Centre liquidity currently stands at £1.7 billion[4] *(February 2017: £1.8 billion)*, in excess of the £1 billion minimum balance that we generally intend to maintain. It excludes amounts set aside to meet our £300 million share repurchase programme.

We have announced the following disposals to date: in France, we completed the sale of Antarius for €500 million in April and the sale of the small individual health brokerage portfolio AMIS is expected to complete later this year; in July, we announced the disposals of our joint ventures with Unicorp Vida, Caja Espana Vida as well as our retail life insurance business in Spain for €475 million and of Friends Provident International Limited (FPIL) for £340 million. These actions are in line with our strategy to focus on businesses where we can make a difference.

Consistent with our message at our 2016 result, our priorities for capital deployment remain organic growth, bolt-on acquisitions in our existing markets, and capital returns to both debtholders and shareholders. These priorities are not mutually exclusive and we expect to pursue all of these options.

To date in 2017, we have continued to invest in our businesses, prioritising capital in areas where we can deliver superior returns and growth over the medium term. We increased our focus on Vietnam, acquiring the full ownership of VietinBank Aviva Life Insurance Limited and signing a new distribution agreement with VietinBank in April 2017. Today, we also have announced a new distribution partnership with HSBC in the UK which should further strengthen our leading position in the UK general insurance market.

We have also progressed our capital return plans over the period with the start of a £300 million share repurchase programme in May 2017. As at the end of July 2017, 25 million shares have been repurchased for £132 million, an average price per share of 531p. Reducing hybrid debt during 2017 remains an option.

Outlook

We remain committed to the three financial targets set in July 2016: (1) to deliver mid-single digit percentage growth in operating EPS over the medium term, (2) for our business units to remit £7 billion of cash to group centre in 2016 to 2018 inclusive and (3) to increase our dividend payout ratio to 50% by the end of 2017.

Thomas D. Stoddard
Chief Financial Officer

1 Represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion (FY16: £2.9 billion) and staff pension schemes in surplus £1.2 billion (FY16: £1.1 billion). Includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017 £0.5 billion decrease to surplus (FY16: £0.4 billion). Also included are the pro forma impacts of the disposal of the Spanish joint ventures and retail life insurance business (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the buy-back of the remaining £0.2 billion share capital out of the £0.3 billion announced 25 May 2017. The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting tax relief (£0.4 billion decrease to surplus).
3 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change.
4 As at end of July 2017. It excludes amounts set aside to meet our £300 million share repurchase programme.

Notes to editors

All comparators are for the half year 2016 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 2017. The average rates employed in this announcement are 1 euro = £0.86 *(6 months to 30 June 2016: 1 euro = £0.78)* and CAD$1 = £0.59 *(6 months to 30 June 2016: CAD$1 = £0.53)*.

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 'Other information – Shareholder Information – Risks relating to our business' 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.

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Contents

Operating profit

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016[3] £m
Life business	**1,319**	1,226	8%	2,642
General insurance and health	**417**	334	25%	833
Fund management	**69**	49	41%	138
Other[1]	**(340)**	(284)	(20)%	(603)
Total[2]	**1,465**	1,325	11%	3,010
Operating earnings per share[2,4]	**25.8p**	22.4p	15%	51.1p

Cash remittances and Operating capital generation: Solvency II basis

	6 months 2017		6 months 2016		Full year 2016	
	Cash Remittances £m	Operating Capital Generation £bn	Cash Remittances £m	Operating Capital Generation £bn	Cash Remittances £m	Operating Capital Generation £bn
United Kingdom & Ireland Life	**922**	**0.6**	577	0.7	1,096	2.5
United Kingdom & Ireland General Insurance and Health	**8**	**0.2**	—	0.1	91	0.3
Canada	**13**	**0.1**	4	0.1	130	0.3
Europe	**190**	**0.4**	169	0.6	449	1.0
Asia, Aviva Investors & Other	**37**	**(0.2)**	2	(0.3)	39	(0.6)
Total	**1,170**	**1.1**	752	1.2	1,805	3.5

Expenses

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
Operating expenses	**1,851**	1,696	9%	3,408
Integration & restructuring costs	**52**	105	(50)%	212
Expense Base	**1,903**	1,801	6%	3,620
Operating expense ratio	**53.3%**	53.4%	(0.1)pp	50.5%

Value of new business: Adjusted SII basis

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
United Kingdom & Ireland	**270**	205	32%	441
Europe	**243**	188	29%	417
Asia & Aviva Investors	**83**	55	51%	134
Total	**596**	448	33%	992

General insurance combined operating ratio[5]

	6 months 2017	6 months 2016	Change	Full Year 2016
United Kingdom & Ireland[6]	**92.5%**	93.8%	(1.3)pp	105.2%
Canada	**98.9%**	95.9%	3.0pp	93.0%
Europe	**92.7%**	98.9%	(6.2)pp	95.8%
Combined operating ratio	**94.5%**	95.7%	(1.2)pp	100.1%

Profit after tax

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
Profit after tax[2]	**716**	201	256%	859
Basic earnings per share[2]	**14.9p**	2.5p	496%	15.3p

Interim dividend

	6 months 2017	6 months 2016	Sterling % change
Interim dividend per share	**8.40p**	7.42p	13%

Capital position

	30 June 2017	31 December 2016	Sterling change	30 June 2016
Estimated Solvency II cover ratio[7,8,9]	**193%**	189%	4.0pp	174%
Estimated Solvency II surplus[8,9]	**£11.4bn**	£11.3bn	1%	£9.5bn
Net asset value per share	**412p**	414p	(0)%	412p

1 Other includes other operations, corporate centre costs and group debt and other interest costs.
2 Operating profit is a non-GAAP measure used by management. Refer to the 'Financial supplement' for the reconciliation of Group operating profit to profit after tax and refer to note B7 – Earnings per share for a reconciliation of operating earnings per share to basic earnings per share.
3 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL) and the impact of the exceptional Ogden charge.
4 Operating EPS is shown net of tax, non-controlling interests, preference dividends, and coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax).
5 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.
6 FY16 includes the impact of the change in the Ogden discount rate, which had an impact of 5.9pp, and excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
7 The estimated Solvency II position represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion *(FY16: £2.9 billion; HY16: £2.7 billion)* and staff pension schemes in surplus £1.2 billion *(FY16: £1.1 billion; HY16: £0.9 billion)* – these exclusions have no impact on Solvency II surplus.
8 The estimated Solvency II position includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017, £0.5 billion decrease to surplus *(FY16: £0.4 billion; HY16: £nil)*. Also included are the pro forma impacts of the disposal of the Spanish joint ventures Unicorp Vida and Caja Espana Vida and its retail life insurance business Aviva Vida y Pensiones (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the remaining £0.2 billion of the share buy-back announced on 25 May 2017.
9 The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius to Sogecap which completed on 5 April 2017 (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting the tax relief that can be claimed in respect of tax losses (£0.4 billion decrease to surplus). However, under the amended tax rules published on 13 July 2017, this restriction will not be material, and as a result no corresponding pro forma impact is included in the estimated 30 June 2017 Solvency II position. The 30 June 2016 Solvency position includes the pro forma impact of acquiring the RBC General Insurance business (£(0.3) billion).

Overview

The Group has delivered an increase in operating profit, grown cash remittances to the Group and continued to maintain a strong Solvency II capital position. The operating result reflects improved performance in the UK & Ireland, Europe and Aviva Investors in addition to the benefits from foreign exchange movements and the contribution from RBC General Insurance Company (RBC) in Canada.

In France we completed the sale of Antarius to Sogecap, a subsidiary of Société Générale in April 2017. In Spain, we announced the sale on 10 May 2017 of our 50% shareholding in our life insurance and pension joint ventures Unicorp Vida and Caja España Vida, as well as our retail life insurance business Aviva Vida y Pensiones to Santalucía. On 19 July 2017 we also announced the sale of Friends Provident International Limited (FPI) to RL360 Holding Company Limited, a subsidiary of International Financial Group Limited.

1 – Operating profit

Group operating profit

For the six month period ended 30 June 2017

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Operating profit before tax attributable to shareholders' profits			
Life business			
United Kingdom & Ireland	**756**	711	1,555
France	**217**	212	429
Poland	**77**	60	132
Italy	**83**	74	170
Spain	**51**	47	107
Turkey	**5**	2	6
Europe	**433**	395	844
Asia	**120**	118	241
Other	**10**	2	2
Total life business (note 7.i)	**1,319**	1,226	2,642
General insurance and health			
United Kingdom & Ireland[1]	**259**	231	471
Canada	**71**	88	269
Europe	**85**	35	120
Asia	**(5)**	(6)	(13)
Other	**7**	(14)	(14)
Total general insurance and health[1] (note 7.ii)	**417**	334	833
Fund management			
Aviva Investors	**71**	49	139
Asia	**(2)**	—	(1)
Total fund management	**69**	49	138
Other			
Other operations (note A1)	**(98)**	(49)	(94)
Market operating profit[1]	**1,707**	1,560	3,519
Corporate centre (note A2)	**(83)**	(80)	(184)
Group debt costs and other interest (note A3)	**(159)**	(155)	(325)
Operating profit before tax attributable to shareholders' profits[1]	**1,465**	1,325	3,010
Tax attributable to shareholders' profit	**(311)**	(323)	(706)
Non-controlling interests	**(73)**	(67)	(147)
Preference dividends and other[2]	**(32)**	(30)	(85)
Operating profit attributable to ordinary shareholders[1]	**1,049**	905	2,072
Operating earnings per share[1,3]	**25.8p**	22.4p	51.1p

1 FY16 excludes the impact of the change in the Ogden discount rate of £475 million, which has been recognised as an exceptional non-operating item. FY16 also excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
2 Other includes coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax).
3 Net of tax, non-controlling interests, preference dividends, coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax). The calculation of earnings per share uses a weighted average of 4,061 million *(HY16: 4,046 million; FY16: 4,051 million)* ordinary shares in issue, after deducting treasury shares.

1 – Operating Profit continued

Operating profit was £1,465 million *(HY16: £1,325 million)* and includes a favourable impact from foreign exchange movements of £61 million.

The life business operating profit increased to £1,319 million *(HY16: £1,226 million)*, mainly driven by the UK & Ireland. UK & Ireland's performance reflected increased contributions from both protection and retirement with the result underpinned by growth in long-term savings assets under management. In Europe, excluding the results of our French joint venture with Crédit du Nord ('Antarius') which was sold in April 2017, life operating profit is up on a constant currency basis. Asia's contribution remained broadly stable whilst continuing to strengthen its distribution channels.

The general insurance and health business operating profit increased to £417 million *(HY16: £334 million)* mainly due to improved performance and benign weather in the UK & Ireland, and favourable prior year development and weather experience in France. In Canada, favourable foreign exchange and the contribution from RBC, acquired in July 2016, was more than offset by higher claims experience and unfavourable prior year development.

Fund management operating profit of £69 million *(HY16: £49 million)* reflected continued growth in the AIMS range of funds, a benefit from the transfer of Friends Life assets in the second half of 2016 and increased income from the origination of infrastructure assets.

Other operations related to non-insurance activities of the Group had total losses of £98 million *(HY16: £49 million)* which included further investment in the UK digital business to establish a centre of excellence for digital expertise, results from the savings platform business in the UK and investment in organisation and culture initiatives.

2.i – Cash remitted to Group

The flow of sustainable cash remittances from the Group's businesses is a key financial priority. We use a wholly-owned, UK domiciled reinsurance subsidiary for internal capital and cash management. Some of the remittances otherwise attributable to the operating businesses arise from this internal reinsurance vehicle. The table below reflects actual remittances received by the Group.

Cash remittances increased to £1,170 million *(HY16: £752 million)* and includes cash paid by our operating businesses to the Group, comprising dividends and interest on internal loans.

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
United Kingdom & Ireland Life[1,2]	**922**	577	1,096
United Kingdom & Ireland General Insurance & Health[1]	**8**	—	91
Canada	**13**	4	130
Europe[1]	**190**	169	449
Aviva Investors & Other[3]	**37**	2	39
Total[4]	**1,170**	752	1,805

1 FY16 cash remittances include £100 million received from UK & Ireland Life and £83 million received from UK & Ireland GI in February 2017 in respect of 2016 activity. FY16 cash remittances also include £159 million received from France in January 2017 in respect of 2016 activity.
2 UK Life HY17 remittance includes £115 million of cash received from our internal reinsurance vehicle.
3 Other includes Group Reinsurance.
4 Cash remittances are eliminated on consolidation and are hence not directly reconcilable to the Group's IFRS statement of cash flows.

The increase in cash remittances to the Group was primarily driven by the UK & Ireland Life business which includes £315 million, the second instalment of the overall planned £1 billion Friends Life integration additional remittance (taking the total received to date to £565 million).

Cash remittances in France and Aviva Investors increased, as dividends were not remitted until the second half of 2016.

We report excess centre cash flow annually following receipt of all cash remittances. Excess centre cash flow represents cash remitted by business units to the Group centre less central operating expenses and debt financing costs. It is an important measure of the cash that is available to pay dividends, reduce debt, pay exceptional charges or invest back into our business units. It does not include non-operating cash movements such as disposal proceeds or cash injections.

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 our "cash flow plus growth" investment thesis.

Solvency II operating capital generation (OCG) was £1.1 billion during HY17 *(HY16: £1.2 billion)*, incorporating £1.3 billion *(HY16: £1.5 billion)* from our operating business units, net of £0.2 billion *(HY16: £0.3 billion)* of debt and corporate centre costs. The business unit OCG reduced by £0.2 billion in the period reflecting a lower benefit from non-recurring capital actions in Europe in 2017.

	Life business SII Operating Capital Generation				Non-Life SII Operating Capital Generation		6 months 2016
6 months 2017 **£bn**	**Impact of New Business[1]**	**Earnings from Existing Business**	**Other**	**Life SII Operating Capital Generation**	**GI, Health, FM & Other SII Operating Capital Generation**	**Total SII Operating Capital Generation**	Total SII Operating Capital Generation[4]
United Kingdom & Ireland Life	**—**	**0.4**	**0.2**	**0.6**	—	**0.6**	0.7
United Kingdom & Ireland General Insurance and Health					**0.2**	**0.2**	0.1
Canada					**0.1**	**0.1**	0.1
Europe	**—**	**0.3**	**—**	**0.3**	**0.1**	**0.4**	0.6
Asia, Group centre costs and Other[2]	**—**	**—**	**—**	—	**(0.2)**	**(0.2)**	(0.3)
Total Group Solvency II operating capital generation[3]	**—**	**0.7**	**0.2**	**0.9**	**0.2**	**1.1**	1.2

1 Impact of new business (Life) as set out in note 4 Solvency II Surplus impact of new business.
2 Other includes changes in Group diversification benefit.
3 As reported in the movement in Group Solvency II surplus disclosure in note 8iv.
4 A split of life business OCG into the impact of new business, earnings from existing business and other is not available for HY16.

	Life business SII Operating Capital Generation				Non-Life SII Operating Capital Generation	
Full Year 2016 £bn	Impact of New Business[1]	Earnings from Existing Business	Other[2]	Life SII Operating Capital Generation	GI, Health, FM & Other SII Operating Capital Generation	Total SII Operating Capital Generation
United Kingdom & Ireland Life	(0.1)	1.4	1.2	2.5	—	2.5
United Kingdom & Ireland General Insurance and Health					0.3	0.3
Canada					0.3	0.3
Europe	(0.1)	0.6	0.4	0.9	0.1	1.0
Asia, Group centre costs and Other[2]	—	—	0.2	0.2	(0.8)	(0.6)
Total Group Solvency II operating capital generation[3]	(0.2)	2.0	1.8	3.6	(0.1)	3.5

1 Impact of new business (Life) as set out in note 4 Solvency II Surplus impact of new business.
2 Other includes changes in Group diversification benefit.
3 As reported in the movement in Group Solvency II surplus disclosure in note 8iv.

Solvency II OCG is the Solvency II surplus movement in the period due to operating items including the impact of new business, expected investment returns on existing business, operating variances, operating assumption changes and management actions. It excludes economic variances, economic assumption changes and integration and restructuring costs which are included in non-operating capital generation. The expected investment returns are consistent with the returns used in IFRS (as set out in notes A4 and A5 in the financial supplement), except in UK Life where a risk-free curve plus an allowance for expected real-world returns (less an adjustment for credit risk, where required) is applied. Total Group OCG is a component of the movement in Group Solvency II surplus over the period as set out in note 8.iv and is not reconcilable to IFRS.

For life business, the impact of new business is the change in Solvency II surplus resulting from new business written in the period. In the current period, the contribution from new business is neutral; however, this business is expected to generate an operating surplus through earnings from existing business in future periods.

Life business earnings from existing business is the Solvency II surplus movement in the period due to operating items excluding the impacts of New Business and Other OCG. Life business Other OCG includes non-recurring capital actions and operating assumption changes.

Our principal source of Group centre liquidity is cash remittances in the form of dividends and debt interest receipts from our businesses. 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 for investment in initiatives that provide potential future growth.

3 – Expenses

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
United Kingdom and Ireland Life	**431**	439	867
United Kingdom and Ireland General Insurance & Health	**346**	372	665
Canada	**234**	167	396
Europe	**351**	318	641
Asia	**101**	88	177
Aviva Investors	**202**	192	367
Other Group activities	**186**	120	295
Operating cost base	**1,851**	1,696	3,408
Integration & restructuring costs[1]	**52**	105	212
Expense base	**1,903**	1,801	3,620
Operating expenses ratio[2]	**53.3%**	53.4%	50.5%

1 As reported within other expenses of £1,669 million *(HY16: £2,071 million; FY16: £3,853 million)* in the consolidated income statement.
2 Group operating expenses expressed as a percentage of operating profit before operating expenses and group debt costs.

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Claims handling costs[1]	**163**	139	290
Non-commission acquisition costs[2]	**431**	423	846
Other expenses[3]	**1,257**	1,134	2,272
Operating cost base	**1,851**	1,696	3,408

1 Operating expenses as reported within net claims and benefits paid of £12,501 million *(HY16: £11,453 million; FY16: £23,782 million)* in the consolidated income statement.
2 Operating expenses as reported within fee and commission expense of £2,200 million *(HY16: £1,654 million; FY16: £3,885 million)* in the consolidated income statement.
3 Operating expenses as reported within other expenses of £1,669 million *(HY16: £2,071 million; FY16: £3,853 million)* in the consolidated income statement.

The operating expense ratio is broadly flat despite investment in digital and other growth initiatives.

Operating expenses were £1,851 million *(HY16: £1,696 million)*. The increase in operating expenses was primarily driven by £75 million adverse foreign exchange movements, a full six months of RBC operating costs and targeted investment.

Integration & restructuring costs halved to £52 million *(HY16: £105 million)* as a result of lower integration spend on the Friends Life acquisition and completion of the Solvency II project in 2016, partially offset by integration spend on the RBC acquisition.

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

Following the introduction of Solvency II, the new prudential regulatory framework that came into force on 1 January 2016, the Group has calculated VNB on an adjusted Solvency II basis.

Adjusted Solvency II VNB reflects Solvency II assumptions and allowance for risk and is defined as the increase in Solvency II Own Funds resulting from business written in the period, adjusted to:

- Include business which is not included in the Solvency II best estimate liability (BEL) valuation (e.g. UK and Asia Healthcare business, Retail fund management business and the UK Equity release business);
- Remove the impact of contract boundaries; and
- Include look through profits in service companies (where not included in Solvency II).

A reconciliation between adjusted Solvency II VNB, Solvency II Own Funds impact of new business and Solvency II surplus impact of new business is provided below. The trend analysis of adjusted Solvency II VNB and adjusted Solvency II present value of new business premiums (PVNBP) is included in the financial supplement, section E: VNB & sales analysis.

6 months 2017	UK & Ireland £m	Europe £m	Asia & Other £m	Group £m
Adjusted Solvency II VNB (gross of tax and non-controlling interests)[1]	**270**	**243**	**83**	**596**
Allowance for Solvency II contract boundary rules	**30**	**(40)**	**2**	**(8)**
Differences due to change in business in scope	**(85)**	**(22)**	**(14)**	**(121)**
Tax & Other[2]	**(49)**	**(85)**	**(12)**	**(146)**
Solvency II Own Funds impact of new business (net of tax and non-controlling interests)	**166**	**96**	**59**	**321**

6 months 2016	UK & Ireland £m	Europe £m	Asia & Other £m	Group £m
Adjusted Solvency II VNB (gross of tax and non-controlling interests)[1,4]	205	188	55	448

Full Year 2016	UK & Ireland £m	Europe £m	Asia & Other £m	Group £m
Adjusted Solvency II VNB (gross of tax and non-controlling interests)[1,3]	441	417	134	992
Allowance for Solvency II contract boundary rules	51	(55)	(9)	(13)
Differences due to change in business in scope	(131)	(41)	(51)	(223)
Tax & Other[2]	(78)	(146)	(13)	(237)
Solvency II Own Funds impact of new business (net of tax and non-controlling interests)	283	175	61	519

1 The principal methodologies and assumptions underlying the calculation of adjusted Solvency II VNB are set out in section E1 and E14 respectively.
2 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.
3 UK Life VNB includes £(12) million relating to the internal transfer of annuities from a with-profits fund to a non-profit fund during the second half of 2016.
4 A reconciliation between Adjusted Solvency II VNB and Solvency II Own Funds impact of new business is not available for HY16.

The Group's VNB increased by 33% to £596 million *(HY16: £448 million)*. This was primarily driven by growth of new business in the UK, Europe and Asia and a favourable impact from foreign exchange movements of £21 million.

The UK benefitted from an increase in VNB primarily reflecting higher volumes of long-term savings business and the introduction of transitional relief. A clarification to the Solvency II rules made by the Prudential Regulation Authority (PRA) in 2017, relating to new business written since the introduction of Solvency II, has been reflected in the calculation of UK Life's transitional measures. This increased the adjusted Solvency II VNB (and Solvency II Own Funds impact of new business and Solvency II Surplus from life new business within OCG) by £24 million gross of tax and non-controlling interests as at HY17.

The increase in Europe was mainly driven by a change in business mix towards more profitable unit-linked and protection business in France and Italy and favourable foreign exchange movements, partly offset by lower volumes of with-profits business in France and the sale of Antarius. VNB in Asia benefitted from a more profitable business mix and higher volumes of protection business in China and higher volumes of with-profits business in Singapore, as well as favourable foreign exchange movements.

The life new business written during the period has increased the Solvency II Capital Requirement by £0.3 billion, split £0.2 billion for UK & Ireland, £0.1 billion for Europe and £nil for Asia & Other business. This has resulted in a net £nil impact on Solvency II Surplus from life new business across the Group.

Solvency II Surplus impact of new business is set out in section 2.ii Life business Solvency II Operating Capital Generation impact of new business.

5 – General insurance combined operating ratio (COR)[1]

	Net earned premiums			Claims ratio[3]			Commission and expense ratio[4]			Combined operating ratio[5]		
	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m	**6 months 2017 %**	6 months 2016 %	Full Year 2016 %	**6 months 2017 %**	6 months 2016 %	Full Year 2016 %	**6 months 2017 %**	6 months 2016 %	Full Year 2016 %[7]
United Kingdom[2,7]	**1,996**	1,884	3,821	**59.9**	60.5	73.8	**33.3**	33.4	32.5	**93.2**	93.9	106.3
Ireland	**202**	159	351	**52.8**	62.4	63.3	**31.9**	29.5	29.1	**84.7**	91.9	92.4
United Kingdom & Ireland	**2,198**	2,043	4,172	**59.3**	60.6	73.0	**33.2**	33.2	32.2	**92.5**	93.8	105.2
Canada	**1,429**	1,020	2,420	**69.5**	64.6	63.5	**29.4**	31.3	29.5	**98.9**	95.9	93.0
Europe	**778**	658	1,396	**63.4**	68.5	66.7	**29.3**	30.4	29.1	**92.7**	98.9	95.8
Asia[6]	**6**	6	12	**87.3**	66.9	72.0	**44.1**	41.7	37.9	**131.4**	108.6	109.9
Total[2,7]	**4,411**	3,727	8,000	**63.2**	63.5	69.2	**31.3**	32.2	30.9	**94.5**	95.7	100.1

1 COR is now reported on an earned basis. Comparatives have been realigned to reflect this change.
2 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
3 Claims ratio: incurred claims expressed as a percentage of net earned premiums.
4 Commission and expense ratio: earned commissions and expenses expressed as a percentage of net earned premiums.
5 Combined operating ratio: aggregate of claims ratio and commission and expense ratio.
6 Includes Aviva Re net earned premiums.
7 FY16 COR includes the impact of the change in the Ogden discount rate which had an impact of 5.9pp.

Group COR for the period improved 1.2pp to 94.5% *(HY16: 95.7%)*, with the claims ratio improving 0.3pp, and commission and expense ratio decreasing by 0.9pp.

The claims ratio decreased to 63.2pp *(HY16: 63.5%)*, primarily due to more benign weather across the Group and underwriting initiatives in the UK and Ireland. This was partly offset by increased claims frequency and unfavourable prior year development in Canada.

The 0.9pp decrease in the Group's commission and expense ratio was mainly attributable to the contribution from RBC in Canada, which has a lower commission ratio.

We continue to apply our reserving policy consistently and to focus on understanding the cost of claims to ensure that reserves are maintained at an appropriate level. Prior year reserve movements will vary year to year but our business is predominantly short tail in nature and the loss development experience is generally stable. At HY17, we had lower prior year releases in our general insurance business of £32 million *(HY16: £57 million)*, which had a beneficial impact of 0.6pp *(HY16: 1.6pp)*. The impact of Ogden on our HY17 results is not material.

Normalised accident year combined operating ratio (COR)

	UK & Ireland[1]			Canada			Europe			Total		
	6 months 2017 %	6 months 2016 %	Full Year 2016 %	**6 months 2017 %**	6 months 2016 %	Full Year 2016 %	**6 months 2017 %**	6 months 2016 %	Full Year 2016 %	**6 months 2017 %**	6 months 2016 %	Full Year 2016 %
Normalised accident year claims ratio[2]	**63.1**	64.5	66.0	**67.5**	67.5	68.2	**64.0**	66.5	68.6	**64.7**	65.7	67.1
Impact of change in Ogden discount rate	**—**	—	11.4	**—**	—	—	**—**	—	—	**—**	—	5.9
Prior year reserve release[3]	**(0.9)**	(1.5)	(2.1)	**1.6**	(3.8)	(5.4)	**(2.7)**	(0.7)	(2.5)	**(0.6)**	(1.6)	(2.9)
Weather over/(under) long-term average[4]	**(2.9)**	(2.4)	(2.3)	**0.4**	0.9	0.7	**2.1**	2.7	0.6	**(0.9)**	(0.6)	(0.9)
Claims ratio	**59.3**	60.6	73.0	**69.5**	64.6	63.5	**63.4**	68.5	66.7	**63.2**	63.5	69.2
Commission and expense ratio[5]	**33.2**	33.2	32.2	**29.4**	31.3	29.5	**29.3**	30.4	29.1	**31.3**	32.2	30.9
Normalised accident year combined operating ratio	**96.3**	97.7	98.2	**96.9**	98.8	97.7	**93.3**	96.9	97.7	**96.0**	97.9	98.0
Combined operating ratio	**92.5**	93.8	105.2	**98.9**	95.9	93.0	**92.7**	98.9	95.8	**94.5**	95.7	100.1

1 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
2 Normalised accident year claims ratio represents the claims ratio adjusted to exclude prior year claims development and weather variations vs. expectations, gross of the impact of profit sharing agreements and the impact of the change in the Ogden discount rate in FY16.
3 Prior year reserve release represents the changes in the ultimate cost of the claims incurred in prior years, gross of the impact of profit sharing arrangements.
4 Weather over/(under) long-term average represents the difference between the reported net incurred cost of general insurance claims that have occurred as a result of weather events and the equivalent long-term average expected net costs, gross of the impact of profit sharing arrangements.
5 The commission and expense ratio includes the impact of profit sharing arrangements.

The definition of COR has been changed to an earned basis. It was previously calculated on a hybrid basis: the claims ratio was on an earned basis with the incurred claims expressed as a percentage of net earned premiums; while the commission and expense ratio was on a written basis with written commissions and written expenses expressed as a percentage of net written premiums. This did not consider the impact of deferred commissions and expenses, which are included in the underwriting result. The new method is calculated as claims incurred, earned commission and earned expenses as a percentage of net earned premiums which aligns better to our underwriting result. Comparatives have been realigned for HY16 and FY16 on an earned basis.

6.i – United Kingdom & Ireland Life

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
Life operating profit	**756**	711	6%	1,555
Cash remitted to Group[1]	**922**	577	60%	1,096
Expenses				
Operating expenses	**431**	439	(2)%	867
Integration and restructuring costs	**32**	61	(48)%	119
	463	500	(7)%	986
Value of new business: Adjusted SII basis	**270**	205	32%	441

1 HY17 includes £115 million of cash received from the Group's internal reinsurance vehicle. FY16 cash remittances include amounts of £100 million received from UK & Ireland Life in February 2017 in respect of 2016 activity.

Overview

Our franchises across long-term savings, protection and retirement have continued to grow, delivering a 6% year on year increase in operating profit to £756 million. Growth was underpinned by an increase in long-term savings assets under administration (up to £109 billion) and a 32% increase in Solvency II value of new business to £270 million.

The payment of a further £315 million Friends Life integration special remittance takes the total to date to £565 million of the targeted £1 billion.

Operating and financial performance

Operating profit

UK & Ireland Life operating profit for the first half of 2017 increased 6% to £756 million *(HY16: £711 million)*.

In the UK, operating profit increased 7% to £750 million *(HY16: £699 million)*. New business grew, offsetting the expected reduction in Legacy profits as the book continues to run off and the reduction in Other.

Ireland operating profit was £6 million *(HY16: £12 million)*.

	6 months 2017 £m			6 months 2016 £m				Full Year 2016 £m		
Life Operating Profit	**New Business**[1]	**Existing Business**	**Total £m**	New Business[1]	Existing Business	Total £m	Sterling % change	New Business[1]	Existing Business	Total £m
Long-term savings[2]	**(40)**	**129**	**89**	(45)	109	64	39%	(77)	219	142
Annuities & equity release	**109**	**200**	**309**	88	158	246	26%	305	351	656
Protection	**67**	**66**	**133**	46	68	114	17%	118	124	242
Legacy[3]	**—**	**187**	**187**	—	192	192	(3)%	—	332	332
Other[4]	**—**	**32**	**32**	—	83	83	(61)%	—	151	151
UK Life	**136**	**614**	**750**	89	610	699	7%	346	1,177	1,523
Ireland Life			**6**			12	(50)%			32
Total			**756**			711	6%			1,555

1 New business represents the income earned on new business written during the period reflecting premiums less initial reserves and initial expenses (including commission) less deferred costs along with any changes to existing contracts, which were not anticipated at the outset of the contract that generate additional shareholder risk.
2 Includes pensions and the savings Platforms.
3 Legacy represents products no longer actively marketed, including With-Profits and Bonds.
4 Other represents changes in assumptions and modelling, other non-recurring product specific items, and non product specific items.

Long-term savings

Long-term savings generated £89 million of operating profit *(HY16: £64 million)* comprising £129 million from existing business net of a £40 million new business strain. The increase compared to HY16 is driven by assets under administration increasing to £109 billion *(HY16: £95 billion)* due to positive net flows and favourable investment market movements. Net fund flows increased to £2.1 billion *(HY16: £2.0 billion)*.

Annuities and equity release

Annuities and equity release generated £309 million of operating profit *(HY16: £246 million)* comprising £200 million from existing business and £109 million from new business. This was underpinned by a 75% increase in PVNBP to £1,435 million *(HY16: £818 million)* with an increase in bulk annuities to £320 million *(HY16: £64 million)*. We have continued to optimise our asset mix, increasing our investment in illiquid assets which has resulted in a £54 million benefit for existing business in the first half of 2017.

Protection

Protection generated £133 million of operating profit *(HY16: £114 million)* including £66 million from existing business and £67 million from new business. Operating profit benefitted from solid growth in individual protection sales together with expense efficiencies.

Legacy

Legacy contributed £187 million of operating profit *(HY16: £192 million)*. The reduction in operating profit is driven by the expected run-off of the business, partly offset by favourable investment market movements as 2017 assets under management reduced 4% to £80 billion *(HY16: £83 billion)*.

Other

£32 million of Other includes a £55 million benefit from a change in the allocation strategy for those assets backing annuities and the net impact of various reserve movements and non product specific items. There were no material assumption changes in HY17. In HY16 Other mainly related to a £63 million benefit in relation to annuitant mortality assumption changes.

6.i – United Kingdom & Ireland Life continued

Cash

Cash remitted to Group was £922 million *(HY16: £577 million)* including £315 million, the second instalment of the targeted £1 billion Friends Life integration additional remittance, taking instalments to date to £565 million. Excluding the integration remittance, underlying remittances have increased 5% year on year.

Expenses

Operating expenses reduced 2% to £431 million *(HY16: £439 million)*.

UK Life operating expenses reduced to £412 million *(HY16: £418 million)* with the reduction year on year reflecting continued cost control, whilst also investing in growth.

Ireland operating expenses have decreased due to reduced project spend and continued focus on cost control.

Integration and restructuring expenses reduced by 48% to £32 million *(HY16: £61 million)* due to lower integration spend on the Friends Life acquisition.

Value of new business: Adjusted SII Basis (VNB)

	6 months 2017 £m	6 months 2016 £m	Sterling % change[1]	Full Year 2016 £m
UK Life				
Long-term savings	**82**	37	122%	108
Annuities and equity release	**77**	71	8%	141
Protection	**88**	79	11%	151
Health & Other	**20**	13	54%	29
	267	200	34%	429
Ireland Life	**3**	5	(42)%	12
Total	**270**	205	32%	441

1 Currency movements are calculated on unrounded numbers so minor rounding differences may exist.

UK & Ireland Life VNB increased 32% to £270 million *(HY16: £205 million)*.

UK Life VNB increased to £267 million *(HY16: £200 million)*, including a £24 million benefit following a clarification to Solvency II rules on the calculation of transitional measures.

Long-term savings VNB increased to £82 million *(HY16: £37 million)*, driven by continued growth from the savings platforms, and new workplace pension schemes.

Annuities and equity release VNB increased to £77 million *(HY16: £71 million)* driven by an allowance for transitional relief on new business and higher volumes, partially offset by reduced margins on annuities.

Protection VNB increased to £88 million *(HY16: £79 million)*, benefitting from growth in individual protection new business volumes as we see the continued benefit of our digital platform.

Health & Other VNB increased 54% to £20 million, benefitting from increased volumes.

Ireland VNB decreased to £3 million *(HY16: £5 million)*, due to a change in business mix and reduced annuity margins driven by a reduction in asset yields.

6.ii – United Kingdom & Ireland general insurance and health

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
Operating profit[1,2]	**259**	231	12%	471
Cash remitted to Group[3]	**8**	—	100%	91
Expenses				
Operating expenses	**346**	372	(7)%	665
Integration and restructuring costs	**—**	8	(100)%	15
	346	380	(9)%	680
Combined operating ratio[2,4,5]	**92.5%**	93.8%	(1.3)pp	105.2%
Combined operating ratio excluding impact of projected change in Ogden rate[1,2,4,5]				93.8%
General insurance net written premiums[2]	**2,326**	2,180	7%	4,308

1 FY16 excludes the impact of the change in the Ogden discount rate of £475 million, which has been recognised as an exceptional non-operating item.
2 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
3 FY16 cash remittances include amounts of £83 million received from UK & Ireland General Insurance in February 2017 in respect of 2016 activity.
4 General insurance business only.
5 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.

Overview

Our continued focus on disciplined pricing and underwriting, claims and indemnity management and control of expenses has contributed to our results in HY17.

Premium growth has been in our chosen channels and products, particularly in Digital Motor and Commercial Property and Specialty, which has given us the opportunity to reduce volumes in our underperforming segments within our Commercial Motor book. We continue to make good progress in controlling our costs. Ireland's growth in profitability due to strong rate increases and improved performance enables us to continue to invest in growing the business.

Operating and financial performance

Operating profit[1]

United Kingdom and Ireland	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
General insurance				
Underwriting result	**166**	127	31%	259
Longer-term investment return	**85**	93	(9)%	176
Other	**—**	(1)	100%	(2)
	251	219	15%	433
Health				
Underwriting result	**7**	10	(30)%	35
Longer-term investment return	**1**	2	(50)%	3
	8	12	(33)%	38
General insurance and health operating profit	**259**	231	12%	471

1 FY16 excludes the impact of the change in the Ogden discount rate of £475 million, which has been recognised as an exceptional non-operating item. FY16 also excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).

UK & Ireland general insurance and health operating profit increased 12% to £259 million. Excluding Ireland health, which was disposed of in August 2016, general insurance and health operating profit is up 15%.

The general insurance underwriting result increased 31% to £166 million *(HY16: £127 million)* with improved performance from a continued focus on portfolio rebalancing and cost initiatives, and lower weather claims, despite lower prior year releases.

UK & Ireland general insurance longer-term investment return reduced by £8 million to £85 million *(HY16: £93 million)*, mostly due to the impact of the reduction in the internal loan (Group net neutral). Excluding the internal loan impact, the UK & Ireland general insurance operating profit was up 20%.

Cash

Cash remitted to the Group was £8 million *(HY16: £nil)*.

Expenses

UK & Ireland general insurance and health expenses were 9% lower at £346 million *(HY16: £380 million)*, partially due to the disposal of Ireland health.

6.ii – United Kingdom & Ireland general insurance and health continued

	Net written premiums				Combined operating ratio[2]			
United Kingdom and Ireland General insurance[1]	**6 months 2017 £m**	6 months 2016 £m	Sterling % change	Full Year 2016 £m	**6 months 2017 £m**	6 months 2016 £m	Change	Full Year 2016 £m
Personal Motor	**580**	530	9%	1,076				
Personal Home and Specialty	**689**	658	5%	1,332				
UK Personal Lines	**1,269**	1,188	7%	2,408	**92.9%**	93.3%	(0.4)pp	92.5%
Commercial Motor	**269**	280	(4)%	538				
Commercial Property and Specialty	**567**	533	6%	984				
UK Commercial Lines	**836**	813	3%	1,522	**93.6%**	94.9%	(1.3)pp	96.1%
UK general insurance excluding impact of change in Ogden discount rate	**2,105**	2,001	5%	3,930	**93.2%**	93.9%	(0.7)pp	93.9%
Impact of change in Ogden discount rate								12.4%
UK general insurance	**2,105**	2,001	5%	3,930	**93.2%**	93.9%	(0.7)pp	106.3%
Ireland general insurance	**221**	179	23%	378	**84.7%**	91.9%	(7.2)pp	92.4%
Total	**2,326**	2,180	7%	4,308	**92.5%**	93.8%	(1.3)pp	105.2%

1 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
2 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.

General insurance net written premiums

UK & Ireland general insurance net written premiums increased 7%. UK premiums were up 5%, in our chosen channels and products, particularly in Digital Motor and Commercial Property and Specialty.

UK Personal Motor increased 9%, particularly in our Digital channel which grew 15%, from both rate and volume. Our rating has been in line with the market, which has experienced significant increases to match increased claims inflation as a consequence of the change in Ogden rate. Rate hardening and higher levels of switching have allowed us to improve our risk mix reflected in growth in policies in the Digital channel.

UK Personal Home and Specialty grew 5%, driven by additional premiums in Specialty lines, and supported by growth in the Home book due to Digital and Partnerships.

UK Commercial was up 3%, reflecting growth in Property and Specialty, partly offset by rating actions and other underwriting actions taken in underperforming segments in Commercial Motor, in a continued soft market.

Ireland saw a 23% increase (12% in constant currency), with growth across all lines of business from both rate and volume.

General insurance combined operating ratio (COR)

UK & Ireland COR was lower at 92.5% *(HY16: 93.8%)*, reflecting underwriting initiatives, and the continued benefit from growth in targeted markets. Weather experience was more benign in HY17, benefitting both personal and commercial lines, offset by lower levels of prior year releases.

UK Personal Lines COR improved by 0.4pp to 92.9%, as a result of growth in Digital and improved performance in the Broker channel.

UK Commercial Lines COR of 93.6% was 1.3pp lower, as we grow in Property and Specialty, whilst remediating in sectors of Commercial Motor.

Ireland COR of 84.7% was 7.2pp better, with claims initiatives driving a lower claims ratio.

6.iii – Canada

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m
General Insurance operating profit	**71**	88	(19)%	(28)%	269
Cash remitted to Group	**13**	4	225%	—	130
Expenses					
Operating expenses	**234**	167	40%	25%	396
Integration and restructuring costs	**9**	3	200%	180%	18
	243	170	43%	27%	414
Combined operating ratio[1]	**98.9%**	95.9%	3.0pp	3.0pp	93.0%
Net written premiums	**1,477**	1,049	41%	25%	2,453

1 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.

Overview

In 2017, operating profit fell 28% in constant currency and the combined operating ratio worsened to 98.9% impacted by prior year development which went from significantly favourable to modestly unfavourable. Catastrophe losses were above the long-term average. Excluding the impact of the RBC acquisition, net written premiums grew 3% in constant currency despite lacklustre economic conditions and continued challenges in the personal motor industry.

The integration of RBC Insurance is progressing well, with the completion of a major new system implementation.

Operating and financial performance

Operating profit

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m
Underwriting result	**16**	42	(62)%	(66)%	168
Longer-term investment return	**57**	47	21%	8%	105
Other	**(2)**	(1)	(100)%	(38)%	(4)
Total	**71**	88	(19)%	(28)%	269

The lower underwriting result was mainly driven by higher claims frequency and unfavourable prior year development, partly offset by the contribution from RBC. Frequency was worse year-on-year but broadly similar to the three year average and partly a reflection of a more typical Canadian winter. The moderately unfavourable prior year development reflects the absence in HY17, of the large releases that benefitted the prior year (much of which were due to Ontario motor insurance), coupled with revisions in case reserves for a modest number of large claims spread across both motor and property.

Net catastrophe losses are broadly in line with prior year despite having one of the largest Canadian insured events in history, the Alberta wildfires, in the prior year. The longer-term investment result increased due to the contribution from the RBC acquisition.

Cash

Cash remittances during the period were £13 million *(HY16: £4 million)* reflecting increased loan interest.

Expenses

Operating expenses increased to £234 million *(HY16: £167 million)* and integration and restructuring costs increased to £9 million *(HY16: £3 million)* mainly driven by the RBC acquisition and the impact of foreign exchange movements.

	Net written premiums					Combined operating ratio[1]			
	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m	6 months 2017 £m	6 months 2016 £m	Change	Full Year 2016 £m
Personal Lines	**1,047**	680	54%	37%	1,680	**99.4%**	96.9%	2.5pp	93.4%
Commercial Lines	**430**	369	17%	4%	773	**97.6%**	94.0%	3.6pp	92.2%
Total	**1,477**	1,049	41%	25%	2,453	**98.9%**	95.9%	3.0pp	93.0%

1 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.

Net written premiums

Net written premiums were £1,477 million *(HY16: £1,049 million)*, up 25% excluding the impact of foreign exchange rate movements, mostly due to the RBC acquisition. Net written premiums increased 3% in constant currency, excluding RBC.

Combined operating ratio

The combined operating ratio was 98.9% *(HY16: 95.9%)*. Excluding prior year development and weather, the claims ratio was stable, despite increased claims frequency. The commission and expense ratio was lower, as a result of the shift in business mix following the RBC acquisition.

6.iv – Europe[1]

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m
Operating profit					
Life	**433**	395	10%	(1)%	844
General insurance and health	**85**	35	143%	117%	120
	518	430	20%	9%	964
Cash remitted to Group[2]	**190**	169	12%	—	449
Expenses					
Operating expenses	**351**	318	10%	—	641
Integration and restructuring costs	**9**	5	80%	82%	9
	360	323	11%	1%	650
Value of new business: Adjusted SII basis	**243**	188	29%	18%	417
Combined operating ratio[3]	**92.7%**	98.9%	(6.2)pp	(6.2)pp	95.8%
Net written premiums[3]	**879**	757	16%	5%	1,438

1 Our European business includes life and general insurance business written in France, Poland and Italy, life business in Spain and Turkey and health business in France.
2 Cash remittances include amounts of £159 million received from Europe in January 2017 in respect of 2016 activity.
3 General insurance business only.

Overview

Our businesses have shown continued resilient performance, with a 9% increase in operating profit in constant currency, reflecting the strength and diversity of our European franchise. We reported year-on-year volume growth, with value of new business (VNB) and net written premiums (NWP) increasing by 18% and 5% on a constant currency basis respectively. This is despite persistently low interest rates and continued volatility in financial markets, impacted in part by political uncertainty. The business has benefitted from foreign exchange movements following the strengthening of the euro and Polish zloty by 9% and 11% respectively against sterling.

In line with our strategy of allocating capital where we can deliver higher returns, our European businesses announced three disposals in the period. In France, we completed the sale of Antarius in April 2017, to Sogecap, a subsidiary of Société Générale. In Spain, we announced the sale of our 50% shareholding in our life insurance and pension joint ventures Unicorp Vida and Caja España Vida, as well as our retail life insurance business Aviva Vida y Pensiones to Santalucía. In Italy, we have been notified of the termination of our distribution agreement with Banco Popolare.

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

Operating and financial performance

Operating profit

	Life					General insurance & health				
	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m	**6 months 2017 £m**	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m
France (excluding Antarius)[1]	**196**	173	13%	2%	351	**54**	16	238%	202%	70
Poland[2]	**77**	60	28%	15%	132	**11**	3	267%	223%	8
Italy	**83**	74	12%	1%	170	**20**	16	25%	13%	42
Spain	**51**	47	9%	(1)%	107	**—**	—	—	—	—
Turkey	**5**	2	150%	245%	6	**—**	—	—	—	—
Total (excluding Antarius)	**412**	356	16%	5%	766	**85**	35	143%	117%	120
Antarius[1]	**21**	39	(46)%	(51)%	78	**—**	—	—	—	—
Total	**433**	395	10%	(1)%	844	**85**	35	143%	—	120

1 In April 2017, Aviva sold its 50% shareholding in Antarius. The Antarius figures shown represent a full 6 months in HY16, a full year for FY16, and up to completion of the disposal in 2017.
2 Poland operating profit benefits from an additional £7 million due to consolidating our joint ventures with Bank Zachodni WBK SA for the first time in 2017.

Life operating profit was broadly stable at £433 million *(HY16: £395 million)*. Excluding Antarius, life operating profit was up 5%. In France, operating profit excluding Antarius was £196 million *(HY16: £173 million)*, an increase of 2%, due to growth in protection and unit-linked products, and higher unit-linked fee income supported by favourable equity market movements. Poland operating profit of £77 million *(HY16: £60 million)* increased 15% as a result of the favourable impact of equity market movements on pension assets, and the benefit of consolidating the joint venture with Bank Zachodni WBK SA for the first time in HY17. Italy operating profit of £83 million *(HY16: £74 million)* was up 1% with volume growth supported by the launch of hybrid with-profits and unit-linked products. Spain operating profit fell 1% to £51 million *(HY16: £47 million)* due to lower sales on savings products, partially offset by an improved performance on protection business.

General insurance operating profits increased by 117% to £85 million *(HY16: £35 million)*. This was mainly driven by France operating profit growth to £54 million *(HY16: £16 million)*, primarily due to favourable prior year development and better weather experience. In Poland, operating profit increased to £11 million *(HY16: £3 million)* due to lower commercial large losses and decreased motor claims frequency along with the joint venture consolidation. Operating profit in Italy of £20 million *(HY16: £16 million)* increased 13% driven by volume growth and claims initiatives.

6.iv – Europe continued

Cash remitted to Group

Cash remitted to Group was £190 million, with higher remittances in France as dividends were not remitted until the second half of 2016.

Expenses

Expenses were up 1% to £360 million *(HY16: £323 million)* due to the consolidation of the joint ventures in Poland, mostly offset by lower expenses in France despite investment to grow and reorganise the business.

Value of new business: Adjusted SII basis (VNB)

	6 months 2017 £m	6 months 2016 £m	Sterling % change[1]	Constant currency % change	Full Year 2016 £m
France	**120**	101	19%	8%	225
Poland	**28**	22	24%	10%	54
Italy	**60**	42	43%	29%	83
Spain	**25**	12	107%	87%	34
Turkey	**10**	11	(1)%	8%	21
Total	**243**	188	29%	18%	417

1 Currency movements are calculated on unrounded numbers so minor rounding differences may exist.

VNB increased by 18% with strong performance across all markets. VNB in France increased 8%, up 25% excluding Antarius, with higher unit-linked and protection volumes, partly offset by lower with-profits volumes. In Poland, VNB increased by 10% due to the consolidation of the joint venture. VNB in Italy was up by 29% as a result of higher unit-linked volumes and improved margin on with-profits products. Spain VNB increased 87%, reflecting growth in higher margin unit-linked and protection products. Turkey's VNB increased 8% due to volume growth on protection and pensions.

	Net written premiums[1]					**Combined operating ratio[1,2]**			
	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m	Sterling % change	Constant currency %	**6 months 2017 £m**	6 months 2016 £m	Change	Full Year 2016 £m
France	**605**	526	957	15%	4%	**93.2%**	100.4%	(7.2)pp	97.0%
Poland[3]	**59**	43	86	37%	23%	**86.2%**	100.1%	(13.9)pp	97.8%
Italy	**215**	188	395	14%	4%	**93.4%**	94.8%	(1.4)pp	92.5%
Total	**879**	757	1,438	16%	5%	**92.7%**	98.9%	(6.2)pp	95.8%

1 General insurance business only.
2 The combined operating ratio is now reported on an earned basis. Comparatives have been realigned to reflect this change. See note 5 for details.
3 Poland net written premium and combined operating ratio excludes the joint venture in 2016 but has been consolidated for the first time in 2017.

Net written premiums

General insurance NWP of £879 million has increased by 5% with growth in all our markets. In France, general insurance NWP was £605 million *(HY16: £526 million)*, an increase of 4% primarily reflecting rating actions. In Poland, NWP increased by 23% to £59 million *(HY16: £43 million)* with benefits from the consolidation of the joint venture partly offset by a reduction in motor volumes as part of underwriting action taken. Italy's NWP grew by 4% to £215 million *(HY16: £188 million)*, primarily in non-motor.

Combined operating ratio (COR)

The European COR has improved by 6.2pp primarily due to France's COR reducing 7.2pp to 93.2%. Our claims ratio has decreased by 5.1pp to 63.4% *(HY16: 68.5%)* due to favourable prior year development and better weather experience in France. Continued pricing actions across the markets, notably on motor in both France and Poland, and underwriting discipline when selecting risks have also improved the claims ratio.

6.v – Asia

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m
Operating profit					
Life	**120**	118	2%	(3)%	241
General insurance & health	**(5)**	(6)	17%	33%	(13)
	115	112	3%	(1)%	228
Expenses					
Operating expenses	**101**	88	15%	7%	177
Integration and restructuring costs	**—**	8	(100)%	(100)%	17
	101	96	5%	(2)%	194
Value of new business: Adjusted SII basis	**71**	43	63%	49%	106
Combined operating ratio[1]	**131.4%**	108.6%	22.8pp	22.8pp	109.9%
Net written premiums[1]	**6**	5	20%	1%	11

1 General insurance business only.

Overview

Asia continues to invest in and strengthen its distribution channels and digital and analytics capabilities to support business growth. In Singapore, subsequent to the successful launch of Aviva Financial Advisers in 2016, the owned financial advisory firm – Professional Investment Advisory Services (PIAS), expanded in May 2017. In China, both the agency and broker channels continued to grow.

On 19 July 2017 we announced the sale of Friends Provident International Limited (FPI) to RL360 Holding Company Limited, a subsidiary of International Financial Group Limited.

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

Operating and financial performance

Operating profit

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Constant currency %	Full Year 2016 £m
Life operating profit					
Singapore	**47**	50	(6)%	(15)%	112
FPI	**70**	70	—	1%	140
Other Asia	**3**	(2)	—	—	(11)
	120	118	2%	(3)%	241
General insurance & health operating profit	**(5)**	(6)	17%	33%	(13)
Total operating profit	**115**	112	3%	(1)%	228

Operating profit decreased 1% to £115 million *(HY16: £112 million)* due to a tax recovery benefit in Singapore in HY16. Excluding this, operating profit improved 7% reflecting new business growth generated from the financial advisory channel in Singapore in addition to higher profits generated from existing business and favourable claims and expense experiences in China. The contribution of FPI post amortisation of acquired value in-force business was £2 million *(HY16: £1 million loss)*.

Cash

No dividends were remitted to Group *(HY16: £nil)* as we continue to reallocate capital to support distribution and digital initiatives in the region.

Expenses

Expenses were broadly flat at £101 million *(HY16: £96 million)* with the increase in operating expenses driven by higher distribution costs in Singapore and investment in digital and analytics capabilities offset by a reduction in integration and restructuring costs.

Value of new business: Adjusted SII basis (VNB)

	6 months 2017 £m	6 months 2016 £m	Sterling % change[1]	Constant currency % change[1]	Full Year 2016 £m
Singapore	**44**	34	27%	14%	95
FPI	**(1)**	—	—	—	4
Other Asia	**28**	9	211%	207%	7
Total	**71**	43	63%	49%	106

1 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.

VNB in Asia improved 49% to £71million *(HY16: £43 million)* reflecting growth in Singapore's core financial advisory channel and China. China increased to £31 million *(HY16: £13 million)* driven by the improvement in product mix towards higher margin protection business, growth in agency and broker channels and higher interest rates.

Combined operating ratio

The combined operating ratio increased 22.8pp to 131.4% *(HY16: 108.6%)* due to unfavourable claims experience and continuing softening of market premium rates for motor insurance in Singapore.

6.vi – Aviva Investors

	6 months 2017 £m	6 months 2016 £m	Sterling % change	Full Year 2016 £m
Revenue: Fee income	**273**	241	13%	506
Expenses				
Operating expenses	**202**	192	5%	367
Integration and restructuring costs	**—**	10	(100)%	19
	202	202	—	386
Operating profit				
Fund management	**71**	49	45%	139
Other operations	**25**	20	25%	19
	96	69	39%	158
Cash remitted to Group	**37**	2	—	39
Value of new business: Adjusted SII basis	**12**	12	—	28

Overview

Fund management operating profit increased by 45% to £71 million from HY16. Fund management operating profit margin* increased by 6pp to 26% *(HY16: 20%)*. Progress has been made in broadening our range of outcome oriented propositions, and we continue to invest in the growth of the business.

Operating and financial performance

Revenue

Revenue increased by 13% to £273 million driven by the continued growth of Aviva Investors Multi-Strategy (AIMS) assets under management to £12 billion *(HY16: £6 billion)*, the Friends Life assets on boarded in the second half of 2016 and increased income from the origination of infrastructure assets. Revenue from external clients generated 35% of total revenue *(HY16: 30%)*.

Expenses

Operating expenses in Aviva Investors were £202 million *(HY16: £192 million)* reflecting increased investment in staff and systems as we support the growth of higher value-add products and further development of the business.

Operating profit

Fund management operating profit increased by £22 million to £71 million *(HY16: £49 million)*. This increase was driven by growth in revenue, with operating expenses increasing at a slower rate. This led to an improved operating profit margin.

Operating profit from other operations of £25 million related to insurance recoveries *(HY16: £20 million of which £16 million was from the Group's internal reinsurer)*.

Cash

Cash remitted to Group was £37 million *(HY16: £2 million)* as dividends were not remitted until the second half of 2016.

Value of new business: Adjusted SII basis

Value of new business in Aviva Investors was £12 million, in line with prior year.

Net flows and assets under management – Aviva Investors[1]

	Internal Legacy[2] £m	Internal Core £m	External £m	Total £m
Aviva Investors				
Assets under management at 1 January 2017	97,290	190,667	56,561	344,518
Total Inflows	1,966	11,304	6,099	19,369
Total Outflows	(4,342)	(9,624)	(4,869)	(18,835)
Net Flows	(2,376)	1,680	1,230	534
Net Flows into Liquidity Funds	(573)	(138)	955	244
Reallocation[3]	—	(13,414)	13,414	—
Disposals[4]	—	—	(714)	(714)
Market and foreign exchange movements	3,148	2,541	1,046	6,735
Assets under management at 30 June 2017	**97,489**	**181,336**	**72,492**	**351,317**

1 Assets under management represents all assets managed by Aviva Investors. These comprise Aviva (internal) assets which are included within the Group's statement of financial position and those belonging to external clients outside the Aviva Group which are therefore not included in the Group's statement of financial position. These assets under management exclude those funds that are managed by third parties.
2 Assets managed by Aviva Investors on behalf of internal Aviva Clients relating to products that are no longer actively marketed.
3 Retention of assets under management following sale of Antarius, resulting in a switch from Internal to External.
4 Disposal of Real Estate fund in February 2017.

Aviva Investors assets under management increased by £6.8 billion to £351.3 billion *(FY16: £344.5 billion)* in HY17 with net external inflows of £1.2 billion. Internal Core net inflows were £1.7 billion while net outflows on the Internal Legacy book were £2.4 billion. Net flows into liquidity funds were £0.2 billion. The remaining increase of £6.0 billion comprised favourable market movements of £3.9 billion and favourable foreign exchange rate movements of £2.8 billion, offset by the disposal of a Real Estate fund (£0.7 billion).

* Operating profit margin is calculated as operating profit expressed as a percentage of revenue.

7.i – Life business profit drivers

Life business operating profit before shareholder tax increased by 8% to £1,319 million *(HY16: £1,226 million)*, up 3% on a constant currency basis.

Overall, total income increased by 8% to £2,290 million *(HY16: £2,114 million)* and total expenses increased by 5% to £1,117 million *(HY16: £1,059 million)*. This increase in net income of £118 million has been partially offset by a lower benefit from DAC and other items, giving a total increase in life operating profit of £93 million for the half year, which includes favourable currency movements of £49 million.

	United Kingdom & Ireland			Europe			Asia			Total		
	6 months 2017 £m	6 months 2016 £m	Full year 2016 £m	**6 months 2017 £m**	6 months 2016 £m	Full year 2016 £m	**6 months 2017 £m**	6 months 2016 £m	Full year 2016 £m	**6 months 2017 £m**	6 months 2016 £m	Full year 2016 £m
New business income[1]	**370**	316	801	**129**	130	267	**101**	74	184	**600**	520	1,252
Underwriting margin[2]	**164**	158	326	**124**	115	223	**36**	37	76	**324**	310	625
Investment return[3]	**676**	677	1,352	**605**	545	1,134	**85**	62	159	**1,366**	1,284	2,645
Total Income	**1,210**	1,151	2,479	**858**	790	1,624	**222**	173	419	**2,290**	2,114	4,522
Acquisition expenses[4]	**(213)**	(210)	(396)	**(135)**	(144)	(274)	**(91)**	(68)	(158)	**(439)**	(422)	(828)
Administration expenses[5]	**(325)**	(332)	(652)	**(300)**	(258)	(520)	**(53)**	(47)	(96)	**(678)**	(637)	(1,268)
Total Expenses	**(538)**	(542)	(1,048)	**(435)**	(402)	(794)	**(144)**	(115)	(254)	**(1,117)**	(1,059)	(2,096)
DAC and other	**84**	102	124	**10**	7	14	**42**	60	76	**136**	169	214
	756	711	1,555	**433**	395	844	**120**	118	241	**1,309**	1,224	2,640
Other business[6]										**10**	2	2
Total life business operating profit										**1,319**	1,226	2,642

1 Represents the income earned on new business written during the period reflecting premiums less initial reserves.
2 Underwriting margin represents the release of reserves held to cover claims, surrenders and expenses less the cost of actual claims and surrenders in the period.
3 Represents the expected income on existing business (other than the underwriting margin). Life investment return comprises unit-linked margin, shareholders' return on participating business, spread margin and the expected return on shareholder assets.
4 Initial expenses and commission incurred in writing new business less deferred costs.
5 Expenses and renewal commissions incurred in managing existing business.
6 Other business includes the total result for Aviva Investors Pooled Pensions and Aviva Life Reinsurance.

Income: New business income and underwriting margin

	United Kingdom & Ireland		Europe		Asia		Total	
	6 months 2017 £m	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m
New business income (£m)	**370**	316	**129**	130	**101**	74	**600**	520
APE (£m)[1]	**1,422**	1,194	**632**	617	**180**	120	**2,234**	1,931
As margin on APE (%)	**26%**	26%	**20%**	21%	**56%**	62%	**27%**	27%
Underwriting margin (£m)	**164**	158	**124**	115	**36**	37	**324**	310
Analysed by:								
Expenses	**36**	31	**29**	28	**28**	23	**93**	82
Mortality and longevity	**125**	135	**98**	82	**8**	12	**231**	229
Persistency	**3**	(8)	**(3)**	5	**—**	2	**—**	(1)

1 Used as a measure of life sales. It is calculated as the sum of new regular premiums plus 10% of new single premiums written in the period. APE excludes UK Retail Fund Management and Health business in UK & Ireland and Asia.

(a) New business income

New business income increased to £600 million *(HY16: £520 million)*, mainly driven by UK & Ireland, Asia and favourable foreign exchange movements of £19 million.

The net contribution from new business is the new business income less associated acquisition expenses (see (g) below). This increased to a profit of £161 million *(HY16: profit of £98 million)*. In the UK & Ireland, net contribution from new business increased to £157 million *(HY16: £106 million)* mainly driven by growth in sales of individual protection and annuities.

In Europe, the net contribution improved to a loss of £6 million *(HY16: loss of £14 million)* with an improved contribution in Poland due to consolidating the joint venture with Bank Zachodni WBK SA for the first time. Volumes based on APE decreased by 6% in constant currency, reflecting the sale of Antarius in France, partly offset by higher sales volumes in Spain and Turkey. New business margin on APE remained broadly stable in Europe at 20% *(HY16: 21%)*.

In Asia, the net contribution increased 26% in constant currency to a profit of £10 million *(HY16: profit of £6 million)* mainly as a result of higher sales in Singapore for with-profits business and higher sales volumes in China, with changes in business mix reducing the new business margin.

(b) Underwriting margin

The underwriting margin increased to £324 million *(HY16: £310 million)* mainly due to favourable currency movements, with the amount being broadly consistent on a constant currency basis. In the UK & Ireland, underwriting margin increased to £164 million *(HY16: £158 million)* with improved expenses and persistency margins being partially offset by a reduction in mortality margins. In Europe, underwriting margin increased to £124 million *(HY16: £115 million)* reflecting favourable foreign exchange movements, with a decrease of 2% on a constant currency basis, reflecting a lower persistency margin, partially offset by an improvement in the mortality margin, in Italy.

In Asia, underwriting margin decreased 9% in constant currency to £36 million *(HY16: £37 million)* mainly due to adverse mortality margins in Singapore, partly offset by an improved expenses margin in China.

7.i – Life business profit drivers continued

Income: Investment return

	United Kingdom & Ireland		Europe		Asia		Total	
	6 months 2017 £m	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m
Unit-linked margin[1] (£m)	**439**	429	**285**	236	**68**	52	**792**	717
As annual management charge on average reserves (bps)	**74**	80	**150**	146	**145**	127	**95**	97
Average reserves [5] (£bn)	**118.4**	107.2	**38.1**	32.4	**9.4**	8.2	**165.9**	147.8
Participating business[2] (£m)	**89**	79	**269**	258	**1**	(5)	**359**	332
As bonus on average reserves (bps)	**36**	30	**80**	83	**5**	n/a	**60**	57
Average reserves [5] (£bn)	**49.5**	51.9	**67.1**	62.2	**3.9**	3.3	**120.5**	117.4
Spread margin[3] (£m)	**129**	135	**3**	3	**7**	8	**139**	146
As spread margin on average reserves (bps)	**39**	44	**19**	19	**108**	145	**40**	44
Average reserves[5] (£bn)	**65.4**	61.4	**3.2**	3.2	**1.3**	1.1	**69.9**	65.7
Expected return on shareholder assets[4] (£m)	**19**	34	**48**	48	**9**	7	**76**	89
Total (£m)	**676**	677	**605**	545	**85**	62	**1,366**	1,284

1 Unit-linked margin represents the annual management charges on unit-linked business based on expected investment return.
2 The shareholders' share of the return on with-profit and other participating business.
3 Spread margin represents the return made on annuity and other non-linked business, based on the expected investment return less amounts credited to policyholders.
4 The expected investment return based on opening economic assumptions applied to expected surplus assets over the reporting period that are not backing policyholder liabilities.
5 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.

(c) Unit-linked margin

The unit-linked average reserves have increased to £166 billion *(HY16: £148 billion)*, with the movement largely driven by favourable market performance. This increased the unit-linked margin to £792 million *(HY16: £717 million)*. The margin as a proportion of average unit-linked reserves remained broadly stable at 95 bps *(HY16: 97 bps)*.

The unit-linked margin in UK & Ireland has increased mainly due to favourable market movements and growth in the sales of group pensions. The margin on average reserves has decreased to 74 bps *(HY16: 80 bps)* due to the expected run-off in the higher margin back book and lower margins on group pensions. The unit-linked margin in Europe increased on a constant currency basis by £24 million, mainly driven by favourable market movements and the benefit of consolidating the Polish joint venture for the first time. The increase in unit-linked margin in Asia on a constant currency basis was £15 million, which is mainly due to higher sales volumes in Indonesia.

(d) Participating business

The participating average reserves have increased to £121 billion *(HY16: £117 billion)*. Income from participating business increased to £359 million *(HY16: £332 million)*. In the UK & Ireland, participating business income increased to £89 million *(HY16: £79 million)*. In Europe, income has increased to £269 million *(HY16: £258 million)* reflecting favourable foreign currency movements of £27 million, partly offset by lower income in France due to the disposal of Antarius. The majority of participating business income continues to be earned in France, where there is a fixed management charge of around 50bps on AFER business, which is the largest single component of this business.

(e) Spread margin

Spread business income, which mainly relates to UK in-force immediate annuity and equity release business, decreased to £139 million *(HY16: £146 million).* The spread margin decreased to 40 bps *(HY16: 44 bps)* mainly due to the increase in average reserves to £70 billion *(HY16: £66 billion)*, which is largely driven by lower interest rates in the UK. In Europe, spread margin remained stable at £3 million. In Asia, spread business income decreased £2 million on a constant currency basis to £7 million *(HY16: £8 million)* driven by lower investment margins in Singapore.

(f) Expected return on shareholder assets

Expected returns, representing investment income on surplus funds, have decreased to £76 million *(HY16: £89 million).* This is mainly due to the impact of the economic capital optimisation (hedging) activity in Friends Life and the fall in interest rates in the UK, both reducing the expected return on shareholder assets in UK Life.

7.i – Life business profit drivers continued

Expenses

	United Kingdom & Ireland		Europe		Asia		Total	
	6 months 2017 £m	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m	**6 months 2017 £m**	6 months 2016 £m
Acquisition expenses (£m)	**(213)**	(210)	**(135)**	(144)	**(91)**	(68)	**(439)**	(422)
APE (£m)[1]	**1,422**	1,194	**632**	617	**180**	120	**2,234**	1,931
As acquisition expense ratio on APE (%)	**15%**	18%	**21%**	23%	**51%**	57%	**20%**	22%
Administration expenses (£m)	**(325)**	(332)	**(300)**	(258)	**(53)**	(47)	**(678)**	(637)
As existing business expense ratio on average reserves (bps)	**28**	30	**55**	53	**73**	75	**38**	39
Average reserves (£bn)	**233.3**	220.5	**108.4**	97.8	**14.6**	12.6	**356.3**	330.9

1 APE excludes UK Retail Fund Management and Health business in UK & Ireland and Asia.

(g) Acquisition expenses

Acquisition expenses increased to £439 million *(HY16: £422 million)* primarily reflecting higher sales volumes in Asia and higher protection sales in the UK. Europe acquisition expenses have decreased 14% on a constant currency basis, mainly driven by the sale of Antarius in France and lower sales volumes in Italy.

The increase in Asia is due to higher new business sales in China and Indonesia. The group ratio of acquisition expenses to APE improved to 20% *(HY16: 22%).*

(h) Administration expenses

Administration expenses increased to £678 million *(HY16: £637 million)* with an expense ratio of 38 bps *(HY16: 39 bps)* on average reserves of £356 billion *(HY16: £331 billion).* The decrease in UK & Ireland to £325 million *(HY16: £332 million)* is driven by continued cost control, whilst also investing in growth. Administration expenses in Europe have increased to £300 million *(HY16: £258 million)* due to adverse exchange rate movements of £26 million, the consolidation of the joint venture in Poland and higher renewal commission costs in Italy, driven by business mix. On a constant currency basis, administration expenses in Asia increased by 8%, primarily due to increases in Hong Kong (where they were offset by a reduction in acquisition expenses).

The overall increase in life business acquisition and administration expenses was £58 million, with increased costs due to higher sales volumes and adverse foreign exchange rate movements.

(i) DAC and other

DAC and other items amounted to an overall positive contribution of £136 million *(HY16: £169 million)*. In the UK, DAC and other includes a £55 million benefit from a change in the allocation strategy for those assets backing annuities, partly offset by an increase in DAC amortisation. There were no material assumption changes in HY17. Other in HY16 mainly related to a £63 million benefit in relation to annuitant mortality assumption changes.

In Asia, DAC and other items reduced to £42 million *(HY16: £60 million)* mainly due to a recovery of indirect tax in Singapore in HY16.

7.ii – General insurance and health

6 months 2017	UK Personal £m	UK Commercial £m	**Total UK £m**	Ireland £m	**Total UK & Ireland £m**	Canada Personal £m	Canada Commercial £m	**Total Canada £m**	**Europe £m**	**Asia & Other[1] £m**	**Total £m**
General insurance											
Gross written premiums	1,300	934	**2,234**	229	**2,463**	1,066	463	**1,529**	**911**	**6**	**4,909**
Net written premiums	1,269	836	**2,105**	221	**2,326**	1,047	430	**1,477**	**879**	**6**	**4,688**
Net earned premiums	1,218	778	**1,996**	202	**2,198**	1,019	410	**1,429**	**778**	**6**	**4,411**
Net claims incurred	(719)	(477)	**(1,196)**	(107)	**(1,303)**	(742)	(250)	**(992)**	**(493)**	**2**	**(2,786)**
Of which claims handling costs			***(72)***	*(5)*	***(77)***			***(58)***	***(26)***	**—**	***(161)***
Earned commission	(327)	(159)	**(486)**	(33)	**(519)**	(174)	(87)	**(261)**	**(165)**	**—**	**(945)**
Earned expenses[2]	(87)	(92)	**(179)**	(31)	**(210)**	(94)	(66)	**(160)**	**(63)**	**(3)**	**(436)**
Underwriting result	85	50	**135**	31	**166**	9	7	**16**	**57**	**5**	**244**
Longer-term investment return[3]			**78**	7	**85**			**57**	**28**	**1**	**171**
Other[4]			**—**	—	**—**			**(2)**	**—**	**—**	**(2)**
Operating profit			**213**	38	**251**			**71**	**85**	**6**	**413**
Health insurance											
Underwriting result					**7**			**—**	**—**	**(4)**	**3**
Longer-term investment return					**1**			**—**	**—**	**—**	**1**
Operating profit					**8**			**—**	**—**	**(4)**	**4**
Total operating profit					**259**			**71**	**85**	**2**	**417**
General insurance combined operating ratio[1]											
Claims ratio	59.0%	61.4%	**59.9%**	52.8%	**59.3%**	72.8%	61.0%	**69.5%**	**63.4%**		**63.2%**
Commission ratio	26.8%	20.4%	**24.3%**	16.4%	**23.6%**	17.2%	20.9%	**18.2%**	**21.2%**		**21.4%**
Expense ratio	7.1%	11.8%	**9.0%**	15.5%	**9.6%**	9.4%	15.7%	**11.2%**	**8.1%**		**9.9%**
Combined operating ratio[5]	92.9%	93.6%	**93.2%**	84.7%	**92.5%**	99.4%	97.6%	**98.9%**	**92.7%**		**94.5%**
Assets supporting general insurance and health business											
Debt securities			**3,255**	283	**3,538**			**4,247**	**2,270**	**174**	**10,229**
Equity securities			**6**	—	**6**			**249**	**41**	**—**	**296**
Investment property			**207**	—	**207**			**—**	**137**	**—**	**344**
Cash and cash equivalents			**902**	73	**975**			**145**	**293**	**38**	**1,451**
Other[6]			**1,808**	56	**1,864**			**213**	**324**	**2**	**2,403**
Assets at 30 June 2017			**6,178**	412	**6,590**			**4,854**	**3,065**	**214**	**14,723**
Debt securities			**3,718**	360	**4,078**			**4,349**	**2,175**	**197**	**10,799**
Equity securities			**7**	—	**7**			**235**	**25**	**—**	**267**
Investment property			**208**	—	**208**			**—**	**133**	**—**	**341**
Cash and cash equivalents			**757**	47	**804**			**115**	**220**	**23**	**1,162**
Other[6]			**1,464**	4	**1,468**			**256**	**305**	**3**	**2,032**
Assets at 31 December 2016			**6,154**	411	**6,565**			**4,955**	**2,858**	**223**	**14,601**
Average assets			**6,165**	412	**6,577**			**4,904**	**2,962**	**219**	**14,662**
LTIR as % of average assets			**2.5%**	3.4%	**2.6%**			**2.3%**	**1.9%**	**0.9%**	**2.3%**

1 Asia & Other includes Aviva Re.
2 Operating expenses shown in note 3 includes claims handling costs and earned expenses included in general insurance COR above, plus operating expenses of other non-insurance operations.
3 The UK & Ireland LTIR includes £28 million *(HY16: £37 million)* relating to the internal loan. This is lower than 2016 primarily as a result of the reduction in the loan balance in HY16.
4 Includes unwind of discount and pension scheme net finance costs.
5 COR is calculated as incurred claims, earned commission and earned expenses, expressed as a percentage of net earned premiums. COR is calculated using unrounded numbers so minor rounding differences may exist.
6 Includes loans and other financial investments.

7.ii – General insurance and health continued

6 months 2016	UK Personal £m	UK Commercial £m	Total UK £m	Ireland £m	Total UK & Ireland £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Europe £m	Asia & Other[1] £m	Total £m
General insurance											
Gross written premiums	1,225	921	2,146	185	2,331	692	399	1,091	786	6	4,214
Net written premiums	1,188	813	2,001	179	2,180	680	369	1,049	757	5	3,991
Net earned premiums	1,121	763	1,884	159	2,043	655	365	1,020	658	6	3,727
Net claims incurred	(666)	(473)	(1,139)	(99)	(1,238)	(447)	(212)	(659)	(451)	(19)	(2,367)
Of which claims handling costs			*(68)*	*(5)*	*(73)*			*(41)*	*(22)*	—	*(136)*
Earned commission	(273)	(154)	(427)	(25)	(452)	(127)	(74)	(201)	(132)	—	(785)
Earned expenses[2]	(106)	(97)	(203)	(23)	(226)	(61)	(57)	(118)	(65)	(3)	(412)
Underwriting result	76	39	115	12	127	20	22	42	10	(16)	163
Longer-term investment return[3]			85	8	93			47	28	1	169
Other[4]			(1)	—	(1)			(1)	—	—	(2)
Operating profit			199	20	219			88	38	(15)	330
Health insurance											
Underwriting result					10			—	(3)	(5)	2
Longer-term investment return					2			—	—	—	2
Operating profit					12			—	(3)	(5)	4
Total operating profit					231			88	35	(20)	334
General insurance combined operating ratio											
Claims ratio	59.4%	62.0%	60.5%	62.4%	60.6%	68.2%	58.1%	64.6%	68.5%		63.5%
Commission ratio	24.4%	20.2%	22.6%	15.3%	22.1%	19.4%	20.3%	19.7%	20.5%		21.2%
Expense ratio	9.5%	12.7%	10.8%	14.2%	11.1%	9.3%	15.6%	11.6%	9.9%		11.0%
Combined operating ratio[5]	93.3%	94.9%	93.9%	91.9%	93.8%	96.9%	94.0%	95.9%	98.9%		95.7%
Assets supporting general insurance and health business											
Debt securities			3,474	413	3,887			3,500	2,168	202	9,757
Equity securities			8	—	8			201	16	—	225
Investment property			205	—	205			—	163	—	368
Cash and cash equivalents			811	71	882			462	236	43	1,623
Other[6]			1,535	102	1,637			166	235	2	2,040
Assets at 30 June 2016			6,033	586	6,619			4,329	2,818	247	14,013
Debt securities			3,993	470	4,463			2,999	1,937	209	9,608
Equity securities			8	—	8			188	21	—	217
Investment property			198	—	198			—	137	—	335
Cash and cash equivalents			639	79	718			107	118	26	969
Other[6]			2,559	104	2,663			135	209	1	3,008
Assets at 31 December 2015			7,397	653	8,050			3,429	2,422	236	14,137
Average assets			6,715	620	7,335			3,878	2,620	242	14,075
LTIR as % of average assets			2.5%	2.6%	2.6%			2.4%	2.1%	0.8%	2.4%

1 Asia & Other includes Aviva Re.
2 Operating expenses shown in note 3 includes claims handling costs and earned expenses included in general insurance COR above, plus operating expenses of other non-insurance operations.
3 The UK & Ireland LTIR includes £37 million *(HY15: £59 million)* relating to the internal loan. This is lower than 2015 primarily as a result of a reduction in the balance of this loan during 2015 and 2016.
4 Includes unwind of discount and pension scheme net finance costs.
5 COR is now reported on an earned basis and is calculated as incurred claims, earned commission and earned expenses, expressed as a percentage of net earned premiums. Comparatives have been realigned to reflect this change. See note 5 for details. COR is calculated using unrounded numbers so minor rounding differences may exist.
6 Includes loans and other financial investments.

7.ii – General insurance and health continued

Full year 2016	UK Personal £m	UK Commercial £m	Total UK £m	Ireland £m	Total UK & Ireland £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Europe £m	Asia & Other[2] £m	Total £m
General insurance											
Gross written premiums	2,476	1,743	4,219	392	4,611	1,711	831	2,542	1,499	12	8,664
Net written premiums[1]	2,408	1,522	3,930	378	4,308	1,680	773	2,453	1,438	12	8,211
Net earned premiums[1]	2,295	1,526	3,821	351	4,172	1,645	775	2,420	1,396	12	8,000
Net claims incurred[1]	(1,602)	(1,220)	(2,822)	(222)	(3,044)	(1,104)	(433)	(1,537)	(931)	(24)	(5,536)
Of which claims handling costs			*(137)*	*(9)*	*(146)*			*(93)*	*(45)*	—	*(284)*
Earned commission	(570)	(310)	(880)	(53)	(933)	(283)	(160)	(443)	(268)	—	(1,644)
Earned expenses[3]	(180)	(182)	(362)	(49)	(411)	(150)	(122)	(272)	(133)	(6)	(822)
Impact of change in Ogden discount rate excluded from underwriting result	230	245	475	—	475	—	—	—	—	—	475
Underwriting result[1]	173	59	232	27	259	108	60	168	64	(18)	473
Longer-term investment return[4]			162	14	176			105	55	3	339
Other[5]			(2)	—	(2)			(4)	—	—	(6)
Operating profit[1]			392	41	433			269	119	(15)	806
Health insurance											
Underwriting result					35			—	—	(12)	23
Longer-term investment return					3			—	1	—	4
Operating profit					38			—	1	(12)	27
Total operating profit[1]					471			269	120	(27)	833
General insurance combined operating ratio[1]											
Claims ratio[1]	69.8%	79.9%	73.8%	63.3%	73.0%	67.1%	55.9%	63.5%	66.7%		69.2%
Commission ratio	24.8%	20.3%	23.0%	15.1%	22.3%	17.2%	20.6%	18.3%	19.6%		20.6%
Expense ratio	7.8%	11.9%	9.5%	14.0%	9.9%	9.1%	15.7%	11.2%	9.5%		10.3%
Combined operating ratio[6]	102.4%	112.1%	106.3%	92.4%	105.2%	93.4%	92.2%	93.0%	95.8%		100.1%
Combined operating ratio, excluding the impact of change in Ogden discount rate[6]	92.5%	96.1%	93.9%	92.4%	93.8%	93.4%	92.2%	93.0%	95.8%		94.1%
Assets supporting general insurance and health business											
Debt securities			3,718	360	4,078			4,349	2,175	197	10,799
Equity securities			7	—	7			235	25	—	267
Investment property			208	—	208			—	133	—	341
Cash and cash equivalents			757	47	804			115	220	23	1,162
Other[7]			1,464	4	1,468			256	305	3	2,032
Assets at 31 December 2016			6,154	411	6,565			4,955	2,858	223	14,601
Debt securities			3,993	470	4,463			2,999	1,937	209	9,608
Equity securities			8	—	8			188	21	—	217
Investment property			198	—	198			—	137	—	335
Cash and cash equivalents			639	79	718			107	118	26	969
Other[7]			2,559	104	2,663			135	209	1	3,008
Assets at 31 December 2015			7,397	653	8,050			3,429	2,422	236	14,137
Average assets			6,776	532	7,308			4,192	2,640	229	14,369
LTIR as % of average assets			2.4%	2.6%	2.4%			2.5%	2.1%	1.3%	2.4%

1 Excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
2 Asia & Other includes Aviva Re.
3 Operating expenses shown in note 3 includes claims handling costs and earned expenses included in general insurance COR above, plus operating expenses of other non-insurance operations.
4 The UK & Ireland LTIR includes £69 million *(FY15: £115 million)* relating to the internal loan. This is lower than 2015 primarily as a result of a reduction in the balance of this loan during 2016.
5 Includes unwind of discount and pension scheme net finance costs.
6 COR is now reported on an earned basis and is calculated as incurred claims, earned commission and earned expenses, expressed as a percentage of net earned premiums. Comparatives have been realigned to reflect this change. See note 5 for details. COR is calculated using unrounded numbers so minor rounding differences may exist.
7 Includes loans and other financial investments.

7.iii – 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 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.

	Managed assets at 1 January 2017 £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 2017[3] £m
Life and platform business						
UK – non-profit:						
– platform	12,963	3,771	(807)	2,964	555	**16,482**
– pensions and other long term savings	91,589	3,376	(4,192)	(816)	2,181	**92,954**
– long term savings	104,552	7,147	(4,999)	2,148	2,736	**109,436**
– annuities and equity release	57,316	682	(1,231)	(549)	2,203	**58,970**
– other	25,851	887	(1,470)	(583)	991	**26,259**
Ireland	5,989	475	(314)	161	101	**6,251**
United Kingdom & Ireland (excluding UK with-profits)	193,708	9,191	(8,014)	1,177	6,031	**200,916**
Europe	113,842	5,202	(4,106)	1,096	(5,538)	**109,400**
Asia	13,456	362	(181)	181	383	**14,020**
Other	1,599	13	(154)	(141)	61	**1,519**
	322,605	14,768	(12,455)	2,313	937	**325,855**
UK – with-profits and other	61,796					**59,187**
Total life and platform business	384,401					**385,042**

1 Life business net flows in the table above are net of reinsurance.
2 For the period to 30 June 2017, net flows of £2.3 billion includes net flows of £1.0 billion that are included in the IFRS income statement within net written premiums and net paid claims.
3 Life and platform business managed assets at the balance sheet date includes financial investments, loans, investment property, externally reinsured non-participating investment contracts and cash and cash equivalents included on the IFRS statement of financial position, plus assets administered by the Group that are not included on the IFRS statement of financial position. At 30 June 2017, life and platform business managed assets of £385 billion *(FY16: £384 billion)* includes £371 billion *(FY16: £373 billion)* that is on the IFRS statement of financial position.
4 Includes platform and pensions business and externally reinsured non-participating investment contracts.

United Kingdom & Ireland (excluding UK with-profits)

UK long-term savings managed assets[4] have increased to c.£109 billion *(FY16: c.£105 billion)* during the period. Within this, net inflows were £2.1 billion mainly reflecting continued growth from our platform business of £3.0 billion with managed assets increasing 27% in the period to £16.5 billion *(FY16: £13.0 billion)*.

UK annuities and equity release and other non-profit outflows were £1.1 billion driven by net outflows in Bonds & Savings as the book continues to run off as expected. Market and other movements include favourable market movements driven by narrowing spreads and growth in equities.

Europe

Net inflows were £1.1 billion. This was mainly driven by unit-linked volumes in France and improved margin on with-profits products in Italy. Market and other movements in Europe reflect the disposal of £11.4 billion investment assets following the sale of Antarius, partly offset by favourable foreign exchange rate movements of £3.3 billion and investment market movements of £2.6 billion.

Asia and other

Net inflows in Asia were £0.2 billion arising mainly in Singapore. Other business net outflows of £0.1 billion primarily relate to Aviva Investors' Pooled Pensions business.

8.i – Summary of assets

The Group asset portfolio is invested to generate competitive investment returns for both policyholders and shareholders whilst remaining within the Group's appetite for market, credit and liquidity risk.

The Group has a low appetite for interest rate risk and currency risk which means that the asset portfolios are well matched by duration and currency to the liabilities they cover. The Group also runs a low level of liquidity risk which results in a high proportion of income generating assets and a preference for more liquid assets where there is the potential need to realise those assets before maturity.

The Group seeks to diversify its asset portfolio in order to reduce risk and provide more attractive risk-adjusted returns. In order to achieve this there is a comprehensive risk limit framework in place. There is an allowance for diversification in our economic capital model and we continue to broaden the investment portfolio in individual businesses.

Asset allocation decisions are taken at legal entity level and in many cases by fund within a legal entity in order to reflect the nature of the liabilities, customer expectations, the local accounting and regulatory treatment, and any local constraints. These asset allocation decisions are made in accordance with a Group-wide framework that takes into account consensus investment views across the Group, prioritised Group objectives and metrics and Group risk limits and constraints. This framework is overseen by the Group Asset Liability Committee (ALCO) and facilitates a consistent approach to asset allocation across the business units in line with Group risk appetite and shareholder objectives.

The asset allocation as at 30 June 2017 across the Group, split according to the type of liability the assets are covering, is shown in the table below. Further information on these assets is given in the Analysis of Assets section.

	Shareholder business assets			Participating fund assets				
Carrying value in the statement of financial position	General Insurance & health & other[1] £m	Annuity and non-profit £m	Policyholder (unit-linked assets) £m	UK style with-profits £m	Continental European-style Participating funds £m	Total assets analysed £m	Less assets of operation classified as held for sale £m	Carrying value in the statement of financial position £m
Debt securities								
Government bonds	**6,843**	**16,218**	**13,655**	**17,720**	**28,035**	**82,471**	**(1,811)**	**80,660**
Corporate bonds	**4,250**	**22,815**	**10,408**	**15,868**	**26,483**	**79,824**	**(1,239)**	**78,585**
Other	**366**	**2,226**	**2,836**	**1,169**	**6,220**	**12,817**	**(992)**	**11,825**
	11,459	**41,259**	**26,899**	**34,757**	**60,738**	**175,112**	**(4,042)**	**171,070**
Loans								
Mortgage loans	**—**	**18,975**	**—**	**109**	**—**	**19,084**	**—**	**19,084**
Other loans	**164**	**3,170**	**8**	**2,301**	**792**	**6,435**	**(67)**	**6,368**
	164	**22,145**	**8**	**2,410**	**792**	**25,519**	**(67)**	**25,452**
Equity securities	**321**	**547**	**57,623**	**13,086**	**2,614**	**74,191**	**(616)**	**73,575**
Investment property	**354**	**172**	**6,595**	**2,342**	**1,257**	**10,720**	**(1)**	**10,719**
Other investments	**1,180**	**3,157**	**51,368**	**4,185**	**4,806**	**64,696**	**(119)**	**64,577**
Total as at 30 June 2017	**13,478**	**67,280**	**142,493**	**56,780**	**70,207**	**350,238**	**(4,845)**	**345,393**
Total as at 31 December 2016	14,152	65,628	132,901	56,672	76,863	346,216	(10,829)	335,387

1 Of the £13.5 billion of assets 11% relates to other shareholder business assets.

There is an internal loan between Aviva Insurance Limited (AIL) and Aviva Group Holdings Limited (AGH) that has a net value of zero at a consolidated level.

General insurance and health

All the investment risk is borne by shareholders and the portfolio held to cover these liabilities contains a high proportion of fixed and variable income securities, of which 83% are rated A or above. The assets are relatively short duration reflecting the short average duration of the liabilities. Liquidity, interest rate and currency risks are maintained at a low level within risk appetite.

Annuity and other non-profit

All the investment risk is borne by shareholders. The annuity liabilities have a long duration but are also illiquid as customers cannot surrender their policies. The assets are chosen to provide stable income and cash flow. Currency and interest rate exposures are closely matched to the liabilities in line with risk appetite. We are able to invest part of the portfolio in less liquid assets in order to improve risk-adjusted returns given the illiquid nature of the liabilities. The asset portfolio is principally comprised of long maturity bonds and loans including a material book of commercial mortgage loans. The other non-profit business assets are a smaller proportion of this portfolio and are generally shorter in duration and have a high proportion invested in fixed income.

£11.7 billion of shareholder loan assets are backing UK annuity liabilities and comprise of commercial mortgage loans (£6.9 billion), Healthcare, Infrastructure and PFI mortgage loans (£3.5 billion) and Primary Healthcare, Infrastructure and PFI other loans (£1.3 billion). The Group carries a valuation allowance within the liabilities against the risk of default of commercial mortgages, including Healthcare and PFI mortgages, of £0.4 billion which equates to 39bps at 30 June 2017 *(FY16: 50bps)*.

8.i – Summary of assets continued

Policyholder assets

These assets are invested in line with the fund choices made by our unit-linked policyholders and the investment risk is borne by the policyholder. This results in a high allocation to growth assets such as equity and property. Aviva's shareholder exposure to these assets arises from the fact that the income we receive is a proportion of the assets under management.

UK style with-profits (WP)

UK style with-profits funds hold relatively long-term contracts with policyholders participating in pooled investment performance subject to some minimum guarantees. Smoothed returns are used to declare bonuses to policyholders which increase the level of the guarantees through time. The part of the portfolio to which policyholder bonuses are linked is invested in line with their expectations and includes growth assets as well as fixed income. The remainder of the portfolio is invested to mitigate the resultant shareholder risk. This leads us to an overall investment portfolio that holds a higher proportion of growth assets than our other business lines although there are still material allocations to fixed income assets.

Continental European style participating funds

Continental European style participating funds hold relatively long-term contracts with policyholders participating in pooled investment performance subject to some minimum guarantees. Smoothed returns are used to declare bonuses to policyholders. A certain portion of the guarantees are subject to annual discretion declared at the start of the year. Other guarantees are subject to revision downwards at contractual dates. The investment portfolio holds a higher proportion of fixed income assets than the UK style equivalent.

8.ii – Net asset value

At HY17, the net asset value per share was 412 pence (*FY16: 414 pence*). Increases in operating profit and profit on disposal and remeasurements of subsidiaries, joint ventures and associates were offset by the payment of the final 2016 dividend to shareholders, adverse economic variances, the cost of shares purchased in the buy-back and impairment and amortisation of intangibles and acquired value of in-force business.

Total investment variances and economic assumption changes were £396 million adverse. This included £217 million adverse variances in the non-life business, primarily reflecting unfavourable short-term fluctuations. These short-term fluctuations were mainly due to interest rate increases reducing the value of fixed income securities and foreign exchange losses and adverse market movements on Group centre holdings, including the centre hedging programme.

In the life businesses, investment variances and economic assumption changes were £179 million adverse. The negative variance in HY17 primarily reflects the treatment on disposal of our French subsidiary Antarius and falling interest rates in Asia. Of the £180 million profit on disposal of Antarius, £147 million has been transferred under French reserving rules to insurance contract liabilities and is expected to be released over time in accordance with French reserving rules (see A4 for further details).

	30 June 2017 £m	**pence per share[2]**	30 June 2016 £m	pence per share[2]	31 December 2016 £m	pence per share[2]
Equity attributable to shareholders of Aviva plc at 1 January[1]	**16,803**	**414p**	15,802	390p	15,802	390p
Operating profit	**1,465**	**37p**	1,325	32p	3,010	73p
Investment return variances and economic assumption changes on life and non-life business	**(396)**	**(10)p**	(455)	(11)p	(381)	(9)p
Profit/(loss) on the disposal and remeasurements of subsidiaries, joint ventures and associates	**202**	**5p**	(18)	—	(11)	—
Goodwill impairment and amortisation of intangibles	**(110)**	**(3)p**	(92)	(2)p	(175)	(4)p
Amortisation and impairment of acquired value of in-force business	**(234)**	**(6)p**	(318)	(8)p	(540)	(13)p
Integration and restructuring costs	**(52)**	**(1)p**	(105)	(3)p	(212)	(5)p
Other[3]	**—**	**—**	—	—	(498)	(13)p
Tax on operating profit and on other activities	**(159)**	**(4)p**	(136)	(3)p	(334)	(8)p
Non-controlling interests	**(79)**	**(2)p**	(71)	(2)p	(156)	(4)p
Profit after tax attributable to shareholders of Aviva plc	**637**	**16p**	130	3p	703	17p
AFS securities (fair value) & other reserve movements	**(3)**	**—**	21	—	4	—
Ordinary dividends	**(646)**	**(16)p**	(570)	(14)p	(871)	(22)p
Direct capital instruments and tier 1 notes interest and preference share dividend	**(32)**	**(1)p**	(30)	(1)p	(85)	(2)p
Foreign exchange rate movements	**(21)**	**—**	730	18p	945	23p
Remeasurements of pension schemes	**(25)**	**—**	607	15p	242	6p
Shares purchased in buy-back	**(73)**	**(2)p**	—	—	—	—
Other net equity movements	**51**	**1p**	23	1p	63	2p
Equity attributable to shareholders of Aviva plc at 30 June/31 December[1]	**16,691**	**412p**	16,713	412p	16,803	414p

1 Excluding preference shares of £200 million *(HY16: £200 million; FY16: £200 million)*.
2 Number of shares as at 30 June 2017: 4,055 million *(30 June 2016: 4,058 million; 31 December 2016: 4,062 million)*.
3 Other items in FY16 include an exceptional charge of £475 million with a post tax impact of £380 million, relating to the impact of the change in Ogden discount rate from 2.5% set in 2001 to minus 0.75% announced by the Lord Chancellor on 27 February 2017. Other items also includes a loss upon the completion of an outwards reinsurance contract by the UK General Insurance business, which provides significant protection against claims volatility from mesothelioma, industrial deafness and other long tail risks. The £23 million loss comprises £107 million in premium ceded, less £78 million in reinsurance recoverables recognised and £6 million handling provisions released.

8.iii – Return on equity[1]

The return on equity calculation is based on operating return after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity.

During HY17, return on equity has increased to 12.4% *(HY16: 11.0%)*, reflecting the increase in operating profit in 2017.

	6 months 2017 %	6 months 2016 %	Full Year 2016 %
United Kingdom & Ireland Life	**10.7%**	9.9%	11.2%
United Kingdom & Ireland General Insurance and Health	**23.2%**	12.4%	15.6%
Canada	**7.1%**	12.3%	15.7%
Europe	**13.2%**	11.9%	13.1%
Asia	**12.9%**	14.3%	14.0%
Fund management	**22.9%**	18.8%	24.4%
Corporate and Other Business	**n/a**	n/a	n/a
Return on total capital employed	**9.3%**	8.8%	9.7%
Subordinated debt	**4.3%**	4.4%	4.5%
Senior debt	**0.3%**	—	0.1%
Return on total equity	**11.9%**	10.7%	12.1%
Less: Non-controlling interest	**10.6%**	11.1%	11.5%
Direct capital instrument and tier 1 notes	**6.1%**	5.6%	6.1%
Preference capital	**8.5%**	9.0%	8.5%
Return on equity shareholders' funds	**12.4%**	11.0%	12.5%

1 Please refer to note C1 for further analysis of return on equity.

8.iv – Solvency II

The estimated pro forma shareholder cover ratio on a Solvency II basis is 193% at 30 June 2017. The Solvency II position disclosed is based on a 'shareholder view'. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds (£3.2 billion at 30 June 2017) and staff pension schemes in surplus (£1.2 billion at 30 June 2017). These exclusions have no impact on Solvency II surplus. The most material fully ring fenced with-profit funds and staff pension schemes are self-supporting on a Solvency II capital basis with any surplus capital above SCR not recognised in the Group position. The shareholder view is therefore 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.

The Solvency II risk margin is highly sensitive to movements in interest rates, which can be offset by a reset of the transitional measure on technical provisions ('TMTP'). The Solvency II position disclosed therefore assumes that the TMTP, approved for use by the PRA, has been notionally reset to reflect interest rates at 30 June 2017. This presentation is in line with the Group's preference to manage its capital position assuming a dynamic TMTP in respect of the impact of interest rate movements on the risk margin, as this avoids step changes to the Solvency II position that arise only when the formal TMTP reset points are triggered.

The 30 June 2017 Solvency II position disclosed includes three pro forma adjustments, to reflect known or highly likely events materially affecting the Group's solvency position post 30 June 2017. The adjustments consist of the disposal of the Spanish joint ventures Unicorp Vida and Caja Espana Vida and its retail life insurance business Aviva Vida y Pensiones, the disposal of Friends Provident International Limited, and the remaining share capital out of the £0.3 billion share buy-back announced on 25 May 2017. 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 2017 £bn	30 June 2016 £bn	31 December 2016 £bn
Own Funds[1,2,3,4]	**23.7**	22.4	24.0
Solvency Capital Requirement before diversification[1,2,3,4]	**(17.6)**	(17.8)	(18.1)
Diversification benefit	**5.3**	4.9	5.4
Diversified Solvency Capital Requirement[1,2,3,4]	**(12.3)**	(12.9)	(12.7)
Estimated Solvency II Surplus at 30 June/31 December[2,3,4]	**11.4**	9.5	11.3
Estimated Shareholder Cover Ratio[1,2,3,4]	**193%**	174%	189%

1 The estimated Solvency II position represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion *(HY16: £2.7 billion; FY16: £2.9 billion)* and staff pension schemes in surplus £1.2 billion *(HY16: £0.9 billion; FY16: £1.1 billion)* – these exclusions have no impact on Solvency II surplus.
2 The estimated Solvency II position includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017 £0.5 billion decrease to surplus *(HY16: £nil; FY16: £0.4 billion)*. Also included are the pro forma impacts of the disposal of the Spanish joint ventures Unicorp Vida and Caja Espana Vida and its retail life insurance business Aviva Vida y Pensiones (£0.1 billion increase to surplus), the disposal of Friends Provident International Limited (£0.1 billion increase to surplus), and the remaining £0.2 billion of the share buy-back announced on 25 May 2017.
3 The 31 December 2016 Solvency II position includes the pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius to Sogecap which completed on 5 April 2017 (£0.2 billion increase to surplus) and an anticipated future change to UK tax rules restricting the tax relief that can be claimed in respect of tax losses (£0.4 billion decrease to surplus). However, under the amended tax rules published on 13 July 2017, this restriction will not be material, and as a result no corresponding pro forma impact is included in the estimated 30 June 2017 Solvency II position.
4 The 30 June 2016 Solvency II position includes the pro forma impact of acquiring the RBC General Insurance business (£(0.3) billion).

Movement in Group Solvency II Surplus

	30 June 2017 £bn	30 June 2016 £bn	31 December 2016 £bn
Group Solvency II Surplus at 1 January	**11.3**	9.7	9.7
Operating Capital Generation	**1.1**	1.2	3.5
Non-operating Capital Generation	**(0.3)**	(1.2)	(1.8)
Dividends	**(0.7)**	(0.6)	(1.0)
Share buy-back	**(0.3)**	–	–
Foreign exchange variances	**0.1**	0.4	0.6
Hybrid debt issuance	**–**	0.3	0.4
Acquired/divested business	**0.2**	(0.3)	(0.1)
Estimated Solvency II Surplus at 30 June/31 December	**11.4**	9.5	11.3

The estimated Solvency II surplus at 30 June 2017 is £11.4 billion, with a shareholder cover ratio of 193%. This is an increase of £0.1 billion compared to the 31 December 2016 surplus. The beneficial impacts of operating capital generation, disposals and foreign exchange variances have been partially offset by the impact of the Aviva plc dividend, share buy-back and the adverse non-operating capital generation. The non-operating capital generation includes a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017.

8.iv – Solvency II continued

Summary of analysis of diversified Solvency Capital Requirement

	30 June 2017 £bn	30 June 2016 £bn	31 December 2016 £bn
Credit risk[1]	**3.4**	2.8	3.3
Equity risk[2]	**1.4**	1.2	1.3
Interest rate risk[3]	**0.4**	0.9	0.4
Other market risk[4]	**1.5**	1.2	1.6
Life insurance risk[5]	**3.1**	3.7	3.3
General insurance risk[6]	**0.6**	0.9	0.6
Operational risk	**1.1**	1.1	1.1
Other risk[7]	**0.8**	1.1	1.1
Total	**12.3**	12.9	12.7

1 Capital held in respect of credit risk recognises the Group's shareholder exposure to changes in the market value of assets and defaults. A range of specific stresses are applied reflecting the difference in assumed risk relative to investment grade and duration.
2 Capital held in respect of equity risk recognises the Group's shareholder exposure to changes in the market value of assets.
3 Capital held in respect of interest rate risk recognises the Group's shareholder exposure to changes in the value of net assets as a result of movements in interest rates.
4 Capital held in respect of other market risk recognises the Group's shareholder exposure to changes in the market value of commercial mortgages and property, but also captures risk in association with inflation and foreign exchange.
5 Capital held in respect of life insurance risk recognises the Group's shareholder exposure to life insurance specific risks, such as longevity and lapse.
6 Capital held in respect of general insurance risk recognises the Group's shareholder exposure to general insurance specific risks, such as claims volatility and catastrophe.
7 Capital held in respect of other risk recognises the Group's shareholder exposure to specific risks unique to particular business units and other items.

Changes to the diversified Solvency Capital Requirement since 31 December 2016 primarily reflect the pro forma disposals of Spanish joint ventures Unicorp Vida and Caja Espana Vida and its retail life insurance business Aviva Vida y Pensiones, and Friends Provident International Limited. In addition, the 31 December 2016 other risk included the pro forma impact of the anticipated future change to UK tax rules restricting the tax relief that can be claimed in respect of tax losses. This pro forma adjustment is not present in the corresponding 30 June 2017 figure following the amended tax rules published on 13 July 2017.

Sensitivity analysis of Solvency II surplus

The following table shows the sensitivity of the Group's Solvency II surplus to:

Economic assumptions:

- 25 basis point increase and decrease, 50 basis point decrease and 100 basis point increase in the risk-free rate, including all consequential changes (including assumed investment returns for all asset classes, market values of fixed interest assets, risk discount rates);
- 50 basis point increase and decrease and 100 basis point increase in credit spreads for corporate bonds with credit rating A at 10 year duration, with the other ratings and durations stressed by the same proportion relative to the stressed capital requirement;
- an immediate full letter downgrade on 20% of the annuity portfolio bonds (e.g. from AAA to AA, from AA to A);
- 10% increase and decrease and 25% decrease in market values of equity assets.

Non-Economic assumptions:

- 10% increase in maintenance and investment expenses (a 10% sensitivity on a base expense assumption of £10 p.a. would represent an expense assumption of £11 p.a.);
- 10% increase in lapse rates (a 10% sensitivity on a base assumption of 5% p.a. would represent a lapse rate of 5.5% p.a.);
- 5% increase in both mortality and morbidity rates for life assurance;
- 5% decrease in mortality rates for annuity business;
- 5% increase in gross loss ratios for general insurance and health business.

8.iv – Solvency II continued

The sensitivity 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 Solvency Capital Requirement calculation is applicable for that sensitivity. For example, future bonus rates are automatically adjusted to reflect sensitivity changes to future investment returns.

Transitional Measures on Technical Provisions is assumed to be recalculated in all sensitivities where its impact would be material.

The table below shows the absolute change in cover ratio under each sensitivity, e.g. a 4% positive impact would result in a cover ratio of 197%.

Sensitivities		Impact on cover ratio %
Changes in Economic assumptions	25 bps increase in interest rate	**4%**
	100 bps increase in interest rate	**16%**
	25 bps decrease in interest rate	**(6%)**
	50 bps decrease in interest rate	**(12%)**
	50 bps increase in corporate bond spread[1]	**0%**
	100 bps increase in corporate bond spread	**(1%)**
	50 bps decrease in corporate bond spread	**(2%)**
	Credit downgrade on annuity portfolio	**(4%)**
	10% increase in market value of equity	**2%**
	10% decrease in market value of equity	**(2%)**
	25% decrease in market value of equity	**(3%)**
Changes in Non-Economic assumptions	10% increase in maintenance and investment expenses	**(7%)**
	10% increase in lapse rates[1]	**0%**
	5% increase in mortality/morbidity rates – Life assurance	**(2%)**
	5% decrease in mortality rates – annuity business	**(12%)**
	5% increase in gross loss ratios	**(3%)**

1 A 50 bps increase in corporate bond spread and 10% increase in lapse rates result in a proportionate decrease in Group Own Funds and Group SCR with no overall impact on the rounded Group cover ratio.

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 allocation, adjusting bonuses credited to policyholders, and taking other protective action.

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

Reconciliation of IFRS total equity to Solvency II Own Funds

The reconciliation from total Group equity on an IFRS basis to Solvency II Own Funds is presented below. The valuation differences reflect moving from IFRS valuations to a Solvency II shareholder view of Own Funds.

	30 June 2017 £bn	30 June 2016 £bn	31 December 2016 £bn
Total Group equity on an IFRS basis	**19.3**	19.3	19.6
Elimination of goodwill and other intangible assets[1]	**(10.1)**	(9.9)	(10.0)
Liability valuation differences (net of transitional deductions)[2,3]	**22.5**	21.4	22.1
Inclusion of risk margin (net of transitional deductions)	**(4.5)**	(4.9)	(4.4)
Net deferred tax[3,4]	**(1.5)**	(1.4)	(1.6)
Revaluation of subordinated liabilities	**(0.8)**	(1.1)	(0.9)
Estimated Solvency II Net Assets (gross of non-controlling interests)[2,3]	**24.9**	23.4	24.8
Difference between Solvency II Net Assets and Own Funds[2,3,5]	**(1.2)**	(1.0)	(0.8)
Estimated Solvency II Own Funds[6]	**23.7**	22.4	24.0

1 Includes £2.0 billion (*HY16: £1.9 billion; FY16: £2.0 billion*) of goodwill and £8.1 billion (*HY16: £8.0 billion; FY16: £8.0 billion*) of other intangible assets comprising acquired value of in-force business of £3.6 billion (*HY16: £4.0 billion; FY16: £3.9 billion*), deferred acquisition costs (net of deferred income) of £2.8 billion *(HY16: £2.6 billion; FY16: £2.5 billion*) and other intangibles of £1.7 billion *(HY16: £1.4 billion; FY16: £1.6 billion*).

2 The estimated Solvency II position includes an estimated adverse impact of a notional reset of the transitional measure on technical provisions ('TMTP') to reflect interest rates at 30 June 2017 £0.5 billion decrease to surplus *(HY16: £nil; FY16: £0.4 billion)*. Also included are the pro forma impacts of the disposal of the Spanish joint ventures Unicorp Vida and Caja Espana Vida and its retail life insurance business Aviva Vida y Pensiones (£0.1 billion decrease to Own Funds), the disposal of Friends Provident International Limited (£0.1 billion decrease to Own Funds), and the remaining £0.2 billion of the share buy-back announced on 25 May 2017.

3 The 30 June 2016 Solvency II position includes the pro forma impact of acquiring the RBC General Insurance business £(0.3) billion. The 31 December 2016 Solvency II position includes pro forma impacts of the disposal of Aviva's 50% shareholding in Antarius to Sogecap completed on 05 April 2017 and an anticipated future change to UK tax rules restricting the tax relief that can be claimed in respect of tax losses (£0.1 billion decrease to Own Funds). However, under the amended tax rules published on 13 July 2017, this restriction will not be material, and as a result no corresponding pro forma impact in respect of tax losses is included in the estimated 30 June 2017 Solvency II position.

4 Net deferred tax includes the tax effect of all other reconciling items in the table above which are shown gross of tax.

5 Regulatory adjustments to bridge from Solvency II Net Assets to Own Funds include recognition of subordinated debt capital and non-controlling interests.

6 The estimated Solvency II position represents the shareholder view. This excludes the contribution to Group Solvency Capital Requirement (SCR) and Group Own Funds of fully ring fenced with-profits funds £3.2 billion *(HY16: £2.7 billion; FY16: £2.9 billion)* and staff pension schemes in surplus £1.2 billion *(HY16: £0.9 billion; FY16: £1.1 billion)* – these exclusions have no impact on Solvency II surplus.

Financial supplement

In this section

Reconciliation of Group operating profit to profit after tax

For the six month period ended 30 June 2017

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Operating profit before tax attributable to shareholders' profits			
Life business			
United Kingdom & Ireland	**756**	711	1,555
Europe	**433**	395	844
Asia	**120**	118	241
Other	**10**	2	2
Total life business	**1,319**	1,226	2,642
General insurance and health			
United Kingdom & Ireland	**259**	231	471
Canada	**71**	88	269
Europe	**85**	35	120
Asia	**(5)**	(6)	(13)
Other	**7**	(14)	(14)
Total general insurance and health	**417**	334	833
Fund management			
Aviva Investors	**71**	49	139
Asia	**(2)**	—	(1)
Total fund management	**69**	49	138
Other			
Other operations (note A1)	**(98)**	(49)	(94)
Market operating profit	**1,707**	1,560	3,519
Corporate centre (note A2)	**(83)**	(80)	(184)
Group debt costs and other interest (note A3)	**(159)**	(155)	(325)
Operating profit before tax attributable to shareholders' profits	**1,465**	1,325	3,010
Integration and restructuring costs	**(52)**	(105)	(212)
Operating profit before tax attributable to shareholders' profits after integration and restructuring costs	**1,413**	1,220	2,798
Adjusted for the following:			
Investment return variances and economic assumption changes on long-term business (note A4)	**(179)**	6	379
Short-term fluctuation in return on investments backing non-long-term business (note A5)	**(205)**	(338)	(518)
Economic assumption changes on general insurance and health business (note A6)	**(12)**	(123)	(242)
Impairment of goodwill, joint ventures and associates and other amounts expensed (note A7)	**(19)**	—	—
Amortisation and impairment of intangibles	**(91)**	(92)	(175)
Amortisation and impairment of acquired value of in-force business (note A8)	**(234)**	(318)	(540)
Profit/(loss) on the disposal and re-measurement of subsidiaries, joint ventures and associates (note A9)	**202**	(18)	(11)
Other (note A10)	**—**	—	(498)
Non-operating items before tax	**(538)**	(883)	(1,605)
Profit before tax attributable to shareholders' profits	**875**	337	1,193
Tax on operating profit	**(311)**	(323)	(706)
Tax on other activities	**152**	187	372
	(159)	(136)	(334)
Profit for the period	**716**	201	859

Other Group Operating Profit Items

A1 – Other operations

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
United Kingdom & Ireland Life	**(25)**	(14)	(7)
United Kingdom & Ireland General Insurance	**1**	2	3
Europe	**(17)**	(10)	(19)
Asia	**(17)**	(14)	(26)
Other Group operations[1]	**(40)**	(13)	(45)
Total	**(98)**	(49)	(94)

1 Other Group operations include Group and head office costs.

Other operations relate to non-insurance activities across the Group, with total losses increasing to £98 million *(HY16: £49 million)*. Within UK & Ireland the result primarily relates to the losses on the savings platform businesses as they continue to grow to scale. Europe and Asia include holding company expenses and adverse foreign exchange movements of £4 million.

'Other Group operations' includes further investment in resources and talent in UK Digital to establish a centre of excellence for digital expertise and to support the growth in direct customer sales through MyAviva.

Additionally, there has been investment in organisation and culture initiatives within the Group in the first half of the year. Partly offsetting these overall costs was an income of £25 million relating to insurance recoveries *(HY16: £20 million, of which £16 million was due from the Group's internal reinsurer and therefore had a neutral effect on overall Group operating profit)*.

A2 – Corporate centre

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Project spend	**(4)**	(12)	(30)
Central spend and share award costs	**(79)**	(68)	(154)
Total	**(83)**	(80)	(184)

Corporate costs of £83 million increased by £3 million *(HY16: £80 million)* mainly due to higher share scheme costs offset by a decrease in Group led projects.

A3 – Group debt costs and other interest

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
External debt			
Subordinated debt	**(191)**	(184)	(387)
Other	**(2)**	—	(1)
Total external debt	**(193)**	(184)	(388)
Internal lending arrangements	**(3)**	(15)	(23)
Net finance income on main UK pension scheme	**37**	44	86
Total	**(159)**	(155)	(325)

Non-operating profit items

A4 – Life business: Investment variances and economic assumption changes

(a) Definitions

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. Operating profit includes the effect of variance in experience for non-economic items, such as mortality, persistency and expenses, and the effect of changes in non-economic assumptions, where not treated as other items. 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 operating profit.

(b) Economic volatility

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

Life business	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Investment variances and economic assumptions	**(179)**	6	379

Investment variances and economic assumption changes were £179 million negative *(HY16: £6 million positive; FY16: £379 million positive)*. The negative variance in 2017 primarily reflects the treatment on disposal of our French subsidiary Antarius and falling interest rates in Asia. The profit on sale of Antarius of £180 million is reported as a profit on disposal of subsidiaries (see note B4(b)(i) for further details). Under French reserving rules (applicable under grandfathering of French GAAP when IFRS was adopted), £147 million of the profit on disposal has been transferred to insurance liabilities at 30 June 2017, and is expected to be released over time in line with French rules governing the annual minimum allocation of bonuses to policyholders. The impact of the transfer at 30 June 2017 is shown in investment variances above.

The investment variances at HY16 were £6 million positive. Positive variances in the UK reflecting lower interest rates were partially offset by an adverse impact reflecting the Group's revised expectation of future property prices and rental income in light of the UK referendum vote for the UK to leave the European Union. The positive variance in the UK was broadly offset by negative variances in Asia and France due to decreasing interest rates and equity underperformance.

In 2016, investment variances and economic assumption changes were £379 million positive. Positive variances in the UK reflected lower interest rates and narrowing credit spreads, which increase asset values more than liabilities. The adverse impact of the Group's revised expectation of future property prices and rental income in light of the UK referendum vote for the UK to leave the European Union was broadly offset in the second half of the year as expectations for future property price and rental growth increased. In addition, in the UK the investment variance reflected a refined approach of assuming best estimate expected credit defaults on corporate bonds, with a resulting increase in operating profit in the period. The positive variance in the UK was partially offset by negative variances in France and Italy.

(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 2017 %	6 months 2016 %	Full Year 2016 %	6 months 2017 %	6 months 2016 %	Full Year 2016 %
United Kingdom	**4.8%**	5.5%	5.5%	**3.3%**	4.0%	4.0%
Eurozone	**4.2%**	4.5%	4.5%	**2.7%**	3.0%	3.0%

The expected return on equities and properties has been calculated by reference to the 10 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 2017 %	6 months 2016 %	Full Year 2016 %
Equity risk premium	**3.5%**	3.5%	3.5%
Property risk premium	**2.0%**	2.0%	2.0%

The 10 year mid-price swap rates at the start of the period are set out in the table below:

Territories	2017 %	2016 %
United Kingdom	**1.3%**	2.0%
Eurozone	**0.7%**	1.0%

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 2017 £m	6 months 2016 £m	Full Year 2016 £m
Analysis of investment income:			
– Net investment income	**122**	209	383
– Foreign exchange gains/losses and other charges	**(17)**	(15)	(35)
	105	194	348
Analysed between:			
– Longer-term investment return, reported within operating profit	**172**	171	343
– Short-term fluctuations in investment return, reported outside operating profit	**(67)**	23	5
	105	194	348
Short-term fluctuations:			
– General insurance and health	**(67)**	23	5
– Other operations[1]	**(138)**	(361)	(523)
Total short-term fluctuations	**(205)**	(338)	(518)

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

The longer-term investment return is calculated separately for each principal non-life business unit. 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 longer-term rate of investment return. The longer-term rate of investment return is determined using consistent assumptions between operations, having regard to local economic and market forecasts of investment return. The allocated longer-term return for other investments is the actual income receivable for the period. Actual income and longer-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 longer-term investment returns are disclosed separately in short-term fluctuations outside operating profit.

The impact of realised and unrealised gains and losses on Group centre investments, including the centre hedging programme which is designed to economically protect the total Group's capital against adverse equity and foreign exchange movements, is included in short-term fluctuations on other operations.

The adverse short-term fluctuations during the first half of 2017 are mainly due to interest rate increases reducing the value of fixed income securities, and foreign exchange losses 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 longer-term return, are:

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Debt securities	**10,229**	9,757	10,799
Equity securities	**296**	225	267
Properties	**344**	368	341
Cash and cash equivalents	**1,451**	1,623	1,162
Other[1]	**2,403**	2,040	2,032
Assets supporting general insurance and health business	**14,723**	14,013	14,601
Assets supporting other non-long-term business[2]	**1,173**	513	724
Total assets supporting non-long-term business	**15,896**	14,526	15,325

1 Includes the internal loan.
2 Represents assets backing non-life business in Group centre investments, including the centre hedging programme.

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

	Longer-term rates of return on equities			Longer-term rates of return on property		
	6 months 2017 %	6 months 2016 %	Full Year 2016 %	6 months 2017 %	6 months 2016 %	Full Year 2016 %
United Kingdom	**4.8%**	5.5%	5.5%	**3.3%**	4.0%	4.0%
Eurozone	**4.2%**	4.5%	4.5%	**2.7%**	3.0%	3.0%
Canada	**5.5%**	5.4%	5.4%	**4.0%**	3.9%	3.9%

The longer-term rates of return on equities and properties have been calculated by reference to the 10 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

Economic assumption changes of £12 million adverse *(HY16: £123 million adverse)* mainly arise as a result of an increase in the estimated future inflation rate used to value periodic payment orders partly offset by a slight increase in the interest rates used to discount claim reserves for periodic payment orders and latent claims. During the first half of 2016 market interest rates used to discount periodic payment orders and latent claims reduced and the estimated future inflation rate used to value periodic payment orders was increased to be consistent with market expectations. This was, in part, offset by a change in estimate for the interest rate used to discount periodic payment orders to allow for the illiquid nature of these liabilities.

A7 – Impairment of goodwill, joint ventures, associates and other amounts expensed
Impairment of goodwill, joint ventures and associates in the period is a charge of £19 million *(HY16: £nil)* in respect of the group's associate in India as management determined that the goodwill of this business is not fully recoverable.

A8 – Amortisation and impairment of acquired value of in-force business
Amortisation of acquired value of in-force business in the period is a charge of £234 million *(HY16: £318 million charge)*. There were no impairments of acquired value of in-force business in the period *(HY16: £nil)*.

A9 – Profit/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates
The profit on the disposal and remeasurement of subsidiaries, joint ventures and associates during the period of £202 million *(HY16: loss of £18 million)* consists of a £180 million profit on disposal of Antarius (see note B4(b)(i)) and £22 million of remeasurement gains in respect of the joint venture operations in Poland and Aviva Vietnam. See note B4(b)(ii) and note B4(a) for further details of Poland and Aviva Vietnam respectively.

A10 – 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. There were no such items in the first half of 2017 *(HY16: £nil)*.

IFRS financial statements

Condensed consolidated income statement
For the six month period ended 30 June 2017

	Note	Reviewed 6 months 2017 £m	Reviewed 6 months 2016 £m	Audited Full Year 2016 £m
Income				
Gross written premiums		**13,576**	12,593	25,442
Premiums ceded to reinsurers		**(1,076)**	(1,160)	(2,364)
Premiums written net of reinsurance		**12,500**	11,433	23,078
Net change in provision for unearned premiums		**(365)**	(348)	(210)
Net earned premiums		**12,135**	11,085	22,868
Fee and commission income		**1,125**	996	1,962
Net investment income		**10,754**	15,164	30,257
Share of profit after tax of joint ventures and associates		**10**	195	216
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	B4	**202**	(18)	(11)
		24,226	27,422	55,292
Expenses				
Claims and benefits paid, net of recoveries from reinsurers		**(12,501)**	(11,453)	(23,782)
Change in insurance liabilities, net of reinsurance	B9a(ii)	**(1,684)**	(5,926)	(6,893)
Change in investment contract provisions		**(5,584)**	(4,576)	(14,039)
Change in unallocated divisible surplus	B13	**794**	(792)	(381)
Fee and commission expense		**(2,200)**	(1,654)	(3,885)
Other expenses		**(1,669)**	(2,071)	(3,853)
Finance costs		**(353)**	(295)	(626)
		(23,197)	(26,767)	(53,459)
Profit before tax		**1,029**	655	1,833
Tax attributable to policyholders' returns	B6	**(154)**	(318)	(640)
Profit before tax attributable to shareholders' profits		**875**	337	1,193
Tax expense	B6	**(313)**	(454)	(974)
Less: tax attributable to policyholders' returns	B6	**154**	318	640
Tax attributable to shareholders' profits		**(159)**	(136)	(334)
Profit for the period		**716**	201	859
Attributable to:				
Equity holders of Aviva plc		**637**	130	703
Non-controlling interests		**79**	71	156
Profit for the period		**716**	201	859
Earnings per share	B7			
Basic (pence per share)		**14.9p**	2.5p	15.3p
Diluted (pence per share)		**14.7p**	2.4p	15.1p

Condensed consolidated statement of comprehensive income

For the six month period ended 30 June 2017

	Note	**Reviewed 6 months 2017 £m**	Reviewed 6 months 2016 £m	Audited Full Year 2016 £m
Profit for the period		**716**	201	859
Other comprehensive income:				
Items that may be reclassified subsequently to income statement				
Investments classified as available for sale				
Fair value (losses)/gains		**(10)**	26	12
Fair value gains transferred to profit on disposals		**(2)**	—	(2)
Share of other comprehensive income of joint ventures and associates		**1**	3	(6)
Foreign exchange rate movements		**46**	866	1,128
Aggregate tax effect – shareholder tax on items that may be reclassified subsequently to income statement		**5**	(31)	(34)
Items that will not be reclassified to income statement				
Owner-occupied properties – fair value gains/(losses)		**(1)**	2	4
Remeasurements of pension schemes	B15	**(36)**	776	311
Aggregate tax effect – shareholder tax on items that will not be reclassified subsequently to income statement		**12**	(170)	(70)
Total other comprehensive income, net of tax		**15**	1,472	1,343
Total comprehensive income for the period		**731**	1,673	2,202
Attributable to:				
Equity holders of Aviva plc		**619**	1,488	1,901
Non-controlling interests		**112**	185	301
		731	1,673	2,202

IFRS

Condensed consolidated statement of changes in equity

For the six month period ended 30 June 2017

	Note	**Reviewed 6 months 2017 £m**	Reviewed 6 months 2016 £m	Audited Full Year 2016 £m
Balance at 1 January as reported		**19,551**	18,270	18,270
Profit for the period		**716**	201	859
Other comprehensive income		**15**	1,472	1,343
Total comprehensive income for the period		**731**	1,673	2,202
Owner-occupied properties fair value gains transferred to retained earnings on disposals		**—**	—	—
Dividends and appropriations	B8	**(684)**	(605)	(973)
Non-controlling interests share of dividends declared in the period		**(55)**	(62)	(135)
Transfer to profit on disposal of subsidiaries, joint ventures and associates		**(31)**	—	(7)
Capital contributions from non-controlling interests		**39**	8	9
Changes in non-controlling interests in subsidiaries		**(202)**	(1)	105
Treasury shares held by subsidiary companies		**—**	—	13
Reserves credit for equity compensation plans		**46**	20	38
Shares issued under equity compensation plans		**5**	3	12
Shares purchased in buy-back		**(73)**	—	—
Aggregate tax effect – shareholder tax		**6**	5	17
Balance at 30 June/31 December		**19,333**	19,311	19,551

Condensed consolidated statement of financial position

As at 30 June 2017

	Note	Reviewed 30 June 2017 £m	Reviewed 30 June 2016 £m	Audited 31 December 2016 £m
Assets				
Goodwill		**1,911**	1,979	2,045
Acquired value of in-force business and intangible assets	B21	**4,841**	5,450	5,468
Interests in, and loans to, joint ventures		**1,214**	1,765	1,604
Interests in, and loans to, associates		**472**	449	481
Property and equipment		**510**	482	487
Investment property		**10,719**	11,106	10,768
Loans		**25,452**	24,305	24,784
Financial investments		**309,222**	288,460	299,835
Reinsurance assets	B11	**18,512**	22,983	26,343
Deferred tax assets		**186**	128	180
Current tax assets		**80**	76	119
Receivables		**9,060**	8,762	7,794
Deferred acquisition costs and other assets		**6,407**	6,293	5,893
Prepayments and accrued income		**2,929**	2,908	2,882
Cash and cash equivalents	B19	**42,456**	34,911	38,708
Assets of operations classified as held for sale	B4	**6,042**	14,193	13,028
Total assets		**440,013**	424,250	440,419
Equity				
Capital				
Ordinary share capital		**1,014**	1,014	1,015
Preference share capital		**200**	200	200
		1,214	1,214	1,215
Capital reserves				
Share premium		**1,201**	1,188	1,197
Merger reserve		**8,975**	8,974	8,974
		10,176	10,162	10,171
Treasury shares		**(14)**	(28)	(15)
Other reserves		**780**	587	797
Retained earnings		**4,735**	4,978	4,835
Equity attributable to shareholders of Aviva plc		**16,891**	16,913	17,003
Direct capital instrument and tier 1 notes		**1,123**	1,123	1,123
Equity excluding non-controlling interests		**18,014**	18,036	18,126
Non-controlling interests		**1,319**	1,275	1,425
Total equity		**19,333**	19,311	19,551
Liabilities				
Gross insurance liabilities	B9	**150,714**	147,977	151,183
Gross liabilities for investment contracts	B10	**203,726**	186,006	197,095
Unallocated divisible surplus	B13	**8,524**	9,624	9,349
Net asset value attributable to unitholders		**18,469**	13,045	15,638
Provisions	B15	**1,426**	1,484	1,510
Deferred tax liabilities		**2,325**	2,207	2,413
Current tax liabilities		**188**	484	421
Borrowings	B14	**10,338**	9,681	10,295
Payables and other financial liabilities		**17,057**	18,020	17,751
Other liabilities		**2,733**	2,795	2,719
Liabilities of operations classified as held for sale	B4	**5,180**	13,616	12,494
Total liabilities		**420,680**	404,939	420,868
Total equity and liabilities		**440,013**	424,250	440,419

IFRS

Condensed consolidated statement of cash flows

For the six month period ended 30 June 2017

	Note	Reviewed 6 months 2017 £m	Reviewed 6 months 2016 £m	Audited Full Year 2016 £m
Cash flows from operating activities[1]				
Cash generated from operating activities		**5,255**	1,347	5,394
Tax paid		**(405)**	(219)	(647)
Total net cash from operating activities		**4,850**	1,128	4,747
Cash flows from investing activities				
Acquisitions of, and additions to, subsidiaries, joint ventures and associates, net of cash acquired		**25**	(114)	(432)
Disposals of subsidiaries, joint ventures and associates, net of cash transferred		**(36)**	—	42
New loans to joint ventures and associates		**(2)**	—	(3)
Repayment of loans to joint ventures and associates		**—**	71	97
Net new loans to joint ventures and associates		**(2)**	71	94
Purchases of property and equipment		**(40)**	(25)	(67)
Proceeds on sale of property and equipment		**2**	44	75
Purchases of intangible assets		**(44)**	(35)	(119)
Total net cash (used in)/from investing activities		**(95)**	(59)	(407)
Cash flows from financing activities				
Proceeds from issue of ordinary shares		**6**	6	15
Shares purchased in buy-back		**(73)**	—	—
Treasury shares distributed from employee trusts		**1**	1	—
New borrowings drawn down, net of expenses		**21**	1,355	3,526
Repayment of borrowings		**(129)**	(867)	(2,340)
Net (repayment)/drawdown of borrowings		**(108)**	488	1,186
Interest paid on borrowings		**(294)**	(284)	(595)
Preference dividends paid	B8	**(9)**	(9)	(17)
Ordinary dividends paid	B8	**(646)**	(570)	(871)
Coupon payments on direct capital instrument and tier 1 notes	B8	**(29)**	(26)	(85)
Capital contributions from non-controlling interests of subsidiaries		**39**	—	9
Dividends paid to non-controlling interests of subsidiaries		**(55)**	(62)	(135)
Changes in controlling interest in subsidiaries		**—**	(1)	105
Total net cash (used in)/from financing activities		**(1,168)**	(457)	(388)
Total net increase in cash and cash equivalents		**3,587**	612	3,952
Cash and cash equivalents at 1 January		**38,405**	33,170	33,170
Effect of exchange rate changes on cash and cash equivalents		**248**	1,053	1,283
Cash and cash equivalents at 30 June/31 December	B19	**42,240**	34,835	38,405

1 Cash flows from operating activities includes interest received of £2,669 million (*FY16: £5,642 million; HY16: £3,207 million*) and dividends received of £2,054 million (*FY16: £2,536 million; HY16: £1,204 million*).

The cash flows presented in this statement cover all the Group's activities and include flows from both policyholder and shareholder activities. Operating cash flows reflect the movement in both policyholder and shareholder controlled cash and cash equivalent balances.

During the period the net operating cash inflow reflects a number of factors, including the level of premium income, payments of claims, creditors and surrenders and purchases and sales of operating assets including financial investments. It also includes changes in the size and value of consolidated cash investment funds and changes in the Group participation in these funds.

B1 – Basis of preparation

The condensed consolidated interim financial statements for the six months to 30 June 2017 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 accounting policies applied in the condensed consolidated interim financial statements are the same as those applied in Aviva plc's 2016 Annual Report and Accounts. In addition, during the period ended 30 June 2017, Aviva plc ('the Group') adopted new amendments to International Financial Reporting Standards ('IFRS') that became effective on 1 January 2017, described in the 2016 Annual Report and Accounts, however these had no effect on reported profit or loss or equity, the statement of financial position or the statement of cash flows.

The results for the six months to 30 June 2017 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 results for the full year 2016 have been taken from the Group's 2016 Annual Report and Accounts. Therefore, these interim financial statements should be read in conjunction with the 2016 Annual Report and Accounts that were prepared in accordance with IFRS as endorsed by the European Union. PricewaterhouseCoopers LLP reported on the 2016 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 2016 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 12 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).

The long-term nature of much of the Group's operations means that, for management's decision-making and internal performance management, short-term realised and unrealised investment gains and losses are treated as non-operating items. As a result, the Group focuses on operating profit, a non-GAAP financial performance measure, that incorporates an expected return on investments supporting its long-term and non-long-term businesses. Operating profit for long-term business is based on expected investment returns on financial investments backing shareholder and policyholder funds over the reporting period, with allowance for the corresponding expected movements in liabilities. Variances between actual and expected investment returns, and the impact of changes in economic assumptions on liabilities, are disclosed separately outside operating profit. For non-long-term business, the total investment income, including realised and unrealised gains, is analysed between that calculated using a longer-term return and short-term fluctuations from that level. 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; the profit or loss on disposal and remeasurement of subsidiaries, joint ventures and associates; integration and restructuring costs; and 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.

B2 – Presentation changes

There are no presentation changes in this period.

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 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 2017	6 months 2016	Full Year 2016
Eurozone			
Average rate (€1 equals)	**£0.86**	£0.78	£0.82
Period end rate (€1 equals)	**£0.88**	£0.83	£0.85
Canada			
Average rate ($CAD1 equals)	**£0.59**	£0.53	£0.56
Period end rate ($CAD1 equals)	**£0.59**	£0.58	£0.60
Poland			
Average rate (PLN1 equals)	**£0.20**	£0.18	£0.19
Period end rate (PLN1 equals)	**£0.21**	£0.19	£0.19

IFRS

B4 – Subsidiaries, joint ventures and associates

This note provides details of the acquisitions and disposals of subsidiaries, joint ventures and associates that the Group has made during the period, together with details of businesses held for sale at the period end.

(a) Acquisitions

On 21 April 2017, Aviva plc announced the acquisition of VietinBank's 50% shareholding in its life insurance joint venture VietinBank Aviva Life Insurance Limited ('Aviva Vietnam') for a consideration of £20 million and signing of a new life insurance distribution agreement. Following completion of the transaction on 22 May 2017, Aviva Vietnam is now a wholly owned subsidiary, with a change in the legal entity name to Aviva Vietnam Life Insurance Company Limited. The change from an equity accounted joint venture to a consolidated subsidiary resulted in a fair value remeasurement gain of £6 million on the previous equity interest of £2 million and recognition of £18 million of goodwill and other intangible assets.

(b) Disposal and re-measurements of subsidiaries, joint ventures and associates

The profit/(loss) on the disposal and re-measurement of subsidiaries, joint ventures and associates comprises:

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
France – Antarius (see (i) below)	**180**	—	—
Ireland – health	**—**	(11)	(8)
Poland (see (ii) below)	**16**	—	—
Asia – Vietnam (see (a) above)	**6**	—	—
Other small operations	**—**	(7)	(3)
Total profit/(loss) on disposal and remeasurement	**202**	(18)	(11)

The profit on the disposal and remeasurement of subsidiaries, joint ventures and associates during the period of £202 million *(HY16: loss of £18 million)* consists of a £180 million profit on disposal of Antarius (see note B4(b)(i)) and £22 million of remeasurement gains in respect of the joint venture operations in Poland (see note B4(b)(ii)) and Aviva Vietnam (see note B4(a) above).

(i) Antarius

On 5 April 2017, Aviva announced that it had completed the sale of its entire 50% shareholding in Antarius to Sogecap, a subsidiary of Société Générale, for a consideration of approximately £433 million (€500 million). Antarius was owned jointly by Aviva and Crédit du Nord, a separate subsidiary of Société Générale. The transaction resulted in a profit on disposal of £180 million, calculated as follows:

	£m
Assets	
Goodwill, AVIF and other intangibles	**12**
Investment property	**49**
Loans	**78**
Financial investments	**10,873**
Reinsurance assets	**408**
Other assets	**1,499**
Cash and cash equivalents	**468**
Total assets	**13,387**
Liabilities	
Insurance liabilities	**4,720**
Liability for investment contract	**7,247**
Unallocated divisible surplus	**832**
Other liabilities	**34**
Total liabilities	**12,833**
Net assets	**554**
Non-controlling interests before disposal	**(277)**
Group's share of net assets disposed of	**277**
Cash consideration	**433**
Less: transaction costs	**(2)**
Net consideration	**431**
Revaluation reserves recycled to the income statement	**26**
Profit on disposal[1]	**180**

1 Under French reserving rules (applicable under grandfathering of French GAAP when IFRS was adopted), £147 million of the profit on disposal has been transferred to insurance liabilities at 30 June 2017. See note A4(b) for further details.

(ii) Poland

Remeasurement during the period relates to the joint venture insurance operations in Poland. As a result of changes agreed by Aviva and Santander to the shareholders' agreement, Aviva now controls the two joint venture companies and consolidates them with an effective date of 1 January 2017. The change from equity accounted joint ventures to consolidated subsidiaries resulted in a fair value remeasurement gain of £16 million on the previous equity interests of £48 million and recognition of a distribution agreement within intangible assets.

B4 – Subsidiaries, joint ventures and associates continued

(c) 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 2017 are as follows:

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Assets			
Goodwill, AVIF and other intangibles	**598**	25	12
Property and equipment	**1**	—	—
Investment property	**1**	44	48
Loans	**67**	64	75
Financial investments	**4,777**	10,715	10,706
Reinsurance assets	**101**	972	411
Other assets	**91**	1,698	1,521
Cash and cash equivalents	**406**	683	255
	6,042	14,201	13,028
Additional impairment to write down the disposal group to fair value less cost to sell	**—**	(8)	—
Total assets	**6,042**	14,193	13,028
Liabilities			
Insurance liabilities	**(4,061)**	(4,717)	(4,448)
Liability for investment contracts	**—**	(7,655)	(7,175)
Unallocated divisible surplus	**(248)**	(852)	(859)
Net assets attributable to unit holders	**(555)**	—	—
External borrowings	**(13)**	—	—
Other liabilities	**(303)**	(392)	(12)
Total liabilities	**(5,180)**	(13,616)	(12,494)
Net assets	**862**	577	534

Assets and liabilities of operations classified as held for sale as at 30 June 2017 relate to the expected disposal of three businesses in Spain and two businesses in Italy. See note B4(c)(i) and note B4(c)(ii) for further details. Assets and liabilities of operations classified as held for sale during 2016 relate to Antarius (see note B4(b)(i)) and other small operations disposed of during 2016.

(i) Spain

On 10 May 2017, Aviva announced the sale of its 50% shareholding in life insurance and pension partnerships Unicorp Vida and Caja España Vida, as well as its wholly owned retail life insurance business Aviva Vida y Pensiones, to Santalucía for a total consideration of approximately £409 million (€475 million). The transaction is subject to regulatory and anti-trust approvals and is expected to complete in the third quarter of 2017. These businesses have been classified as held for sale from May 2017, measured at their carrying amount and remain consolidated subsidiaries of Aviva at the balance sheet date.

(ii) Italy

On 29 June 2017, Banco BPM notified Aviva of the termination of their existing distribution bancassurance partnership with Aviva Italia Holding S.p.A, a subsidiary of Aviva, with effect from 31 December 2017. As part of the bancassurance agreement, Aviva holds an option to put its entire 50% shareholding of Avipop Assicurazioni S.p.A and Avipop Vita S.p.A to Banco BPM. In accordance with IFRS 5, these businesses have been classified as held for sale from June 2017. These businesses are measured at their carrying amount and remain consolidated subsidiaries of Aviva at the balance sheet date.

(d) Subsequent events

On 19 July 2017, Aviva announced the sale of Friends Provident International Limited ('FPI') to RL360 Holding Company Limited, a subsidiary of International Financial Group Limited, for a total consideration of £340 million. The transaction is subject to regulatory approvals and is expected to complete in early 2018. In accordance with IFRS 5, 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 expected to create an IFRS loss on disposal and remeasurement of approximately £130 million.

B5 – Segmental information

The Group's results can be segmented, either by activity or by geography. Our primary reporting format is along market reporting lines, with supplementary information being given by business activity. This note provides segmental information on the condensed consolidated income statement and condensed consolidated statement of financial position.

The Group has determined its operating segments along market reporting lines and internal management reporting.

United Kingdom and Ireland

The United Kingdom and Ireland comprises two operating segments – Life and General Insurance. The principal activities of our UK and Ireland Life operations (including Friends UK) are life insurance, long-term health (in the UK) and accident insurance, savings, pensions and annuity business. UK and Ireland 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. UK and Ireland General Insurance includes the results of our Ireland Health business, up to the date of disposal on 1 August 2016.

Canada

The principal activity of the Canadian operation is general insurance. In particular it provides personal and commercial lines insurance products principally distributed through insurance brokers. Canada includes the operations of RBC General Insurance Company following its acquisition on 1 July 2016.

France

The principal activities of our French operations 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. The results of Antarius are included up to the date of disposal on 5 April 2017 (see B4 (b)(i) for further details).

Poland

Activities in Poland comprise long-term business and general insurance operations, including our long-term business in Lithuania.

Italy, Spain 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. The principal activities of our Italian operations are long-term business and general insurance. The long-term business offers a range of long-term insurance and savings products and the general insurance business provides motor and home insurance products to individuals, as well as small commercial risk insurance to businesses. The principal activity of the Spanish operation is the sale of long-term business, accident and health insurance and a selection of savings products. As set out in note B4 (c) (i) and (ii) certain entities within our Spanish and Italian businesses are classified as held for sale as at 30 June 2017. Our 'Other' operations include our life operations in Turkey.

Asia

Our activities in Asia principally comprise our long-term insurance business operations in China, India, Singapore, Hong Kong, Vietnam, Indonesia, Taiwan and the international operations of Friends Life. 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, Europe, North America, Asia Pacific and other international businesses, managing policyholders' and shareholders' invested funds, providing investment management services for institutional pension fund mandates and managing a range of retail investment products, including investment funds, unit trusts, OEICs and ISAs.

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 reinsurance operations are also included in this segment.

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.

B5 – Segmental information continued

(a) (i) Segmental income statement for the six month period ended 30 June 2017

	United Kingdom & Ireland			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities[2] £m	Total £m
Gross written premiums	3,070	2,464	1,529	3,053	286	2,657	517	—	—	13,576
Premiums ceded to reinsurers	(754)	(138)	(52)	(40)	(5)	(21)	(66)	—	—	(1,076)
Internal reinsurance revenue	(3)	—	—	—	—	(2)	(5)	—	10	—
Premiums written net of reinsurance	2,313	2,326	1,477	3,013	281	2,634	446	—	10	12,500
Net change in provision for unearned premiums	(38)	(128)	(48)	(128)	—	(9)	(14)	—	—	(365)
Net earned premiums	2,275	2,198	1,429	2,885	281	2,625	432	—	10	12,135
Fee and commission income	516	60	12	146	40	44	103	206	(2)	1,125
	2,791	2,258	1,441	3,031	321	2,669	535	206	8	13,260
Net investment income	8,045	41	57	1,417	197	240	480	61	216	10,754
Inter-segment revenue	—	—	—	—	—	—	—	113	—	113
Share of profit of joint ventures and associates	29	—	—	12	—	4	(35)	—	—	10
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	180	16	—	6	—	—	202
Segmental income[1]	10,865	2,299	1,498	4,640	534	2,913	986	380	224	24,339
Claims and benefits paid, net of recoveries from reinsurers	(5,679)	(1,368)	(898)	(2,717)	(215)	(1,383)	(235)	—	(6)	(12,501)
Change in insurance liabilities, net of reinsurance	(205)	42	(94)	(442)	(93)	(605)	(306)	—	19	(1,684)
Change in investment contract provisions	(3,772)	—	—	(859)	—	(713)	(178)	(62)	—	(5,584)
Change in unallocated divisible surplus	611	—	—	133	(4)	152	(98)	—	—	794
Fee and commission expense	(290)	(672)	(367)	(354)	(68)	(166)	(58)	(21)	(204)	(2,200)
Other expenses	(611)	(152)	(97)	(146)	(44)	(54)	(146)	(206)	(213)	(1,669)
Inter-segment expenses	(101)	(4)	(3)	(1)	(2)	—	—	—	(2)	(113)
Finance costs	(131)	—	(2)	(1)	—	(1)	(2)	—	(216)	(353)
Segmental expenses	(10,178)	(2,154)	(1,461)	(4,387)	(426)	(2,770)	(1,023)	(289)	(622)	(23,310)
Profit/(loss) before tax	687	145	37	253	108	143	(37)	91	(398)	1,029
Tax attributable to policyholders' returns	(144)	—	—	—	—	—	(10)	—	—	(154)
Profit/(loss) before tax attributable to shareholders' profits	543	145	37	253	108	143	(47)	91	(398)	875
Adjusted for non-operating items:										
Reclassification of corporate costs and unallocated interest	—	(6)	14	24	—	—	—	2	(34)	—
Investment return variances and economic assumption changes on long-term business	(31)	—	—	157	(3)	—	56	—	—	179
Short-term fluctuation in return on investments backing non-long-term business	—	75	(11)	4	(1)	4	1	—	133	205
Economic assumption changes on general insurance and health business	—	23	—	(9)	—	—	—	—	(2)	12
Impairment of goodwill, joint ventures and associates and other amounts expensed	—	—	—	—	—	—	19	—	—	19
Amortisation and impairment of intangibles	33	15	22	—	3	3	5	3	7	91
Amortisation and impairment of AVIF	162	—	—	1	—	1	68	—	2	234
(Profit)/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	(180)	(16)	—	(6)	—	—	(202)
Integration and restructuring costs	32	—	9	9	—	—	—	—	2	52
Other	—	—	—	—	—	—	—	—	—	—
Operating profit/(loss) before tax attributable to shareholders	739	252	71	259	91	151	96	96	(290)	1,465

1 Total reported income, excluding inter-segment revenue, includes £12,837 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.

B5 – Segmental information continued

(a) (ii) Segmental income statement for the six month period ended 30 June 2016

	United Kingdom & Ireland			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Spain and Other £m	Asia £m	Aviva Investors[2] £m	Other Group activities[3] £m	Total £m
Gross written premiums	2,439	2,454	1,091	3,499	237	2,413	460	—	—	12,593
Premiums ceded to reinsurers	(751)	(229)	(42)	(41)	(4)	(19)	(74)	—	—	(1,160)
Internal reinsurance revenue	(3)	(2)	—	—	—	(1)	(5)	—	11	—
Premiums written net of reinsurance	1,685	2,223	1,049	3,458	233	2,393	381	—	11	11,433
Net change in provision for unearned premiums	(34)	(136)	(29)	(117)	(12)	(7)	(13)	—	—	(348)
Net earned premiums	1,651	2,087	1,020	3,341	221	2,386	368	—	11	11,085
Fee and commission income	453	78	8	115	28	50	103	162	(1)	996
	2,104	2,165	1,028	3,456	249	2,436	471	162	10	12,081
Net investment income	13,431	132	42	704	3	416	316	39	81	15,164
Inter-segment revenue	—	—	—	—	—	—	—	117	—	117
Share of profit of joint ventures and associates	178	—	—	13	4	—	—	—	—	195
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(8)	(11)	—	—	—	—	—	—	1	(18)
Segmental income[1]	15,705	2,286	1,070	4,173	256	2,852	787	318	92	27,539
Claims and benefits paid, net of recoveries from reinsurers	(5,637)	(1,315)	(619)	(2,423)	(153)	(1,114)	(178)	—	(14)	(11,453)
Change in insurance liabilities, net of reinsurance	(4,459)	(79)	(41)	(479)	30	(677)	(213)	—	(8)	(5,926)
Change in investment contract provisions	(3,600)	—	—	(196)	—	(564)	(176)	(40)	—	(4,576)
Change in unallocated divisible surplus	(14)	—	—	(568)	4	(168)	(46)	—	—	(792)
Fee and commission expense	(272)	(629)	(285)	(211)	(38)	(146)	(61)	(18)	6	(1,654)
Other expenses	(754)	(162)	(53)	(131)	(34)	(61)	(138)	(205)	(533)	(2,071)
Inter-segment expenses	(106)	(3)	(2)	(3)	(2)	—	—	—	(1)	(117)
Finance costs	(89)	(1)	(1)	(1)	—	(2)	(2)	—	(199)	(295)
Segmental expenses	(14,931)	(2,189)	(1,001)	(4,012)	(193)	(2,732)	(814)	(263)	(749)	(26,884)
Profit/(loss) before tax	774	97	69	161	63	120	(27)	55	(657)	655
Tax attributable to policyholders' returns	(317)	—	—	—	—	—	(1)	—	—	(318)
Profit/(loss) before tax attributable to shareholders' profits	457	97	69	161	63	120	(28)	55	(657)	337
Adjusted for non-operating items:										
Reclassification of corporate costs and unallocated interest	1	(1)	4	22	—	—	—	2	(28)	—
Investment return variances and economic assumption changes on long-term business	(82)	—	—	32	—	2	42	—	—	(6)
Short-term fluctuation in return on investments backing non-long-term business	(17)	(23)	4	(1)	(1)	4	—	—	372	338
Economic assumption changes on general insurance and health business	—	123	1	—	—	—	—	—	(1)	123
Impairment of goodwill, joint ventures and associates and other amounts expensed	—	—	—	—	—	—	—	—	—	—
Amortisation and impairment of intangibles	35	11	8	—	2	7	5	3	21	92
Amortisation and impairment of AVIF	241	—	—	2	1	1	71	—	2	318
Loss/(profit) on the disposal and remeasurement of subsidiaries, joint ventures and associates	8	11	—	—	—	—	—	—	(1)	18
Integration and restructuring costs	61	8	3	4	—	1	8	10	10	105
Other	—	—	—	—	—	—	—	—	—	—
Operating profit/(loss) before tax attributable to shareholders	704	226	89	220	65	135	98	70	(282)	1,325

1 Total reported income, excluding inter-segment revenue, includes £17,606 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 Aviva Investors operating profit also includes £1 million profit relating to the Aviva Investors Pooled Pensions business.
3 Other Group activities include Group Reinsurance.

B5 – Segmental information continued

(a) (iii) Segmental income statement for the year ended 31 December 2016

	United Kingdom & Ireland			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Spain and Other £m	Asia £m	Aviva Investors[2] £m	Other Group activities[3] £m	Total £m
Gross written premiums	5,458	4,750	2,542	6,624	496	4,652	920	—	—	25,442
Premiums ceded to reinsurers	(1,509)	(498)	(89)	(86)	(9)	(39)	(134)	—	—	(2,364)
Internal reinsurance revenue	(7)	(2)	—	—	—	(3)	(11)	—	23	—
Premiums written net of reinsurance	3,942	4,250	2,453	6,538	487	4,610	775	—	23	23,078
Net change in provision for unearned premiums	(2)	(132)	(33)	(8)	(16)	(11)	(8)	—	—	(210)
Net earned premiums	3,940	4,118	2,420	6,530	471	4,599	767	—	23	22,868
Fee and commission income	868	140	17	258	60	98	198	326	(3)	1,962
	4,808	4,258	2,437	6,788	531	4,697	965	326	20	24,830
Net investment income	24,903	283	50	2,951	141	533	1,240	83	73	30,257
Inter-segment revenue	—	—	—	—	—	—	—	234	—	234
Share of profit of joint ventures and associates	172	—	1	16	7	3	17	—	—	216
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(3)	(8)	—	—	—	—	—	—	—	(11)
Segmental income[1]	29,880	4,533	2,488	9,755	679	5,233	2,222	643	93	55,526
Claims and benefits paid, net of recoveries from reinsurers	(11,200)	(2,680)	(1,521)	(5,397)	(315)	(2,230)	(399)	—	(40)	(23,782)
Change in insurance liabilities, net of reinsurance	(3,381)	(550)	(16)	(1,221)	(79)	(1,303)	(349)	—	6	(6,893)
Change in investment contract provisions	(10,069)	—	—	(1,636)	—	(1,180)	(1,069)	(85)	—	(14,039)
Change in unallocated divisible surplus	(259)	—	—	(276)	2	132	20	—	—	(381)
Fee and commission expense	(862)	(1,277)	(628)	(632)	(77)	(275)	(108)	(35)	9	(3,885)
Other expenses	(1,427)	(263)	(150)	(266)	(64)	(106)	(289)	(393)	(895)	(3,853)
Inter-segment expenses	(212)	(8)	(5)	(1)	(5)	—	—	—	(3)	(234)
Finance costs	(195)	(2)	(4)	(1)	—	(3)	(3)	—	(418)	(626)
Segmental expenses	(27,605)	(4,780)	(2,324)	(9,430)	(538)	(4,965)	(2,197)	(513)	(1,341)	(53,693)
Profit/(loss) before tax	2,275	(247)	164	325	141	268	25	130	(1,248)	1,833
Tax attributable to policyholders' returns	(638)	—	—	—	—	—	(2)	—	—	(640)
Profit/(loss) before tax attributable to shareholders' profits	1,637	(247)	164	325	141	268	23	130	(1,248)	1,193
Adjusted for non-operating items:										
Reclassification of corporate costs and unallocated interest	—	(5)	17	46	—	—	—	5	(63)	—
Investment return variances and economic assumption changes on long-term business	(503)	—	—	86	1	27	10	—	—	(379)
Short-term fluctuation in return on investments backing non-long-term business	(135)	(79)	42	(2)	(1)	13	—	—	680	518
Economic assumption changes on general insurance and health business	—	229	—	13	—	—	—	—	—	242
Impairment of goodwill, joint ventures and associates and other amounts expensed	—	—	—	—	—	—	—	—	—	—
Amortisation and impairment of intangibles	71	24	29	2	3	7	9	6	24	175
Amortisation and impairment of AVIF	387	—	—	3	2	2	142	—	4	540
Loss/(profit) on the disposal and remeasurement of subsidiaries, joint ventures and associates	3	8	—	—	—	—	—	—	—	11
Integration and restructuring costs	119	15	18	8	—	1	17	19	15	212
Other[4]	—	498	—	—	—	—	—	—	—	498
Operating profit/(loss) before tax attributable to shareholders	1,579	443	270	481	146	318	201	160	(588)	3,010

1 Total reported income, excluding inter-segment revenue, includes £33,784 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 Aviva Investors operating profit includes £2 million profit relating to the Aviva Investors Pooled Pensions business.
3 Other Group activities include Group Reinsurance.
4 Other items include an exceptional charge of £475 million (2015: £nil) relating to the impact of the change in the Ogden discount rate from 2.5% set in 2001 to minus 0.75% announced by the Lord Chancellor on 27 February 2017. Refer to note B9 (C)(iii) for further details. Other items also include a loss upon the completion of an outwards reinsurance contract by the UK General Insurance business, which provides significant protection against claims volatility from mesothelioma, industrial deafness and other long tail risks. The £23 million loss comprises £107 million in premiums ceded less £78 million in reinsurance recoverables recognised and £6 million claims handling provisions.

B5 – Segmental information continued

(a) (iv) Segmental statement of financial position as at 30 June 2017

	United Kingdom & Ireland			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities £m	Total £m
Goodwill	663	1,021	87	—	28	50	62	—	—	1,911
Acquired value of in-force business and intangible assets	2,956	151	279	88	79	191	1,001	6	90	4,841
Interests in, and loans to, joint ventures and associates	937	—	14	183	—	70	482	—	—	1,686
Property and equipment	72	26	39	248	4	3	10	4	104	510
Investment property	6,427	207	—	2,998	—	—	—	909	178	10,719
Loans	24,502	5	157	741	—	11	36	—	—	25,452
Financial investments	184,945	4,174	4,552	70,211	3,493	20,959	11,934	545	8,409	309,222
Deferred acquisition costs	1,335	546	375	323	106	76	137	—	—	2,898
Other assets	42,589	6,414	1,373	10,381	310	1,375	1,704	1,056	11,530	76,732
Assets of operations classified as held for sale	—	—	—	—	—	6,042	—	—	—	6,042
Total assets	**264,426**	**12,544**	**6,876**	**85,173**	**4,020**	**28,777**	**15,366**	**2,520**	**20,311**	**440,013**
Insurance liabilities										
Long-term business and outstanding claims provisions	104,987	6,039	3,233	16,622	3,158	7,091	4,130	—	6	145,266
Unearned premiums	265	2,284	1,549	607	118	293	86	—	—	5,202
Other insurance liabilities	—	72	119	53	—	—	—	—	2	246
Liability for investment contracts	128,506	—	—	52,233	2	12,993	8,509	1,483	—	203,726
Unallocated divisible surplus	2,251	—	—	5,200	69	701	303	—	—	8,524
Net asset value attributable to unitholders	76	—	—	3,141	—	—	—	—	15,252	18,469
External borrowings	1,798	—	—	1	—	34	—	—	8,505	10,338
Other liabilities, including inter-segment liabilities	14,898	(314)	981	4,797	211	511	657	457	1,531	23,729
Liabilities of operations classified as held for sale	—	—	—	—	—	5,180	—	—	—	5,180
Total liabilities	**252,781**	**8,081**	**5,882**	**82,654**	**3,558**	**26,803**	**13,685**	**1,940**	**25,296**	**420,680**
Total equity										**19,333**
Total equity and liabilities										**440,013**

(a) (v) Segmental statement of financial position as at 30 June 2016

	United Kingdom & Ireland			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities £m	Total £m
Goodwill	663	1,016	26	6	26	192	50	—	—	1,979
Acquired value of in-force business and intangible assets	3,323	149	83	83	11	604	1,135	12	50	5,450
Interests in, and loans to, joint ventures and associates	1,415	—	10	166	46	78	499	—	—	2,214
Property and equipment	89	27	15	254	3	5	9	2	78	482
Investment property	7,165	205	—	2,336	—	1	—	1,140	259	11,106
Loans	23,338	5	164	732	1	29	36	—	—	24,305
Financial investments	171,680	4,201	3,703	65,171	2,720	22,774	10,500	523	7,188	288,460
Deferred acquisition costs	1,427	496	304	274	38	82	84	4	—	2,709
Other assets	47,874	6,461	1,603	7,743	246	1,687	1,565	989	5,184	73,352
Assets of operations classified as held for sale	1,197	455	—	12,541	—	—	—	—	—	14,193
Total assets	258,171	13,015	5,908	89,306	3,091	25,452	13,878	2,670	12,759	424,250
Insurance liabilities										
Long-term business and outstanding claims provisions	104,326	5,414	2,716	15,036	2,509	9,382	3,614	—	35	143,032
Unearned premiums	260	2,268	1,215	567	63	273	77	—	—	4,723
Other insurance liabilities	—	77	92	50	—	—	—	—	3	222
Liability for investment contracts	118,071	—	—	47,196	2	11,298	7,738	1,701	—	186,006
Unallocated divisible surplus	2,609	—	—	5,324	56	1,359	276	—	—	9,624
Net asset value attributable to unitholders	84	—	—	2,665	—	471	—	—	9,825	13,045
External borrowings	1,914	—	—	—	—	55	—	—	7,712	9,681
Other liabilities, including inter-segment liabilities	17,754	83	904	4,043	107	752	581	471	295	24,990
Liabilities of operations classified as held for sale	1,171	395	—	12,050	—	—	—	—	—	13,616
Total liabilities	246,189	8,237	4,927	86,931	2,737	23,590	12,286	2,172	17,870	404,939
Total equity										19,311
Total equity and liabilities										424,250

B5 – Segmental information continued

(a) (vi) Segmental statement of financial position as at 31 December 2016

	United Kingdom & Ireland			Europe						
	Life £m	GI £m	Canada £m	France £m	Poland £m	Italy, Spain and Other £m	Asia £m	Aviva Investors £m	Other Group activities £m	Total £m
Goodwill	663	1,018	88	—	26	199	51	—	—	2,045
Acquired value of in-force business and intangible assets	3,152	160	292	86	12	619	1,062	9	76	5,468
Interests in, and loans to, joint ventures and associates	1,257	—	13	169	48	71	527	—	—	2,085
Property and equipment	78	27	24	240	4	5	12	5	92	487
Investment property	6,504	208	—	2,878	—	1	—	951	226	10,768
Loans	23,793	5	170	757	—	22	37	—	—	24,784
Financial investments	173,069	4,324	4,670	68,427	3,015	24,108	11,460	574	10,188	299,835
Deferred acquisition costs	1,224	507	360	280	45	82	113	3	—	2,614
Other assets	52,754	6,175	1,372	7,716	237	1,644	1,479	961	6,967	79,305
Assets of operations classified as held for sale	—	—	—	13,028	—	—	—	—	—	13,028
Total assets	262,494	12,424	6,989	93,581	3,387	26,751	14,741	2,503	17,549	440,419
Insurance liabilities										
Long-term business and outstanding claims provisions	104,194	6,098	3,248	15,932	2,698	10,241	3,750	—	12	146,173
Unearned premiums	227	2,136	1,527	463	68	281	64	—	—	4,766
Other insurance liabilities	—	72	118	51	—	—	—	—	3	244
Liability for investment contracts	125,198	—	—	49,929	2	12,000	8,395	1,571	—	197,095
Unallocated divisible surplus	2,858	—	—	5,151	60	1,074	206	—	—	9,349
Net asset value attributable to unitholders	76	—	—	2,349	—	509	—	—	12,704	15,638
External borrowings	1,793	—	—	1	—	46	—	—	8,455	10,295
Other liabilities, including inter-segment liabilities	15,701	(404)	1,107	4,694	139	758	645	396	1,778	24,814
Liabilities of operations classified as held for sale	—	—	—	12,494	—	—	—	—	—	12,494
Total liabilities	250,047	7,902	6,000	91,064	2,967	24,909	13,060	1,967	22,952	420,868
Total equity										19,551
Total equity and liabilities										440,419

(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 and 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, provides investment management services for institutional pension fund mandates and manages a range of retail investment products, including investment funds, unit trusts, OEICs and ISAs. 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.

B5 – Segmental information continued

(b) (i) Segmental income statement – products and services for the six month period ended 30 June 2017

	Long-term business £m	General insurance and health[2] £m	Fund management £m	Other £m	Total £m
Gross written premiums[1]	8,114	5,462	—	—	13,576
Premiums ceded to reinsurers	(838)	(238)	—	—	(1,076)
Premiums written net of reinsurance	7,276	5,224	—	—	12,500
Net change in provision for unearned premiums	—	(365)	—	—	(365)
Net earned premiums	7,276	4,859	—	—	12,135
Fee and commission income	710	7	178	230	1,125
	7,986	4,866	178	230	13,260
Net investment income/(expense)	10,443	122	(1)	190	10,754
Inter-segment revenue	—	—	115	—	115
Share of profit of joint ventures and associates	10	—	—	—	10
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	196	6	—	—	202
Segmental income	18,635	4,994	292	420	24,341
Claims and benefits paid, net of recoveries from reinsurers	(9,418)	(3,083)	—	—	(12,501)
Change in insurance liabilities, net of reinsurance	(1,620)	(64)	—	—	(1,684)
Change in investment contract provisions	(5,584)	—	—	—	(5,584)
Change in unallocated divisible surplus	794	—	—	—	794
Fee and commission expense	(610)	(1,258)	(20)	(312)	(2,200)
Other expenses	(799)	(295)	(208)	(367)	(1,669)
Inter-segment expenses	(107)	(7)	—	(1)	(115)
Finance costs	(132)	(2)	—	(219)	(353)
Segmental expenses	(17,476)	(4,709)	(228)	(899)	(23,312)
Profit/(loss) before tax	1,159	285	64	(479)	1,029
Tax attributable to policyholder returns	(154)	—	—	—	(154)
Profit/(loss) before tax attributable to shareholders' profits	1,005	285	64	(479)	875
Adjusted for:					
Non-operating items	314	132	5	139	590
Operating profit/(loss) before tax attributable to shareholders' profits	1,319	417	69	(340)	1,465

1 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £40 million, of which £22 million relates to property and liability insurance and £18 million relates to long-term business.
2 General insurance and health business segment includes gross written premiums of £552 million relating to health business. The remaining business relates to property and liability insurance.

B5 – Segmental information continued

(b) (ii) Segmental income statement – products and services for the six month period ended 30 June 2016

	Long-term business £m	General insurance and health[2] £m	Fund management £m	Other £m	Total £m
Gross written premiums[1]	7,733	4,860	—	—	12,593
Premiums ceded to reinsurers	(845)	(315)	—	—	(1,160)
Premiums written net of reinsurance	6,888	4,545	—	—	11,433
Net change in provision for unearned premiums	—	(348)	—	—	(348)
Net earned premiums	6,888	4,197	—	—	11,085
Fee and commission income	638	20	139	199	996
	7,526	4,217	139	199	12,081
Net investment income/(expense)	14,905	209	(1)	51	15,164
Inter-segment revenue	—	—	119	—	119
Share of profit of joint ventures and associates	193	2	—	—	195
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(8)	(11)	—	1	(18)
Segmental income	22,616	4,417	257	251	27,541
Claims and benefits paid, net of recoveries from reinsurers	(8,782)	(2,671)	—	—	(11,453)
Change in insurance liabilities, net of reinsurance	(5,739)	(187)	—	—	(5,926)
Change in investment contract provisions	(4,576)	—	—	—	(4,576)
Change in unallocated divisible surplus	(792)	—	—	—	(792)
Fee and commission expense	(451)	(1,102)	(17)	(84)	(1,654)
Other expenses	(976)	(261)	(206)	(628)	(2,071)
Inter-segment expenses	(113)	(6)	—	—	(119)
Finance costs	(112)	(2)	—	(181)	(295)
Segmental expenses	(21,541)	(4,229)	(223)	(893)	(26,886)
Profit/(loss) before tax	1,075	188	34	(642)	655
Tax attributable to policyholder returns	(318)	—	—	—	(318)
Profit/(loss) before tax attributable to shareholders' profits	757	188	34	(642)	337
Adjusted for:					
Non-operating items	469	146	15	358	988
Operating profit/(loss) before tax attributable to shareholders' profits	1,226	334	49	(284)	1,325

1 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £71 million, of which £29 million relates to property and liability insurance and £42 million relates to long-term business.
2 General insurance and health business segment includes gross written premiums of £646 million relating to health business. The remaining business relates to property and liability insurance.

B5 – Segmental information continued

(b) (iii) Segmental income statement – products and services for the year ended 31 December 2016

	Long-term business £m	General insurance and health[2] £m	Fund management £m	Other £m	Total £m
Gross written premiums[1]	15,748	9,694	—	—	25,442
Premiums ceded to reinsurers	(1,697)	(667)	—	—	(2,364)
Premiums written net of reinsurance	14,051	9,027	—	—	23,078
Net change in provision for unearned premiums	—	(210)	—	—	(210)
Net earned premiums	14,051	8,817	—	—	22,868
Fee and commission income	1,234	26	300	402	1,962
	15,285	8,843	300	402	24,830
Net investment income/(expense)	29,695	383	(2)	181	30,257
Inter-segment revenue	—	—	239	—	239
Share of profit of joint ventures and associates	213	3	—	—	216
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(3)	(8)	—	—	(11)
Segmental income	45,190	9,221	537	583	55,531
Claims and benefits paid, net of recoveries from reinsurers	(18,026)	(5,756)	—	—	(23,782)
Change in insurance liabilities, net of reinsurance	(6,249)	(644)	—	—	(6,893)
Change in investment contract provisions	(14,039)	—	—	—	(14,039)
Change in unallocated divisible surplus	(381)	—	—	—	(381)
Fee and commission expense	(1,369)	(2,299)	(33)	(184)	(3,885)
Other expenses	(1,887)	(521)	(396)	(1,049)	(3,853)
Inter-segment expenses	(222)	(12)	—	(5)	(239)
Finance costs	(183)	(5)	—	(438)	(626)
Segmental expenses	(42,356)	(9,237)	(429)	(1,676)	(53,698)
Profit/(loss) before tax	2,834	(16)	108	(1,093)	1,833
Tax attributable to policyholder returns	(640)	—	—	—	(640)
Profit/(loss) before tax attributable to shareholders' profits	2,194	(16)	108	(1,093)	1,193
Adjusted for:					
Non-operating items	448	849	30	490	1,817
Operating profit/(loss) before tax attributable to shareholders' profits	2,642	833	138	(603)	3,010

1 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £138 million, of which £54 million relates to property and liability insurance and £84 million relates to long-term business.
2 General insurance and health business segment includes gross written premiums of £1,030 million relating to health business. The remaining business relates to property and liability insurance.

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B5 – Segmental information continued

(c) (i) Segmental statement of financial position – products and services as at 30 June 2017

	Long-term business £m	General insurance and health £m	Fund management £m	Other £m	Total £m
Goodwill	755	1,086	3	67	1,911
Acquired value of in-force business and intangible assets	4,304	458	6	73	4,841
Interests in, and loans to, joint ventures and associates	1,663	10	—	13	1,686
Property and equipment	262	125	4	119	510
Investment property	10,197	344	—	178	10,719
Loans	25,288	164	—	—	25,452
Financial investments	289,348	11,432	51	8,391	309,222
Deferred acquisition costs	1,756	1,142	—	—	2,898
Other assets	54,045	9,529	953	12,205	76,732
Assets of operations classified as held for sale	5,733	309	—	—	6,042
Total assets	**393,351**	**24,599**	**1,017**	**21,046**	**440,013**
Gross insurance liabilities	133,908	16,806	—	—	150,714
Gross liabilities for investment contracts	203,726	—	—	—	203,726
Unallocated divisible surplus	8,524	—	—	—	8,524
Net asset value attributable to unitholders	3,217	—	—	15,252	18,469
External borrowings	1,702	—	—	8,636	10,338
Other liabilities, including inter-segment liabilities	19,122	1,195	440	2,972	23,729
Liabilities of operations classified as held for sale	5,006	174	—	—	5,180
Total liabilities	**375,205**	**18,175**	**440**	**26,860**	**420,680**
Total equity					**19,333**
Total equity and liabilities					**440,013**

(c) (ii) Segmental statement of financial position – products and services as at 30 June 2016

	Long-term business £m	General insurance and health £m	Fund management £m	Other £m	Total £m
Goodwill	887	1,025	—	67	1,979
Acquired value of in-force business and intangible assets	5,062	346	12	30	5,450
Interests in, and loans to, joint ventures and associates	2,167	39	—	8	2,214
Property and equipment	280	107	2	93	482
Investment property	10,479	368	—	259	11,106
Loans	24,135	170	—	—	24,305
Financial investments	270,739	10,527	32	7,162	288,460
Deferred acquisition costs	1,729	976	4	—	2,709
Other assets	56,016	9,680	901	6,755	73,352
Assets of operations classified as held for sale	13,738	455	—	—	14,193
Total assets	385,232	23,693	951	14,374	424,250
Gross insurance liabilities	132,840	15,137	—	—	147,977
Gross liabilities for investment contracts	186,006	—	—	—	186,006
Unallocated divisible surplus	9,624	—	—	—	9,624
Net asset value attributable to unitholders	3,221	—	—	9,824	13,045
External borrowings	1,872	—	—	7,809	9,681
Other liabilities, including inter-segment liabilities	20,694	1,416	455	2,425	24,990
Liabilities of operations classified as held for sale	13,221	395	—	—	13,616
Total liabilities	367,478	16,948	455	20,058	404,939
Total equity					19,311
Total equity and liabilities					424,250

B5 – Segmental information continued

(c) (iii) Segmental statement of financial position – products and services as at 31 December 2016

	Long-term business £m	General insurance and health £m	Fund management £m	Other £m	Total £m
Goodwill	889	1,086	3	67	2,045
Acquired value of in-force business and intangible assets	4,845	571	9	43	5,468
Interests in, and loans to, joint ventures and associates	2,030	42	—	13	2,085
Property and equipment	264	109	5	109	487
Investment property	10,202	341	—	225	10,768
Loans	24,607	177	—	—	24,784
Financial investments	277,889	11,699	51	10,196	299,835
Deferred acquisition costs	1,574	1,037	3	—	2,614
Other assets	61,780	8,995	835	7,695	79,305
Assets of operations classified as held for sale	13,028	—	—	—	13,028
Total assets	397,108	24,057	906	18,348	440,419
Gross insurance liabilities	134,695	16,488	—	—	151,183
Gross liabilities for investment contracts	197,095	—	—	—	197,095
Unallocated divisible surplus	9,349	—	—	—	9,349
Net asset value attributable to unitholders	2,934	—	—	12,704	15,638
External borrowings	1,718	—	—	8,577	10,295
Other liabilities, including inter-segment liabilities	19,930	1,215	371	3,298	24,814
Liabilities of operations classified as held for sale	12,494	—	—	—	12,494
Total liabilities	378,215	17,703	371	24,579	420,868
Total equity					19,551
Total equity and liabilities					440,419

B6 – Tax

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

(a) Tax charged to the income statement

(i) The total tax charge comprises:

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Current tax			
For the period	**269**	602	930
Prior period adjustments	**8**	(6)	1
Total current tax	**277**	596	931
Deferred tax			
Origination and reversal of temporary differences	**48**	(131)	72
Changes in tax rates or tax laws	**(13)**	(11)	(14)
Write down/(back) of deferred tax assets	**1**	—	(15)
Total deferred tax	**36**	(142)	43
Total tax charged to income statement	**313**	454	974

(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 policyholder returns is included in the tax charge. The tax charge attributable to policyholders' returns included in the charge above is £154 million *(HY16: £318 million charge; FY16: £640 million charge)*.

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

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
UK tax	**209**	312	688
Overseas tax	**104**	142	286
	313	454	974

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

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

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Current tax			
In respect of pensions and other post-retirement obligations	**(29)**	(16)	(25)
In respect of foreign exchange movements	**3**	22	31
	(26)	6	6
Deferred tax			
In respect of pensions and other post-retirement obligations	**18**	185	94
In respect of fair value (losses)/gains on owner-occupied properties	**(1)**	1	1
In respect of unrealised (losses)/gains on investments	**(8)**	9	3
	9	195	98
Total tax (credited)/charged to other comprehensive income	**(17)**	201	104

(ii) The tax charge attributable to policyholders' returns included above is £nil *(HY16: £nil; FY16: £nil)*.

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B6 – 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 £6 million *(HY16: £5 million; FY16: £17 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 2017 £m**	Shareholder £m	Policyholder £m	6 months 2016 £m	Shareholder £m	Policyholder £m	Full Year 2016 £m
Total profit before tax	**875**	**154**	**1,029**	337	318	655	1,193	640	1,833
Tax calculated at standard UK corporation tax rate of 19.25% (2016: 20.00%)	**168**	**30**	**198**	67	64	131	239	128	367
Reconciling items									
Different basis of tax – policyholders	**—**	**124**	**124**	—	254	254	—	513	513
Adjustment to tax charge in respect of prior periods	**(10)**	**—**	**(10)**	(1)	—	(1)	(34)	—	(34)
Non-assessable income and items not taxed at the full statutory rate	**(8)**	**—**	**(8)**	9	—	9	39	—	39
Non-taxable (profit)/loss on sale of subsidiaries and associates	**(52)**	**—**	**(52)**	2	—	2	1	—	1
Disallowable expenses	**25**	**—**	**25**	26	—	26	49	—	49
Different local basis of tax on overseas profits	**49**	**—**	**49**	50	—	50	97	(1)	96
Change in future local statutory tax rates	**(13)**	**—**	**(13)**	(11)	—	(11)	(36)	—	(36)
Movement in deferred tax not recognised	**(3)**	**—**	**(3)**	(1)	—	(1)	(13)	—	(13)
Tax effect of profit from joint ventures and associates	**2**	**—**	**2**	—	—	—	(6)	—	(6)
Other	**1**	**—**	**1**	(5)	—	(5)	(2)	—	(2)
Total tax charged to income statement	**159**	**154**	**313**	136	318	454	334	640	974

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-profit 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 difference between the policyholder tax charge and the impact of this item in the tax reconciliation can be explained as follows:

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Tax attributable to policyholder returns	**154**	318	640
UK corporation tax at a rate of 19.25% (2016: 20.00%) in respect of the policyholder tax deduction	**(30)**	(64)	(128)
Different local basis of tax of overseas profits	**—**	—	1
Different basis of tax – policyholders per tax reconciliation	**124**	254	513

The rate of corporation tax in the UK from 1 April 2017 is 19% reduced from 20% at 1 April 2016, giving a standard UK rate of 19.25%. Finance Act 2016 introduced legislation reducing the rate of corporation tax to 17% from 1 April 2017. In addition, during 2016, the French government reduced the French corporation tax rate from 34.43% to 28.92% from 1 January 2020. These reduced rates were used in the calculation of deferred tax assets and liabilities in the UK and France at 31 December 2016 and 30 June 2017.

B7 – Earnings per share

(a) Basic earnings per share

(i) The profit attributable to ordinary shareholders is:

	6 months 2017			6 months 2016			Full Year 2016		
	Operating profit £m	**Non-operating items £m**	**Total £m**	Operating profit £m	Non-operating items £m	Total £m	Operating profit £m	Non-operating items £m	Total £m
Profit before tax attributable to shareholders' profits	**1,465**	**(590)**	**875**	1,325	(988)	337	3,010	(1,817)	1,193
Tax attributable to shareholders' profit	**(311)**	**152**	**(159)**	(323)	187	(136)	(706)	372	(334)
Profit for the period	**1,154**	**(438)**	**716**	1,002	(801)	201	2,304	(1,445)	859
Amount attributable to non-controlling interests	**(73)**	**(6)**	**(79)**	(67)	(4)	(71)	(147)	(9)	(156)
Cumulative preference dividends for the period	**(9)**	**—**	**(9)**	(9)	—	(9)	(17)	—	(17)
Coupon payments in respect of the direct capital instrument (DCI) and tier 1 notes (net of tax)	**(23)**	**—**	**(23)**	(21)	—	(21)	(68)	—	(68)
Profit attributable to ordinary shareholders	**1,049**	**(444)**	**605**	905	(805)	100	2,072	(1,454)	618

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

	6 months 2017			6 months 2016			Full Year 2016		
	Before tax £m	**Net of tax, non-controlling interests, preference dividends and DCI[1] £m**	**Per share p**	Before tax £m	Net of tax, non-controlling interests, preference dividends and DCI[1] £m	Per share p	Before tax £m	Net of tax, non-controlling interests, preference dividends and DCI[1] £m	Per share p
Operating profit attributable to ordinary shareholders	**1,465**	**1,049**	**25.8**	1,325	905	22.4	3,010	2,072	51.1
Non-operating items:									
Investment return variances and economic assumption changes on long-term business	**(179)**	**(129)**	**(3.2)**	6	(2)	—	379	313	7.8
Short-term fluctuation in return on investments backing non-long-term business	**(205)**	**(166)**	**(4.1)**	(338)	(267)	(6.6)	(518)	(398)	(9.8)
Economic assumption changes on general insurance and health business	**(12)**	**(10)**	**(0.2)**	(123)	(98)	(2.4)	(242)	(193)	(4.8)
Impairment of goodwill, joint ventures and associates and other amounts expensed	**(19)**	**(19)**	**(0.5)**	—	—	—	—	—	—
Amortisation and impairment of intangibles	**(91)**	**(71)**	**(1.7)**	(92)	(68)	(1.7)	(175)	(137)	(3.4)
Amortisation and impairment of acquired value of in-force business	**(234)**	**(201)**	**(4.9)**	(318)	(270)	(6.7)	(540)	(455)	(11.2)
Profit/(loss) on disposal and remeasurement of subsidiaries, joint ventures and associates	**202**	**192**	**4.7**	(18)	(18)	(0.4)	(11)	(16)	(0.4)
Integration and restructuring costs	**(52)**	**(40)**	**(1.0)**	(105)	(82)	(2.1)	(212)	(170)	(4.2)
Other[2]	**—**	**—**	**—**	—	—	—	(498)	(398)	(9.8)
Profit attributable to ordinary shareholders	**875**	**605**	**14.9**	337	100	2.5	1,193	618	15.3

1 DCI includes the direct capital instrument and tier 1 notes.
2 Other items include an exceptional charge of £nil *(HY16 £nil; FY16: £475 million)*, £nil net of tax *(HY16 £nil; FY16: £380 million)*, relating to the impact of the change in the Ogden discount rate from 2.5% set in 2001 to minus 0.75% announced by the Lord Chancellor on 27 February 2017.

(iii) The calculation of basic earnings per share uses a weighted average of 4,061 million *(HY16: 4,046 million; FY16: 4,051 million)* ordinary shares in issue, after deducting treasury shares. The actual number of shares in issue at 30 June 2017 was 4,055 million *(HY16: 4,058 million; FY16: 4,062 million)* and 4,052 million *(HY16: 4,051 million; FY16: 4,058 million)* excluding treasury shares.

(iv) On 25 May 2017 Aviva announced a share buy-back of ordinary shares for an aggregate purchase price of up to £300 million, during the period from 25 May 2017 to no later than 15 December 2017. The number of shares in issue has reduced by 14 million as at 30 June 2017 in respect of shares acquired and cancelled under the buy-back programme. Net of new shares issued during the period, the number of shares in issue reduced by 7 million.

B7 – Earnings per share continued

(b) Diluted earnings per share

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

	6 months 2017			6 months 2016			Full Year 2016		
	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	**605**	**4,061**	**14.9**	100	4,046	2.5	618	4,051	15.3
Dilutive effect of share awards and options	**—**	**47**	**(0.2)**	—	39	(0.1)	—	38	(0.2)
Diluted earnings per share	**605**	**4,108**	**14.7**	100	4,085	2.4	618	4,089	15.1

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

	6 months 2017			6 months 2016			Full Year 2016		
	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
Operating profit attributable to ordinary shareholders	**1,049**	**4,061**	**25.8**	905	4,046	22.4	2,072	4,051	51.1
Dilutive effect of share awards and options	**—**	**47**	**(0.3)**	—	39	(0.2)	—	38	(0.4)
Diluted operating profit per share	**1,049**	**4,108**	**25.5**	905	4,085	22.2	2,072	4,089	50.7

B8 – Dividends and appropriations

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Ordinary dividends declared and charged to equity in the period			
Final 2016 – 15.88 pence per share, paid on 17 May 2017	**646**	—	—
Final 2015 – 14.05 pence per share, paid on 17 May 2016	**—**	570	570
Interim 2016 – 7.42 pence per share, paid on 17 November 2016	**—**	—	301
	646	570	871
Dividends waived/unclaimed returned to the Company	**—**	—	—
Preference dividends declared and charged to equity in the period	**9**	9	17
Coupon payments on direct capital instrument and tier 1 notes	**29**	26	85
	684	605	973

Subsequent to 30 June 2017, the directors declared an interim dividend for 2017 of 8.40 pence per ordinary share *(HY16: 7.42 pence)*, amounting to £340 million *(HY16: £301 million)* in total based on shares in issue as at 2 August 2017. The dividend will be paid on 17 November 2017 and will be accounted for as an appropriation of retained earnings in the year ending 31 December 2017.

Interest on the direct capital instrument and tier 1 notes is treated as an appropriation of retained profits and, accordingly, is accounted for when paid. Tax relief is obtained at a rate of 19.25% *(2016: 20.00%)*.

B9 – Insurance liabilities

(a) Carrying amount

(i) Insurance liabilities (gross of reinsurance) at 30 June/31 December comprised:

	30 June 2017			30 June 2016			31 December 2016		
	Long-term business £m	**General insurance and health £m**	**Total £m**	Long-term business £m	General insurance and health £m	Total £m	Long-term business £m	General insurance and health £m	Total £m
Long-term business provisions									
Participating	**53,134**	**—**	**53,134**	55,145	—	55,145	56,760	—	56,760
Unit-linked non-participating	**16,941**	**—**	**16,941**	15,031	—	15,031	16,026	—	16,026
Other non-participating	**65,677**	**—**	**65,677**	65,172	—	65,172	64,432	—	64,432
	135,752	**—**	**135,752**	135,348	—	135,348	137,218	—	137,218
Outstanding claims provisions	**2,090**	**9,041**	**11,131**	1,980	7,780	9,760	1,925	8,749	10,674
Provision for claims incurred but not reported	**—**	**2,676**	**2,676**	—	2,851	2,851	—	2,960	2,960
	2,090	**11,717**	**13,807**	1,980	10,631	12,611	1,925	11,709	13,634
Provision for unearned premiums	**—**	**5,203**	**5,203**	—	4,723	4,723	—	4,766	4,766
Provision arising from liability adequacy tests[1]	**—**	**13**	**13**	—	12	12	—	13	13
Total	**137,842**	**16,933**	**154,775**	137,328	15,366	152,694	139,143	16,488	155,631
Less: Amounts classified as held for sale	**(3,934)**	**(127)**	**(4,061)**	(4,488)	(229)	(4,717)	(4,448)	—	(4,448)
	133,908	**16,806**	**150,714**	132,840	15,137	147,977	134,695	16,488	151,183

1 Provision arising from liability adequacy tests relates to general insurance business only. Liability adequacy test provisions for life operations are included in other line items.

(ii) Change in insurance liabilities 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 this note. The components of the reconciliation are the change in provision for outstanding claims on long-term business (which is not included in a separate movement table), and the unwind of discounting on general insurance reserves (which is included within finance costs in the income statement). For general insurance and health business, the change in the provision for unearned premiums is not included in the reconciliation as, within the income statement, this is included within earned premiums.

30 June 2017	**Gross £m**	**Reinsurance £m**	**Net £m**
Long-term business			
Change in long-term business provisions (note B9(b))	**2,000**	**(523)**	**1,477**
Change in provision for outstanding claims	**147**	**(4)**	**143**
	2,147	**(527)**	**1,620**
General insurance and health			
Change in insurance liabilities (note B9(c))	**(8)**	**73**	**65**
Less: Unwind of discount on GI reserves and other	**(5)**	**4**	**(1)**
	(13)	**77**	**64**
Total change in insurance liabilities	**2,134**	**(450)**	**1,684**

30 June 2016	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in long-term business provisions (note B9(b))	6,144	(564)	5,580
Change in provision for outstanding claims	171	(12)	159
	6,315	(576)	5,739
General insurance and health			
Change in insurance liabilities (note B9(c))	498	(310)	188
Less: Unwind of discount on GI reserves and other	(5)	4	(1)
	493	(306)	187
Total change in insurance liabilities	6,808	(882)	5,926

31 December 2016	Gross £m	Reinsurance[1] £m	Net £m
Long-term business			
Change in long-term business provisions (note B9(b))	7,164	(993)	6,171
Change in provision for outstanding claims	91	(13)	78
	7,255	(1,006)	6,249
General insurance and health			
Change in insurance liabilities (note B9(c))[2]	867	(222)	645
Less: Unwind of discount on GI reserves and other	(11)	10	(1)
	856	(212)	644
Total change in insurance liabilities	8,111	(1,218)	6,893

1 Reinsurance assets at 31 December 2016 for General insurance and health business include the impact of the £78 million reinsurance asset relating to an outwards reinsurance contract completed by the UK General Insurance business.
2 Includes £475 million in the UK General Insurance business relating to the impact of the change in the Ogden discount rate.

B9 – Insurance liabilities continued

(b) Movements in long-term business liabilities

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

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Carrying amount at 1 January	**137,218**	125,348	125,348
Provisions in respect of new business	**2,959**	2,596	5,224
Expected change in existing business provisions	**(4,027)**	(3,778)	(8,235)
Variance between actual and expected experience	**1,512**	942	4,752
Impact of operating assumption changes	**(2)**	(125)	(536)
Impact of economic assumption changes	**1,274**	6,529	5,930
Other movements[1]	**284**	(20)	29
Change in liability recognised as an expense (note B9 a(ii))	**2,000**	6,144	7,164
Effect of portfolio transfers, acquisitions and disposals[2]	**(4,429)**	—	—
Foreign exchange rate movements	**897**	3,861	4,761
Other movements	**66**	(5)	(55)
Carrying amount at 30 June/31 December	**135,752**	135,348	137,218

1 Other movements during 2017 primarily relates to a special bonus distribution to with-profit policyholders (UK Life).
2 The movement during 2017 primarily relates to the disposal of Antarius in France.

(c) Movements in general insurance and health liabilities

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

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Carrying amount at 1 January	**11,709**	9,446	9,446
Impact of changes in assumptions	**(12)**	239	324
Claim losses and expenses incurred in the current period	**3,342**	3,266	6,703
Decrease in estimated claim losses and expenses incurred in prior periods	**(88)**	(179)	(7)
Incurred claims losses and expenses	**3,242**	3,326	7,020
Less:			
Payments made on claims incurred in the current period	**(1,363)**	(1,260)	(3,505)
Payments made on claims incurred in prior periods	**(2,014)**	(1,716)	(2,893)
Recoveries on claim payments	**122**	143	234
Claims payments made in the period, net of recoveries	**(3,255)**	(2,833)	(6,164)
Unwind of discounting	**5**	5	11
Changes in claims reserve recognised as an expense (note B9 a(ii))	**(8)**	498	867
Effect of portfolio transfers, acquisitions and disposals	**2**	(38)	430
Foreign exchange rate movements	**14**	725	966
Other movements	**—**	—	—
Carrying amount at 30 June/31 December	**11,717**	10,631	11,709

IFRS

B10 – Liability for investment contracts

(a) Carrying amount

The liability for investment contracts (gross of reinsurance) at 30 June/31 December comprised:

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Long-term business			
Participating contracts	**85,435**	87,709	89,739
Non-participating contracts at fair value	**118,291**	105,952	114,531
Total	**203,726**	193,661	204,270
Less: Amounts classified as held for sale	**—**	(7,655)	(7,175)
	203,726	186,006	197,095

(b) Movements in participating investment contracts

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

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Carrying amount at 1 January	**89,739**	78,048	78,048
Provisions in respect of new business	**2,339**	2,332	4,584
Expected change in existing business provisions	**(2,510)**	(2,176)	(4,893)
Variance between actual and expected experience	**1,085**	1,011	3,084
Impact of operating assumption changes	**(1)**	—	36
Impact of economic assumption changes	**92**	236	450
Other movements[1]	**132**	(5)	(347)
Change in liability recognised as an expense[2]	**1,137**	1,398	2,914
Effect of portfolio transfers, acquisitions and disposals[3]	**(7,243)**	—	—
Foreign exchange rate movements	**1,780**	6,992	8,721
Other movements[4]	**22**	1,271	56
Carrying amount at 30 June/31 December	**85,435**	87,709	89,739

1 Other movements during 2017 primarily relates to a special bonus distribution to with-profit policyholders (UK Life).
2 Total interest expense for participating investment contracts recognised in profit or loss is £2,374 million (*HY16: £2,082 million, FY16: £3,111 million*).
3 The movement during 2017 relates to the disposal of Antarius in France.
4 Other movements during the first half of 2016 comprise liabilities in the UK of £1,271 million reclassified from non-participating investment contracts. During the second half of 2016 the reclassification methodology was reviewed which resulted in a reduced valuation of the amount of liability to be reclassified. In addition, a further reclassification from participating investment contracts to non-participating investment contracts was undertaken.

(c) Movements in non-participating investment contracts

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

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Carrying amount at 1 January	**114,531**	103,034	103,034
Provisions in respect of new business	**1,796**	1,455	3,222
Expected change in existing business provisions	**(2,129)**	(1,775)	(3,481)
Variance between actual and expected experience	**3,872**	3,660	11,105
Impact of operating assumption changes	**—**	—	17
Impact of economic assumption changes	**(1)**	1	2
Other movements	**—**	(2)	334
Change in liability	**3,538**	3,339	11,199
Effect of portfolio transfers, acquisitions and disposals[1]	**(4)**	—	(757)
Foreign exchange rate movements	**199**	850	1,065
Other movements[2]	**27**	(1,271)	(10)
Carrying amount at 30 June/31 December	**118,291**	105,952	114,531

1 The movement during 2016 relates to the disposal of a closed book of offshore bonds business. The movement during 2017 relates to the disposal of Antarius in France.
2 Other movements during the first half of 2016 comprise liabilities in the UK of £1,271 million reclassified to participating investment contracts. During the second half of 2016 the reclassification methodology was reviewed which resulted in a reduced valuation of the amount of liability to be reclassified. In addition, a further reclassification to non-participating investment contracts from participating investment contracts was undertaken.

For non-participating investment contracts, deposits collected and amounts withdrawn are not shown on the income statement, but are accounted for directly through the statement of financial position as an adjustment to the gross liabilities for investment contracts. The associated change in investment contract provisions shown on the income statement consists of the attributed investment return. Participating investment contracts are treated consistently with insurance contracts with the change in investment contract provisions primarily consisting of the movement in participating investment contract liabilities (net of reinsurance) over the reporting period.

B11 – Reinsurance assets

The reinsurance assets at 30 June/31 December comprised:

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Long-term business			
Insurance contracts	**6,278**	5,712	6,186
Participating investment contracts	**22**	12	2
Non-participating investment contracts[1]	**10,170**	15,859	18,366
	16,470	21,583	24,554
Outstanding claims provisions	**67**	66	65
	16,537	21,649	24,619
General insurance and health			
Outstanding claims provisions[2]	**1,065**	1,055	1,090
Provisions for claims incurred but not reported[2]	**741**	911	795
	1,806	1,966	1,885
Provisions for unearned premiums	**270**	340	250
	2,076	2,306	2,135
	18,613	23,955	26,754
Less: Amounts classified as held for sale	**(101)**	(972)	(411)
Total	**18,512**	22,983	26,343

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 2017, £8,934 million of reinsurance assets (UK Life) have been reclassified as collective investments in unit linked funds following a restructure of a reinsurance treaty.
2 Reinsurance assets at 31 December 2016 for General insurance and health business include the impact of the £78 million reinsurance asset relating to an outwards reinsurance contract completed by the UK General Insurance business and the remaining recoveries expected in respect of the Alberta fires in Canada.

B12 – Effect of changes in assumptions and estimates during the period

This disclosure only allows for the impact on liabilities and related assets, such as unallocated divisible surplus, reinsurance, deferred acquisition costs and AVIF, and does not allow for offsetting movements in the value of backing financial assets.

	Effect on profit 6 months 2017 £m	Effect on profit 6 months 2016 £m	Effect on profit Full Year 2016 £m
Assumptions			
Long-term insurance business			
Interest rates	**(970)**	(4,269)	(4,490)
Expenses	**(2)**	—	48
Persistency rates	**—**	—	(80)
Mortality for assurance contracts	**—**	—	(11)
Mortality for annuity contracts	**—**	63	294
Tax and other assumptions	**—**	89	97
Investment contracts			
Expenses	**(1)**	—	—
General insurance and health business			
Change in discount rate assumptions	**(12)**	(123)	(242)
Change in expense ratio and other assumptions	**—**	—	—
Total	**(985)**	(4,240)	(4,384)

The impact of interest rates on long-term business relates primarily to annuities in the UK (including any change in credit default and reinvestment risk provisions), where a decrease in the valuation interest rate, in response to narrowing of credit spreads partially offset by increasing risk free rates, has increased liabilities. The overall impact on profit also depends on movements in the value of assets backing the liabilities, which is not included in this disclosure.

The adverse change in discount rate assumptions on general insurance and health business of £12 million *(HY16: £123 million adverse)* arises mainly as a result of an increase in the estimated future inflation rate used to value periodic payment orders partly offset by a slight increase in the interest rates used to discount claim reserves for periodic payment orders and latent claims. During 2016 market interest rates used to discount periodic payment orders and latent claims reduced and the estimated future inflation rate used to value periodic payment orders was increased to be consistent with market expectations. This was, in part, offset by a change in estimate for the interest rate used to discount periodic payment orders to allow for the illiquid nature of these liabilities.

B13 – 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 not defined.

This note shows the movements in the UDS during the period.

	6 months 2017 £m	Restated[1] 6 months 2016 £m	Full Year 2016 £m
Carrying amount at 1 January	**10,208**	8,811	8,811
Change in participating fund assets	**554**	4,497	4,977
Change in participating fund liabilities	**(1,348)**	(3,705)	(4,596)
Change in liability recognised as an expense	**(794)**	792	381
Effect of portfolio transfers, acquisitions and disposals[2]	**(832)**	—	—
Foreign exchange rate movements	**190**	873	1,016
Carrying amount at 30 June/31 December	**8,772**	10,476	10,208
Less: Amounts classified as held for sale	**(248)**	(852)	(859)
	8,524	9,624	9,349

1 A review of the 6 months 2016 movement in unallocated divisible surplus identified inconsistencies in the presentational approach taken for each participating fund across the Group. As a result, the 6 months 2016 analysis has been restated to present the movement in participating fund assets and liabilities consistently on a gross basis for all funds. The 6 months 2016 'Change in participating fund assets' has increased by £3,695 million and 'Change in participating fund liabilities' has decreased by £3,695 million. There is no impact on the carrying amount of unallocated divisible surplus at 1 January 2016 and 30 June 2016.
2 The movement during 2017 relates to the disposal of Antarius.

The amount of UDS at 30 June 2017 has decreased to £8.8 billion (*HY16: £10.5 billion, FY16: £10.2 billion*) including amounts classified as held for sale, and £8.5 billion (*HY16: £9.6 billion, FY16: £9.3 billion*) excluding amounts classified as held for sale. The decrease is mainly due to the sale of Antarius and a distribution of assets out of UK Life's UDS in anticipation of a special bonus to policyholders, partly offset by the weakening of sterling against the euro.

Where the aggregate amount of participating assets is less than the participating liabilities within a fund then the shortfall may be held as negative UDS, subject to recoverability testing as part of the liability adequacy requirements of IFRS 4. There are no material negative UDS balances at the participating fund-level within each life entity in the current and comparative periods with the exception of one fund in UK Life in the comparative period (*FY16: a negative UDS of £16 million*). This negative UDS balance was tested for recoverability and considered to be recoverable by comparing the excess of IFRS participating liabilities over the adjusted Solvency II best estimate liabilities for the relevant contracts. The Solvency II best estimate liabilities were adjusted where Solvency II does not represent a best estimate of shareholders' interests consistent with the impairment test for goodwill for long term business and for AVIF on insurance contracts.

B14 – Borrowings

The Group's borrowings are either core structural borrowings or operational borrowings. This note shows the carrying values of each type.

(a) Analysis of total borrowings:

Total borrowings comprise:

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Core structural borrowings, at amortised cost	**8,636**	7,809	8,577
Operational borrowings, at amortised cost	**501**	566	608
Operational borrowings, at fair value	**1,214**	1,306	1,110
	1,715	1,872	1,718
	10,351	9,681	10,295
Less: Amounts classified as held for sale	**(13)**	—	—
Total	**10,338**	9,681	10,295

(b) Core structural borrowings

The carrying amounts of these borrowings are:

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Subordinated debt			
6.125% £700 million subordinated notes 2036	**693**	693	694
6.125% £800 million undated subordinated notes	**795**	795	795
6.875% £600 million subordinated notes 2058	**594**	594	594
6.875% €500 million subordinated notes 2038	**439**	415	427
12.00% £162 million subordinated notes 2021	**208**	219	213
8.25% £500 million subordinated notes 2022	**590**	607	598
6.625% £450 million subordinated notes 2041	**448**	447	448
8.25% $400 million subordinated notes 2041	**—**	298	—
7.875% $575 million undated subordinated notes	**463**	463	494
6.125% €650 million subordinated notes 2043	**568**	538	552
3.875% €700 million subordinated notes 2044	**611**	577	593
5.125% £400 million subordinated notes 2050	**395**	394	394
3.375% €900 million subordinated notes 2045	**780**	738	758
4.50% C$450 million subordinated notes 2021	**265**	256	269
4.375% £400 million subordinated notes 2049	**393**	—	393
	7,242	7,034	7,222
Senior notes			
0.100% €350 million senior notes 2018	**306**	—	298
0.625% €500 million senior notes 2023	**436**	—	424
	742	—	722
Commercial paper	**661**	815	642
	8,645	7,849	8,586
Less: Amount held by Group companies	**(9)**	(40)	(9)
Total	**8,636**	7,809	8,577

(c) Operational borrowings

The carrying amounts of these borrowings are:

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Amounts owed to financial institutions			
Loans[1]	**501**	566	608
Securitised mortgage loan notes			
UK lifetime mortgage business	**1,214**	1,306	1,110
Total	**1,715**	1,872	1,718

1 Includes held for sale operational borrowings of £13 million on 30 June 2017 (*2016: £nil*).

B15 – 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 2017 £m	30 June 2016 £m	31 December 2016 £m
Total IAS 19 obligations to the main staff pension schemes	**892**	786	843
Deficits in other staff pension schemes	**60**	52	56
Total IAS 19 obligations to staff pension schemes	**952**	838	899
Restructuring provisions	**80**	170	111
Other provisions	**397**	476	501
Total provisions	**1,429**	1,484	1,511
Less: Amounts classified as held for sale	**(3)**	—	(1)
	1,426	1,484	1,510

(ii) Pension obligations

The assets and liabilities of the Group's material defined benefit schemes as at 30 June/31 December are shown below.

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Total fair value of assets	**19,225**	19,726	20,327
Present value of scheme liabilities	**(16,115)**	(16,399)	(17,347)
Net surplus in the schemes	**3,110**	3,327	2,980
Less: consolidation elimination for non-transferable Group insurance policy[1]	**(628)**	(605)	(633)
Net IAS 19 surplus in the schemes	**2,482**	2,722	2,347
Surplus included in other assets	**3,374**	3,508	3,190
Deficits included in provisions	**(892)**	(786)	(843)
Net IAS 19 surplus in the schemes	**2,482**	2,722	2,347

1 As at 30 June 2017, the scheme assets in the Friends Provident Pension Scheme include an insurance policy of £628 million (*30 June 2016: £605 million, 31 December 2016: £633 million*) issued by a Group company that is not transferable under IAS 19 and consequently is eliminated from the IAS 19 net surplus balance. The IAS 19 fair value of scheme assets at 30 June 2017, excluding this policy is £18,597 million (*30 June 2016: £19,121 million, 31 December 2016: £19,694 million*).

(b) Movements in the schemes' surpluses and deficits

Movements in the pension schemes' surpluses and deficits comprise:

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Net IAS 19 surplus in the schemes at 1 January	**2,347**	1,837	1,837
Past service costs – amendments	**—**	(1)	(1)
Administrative expenses[1]	**(8)**	(7)	(13)
Total pension cost charged to net operating expenses	**(8)**	(8)	(14)
Net interest credited/(charged) to investment income/(finance costs)[2]	**30**	37	73
Total recognised in income statement	**22**	29	59
Remeasurements:			
Actual return on these assets	**16**	3,090	4,044
Less: Interest income on scheme assets	**(239)**	(298)	(590)
Return on scheme assets excluding amounts in interest income	**(223)**	2,792	3,454
Gains/(losses) from change in financial assumptions	**282**	(2,022)	(3,944)
(Losses)/gains from change in demographic assumptions	**(36)**	—	363
Experience (losses)/gains	**(59)**	6	438
Total remeasurements recognised in other comprehensive income	**(36)**	776	311
Employer contributions	**153**	123	190
Administrative expenses paid from scheme assets[1]	**—**	—	(2)
Foreign exchange rate movements	**(4)**	(43)	(48)
Net IAS 19 surplus in the schemes at 30 June/31 December	**2,482**	2,722	2,347

1 Administrative expenses are expensed as incurred.
2 Net interest income of £40 million (*HY16: £48 million, FY16: £102 million*) has been credited to investment income and net interest expense of £10 million (*HY16: £11 million, FY16: £29 million*) has been charged to finance costs in HY17.

The increase in the surplus during the period is primarily due to employer contributions into the schemes partly offset by remeasurements recognised in other comprehensive income. The remeasurements recognised are mainly due to lower inflation and narrowing spreads in the UK partly offset by favourable UK equity and property performance.

B16 – 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 2016. There were no transactions with related parties that had a material effect on the result for the period ended 30 June 2017, 30 June 2016 or 31 December 2016.

B17 – 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, certain private equity investments and private placements.

The majority of the Group's assets and liabilities measured at fair value are based on quoted market information or observable market data. 15.8% of assets and 3.3% 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 technique

There were no changes in the valuation techniques during the period compared to those described in the 2016 annual report and accounts.

B17 – 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 2017		30 June 2016		31 December 2016	
	Fair value £m	Carrying amount £m	Fair value £m	Carrying amount £m	Fair value £m	Carrying amount £m
Financial assets						
Loans[1]	**25,459**	**25,452**	24,259	24,305	24,705	24,784
Financial Investments	**309,222**	**309,222**	288,460	288,460	299,835	299,835
Fixed maturity securities	**171,070**	**171,070**	173,798	173,798	175,536	175,536
Equity securities	**73,575**	**73,575**	63,331	63,331	68,348	68,348
Other investments (including derivatives)	**64,577**	**64,577**	51,331	51,331	55,951	55,951
Financial liabilities						
Non-participating investment contracts[2]	**118,291**	**118,291**	105,243	105,243	114,527	114,527
Net asset value attributable to unitholders	**18,469**	**18,469**	13,045	13,045	15,638	15,638
Borrowings[1]	**11,545**	**10,338**	9,866	9,681	10,926	10,295
Derivative liabilities[3]	**6,093**	**6,093**	8,127	8,127	6,795	6,795

1 Within the fair value, the estimated fair value has been provided for the portion of loans and borrowings that are carried at amortised cost as disclosed in note B17(d).
2 Non-participating investment contracts are included within gross liabilities for investment contracts on the condensed consolidated statement of financial position and disclosed in note B10.
3 Derivative liabilities are included within payables and other financial liabilities on the condensed consolidated statement of financial position.

Fair value of the following assets and liabilities approximate to their carrying amounts:

- Receivables
- Cash and cash equivalents
- Payables and other financial liabilities
- The equivalent assets to those above, which are classified as held for sale

(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. Financial instruments relating to operations classified as held for sale have been excluded from the individual asset and liability line items and have been disclosed separately.

	Fair value hierarchy					
At 30 June 2017	**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	—	—	**10,719**	**10,719**	—	**10,719**
Loans	—	**3**	**22,225**	**22,228**	**3,224**	**25,452**
Financial investments measured at fair value						
Fixed maturity securities	**98,044**	**56,430**	**16,596**	**171,070**	—	**171,070**
Equity securities	**72,675**	—	**900**	**73,575**	—	**73,575**
Other investments (including derivatives)	**55,072**	**5,164**	**4,341**	**64,577**	—	**64,577**
Financial assets of operations classified as held for sale	**4,135**	**705**	**5**	**4,845**	—	**4,845**
Total	**229,926**	**62,302**	**54,786**	**347,014**	**3,224**	**350,238**
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	**114,721**	**227**	**3,343**	**118,291**	—	**118,291**
Net asset value attributable to unit holders	**18,445**	—	**24**	**18,469**	—	**18,469**
Borrowings	—	—	**1,214**	**1,214**	**9,124**	**10,338**
Derivative liabilities[2]	**431**	**5,510**	**152**	**6,093**	—	**6,093**
Financial liabilities of operations classified as held for sale	**555**	—	—	**555**	—	**555**
Total	**134,152**	**5,737**	**4,733**	**144,622**	**9,124**	**153,746**

1 In addition to the balances in this table, included within reinsurance assets in the condensed consolidated statement of financial position and note B11 are £10,170 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.
2 Derivative liabilities are included within payables and other financial liabilities on the condensed consolidated statement of financial position.

	Fair value hierarchy			
At 30 June 2017	**Level 1 £m**	**Level 2 £m**	**Level 3 £m**	**Total fair value £m**
Non-recurring fair value measurement[1]				
Properties occupied by group companies	—	—	**327**	**327**
Total	—	—	**327**	**327**

1 Non-recurring fair value measurements of assets or liabilities are those fair value measurements that other IFRSs permit or require in particular circumstances.

B17 – Fair value continued

At 30 June 2016	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	—	—	11,106	11,106	—	11,106
Loans	—	1,000	19,781	20,781	3,524	24,305
Financial investments measured at fair value						
Fixed maturity securities	94,715	63,214	15,869	173,798	—	173,798
Equity securities	62,341	—	990	63,331	—	63,331
Other investments (including derivatives)	39,265	8,043	4,023	51,331	—	51,331
Financial assets of operations classified as held for sale	9,462	445	852	10,759	64	10,823
Total	205,783	72,702	52,621	331,106	3,588	334,694
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	101,612	300	3,331	105,243	—	105,243
Net asset value attributable to unit holders	13,022	—	23	13,045	—	13,045
Borrowings	—	809	497	1,306	8,375	9,681
Derivative liabilities[2]	274	5,722	2,131	8,127	—	8,127
Financial liabilities of operations classified as held for sale	705	4	—	709	—	709
Total	115,613	6,835	5,982	128,430	8,375	136,805

1 In addition to the balances in this table, included within reinsurance assets in the statement of condensed consolidated financial position and note B11 are £15,859 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.
2 Derivative liabilities are included within payables and other financial liabilities on the condensed consolidated statement of financial position.

At 30 June 2016	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement[1]				
Properties occupied by group companies	—	—	347	347
Total	—	—	347	347

1 Non-recurring fair value measurements of assets or liabilities are those fair value measurements that other IFRSs permit or require in particular circumstances.

At 31 December 2016	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	—	—	10,768	10,768	—	10,768
Loans	—	360	20,923	21,283	3,501	24,784
Financial investments measured at fair value						
Fixed maturity securities	96,102	62,987	16,447	175,536	—	175,536
Equity securities	67,435	—	913	68,348	—	68,348
Other investments (including derivatives)	45,710	6,240	4,001	55,951	—	55,951
Financial assets of operations classified as held for sale	9,408	366	980	10,754	75	10,829
Total	218,655	69,953	54,032	342,640	3,576	346,216
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	110,900	219	3,408	114,527	—	114,527
Net asset value attributable to unit holders	15,618	—	20	15,638	—	15,638
Borrowings	—	—	1,110	1,110	9,185	10,295
Derivative liabilities[2]	401	4,794	1,600	6,795	—	6,795
Financial liabilities of operations classified as held for sale	—	4	—	4	—	4
Total	126,919	5,017	6,138	138,074	9,185	147,259

1 In addition to the balances in this table, included within reinsurance assets in the statement of condensed consolidated financial position and note B11 are £18,366 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.
2 Derivative liabilities are included within payables and other financial liabilities on the condensed consolidated statement of financial position.

At 31 December 2016	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement[1]				
Properties occupied by group companies	—	—	321	321
Total	—	—	321	321

1 Non-recurring fair value measurements of assets or liabilities are those fair value measurements that other IFRSs permit or require in particular circumstances.

B17 – 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 2017.

Transfers to/from Level 3

Transfers into Level 3 assets of £1.6 billion included:

- £1.2 billion of debt securities held in the UK and France which were transferred from Level 2 due to the unavailability of significant observable market data or sufficiently significant differences between the valuation provided by the counterparty and broker quotes and the validation models.
- £0.3 billion of student accommodation mortgage loans were transferred from Level 2 to Level 3. These are valued using a discounted cash flow model which uses a liquidity premium derived from the new business on the whole of the UK Life commercial mortgages portfolio as no new student accommodation business has been written recently. Therefore the liquidity premium used in the model is no longer deemed an observable input.

Transfers out of Level 3 assets of £1.4 billion relate principally to £1.3 billion of debt securities which were transferred to Level 2 by our UK business, as observable inputs became available or where the valuation provided by the counterparty and broker quotes are corroborated using valuation models with observable inputs.

Transfers out of Level 3 liabilities of £1.4 billion relate to RPI swaps held by the UK business. The levelling review conducted during the period suggested that the market for these is liquid and deep, the inputs are now deemed to be observable and as a result these were transferred to Level 2.

(f) Valuation approach for fair value assets and liabilities classified as Level 2

Please see note B17(a) for a description of typical Level 2 inputs.

Debt securities, in line with market practice, are generally valued using an independent pricing service. These valuations are determined using independent external quotations from multiple sources and are subject to a number of monitoring controls, such as monthly price variances, stale price reviews and variance analysis. Pricing services, where available, are used to obtain the third-party broker quotes. Where pricing service providers are used, a single valuation is obtained and applied. When prices are not available from pricing services, quotes are sourced from brokers.

Over the counter derivatives are valued using broker quotes or models such as the option pricing model, simulation models or a combination of models. The inputs for these models include current market and contractual prices for underlying instruments, period to maturity, correlations, yield curves and volatility of the underlying instruments which are deemed to be observable.

Unit Trusts and other investment funds included under the Other investments category are valued using net assets values which are not subject to a significant adjustment for restrictions on redemption or for a limited trading activity.

(g) Further information on Level 3 assets and liabilities:

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

	Assets								Liabilities	
At 30 June 2017	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
Opening balance at 1 January 2017	**10,768**	**20,923**	**16,447**	**913**	**4,001**	**980**	**(3,408)**	**(20)**	**(1,600)**	**(1,110)**
Total net gains/(losses) recognised in the income statement[1]	223	536	154	(64)	(75)	—	(25)	(4)	(52)	(121)
Purchases	217	505	358	57	699	—	(70)	—	(40)	—
Issuances	—	72	—	—	—	—	—	—	—	—
Disposals	(577)	(96)	(495)	(12)	(319)	(988)	171	—	156	17
Settlements[2]	—	(6)	(9)	—	—	—	9	—	—	—
Transfers into Level 3	—	288	1,203	4	61	—	(17)	—	(2)	—
Transfers out of Level 3	—	—	(1,262)	—	(105)	—	4	—	1,387	—
Reclassification to held for sale	(1)	—	—	—	(4)	5	—	—	—	—
Foreign exchange rate movements	89	3	200	2	83	8	(7)	—	(1)	—
Balance at 30 June 2017	**10,719**	**22,225**	**16,596**	**900**	**4,341**	**5**	**(3,343)**	**(24)**	**(152)**	**(1,214)**

1 Total net gains/(losses) recognised in the income statement includes realised gains/(losses) on disposals.
2 Settlements include effective settlements of Group holdings.

B17 – Fair value continued

	Assets								Liabilities	
At 30 June 2016	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	Derivative liabilities £m	Borrowings £m
Opening balance at 1 January 2016	11,301	18,129	14,603	936	4,153	—	(3,421)	(22)	(1,093)	(527)
Total net gains/(losses) recognised in the income statement[1]	38	1,043	517	51	19	(76)	104	(1)	(952)	28
Purchases	99	46	860	66	240	65	(61)	—	(107)	—
Issuances	—	1,004	4	—	—	—	(22)	—	—	—
Disposals	(604)	(272)	(590)	(85)	(421)	(12)	43	—	25	—
Settlements[2]	—	(171)	(5)	—	—	—	3	—	—	2
Transfers into Level 3	—	—	1,213	6	22	123	(22)	—	—	—
Transfers out of Level 3	—	—	(1,036)	(1)	(80)	(5)	51	—	—	—
Reclassification to held for sale	(40)	—	(590)	—	(36)	666	—	—	—	—
Foreign exchange movements	312	2	893	17	126	91	(6)	—	(4)	—
Balance at 30 June 2016	11,106	19,781	15,869	990	4,023	852	(3,331)	(23)	(2,131)	(497)

1 Total net (losses)/gains recognised in the income statement includes realised gains/(losses) on disposals.
2 Settlements include effective settlements of Group holdings.

	Assets								Liabilities	
At 31 December 2016	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
Opening balance at 1 January 2016	11,301	18,129	14,603	936	4,153	—	(3,421)	(22)	(1,093)	(527)
Total net gains/(losses) recognised in the income statement[1]	(75)	483	586	55	161	13	(111)	2	(575)	217
Purchases	721	116	1,587	94	718	228	(184)	—	(302)	—
Issuances	—	2,612	—	—	—	—	(41)	—	—	—
Disposals	(1,534)	(1,140)	(1,528)	(194)	(1,144)	(75)	358	—	196	—
Settlements[2]	—	—	67	—	—	—	21	—	—	17
Transfers into Level 3	—	718	1,893	—	40	50	(40)	—	—	(817)
Transfers out of Level 3	—	—	(1,284)	(1)	(111)	(15)	81	—	179	—
Reclassification to held for sale	(40)	—	(590)	—	(36)	666	—	—	—	—
Foreign exchange rate movements	395	5	1,113	23	220	113	(71)	—	(5)	—
Balance at 31 December 2016	10,768	20,923	16,447	913	4,001	980	(3,408)	(20)	(1,600)	(1,110)

1 Total net gains/(losses) recognised in the income statement includes realised gains/(losses) on disposals.
2 Settlements include effective settlements of Group holdings.

Total net gains recognised in the income statement in the first half of 2017 in respect of Level 3 assets measured at fair value amounted to £0.8 billion (*HY16: net gains of £1.6 billion)* with net losses in respect of liabilities of £0.2 billion *(HY16: net losses of £0.8 billion)*. This balance includes £0.6 billion of net gains *(HY16: £1.6 billion)* attributable to those assets still held at the end of the period and £74 million of net losses *(HY16: net losses of £841 million)* attributable to those liabilities still held at the end of the period.

The principal assets classified as Level 3, and the valuation techniques applied to them, are described below.

(i) Investment property

- Investment property amounting to £10.7 billion *(FY16: £10.8 billion)* 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, Primary Healthcare, Infrastructure and Private Finance Initiative (PFI) loans held by our UK Life business amounting to £13.0 billion *(FY16: £12.3 billion)*, were valued using a Portfolio Credit Risk Model (PCRM). This model calculates a Credit Risk Adjusted Value (CRAV) 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 105 bps to 230 bps.

B17 – Fair value continued

- Equity release and securitised mortgage loans held by our UK Life business amounting to £8.6 billion *(FY16: £8 billion)* are valued using an internal model. Inputs to the model include primarily property growth rates, mortality and morbidity assumptions, cost of capital and liquidity premium which are not deemed to be market observable.
- Non-recourse loans of £0.6 billion *(FY16: £0.6 billion)* have been valued using internally developed discounted cash flow models incorporating a significant number of modelling assumptions and unobservable market data including the probability of counterparty default and illiquidity premium.

(iii) Debt securities

- Privately placed notes, commercial real estate loans, PFI loans and infrastructure loans held by our UK Life business of £3.1 billion *(FY16: £3.1 billion)* are not traded in active markets. Valuations are obtained from third party evaluated pricing services which represent the vendor's opinion of the asset values or discounted cash flow models which incorporate significant unobservable inputs.
- Structured bond-type and non-standard debt products held by our business in France amounting to £6.5 billion *(FY16: £7.4 billion)* and bonds held by our UK business of £2.7 billion *(FY16: £2.6 billion)* 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.
- Collateralised loan obligations of £0.4 billion *(FY16: £0.4 billion)* have been valued using internally developed discounted cash flow models incorporating a significant number of modelling assumptions and unobservable market data including assumptions regarding correlation among the underlying loans, a probability of default and liquidity premium.
- Corporate debt securities held by our French business of £2.1 billion *(FY16: £1.5 billion)* and debt securities of £1.2 billion held by our UK and Asia businesses (*FY16: £1.4 billion)* 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 private equity holdings of £0.8 billion *(FY16: £0.8 billion)* held predominantly 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) Other investments

- The following Other investments are valued based on external valuation reports received from fund managers:
  - Private equity investment funds amounting to £0.6 billion *(FY16: £0.8 billion)*;
  - Other investment funds including property funds amounting to £1.3 billion *(FY16: £0.8 billion)*;
  - External hedge funds held principally by businesses in the UK and France amounting to £0.4 billion *(FY16: £0.5 billion)*; and
  - Discretionary managed funds held in Asia amount to £1.6 billion *(FY16: £1.7 billion)*.

Where these valuations are at a date other than balance sheet date, as in the case of some private equity funds, we make adjustments for items such as subsequent draw-downs and distributions and the fund manager's carried interest.

- Derivative assets of £0.4 million in the UK are predominantly comprised of uncollateralised interest rate and inflation swaps with PFI counterparties. These are valued in the same way as collateralised swaps but a subsequent adjustment which makes use of unobservable inputs is made to the value to reflect the counterparty credit risk.

Remaining Level 3 investments amount to £0.7 billion (*FY16: £0.3 billion*) within debt securities, equity securities and other investments held by a number of businesses throughout the Group.

Where possible, the Group tests the sensitivity of the fair values of Level 3 investments to changes in unobservable inputs to reasonable alternatives. Valuations for Level 3 investments 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.

On the basis of the methodology outlined above, the Group is able to perform sensitivity analysis for £54 billion of the Group's Level 3 assets. For these Level 3 assets, changing unobservable valuation inputs to a reasonable alternative would result in a change in fair value by +£2.5 billion / –£2.3 billion. Of the £0.8 billion Level 3 assets for which sensitivity analysis is not provided, it is estimated that a 10% change in valuation assumptions downwards of these assets would result in a change in fair value of approximately £80 million.

B17 – Fair value continued

(vi) Liabilities

The principal liabilities classified as Level 3, and the valuation techniques applied to them, are:

- £3.3 billion (*FY16: £3.4 billion*) of non-participating investment contract liabilities 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.
- £1.3 billion (*FY16: £1.1 billion*) of securitised mortgage loan notes, presented within Borrowings, are valued using a similar technique to the related Level 3 securitised mortgage assets.
- Remaining Level 3 liabilities amount to £0.1 billion (*FY16: £nil*) and relate to a range of liabilities held by a number of businesses throughout the Group.

Where possible, the Group tests the sensitivity of the fair values of Level 3 liabilities to changes in unobservable inputs to reasonable alternatives. 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.

On the basis of the methodology outlined above, the Group is able to perform sensitivity analysis for £4.7 billion of the Group's Level 3 liabilities. For these Level 3 liabilities, changing unobservable valuation inputs to a reasonable alternative would result in a change in fair value by approximately ±£0.6 billion. Of the £45 million Level 3 liabilities for which sensitivity analysis is not provided, it is estimated that a 10% change in valuation assumptions downwards of these assets would result in a change in fair value of approximately £5 million.

B18 – Risk management

As a global insurance group, risk management is at the heart of what we do and is the 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

The first half of 2017 saw a slowing of UK economic growth as rising inflation following last year's depreciation in sterling and stagnant real wages depressed consumer demand. In the Eurozone economic growth has picked up supported by the European Central Bank's asset purchase regime and loose monetary policy. While UK and Eurozone monetary policy has remained loose, the US Federal reserve has continued its gradual increase in interest rates started in 2016 with two further rate rises. Despite this the US dollar has weakened from its previous highs in the aftermath of last year's US Presidential election, as expectations of a significant fiscal stimulus have receded. Equity markets remain strong and at record highs, while commodity prices have remained generally stable.

Looking forward, political uncertainty as a result of the UK's inconclusive General Election and uncertainty over the outcome of Brexit negotiations and future trading arrangements with the European Union are likely to weigh negatively on UK macroeconomic growth and possibly sterling. Despite this further rises in inflation and concerns over consumer credit growth may cause the Bank of England to tighten monetary policy, possibly resulting in a pick-up in current exceptionally low long-term UK gilt yields. Economic prospects in France and the wider Eurozone are likely to remain favourable in the short term at least, bolstered by the outcome of the recent French Presidential and Parliamentary elections, albeit a potential Eurozone banking crisis remains a threat to Eurozone economic stability despite recent progress in Spain and Italy in resolving failing banks. Likely further increases in interest rates, by the US Federal reserve, raises the prospect of increasing divergence in US and European monetary policy. Other possible shocks to global growth in the second half of 2017 include a credit crunch in China, where indebtedness is currently at record levels.

During the first six months of the year there were also several high profile cyber security breaches for corporates in the UK and elsewhere and this risk is expected to continue to increase in the future.

In February 2017, the Lord Chancellor announced a change in the Ogden discount rate used to calculate lump sum payments in settlement of bodily injury claims in the UK, significantly increasing lump sum payments and insurance liabilities. Consultations continue with the UK Government on how the discount rate is set to mitigate its impact. In June 2017 the FCA published the final findings from its market study on the Asset Management industry as a precursor to future regulatory changes which may impact how asset managers and investment platforms operate and charge fees. In the UK we continue to review the appropriateness of pension lifestyle investment strategies in light of the 2015 pension reforms and changes to customer behaviour in response, which may be further impacted by the FCA's industry review of these strategies, which was also published in June 2017. The Group is taking action to ensure it will be compliant with the General Data Protection Regulations and Insurance Distribution Directive, which will become effective in the EU, including the UK, during 2018.

The International Association of Insurance Supervisors (IAIS) continues to develop the higher loss absorbency capital requirements, which will apply from January 2019, should the Group remain a Global Systemically Important Insurer (G-SII). In May 2017, the International Accounting Standards Board (IASB) issued its standard for the accounting of insurance contracts *IFRS17,* with an implementation date of 2021.

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 through the disposal of our joint venture with Credit du Nord in France and pending disposals of Friends Provident International Limited and businesses in Spain (expected to complete early 2018 and the third quarter of 2017 respectively subject to regulatory and anti-trust approvals) and Italy (expected to complete in 2018) while investing in new business opportunities. 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 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 increasing cash flow and capital generation, while maintaining a strong balance sheet with limited volatility and external leverage at a level commensurate with an AA financial strength rating.

B18 – Risk management continued

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 over the half-year to 30 June 2017 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 56 of the Aviva plc Annual Report and Accounts 2016.

(a) Credit risk

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. During the first half of 2017 restrictions to our sovereign and corporate debt exposure to Greece, Italy, Portugal and Spain remained in place. We have in place a comprehensive group-wide reporting system that consolidates credit exposures across geographies, business lines and exposure types. We have a robust framework of limits and controls to diversify the portfolio and enable the early identification of potential issues. Refer to section D.3.3.5 of this report for details of our sovereign exposures to Greece, Ireland, Portugal, Spain and Italy.

During the first half of 2017 the credit rating profile of our debt securities portfolio has remained strong. At 30 June 2017, the proportion of our shareholder debt securities that are investment grade has decreased slightly to 93.1% *(31 December 2016: 93.5%)*. Of the remaining 6.9% of shareholder debt securities that do not have an external rating of BBB or higher 84% are not rated by the major rating agencies. However, most of these are allocated an internal rating using a methodology largely consistent with that adopted by an external rating agency, and are considered to be of investment grade credit quality.

The Group's largest reinsurance counterparty is BlackRock Life Ltd (including subsidiaries) as a result of the BlackRock funds offered to UK Life customers via unit linked contracts. Whilst the risk of default is considered remote due to the nature of the arrangement and the counterparty, the Group is in the process of restructuring the agreements with BlackRock Life Ltd to significantly reduce this exposure. Since the beginning of the year, the Group's credit exposure to BlackRock Life Ltd has been almost halved to £9.2 billion at 30 June 2017 *(31 December 2016: £17.1 billion)* and will be further significantly reduced during the remainder of 2017 and into early 2018.

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

(b) Market risk

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. At 30 June 2017 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 2017, Canadian dollar hedges with notional values of £0.8 billion were in place.

(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, Aviva Group Holdings Limited (AGH) and Friends Life Holdings plc, 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 2017: £1.65 billion) from a range of leading international banks to further mitigate this risk.

B18 – Risk management continued

(d) Life insurance risk

The profile of our life insurance risks, primarily longevity, persistency, mortality and expense risk, has remained stable in the first half of 2017. 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. 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. 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.

During the first half of 2017, 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.

Aviva successfully completed the renewal of its group-wide catastrophe protection on 1 January 2017, maintaining the level of reinsurance it purchases which includes both event and aggregate catastrophe protection on a group-wide basis. Processes are in place to manage catastrophe risk in individual business units and at a group level.

(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 on-going basis with issues escalated to the Aviva Investors Risk Management Committee and ultimately to the Aviva Investors Holdings Limited Board Risk Committee.

(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. We continue to invest to reduce our operational risk exposures through on-going investment in our Security Transformation programme in response to the increasing cyber security risk and continued investment in simplifying our technology estate to improve the resilience and reliability of our systems. 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 founded, or the customer's expectations for the product have changed. We monitor this risk and have controls in place to limit our exposure.

B18 – Risk management continued

(i) Risk and capital management

(i) Sensitivity test analysis

The Group uses a number of sensitivity tests to understand the volatility of earnings, the volatility of its capital requirements, and to manage its capital more efficiently. Sensitivities to economic and operating experience are regularly produced on the Group's key financial performance metrics to inform the Group's decision making and planning processes, and as part of the framework for identifying and quantifying the risks to which each of its business units, and the Group as a whole, are exposed.

(ii) Life insurance and investment contracts

The nature of long-term business is such that a number of assumptions are made in compiling these financial statements. Assumptions are made about investment returns, expenses, mortality rates, and persistency in connection with the in-force policies for each business unit. Assumptions are best estimates based on historic and expected experience of the business.

(iii) General insurance and health business

General insurance and health claim liabilities are estimated by using standard actuarial claims projection techniques. These methods extrapolate the claims development for each accident year based on the observed development of earlier years. In most cases, no explicit assumptions are made as projections are based on assumptions implicit in the historic claims.

(iv) Sensitivity test results

Illustrative results of sensitivity testing for long-term business, general insurance and health business and the fund management and non-insurance business are set out below. For each sensitivity test the impact of a reasonably possible change in a single factor is shown, with other assumptions left unchanged.

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%.

Long-term business
Sensitivities as at 30 June 2017

30 June 2017 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)	—	(15)	(165)	20	(40)	(5)	(15)
Insurance non-participating	(165)	60	(720)	(70)	45	(195)	(95)	(925)
Investment participating	(10)	5	—	(5)	—	(10)	—	—
Investment non-participating	25	(35)	—	45	(60)	(65)	—	—
Assets backing life shareholders' funds	(115)	170	5	(85)	85	—	—	—
Total	**(285)**	**200**	**(730)**	**(280)**	**90**	**(310)**	**(100)**	**(940)**

30 June 2017 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)	—	(15)	(165)	20	(40)	(5)	(15)
Insurance non-participating	(165)	60	(720)	(70)	45	(195)	(95)	(925)
Investment participating	(10)	5	—	(5)	—	(10)	—	—
Investment non-participating	25	(35)	—	45	(60)	(65)	—	—
Assets backing life shareholders' funds	(155)	215	—	(85)	85	—	—	—
Total	**(325)**	**245**	**(735)**	**(280)**	**90**	**(310)**	**(100)**	**(940)**

B18 – Risk management continued

Sensitivities as at 31 December 2016

31 December 2016 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	(50)	30	(10)	(130)	65	(30)	(5)	(15)
Insurance non-participating	(190)	20	(775)	(35)	10	(190)	(90)	(920)
Investment participating	(10)	5	(5)	—	—	(5)	—	—
Investment non-participating	10	(15)	—	50	(70)	(65)	—	—
Assets backing life shareholders' funds	(115)	190	10	(85)	85	—	—	—
Total	(355)	230	(780)	(200)	90	(290)	(95)	(935)

31 December 2016 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	(50)	30	(10)	(130)	65	(30)	(5)	(15)
Insurance non-participating	(190)	20	(775)	(35)	10	(190)	(90)	(920)
Investment participating	(10)	5	(5)	—	—	(5)	—	—
Investment non-participating	10	(15)	—	50	(70)	(65)	—	—
Assets backing life shareholders' funds	(155)	230	5	(85)	85	—	—	—
Total	(395)	270	(785)	(200)	90	(290)	(95)	(935)

Changes in sensitivities between HY17 and FY16 reflect underlying movements in market interest rates, portfolio growth, changes to asset mix and the relative durations of assets and liabilities and asset liability management actions. The sensitivities to economic and demographic movements relate mainly to business in the UK.

General insurance and health business sensitivities as at 30 June 2017

30 June 2017 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	**(315)**	**315**	**(145)**	**90**	**(90)**	**(75)**	**(150)**
Net of reinsurance	**(385)**	**375**	**(145)**	**90**	**(90)**	**(75)**	**(145)**

30 June 2017 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	**(315)**	**315**	**(145)**	**90**	**(90)**	**(25)**	**(150)**
Net of reinsurance	**(385)**	**375**	**(145)**	**90**	**(90)**	**(25)**	**(145)**

Sensitivities as at 31 December 2016

31 December 2016 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	(315)	320	(145)	85	(85)	(115)	(340)
Net of reinsurance	(385)	375	(145)	85	(85)	(115)	(320)

31 December 2016 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	(315)	320	(145)	85	(85)	(25)	(340)
Net of reinsurance	(385)	375	(145)	85	(85)	(25)	(320)

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.

B18 – Risk management continued

Fund management and non-insurance business sensitivities as at 30 June 2017

30 June 2017 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	**(35)**	**30**	**10**	**—**	**5**

30 June 2017 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	**(25)**	**25**	**10**	**—**	**5**

Sensitivities as at 31 December 2016

31 December 2016 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	—	—	10	(10)	15

31 December 2016 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates - 1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	—	—	10	(10)	15

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.

B19 – Cash and cash equivalents

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

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Cash and cash equivalents	**42,456**	34,911	38,708
Cash and cash equivalents of operations classified as held for sale	**406**	683	255
Bank overdrafts	**(622)**	(759)	(558)
Net cash and cash equivalents at 30 June/31 December	**42,240**	34,835	38,405

B20 – 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 52 of the Group's 2016 Annual report and accounts. An update on material risks is provided in note B18 Risk management.

B21 – Acquired value of in-force business and intangible assets

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

	30 June 2017 £m	30 June 2016 £m	31 December 2016 £m
Acquired value of in-force business on insurance contracts[1]	**1,646**	1,870	1,750
Acquired value of in-force business on investment contracts[2]	**1,967**	2,199	2,097
Intangible assets	**1,672**	1,394	1,633
	5,285	5,463	5,480
Less: Amounts classified as held for sale	**(444)**	(13)	(12)
Total	**4,841**	5,450	5,468

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

The acquired value of in-force business on insurance and investment contracts has reduced in the period primarily due to an amortisation charge of £232 million (*HY16: £317 million charge, FY16: £539 million charge*). There were no impairments of acquired value of in-force business in the period *(HY16: £nil, FY16: £nil)*.

The increase in intangible assets primarily relates to a distribution agreement in Poland following the consolidation of its insurance operations (see note B4 (b)(ii)), partially offset by the amortisation charge for the period.

Directors' responsibility statement

The directors confirm that these condensed interim financial statements have been prepared in accordance with International Accounting Standard 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

Mark Wilson
Group chief executive officer
2 August 2017

Thomas D. Stoddard
Chief financial officer

Independent review report to Aviva plc

Report on the condensed consolidated interim financial statements

Our conclusion

We have reviewed Aviva plc's condensed consolidated interim financial statements (the "interim financial statements") in the half year report of Aviva plc for the six month period ended 30 June 2017. Based on our review, nothing has come to our attention that causes us to believe that the condensed consolidated 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 Condensed consolidated interim financial statements, which are prepared by Aviva plc, comprise:

- the Condensed consolidated statement of financial position as at 30 June 2017;
- the Condensed consolidated income statement and 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 condensed consolidated interim financial statements.

The condensed consolidated 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 condensed consolidated interim financial statements and the review

Our responsibilities and those of the directors

The half year report, including the condensed consolidated 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 to the company a conclusion on the condensed consolidated 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 Rules and Transparency Rules 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 condensed consolidated 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 condensed consolidated interim financial statements.

PricewaterhouseCoopers LLP
Chartered Accountants
2 August 2017
London

Notes:

(a) The maintenance and integrity of the Aviva plc website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the interim financial statements since they were initially presented on the website.

(b) Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Capital & liquidity

In this section

C1 – Analysis of return on equity

6 months 2017	Operating return[1] Before tax £m	Operating return[1] After tax £m	Weighted average shareholders' funds including non-controlling interests[2] £m	Return on equity[2] %
United Kingdom & Ireland Life	**756**	**606**	**11,323**	**10.7%**
United Kingdom & Ireland General Insurance and Health	**259**	**211**	**1,817**	**23.2%**
Canada	**71**	**52**	**1,468**	**7.1%**
Europe	**518**	**367**	**5,574**	**13.2%**
Asia	**115**	**107**	**1,661**	**12.9%**
Fund management	**69**	**55**	**481**	**22.9%**
Corporate and Other Business[3]	**(130)**	**(88)**	**5,725**	**n/a**
Return on total capital employed	**1,658**	**1,310**	**28,049**	**9.3%**
Subordinated debt	**(191)**	**(154)**	**(7,223)**	**4.3%**
Senior debt	**(2)**	**(2)**	**(1,384)**	**0.3%**
Return on total equity	**1,465**	**1,154**	**19,442**	**11.9%**
Less: Non-controlling interests		**(73)**	**(1,372)**	**10.6%**
Direct capital instrument and tier 1 notes[4]		**(23)**	**(1,123)**	**6.1%**
Preference capital		**(9)**	**(200)**	**8.5%**
Return on equity shareholders' funds		**1,049**	**16,747**	**12.4%**

1 The operating return is based upon Group operating profit. Refer to note B1.
2 Return on equity is based on an annualised operating return after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity.
3 The 'Corporate' and 'Other Business' loss before tax of £130 million comprises corporate costs of £83 million, interest on internal lending arrangements of £3 million, other business operating loss (net of investment return) of £81 million, partly offset by finance income on the main UK pension scheme of £37 million.
4 The return on equity is based on an annualised operating return after tax reflecting the expected direct capital instrument interest in the second half of the year.

6 months 2016	Operating return[1] Before tax £m	Operating return[1] After tax £m	Weighted average shareholders' funds including non-controlling interests[2] £m	Return on equity[2] %
United Kingdom & Ireland Life	711	547	11,057	9.9%
United Kingdom & Ireland General Insurance and Health	231	187	3,008	12.4%
Canada	88	65	1,059	12.3%
Europe	430	296	4,960	11.9%
Asia	112	106	1,478	14.3%
Fund management	49	39	414	18.8%
Corporate and Other Business[3]	(112)	(91)	4,176	n/a
Return on total capital employed	1,509	1,149	26,152	8.8%
Subordinated debt	(184)	(147)	(6,711)	4.4%
Senior debt	—	—	(650)	—
Return on total equity	1,325	1,002	18,791	10.7%
Less: Non-controlling interests		(67)	(1,210)	11.1%
Direct capital instrument and tier 1 notes[4]		(21)	(1,123)	5.6%
Preference capital		(9)	(200)	9.0%
Return on equity shareholders' funds		905	16,258	11.0%

1 The operating return is based upon Group operating profit. Refer to note B1.
2 Return on equity is based on an annualised operating return after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity.
3 The 'Corporate' and 'Other Business' loss before tax of £112 million comprises corporate costs of £80 million, interest on internal lending arrangements of £15 million, other business operating loss (net of investment return) of £61 million, partly offset by finance income on the main UK pension scheme of £44 million.
4 The return on equity is based on an annualised operating return after tax reflecting the expected direct capital instrument interest in the second half of the year.

C1 – Analysis of return on equity continued

Full Year 2016	Operating return[1] Before tax £m	Operating return[1] After tax £m	Weighted average shareholders' funds including non-controlling interests[2] £m	Return on equity[2] %
United Kingdom & Ireland Life	1,555	1,262	11,218	11.2%
United Kingdom & Ireland General Insurance and Health	471	380	2,431	15.6%
Canada	269	197	1,256	15.7%
Europe	964	674	5,160	13.1%
Asia	228	216	1,548	14.0%
Fund management	138	104	426	24.4%
Corporate and Other Business[3]	(227)	(219)	4,850	n/a
Return on total capital employed	3,398	2,614	26,889	9.7%
Subordinated debt	(387)	(309)	(6,907)	4.5%
Senior debt	(1)	(1)	(869)	0.1%
Return on total equity	3,010	2,304	19,113	12.1%
Less: Non-controlling interests		(147)	(1,279)	11.5%
Direct capital instrument and tier 1 notes		(68)	(1,123)	6.1%
Preference capital		(17)	(200)	8.5%
Return on equity shareholders' funds		2,072	16,511	12.5%

1 The operating return is based upon Group operating profit. Refer to note B1.
2 Return on equity is based on an annualised operating return after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity.
3 The 'Corporate' and 'Other Business' loss before tax of £227 million comprises corporate costs of £184 million, interest on internal lending arrangements of £23 million, other business operating loss (net of investment return) of £106 million, partly offset by finance income on the main UK pension scheme of £86 million.

C2 – Group capital structure – IFRS basis

The table below shows how our capital is deployed by product and service segments and how that capital is funded.

	30 June 2017 Capital employed £m	31 December 2016 Capital employed £m
Life business		
United Kingdom & Ireland	**10,882**	11,764
France	**2,769**	2,756
Poland	**283**	296
Italy	**967**	947
Spain	**653**	594
Other Europe	**70**	71
Europe	**4,742**	4,664
Asia	**1,650**	1,643
	17,274	18,071
General insurance & health		
United Kingdom & Ireland[1]	**1,872**	1,761
Canada	**1,466**	1,471
France	**504**	462
Italy	**304**	282
Other Europe	**119**	70
Europe	**927**	814
Asia	**12**	16
	4,277	4,062
Fund Management	**501**	462
Corporate & Other Business[1,2]	**5,917**	5,533
Total capital employed	**27,969**	28,128
Financed by		
Equity shareholders' funds	**16,691**	16,803
Non-controlling interests	**1,319**	1,425
Direct capital instrument & tier 1 notes	**1,123**	1,123
Preference shares	**200**	200
Subordinated debt[3]	**7,233**	7,213
Senior debt	**1,403**	1,364
Total capital employed[4]	**27,969**	28,128

1 Capital employed for United Kingdom & Ireland general insurance and health excludes c.£0.9 billion of goodwill which does not support the general insurance and health business for capital purposes and is included in 'Corporate & Other Business'.
2 'Corporate & 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 £9 million (*FY16: £9 million*).
4 Goodwill, AVIF and other intangibles are maintained within the capital base. Goodwill includes goodwill in subsidiaries of £1,911 million (*FY16: £2,045 million*), goodwill in joint ventures of £19 million (*FY16: £20 million*) and goodwill in associates of £28 million (*FY16: £47 million*). AVIF and other intangibles comprise £4,841 million (*FY16: £5,468 million*) of intangibles in subsidiaries, £46 million (*FY16: £72 million*) of intangibles in joint ventures and £17 million (*FY16: £18 million*) of intangibles in associates, net of deferred tax liabilities of £(625) million (*FY16: £(783) million*) and the non-controlling interest share of intangibles of £(73) million (*FY16: £(226) million*).

Total capital employed is financed by a combination of equity shareholders' funds, preference capital, subordinated debt and borrowings. Total capital employed at HY17 amounted to £28.0 billion (*FY16: £28.1 billion*).

At HY17 the market value of external debt, subordinated 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), direct capital instrument and tier 1 notes is £11,579 million *(FY16: £11,006 million*).

C3 – Equity sensitivity analysis – IFRS basis

The sensitivity of the Group's total equity on an IFRS basis at 30 June 2017 to a 10% fall in global equity markets, a rise of 1% in global interest rates or a 0.5% increase in credit spreads is as follows:

31 December 2016 £bn	IFRS basis	30 June 2017 £bn	Equities down 10% £bn	Interest rates up 1% £bn	0.5% increased credit spread £bn
18.1	Long-term savings	**17.3**	**—**	**(0.3)**	**(0.2)**
10.1	General insurance and other	**10.6**	**(0.1)**	**(0.4)**	**0.6**
(8.6)	Borrowings	**(8.6)**	**—**	**—**	**—**
19.6	**Total equity**	**19.3**	**(0.1)**	**(0.7)**	**0.4**

These sensitivities assume a full tax charge/credit on market value assumptions. The interest rate sensitivity also assumes an equivalent movement in both inflation and discount rate (i.e. no change to real interest rates) and therefore incorporates the offsetting effects of these items on the pension scheme liabilities. A 1% increase in the real interest rate has the effect of reducing the pension scheme liability in the main UK pension scheme by £2.3 billion (before any associated tax impact).

The 0.5% increased credit spread sensitivity does not make an allowance for any adjustment to risk-free interest rates. The long-term business sensitivities provide for any impact of credit spread movements on liability valuations. The sensitivities also include the allocation of staff pension scheme sensitivities, which assume inflation rates and government bond yields remain constant. In practice, the sensitivity of the business to changes in credit spreads is subject to a number of complex interactions. The impact of the credit spread movements will be related to individual portfolio composition and may be driven by changes in credit or liquidity risk; hence, the actual impact may differ substantially from applying spread movements implied by various published credit spread indices to these sensitivities.

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Analysis of assets

In this section

Analysis of assets

D1 – Total assets

As an insurance business, Aviva 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. In addition, to support this, Aviva also uses a variety of hedging and other risk management strategies to diversify away any residual mis-match risk that is outside of Group's risk appetite.

30 June 2017	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	—	—	7,350	7,350	(598)	6,752
Interests in joint ventures and associates	—	1,132	554	1,686	—	1,686
Property and equipment	—	189	322	511	(1)	510
Investment property	6,595	3,599	526	10,720	(1)	10,719
Loans	8	3,202	22,309	25,519	(67)	25,452
Financial investments						
Debt securities	26,899	95,495	52,718	175,112	(4,042)	171,070
Equity securities	57,623	15,700	868	74,191	(616)	73,575
Other investments	51,368	8,991	4,337	64,696	(119)	64,577
Reinsurance assets	10,244	175	8,194	18,613	(101)	18,512
Deferred tax assets	—	—	186	186	—	186
Current tax assets	—	—	88	88	(8)	80
Receivables and other financial assets	208	2,179	6,699	9,086	(26)	9,060
Deferred acquisition costs and other assets	10	813	5,601	6,424	(17)	6,407
Prepayments and accrued income	325	1,264	1,380	2,969	(40)	2,929
Cash and cash equivalents	11,034	19,341	12,487	42,862	(406)	42,456
Assets of operations classified as held for sale	—	—	—	—	6,042	6,042
Total	**164,314**	**152,080**	**123,619**	**440,013**	**—**	**440,013**
Total %	**37.3%**	**34.6%**	**28.1%**	**100.0%**	**—**	**100.0%**
FY16 Total	161,128	157,775	121,516	440,419	—	440,419
FY16 Total %	36.6%	35.8%	27.6%	100.0%	—	100.0%

As at 30 June 2017, 28.1% of Aviva's total asset base was shareholder assets, 34.6% participating assets where Aviva shareholders have partial exposure, and 37.3% policyholder assets where Aviva shareholders have no exposure. Of the total assets (excluding assets held for sale), investment property, loans and financial investments comprise £345.4 billion *(FY16: £335.4 billion)*.

D2 – Total assets – Valuation bases/fair value hierarchy

Total assets – 30 June 2017	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	—	7,350	—	7,350
Interests in joint ventures and associates	—	—	1,686	1,686
Property and equipment	395	116	—	511
Investment property	10,720	—	—	10,720
Loans	22,295	3,224	—	25,519
Financial Investments				
Debt securities	175,112	—	—	175,112
Equity securities	74,191	—	—	74,191
Other investments	64,696	—	—	64,696
Reinsurance assets	10,170	8,443	—	18,613
Deferred tax assets	—	—	186	186
Current tax assets	—	—	88	88
Receivables and other financial assets	—	9,086	—	9,086
Deferred acquisition costs and other assets	—	6,424	—	6,424
Prepayments and accrued income	—	2,969	—	2,969
Cash and cash equivalents	42,862	—	—	42,862
Total	**400,441**	**37,612**	**1,960**	**440,013**
Total %	**91.0%**	**8.6%**	**0.4%**	**100.0%**
Assets of operations classified as held for sale	5,253	782	7	6,042
Total (excluding assets held for sale)	**395,188**	**36,830**	**1,953**	**433,971**
Total % (excluding assets held for sale)	**91.1%**	**8.5%**	**0.4%**	**100.0%**
FY16 Total	400,358	37,674	2,387	440,419
FY16 Total %	90.9%	8.6%	0.5%	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 assets 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.

Total assets – Policyholder assets 30 June 2017	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	—	—	—	—
Interests in joint ventures and associates	—	—	—	—
Property and equipment	—	—	—	—
Investment property	6,595	—	—	6,595
Loans	—	8	—	8
Financial Investments				
Debt securities	26,899	—	—	26,899
Equity securities	57,623	—	—	57,623
Other investments	51,368	—	—	51,368
Reinsurance assets	10,040	204	—	10,244
Deferred tax assets	—	—	—	—
Current tax assets	—	—	—	—
Receivables and other financial assets	—	208	—	208
Deferred acquisition costs and other assets	—	10	—	10
Prepayments and accrued income	—	325	—	325
Cash and cash equivalents	11,034	—	—	11,034
Total	**163,559**	**755**	**—**	**164,314**
Total %	**99.5%**	**0.5%**	**—**	**100.0%**
Assets of operations classified as held for sale	723	—	—	723
Total (excluding assets held for sale)	**162,836**	**755**	**—**	**163,591**
Total % (excluding assets held for sale)	**99.5%**	**0.5%**	**—**	**100.0%**
FY16 Total	159,107	1,932	89	161,128
FY16 Total %	98.7%	1.2%	0.1%	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 assets 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.

D2 – Total assets – Valuation bases/fair value hierarchy continued

Total assets – Participating fund assets 30 June 2017	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	—	—	—	—
Interests in joint ventures and associates	—	—	1,132	1,132
Property and equipment	182	7	—	189
Investment property	3,599	—	—	3,599
Loans	168	3,034	—	3,202
Financial Investments				
Debt securities	95,495	—	—	95,495
Equity securities	15,700	—	—	15,700
Other investments	8,991	—	—	8,991
Reinsurance assets	—	175	—	175
Deferred tax assets	—	—	—	—
Current tax assets	—	—	—	—
Receivables and other financial assets	—	2,179	—	2,179
Deferred acquisition costs and other assets	—	813	—	813
Prepayments and accrued income	—	1,264	—	1,264
Cash and cash equivalents	19,341	—	—	19,341
Total	**143,476**	**7,472**	**1,132**	**152,080**
Total %	**94.3%**	**5.0%**	**0.7%**	**100.0%**
Assets of operations classified as held for sale	2,476	—	—	2,476
Total (excluding assets held for sale)	**141,000**	**7,472**	**1,132**	**149,604**
Total % (excluding assets held for sale)	**94.2%**	**5.0%**	**0.8%**	**100.0%**
FY16 Total	149,146	7,273	1,356	157,775
FY16 Total %	94.5%	4.6%	0.9%	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 assets 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.

Total assets – Shareholders assets 30 June 2017	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	—	7,350	—	7,350
Interests in joint ventures and associates	—	—	554	554
Property and equipment	213	109	—	322
Investment property	526	—	—	526
Loans	22,127	182	—	22,309
Financial Investments				
Debt securities	52,718	—	—	52,718
Equity securities	868	—	—	868
Other investments	4,337	—	—	4,337
Reinsurance assets	130	8,064	—	8,194
Deferred tax assets	—	—	186	186
Current tax assets	—	—	88	88
Receivables and other financial assets	—	6,699	—	6,699
Deferred acquisition costs and other assets	—	5,601	—	5,601
Prepayments and accrued income	—	1,380	—	1,380
Cash and cash equivalents	12,487	—	—	12,487
Total	**93,406**	**29,385**	**828**	**123,619**
Total %	**75.5%**	**23.8%**	**0.7%**	**100.0%**
Assets of operations classified as held for sale	2,054	782	7	2,843
Total (excluding assets held for sale)	**91,352**	**28,603**	**821**	**120,776**
Total % (excluding assets held for sale)	**75.6%**	**23.7%**	**0.7%**	**100.0%**
FY16 Total	92,105	28,469	942	121,516
FY16 Total %	75.8%	23.4%	0.8%	100.0%

D2 – Total assets – Valuation bases/fair value hierarchy continued

Financial instruments (including investment property, derivatives and loans) – fair value hierarchy

The table below categorises the measurement basis for assets carried at fair value into a 'fair value hierarchy' in accordance with fair value methodology disclosed in note B17 in the condensed consolidated financial statements (IFRS section).

	Fair value hierarchy						
Investment property and financial assets – Total 30 June 2017	**Level 1 £m**	**Level 2 £m**	**Level 3 £m**	**Sub-total fair value £m**	**Amortised cost £m**	**Less: Assets of operations classified as held for sale £m**	**Balance sheet total £m**
Investment property	**—**	**—**	**10,720**	**10,720**	**—**	**(1)**	**10,719**
Loans	**—**	**70**	**22,225**	**22,295**	**3,224**	**(67)**	**25,452**
Debt securities	**101,475**	**57,041**	**16,596**	**175,112**	**—**	**(4,042)**	**171,070**
Equity securities	**73,291**	**—**	**900**	**74,191**	**—**	**(616)**	**73,575**
Other investments (including derivatives)	**55,160**	**5,191**	**4,345**	**64,696**	**—**	**(119)**	**64,577**
Assets of operations classified as held for sale	**—**	**—**	**—**	**—**	**—**	**4,845**	**4,845**
Total	**229,926**	**62,302**	**54,786**	**347,014**	**3,224**	**—**	**350,238**
Total %	**65.7%**	**17.8%**	**15.6%**	**99.1%**	**0.9%**	**—**	**100.0%**
Assets of operations classified as held for sale	**4,135**	**705**	**5**	**4,845**	**—**	**—**	**4,845**
Total (excluding assets held for sale)	**225,791**	**61,597**	**54,781**	**342,169**	**3,224**	**—**	**345,393**
Total % (excluding assets held for sale)	**65.4%**	**17.8%**	**15.9%**	**99.1%**	**0.9%**	**—**	**100.0%**
FY16 Total	218,655	69,953	54,032	342,640	3,576	—	346,216
FY16 Total %	63.2%	20.2%	15.6%	99.0%	1.0%	—	100.0%

At 30 June 2017, the proportion of total investment property, financial investments and loans classified as Level 1 in the fair value hierarchy increased to 65.7% *(FY16: 63.2%)*. The proportion of Level 2 financial investments was 17.8% *(FY16: 20.2%)*, while those classified as Level 3 represented 15.6% *(FY16: 15.6%)*.

D3 – Analysis of asset quality

The analysis of assets that follows provides information about the assets held by the Group.

D3.1 – Investment property

	30 June 2017				31 December 2016			
	Fair value hierarchy				Fair value hierarchy			
Investment property – Shareholder assets	**Level 1 £m**	**Level 2 £m**	**Level 3 £m**	**Total £m**	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Lease to third parties under operating leases	—	—	**526**	**526**	—	—	526	526
Vacant investment property/held for capital appreciation	—	—	—	—	—	—	1	1
Total	—	—	**526**	**526**	—	—	527	527
Total %	—	—	**100.0%**	**100.0%**	—	—	100.0%	100.0%

95.1% *(FY16: 95.1%)* of total investment property by value is held in unit-linked or participating funds. Shareholder exposure to investment properties is principally through investments in UK and French property.

Investment properties are stated at their market values as assessed by qualified external independent valuers or by local qualified staff of the Group, all with recent relevant experience. The investment properties are valued on an income basis 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 value of the property. This uplift and the discount rate are derived from rates implied by recent market transactions on similar property. These inputs are deemed unobservable.

D3 – Analysis of asset quality continued

D3.2 – Loans

The Group loan portfolio is principally made up of:

- Policy loans which are generally collateralised by a lien or charge over the underlying policy;
- Loans and advances to banks, which primarily relate to loans of cash collateral received in stock lending transactions. These loans are fully collateralised by other securities;
- Mortgage loans collateralised by property assets;
- Healthcare, Infrastructure & Private Finance Initiative ('PFI') other loans; and
- Other loans, which include loans to brokers and intermediaries.

Loans with fixed maturities, including policy loans, mortgage loans (at amortised cost) 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 as an adjustment to loan yield using the effective interest rate method.

For certain mortgage loans, the Group has taken advantage of the fair value option under IAS 39 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. The mortgage loans are not traded in active markets. These investments are classified as level 3 as the assumptions used to derive the credit risk, liquidity premium and property risk are not deemed to be market observable.

Loans – Total 30 June 2017	United Kingdom & Ireland £m	Canada £m	Europe £m	Asia £m	Total £m
Policy loans	**24**	**—**	**740**	**36**	**800**
Loans and advances to banks	**2,319**	**—**	**15**	**—**	**2,334**
Healthcare, Infrastructure & PFI other loans	**2,586**	**—**	**55**	**—**	**2,641**
Mortgage loans	**19,084**	**—**	**—**	**—**	**19,084**
Other loans	**494**	**157**	**9**	**—**	**660**
Total	**24,507**	**157**	**819**	**36**	**25,519**
Total %	**96.1%**	**0.6%**	**3.2%**	**0.1%**	**100.0%**
Assets of operations classified as held for sale	**—**	**—**	**67**	**—**	**67**
Total (excluding assets held for sale)	**24,507**	**157**	**752**	**36**	**25,452**
Total % (excluding assets held for sale)	**96.3%**	**0.6%**	**3.0%**	**0.1%**	**100.0%**
FY16 Total	23,798	170	854	37	24,859
FY16 Total %	95.8%	0.7%	3.4%	0.1%	100.0%

Loans – Shareholder assets 30 June 2017	United Kingdom & Ireland £m	Canada £m	Europe £m	Asia £m	Total £m
Policy loans	**4**	**—**	**6**	**2**	**12**
Loans and advances to banks	**553**	**—**	**13**	**—**	**566**
Healthcare, Infrastructure & PFI other loans	**2,586**	**—**	**—**	**—**	**2,586**
Mortgage loans	**18,975**	**—**	**—**	**—**	**18,975**
Other loans	**4**	**157**	**9**	**—**	**170**
Total	**22,122**	**157**	**28**	**2**	**22,309**
Total %	**99.2%**	**0.7%**	**0.1%**	**0.0%**	**100.0%**
Assets of operations classified as held for sale	**—**	**—**	**18**	**—**	**18**
Total (excluding assets held for sale)	**22,122**	**157**	**10**	**2**	**22,291**
Total % (excluding assets held for sale)	**99.3%**	**0.7%**	**0.0%**	**0.0%**	**100.0%**
FY16 Total	21,164	170	26	2	21,362
FY16 Total %	99.1%	0.8%	0.1%	0.0%	100.0%

The value of the Group's loan portfolio (including Policyholder, Participating Fund and Shareholder assets), at 30 June 2017 stood at £25.5 billion *(FY16: £24.9 billion)*, an increase of £0.6 billion.

The total shareholder exposure to loans was £22.3 billion *(FY16: £21.4 billion)*, and represented 87% of the total loan portfolio, with the remaining 13% mainly held in participating funds (£3.2 billion *(FY16: £2.4 billion)*) with £nil *(FY16: £1.0 billion)* in policyholder assets.

Of the Group's total loan portfolio excluding assets held for sale (including Policyholder, Participating Fund and Shareholder assets), 75% *(FY16: 74%)* is invested in mortgage loans.

Primary Healthcare, Infrastructure and PFI other loans included within shareholder assets are £2.6 billion *(FY16: £2.5 billion)* and are secured against the income from healthcare and educational premises.

D3 – Analysis of asset quality continued

D3.2 – Loans continued

Mortgage loans – Shareholder assets

30 June 2017	Total £m
Non-securitised mortgage loans	
– Residential (Equity release)	890
– Commercial	6,923
– Healthcare, Infrastructure & PFI mortgage loans	3,472
	11,285
Securitised mortgage loans	7,690
Total	**18,975**
Assets of operations classified as held for sale	—
Total (excluding assets held for sale)	**18,975**
FY16 Total	18,133

The Group's mortgage loan portfolio is mainly focused in the UK, across various sectors, including residential loans, commercial loans and government supported healthcare loans. Aviva's shareholder exposure to mortgage loans accounts for 85% of total shareholder asset loans. This section focuses on explaining the shareholder risk within these exposures.

United Kingdom & Ireland

(Non-securitised mortgage loans)

Residential

The UK non-securitised residential mortgage portfolio has a current value of £0.9 billion *(FY16: £0.7 billion)*. The movement is due to £0.2 billion of net new loans and accrued interest (net of redemptions). Fair value movements were less than £0.1 billion.

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 30.7% *(FY16: 35.2%)*.

Commercial

Gross exposure by loan to value and arrears is shown in the table below.

Shareholder assets

30 June 2017	>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	—	—	—	—	—	302	47	228	1,121	5,225	6,923
0 – 3 months	—	—	—	—	—	—	—	—	—	—	—
3 – 6 months	—	—	—	—	—	—	—	—	—	—	—
6 – 12 months	—	—	—	—	—	—	—	—	—	—	—
> 12 months	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	302	47	228	1,121	5,225	6,923

Of the £6.9 billion *(FY16: £6.7 billion)* of UK non-securitised commercial mortgage loans in the shareholder fund held by our UK Life business, £6.9 billion are used to back annuity liabilities and are stated on a fair value basis. The loan exposures for our UK Life business are calculated on a discounted cash flow basis, and include a risk adjustment through the use of Credit Risk Adjusted Value ('CRAV') methods.

For commercial mortgages loan service collection ratios, a key indicator of mortgage portfolio performance, improved to 2.09x *(FY16: 1.89x)*. Loan Interest Cover ('LIC'), which is defined as the annual net rental income (including rental deposits and less ground rent) divided by the annual loan interest service, also improved to 2.36x *(FY16: 2.18x)*. Average mortgage LTV remained stable compared to FY16 at 58% (CRAV). The value of loans in arrears included within our shareholder assets is £nil *(FY16: £0.1 million)*.

Commercial mortgages and Healthcare, Infrastructure & PFI loans are held at fair value on the asset side of the statement of financial position. Insurance liabilities are valued using a discount rate derived from gross yield on assets, with adjustments to allow for risk. £11.7 billion of shareholder loan assets are backing annuity liabilities and comprise of commercial mortgage loans (£6.9 billion), Healthcare, Infrastructure and PFI mortgage loans (£3.5 billion) and Primary Healthcare, Infrastructure and PFI other loans (£1.3 billion). The Group carries a valuation allowance within the liabilities against the risk of default of commercial mortgages, including Healthcare and PFI mortgages, of £0.4 billion *(FY16: £0.5 billion)* which equates to 39bps at 30 June 2017 *(FY16: 50bps)*. The total valuation allowance held by Aviva Annuity UK Limited in respect of corporate bonds and mortgages, including Healthcare and PFI mortgages is £1.3 billion *(FY16: £1.3 billion)* over the remaining term of the UK Life corporate bond and mortgage portfolio. The valuation allowance for Friends Life Limited in respect of corporate bonds was £0.6 billion *(FY16: £0.5 billion)*.

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 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 cover falls below 1.0x and the borrower defaults then Aviva still retains the option of selling the security or restructuring the loans and benefitting 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.

D3 – Analysis of asset quality continued

D3.2 – Loans continued

Healthcare

Primary Healthcare, Infrastructure and PFI mortgage loans included within shareholder assets of £3.5 billion *(FY16: £3.3 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 and premises 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 78% *(FY16: 74%)*, although as explained above, we do not consider this to be a key risk indicator. Income support from the Government bodies and the social need for these premises provide sustained income stability. Aviva therefore considers these loans to be lower risk relative to other mortgage loans.

Securitised mortgage loans

Securitised residential mortgages held are predominantly issued through vehicles in the UK. As at 30 June 2017, the Group has £7.7 billion *(FY16: £7.4 billion)* securitised mortgage loans of which £2.5 billion *(FY16: £2.4 billion)* are externally securitised and the remainder are internally securitised. Funding for the externally securitised residential mortgage assets of £2.5 billion *(FY16: £2.4 billion)* was obtained by issuing loan note securities. Of these loan notes approximately £183 million *(FY16: £217 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 redeemed is borne by the loan note holders, the majority of the credit risk of these mortgages is borne by third parties.

£5.2 billion *(FY16: £5.0 billion)* of non-securitised residential loans are securitised internally through the issuance of loan notes. 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 internally securitised mortgage loans is 23.4% *(FY16: 23.4%)*.

3.3 – Financial investments

	30 June 2017				31 December 2016			
Financial Investments – Total	Cost/ amortised cost £m	Unrealised gains £m	Impairment and unrealised losses £m	Fair value £m	Cost/ amortised cost £m	Unrealised gains £m	Impairment and unrealised losses £m	Fair value £m
Debt securities	**160,635**	**15,542**	**(1,065)**	**175,112**	168,075	16,408	(1,209)	183,274
Equity securities	**60,645**	**15,133**	**(1,587)**	**74,191**	57,268	13,214	(1,470)	69,012
Other investments	**53,603**	**11,568**	**(475)**	**64,696**	49,199	9,035	21	58,255
Total	**274,883**	**42,243**	**(3,127)**	**313,999**	274,542	38,657	(2,658)	310,541
Assets of operations classified as held for sale	**4,647**	**130**	**—**	**4,777**	9,872	865	(31)	10,706
Total (excluding assets held for sale)	**270,236**	**42,113**	**(3,127)**	**309,222**	264,670	37,792	(2,627)	299,835

Aviva holds large quantities of high quality bonds, primarily to match our liability to make guaranteed payments to policyholders. Some credit risk is taken, partly to increase returns to policyholders and partly to optimise the risk/return profile for shareholders. The risks are consistent with the products we offer and the related investment mandates, and are in line with our risk appetite.

The Group also holds equities, the majority of which are held in participating funds and policyholder funds, where they form an integral part of the investment expectations of policyholders and follow well-defined investment mandates. Some equities are also held in shareholder funds. The vast majority of equity investments are valued at quoted market prices.

D3 – Analysis of asset quality continued

D3.3 – Financial investments continued

D3.3.1 – Debt securities

Debt securities – Shareholder assets 30 June 2017	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total £m
UK Government	10,209	1,257	137	11,603
Non-UK Government	3,366	7,525	567	11,458
Europe	3,245	4,026	285	7,556
North America	32	3,148	282	3,462
Asia Pacific & Other	89	351	—	440
Corporate bonds – Public utilities	171	4,642	591	5,404
Corporate convertible bonds	—	—	—	—
Other Corporate bonds	1,317	15,929	4,415	21,661
Other	171	1,897	524	2,592
Total	**15,234**	**31,250**	**6,234**	**52,718**
Total %	**28.9%**	**59.3%**	**11.8%**	**100.0%**
Assets of operations classified as held for sale	1,233	208	—	1,441
Total (excluding assets held for sale)	**14,001**	**31,042**	**6,234**	**51,277**
Total % (excluding assets held for sale)	**27.3%**	**60.5%**	**12.2%**	**100.0%**
FY16 Total	15,042	32,440	6,233	53,715
FY16 Total %	28.0%	60.4%	11.6%	100.0%

11.8% *(FY16: 11.6%)* of shareholder exposure to debt securities is fair valued using models with significant unobservable market parameters (classified as fair value 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.

28.9% *(FY16: 28.0%)* of shareholder exposure to debt securities is based on quoted prices in an active market and are therefore classified as fair value Level 1.

Debt securities – Shareholder assets 30 June 2017	External ratings AAA £m	AA £m	A £m	BBB £m	Less than BBB £m	Non-rated £m	Total £m
Government							
UK Government	—	11,444	71	—	—	71	11,586
UK local authorities	—	—	—	—	—	17	17
Non-UK Government	4,565	4,122	1,316	1,435	7	13	11,458
	4,565	15,566	1,387	1,435	7	101	23,061
Corporate							
Public utilities	—	119	2,875	2,094	31	285	5,404
Convertibles and bonds with warrants	—	—	—	—	—	—	—
Other corporate bonds	1,988	3,021	8,206	5,639	267	2,540	21,661
	1,988	3,140	11,081	7,733	298	2,825	27,065
Certificates of deposits	—	—	—	2	9	—	11
Structured							
RMBS[1] non-agency ALT A	—	—	—	—	—	—	—
RMBS[1] non-agency prime	1	33	22	3	44	—	103
RMBS[1] agency	59	—	—	—	—	—	59
	60	33	22	3	44	—	162
CMBS[2]	245	88	85	—	6	1	425
ABS[3]	41	474	388	49	39	9	1,000
CDO (including CLO)[4]	2	—	—	—	—	—	2
ABCP[5]	—	—	—	—	—	—	—
	288	562	473	49	45	10	1,427
Wrapped credit	—	13	413	53	58	46	583
Other	2	5	86	118	139	59	409
Total	**6,903**	**19,319**	**13,462**	**9,393**	**600**	**3,041**	**52,718**
Total %	**13.2%**	**36.6%**	**25.5%**	**17.8%**	**1.1%**	**5.8%**	**100.0%**
Assets of operations classified as held for sale	65	55	205	1,085	31	—	1,441
Total (excluding assets held for sale)	**6,838**	**19,264**	**13,257**	**8,308**	**569**	**3,041**	**51,277**
Total % (excluding assets held for sale)	**13.3%**	**37.6%**	**25.9%**	**16.2%**	**1.1%**	**5.9%**	**100.0%**
FY16 Total	7,307	19,796	13,988	9,165	580	2,879	53,715
FY16 Total %	13.6%	36.8%	26.0%	17.1%	1.1%	5.4%	100.0%

1 RMBS – Residential Mortgage Backed Security.
2 CMBS – Commercial Mortgage Backed Security.
3 ABS – Asset Backed Security.
4 CDO – Collateralised Debt Obligation, CLO – Collateralised Loan Obligation.
5 ABCP – Asset Backed Commercial Paper.

D3 – Analysis of asset quality continued

D3.3 – Financial investments continued

D3.3.1 – Debt securities continued

During the period, shareholder exposure to debt securities decreased by £1.0 billion to £52.7 billion (*FY16: £53.7 billion*). The overall quality of the book remains strong. 44% of shareholder exposure to debt securities is in government holdings *(FY16: 43%)*. Our corporate debt securities portfolio represents 51% *(FY16: 52%)* of total shareholder debt securities.

The majority of non-rated corporate bonds are held by our businesses in the UK.

At 30 June 2017, the proportion of our shareholder debt securities that are investment grade decreased to 93.1% *(FY16: 93.5%)*. The remaining 6.9% of shareholder debt securities that do not have an external rating of BBB or higher can be split as follows:

- 1.1% are debt securities that are rated as below investment grade;
- 5.8% are not rated by the major rating agencies.

Of the securities not rated by an external agency most are allocated an internal rating using a methodology largely consistent with that adopted by an external rating agency, and are considered to be of investment grade credit quality; these include £2.2 billion of debt securities held in our UK Life business, predominantly made up of private placements and other corporate bonds, which have been internally rated as investment grade (*FY16: £2.3 billion*).

The Group has limited shareholder exposure to CDOs, CLOs and 'sub-prime' debt securities.

Out of the total shareholder asset backed securities (ABS), £938 million (*FY16: £948 million)* are held by the UK Life business. 95.2% of the Group's shareholder holdings in ABS are investment grade (*FY16: 95.7%).* ABS which either have a rating below BBB or are not rated represent approximately 0.1% of shareholder exposure to debt securities (*FY16: 0.1%).*

D3.3.2 – Equity securities

				30 June 2017				31 December 2016
	Fair value hierarchy				Fair value hierarchy			
Equity securities – Shareholder assets	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Public utilities	7	—	—	7	6	—	—	6
Banks, trusts and insurance companies	121	—	94	215	125	—	81	206
Industrial miscellaneous and all other	414	—	11	425	237	—	15	252
Non-redeemable preferred shares	221	—	—	221	206	—	—	206
Total	**763**	**—**	**105**	**868**	574	—	96	670
Total %	**87.9%**	**—**	**12.1%**	**100.0%**	85.7%	—	14.3%	100.0%
Assets of operations classified as held for sale	54	—	—	54	—	—	—	—
Total (excluding assets held for sale)	**709**	**—**	**105**	**814**	574	—	96	670
Total % (excluding assets held for sale)	**87.1%**	**—**	**12.9%**	**100.0%**	85.7%	—	14.3%	100.0%

Within our total shareholder exposure to equity securities, 87.9% is based on quoted prices in an active market and as such is classified as Level 1 *(FY16: 85.7%)*.

D3.3.3 – Other investments

				30 June 2017				31 December 2016
	Fair value hierarchy				Fair value hierarchy			
Other investments – Shareholders assets	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	2,233	10	29	2,272	1,341	9	34	1,384
Derivative financial instruments	25	1,490	354	1,869	41	1,836	45	1,922
Deposits with credit institutions	9	—	—	9	3	—	—	3
Minority holdings in property management undertakings	—	28	157	185	—	27	162	189
Other	2	—	—	2	8	—	—	8
Total	**2,269**	**1,528**	**540**	**4,337**	1,393	1,872	241	3,506
Total %	**52.3%**	**35.2%**	**12.5%**	**100.0%**	39.7%	53.4%	6.9%	100.0%
Assets of operations classified as held for sale	106	24	4	134	—	—	—	—
Total (excluding assets held for sale)	**2,163**	**1,504**	**536**	**4,203**	1,393	1,872	241	3,506
Total % (excluding assets held for sale)	**51.4%**	**35.8%**	**12.8%**	**100.0%**	39.7%	53.4%	6.9%	100.0%

In total 87.5% *(FY16: 93.1%)* of total shareholder other investments are classified as Level 1 or 2 in the fair value hierarchy. Unit trusts and other investment vehicles invest in a variety of assets, which can include cash equivalents, debt, equity and property securities.

D3.3.4 – Available for sale investments – Impairments and duration and amount of unrealised losses

There was no impairment expense for the six months to 30 June 2017 for AFS securities *(HY16: £nil)*.

Total unrealised losses on AFS debt securities, equity securities and other investments at 30 June 2017 were £nil *(HY16: £nil)*, £nil *(HY16: £nil)* and £nil *(HY16: £nil)* respectively.

D3 – Analysis of asset quality continued

D3.3 – Financial investments continued

D3.3.5 – Exposures to peripheral European countries

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.

Net of non-controlling interests, our direct shareholder and participating fund asset exposure to the government (and local authorities and agencies) of Italy is £6.3 billion *(FY16: £5.8 billion)*.

Direct sovereign exposures to Greece, Ireland, Portugal, Italy and Spain (net of non-controlling interests, excluding policyholder assets)

	Participating		Shareholder		Total	
	30 June 2017 £bn	31 December 2016 £bn	**30 June 2017 £bn**	31 December 2016 £bn	**30 June 2017 £bn**	31 December 2016 £bn
Greece	**—**	—	**—**	—	**—**	—
Ireland	**0.7**	0.7	**0.1**	0.1	**0.8**	0.8
Portugal	**0.1**	0.1	**—**	—	**0.1**	0.1
Italy	**5.7**	5.4	**0.6**	0.4	**6.3**	5.8
Spain	**1.0**	1.0	**0.4**	0.4	**1.4**	1.4
Total Greece, Ireland, Portugal, Italy and Spain	**7.5**	7.2	**1.1**	0.9	**8.6**	8.1

Direct sovereign exposures to Greece, Ireland, Portugal, Italy and Spain (gross of non-controlling interests, excluding policyholder assets)

	Participating		Shareholder		Total	
	30 June 2017 £bn	31 December 2016 £bn	**30 June 2017 £bn**	31 December 2016 £bn	**30 June 2017 £bn**	31 December 2016 £bn
Greece	**—**	—	**—**	—	**—**	—
Ireland	**0.7**	0.7	**0.1**	0.1	**0.8**	0.8
Portugal	**0.1**	0.1	**—**	—	**0.1**	0.1
Italy	**7.8**	7.5	**0.7**	0.5	**8.5**	8.0
Spain	**1.4**	1.4	**0.7**	0.7	**2.1**	2.1
Total Greece, Ireland, Portugal, Italy and Spain	**10.0**	9.7	**1.5**	1.3	**11.5**	11.0

D3 – Analysis of asset quality continued

D3.3 – Financial investments continued

D3.3.6 – Non-UK Government debt securities (gross of non-controlling interests)

Non-UK Government Debt Securities	Policyholder 30 June 2017 £m	Policyholder 31 December 2016 £m	Participating 30 June 2017 £m	Participating 31 December 2016 £m	Shareholder 30 June 2017 £m	Shareholder 31 December 2016 £m	Total 30 June 2017 £m	Total 31 December 2016 £m
Austria	**4**	11	**632**	715	**124**	138	**760**	864
Belgium	**17**	21	**1,042**	1,273	**271**	357	**1,330**	1,651
France	**119**	115	**12,604**	13,285	**1,768**	1,859	**14,491**	15,259
Germany	**109**	142	**1,416**	1,629	**677**	606	**2,202**	2,377
Greece	**—**	—	**—**	—	**—**	—	**—**	—
Ireland	**2**	3	**672**	662	**114**	130	**788**	795
Italy	**217**	223	**7,790**	7,500	**736**	556	**8,743**	8,279
Netherlands	**49**	47	**883**	976	**302**	329	**1,234**	1,352
Poland	**852**	807	**777**	769	**494**	384	**2,123**	1,960
Portugal	**1**	2	**129**	118	**—**	—	**130**	120
Spain	**91**	88	**1,373**	1,386	**668**	659	**2,132**	2,133
European Supranational debt	**135**	174	**1,827**	2,404	**1,820**	1,821	**3,782**	4,399
Other European countries	**298**	272	**1,312**	1,029	**582**	642	**2,192**	1,943
Europe	**1,894**	1,905	**30,457**	31,746	**7,556**	7,481	**39,907**	41,132
Canada	**20**	16	**53**	174	**2,452**	2,397	**2,525**	2,587
United States	**871**	948	**446**	392	**1,010**	1,022	**2,327**	2,362
North America	**891**	964	**499**	566	**3,462**	3,419	**4,852**	4,949
Singapore	**7**	2	**682**	904	**282**	330	**971**	1,236
Other	**2,190**	2,295	**2,695**	2,650	**158**	143	**5,043**	5,088
Asia Pacific and other	**2,197**	2,297	**3,377**	3,554	**440**	473	**6,014**	6,324
Total	**4,982**	5,166	**34,333**	35,866	**11,458**	11,373	**50,773**	52,405
Assets of operations classified as held for sale	**18**	—	**915**	2,325	**878**	—	**1,811**	2,325
Total (excluding assets held for sale)	**4,964**	5,166	**33,418**	33,541	**10,580**	11,373	**48,962**	50,080

At 30 June 2017, the Group's total non-UK Government debt securities stood at £50.8 billion *(FY16: £52.4 billion)*. 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.

Gross of non-controlling interests, our direct shareholder asset exposure to non-UK Government debt securities amounts to £11.5 billion *(FY16: £11.4 billion)*. The primary exposures, relative to total shareholder non-UK Government debt exposure, are to Canadian (21%), French (15%), US (9%), Italian (6%), German (6%), and Spanish (6%) Government debt securities.

The participating funds exposure to non-UK Government debt amounts to £34.3 billion *(FY16: £35.9 billion)*. The primary exposures, relative to total non-UK Government debt exposures included within our participating funds, are to the Government debt securities of France (37%), Italy (23%), Germany (4%), Spain (4%), Belgium (3%), and Netherlands (3%).

D3 – Analysis of asset quality continued

D3.3 – Financial investments continued

D3.3.7 – Exposure to worldwide bank debt securities

Direct shareholder and participating fund assets exposures to worldwide bank debt securities (net of non-controlling interests, excluding policyholder assets)

	Shareholder assets			Participating fund assets		
30 June 2017	Total senior debt £bn	Total subordinated debt £bn	Total debt £bn	Total senior debt £bn	Total subordinated debt £bn	Total debt £bn
Australia	0.3	—	0.3	0.2	—	0.2
Denmark	—	—	—	0.9	—	0.9
France	0.5	0.1	0.6	2.7	0.6	3.3
Germany	—	—	—	0.5	0.3	0.8
Ireland	—	—	—	—	—	—
Italy	0.1	—	0.1	0.1	—	0.1
Netherlands	0.3	0.2	0.5	1.3	0.2	1.5
Spain	0.6	—	0.6	0.5	0.1	0.6
Sweden	0.2	—	0.2	0.2	—	0.2
Switzerland	—	—	—	1.1	—	1.1
United Kingdom	1.3	0.4	1.7	1.4	0.9	2.3
United States	1.0	0.2	1.2	1.7	0.1	1.8
Other	0.7	0.2	0.9	2.3	0.5	2.8
Total	**5.0**	**1.1**	**6.1**	**12.9**	**2.7**	**15.6**
Assets of operations classified as held for sale	0.2	—	0.2	0.3	—	0.3
Total (excluding assets held for sale)	**4.8**	**1.1**	**5.9**	**12.6**	**2.7**	**15.3**
FY16 Total	5.4	1.2	6.6	14.8	3.1	17.9

Net of non-controlling interests, our direct shareholder exposure to worldwide debt bank securities is £6.1 billion (*FY16: £6.6 billion*). The majority of our holding (82%) is in senior debt. The primary exposures are to UK (28%), US (20%), and Spanish (10%) banks.

Net of non-controlling interests, the participating fund exposures to worldwide bank debt securities, where the risk to our shareholders is governed by the nature and extent of our participation within those funds, is £15.6 billion (*FY16: £17.9 billion*). The majority of the exposure (83%) is in senior debt. Participating funds are the most exposed to French (21%), UK (15%), and US (12%) banks.

Direct shareholder and participating fund assets exposures to worldwide bank debt securities (gross of non-controlling interests, excluding policyholder assets)

	Shareholder assets			Participating fund assets		
30 June 2017	Total senior debt £bn	Total subordinated debt £bn	Total debt £bn	Total senior debt £bn	Total subordinated debt £bn	Total debt £bn
Australia	0.3	—	0.3	0.2	—	0.2
Denmark	—	—	—	0.9	—	0.9
France	0.5	0.1	0.6	2.8	0.6	3.4
Germany	—	—	—	0.6	0.3	0.9
Ireland	—	—	—	—	—	—
Italy	0.1	—	0.1	0.2	—	0.2
Netherlands	0.3	0.2	0.5	1.3	0.2	1.5
Spain	0.8	—	0.8	0.6	0.1	0.7
Sweden	0.2	—	0.2	0.2	—	0.2
Switzerland	—	—	—	1.1	—	1.1
United Kingdom	1.3	0.4	1.7	1.5	0.9	2.4
United States	1.0	0.2	1.2	1.8	0.1	1.9
Other	0.7	0.2	0.9	2.4	0.5	2.9
Total	**5.2**	**1.1**	**6.3**	**13.6**	**2.7**	**16.3**
Assets of operations classified as held for sale	0.4	—	0.4	0.4	—	0.4
Total (excluding assets held for sale)	**4.8**	**1.1**	**5.9**	**13.2**	**2.7**	**15.9**
FY16 Total	5.5	1.2	6.7	16.2	3.3	19.5

Gross of non-controlling interests, our direct shareholder exposure to worldwide bank debt securities is £6.3 billion (*FY16: £6.7 billion*). The majority of our holding (83%) is in senior debt. The primary exposures are to UK (27%), US (19%), and Spanish (13%) banks.

Gross of non-controlling interests, the participating fund exposures to worldwide bank debt securities, where the risk to our shareholders is governed by the nature and extent of our participation within those funds, is £16.3 billion (*FY16: £19.5 billion*). The majority of the exposure (83%) is in senior debt. Participating funds are the most exposed to French (21%), UK (15%), and US (12%) banks.

D4 – Pension fund assets

In addition to the assets recognised directly on the Group's statement of financial position outlined in the disclosures above, the Group is also exposed to the 'scheme assets' that are shown net of the present value of scheme liabilities within the IAS 19 net pension surplus. Pension surpluses are included within other assets and pension deficits are recognised within provisions in the Group's consolidated statement of financial position. Refer to note B15 for details on the schemes' surpluses and deficits.

Scheme assets are stated at their fair values. Total scheme assets in the UK, Ireland and Canada are comprised as follows:

	30 June 2017				31 December 2016			
	UK £m	Ireland £m	Canada £m	Total £m	UK £m	Ireland £m	Canada £m	Total £m
Bonds								
Fixed interest	**6,148**	**465**	**173**	**6,786**	7,085	249	151	7,485
Index-linked	**11,312**	**284**	**—**	**11,596**	11,469	157	—	11,626
Equities	**1**	**—**	**—**	**1**	71	—	—	71
Property	**329**	**—**	**—**	**329**	338	—	—	338
Pooled investment vehicles	**4,296**	**179**	**103**	**4,578**	3,433	200	96	3,729
Derivatives	**53**	**2**	**—**	**55**	86	1	—	87
Cash and other[1]	**(3,813)**	**(313)**	**6**	**(4,120)**	(3,046)	3	34	(3,009)
Total fair value of scheme assets	**18,326**	**617**	**282**	**19,225**	19,436	610	281	20,327
Less: consolidation elimination for non-transferable Group insurance policy[2]	**(628)**	**—**	**—**	**(628)**	(633)	—	—	(633)
Total IAS 19 fair value of scheme assets	**17,698**	**617**	**282**	**18,597**	18,803	610	281	19,694

1 Cash and other assets comprise cash at bank, insurance policies, receivables, payables and repos. At 30 June 2017, repos of £5,813 million *(FY16: £4,666 million)* are included within cash and other assets for the UK and Ireland pension schemes.
2 Friends Provident Pension Scheme assets are included in the UK balances. As at 30 June 2017, the Friends Provident Pension Scheme's cash and other balance includes an insurance policy of £628 million *(FY16: £633 million)* issued by a Group company that is not transferable under IAS 19 and is consequently eliminated from the Group's IAS 19 scheme assets.

Total scheme assets are analysed by those that have a quoted market price in an active market and those that do not as follows:

	30 June 2017			31 December 2016		
	Total Quoted £m	Total Unquoted £m	Total £m	Total Quoted £m	Total Unquoted £m	Total £m
Bonds						
Fixed interest	**2,908**	**3,878**	**6,786**	3,697	3,788	7,485
Index-linked	**11,195**	**401**	**11,596**	11,141	485	11,626
Equities	**1**	**—**	**1**	71	—	71
Property	**—**	**329**	**329**	—	338	338
Pooled investment vehicles	**396**	**4,182**	**4,578**	189	3,540	3,729
Derivatives	**4**	**51**	**55**	70	17	87
Cash and other[1]	**165**	**(4,285)**	**(4,120)**	714	(3,723)	(3,009)
Total fair value of scheme assets	**14,669**	**4,556**	**19,225**	15,882	4,445	20,327
Less: consolidation elimination for non-transferable Group insurance policy[2]	**—**	**(628)**	**(628)**	—	(633)	(633)
Total IAS 19 fair value of scheme assets	**14,669**	**3,928**	**18,597**	15,882	3,812	19,694

1 Cash and other assets comprise cash at bank, insurance policies, receivables, payables and repos. At 30 June 2017, repos of £5,813 million *(FY16: £4,666 million)* are included within cash and other assets for the UK and Ireland pension schemes.
2 Friends Provident Pension Scheme assets are included in the UK balances. As at 30 June 2017, the Friends Provident Pension Scheme's cash and other balance includes an insurance policy of £628 million *(FY16: £633 million)* issued by a Group company that is not transferable under IAS 19 and is consequently eliminated from the Group's IAS 19 scheme assets.

Risk management and asset allocation strategy

The long-term investment objectives of the trustees and the employers are to limit the risk of the assets failing to meet the liabilities of the schemes over the long term, and to maximise returns consistent with an acceptable level of risk so as to control the long-term costs of these schemes. To meet these objectives, the schemes' assets are invested in a portfolio consisting primarily (approximately 65%[3]) of debt securities. The investment strategy will continue to evolve over time and is expected to match the liability profile increasingly closely with swap overlays to improve interest rate and inflation matching. The schemes are generally matched to interest rate risk relative to the funding basis.

Main UK Scheme

The Company works closely with the trustee, who is required to consult it on the investment strategy.

Interest rate and inflation risks are managed using a combination of liability-matching assets and swaps. Exposure to equity risk has been reducing over time and credit risk is managed within risk appetite. Currency risk is relatively small and is largely hedged. The other principal risk is longevity risk. In 2014, the Aviva Staff Pension Scheme entered into a longevity swap covering approximately £5 billion of pensioner in payment scheme liabilities.

Other schemes

The other schemes are considerably less material but their risks are managed in a similar way to those in the main UK scheme. In 2015, the RAC pension scheme entered into a longevity swap covering approximately £600 million of pensioner in payment scheme liabilities.

3 Excluding repos of £5,813 million

D5 – Available funds

To ensure access to liquidity as and when needed, the Group maintains £1.7 billion of undrawn committed central borrowing facilities with various highly rated banks. These facilities are used to support Aviva plc's commercial paper programmes. The expiry profile of the undrawn committed central borrowing facilities is as follows:

	30 June 2017 £m	31 December 2016 £m
Expiring within one year	**—**	—
Expiring beyond one year	**1,650**	1,650
Total	**1,650**	1,650

D6 – Guarantees

As a normal part of their operating activities, various Group companies have given guarantees and options, including investment return guarantees, in respect of certain long-term insurance and fund management products.

For the UK Life with-profits business, provisions in respect of these guarantees and options are calculated on a market consistent basis, in which stochastic models are used to evaluate the level of risk (and additional cost) under a number of economic scenarios, which allow for the impact of volatility in both interest rates and equity prices. For UK Life non-profit business, provisions do not materially differ from those determined on a market consistent basis.

In all other businesses, provisions for guarantees and options are calculated on a local basis with sensitivity analysis undertaken where appropriate to assess the impact on provisioning levels of a movement in interest rates and equity levels (typically a 1% decrease in interest rates and 10% decline in equity markets).

VNB & sales analysis

In this section

VNB & sales analysis

E1 – Sales, VNB and new business margin analysis by market (adjusted Solvency II basis)

The table below sets out the present value of new business premiums (PVNBP) written by the life and related businesses, value generated by new business written during the period (VNB) and the resulting margin, gross of tax and non-controlling interests, on an adjusted Solvency II basis. Following the introduction of the Solvency II regime on 1 January 2016, MCEV (which was calculated on the expired Solvency I basis) is no longer used as an indicator of the drivers of financial performance of the Group's in-force Life and related businesses. The MCEV VNB and MCEV PVNBP were disclosed for the last time at 31 December 2016.

The VNB shown below is the present value of the projected stream of pre-tax distributable profit generated by the new business written during the period, including expected profit between point of sale and the valuation date on an adjusted Solvency II basis. It reflects the additional value to shareholders created through the activity of writing new business including the impacts of interactions between in-force and new business. The VNB and PVNBP for 2016 include £(12) million and £257 million respectively relating to the internal transfer of annuities from a with-profits fund to a non profit fund during the second half of 2016 in the UK. The methodology underlying the calculation of adjusted Solvency II VNB remains unchanged from the prior year as set out in note 4. The demographic assumptions used are materially the same as that used at 31 December 2016 as set out in D.2.2 of the Aviva 2016 Solvency and Financial Condition Report (SFCR). The economic assumptions have been updated to be those relevant at the point of sale which has been implemented with the assumptions being taken as those appropriate to the start of each quarter. For contracts that are re-priced more frequently, weekly or monthly economic assumptions have been used. The principal economic assumptions are set out in E14. Adjusted Solvency II PVNBP is calculated using assumptions consistent with those used to determine the adjusted Solvency II VNB.

	Present value of new business premiums[1]			Value of new business			New business margin		
Gross of tax and non-controlling interests	**6 months 2017 £m**	6 months 2016 £m	Full year 2016 £m	**6 months 2017 £m**	6 months 2016 £m	Full year 2016 £m	**6 months 2017 %**	6 months 2016 %	Full year 2016 %
United Kingdom	**11,191**	8,232	18,142	**267**	200	429	**2.4%**	2.4%	2.4%
Ireland	**495**	339	710	**3**	5	12	**0.6%**	1.5%	1.7%
United Kingdom & Ireland	**11,686**	8,571	18,852	**270**	205	441	**2.3%**	2.4%	2.3%
France	**2,405**	2,898	5,523	**120**	101	225	**5.0%**	3.5%	4.1%
Poland	**202**	190	421	**28**	22	54	**13.9%**	11.6%	12.8%
Italy	**2,191**	2,024	3,634	**60**	42	83	**2.7%**	2.1%	2.3%
Spain	**677**	299	935	**25**	12	34	**3.7%**	4.0%	3.6%
Turkey	**274**	216	455	**10**	11	21	**3.6%**	5.1%	4.6%
Europe	**5,749**	5,627	10,968	**243**	188	417	**4.2%**	3.3%	3.8%
Asia	**1,328**	982	2,372	**71**	43	106	**5.3%**	4.4%	4.5%
Aviva Investors	**1,262**	1,388	2,845	**12**	12	28	**1.0%**	0.9%	1.0%
Total	**20,025**	16,568	35,037	**596**	448	992	**3.0%**	2.7%	2.8%

1 A reconciliation to IFRS net written premiums can be found in note E13.

E2 – Trend analysis of adjusted Solvency II VNB – cumulative

				Growth[1] on 1H16	
Gross of tax and non-controlling interests	1H16 YTD £m	2H16 YTD £m	**1H17 YTD £m**	**Sterling %**	**Constant currency %**
United Kingdom[2]	200	429	**267**	**34%**	**34%**
Ireland	5	12	**3**	**(42)%**	**(47)%**
United Kingdom & Ireland	205	441	**270**	**32%**	**32%**
France	101	225	**120**	**19%**	**8%**
Poland[3]	22	54	**28**	**24%**	**10%**
Italy	42	83	**60**	**43%**	**29%**
Spain	12	34	**25**	**107%**	**87%**
Turkey	11	21	**10**	**(1)%**	**8%**
Europe	188	417	**243**	**29%**	**18%**
Asia	43	106	**71**	**63%**	**49%**
Aviva Investors	12	28	**12**	**—**	**—**
Total	448	992	**596**	**33%**	**27%**

1 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
2 Includes £(12) million relating to the internal transfer of annuities from a with-profits fund to a non profit fund in 2H16.
3 Poland includes Lithuania.

E3 – Trend analysis of adjusted Solvency II VNB – discrete

Gross of tax and non-controlling interests	1H16 Discrete £m	2H16 Discrete £m	**1H17 Discrete £m**	Growth[1] on 1H16 Sterling %	Growth[1] on 1H16 Constant currency %
United Kingdom[2]	200	229	**267**	**34%**	**34%**
Ireland	5	7	**3**	**(42)%**	**(47)%**
United Kingdom & Ireland	205	236	**270**	**32%**	**32%**
France	101	124	**120**	**19%**	**8%**
Poland[3]	22	32	**28**	**24%**	**10%**
Italy	42	41	**60**	**43%**	**29%**
Spain	12	22	**25**	**107%**	**87%**
Turkey	11	10	**10**	**(1)%**	**8%**
Europe	188	229	**243**	**29%**	**18%**
Asia	43	63	**71**	**63%**	**49%**
Aviva Investors	12	16	**12**	**—**	**—**
Total	448	544	**596**	**33%**	**27%**

1 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
2 Includes £(12) million relating to the internal transfer of annuities from a with-profits fund to a non profit fund in 2H16.
3 Poland includes Lithuania.

E4 – Trend analysis of PVNBP – cumulative

Present value of new business premiums[1]	1H16 YTD £m	2H16 YTD £m	**1H17 YTD £m**	Growth[2] on 1H16 Sterling %	Growth[2] on 1H16 Constant currency %
United Kingdom[3]	8,232	18,142	**11,191**	**36%**	**36%**
Ireland	339	710	**495**	**46%**	**32%**
United Kingdom & Ireland	8,571	18,852	**11,686**	**36%**	**36%**
France	2,898	5,523	**2,405**	**(17)%**	**(25)%**
Poland[4]	190	421	**202**	**6%**	**(6)%**
Italy	2,024	3,634	**2,191**	**8%**	**(2)%**
Spain	299	935	**677**	**126%**	**105%**
Turkey	216	455	**274**	**26%**	**39%**
Europe	5,627	10,968	**5,749**	**2%**	**(7)%**
Asia	982	2,372	**1,328**	**35%**	**27%**
Aviva Investors	1,388	2,845	**1,262**	**(9)%**	**(9)%**
Total	16,568	35,037	**20,025**	**21%**	**16%**

1 Present value of new business premiums (PVNBP) is the present value of new regular premiums plus 100% of single premiums, calculated using assumptions consistent with those used to determine the value of new business.
2 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
3 Includes £257 million relating to the internal transfer of annuities from a with-profits fund to a non profit fund in 2H16.
4 Poland includes Lithuania.

E5 – Trend analysis of PVNBP – discrete

Present value of new business premiums[1]	1H16 Discrete £m	2H16 Discrete £m	**1H17 Discrete £m**	Growth[2] on 1H16 Sterling %	Growth[2] on 1H16 Constant currency %
United Kingdom[3]	8,232	9,910	**11,191**	**36%**	**36%**
Ireland	339	371	**495**	**46%**	**32%**
United Kingdom & Ireland	8,571	10,281	**11,686**	**36%**	**36%**
France	2,898	2,625	**2,405**	**(17)%**	**(25)%**
Poland[4]	190	231	**202**	**6%**	**(6)%**
Italy	2,024	1,610	**2,191**	**8%**	**(2)%**
Spain	299	636	**677**	**126%**	**105%**
Turkey	216	239	**274**	**26%**	**39%**
Europe	5,627	5,341	**5,749**	**2%**	**(7)%**
Asia	982	1,390	**1,328**	**35%**	**27%**
Aviva Investors	1,388	1,457	**1,262**	**(9)%**	**(9)%**
Total	16,568	18,469	**20,025**	**21%**	**16%**

1 Present value of new business premiums (PVNBP) is the present value of new regular premiums plus 100% of single premiums, calculated using assumptions consistent with those used to determine the value of new business.
2 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
3 Includes £257 million relating to the internal transfer of annuities from a with-profits fund to a non profit fund in 2H16.
4 Poland includes Lithuania.

E6 – Trend analysis of PVNBP by product – cumulative

Present value of new business premiums[1]	1H16 YTD £m	2H16 YTD £m	**1H17 YTD £m**	Growth[2] on 1H16 Sterling %	Growth[2] on 1H16 Constant currency %
Pensions	5,578	11,615	**7,169**	**29%**	**29%**
Annuities[3]	571	2,074	**1,075**	**89%**	**89%**
Bonds	62	141	**70**	**12%**	**12%**
Protection	887	1,770	**1,006**	**13%**	**13%**
Equity release	247	637	**360**	**46%**	**46%**
Other	887	1,905	**1,511**	**70%**	**70%**
United Kingdom	8,232	18,142	**11,191**	**36%**	**36%**
Ireland	339	710	**495**	**46%**	**32%**
United Kingdom & Ireland	8,571	18,852	**11,686**	**36%**	**36%**
Savings	2,704	5,114	**2,151**	**(20)%**	**(28)%**
Protection	194	409	**254**	**31%**	**19%**
France	2,898	5,523	**2,405**	**(17)%**	**(25)%**
Pensions	322	757	**429**	**33%**	**35%**
Savings	2,137	4,082	**2,562**	**20%**	**9%**
Annuities	—	1	**—**	**—**	**—**
Protection	270	605	**353**	**30%**	**19%**
Poland[4], Italy, Spain and Turkey	2,729	5,445	**3,344**	**23%**	**12%**
Europe	5,627	10,968	**5,749**	**2%**	**(7)%**
Asia	982	2,372	**1,328**	**35%**	**27%**
Aviva Investors	1,388	2,845	**1,262**	**(9)%**	**(9)%**
Total	16,568	35,037	**20,025**	**21%**	**16%**

1 Present value of new business premiums (PVNBP) is the present value of new regular premiums plus 100% of single premiums, calculated using assumptions consistent with those used to determine the value of new business.
2 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
3 Includes £257 million relating to the internal transfer of annuities from a with-profits fund to a non profit fund in 2H16.
4 Poland includes Lithuania.

E7 – Trend analysis of PVNBP by product – discrete

Present value of new business premiums[1]	1H16 Discrete £m	2H16 Discrete £m	**1H17 Discrete £m**	Growth[2] on 1H16 Sterling %	Growth[2] on 1H16 Constant currency %
Pensions	5,578	6,037	**7,169**	**29%**	**29%**
Annuities[3]	571	1,503	**1,075**	**89%**	**89%**
Bonds	62	79	**70**	**12%**	**12%**
Protection	887	883	**1,006**	**13%**	**13%**
Equity release	247	390	**360**	**46%**	**46%**
Other	887	1,018	**1,511**	**70%**	**70%**
United Kingdom	8,232	9,910	**11,191**	**36%**	**36%**
Ireland	339	371	**495**	**46%**	**32%**
United Kingdom & Ireland	8,571	10,281	**11,686**	**36%**	**36%**
Savings	2,704	2,410	**2,151**	**(20)%**	**(28)%**
Protection	194	215	**254**	**31%**	**19%**
France	2,898	2,625	**2,405**	**(17)%**	**(25)%**
Pensions	322	435	**429**	**33%**	**35%**
Savings	2,137	1,945	**2,562**	**20%**	**9%**
Annuities	—	1	**—**	**—**	**—**
Protection	270	335	**353**	**30%**	**19%**
Poland[4], Italy, Spain and Turkey	2,729	2,716	**3,344**	**23%**	**12%**
Europe	5,627	5,341	**5,749**	**2%**	**(7)%**
Asia	982	1,390	**1,328**	**35%**	**27%**
Aviva Investors	1,388	1,457	**1,262**	**(9)%**	**(9)%**
Total	16,568	18,469	**20,025**	**21%**	**16%**

1 Present value of new business premiums (PVNBP) is the present value of new regular premiums plus 100% of single premiums, calculated using assumptions consistent with those used to determine the value of new business.
2 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
3 Includes £257 million relating to the internal transfer of annuities from a with-profits fund to a non profit fund in 2H16.
4 Poland includes Lithuania.

E8 – Geographical analysis of regular and single premiums

	Regular premiums							Single premiums		
	6 months 2017 £m	Constant currency growth[1]	WACF	Present value £m	6 months 2016 £m	WACF	Present value £m	6 months 2017 £m	6 months 2016 £m	Constant currency growth[1]
United Kingdom	**929**	**7%**	**5.5**	**5,066**	869	5.0	4,331	**6,125**	3,901	**57%**
Ireland	**19**	**17%**	**6.3**	**119**	15	6.5	97	**376**	242	**41%**
United Kingdom & Ireland	**948**	**7%**	**5.5**	**5,185**	884	5.0	4,428	**6,501**	4,143	**56%**
France	**50**	**(15)%**	**9.8**	**491**	53	8.9	474	**1,914**	2,424	**(28)%**
Poland[2]	**25**	**17%**	**6.4**	**159**	19	7.7	146	**43**	44	**(13)%**
Italy	**18**	**(33)%**	**6.5**	**117**	24	2.9	69	**2,074**	1,955	**(4)%**
Spain	**22**	**33%**	**6.2**	**136**	15	5.9	88	**541**	211	**132%**
Turkey	**54**	**53%**	**4.1**	**224**	39	4.8	188	**50**	28	**102%**
Europe	**169**	**6%**	**6.7**	**1,127**	150	6.4	965	**4,622**	4,662	**(10)%**
Asia	**151**	**40%**	**6.7**	**1,011**	100	6.8	682	**317**	300	**(1)%**
Aviva Investors	—	—	—	—	—	—	—	**1,262**	1,388	**(9)%**
Total	**1,268**	**10%**	**5.8**	**7,323**	1,134	5.4	6,075	**12,702**	10,493	**15%**

1 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
2 Poland includes Lithuania.

E9 – Trend analysis of investment sales – cumulative

				Growth[2] on 1H16	
Investment sales[1]	1H16 YTD £m	2H16 YTD £m	1H17 YTD £m	Sterling %	Constant currency %
United Kingdom & Ireland[3]	575	1,390	**1,143**	**99%**	**99%**
Aviva Investors[4]	3,587	5,765	**2,949**	**(18)%**	**(23)%**
Asia[5]	58	137	**116**	**98%**	**78%**
Total investment sales	4,220	7,292	**4,208**	**—**	**(6)%**

1 Investment sales are calculated as new single premiums plus the annualised value of new regular premiums.
2 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
3 UK & Ireland investment sales are also reported in UK Life PVNBP. YTD investment sales of £575 million for 1H16, £1,390 million for 2H16 and £1,143 million for 1H17 are equivalent to £636 million, £1,484 million, and £1,202 million respectively on a PVNBP basis.
4 YTD investment sales of £1,381 million for 1H16, £2,834 million for 2H16 and £1,259 million for 1H17 are also included in Aviva Investors' PVNBP.
5 Asia investment sales are also reported in Asia PVNBP.

E10 – Trend analysis of investment sales – discrete

				Growth[2] on 1H16	
Investment sales[1]	1H16 Discrete £m	2H16 Discrete £m	1H17 Discrete £m	Sterling %	Constant currency %
United Kingdom & Ireland[3]	575	815	**1,143**	**99%**	**99%**
Aviva Investors[4]	3,587	2,178	**2,949**	**(18)%**	**(23)%**
Asia[5]	58	79	**116**	**98%**	**78%**
Total investment sales	4,220	3,072	**4,208**	**—**	**(6)%**

1 Investment sales are calculated as new single premiums plus the annualised value of new regular premiums.
2 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
3 UK & Ireland investment sales are also reported in UK Life PVNBP. Discrete investment sales of £575 million for 1H16, £815 million for 2H16, and £1,143 million for 1H17, are equivalent to £636 million, £847 million, and £1,202 million respectively on a PVNBP basis.
4 Discrete investment sales of £1,381 million for 1H16, £1,453 million for 2H16, and £1,259 million for 1H17 are also included in Aviva Investors' PVNBP.
5 Asia investment sales are also reported in Asia PVNBP.

E11 – Trend analysis of general insurance and health net written premiums – cumulative

	1H16 YTD £m	2H16 YTD £m	**1H17 YTD £m**	Growth[1] on 1H16 Sterling %	Growth[1] on 1H16 Constant currency %
General insurance					
United Kingdom[2]	2,001	3,930	**2,105**	**5%**	**5%**
Ireland	179	378	**221**	**23%**	**12%**
United Kingdom & Ireland	2,180	4,308	**2,326**	**7%**	**6%**
Canada	1,049	2,453	**1,477**	**41%**	**25%**
Europe	757	1,438	**879**	**16%**	**5%**
Asia & Other	5	12	**6**	**11%**	**1%**
	3,991	8,211	**4,688**	**17%**	**11%**
Health insurance					
United Kingdom[3]	292	514	**293**	**—**	**—**
Ireland[4]	43	49	**—**	**(100)%**	**(100)%**
United Kingdom & Ireland	335	563	**293**	**(13)%**	**(14)%**
Europe	155	235	**165**	**7%**	**(3)%**
Asia[5]	64	125	**78**	**22%**	**10%**
	554	923	**536**	**(3)%**	**(8)%**
Total	4,545	9,134	**5,224**	**15%**	**9%**

1 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
2 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
3 These premiums are also reported in UK Life PVNBP. 1H16 YTD NWP of £292 million, 2H16 YTD NWP of £514 million, and 1H17 YTD NWP of £293 million are equivalent to £255 million, £424 million and £308 million on a PVNBP basis respectively.
4 The sale of the Ireland Health business was completed in FY16
5 Singapore long-term health business is also reported in Asia PVNBP. For Singapore long term health business, 1H16 YTD NWP of £30 million, 2H16 YTD NWP £67 million and 1H17 YTD £38 million are equivalent to £97 million, £209 million and £69 million on a PVNBP basis respectively.

E12 – Trend analysis of general insurance and health net written premiums – discrete

	1H16 Discrete £m	2H16 Discrete £m	**1H17 Discrete £m**	Growth[1] on 1H16 Sterling %	Growth[1] on 1H16 Constant currency %
General insurance					
United Kingdom[2]	2,001	1,929	**2,105**	**5%**	**5%**
Ireland	179	199	**221**	**23%**	**12%**
United Kingdom & Ireland	2,180	2,128	**2,326**	**7%**	**6%**
Canada	1,049	1,404	**1,477**	**41%**	**25%**
Europe	757	681	**879**	**16%**	**5%**
Asia & Other	5	7	**6**	**11%**	**1%**
	3,991	4,220	**4,688**	**17%**	**11%**
Health insurance					
United Kingdom[3]	292	222	**293**	**—**	**—**
Ireland[4]	43	6	**—**	**(100)%**	**(100)%**
United Kingdom & Ireland	335	228	**293**	**(13)%**	**(14)%**
Europe	155	80	**165**	**7%**	**(3)%**
Asia[5]	64	61	**78**	**22%**	**10%**
	554	369	**536**	**(3)%**	**(8)%**
Total	4,545	4,589	**5,224**	**15%**	**9%**

1 Currency movements are calculated using unrounded numbers so minor rounding differences may exist.
2 FY16 excludes the impact from an outward quota share reinsurance agreement written in 2015 and completed in 2016 in Aviva Insurance Limited (AIL).
3 These premiums are also reported in UK Life PVNBP, 1H16 NWP of £292 million, 2H16 of £222 million and 1H17 of £293 million are equivalent to £255 million, £255 million and £308 million on a PVNBP basis respectively.
4 The sale of the Ireland Health business was completed in FY16
5 Singapore long-term health business is also reported in Asia PVNBP. For Singapore long term health business, 1H16 NWP of £30 million, 2H16 £37 million and 1H17 NWP of £38 million are equivalent to £97 million, £112 million, and £69 million on a PVNBP basis respectively.

E13 – Reconciliation of sales to net written premiums in IFRS

The table below presents our consolidated sales for the periods ended 30 June 2017, 30 June 2016 and the year ended 31 December 2016 as well as the reconciliation of sales to net written premiums in IFRS.

	6 months 2017 £m	6 months 2016 £m	Full Year 2016 £m
Present value of new business premiums	**20,025**	16,568	35,037
Investment sales	**4,208**	4,220	7,292
General insurance and health net written premiums	**5,224**	4,545	9,134
Less: long-term health and collectives business[1]	**(2,851)**	(2,337)	(4,944)
Total sales	**26,606**	22,996	46,519
Less: Effect of capitalisation factor on regular premium long-term business	**(5,938)**	(4,941)	(10,563)
Share of long-term new business sales from JVs and associates	**(354)**	(238)	(552)
Annualisation impact of regular premium long-term business	**(152)**	(142)	(264)
Deposits taken on non-participating investment contracts and equity release contracts	**(5,132)**	(3,781)	(7,834)
Retail sales of mutual fund type products (investment sales)	**(4,208)**	(4,220)	(7,292)
Add: IFRS gross written premiums from existing long-term business	**2,516**	2,604	4,867
Less: Long-term insurance and savings business premiums ceded to reinsurers	**(838)**	(845)	(1,696)
Less: Outward reinsurance premium relating to general insurance business	**—**	—	(107)
Total IFRS net written premiums	**12,500**	11,433	23,078
Analysed as:			
Long-term insurance and savings net written premiums	**7,276**	6,888	14,051
General insurance and health net written premiums	**5,224**	4,545	9,027
	12,500	11,433	23,078

1 Long-term health and collectives business are included as part of PVNBP.

Effect of capitalisation factor on regular premium long-term business

PVNBP is derived from the single and regular premiums of the products sold during the financial period and is expressed at the point of sale. The PVNBP calculation is equal to total single premium sales received in the year plus the discounted value of regular premiums expected to be received over the term of the new contracts. The discounted value of regular premiums is calculated using the same methodology as for VNB (on an adjusted Solvency II basis).

The discounted value reflects the expected income streams over the life of the contract, adjusted for expected levels of persistency, discounted back to present value. The discounted value can also be expressed as annualised regular premiums multiplied by a weighted average capitalisation factor (WACF). The WACF varies over time depending on the mix of new products sold, the average outstanding term of the new contracts and the projection assumptions.

Share of long-term new business sales from joint ventures and associates

Total long-term new business sales include our share of sales from joint ventures and associates. Under IFRS reporting, premiums from these sales are excluded from our consolidated accounts, with only our share of profits or losses from such businesses being brought into the income statement separately.

Annualisation impact of regular premium long-term business

As noted above, the calculation of PVNBP includes annualised regular premiums. The impact of this annualisation is removed in order to reconcile the non-GAAP new business sales to IFRS premiums and will vary depending on the volume of regular premium sales during the year.

Deposits taken on non-participating investment contracts and equity release contracts

Under IFRS, non-participating investment contracts are recognised in the Statement of Financial Position by recording the cash received as a deposit and an associated liability and are not recorded as premiums received in the IFRS income statement. Only the margin earned is recognised in the IFRS income statement.

Retail sales of mutual fund type products (investment sales)

Investment sales included in the total sales number represent the cash inflows received from customers to invest in mutual fund type products such as unit trusts and 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.

IFRS gross written premiums from existing long-term business

The non-GAAP measure of long-term and savings sales focuses on new business written in the year under review whilst the IFRS income statement includes premiums received from all business, both new and existing.

E14 – Principal Assumptions underlying the calculation of VNB (on an adjusted SII basis)

Economic assumptions are derived actively, based on market yields on risk-free fixed interest assets at the end of each reporting period.

The risk-free interest rate curves used to calculate VNB reflect the basic risk-free interest rate curves (including the credit risk adjustment), volatility adjustment and fundamental spread for the matching adjustment published by EIOPA on their website. The details on methodology are set out in D.2.2.3 of the Aviva 2016 Solvency and Financial Condition Report (SFCR).

(a) Basic risk-free interest rates

The basic risk-free rate curves are stated in the table below, including a credit risk adjustment.

United Kingdom	2Q 2017 %	1Q 2017 %	4Q 2016 %	3Q 2016 %	2Q 2016 %	1Q 2016 %
Reference rate						
1 year	**0.4%**	0.4%	0.4%	0.3%	0.4%	0.6%
5 years	**0.8%**	0.7%	0.7%	0.4%	0.5%	0.9%
10 years	**1.2%**	1.0%	1.1%	0.6%	0.9%	1.3%
15 years	**1.4%**	1.2%	1.3%	0.8%	1.1%	1.5%
20 years	**1.5%**	1.3%	1.3%	0.9%	1.1%	1.6%

Eurozone	2Q 2017 %	1Q 2017 %	4Q 2016 %	3Q 2016 %	2Q 2016 %	1Q 2016 %
Reference rate						
1 year	**(0.3)%**	(0.3)%	(0.3)%	(0.3)%	(0.3)%	(0.2)%
5 years	**0.2%**	0.1%	0.0%	(0.2)%	(0.2)%	(0.1)%
10 years	**0.8%**	0.7%	0.6%	0.2%	0.3%	0.5%
15 years	**1.2%**	1.1%	1.0%	0.5%	0.7%	0.8%
20 years	**1.4%**	1.3%	1.1%	0.7%	0.8%	0.9%

(b) Matching adjustment

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 (e.g. no future premiums or surrender risk) and are well matched by assets that are intended to be held to maturity and have cash flows that are also relatively fixed. The intention is that, if held to maturity, the business can earn the additional yield on these assets that relate to illiquidity risk.

Aviva applies a matching adjustment to certain obligations in UK Life and Spain Life, using methodology which is set out in the SFCR Report. The matching adjustments used to value new business will reflect the characteristics of the assets allocated to back the new business. The allocation of assets to new business anticipates the expected assets chosen to back new business at the end of year closing balance sheet. These may be different to the matching adjustments applied at the portfolio level.

The matching adjustments used for new business are shown in the table below:

Matching Adjustment Portfolio (bps)	1H 2017	2H 2016	1H 2016
UK Life	**123**	171	152
Spain Life	**19**	24	30

At HY17, a combined MA of 123 bps was calculated for new business within the Friends UK and the Aviva UK annuity portfolios. Prior to HY17 separate MAs were calculated for these portfolios and the assumptions shown in the table above for the comparative periods relate to the Aviva UK annuity portfolio. For Friends UK, the MAs were 106 bps and 123 bps at 2H2016 and 1H2016 respectively. In the comparative periods, the higher MA for Aviva UK new business partly reflects the allocation to Aviva UK of a higher proportion of illiquid assets.

(c) Volatility adjustment

The volatility adjustment (VA) is intended to reflect temporary distortions in spreads caused by illiquidity in the market or extreme widening of credit spreads, in particular in relation to government bonds. VAs are prescribed by EIOPA and published along with the basic risk-free interest rate curves on their website. Where applicable the VA is applied to all those liabilities where a MA is not applied, with the exception of unit-linked business in UK Life where, in line with the approved applications, no allowance for the VA is made.

The volatility adjustments used are shown in the table below:

Volatility Adjustment (bps)	1H 2017	2H 2016	1H 2016
United Kingdom	**21**	30	38
Eurozone	**9**	13	16

Other information

Product definitions

Annuity
A type of policy that pays out regular amounts, either immediately and for the remainder of a person's lifetime, or deferred to commence from a future date. Immediate annuities may be purchased for an individual and his or her dependants or on a bulk purchase basis for groups of people. Deferred annuities are accumulation contracts, which may be used to provide benefits in retirement and may be funded by a policyholder by payment of a series of contributions or by a capital sum. Annuities may be guaranteed, unit-linked or index-linked.

Bonds and savings
These are accumulation products with single or regular premiums and unit-linked or guaranteed investment returns.

Critical illness cover
Pays out a lump sum if the insured person is diagnosed with a serious illness that is specified within the insurance policy.

Equity release
Equity release mortgages allow a homeowner to receive a lump sum in return for a mortgage secured on their house. No interest is payable on the loan; instead, interest is rolled-up on the loan and the loan and accrued interest are repayable at redemption (upon death or moving into long-term care).

General insurance
Also known as non-life or property and casualty insurance. Property insurance covers loss or damage through fire, theft, flood, storms and other specified risks. Casualty insurance primarily covers losses arising from accidents that cause injury to other people or damage to the property of others.

Group pension
A pension plan that covers a group of people, which is typically purchased by a company and offered to their employees.

Health insurance
Provides cover against loss from illness or bodily injury. It can pay for medicine, visits to the doctor, hospital stays, other medical expenses and loss of earnings, depending on the conditions covered and the benefits and choices of treatment available on the policy.

Individual savings account (ISAs)
Tax-efficient plans within the UK for investing in stocks and shares, cash deposits or life insurance investment funds, subject to certain limits.

Investment sales
Comprise retail sales of mutual fund-type products such as unit trusts, individual savings accounts (ISAs) and open-ended investment companies (OEICs).

Mortgage endowment
An insurance contract combining savings and protection elements which is designed to repay the principal of a loan or mortgage.

Mortgage life insurance
A protection contract designed to pay off the outstanding amount of a mortgage or loan in the event of the death of the insured.

Open-ended investment company (OEIC)
A collective investment fund structured as a limited company in which investors can buy and sell shares.

Pension
A means of providing income in retirement for an individual and possibly his/her dependants. Individual pensions are pension plans that are arranged by the policyholder whereas workplace pensions are plans that are arranged by an individual's employer.

Protection
An insurance contract that protects the policyholder or his/her dependants against financial loss on death or ill-health.

Regular premium
A series of payments made by the policyholder, typically monthly or annually, for part of or all of the duration of the contract.

Single premium
A single lump sum paid by the policyholder at the start of the contract.

Unit-linked
Unit-linked business relates to collective investment savings products where premiums are invested on policyholders' behalf in individual units within an investment fund. The financial risk on these contracts is borne by the policyholders.

Unit trusts
A form of open-ended collective investment that is set up under a trust deed, in which investors can buy and sell units.

With-profits/Participating business
With-profits business relates to insurance contracts where premiums are invested in investment funds and policyholders have a contractual right to receive additional benefits based on factors such as the performance of the assets held within the fund, in addition to any guaranteed benefits. The insurer may have discretion as to the timing or amount of additional benefits allocated to policyholders.

General terms

Alternative performance measures

Alternative performance measures ('APMs') are non-GAAP measures used by the Aviva Group within its financial publications to supplement disclosures prepared in accordance with other regulations such as International Financial Reporting Standards (IFRS) and Solvency II. We believe that these measures provide useful information to enhance the understanding of financial performance. The APMs should be viewed as complementary to, rather than a substitute for, the figures determined according to other regulatory measures.

The Group's APMs are highlighted below using the following symbol '‡'.

Acquired value of in force (AVIF)

The present value of future profits on a portfolio of long-term insurance and investment contracts, acquired either directly or through the purchase of, or investment in, a business.

Adjusted Solvency II Present value of new business premiums (PVNBP) ‡

Present value of new regular premiums plus 100% of single premiums from new business written at the point of sale and any changes to existing contracts, which were not anticipated at the outset of the contract that generates additional shareholder risk and associated premium income of the nature of a new policy. An example of a change to existing contracts that is considered to be generating PVNBP is an internal transfer of annuities from with-profits funds to a non-profit fund. PVNBP is calculated using assumptions consistent with those used to determine the adjusted Solvency II value of new business.

Adjusted Solvency II value of new business ‡

Adjusted Solvency II VNB is the increase in Solvency II Own Funds resulting from business written in the period, adjusted to remove the impact of contract boundaries, to include look through profits in service companies (where not included in Solvency II) and to include business which is not included in the Solvency II valuation. There is no explicit adjustment to include the cost associated with holding the Solvency II capital requirement as the Solvency II risk margin is viewed to be sufficient.

The methodology underlying the calculation of adjusted Solvency II VNB uses Solvency II rules with adjustments to reflect a more realistic basis than the prudential Solvency II basis.

Adjusted Solvency II VNB can be reconciled to the Solvency II Own Funds impact of new business; however there is no equivalent IFRS metric.

Annual premium equivalent (APE)

Used as a measure of life sales. It is calculated as the sum of new regular premiums plus 10% of new single premiums written in the period.

Assets under management‡

Assets under management represents all assets managed or administered by or on behalf of the Group, including those assets managed by third parties. Assets under management include managed assets that are included 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.

Available for sale (AFS)

Securities that have been acquired neither for short-term sale nor to be held to maturity and are not classified as other than trading. These are shown at fair value on the statement of financial position and changes in value are taken straight to equity instead of the income statement.

Bancassurance/Affinity

An arrangement whereby banks and building societies sell insurance and investment products to their customers on behalf of other financial providers.

Best Estimate Liabilities (BEL)

The expected present value of future cash flows for a company's current insurance obligations, calculated using best estimate assumptions, projected over the contract's run-off period, taking into account all up-to-date financial market and actuarial information.

Cash remittances ‡

Amounts paid by our operating businesses to the Group, comprising dividends and interest on internal loans. These amounts eliminate on consolidation and hence are not directly reconcilable to the Group's IFRS consolidated statement of cash flows.

Combined operating ratio (COR) ‡

A financial measurement of general insurance underwriting profitability calculated as the sum of claims incurred, earned commission and earned expenses expressed as a percentage of net earned premiums. A COR below 100% indicates profitable underwriting.

The components used to calculate COR for the Group are detailed in note 7.ii – General insurance and health.

Contract boundaries

A contract boundary is the first point in time in the lifetime of an insurance policy at which the insurer has the ability to review the premiums charged at the individual policy level, without any contractual constraints. For policies in which such a point does not exist, the contract boundary is the same as the full term of the contract. Under Solvency II, if a contract boundary on an insurance contract is less than the full term of the contract the expected future premiums and obligations that relate to cover which may be provided after that date are not recognised in the measurement of the insurance liabilities.

Deferred acquisition costs (DAC)

The costs directly attributable to the acquisition of new business for insurance and investment contracts may be deferred to the extent that they are expected to be recoverable out of future margins in revenue on these contracts.

EIOPA

The European Insurance and Occupational Pensions Authority (EIOPA) was established as a consequence of the reforms to the structure of supervision of the financial sector in the European Union. The reform was initiated by the European Commission.

EIOPA's core responsibilities are to support the stability of the financial system, transparency of markets and financial products as well as the protection of policyholders, pension scheme members and beneficiaries. EIOPA is commissioned to monitor and identify trends, potential risks and vulnerabilities stemming from the micro-prudential level, across borders and across sectors.

The implementation of the Solvency II directive aims to address these goals.

Fair value
The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e. an exit price).

Financial Conduct Authority (FCA)
The FCA is an independent public body and is independent of the Bank of England. It is responsible for the conduct business regulation of financial services firms (including those firms subject to prudential regulation by the PRA) and the prudential regulation of firms not regulated by the PRA. The FCA has three statutory objectives: securing an appropriate degree of protection for consumers; protecting and enhancing the integrity of the UK financial system; and promoting effective competition in the interests of consumers.

Gross written premiums
The total earnings or revenue generated by sales of insurance products, before any reinsurance is taken into account. Not all premiums written will necessarily be treated as income in the current financial year, because some of them could relate to insurance cover for a subsequent period.

Independent Financial Advisers (IFAs)
A person or organisation authorised to give independent advice on financial matters. IFAs are authorised by the FCA in the UK.

Inherited estate
In the UK, the assets of the long-term with-profits funds less the realistic reserves for non-profit policies written within the with-profits funds, less asset shares aggregated across the with-profits policies and any additional amounts expected at the valuation date to be paid to in-force policyholders in the future in respect of smoothing costs and guarantees.

International Financial Reporting Standards (IFRS)
These are international accounting regulations that all publicly listed companies in the European Union are required to use.

Latent claims
General insurance claims that are often not made until many years after the period of cover provided, due to the impact of perils or causes not becoming evident for a number of years. Sources of latent claims include asbestos-related diseases, environmental pollution and industrial deafness.

Life business
Subsidiaries selling life and pensions contracts.

Longevity risk
Risk associated with increasing life expectancy trends among policyholders and pensioners.

Long-term and savings business
Collective term for life insurance, pensions, savings, investments and related business.

Matching adjustment
An increase applied to the risk-free interest rate used to value insurance liabilities under Solvency II where the cash flows are relatively fixed (e.g. no future premiums or surrender risk) and are well matched to assets that are intended to be held to maturity and have cash flows that are also relatively fixed.

Minimum capital requirement (MCR)
The Minimum Capital Requirement is the minimum amount of capital that an insurer needs to hold to cover its risks under the Solvency II regulatory framework. If an insurer's capital falls below the MCR then authorisation will be withdrawn by the regulator unless a firm is able to meet the MCR within a short period of time.

Morbidity
Rate of disease or how likely someone will fall ill, varying by such parameters as age, gender and health, used in pricing and calculating liabilities for policyholders of life and annuity products, which contain morbidity risks.

Mortality
Rate of death, varying by such parameters as age, gender and health, used in pricing and calculating liabilities for policyholders of life and annuity products, which contain mortality risks.

Net asset value (NAV) per share‡
Net asset value (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.

Net written premiums
Total gross written premiums for the given period, minus premiums paid over or 'ceded' to reinsurers.

New business margin
New business margins are calculated as the adjusted Solvency II value of new business divided by the adjusted Solvency II 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 including the impact of new business, expected investment returns on existing business, operating variances, operating assumption changes and management actions. It excludes economic variances, economic assumption changes and integration and restructuring costs.

Operating earnings per share (EPS)‡
Operating EPS is calculated based on the operating profit attributable to ordinary shareholders net of tax, non-controlling interests, preference dividends, the direct capital instrument (DCI) and tier one notes divided by the weighted average number of ordinary shares in issue, after deducting treasury shares.
The components used to calculate the operating EPS are detailed in note B7 – Earnings per share.

Operating expense ratio ‡
The Group operating expense ratio expresses operating expenses as a percentage of operating income. Operating income is calculated as operating profit before Group debt costs and operating expenses. The components used to calculate the operating expense ratio are detailed in note 1 – Operating profit, note 3 – Expenses and note A3 – Group debt costs and other interest.

Operating expenses ‡
The day-to-day expenses involved in running the business including staff costs. For the avoidance of doubt, operating expenses excludes commission, non-operating integration and restructuring costs, and amortisation and impairment of AVIF and intangible assets. The components of operating expenses are detailed in note 3 – Expenses.

Operating profit ‡
This is a non-GAAP financial performance measure. It is based on expected investment returns and stated before tax and before non-operating items including impairment of goodwill and amortisation and impairment of acquired value of in-force business, the profit or loss on disposal and remeasurement of subsidiaries, joint ventures and associates, integration and restructuring costs and other items. 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. The components of operating profit are detailed in note A – Reconciliation of group operating profit to profit after tax.

Own Funds
Under Solvency II, capital available to cover the SCR and MCR is referred to as own funds. This includes the excess of assets over liabilities in the Solvency II balance sheet (calculated on best estimate, market consistent assumptions and net of transitional measures on technical provisions), subordinated liabilities that qualify as capital under Solvency II, and off-balance sheet own funds approved by the regulator. Own funds eligible to cover the SCR and MCR also reflect any tiering restrictions.

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

Prudential Regulatory Authority (PRA)
The PRA is a part of the Bank of England and is responsible for the prudential regulation of deposit taking institutions, insurers and major investment firms. The PRA's objectives are: to promote the safety and soundness of the firms it regulates; specifically for insurers, to contribute to the securing of an appropriate degree of protection for policyholders; and a secondary objective to facilitate effective competition.

Return on equity ‡
The return on equity calculation is based on operating return after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity.

The components of the calculation are detailed in note C1 – Analysis of return on equity.

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

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

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

Solvency II cover ratio ‡
Own funds divided by the Solvency Capital Requirement (SCR), as calculated on a shareholder view. The shareholder view excludes the contribution to Group SCR and Group own funds of fully ring fenced with-profits funds and staff pension schemes in surplus – these exclusions have no impact on Solvency II surplus.

Solvency II cover ratio is detailed in note 8.iv – Solvency II.

Solvency II own funds impact of new business
The change in own funds resulting from new business written in the period.

Solvency II surplus
Own funds less the SCR. Holding capital in excess of the SCR demonstrates an insurer has adequate financial resources in place to meet all its liabilities as and when they fall due and that there is sufficient capital to absorb significant losses.

Solvency II surplus impact of new business
The change in Solvency II surplus resulting from new business written in the period.

Solvency Capital Requirement (SCR)
The SCR is the amount of capital the regulator requires an insurer to hold to meet the requirements under the Solvency II regulatory framework. Firms may use their own internal model, the European Insurance and Occupational Pensions Authority (EIOPA) prescribed standard formula or a partial internal model to determine SCR.

Transitional Measures on Technical Provisions (TMTP)
TMTP is an adjustment to Solvency II technical provisions to bring them into line with the pre-Solvency II equivalent as at 1 January 2016 when the regulatory basis changed, to smooth the introduction of the new regime. This will decrease linearly over the 16 years following Solvency II implementation but may be recalculated to allow for material changes to the risk profile of the relevant business, subject to agreement with the regulator. TMTP may also be recalculated every 24 months if considered appropriate by the firm or at the request of the regulator.

Underwriting result
The profit or loss from general insurance and health activities, excluding investment performance. It is calculated as net earned premiums less net insurance claims, commission and expenses. The underwriting result is calculated in note 7ii – General insurance and health.

Volatility adjustment
A reduction to Solvency II technical provisions to reflect temporary distortions in spreads caused by illiquidity in the market or extreme widening of credit spreads. The volatility adjustment reduces technical provisions by increasing the discount rate used to calculate the best estimate liability. Volatility adjustments are prescribed by EIOPA on a currency and country basis.

Annual General Meeting (AGM)
The voting results for the 2017 AGM, including proxy votes and votes withheld, can be viewed on our website at www.aviva.com/agm. There, you will also find a webcast of the formal business of the meeting and information relating to past general meetings.

2017 financial year calendar

2017 interim dividend ex-dividend	5 October 2017
2017 interim record date	6 October 2017
Last day for Dividend Reinvestment Plan and currency election for 2017 interim dividend	27 October 2017
Payment date[1]	17 November 2017
Full year results announcement[2]	8 March 2018

1 Please note that the ADR dividend payment date will be 23 November 2017.
2 This date is provisional and subject to change

Don't miss out on your dividends!
From November 2017, we are simplifying the way we pay dividends to shareholders by only paying cash dividends directly into a nominated bank account. This provides shareholders with the following benefits:
- Make dividend payments to shareholders faster and more secure, minimising the risk of loss or fraud
- Reduce costs and our impact on the environment – we use six metric tons of paper for printing cheques each dividend payment
- Remove administration fees currently payable by shareholders for replacement dividend cheques

If you are currently receiving your dividend by cheque, take action now and choose from the dividend payment options detailed below. There is also a dividend changes timeline to the right showing the key dates of our change to payment of dividends. If you already receive your dividend directly to your bank account, your current payment instruction will apply.

Dividend payment options
Shareholders are able to receive their dividends in the following ways:
- Directly into your nominated UK bank account
- Directly into your 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 Payments Area (SEPA) to elect to receive their dividends or interest payments in a choice of over 60 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 on the next page, 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.

Manage your shareholding online

www.aviva.com/online:
You can access Computershare online services directly using the above address where you can log in using your Computershare details to:
- Change your address
- Change your payment options
- Switch to electronic communications
- View your shareholding
- View any outstanding payments
- Access useful information and view your Aviva policies

www.aviva.co.uk/myaviva:
If you've already registered for MyAviva you'll be able to view useful shareholder information. You can also check the details of Aviva policies you may have. Our online portal brings all this information together into one safe and secure place at a time that suits you. Just log in as normal using your email address via www.aviva.co.uk/myaviva.
MyAviva also includes a link to the Investor Centre, where you can log in and manage your shareholding as outlined above.

www.aviva.com/shareholders:
For access to our shareholder services centre.

www.aviva.com/dividends:
To find the latest information on Aviva dividends.

www.aviva.com/agm:
To find the latest information on our Annual General Meeting.

www.aviva.com/reports:
To access our latest reports.

www.aviva.com/shareprice:
To find out the latest Aviva plc Ordinary share price.

www.londonstockexchange.com:
To find out the latest Aviva plc Preference share price.

Dividend changes timeline

27 October 2017	Last date to complete a mandate instruction to receive the dividend payable in November 2017
17 November 2017	First dividend where direct credit is the only method of payment for cash dividends – a reminder will be sent to shareholders who have not received their dividend
Spring 2019	An annual dividend confirmation will be sent to shareholders who have had dividends withheld during the previous year

Contact details

Ordinary and preference shares – Computershare Investor Services Plc

For any queries regarding your shareholding, or to advise of changes to your personal details, please contact Computershare:

By telephone: 0371 495 0105
Lines are open from 8.30am to 5.30pm (UK time), Monday to Friday (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) – Citibank

For any queries regarding Aviva ADRs, please contact Citibank Shareholder Services (Citibank):

By telephone: 1 877 248 4237 (1 877-CITI-ADR), or +1 781 575 4555 if you are calling from outside the US. (Lines are open from 8.30am to 6pm, Monday to Friday US Eastern Standard Time).

By email: citibank@shareholders-online.com

In writing: Citibank Shareholder Services, PO Box 43077, Providence, Rhode Island 02940-3077 USA

Please visit www.citi.com/dr for further information about Aviva's ADR programme.

Group company secretary

Shareholders may contact the group company secretary as follows:

By email: aviva.shareholders@aviva.com

In writing: Kirstine Cooper, Group Company Secretary, St Helen's, 1 Undershaft, London EC3P 3DQ

By telephone: +44 (0)20 7283 2000

Shareholder updates

We provide quarterly online updates to shareholders to keep them informed on how Aviva is doing as well as useful information for shareholders. Sign up for email communications at www.aviva.com/online to receive a notification when the latest update is available.

Be a ScamSmart investor

www.fca.org.uk/scamsmart

As a shareholder, you may receive a call from someone offering to buy your shares at a higher price than their market value. This might sound like a great deal, but will likely come with a request for money upfront as a bond or other form of security. This is probably a scam where you pay money upfront but never hear from them again.
If you're cold-called regarding your shares or other investment opportunity, chances are it's very risk or a scam.
The safest thing to do is hang up.

Do you receive duplicate documents?

A number of shareholders still receive duplicate documentation and split dividend payments as a result of having more than one account on the Aviva Register of Members. If you think you fall into this group and would like to combine your accounts, please contact Computershare.