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News Release

10 August 2022

Aviva plc 2022 Interim Results Announcement

Continuing momentum with strong first half results demonstrating benefits of diversified business model

Confident outlook for 2022 despite challenging market backdrop

Further capital returns – anticipate launching share buyback with our full year 2022 results

Solvency II OFG‡	Solvency II pro forma cover ratio[1]	General insurance COR‡	Operating profit‡,2	2022 interim dividend
£538m	213%	94.0%	£829m	10.3p
+46%	+27pp	+2.4pp	+14%	+40%
HY21[3]: £369m	2021: 186%	HY21[3]: 91.6%	HY21[3]: £725m	HY21: 7.35p

Amanda Blanc, Group Chief Executive Officer, said:

"Sales are up, operating profit is higher, our financial position is stronger. This has been an excellent six months for Aviva.

Our scale and diversification give us resilience and opportunity, enabling Aviva to withstand the challenging economic climate. Our market leading positions and our unique ability to look after a wide range of customers' needs are clear advantages and have driven robust operating performance. Trading has been encouraging across all our major businesses in insurance, wealth and retirement.

Even so, we are very conscious of the pressures currently facing many of our customers, especially the more vulnerable. In response we have launched new, low cost, insurance products, and we are increasing the range and amount of support we provide to communities, businesses and our own people during this challenging time.

Delivering for our shareholders is at the core of our strategy. Our liquidity and capital position is extremely healthy and we are declaring an interim dividend of 10.3p, in line with our full year 2022 dividend guidance of c.31.0p. We are increasingly confident in Aviva's prospects and anticipate commencing additional returns of capital to shareholders with our 2022 full year results."

Strong first half results demonstrating benefits of diversified business model

- Solvency II operating own funds generation‡ up 46% to £538m (HY21[3]: £369m)
- Operating profit‡,2 up 14% to £829m (HY21[3]: £725m)
- General insurance gross written premiums (GWP) up 6%[4] to £4,694m (HY21[3]: £4,366m) with a strong 94.0% COR‡ (HY21[3]: 91.6%)
- UK & Ireland Life sales[5] up 4% to £16.8bn (HY21: £16.2bn) with VNB‡ up 13% to £300m (HY21: £265m)
- Solvency II return on equity‡ 10.9% (HY21[3,6]: 7.4%), 12.3% (HY21[3,6]: 8.8%) excluding Heritage
- Baseline controllable costs‡,7 down 2% to £1,342m (HY21[3]: £1,372m) reflecting continued focus on efficiency
- Cash remittances‡ of £798m (HY21[3]: £1,063m) in line with our expectation and medium term target
- IFRS loss after tax of £633m (HY21: £198m loss), largely reflects adverse market movements, with no impact on capital or cash remittances‡
- Interim dividend per share of 10.3p (HY21: 7.35p), up 40%, in line with our dividend guidance for 2022

Capital position is strong - new share buyback anticipated with full year 2022 results

- Solvency II shareholder cover ratio‡ of 234% (2021: 244%) and centre liquidity‡ (July 22) of £2.7bn (Feb 22: £6.6bn)
- Estimated Solvency II shareholder cover ratio pro forma[1] for planned £1bn further debt reduction, pension scheme payment, and the acquisition of Succession Wealth of 213%
- Solvency II debt leverage ratio‡ of 30% (2021: 27%). We expect this to return below 30% as we complete additional deleveraging over time
- Given our strong capital position and prospects, we anticipate commencing a new share buyback programme with our 2022 full year results, subject to market conditions and regulatory approval
- Assuming a new buyback is agreed, its size will be determined by the Board at year end and will take account of the financial position at that time, as well as both the drivers of the capital surplus (including the impact of market movements) and our preference to return surplus capital regularly and sustainably

Footnotes are shown on page 2

Continuing strong operating momentum into first half of 2022

- Wealth showed resilience in challenging conditions with net flows[‡] of £5.0bn (HY21: £5.2bn). Workplace added 150,000 new customers in the period, while our Advisor platform attracted the 2nd[8] highest net flows[‡] in the market
- Annuities & Equity release sales[5] up 12% to £2,762m (HY21: £2,466m) and Solvency II operating OFG[‡] up 18% to £169m (HY21: £143m) driven by growth in BPAs and Equity Release. Outlook remains positive with higher BPA volumes and margins expected in H2
- Protection & Health VNB[‡] up 5% to £100m (HY21: £95m) reflecting strong performance in Group Protection and Health partly offset by higher interest rates which impacted Individual Protection
- UK & Ireland General Insurance GWP, up 5% to £2.8bn (HY21: £2.7bn), and COR[‡] of 95.6% (HY21: 93.6%). UK commercial lines performed strongly with GWP up 12% while personal lines was 1% lower as we maintained pricing discipline to mitigate the impact of claims inflation. We will continue to take the necessary actions to price appropriately for the inflationary environment in the second half
- Canada GWP up 12% (6% at constant currency) to £1,854m (HY21: £1,661m) and a COR[‡] of 91.7% (HY21: 88.8%). We saw excellent growth in both Commercial and Personal lines with GWP up 11% and 4% respectively at constant currency
- Aviva Investors external net flows[‡] recovered well in Q2 to £0.2bn in the first half (Q1 2022: £0.2bn net outflows), however remain lower than the prior year (HY21: £1.1 billion) given the volatile market conditions in the first half of 2022
- International investments operating profit[‡,2] flat at £55m with sales[5] 8% lower due to lockdowns in China

Group financial performance

General Insurance GWP	Life new business sales[5]	IFRS loss for the period
£4.7bn	£17.4bn	£(633)m
+6%[4]	+3%	(219)%
HY21[3]: £4.4bn	HY21[3]: £16.9bn	HY21: £(198)m

Group financial strength

Solvency II shareholder cover ratio[‡]	Centre liquidity[‡]
234%	£2.7bn
(10)pp	£(3.9)bn
FY21: 244%	Feb 22: £6.6bn

Outlook

Our strong first half results reinforce our confidence in the prospects and outlook for our business, as our strategy to transform performance continues to build momentum. While recognising the challenging economic backdrop, we remain well positioned to drive growth and meet our Group targets.

In UK & Ireland Life we expect to see continued growth. We anticipate higher BPA volumes in the second half as well as improving margins. In Wealth and Protection & Health we expect a continuation of first half trends for the remainder of the year. We also expect the completion of our acquisition of Succession Wealth during the second half.

In General Insurance, we expect the rating environment to remain favourable in commercial lines, while in personal lines we will continue to price appropriately to manage inflation.

We remain firmly focused on improving efficiency and are on track to meet the first stage of our cost target to reduce baseline controllable costs[‡,7] by £300m (net of inflation) over 2018-22. We are continuing to execute the actions necessary to deliver the upgraded target we set out in March to reduce costs by £750m (gross of inflation) by 2024.

Cash remittances[‡] remain on track to meet our target of >£5.4bn cumulative (2022-24). Solvency II operating own funds generation[‡] also on track to meet our target of £1.5bn per annum by 2024.

‡ Denotes Alternative Performance Measures (APMs) and further information can be found in the 'Other information' section | 1 Solvency II pro forma cover ratio is the estimated Solvency II shareholder cover ratio at 30 June 2022 adjusted for £1bn further debt reduction, pension scheme payment and acquisition of Succession Wealth | 2 Operating profit represents Group adjusted operating profit which is a non-GAAP APM. Operating profit is not bound by the requirements of IFRS. Further details are included in the 'Other information' section | 3 Comparatives presented are from continuing operations | 4 Constant currency | 5 References to sales represent present value of new business premiums (PVNBP) which is an Alternative Performance Measure (APM) and further information can be found in the 'Other information' section | 6 Following a review of the basis of preparation of Group Solvency II Return on Equity comparative for the six months ended 30 June 2021 has been restated. See section '4.ii – Solvency II return on capital/equity' for details | 7 Baseline controllable costs exclude strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline | 8 Latest data available as at Q1 2022 (Fundscape)

Chief Executive's Overview

Overview

I'm pleased to report Aviva has had an excellent first half of 2022 despite the challenging environment.

Our strong first half performance is a timely reminder of the benefits of Aviva's diversified, high quality and focused business model and mix. This provides in-built resilience and opportunity for the Group, allowing us to withstand difficult market conditions. The Group is now focused on growing in those areas where it has market leading positions and expertise, and where it can generate attractive returns. Aviva is well balanced across its insurance, wealth and retirement propositions in the UK, Ireland and Canada.

Strong first half results

Profitability improved across the Group during the first half. We are building clear momentum in our operating performance and we have made progress against the financial targets we set out in March.

Solvency II operating own funds generation (OFG), an important measure of value creation at Aviva and one of our key targets, was up 46% to £538 million (HY21: £369 million). We saw improved volumes and margins in Bulk Purchase Annuities (BPAs), further performance improvement in UK GI Commercial lines together with increased GI investment returns, as well as lower Group interest costs following our debt reduction actions.

Group adjusted operating profit[1] was also up, by 14%, to £829 million.

Cash remittances to the Group centre of £798 million in the first half were in line with our target for over £5.4 billion of gross cash remittances over 2022-24, and this supported a strong centre liquidity position of £2.7 billion as at end July.

In UK & Ireland Life we delivered robust sales[2] growth of 4% to £16.8 billion, with volumes in Annuities & Equity Release up 12% and in Health & Protection up 6%. In our Wealth business net flows of £5.0 billion represented 7%[3] of opening assets under management, although were lower than last year due to the challenging market conditions. UK&I Life value of new business (VNB), a key measure of the profitability of new business, was up 13% to £300 million, driven by a 50% increase in Annuities & Equity Release as BPA margins improved versus the first half of last year.

Trading momentum in General Insurance continued in the first half, and we saw gross written premiums of £4.7 billion, an increase of 6% at constant currency . Commercial Lines delivered double digit premium growth with strong new business, rate increases and high retention levels. Personal Lines premiums were up 1% at constant currency, with UK Personal Lines down 1% reflecting our resolute focus on returns in a difficult market. The Group combined operating ratio (COR) was an excellent 94.0% demonstrating our underwriting discipline and tight management of claims inflation, with the 2.4pp increase versus the first half of 2021 reflecting a return to more normal claims frequency and weather patterns.

External net flows in Aviva Investors recovered well in Q2 to £0.2 billion in the first half (Q122: £0.2 billion net outflows), however remain lower than the prior year (HY21: £1.1 billion) given the volatile market conditions in the first half of 2022. Overall, Aviva Investors saw total net outflows of £4.3 billion in the period reflecting expected outflows from internal assets, mainly Heritage, and withdrawals by clients previously part of the Group, mainly in France.

Our focus on cost efficiency continues. First half baseline controllable costs[4] fell 2% to £1.3 billion as we maintained our cost discipline despite the inflationary environment. We remain on track to meet our £300 million (net of inflation) cost reduction ambition by the end of this year. We are also very focused on delivering our £750 million (gross of inflation) ambition by 2024, although offsetting inflationary pressures will determine how much falls through to the bottom line.

Finally, our balance sheet is strong. On a pro forma basis[5], our Solvency II shareholder cover ratio was 213% at 30 June 2022 (with a headline Solvency II shareholder cover ratio of 234%), benefitting from operating capital generation in the period as well as positive market movements. Our asset portfolio is well positioned with diversification across asset classes, strong credit ratings, and low loan-to-value ratios in our commercial mortgage portfolio.

Interim dividend and commitment to further capital returns

The Board of Directors has declared an interim dividend of 10.3 pence per share, up 40% (HY21: 7.35 pence), with a cost of c.£289 million (HY21: £286 million). This is consistent with our full year 2022 dividend guidance of c.31.0 pence[6] (approximately £870 million).

Given our strong capital position and prospects, we anticipate commencing a new share buyback programme with the 2022 full year results, subject to market conditions and regulatory approval.

Assuming a new buyback is agreed, its size will be determined by the Board at year end and will take account of the financial position at that time, as well as both the drivers of the capital surplus (including the impact of market movements) and our preference to return surplus capital regularly and sustainably.

Delivering Aviva's Promise

We aim to be a leading player in every major segment where we operate. Where we are already number one, we plan to build further on that position. Where we are not, we are pushing hard to get there. We're focusing on four areas to make that a reality:

Customer: delivering leading customer experience and engagement. Aviva already has the benefit of being the no.1 insurance customer franchise in the UK. But we're aiming to go further, by enhancing our digital capability to provide customers with a simpler, more personalised offering, with the products they need, when and how they need them. Our aim is to look after more customers and more of their needs so that they stay with us for longer.

1 Operating profit represents Group adjusted operating profit which is a non-GAAP APM. Operating profit is not bound by the requirements of IFRS. Further details are included in the 'Other information' section | 2 References to sales represent present value of new business premiums (PVNBP) which is an Alternative Performance Measure (APM) and further information can be found in the 'Other information' section | 3 Net flows annualised as a percentage of opening assets under management | 4 Baseline controllable costs exclude strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline | 5 Solvency II pro forma shareholder cover ratio is the estimated Solvency II shareholder cover ratio at 30 June 2022 adjusted for £1 billion further debt reduction, pension scheme payment and acquisition of Succession Wealth | 6 The Board has not approved or made any decision to pay any dividend in respect of any future period

We've been there for our customers during the first half. In February the UK suffered three storms in a single week. We received over 19,000 claims, so colleagues from across the business, including in Canada, helped to process them in good time, settling 10% of claims on the day of notification. That's One Aviva in action, making a real difference for our customers.

Growth: continued targeted growth in our priority areas across the Group. We have great capabilities, partnerships, and market positions, and we're ideally equipped to capitalise on big customer trends.

In the first half we saw continued excellent growth across the Group, including in our General Insurance businesses, in Protection & Health and in Annuities & Equity Release. In Wealth, where market conditions have been challenging, net flows have remained strong. We're expanding revenue streams too, where there are the right opportunities. For example Aviva Zero, our digital motor insurer in the UK with in-built carbon offset feature, which launched earlier this year, has now sold over 10,000 policies. Also in the UK, we have just announced the acquisition of a high net worth business from Azur, which will move us to number one in that segment.

Efficiency: we are targeting top quartile efficiency and cost reduction. That means reducing the number of old systems and products, making it easier for customers and brokers to deal with us, automating processes, and reducing our property footprint. Our baseline controllable costs fell 2% in the first half despite the inflationary pressures, demonstrating our firm grip on Aviva's cost base.

Sustainability: continuing to lead the UK financial services sector on sustainability and living up to our responsibilities to people and the planet, changing the way we do business and using our influence to help others do the same.

In May, our Sustainalytics ESG risk rating improved to 11.3, now ranking Aviva 5th[1] out of 288 global insurers (up from 25th) and ahead of all UK Financial Services peers. Importantly, we've been supporting our colleagues, customers, and communities in the face of economic pressures and the cost-of-living crisis. We have made financial commitments to communities to provide advice and support to vulnerable people and businesses, continued to provide affordable but robust products and premium deferral options, and we are making a one-off payment to help 7,000 of our colleagues.

Summary

Overall, Aviva is in excellent health and our strategy is delivering results. We enter the second half of 2022 with confidence and while we remain mindful of market and macro-economic challenges, we are on track to meet all of our financial targets. There is still much to do, but we expect to make continued good progress to deliver Aviva's promise for our customers and shareholders.

Amanda Blanc
Group Chief Executive Officer

9 August 2022

Other operating highlights

UK & Ireland Life	• Wealth – strong net flows of £5 billion (HY21: £5.2 billion), pleasing performance in challenging markets • Workplace pensions – 150,000 net new customers. AUM 8% lower at £88.5 billion reflecting impact of lower equities • Adviser platform – #2[2] by net flows in the adviser platform market with net flows £2.4 billion. Total platform AUM 7% lower at £40.3 billion (2021: £43.1 billion) • Annuities - BPA sales[3] of £1.9 billion (HY21: £1.6 billion), including £0.8 billion of Aviva staff pension scheme • Equity release – sales[3] up 27% amid heightened market activity and introduction of a new proposition • Group protection – sales[3] up 31% reflecting excellent retention and new scheme wins • Ireland Life – margin improvement with VNB up to £16 million (HY21: £10 million) driven by rationalised product offering
General Insurance	• UK commercial lines GWP up 12% to £1,430 million (HY21: £1,280 million) • UK personal lines GWP 1% lower to £1,198 million (HY21: £1,213 million) as we took actions to maintain pricing discipline • Canada commercial lines GWP up 17% to £716 million (HY21: £614 million), up 11% in constant currency • Canada personal lines GWP up 9% to £1,138 million (HY21: £1,047 million), up 4% in constant currency
Aviva Investors	• First phase of the transition to a new scalable real assets operating model with loan servicing successfully outsourced to Mount Street

1 As at 9 August 2022 | 2 Latest data available as at Q1 2022 (Fundscape) | 3 References to sales represent present value of new business premiums (PVNBP) which is an Alternative Performance Measure (APM) and further information can be found in the 'Other information' section

Cash remittances[‡,R] and Centre liquidity[‡]	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
UK, Ireland, Canada and Aviva Investors	**779**	1,052	(26)%	1,651
International investments[1]	**19**	11	73 %	11
Cash remittances[‡] from continuing operations	**798**	1,063	(25)%	1,662
Centre liquidity[‡] as at end of July/February	**2,735**	2,817	(3)%	6,644

Profit	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
UK, Ireland, Canada and Aviva Investors	**1,040**	984	6 %	2,231
International investments[1]	**55**	55	— %	97
Corporate centre costs and Other operations	**(138)**	(134)	(3)%	(379)
Group debt costs and other interest	**(128)**	(180)	29 %	(315)
Adjusted operating profit[‡,R] from continuing operations[2]	**829**	725	14 %	1,634
IFRS (loss)/profit for the period[3]	**(633)**	(198)	(219)%	2,036
Operating earnings per share (as reported)[4,‡,R]	**19.0 p**	21.0 p	(10)%	43.8p
Operating earnings per share (normalised)[4,5,‡]	**23.5 p**	N/A	N/A	N/A
Basic earnings per share	**(18.8)p**	(6.2)p	(203)%	50.1p

Controllable costs[‡]	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
UK, Ireland, Canada and Aviva Investors	**1,227**	1,259	(3)%	2,559
Corporate centre costs and Other operations	**115**	113	2 %	295
Baseline controllable costs[6]	**1,342**	1,372	(2)%	2,854
Cost reduction implementation, IFRS 17 costs and other	**103**	75	37 %	242
Strategic investment	**34**	—	— %	—
Controllable costs[‡] from continuing operations	**1,479**	1,447	2 %	3,096

Solvency II operating own funds generation (OFG)[‡,R] and Solvency II operating capital generation (OCG)[‡]	Solvency II operating own funds generation				Solvency II operating capital generation			
	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
UK, Ireland, Canada and Aviva Investors	**709**	550	29 %	1,660	**722**	841	(14)%	1,906
International investments[1]	**75**	84	(11)%	124	**33**	37	(11)%	55
Corporate centre costs, Group external debt costs and Other	**(246)**	(265)	7 %	**(597)**	**(199)**	(484)	59 %	(597)
Group Solvency II operating own funds generation[‡] and Solvency II operating capital generation[‡] from continuing operations	**538**	369	46 %	1,187	**556**	394	41 %	1,364

Solvency II return on capital/equity[‡,R]	6 months 2022 %	Restated 6 months 2021[7] %	Change	Full year 2021 %
Solvency II return on capital				
UK, Ireland, Canada and Aviva Investors	**8.0 %**	6.1 %	1.9 pp	8.8 %
International investments[1]	**15.3 %**	18.5 %	(3.2)pp	13.6 %
Group Solvency II return on equity[‡] from continuing operations	**10.9 %**	7.4 %	3.5 pp	10.7 %

Capital position	30 June 2022	31 December 2021	Change	30 June 2021
Estimated Solvency II shareholder cover ratio[‡,R]	**234 %**	244 %	(10)pp	203 %
Estimated Solvency II surplus	**£10.3bn**	£13.1bn	(21)%	£12.0bn
Solvency II net asset value per share[‡]	**420p**	417p	3p	433p
Solvency II debt leverage ratio[‡]	**30 %**	27 %	3 pp	26 %

Dividend	6 months 2022	6 months 2021	Sterling % change	Full year 2021 £m
Interim dividend per share	**10.3p**	7.35p	40 %	7.35p

R Symbol denotes key performance indicators used as a base to determine or modify remuneration | ‡ Denotes Alternative Performance Measures (APMs) and further information can be found in the 'Other information' section |1 International investments include Aviva's interest in joint ventures/associates in Singapore, India and China | 2 Group adjusted operating profit is a non-GAAP APM and is not bound by the requirements of IFRS. Further details of this measure are included in the 'Other information' section. | 3 IFRS (loss)/profit for the period represents IFRS (loss)/profit after tax | 4 Operating earnings per share is derived from the Group adjusted operating profit APM. Further details of this measure are included in the 'Other information' section. | 5 Normalised EPS is calculated as if the share consolidation completed on 16 May 2022 as part of the £3.75 billion capital return, had taken place on 1 January 2022 | 6 Baseline controllable costs exclude strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline | 7 Following a review of the basis of preparation of Group Solvency II Return on Equity and Market Solvency II Return on Capital, comparative amounts for the six months ended 30 June 2021 have been restated. In the numerator, Transitional Measure on Technical Provisions (TMTP) run-off has been replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis and, for Group Solvency II Return on Equity only, the denominator has been adjusted to exclude excess capital above our target Solvency II shareholder cover ratio. Further details can be found in the 'Other information' section.

Group financial headlines

Operating results

Cash remittances

Cash remittances during the first half of 2022 were £0.8 billion (HY21[1]: £1.1 billion), in line with our existing target to grow remittances towards £1.8 billion in 2023. Strong remittances in the prior period arose from the decision to retain cash in our subsidiaries in 2020 to maintain balance sheet strength following volatility arising from COVID-19.

Profit

Operating profit[2] increased by 14% to £829 million (HY21[1]: £725 million). Excluding UK Life management actions and other of £(71) million (HY21: £(38) million), operating profit[2] was up 18% to £900 million (HY21: £763 million).

UK & Ireland Life operating profit[2] benefitted from strong results in Annuities & Equity Release which more than offset marginally lower operating profit[2] in Wealth, as well as lower operating profit[2] from Protection & Health and management actions and other compared with the first half of 2021. Heritage operating profit[2] increased by 33% due to the impact of market movements on policyholder tax. Excluding management actions and other, UK Life operating profit[2] was up 19% to £696 million (HY21: £583 million).

General Insurance performed robustly against a challenging market backdrop, with operating profit[2] down 11% predominantly driven by claims returning to a more normal level following a strong prior period which included COVID-19 frequency benefit.

Operating earnings per share of 19.0 pence (HY21: 21.0 pence) with the impact of disposals partly offset by higher operating profit[2] from continuing operations and a lower share count. Operating earnings per share on a normalised basis was 23.5 pence.

IFRS loss for the period was £(633) million (HY21: £(198) million) while basic earnings per share decreased to (18.8) pence (HY21: (6.2) pence). Higher operating profit[2] was more than offset by non-operating items including economic variances of £(1,470) million (HY21: £(437) million), with higher interest rates and widening spreads resulting in an adverse economic variance impact.

Cost reduction

Baseline controllable costs[3] from continuing operations, fell by 2% to £1,342 million (HY21[1]: £1,372 million), despite headwinds from inflation. We are on track to meet our ambition of a £300 million reduction (net of inflation) in 2022 and to meet our target of £750 million (gross of inflation) cost reduction from the 2018 baseline by the end of 2024.

Solvency II operating own funds generation (Solvency II OFG)

Solvency II OFG from continuing operations increased by 46% to £538 million (HY21[1]: £369 million) with higher Solvency II OFG from Annuities & Equity Release, Management Actions & Other and UK GI partially offset by lower Solvency II OFG from Protection & Health and Canada.

Solvency II operating capital generation (Solvency II OCG)

Solvency II OCG from continuing operations increased by 41% to £556 million (HY21[1]: £394 million) as the prior year was adversely impacted by capital actions and other non-recurring items which have not repeated in the first half of 2022. This has been partially offset by lower Solvency II OCG from core business units.

Solvency II return on equity (Solvency II RoE)

Solvency II RoE was 10.9%, improving by 3.5pp (HY21 restated: 7.4%). Our ambition remains for Solvency II RoE on a continuing basis to improve to >12% by 2024. The Solvency II RoE was 12.3% excluding Heritage, which acts as a drag to the headline Solvency II RoE given it is in run-off.

1 Comparatives presented are from continuing operations | 2 Operating profit represents Group adjusted operating profit which is a non-GAAP APM. Operating profit is not bound by the requirements of IFRS. Further details are included in the 'Other information' section. | 3 Baseline controllable costs exclude strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline

Capital and cash

Solvency II capital

At 30 June 2022, Aviva's Solvency II shareholder surplus was £10.3 billion and Solvency II shareholder cover ratio was 234% (FY21: £13.1 billion and 244% respectively). Our pro forma Solvency II cover ratio allowing for the planned £1 billion further debt reduction, £0.1 billion pension scheme payment, and the acquisition of Succession Wealth, is estimated at 213%.

The solvency capital requirement of £7.7 billion includes a c.£1.9 billion benefit from Group diversification.

Solvency II net asset value per share was 420 pence (FY21: 417 pence).

Pro forma £bn unless otherwise stated	31 December 2021	30 June 2022	Pro forma[1] adjustments	Pro forma 30 June 2022
Own funds	22.2	18.0	(1.6)	16.4
SCR	(9.1)	(7.7)		(7.7)
Surplus	13.1	10.3	(1.6)	8.7
Solvency II shareholder cover ratio (%)	244 %	234 %	(21)%	213 %
Centre liquidity (as at end February/July)	6.6	2.7		1.3
Solvency II debt leverage ratio	27 %	30 %		28 %

Centre liquidity

At end July 2022, centre liquidity was £2.7 billion (February 2022: £6.6 billion) with the reduction primarily driven by the £3.75 billion capital return, £0.5 billion subordinated debt redemption and £0.5 billion payment of the 2021 final dividend, partly offset by cash remittances to Group of £0.8 billion and the £0.5 billion RT1 debt issuance. Our pro forma centre liquidity is £1.3 billion after allowing for the planned further £1 billion debt reduction, £0.1 billion pension payment, and the acquisition of Succession Wealth.

Solvency II debt leverage

Solvency II debt leverage ratio increased to 30% (FY21: 27%) as a result of the reduction in own funds following the capital return. Our pro forma Solvency II debt leverage ratio is 28% after allowing for the planned £1 billion debt reduction, £0.1 billion pension payment and the acquisition of Succession Wealth.

Dividend

Today we have announced an interim dividend per share for the first half of 2022 of 10.3 pence (HY21: 7.35 pence) with a cash cost of approximately £289 million.

Our guidance for dividend payments of approximately £870 million and £915 million for 2022 and 2023 respectively, with low-to-mid single growth in dividends per share thereafter, remains unchanged. On a per share basis this is equivalent to approximately 31.0 pence[2] in 2022 and 32.5 pence[2] in 2023.

Capital return

Under our capital framework, we consider capital above 180% Solvency II shareholder cover ratio as excess, allowing for reinvestment in the business, focused M&A and returns to shareholders. We target Solvency II debt leverage ratio of below 30%.

Given our strong capital position and prospects, we anticipate commencing a new share buyback program with our 2022 full year results, subject to market conditions and regulatory approval.

Assuming a new buyback is agreed, its size will be determined by the Board at year end and will take account of the financial position at that time, as well as both the drivers of the capital surplus (including the impact of market movements) and our preference to return surplus capital regularly and sustainably.

1 Solvency II pro forma shareholder cover ratio is the estimated Solvency II shareholder cover ratio at 30 June 2022 adjusted for £1 billion further debt reduction, pension scheme payment and acquisition of Succession Wealth | 2 The Board has not approved or made any decision to pay any dividend in respect of any future period

Business highlights

UK & Ireland Life

Operating profit	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
Wealth	**71**	73	(3)%	147
Annuities & Equity Release	**346**	265	31 %	645
Protection & Health	**95**	107	(11)%	229
Heritage	**184**	138	33 %	319
Other[1]	**(71)**	(38)	(87)%	77
Ireland Life	**26**	—	— %	11
Total	**651**	545	19 %	1,428

UK and Ireland Life operating profit[2] was 19% higher at £651 million (HY21: £545 million) with a strong performance in Annuities & Equity Release and increased Heritage operating profit[2] more than offsetting a reduction in management actions and other non-operating items compared to the first half of 2021. Annuities & Equity Release operating profit[2] increased 31% to £346 million (HY21: £265 million), driven by sales[3] of bulk purchase annuities, which increased by 15% to £1.9 billion (HY21: £1.6 billion), and improved margins. Heritage operating profit[2] increased by 33% to £184 million (HY21: £138 million) due to the impact of market movements on policyholder tax. The operating loss[2] within Other of £(71) million (HY21: £(38) million) reflects a reduction in the carrying value of deferred acquisition costs as a result of market movements.

Wealth operating profit[2] was 3% lower at £71 million (HY21: £73 million). In Protection & Health, operating profit[2] decreased by 11% to £95 million (HY21: £107 million), primarily driven by the absence of favourable claims experience in the first half of 2022.

Ireland Life operating profit[2] improved significantly to £26 million (HY21: £nil) driven by reduced expenses, improved underlying performance and modelling improvements.

UK & Ireland Life Solvency II OFG of £328 million (HY21: £217 million) was up 51% and up 14% excluding Other. Annuities & Equity Release Solvency II OFG of £169 million (2020: £143 million) was up 18% driven by higher volumes and improved margins reflecting the higher availability and allocation of corporate bonds and illiquid assets. Wealth Solvency II OFG was up 10% reflecting higher average AUM. Protection & Health was down 27% to £56 million (HY21: £77 million) driven by lower volumes of individual protection and the non-recurrence of favourable claims experience.

	PVNBP			VNB		
New business	6 months 2022 £m	6 months 2021 £m	Sterling % change	6 months 2022 £m	6 months 2021 £m	Sterling % change
Wealth[4]	**11,896**	11,699	2 %	**109**	110	(1)%
Annuities and Equity Release	**2,762**	2,466	12 %	**75**	50	50 %
Protection & Health	**1,327**	1,255	6 %	**100**	95	5 %
Ireland Life	**858**	820	5 %	**16**	10	53 %
UK & Ireland Life total	**16,843**	16,240	4 %	**300**	265	13 %

Wealth sales[3,4] grew 2% driven by growth in Workplace, predominantly reflecting incremental growth from the in-force book, which more than offset new business volumes which were lower as the prior year comparator benefitted from significant scheme wins that were delayed from 2020. The growth in Workplace was partly offset by reduced sales[3] from our adviser platform due to a combination of lower new business flows, reflecting current market volatility which has dampened investment activity, and a strong first half in 2021 which saw the benefit from pent up demand from savings accumulated in 2020. VNB reduced by 1% from the resultant change in business mix with a higher proportion of Workplace sales[3].

Our Wealth new business is capital efficient, with profits being derived from asset management fees less costs. We have a competitive position in both workplace and retail markets, which have delivered diversified and resilient earnings and highly efficient customer acquisition into the Group.

Annuities & Equity Release sales[3] were 12% higher, driven by BPA sales[3] of £1.9 billion (HY21: £1.6 billion), despite a relatively subdued first half where we have maintained pricing discipline, and a strong start to the year in equity release with sales[3] up 27% on prior period, reflecting high levels of market activity. This more than offset lower sales[3] from individual annuities where volumes were down on internal individual annuities, despite strong growth in external volumes. VNB for Annuities & Equity Release was up 50% to £75 million (HY21: £50 million) predominantly driven by increased BPA sales[3] at improved margins from a reduced lag in sourcing higher yielding illiquid assets to back the liabilities.

Protection & Health VNB was up 5% driven by increased sales[3], up by 6%. Growth in Health and Group Protection was partially offset by a more subdued Individual Protection market due to lower volumes, as the first half of 2021 benefitted from stamp duty relief, coupled with higher interest rates have adversely impacted sales[3]. Our Group Protection business saw a 31% increase in sales[3] which included a significant scheme win in the first quarter while Health volumes grew 8% as we saw continued momentum from the Expert Select proposition launched last year.

Ireland Life PVNBP grew 5% driven by strong sales[3] in unit linked business, partially offset by lower protection sales[3]. Our single product range has improved margins and driven VNB up significantly over the year.

1 UK Life Other represents changes in assumptions and modelling, non-recurring items and non-product specific overheads | 2 Operating profit represents Group adjusted operating profit which is a non-GAAP APM. Operating profit is not bound by the requirements of IFRS. Further details are included in the 'Other information' section. | 3 References to sales represent present value of new business premiums (PVNBP) which is an Alternative Performance Measure (APM) and further information can be found in the 'Other information' section | 4 Wealth and Other

	Net flows			Assets under management			
	6 months 2022 £m	6 months 2021 £m	Sterling % change	**30 June 2022 £m**	30 June 2021 £m	Sterling % change	Full year 2021 £m
Wealth	**4,962**	5,173	(4)%	**140,425**	141,234	(1)%	152,207
of which: platform	**2,547**	2,834	(10)%	**40,280**	39,012	3 %	43,101
of which: workplace	**2,699**	2,697	— %	**88,463**	89,154	(1)%	95,798
of which: individual pensions	**(284)**	(358)	21 %	**11,682**	13,068	(11)%	13,308

Wealth net flows were down 4% to £5.0 billion (HY21: £5.2 billion), reflecting lower flows due to the current market uncertainty. Within our platform business, our adviser platform saw net flows down 9% to £2.4 billion (HY21: 2.7 billion) driven by subdued new business activity owing to market volatility. Workplace net flows were flat at £2.7 billion despite lower new business as the prior year benefitted from schemes that were delayed from 2020.

Wealth assets under management reduced by 8% to £140 billion during the first six months (2021: £152 billion) due to adverse market movements.

General Insurance

Operating profit	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
UK	**159**	169	(6)%	318
Ireland	**12**	22	(45)%	38
Canada	**204**	229	(11)%	406
General Insurance Total	**375**	420	(11)%	762

Operating profit[1] decreased to £375 million (HY21: £420 million), a good performance despite higher claim costs, as the level of claims returned to a more normal level following lower claim frequency from COVID-19 restrictions in the prior year, and less favourable weather compared with the first half of 2021. This was partially offset by volume growth and an improvement in long-term investment return due to higher yields from reinvestment in hedged equities and corporate bonds.

General Insurance Solvency II OFG of £367 million (HY21: £315 million) was up 17% in the first half. UK & Ireland GI Solvency II OFG of £193 million (HY21: £121 million) was up 60% driven by a strong performance in commercial lines and a higher long-term investment return due to re-risking. In Canada, Solvency II OFG of £174 million (HY21: £194 million) was down 10% due to less favourable weather and non-recurrence of COVID-19 frequency benefits.

	GWP										COR			
	Personal lines			Commercial lines			Total			Total				
	6 months 2022 £m	6 months 2021 £m	Sterling % change	**6 months 2022 £m**	6 months 2021 £m	Sterling % change	**6 months 2022 £m**	6 months 2021 £m	Sterling % change	Full year 2021 £m	**6 months 2022 %**	6 months 2021 %	Sterling % change	Full year 2021 %
UK	**1,198**	1,213	(1)%	**1,430**	1,280	12 %	**2,628**	2,493	5 %	4,943	**95.6 %**	93.9 %	1.7 pp	94.6 %
Ireland	**93**	105	(11)%	**119**	107	11 %	**212**	212	— %	409	**96.2 %**	89.9 %	6.3 pp	91.7 %
Canada	**1,138**	1,047	9 %	**716**	614	17 %	**1,854**	1,661	12 %	3,455	**91.7 %**	88.8 %	2.9 pp	90.7 %
Total	**2,429**	2,365	3 %	**2,265**	2,001	13 %	**4,694**	4,366	8 %	8,807	**94.0 %**	91.6 %	2.4 pp	92.9 %

UK, Ireland and Canada COR increased to 94.0% from 91.6%. UK COR increased by 1.7pp to 95.6% (HY21: 93.9%) following a return to more normal claims frequency together with higher UK weather costs relative to a benign 2021 weather experience, partly offset by improvements in underwriting performance from commercial lines supported by strong rate momentum. Canada COR deteriorated 2.9pp to 91.7% (HY21: 88.8%) due to increased claims costs, as the prior year result benefitted from higher COVID-19 frequency benefits and benign weather, partly offset by lower commission and favourable prior year development compared to the first half of last year.

Total GWP across UK, Ireland and Canada grew 8% (6% in constant currency) to £4.7 billion (HY21: £4.4 billion), including 5% growth in the UK and 12% in Canada (6% in constant currency). Ireland was flat on the prior year.

UK commercial lines GWP grew 12% to £1,430 million (HY21: £1,280 million), reflecting a favourable rating environment, high retention levels and strong new business growth, benefiting from our investment in underwriting talent and strong broker relationships. Canada commercial lines GWP increased 17% (11% in constant currency) to £716 million (HY21: £614 million) due to increased rate in the prevailing hard market and new business growth in mid-market and large corporate accounts.

UK personal lines GWP was 1% lower at £1,198 million (HY21: £1,213 million). Retail premiums were stable with growth in household business partly offsetting a reduction in motor, as we maintained pricing discipline in a soft rating environment. Intermediated premiums were 2% lower as we continue to reshape the portfolio towards more profitable segments. Canada personal lines GWP of £1,138 million (HY21: £1,047 million) was up 9% (4% in constant currency) due to rate increases against the current inflationary environment and new business growth in our direct business.

1 Operating profit represents Group adjusted operating profit which is a non-GAAP APM. Operating profit is not bound by the requirements of IFRS. Further details are included in the 'Other information' section.

Aviva Investors

Operating profit	6 months 2022	6 months 2021	Sterling % change
Aviva Investors	**14**	19	(26)%

Aviva Investors operating profit[1] reduced to £14 million (HY21: £19 million), but increased to £25 million (HY21: £24 million) excluding cost reduction implementation and strategic investment costs, driven by a bigger impact of cost reduction initiatives which included the completion of the first phase of the transition to a new scalable real assets operating model with loan servicing successfully outsourced to Mount Street. Cost efficiency measures and streamlining of the business resulted in a 2% reduction in baseline controllable costs to £165 million (HY21: £168 million). The cost income ratio remained flat at 87% (HY21: 87%).

	Net flows			Assets under management			
	6 months 2022 £m	6 months 2021 £m	Sterling % change	6 months 2022 £m	6 months 2021[3] £m	Sterling % change	Full Year 2021 £m
Aviva Investors	**(4,253)**	829	(613)%	**231,742**	258,382	(10)%	267,780
Of which: Aviva Investors external assets[2]	**202**	1,084	(81)%	**40,464**	53,052	(24)%	51,332

Aviva Investors outflows, excluding cash and liquidity funds, totalled £(4.3) billion compared to net inflows of £0.8 billion in the first half of 2021. This reflected expected outflows from internal assets, mainly Heritage, and withdrawals by clients previously part of the Group, mainly in France. External net inflows, excluding strategic actions and cash and liquidity funds, were £0.2 billion (HY21: £1.1 billion). AUM reduced by £36 billion during the first half of 2022 to £232 billion, predominantly driven by adverse market movements across all asset classes in the period.

Our long-term outlook remains positive as we continue to build and deliver growth through our strengths of environmental, social and governance (ESG), real assets, infrastructure, credit and sustainable equities.

International Investments

International Investments comprises our joint ventures and associates in Singapore, China and India, providing us with value creation potential and optionality in attractive and fast-growing markets.

	6 months 2022 £m	6 months 2021 £m	Sterling % change
Operating profit	**55**	55	— %
PVNBP	**569**	617	(8)%
VNB	**46**	59	(23)%

Operating profit[1] was flat at £55 million (HY21: £55 million). PVNBP of £569 million (HY21: £617 million) and VNB of £46 million (HY21: £59 million) were down on the prior year due to the impact of COVID-19 restrictions in China impacting volumes and strong prior year comparatives from new product launches in Singapore in 2021. Solvency II OFG was down 11% to £75 million (HY21: £84 million).

Corporate centre costs, Group debt costs and Other

Corporate centre costs and Other operations of £138 million (HY21: £134 million) increased due to higher cost reduction implementation, IFRS 17 costs and project costs. Excluding these costs, corporate centre costs of £68 million were down 7% versus HY21.

Group debt costs and other interest reduced to £128 million (HY21: £180 million). External debt costs reduced 23% as a result of £1.9 billion reduction in external debt in 2021. Internal lending arrangements are lower than prior year due to early repayment of capital towards the end of 2021 and partially offset by higher interest rates. Net finance income on the main UK pension scheme increased due to an increase in interest rates and opening assets.

1 Operating profit represents Group adjusted operating profit which is a non-GAAP APM. Operating profit is not bound by the requirements of IFRS. Further details are included in the 'Other information' section. | 2 External net flows above exclude net flows from strategic actions. | 3 Assets under management at 30 June 2021 have been re-presented in line with disclosures at 31 December 2021 to reflect movements in continuing and discontinued business, and a re-classification of certain funds between internal and external.

Cautionary statements

This document should be read in conjunction with the documents distributed by Aviva plc (the 'Company' or 'Aviva') through The Regulatory News Service (RNS). This announcement contains, and we may make other verbal or written 'forward-looking statements' with respect to certain of Aviva's plans and current goals and expectations relating to future financial condition, performance, results, strategic initiatives and objectives. Statements containing the words 'believes', 'intends', 'expects', 'projects', 'plans', 'will', 'seeks', 'aims', 'may', 'could', 'outlook', 'likely', 'target', 'goal', 'guidance', 'trends', 'future', 'estimates', 'potential' and 'anticipates', and words of similar meaning, are forward-looking. By their nature, all forward-looking statements involve risk and uncertainty. Accordingly, there are or will be important factors that could cause actual results to differ materially from those indicated in these statements. Aviva believes factors that could cause actual results to differ materially from those indicated in forward-looking statements in the announcement include, but are not limited to: the impact of ongoing uncertain conditions in the global financial markets and the local and international political and economic situation generally (including those arising from the Russia-Ukraine conflict); market developments and government actions (including those arising from the evolving relationship between the UK and the EU); the effect of credit spread volatility on the net unrealised value of the investment portfolio; the effect of losses due to defaults by counterparties, including potential sovereign debt defaults or restructurings, on the value of our investments; changes in interest rates that may cause policyholders to surrender their contracts, reduce the value or yield of our investment portfolio and impact our asset and liability matching; the unpredictable consequences of reforms to reference rates, including LIBOR; the impact of changes in short or long-term inflation; the impact of changes in equity or property prices on our investment portfolio; fluctuations in currency exchange rates; the effect of market fluctuations on the value of options and guarantees embedded in some of our life insurance products and the value of the assets backing their reserves; the amount of allowances and impairments taken on our investments; the effect of adverse capital and credit market conditions on our ability to meet liquidity needs and our access to capital; changes in, or restrictions on, our ability to initiate capital management initiatives; changes in or inaccuracy of assumptions in pricing and reserving for insurance business (particularly with regard to mortality and morbidity trends, lapse rates and policy renewal rates), longevity and endowments; a cyclical downturn of the insurance industry; the impact of natural and man-made catastrophic events (including the longer-term impact of COVID-19) on our business activities and results of operations; the transitional, litigation and physical risks associated with climate change; failure to understand and respond effectively to the risks associated with environmental, social or governance ("ESG") factors; our reliance on information and technology and third-party service providers for our operations and systems; the impact of the Group's risk mitigation strategies proving less effective than anticipated, including the inability of reinsurers to meet obligations or unavailability of reinsurance coverage; poor investment performance of the Group's asset management business; the withdrawal by customers at short notice of assets under the Group's management; failure to manage risks in operating securities lending of Group and third-party client assets; increased competition in the UK and in other countries where we have significant operations; regulatory approval of changes to the Group's internal model for calculation of regulatory capital under the UK's version of 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 and malicious acts (including cyber attack and theft, loss or misuse of customer data); 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 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 tax laws and interpretation of existing tax laws in jurisdictions where we conduct business; changes to International Financial Reporting Standards relevant to insurance companies and their interpretation (for example, IFRS 17); the inability to protect our intellectual property; the effect of undisclosed liabilities, separation issues and other risks associated with our business disposals; and other uncertainties, such as diversion of management attention and other resources, 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, Canada or elsewhere, including changes to and the implementation of key legislation and regulation (for example, FCA Consumer Duty and Solvency II). Please see Aviva's most recent Annual Report and Accounts for further details of risks, uncertainties and other factors relevant to the business and its securities.

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

This report has been prepared for, and only for, the members of the Company, as a body, and no other persons. The Company, its directors, employees, agents or advisers do not accept or assume responsibility to any other person to who this document is shown or into whose hands it may come, and any such responsibility or liability is expressly disclaimed.

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Notes to editors

- All figures have been retranslated at average exchange rates applying for the period, with the exception of the capital position which is translated at the closing rates on 30 June 2022. The average rates employed in this announcement are 1 euro = £0.84 (6 months to 30 June 2021: 1 euro = £0.87) and CAD$1 = £0.61 (6 months to 30 June 2021: CAD$1 = £0.58).
- 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. All percentages, including currency movements, are calculated on unrounded numbers so minor rounding differences may exist.
- Throughout this report we use a range of financial metrics to measure our performance and financial strength. These metrics include Alternative Performance Measures (APMs), which are non-GAAP measures that are not bound by the requirements of IFRS and Solvency II. A complete list and further guidance in respect of the APMs used by the Group can be found in the 'Other information' section.
- We are the UK's leading Insurance, Wealth & Retirement business and we operate in the UK, Ireland and Canada. We also have international investments in Singapore, China and India.
- We help our 18.5 million customers make the most out of life, plan for the future, and have the confidence that if things go wrong we'll be there to put it right.
- We have been taking care of people for 325 years, in line with our purpose of being 'with you today, for a better tomorrow'. In 2021, we paid £30.2 billion in claims and benefits to our customers.
- Aviva is a market leader in sustainability. In 2021, we announced our plan to become a Net Zero carbon emissions company by 2040, the first major insurance company in the world to do so. This plan means Net Zero carbon emissions from our investments by 2040; setting out a clear pathway to get there with a cut of 25% in the carbon intensity of our investments by 2025 and of 60% by 2030; and Net Zero carbon emissions from our own operations and supply chain by 2030. Find out more about our climate goals at www.aviva.com/climate-goals and our sustainability ambition and action at www.aviva.com/sustainability
- Aviva is a Living Wage and Living Hours employer and provides market-leading benefits for our people, including flexible working, paid carers leave and equal parental leave. Find out more at www.aviva.com/about-us/our-people
- As at 30 June 2022, total Group assets under management at Aviva Group are £353 billion and our Solvency II shareholder capital surplus is £10.3 billion. Our shares are listed on the London Stock Exchange and we are a member of the FTSE 100 index.
- For more details on what we do, our business and how we help our customers, visit www.aviva.com/about-us

Click on, or paste the following link into your web browser, to view the complete Press Release and Half Year Report PDF document:

The document is available to view on the Company's website at https://www.aviva.com/investors/reports/ and copies have been submitted to the National Storage Mechanism and will shortly be available for inspection at https://data.fca.org.uk/#/nsm/nationalstoragemechanism.

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Rupert Taylor Rea	+44(0) 7385 494 440	Andrew Reid	+44(0) 7800 694 276	Presentation slides:	0700 hrs BST
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Michael O'Hara	+44(0) 7837 234 388	Steve Whitelock	+44(0) 7800 691 128	Analyst conference call / audiocast:	0845 hrs BST
				https://www.aviva.com	

Contents

As a reminder

Throughout this report we use a range of financial metrics to measure our performance and financial strength. These metrics include Alternative Performance Measures (APMs), which are non-GAAP measures that are not bound by the requirements of IFRS and Solvency II. Further guidance in respect of the APMs used by the Group, including a reconciliation to the financial statements (where possible), can be found within the Other Information section.

The financial performance of our key markets are presented as UK & Ireland Life, General Insurance (incorporating UK & Ireland and Canada) and Aviva Investors. Our International businesses are presented as International investments (consisting of our interest in Singapore (Aviva Singlife), China and India) previously referred to as Strategic investments.

Following the completion of disposals in 2021, the results of these businesses, which includes France, Italy, Poland, Turkey and Vietnam are presented as discontinued operations in the Half Year 2021 and Full Year 2021 comparatives. The Half Year 2021 and Full Year 2021 comparatives for discontinued operations are unchanged from those disclosed in the Half Year Report 2021 and the Annual Report and Accounts 2021. There are no discontinued operations in the current period.

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

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

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

1 – Profit and earnings per share

	Note	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
UK & Ireland Life		**651**	545	1,428
UK & Ireland General Insurance		**171**	191	356
Canada		**204**	229	406
Aviva Investors		**14**	19	41
UK, Ireland, Canada and Aviva Investors		**1,040**	984	2,231
International investments		**55**	55	97
Corporate centre costs and Other operations	A2	**(138)**	(134)	(379)
Group debt costs and other interest	A3	**(128)**	(180)	(315)
Operating profit from continuing operations		**829**	725	1,634
Discontinued operations		**—**	407	631
Operating profit		**829**	1,132	2,265
Tax attributable to shareholders' profit		**(149)**	(263)	(470)
Non-controlling interests		**(11)**	(35)	(71)
Preference dividends and other		**(9)**	(9)	(17)
Operating profit attributable to ordinary shareholders		**660**	825	1,707
Operating earnings per share (as reported)		**19.0p**	21.0p	43.8p
Operating earnings per share (normalised)[1]		**23.5p**	N/A	N/A
IFRS (loss)/profit for the period[2]		**(633)**	(198)	2,036
Basic earnings per share		**(18.8)p**	(6.2)p	50.1p

1 Normalised earnings per share (EPS) is calculated as if the share consolidation completed on 16 May 2022 as part of £3.75 billion capital return, had taken place on 1 January 2022.
2 See note A1 for the reconciliation of Group adjusted operating profit to IFRS (loss)/profit for the period.

Operating profit from continuing operations increased by 14% to £829 million (HY21: £725 million). UK, Ireland, Canada and Aviva Investors operating profit increased by 6% to £1,040 million (HY21: £984 million) with strong performance from our UK & Ireland Life Insurance markets, partially offset by lower operating profit in UK & Ireland General Insurance, Canada and Aviva Investors.

In the UK & Ireland Life businesses, operating profit increased by 19% to £651 million (HY21: £545 million), driven by higher bulk purchase annuities (BPA) margins and improved experience within Ireland Life. This was offset by reduced operating profit in Protection & Health due to non-recurrence of 2021 favourable claims experience as well as unfavourable impact of the reduction in the carrying value of deferred acquisition costs which was driven by market movements.

In the UK & Ireland General Insurance businesses, operating profit decreased by 10% to £171 million (HY21: £191 million). The UK saw return to normal claims frequency and higher weather costs compared to a benign 2021, whilst also seeing the impacts of increased inflation. Commercial lines continues to grow market share through profitable new business growth and strong rate momentum, and personal lines continues to maintain pricing discipline in a soft market.

In Canada, operating profit decreased by 11% to £204 million (HY21: £229 million) due to increased claims frequency resulting from a harsher winter season combined with an increase in driving behaviour, heightened claims severity including the impact of inflation and higher weather related CAT experience. This was partially offset by favourable prior year reserve development and the impact of our continued actions around pricing, indemnity management and risk selection.

Aviva Investors operating profit decreased to £14 million (HY21: £19 million), or £25 million (HY21: £24 million) excluding cost reduction implementation, driven by a bigger impact of cost reduction initiatives which included the completion of the first phase of the transition to a new scalable real assets operating model with loan servicing successfully outsourced to Mount Street.

International investments operating profit was consistent with prior period at £55 million (HY21: £55 million) with improved performance in China offset by a reduction in operating profit in Singapore against a particularly strong first half in 2021.

On 2 March 2022, Aviva announced a further capital return of £3.75 billion via a B Share Scheme which completed on 16 May 2022. During the period the share consolidation has resulted in a reduction of 884,957,280 shares. If the share consolidation had taken place on 1 January 2022, this would have resulted in normalised operating earnings per share of 23.5 pence for the six months ended 30 June 2022.

IFRS loss for the period has increased to £(633) million (HY21: £(198) million) and basic earnings per share has decreased to (18.8) pence (HY21: (6.2) pence). This is primarily due to adverse impact of £1,470 million (HY21: adverse impact of £437 million) from short-term fluctuations, economic assumptions changes and investment variances. See notes A4 and A5 for further information.

2 – Cash and Centre liquidity

2.i – Cash remittances

The table below reflects actual remittances received by the Group from our markets, comprising dividends and interest on internal loans. Cash remittances are eliminated on consolidation and hence are not directly reconcilable to the Group's IFRS statement of cash flows.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
UK & Ireland Life[1,2]	**706**	983	1,219
UK & Ireland General Insurance[1,2]	**59**	52	261
Canada[1,2]	**14**	17	156
Aviva Investors	**—**	—	15
UK, Ireland, Canada and Aviva Investors	**779**	1,052	1,651
International investments	**19**	11	11
Cash remittances from continuing operations	**798**	1,063	1,662
Discontinued operations[1] and Other	**—**	233	237
Total	**798**	1,296	1,899

1 We use a wholly-owned, UK domiciled reinsurance subsidiary for internal capital and cash management purposes. Some remittances otherwise attributable to the operating businesses arise from this internal reinsurance vehicle.
2 In 2022 a review was undertaken of the basis of allocation of remittances from Aviva's internal reinsurance vehicle. From April 2022, remittances are allocated to business units using an aggregate capital basis, previously remittances were allocated on a first in, first out basis.

Cash remittances from our continuing operations are lower in the first half of 2022 compared to the same period in 2021, reflecting return to normal cash remittance levels from businesses after a period of unprecedented economic and market uncertainty related to COVID-19.

2.ii – Centre liquidity

Centre liquidity comprises cash and liquid assets. Excess centre cash flow represents cash remitted by our businesses 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 or invest back into our businesses.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Cash remittances	**798**	1,296	1,899
External interest paid	**(164)**	(217)	(388)
Internal interest paid	**—**	—	(40)
Central spend	**(254)**	(154)	(432)
Other operating cash flows[1]	**81**	70	62
Excess centre cash inflow	**461**	995	1,101
Ordinary dividend	**(541)**	(554)	(841)
Net reduction in borrowings	**(2)**	(2,035)	(2,035)
External disposal proceeds	**—**	477	6,150
Capital return and share buyback	**(3,895)**	—	(853)
Net reduction/(increase) in internal borrowings	**500**	—	(708)
Other non-operating cash flows[2]	**(432)**	(151)	(255)
Movement in centre liquidity	**(3,909)**	(1,268)	2,559
Centre liquidity as at end of July/February	**2,735**	2,817	6,644

1 Other operating cash flows include pension scheme funding and group tax relief payments.
2 Other non-operating cash flows include capital injections, other investment cash flows and transaction costs paid on disposals.

The decrease of £3,909 million in centre liquidity from full year 2021 is primarily driven by the £3,750 million capital return, ordinary dividends to external shareholders of £541 million and share buyback of £145 million, offset by cash remittances of £798 million. Net reduction in borrowings includes the redemption of the Group's 8.250% £500 million Tier 2 subordinated notes that reached their final maturity date on 21 April 2022, offset by £500 million of 6.875% fixed rate reset perpetual Restricted Tier 1 contingent convertible notes issued by the Group on 15 June 2022. Net reduction of internal borrowings of £500 million represents the repayment of an internal loan. A capital contribution to a subsidiary entity of £500 million made to facilitate the repayment of the external debt is included within other non-operating cash flows.

3 – Controllable costs

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Baseline controllable costs[1]			
UK & Ireland Life	**515**	545	1,102
UK & Ireland General Insurance	**350**	357	713
Canada	**197**	189	399
Aviva Investors	**165**	168	345
UK, Ireland, Canada and Aviva Investors	**1,227**	1,259	2,559
Corporate centre costs and Other operations[3]	**115**	113	295
Baseline controllable costs from continuing operations	**1,342**	1,372	2,854
Cost reduction Implementation, IFRS 17 costs and other[2,3]	**103**	75	242
Strategic Investment	**34**	—	—
Continuing operations	**1,479**	1,447	3,096
Discontinued operations	**—**	375	590
Group controllable costs	**1,479**	1,822	3,686

1 Baseline controllable costs are controllable costs included in the scope of the 2018 cost savings target baseline.
2 'Other' includes costs relating to recently acquired entities, non-insurance operations relating to Europe and Asia and the impact of foreign exchange movements which were not included in the 2018 cost savings target baseline.
3 Following a review of the presentation of controllable costs, comparative amounts have been amended to reclassify foreign exchange rate movements and amounts relating to non-insurance operations relating to Europe and Asia from 'other operations' into 'other' as these amounts were not included in the 2018 cost savings target baseline.

Baseline controllable costs from continuing operations have reduced by £30 million to £1,342 million (HY21: £1,372 million). This reflects our relentless focus on operating efficiency with the decrease driven by planned savings mainly due to lower staff costs, lower property costs and other operational savings.

The reduction in baseline controllable costs in UK & Ireland Life reflects the continued progress on cost savings targets and delivery of targeted efficiencies. The UK & Ireland General Insurance costs decreased as a result of ongoing cost reduction actions. Costs in Canada have increased due to additional investment in pricing and IT infrastructure, offsetting savings in other operational costs. The decrease in Aviva Investors reflects continued focus on cost reduction actions and streamlining of the business. Corporate centre costs and Other operations has seen a slight increase with increased project spend largely offset by the benefits seen from delivery of cost saving initiatives.

4 – Solvency II performance

4.i – Solvency II operating own funds generation

Solvency II operating own funds generation is used by the Group to assess sustainable growth across the UK, Ireland and Canada.

	Solvency II operating own funds generation				
6 months 2022	Impact of new business (life) £m	Earnings from existing business (life) £m	Non-life capital generation £m	Management actions and other[1] £m	Total £m
UK & Ireland Life	159	148	—	21	328
UK & Ireland General Insurance	—	—	195	(2)	193
Canada	—	—	161	13	174
Aviva Investors	—	—	14	—	14
UK, Ireland, Canada and Aviva Investors	159	148	370	32	709
International investments	36	40	—	(1)	75
Corporate centre costs and Other	—	—	(135)	—	(135)
Group external debt costs	—	—	(111)	—	(111)
Continuing operations	195	188	124	31	538
Discontinued operations	—	—	—	—	—
Solvency II operating own funds generation	195	188	124	31	538

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.

	Solvency II operating own funds generation				
6 months 2021	Impact of new business (life) £m	Earnings from existing business (life) £m	Non-life capital generation £m	Management actions and other[1] £m	Total £m
UK & Ireland Life	160	61	—	(4)	217
UK & Ireland General Insurance	—	—	129	(8)	121
Canada	—	—	191	3	194
Aviva Investors	—	—	18	—	18
UK, Ireland, Canada and Aviva Investors	160	61	338	(9)	550
International investments	48	42	—	(6)	84
Corporate centre costs and Other[2]	—	(1)	(114)	(5)	(120)
Group external debt costs	—	—	(145)	—	(145)
Continuing operations	208	102	79	(20)	369
Discontinued operations[2]	54	170	65	52	341
Solvency II operating own funds generation	262	272	144	32	710

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.
2 Following a review of Group adjustments in respect of discontinued operations, comparative amounts for the 6 months ended 30 June 2021 have been amended to reclassify these as Discontinued operations from Corporate centre costs and Other.

	Solvency II operating own funds generation				
Full year 2021	Impact of new business (life) £m	Earnings from existing business (life) £m	Non-life capital generation £m	Management actions and other[1] £m	Total £m
UK & Ireland Life	360	314	—	279	953
UK & Ireland General Insurance	—	—	330	9	339
Canada	—	—	326	6	332
Aviva Investors	—	—	36	—	36
UK, Ireland, Canada and Aviva Investors	360	314	692	294	1,660
International investments	63	62	—	(1)	124
Corporate centre costs and Other	—	(3)	(340)	1	(342)
Group external debt costs	—	—	(255)	—	(255)
Continuing operations	423	373	97	294	1,187
Discontinued operations	90	321	45	2	458
Solvency II operating own funds generation	513	694	142	296	1,645

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.

Solvency II operating own funds generation from continuing operations has increased by £169 million to £538 million (HY21: £369 million).

In the UK & Ireland Life businesses, Solvency II operating own funds generation has increased by £111 million to £328 million (HY21: £217 million) mainly due to increased earnings from existing business driven by improved demographic experience and a higher impact from management actions and other.

In the UK & Ireland General Insurance businesses, Solvency II operating own funds generation has increased by £72 million to £193 million (HY21: £121 million). This is driven by strong performance from retention and new business growth in commercial lines, lower expenses in personal lines business and higher long-term investment return due to re-risking in the second half of 2021. The improvements were partly offset by higher weather costs from storms in the UK in February 2022 and the impacts of increased inflation.

In Canada, Solvency II operating own funds generation has decreased by £20 million to £174 million (HY21: £194 million), mainly due to less favourable weather and non-recurrence of COVID-19 frequency benefits. This has been partly offset by beneficial prior year reserve developments.

Solvency II operating own funds generation from our International investments has decreased by £9 million to £75 million (HY21: £84 million).

Solvency II operating own funds generation has benefitted from a reduction in Group external debt costs, £(111) million in the first half of 2022 (HY21: £(145) million) as a result of the £1.9 billion reduction in external debt in 2021.

4.ii – Solvency II return on capital/equity

Solvency II return on capital/equity measures return generated on shareholder capital at our market level and Group level and is used by the Group to assess performance, as we look to deliver long-term value for our shareholders.

6 months 2022	Solvency II OFG (post TMTP adjustment) £m	Opening own funds £m	Solvency II return on capital[1] %
Market Solvency II return on capital			
UK & Ireland Life	356	13,830	5.1 %
UK & Ireland General Insurance[2]	193	2,339	16.5 %
Canada	174	1,746	19.9 %
Aviva Investors	14	400	7.0 %
UK, Ireland, Canada and Aviva Investors	737	18,315	8.0 %
International investments	75	982	15.3 %
Discontinued operations	—	—	— %

6 months 2022	Solvency II OFG (post TMTP adjustment) £m	Opening own funds[3] £m	Solvency II return on equity[1] %
Group Solvency II return on equity			
Group Solvency II return on equity	539	9,884	10.9 %
Group Solvency II return on equity (excluding UK Life Heritage business)[4]	520	8,445	12.3 %

1 Solvency II return on capital/equity is calculated on an annualised basis.
2 For UK General Insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets. This is only applicable to UK General Insurance Solvency II return on capital and not to the aggregated Group Solvency II return on equity measure.
3 Opening own funds for Group Solvency II return on equity reflects opening unrestricted tier 1 shareholder Solvency II own funds adjusted to exclude excess capital above our target Solvency II shareholder cover ratio.
4 Group Solvency II return on equity (excluding UKL Heritage business) has been calculated on a consistent basis to Group Solvency II RoE except that an adjustment is made to remove the contribution of UK Life Heritage business from the numerator and the denominator. For Solvency II OFG for Heritage see note 6.i. When calculating opening unrestricted tier 1 shareholder Solvency II own funds attributable to UKL Heritage, adjusted to exclude excess capital, a proportion of restricted tier 1, tier 2 and tier 3 capital is assumed to be attributable to UKL Heritage with a consistent adjustment to debt costs in the numerator.

6 months 2021	Restated Solvency II OFG (post TMTP adjustment) £m	Opening own funds £m	Restated Solvency II return on capital[1,2] %
Market Solvency II return on capital			
UK & Ireland Life	260	15,073	3.4 %
UK & Ireland General Insurance[3]	121	2,401	10.1 %
Canada	194	1,534	25.3 %
Aviva Investors	18	385	9.3 %
UK, Ireland, Canada and Aviva Investors	593	19,393	6.1 %
International investments	84	909	18.5 %
Discontinued operations[4]	341	6,362	10.7 %

6 months 2021	Restated Solvency II OFG (post TMTP adjustment) £m	Opening own funds[5] £m	Restated Solvency II return on equity[1,2] %
Group Solvency II return on equity			
Group Solvency II return on equity	734	14,574	10.1 %
Group Solvency II return on equity on a continuing basis[6]	418	11,320	7.4 %
Group Solvency II return on equity on a continuing basis (excluding UK Life Heritage business)[6,7]	425	9,621	8.8 %

1 Solvency II return on capital/equity is calculated on an annualised basis.
2 Following a review of the basis of preparation of Group Solvency II return on equity and Market Solvency II return on capital, comparative amounts for the period ended 30 June 2021 have been restated. In the numerator, Transitional Measure on Technical Provisions (TMTP) run-off has been replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis and, for Group Solvency II return on equity only, the denominator has been adjusted to exclude excess capital above our target Solvency II shareholder cover ratio. Further details can be found in the 'Other Information' section.
3 For UK General Insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets. This is only applicable to UK General Insurance Solvency II return on capital and not to the aggregated Group Solvency II return on capital and Solvency II return on equity measures, with the reversal of impact included in Corporate centre costs and Other opening own funds.
4 Following a review of Group adjustments in respect of discontinued operations, comparative amounts for the 6 months ended 30 June 2021 have been amended to reclassify these as Discontinued operations from Corporate centre costs and Other. The change has no impact on the Group's Solvency II return on equity.
5 Opening own funds for Group Solvency II return on equity reflects opening unrestricted tier 1 shareholder Solvency II own funds adjusted to exclude excess capital above our target Solvency II shareholder cover ratio.
6 Group Solvency II return on equity on a continuing basis excludes our discontinued operations. Further details can be found in the 'Other Information' section.
7 Group Solvency II return on equity (excluding UK Life Heritage business) has been calculated on a consistent basis to Group Solvency II RoE except that an adjustment is made to remove the contribution of UK Life Heritage business from the numerator and the denominator. For Solvency II OFG for Heritage see note 6.i. When calculating opening unrestricted tier 1 shareholder Solvency II own funds attributable to UKL Heritage, adjusted to exclude excess capital, a proportion of restricted tier 1, tier 2 and tier 3 capital is assumed to be attributable to UKL Heritage with a consistent adjustment to debt costs in the numerator.

Full year 2021	Solvency II OFG (post TMTP adjustment) £m	Opening own funds £m	Solvency II return on capital %
Market Solvency II return on capital			
UK & Ireland Life	996	15,073	6.6 %
UK & Ireland General Insurance[1]	339	2,401	14.1 %
Canada	332	1,534	21.6 %
Aviva Investors	36	385	9.3 %
UK, Ireland, Canada and Aviva Investors	1,703	19,393	8.8 %
International investments	124	909	13.6 %
Discontinued operations	458	6,362	7.2 %

Full year 2021	Solvency II OFG (post TMTP adjustment) £m	Opening own funds[2] £m	Solvency II return on equity %
Group Solvency II return on equity			
Group Solvency II return on equity	1,648	14,574	11.3 %
Group Solvency II return on equity on a continuing basis[3]	1,215	11,320	10.7 %
Group Solvency II return on equity on a continuing basis (excluding UK Life Heritage business)[3,4]	1,184	9,621	12.3 %

1 For UK General Insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets. This is only applicable to UK General Insurance Solvency II return on capital and not to the aggregated Group Solvency II return on equity measure.
2 Opening own funds for Group Solvency II return on equity reflects opening unrestricted tier 1 shareholder Solvency II own funds adjusted to exclude excess capital above our target Solvency II shareholder cover ratio.
3 Group Solvency II return on equity on a continuing basis excludes our discontinued operations. Further details can be found in the 'Other Information' section.
4 Group Solvency II return on equity (excluding UKL Heritage business) has been calculated on a consistent basis to Group Solvency II RoE except that an adjustment is made to remove the contribution of UK Life Heritage business from the numerator and the denominator. For Solvency II OFG for Heritage see note 6.i. When calculating opening unrestricted tier 1 shareholder Solvency II own funds attributable to UKL Heritage, adjusted to exclude excess capital, a proportion of restricted tier 1, tier 2 and tier 3 capital is assumed to be attributable to UKL Heritage with a consistent adjustment to debt costs in the numerator.

Solvency II RoE on a continuing basis has increased by 3.5pp to 10.9% (HY21: 7.4%) reflecting the increase in Solvency II operating own funds generation over the period and an increase of 1.1pp due to the impact of higher interest rates in 2021 on the 2022 opening capital position.

4.iii – Solvency II operating capital generation

Solvency II operating capital generation (Solvency II OCG) measures the amount of Solvency II capital the Group generates from operating activities. Capital generated enhances Solvency II surplus which can be used to support sustainable cash remittances from our businesses, which in turn, supports the Group's dividend as well as funding further investment to generate sustainable growth.

	Solvency II operating capital generation					Of which:	
6 months 2022	Impact of new business (life) £m	Earnings from existing business (life) £m	Non-life capital generation £m	Management actions and other[1] £m	Total OCG £m	Own funds OCG £m	SCR OCG £m
UK & Ireland Life	(77)	411	—	93	427	328	99
UK & Ireland General Insurance	—	—	161	(37)	124	193	(69)
Canada	—	—	142	13	155	174	(19)
Aviva Investors	—	—	16	—	16	14	2
UK, Ireland, Canada and Aviva Investors	(77)	411	319	69	722	709	13
International investments	19	15	—	(1)	33	75	(42)
Corporate centre costs and Other	—	—	(101)	13	(88)	(135)	47
Group external debt costs	—	—	(111)	—	(111)	(111)	—
Continuing operations	(58)	426	107	81	556	538	18
Discontinued operations	—	—	—	—	—	—	—
Group Solvency II operating capital generation	(58)	426	107	81	556	538	18

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.

	Solvency II operating capital generation					Of which:	
6 months 2021	Impact of new business (life) £m	Earnings from existing business (life) £m	Non-life capital generation £m	Management actions and other[1] £m	Total OCG £m	Own funds OCG £m	SCR OCG £m
UK & Ireland Life	11	354	—	119	484	217	267
UK & Ireland General Insurance	—	—	113	9	122	121	1
Canada	—	—	194	8	202	194	8
Aviva Investors	—	—	33	—	33	18	15
UK, Ireland, Canada and Aviva Investors	11	354	340	136	841	550	291
International investments	29	14	—	(6)	37	84	(47)
Corporate centre costs and Other	—	—	(116)	(223)	(339)	(120)	(219)
Group external debt costs	—	—	(145)	—	(145)	(145)	—
Continuing operations	40	368	79	(93)	394	369	25
Discontinued operations	(252)	280	114	42	184	341	(157)
Group Solvency II operating capital generation	(212)	648	193	(51)	578	710	(132)

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.
2 Following a review of Group adjustments in respect of discontinued operations, comparative amounts for the 6 months ended 30 June 2021 have been amended to reclassify these as Discontinued operations from Corporate centre costs and Other.

	Solvency II operating capital generation					Of which:	
Full year 2021	Impact of new business (life) £m	Earnings from existing business (life) £m	Non-life capital generation £m	Management actions and other[1] £m	Total OCG £m	Own funds OCG £m	SCR OCG £m
UK & Ireland Life	(84)	873	—	430	1,219	953	266
UK & Ireland General Insurance	—	—	322	(26)	296	339	(43)
Canada	—	—	353	(15)	338	332	6
Aviva Investors	—	—	53	—	53	36	17
UK, Ireland, Canada and Aviva Investors	(84)	873	728	389	1,906	1,660	246
International investments	34	18	—	3	55	124	(69)
Corporate centre costs and Other	—	(3)	(263)	(76)	(342)	(342)	—
Group external debt costs	—	—	(255)	—	(255)	(255)	—
Continuing operations	(50)	888	210	316	1,364	1,187	177
Discontinued operations	(381)	528	49	1	197	458	(261)
Group Solvency II operating capital generation	(431)	1,416	259	317	1,561	1,645	(84)

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.

Solvency II OCG for continuing operations has increased by £162 million to £556 million (HY21: £394 million).

In the UK & Ireland Life businesses, Solvency II OCG reduced by £57 million to £427 million (HY21: £484 million) primarily due to higher new business strain as BPA new business is backed by a higher proportion of illiquid assets and corporate bonds than in the first half of 2021 and a lower benefit from management actions and other which included additional equity hedging in 2021. This is partly offset by higher operating own funds generation.

In the UK & Ireland General Insurance businesses, Solvency II OCG has increased slightly by £2 million to £124 million (HY21: £122 million). The increase in Solvency II operating own funds generation is mostly offset by increases in capital requirements due to re-risking activity in the first half of 2022.

In Canada, Solvency II OCG has decreased by £47 million to £155 million (HY21: £202 million), mainly due to less favourable weather impacts, non-recurrence of COVID-19 frequency benefits and inflationary impacts on expected profits partially offset by beneficial prior year reserve developments.

Solvency II OCG in respect of our International investments reduced by £4 million to £33 million (HY21: £37 million) for the six month period ended 30 June 2022.

Corporate centre costs & Other Solvency II OCG has increased by £251 million to £(88) million (HY21: £(339) million) driven by the non-recurrence of the unwind of the Group Centre equity hedges in the first half of 2021.

5 – Solvency II capital position

5.i – Solvency II position (shareholder view)

Shareholder view cover ratio	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Own funds	**18,009**	23,595	22,150
Solvency capital requirement	**(7,709)**	(11,601)	(9,076)
Estimated Solvency II surplus	**10,300**	11,994	13,074
Estimated Solvency II shareholder cover ratio	**234 %**	203 %	244 %

The estimated Solvency II shareholder cover ratio is 234% at 30 June 2022. The Solvency II position disclosed is based on a 'shareholder view'. The shareholder view is considered by management to be more representative of the shareholders' risk exposure and the Group's ability to cover the solvency capital requirement with eligible own funds and aligns with management's approach to dynamically manage its capital position. In arriving at the shareholder position, the following adjustments are typically made to the regulatory Solvency II position:

- The contribution to the Group's SCR and own funds of the most material fully ring-fenced with-profits funds of £1.7 billion at 30 June 2022 (2021: £2.2 billion) and staff pension schemes in surplus of £1.0 billion at 30 June 2022 (2021: £1.2 billion) are excluded. These exclusions have no impact on Solvency II surplus as these funds are self-supporting on a Solvency II capital basis with any surplus capital above SCR not recognised.
- A notional reset of the TMTP, calculated using the same method as used for formal TMTP resets. This presentation avoids step changes to the Solvency II position that arise only when the formal TMTP reset points are triggered. The 30 June 2022 Solvency II position includes a notional reset (an application for a formal reset has been submitted to the regulator and our regulatory position will be updated once approved, expected in Q3 2022) of £1.0 billion while the 31 December 2021 Solvency II position included a formal, rather than notional, reset of the TMTP in line with the regulatory requirement to reset the TMTP at least every two years and hence no adjustment was required.
- Adjustments are made if the Solvency II shareholder cover ratio does not fully reflect the effect of future regulatory changes that are known as at each reporting date. These adjustments are made in order to show a more representative view of the Group's solvency position. No adjustments for future regulatory changes are included in the 30 June 2022 or 31 December 2021 Solvency II position. The 30 June 2021 Solvency II position includes a pro forma adjustment for the impact of a regulatory change to GBP risk-free rates.

	30 June 2022			30 June 2021			31 December 2021		
	Own funds £m	SCR £m	Surplus £m	Own funds £m	SCR £m	Surplus £m	Own funds £m	SCR £m	Surplus £m
Estimated Solvency II regulatory surplus	**21,540**	**(10,290)**	**11,250**	27,129	(14,975)	12,154	25,573	(12,499)	13,074
Fully ring-fenced with-profit funds	**(1,711)**	**1,711**	**—**	(2,266)	2,266	—	(2,205)	2,205	—
Staff pension schemes in surplus	**(1,045)**	**1,045**	**—**	(1,151)	1,151	—	(1,218)	1,218	—
Notional reset of TMTP	**(775)**	**(175)**	**(950)**	280	—	280	—	—	—
PPE[1]	**—**	**—**	**—**	(305)	—	(305)	—	—	—
Pro forma adjustments[2]	**—**	**—**	**—**	(92)	(43)	(135)	—	—	—
Estimated Solvency II shareholder surplus	**18,009**	**(7,709)**	**10,300**	23,595	(11,601)	11,994	22,150	(9,076)	13,074

1 French insurers are permitted to place a part of the Provision pour Participation aux Excédents (PPE) into Solvency II own funds. At 30 June 2021 PPE of £0.3 billion is included within Group regulatory own funds but remains excluded from the shareholder position as agreed with the regulator. At 31 December 2021 and 30 June 2022 this is no longer included following the disposal of France.

2 The 30 June 2021 Solvency II position includes a pro forma adjustment for the impact of a regulatory change to GBP risk-free rates. From 31 July 2021, these rates are based on Sterling Overnight Index Average (SONIA) rather than London Inter-Bank Offered Rate (LIBOR).

The pro forma Solvency II cover ratio allowing for £1 billion further debt reduction over time, £0.1 billion one-off payment in relation to our staff pension schemes as a result of our excess capital position and the acquisition of Succession Wealth is 213% at 30 June 2022. The acquisition of Succession Wealth is subject to regulatory approval and is expected to complete in the second half of 2022.

5.ii – Movement in Solvency II surplus

Shareholder view movement	6 months 2022 Own funds £m	6 months 2022 SCR £m	6 months 2022 Surplus £m	6 months 2021 Own funds £m	6 months 2021 SCR £m	6 months 2021 Surplus £m	Full year 2021 Own funds £m	Full year 2021 SCR £m	Full year 2021 Surplus £m
Group Solvency II surplus at 1 January	**22,150**	**(9,076)**	**13,074**	25,770	(12,770)	13,000	25,770	(12,770)	13,000
Operating capital generation	**538**	**18**	**556**	710	(132)	578	1,645	(84)	1,561
Non-operating capital generation	**(369)**	**1,349**	**980**	(744)	1,092	348	(1,310)	1,156	(154)
Dividends[1]	**(560)**	**—**	**(560)**	(568)	—	(568)	(874)	—	(874)
(Repayment)/issue of debt	**—**	**—**	**—**	(1,506)	—	(1,506)	(1,506)	—	(1,506)
Capital return / Share buyback	**(3,750)**	**—**	**(3,750)**	—	—	—	(1,000)	—	(1,000)
Disposals completed	**—**	**—**	**—**	(67)	209	142	(575)	2,622	2,047
Estimated Solvency II surplus at 30 June/31 December	**18,009**	**(7,709)**	**10,300**	23,595	(11,601)	11,994	22,150	(9,076)	13,074

1 Dividends includes £9 million (2021: £17 million) of Aviva plc preference dividends and £10 million (2021: £21 million) of General Accident plc preference dividends.

The estimated Solvency II surplus is £10,300 million at 30 June 2022 (2021: £13,074 million), with a Solvency II shareholder cover ratio of 234% (2021: 244%). The decrease in surplus and cover ratio since 31 December 2021 is mainly due to £3.75 billion capital return to shareholders (reducing Solvency II shareholder cover ratio by 41pp) and the payment of the 2021 dividend partially offset by operating and non-operating capital generation. Non-operating capital generation includes the impact of market movements primarily from increase in interest rates and widening of credit spreads.

5.iii – Analysis of SCR

The table below summarises the SCR by market. The Group diversification between markets is the SCR diversification arising from the sum of the SCR for each market being higher than the SCR at Group. The benefit from Group diversification remains unchanged and is £1.9 billion at 30 June 2022 (2021: £1.9 billion) .

SCR by market	30 June 2022 £bn	31 December 2021 £bn
UK and Ireland Life	**5.9**	7.3
UK and Ireland General Insurance	**1.5**	1.5
Canada	**0.6**	0.6
Aviva Investors	**0.3**	0.3
International Investments	**0.8**	0.8
Group centre and other	**0.5**	0.5
Group diversification	**(1.9)**	(1.9)
Total	**7.7**	9.1

The composition by market has remained stable with the reduction in the UK & Ireland Life SCR primarily due to higher interest rates.

The table below summarises the diversified SCR by risk:

SCR by risk	30 June 2022 £bn	31 December 2021 £bn
Credit risk	**1.8**	2.1
Equity risk	**1.0**	1.1
Interest rate risk	**0.1**	0.0
Other market risk	**0.9**	1.0
Life insurance risk	**2.1**	2.9
General insurance risk	**0.8**	0.8
Operational risk	**0.9**	0.9
Other risk	**0.1**	0.3
Total	**7.7**	9.1

The SCR has decreased by £1.4 billion to £7.7 billion since 31 December 2021 primarily due to interest rate rises over the period which affect several risks through the impact of discounting.

5.iv – Solvency II sensitivities

Sensitivity analysis of Solvency II shareholder surplus and cover ratio

The following sensitivity analysis of Solvency II shareholder surplus and cover ratio 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 in the SCR calculation is applicable for that sensitivity. For example, future bonus rates are automatically adjusted to reflect sensitivity changes to future investment returns.

The table below shows the absolute change in Solvency II shareholder surplus and cover ratio under each sensitivity, e.g. a 2pp positive impact would result in a Solvency II shareholder cover ratio of 236%.

Sensitivities		Impact on surplus 30 June 2022 £bn	Impact on shareholder cover ratio 30 June 2022	Impact on surplus 31 December 2021 £bn	Impact on shareholder cover ratio 31 December 2021
Changes in economic assumptions	25 bps increase in interest rate	**0.1**	**4 pp**	0.2	6 pp
	50 bps increase in interest rate	**0.1**	**8 pp**	0.3	12 pp
	100 bps increase in interest rate	**0.2**	**15 pp**	0.4	21 pp
	25 bps decrease in interest rate	**(0.1)**	**(4)pp**	(0.2)	(6)pp
	50 bps decrease in interest rate	**(0.2)**	**(8)pp**	(0.3)	(11)pp
	50 bps increase in corporate bond spread[1]	**0.1**	**5 pp**	0.2	7 pp
	100 bps increase in corporate bond spread[1]	**0.2**	**10 pp**	0.4	15 pp
	50 bps decrease in corporate bond spread[1]	**(0.3)**	**(9)pp**	(0.4)	(11)pp
	Credit downgrade on annuity portfolio[2]	**(0.5)**	**(11)pp**	(0.5)	(9)pp
	10% increase in market value of equity	**0.1**	**— pp**	0.1	— pp
	25% increase in market value of equity	**0.2**	**1 pp**	0.3	1 pp
	10% decrease in market value of equity	**(0.1)**	**(1)pp**	(0.1)	— pp
	25% decrease in market value of equity	**(0.3)**	**(2)pp**	(0.3)	(1)pp
	20% increase in value of commercial property	**0.3**	**5 pp**	0.3	6 pp
	20% decrease in value of commercial property	**(0.5)**	**(10)pp**	(0.5)	(9)pp
	20% increase in value of residential property	**0.3**	**7 pp**	0.4	8 pp
	20% decrease in value of residential property	**(0.6)**	**(11)pp**	(0.6)	(10)pp
Changes in non-economic assumptions	10% increase in maintenance and investment expenses	**(0.8)**	**(13)pp**	(0.7)	(11)pp
	10% increase in lapse rates	**(0.2)**	**(4)pp**	(0.3)	(3)pp
	5% increase in mortality/morbidity rates – life assurance	**(0.2)**	**(3)pp**	(0.2)	(2)pp
	5% decrease in mortality rates – annuity business	**(0.9)**	**(16)pp**	(1.4)	(21)pp
	5% increase in gross loss ratios	**(0.3)**	**(4)pp**	(0.2)	(3)pp

1 The corporate bond spread sensitivity is applied such that even though movements vary by rating and duration consistent with the approach in the solvency capital requirement, the weighted average spread movement equals the headline sensitivity. Fundamental spreads remain unchanged.
2 An immediate full letter downgrade on 20% of the annuity portfolio credit assets (e.g. from AAA to AA, from AA to A).

The sensitivity of Solvency II shareholder surplus to assumption changes has generally reduced over the period primarily due to our capital deployment and rising interest rates over the first half of 2022.

Limitations of sensitivity analysis

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

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

As investment markets move past various trigger levels, management actions could include selling investments, changing investment portfolio allocations, adjusting bonuses credited to policyholders and taking other protective action.

Other limitations in the above sensitivity analysis include the use of hypothetical market movements to demonstrate potential risks 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.

5.v – Solvency II net asset value

	6 months 2022 £m	pence per share[1]	6 months 2021 £m	pence per share[1]	Full year 2021 £m	pence per share[1]
Solvency II shareholder unrestricted Tier 1 own funds at 1 January	**15,697**	**417 p**	17,358	442 p	17,358	442 p
Operating own funds generation	**538**	**19 p**	710	18 p	1,645	44 p
Non-operating capital generation	**(369)**	**(13)p**	(744)	(19)p	(1,310)	(35)p
Dividends[2]	**(560)**	**(20)p**	(568)	(14)p	(874)	(23)p
Capital return / Share buyback	**(3,750)**	**10 p**	—	— p	(1,000)	(8)p
Disposals completed	**—**	**— p**	(67)	(2)p	(575)	(15)p
Impact of changes to the value of subordinated liabilities	**340**	**12 p**	352	9 p	480	13 p
Impact of changes to the value of net deferred tax assets	**(130)**	**(5)p**	(19)	(1)p	(27)	(1)p
Estimated Solvency II shareholder unrestricted Tier 1 own funds at 30 June/31 December	**11,766**	**420 p**	17,022	433 p	15,697	417 p

1 Number of shares in issue as at 30 June 2022 was 2,803 million (2021: 3,766 million).
2 Dividends includes £9 million (2021: £17 million) of Aviva plc preference dividends and £10 million (2021: £21 million) of General Accident plc preference dividends.

Solvency II net asset value per share has increased by 3 pence to 420 pence per share (2021: 417 pence) as a result of operating own funds generation, a reduction in the number of shares following completion of the share buyback and changes to the value of subordinated liabilities following an increase in market interest rates partly offset by dividends and non-operating capital generation.

5.vi – Solvency II regulatory own funds and Solvency II debt leverage ratio

Regulatory view	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Solvency II regulatory debt[1]	**5,990**	6,457	6,330
Senior notes	**669**	665	651
Commercial paper	**52**	52	50
Total debt	**6,711**	7,174	7,031
Unrestricted Tier 1	**15,297**	20,556	19,120
Restricted Tier 1	**1,451**	980	967
Tier 2	**4,539**	5,477	5,363
Tier 3[2]	**253**	116	123
Estimated total regulatory own funds	**21,540**	27,129	25,573
Solvency II debt leverage[3]	**30%**	26%	27%

1 Solvency II regulatory debt consists of Restricted Tier 1 and Tier 2 regulatory own funds.
2 Tier 3 regulatory own funds at 30 June 2022 consist of £253 million net deferred tax assets (2021: £123 million). There is no subordinated debt included in Tier 3 regulatory own funds (2021:£nil).
3 Solvency II debt leverage is calculated as the total debt as a proportion of total regulatory own funds plus commercial paper and senior notes.

Solvency II debt leverage ratio at 30 June 2022 is 30% (2021: 27%). The increase is due to the decrease in own funds following the completion of the £1.0 billion share buyback and the £3.75 billion capital return to ordinary shareholders during the first half of 2022. Debt redemptions and issuances in the period offset each other.

In April 2022 the Group's 8.250% £500 million Tier 2 subordinated notes reached their final maturity date and were redeemed.

On 15 June 2022, the Group issued £500 million of 6.875% fixed rate reset perpetual Restricted Tier 1 contingent convertible notes (the RT1 Notes). The RT1 Notes are callable at par between 15 December 2031 and 15 June 2032 (the First Reset Date) inclusive and thereafter every five years after the First Reset Date. If not called, the coupon from 15 June 2032 will be reset to the prevailing five year benchmark gilt yield plus 4.649%. The notes have no fixed maturity date. Optional cancellation of coupon payments is at the discretion of the Group and mandatory cancellation is upon the occurrence of certain conditions. The RT1 Notes are therefore treated as equity and the coupon payment is recognised directly in equity. On the occurrence of certain conversion trigger events the notes are convertible into ordinary shares of the Group at the prevailing conversion price.

The pro forma Solvency II debt leverage ratio allowing for £1 billion further debt reduction over time, £0.1 billion one-off payment in relation to our staff pension schemes as a result of our excess capital position and the acquisition of Succession Wealth is 28% at 30 June 2022. The acquisition of Succession Wealth is subject to regulatory approval and is expected to complete in the second half of 2022.

6 – Our Market performance
6.i – UK & Ireland Life

£m (unless otherwise stated)	6 months 2022	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Operating profit	**651**	545	19 %	19 %	1,428
Cash remittances	**706**	983	(28)%	(28)%	1,219
Baseline controllable costs[1]	**515**	545	(6)%	(6)%	1,102
New business					
VNB	**300**	265	13 %	13 %	668
PVNBP	**16,843**	16,240	4 %	4 %	35,625
VNB Margin	**1.8 %**	1.6 %	0.2 pp	0.2 pp	1.9 %
Solvency II operating own funds generation	**328**	217	51 %	51 %	953
Solvency II return on capital[2]	**5.1%**	3.4%	1.7 pp	1.7 pp	6.6 %
Solvency II operating capital generation	**427**	484	(12)%	(12)%	1,219

1 Baseline controllable costs exclude strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline.
2 Following a review of the basis of preparation of Solvency II return on capital, comparative amounts for the period ended 30 June 2021 have been restated. In the numerator, TMTP run-off has been replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis. Further details can be found in the "Other Information: Alternative Performance Measures" section.

Overview

Aviva is the UK's largest insurer with a 24% share[1] of the UK life and savings market, over 11 million customers and significant scale of assets under management (AUM). We are the UK's only insurer able to provide customers with all their insurance, protection, savings and retirement needs. We aim to maintain and strengthen our leadership position in the market by leveraging the Aviva brand, widening our already strong distribution relationships, building on our data analytics and underwriting capability and providing broader access to Aviva Investors' investment solutions. UK & Ireland Life is committed to Aviva's social purpose and our position in the group is critical to delivery of Aviva's sustainability ambition.

Our Wealth (formerly Savings & Retirement), Annuities & Equity Release and Protection businesses help individuals save and achieve financial peace of mind through their workplace, advisers or by engaging directly with us. We provide corporate customers with de-risking solutions for their pension schemes and provide solutions to help promote wellbeing and health within their workforce.

In Ireland we are number four[2] in the market. We offer a wide range of products across protection, savings, pensions and annuities and are committed to making it easier for intermediaries to do business with Aviva.

Operating performance
Operating profit

Operating profit	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
Wealth	**71**	73	(3)%	147
Annuities & Equity Release	**346**	265	31 %	645
Protection & Health	**95**	107	(11)%	229
Heritage	**184**	138	33 %	319
Other[1]	**(71)**	(38)	(87)%	77
UK Life	**625**	545	15 %	1,417
Ireland Life	**26**	—	— %	11
Total	**651**	545	19 %	1,428

1 Other represents changes in assumptions and modelling, non-recurring items and non-product specific overheads.

UK & Ireland Life operating profit increased by 19% to £651 million (HY21: £545 million) driven by higher bulk purchase annuities (BPA) margins and improved experience within Ireland Life. Wealth operating profit was marginally down by 3% to £71 million (HY21: £73 million). Lower operating profit in Protection & Health is due to non-recurrence of 2021 favourable claims experience. Heritage operating profit increased due to the impact of market movements on policyholder tax. The operating loss within Other has increased due to a reduction in the carrying value of deferred acquisition costs (DAC) driven by market movements.

1 Association of British Insurers (ABI) – 3 months to end Q122 based on the share of new business.
2 Aviva calculation derived from the Milliman Life and Pensions New Business 2021 Report, which is based on responses from a number of key companies within the Irish Life market.

New business

New Business	VNB 6 months 2022 £m	VNB 6 months 2021 £m	VNB Sterling % change	VNB Full year 2021 £m	PVNBP 6 months 2022 £m	PVNBP 6 months 2021 £m	PVNBP Sterling % change	PVNBP Full year 2021 £m	New Business Margin 6 months 2022 %	New Business Margin 6 months 2021 %	New Business Margin Full year 2021 %
Wealth and Other	**109**	110	(1)%	178	**11,896**	11,699	2 %	23,718	**0.9 %**	0.9 %	0.8 %
Annuities & Equity Release	**75**	50	50 %	280	**2,762**	2,466	12 %	7,887	**2.7 %**	2.0 %	3.6 %
Protection & Health	**100**	95	5 %	188	**1,327**	1,255	6 %	2,374	**7.5 %**	7.6 %	7.9 %
Ireland Life	**16**	10	53 %	22	**858**	820	5 %	1,646	**1.9 %**	1.3 %	1.3 %
Total	**300**	265	13 %	668	**16,843**	16,240	4 %	35,625	**1.8 %**	1.6 %	1.9 %

PVNBP increased by 4% to £16,843 million (HY21: £16,240 million) reflecting higher BPA and Equity Release volumes as well as growth in our Ireland Life business. VNB increased by 13% to £300 million (HY21: £265 million) mainly due to improved margins in BPA.

Net flows

Assets under management and net flows	Platform £m	Workplace £m	Individual pensions £m	Total Wealth £m	Annuities & Equity Release £m	Heritage £m	Other UK Life £m	Ireland Life £m	6 months 2022 Total UK & Ireland Life £m	6 months 2021 Total UK & Ireland Life £m
Assets under management at 1 January	43,101	95,798	13,308	**152,207**	**73,021**	**82,172**	**6,646**	**11,802**	**325,848**	307,081
Premiums and deposits, net of reinsurance (inflows)	4,092	5,249	204	**9,545**	**1,660**	**388**	**695**	**702**	**12,990**	12,944
Claims and redemptions, net of reinsurance (outflows)	(1,545)	(2,550)	(488)	**(4,583)**	**(1,245)**	**(3,466)**	**(294)**	**(552)**	**(10,140)**	(10,344)
Net flows	2,547	2,699	(284)	**4,962**	**415**	**(3,078)**	**401**	**150**	**2,850**	2,600
Market and other movements	(5,368)	(10,034)	(1,342)	**(16,744)**	**(10,695)**	**(7,477)**	**(1,075)**	**(1,040)**	**(37,031)**	3,911
Assets under management at 30 June	40,280	88,463	11,682	**140,425**	**62,741**	**71,617**	**5,972**	**10,912**	**291,667**	313,592

Net flows increased 10% to £2.9 billion (HY21: £2.6 billion) due to a reduction in the level of reinsured BPA business compared to prior year. Wealth net flows remain strong and resilient albeit were 4% lower at £5.0 billion (HY21: £5.2 billion) due to the impact of market volatility and adviser caution. Wealth outflows have increased, reflecting higher average asset values. The impact of lower net flows in Wealth was offset by lower outflows in Heritage which was driven by book run off and improved persistency as customers chose not to withdraw their funds during a period of market volatility.

Wealth

Our Wealth business offers workplace pensions and retail savings products, through both intermediated and retail channels. Our products are supported by guidance and advice and offer access to open architecture asset solutions including Aviva Investors who provide expertise in multi-asset and Environmental, Social, and Governance (ESG) investing. Our new business is capital efficient, with profits being derived from asset management fees less costs. We have a competitive position in both workplace and retail markets, which have delivered diversified and resilient earnings and highly efficient customer acquisition into the Group.

Wealth inflows were lower at £9.5 billion (HY21: £9.7 billion) reflecting 2020 deferred scheme wins reported in the first half of 2021. Excluding the impact of these deferred schemes, Workplace net flows were higher, reflecting new scheme wins and workplace scheme members, which grew to 4.2 million (HY21: 3.9 million). Platform inflows were 5% lower at £4.1 billion (HY21: £4.3 billion) due to adviser caution in light of volatile markets, as well as 2021 benefitting from the release of pent-up demand from 2020.

Overall Wealth outflows were higher at £4.6 billion (HY21: £4.5 billion) due to larger asset values, however, persistency rates were higher than in 2021 with advisers and customers not crystallising the impact of the market volatility in 2022 by delaying withdrawals.

AUM as at 30 June 2022 has fallen to £140.4 billion from an opening position of £152.2 billion, with the benefit of net inflows being offset by adverse market movements of £16.7 billion, reflecting UK and overseas equity market movements during the first half of 2022. Average AUM during first half of 2022 was higher compared to the first half of 2021.

Wealth operating profit decreased to £71 million (HY21: £73 million).

Annuities & Equity Release

Our Annuities & Equity Release business consists of BPA, individual annuities and equity release. Our products offer customers safe and secure income in their retirement and support employers in their desire to de-risk their pension schemes. We are the UK's largest provider of individual annuities[1], we manage the UK's largest book of equity release mortgages[2] and are one of the largest providers of BPAs[3]. Our Annuities & Equity Release products create synergies, with equity release assets being held to back annuity liabilities, alongside assets sourced by Aviva Investors. Profits are primarily driven by yields, and our focus on capital efficiency secures significant cash flows, which has allowed us to invest in, and grow, our BPA business.

1 Aviva estimate based on 2021 company reporting.
2 UK Finance data on UK mortgage lenders.
3 AON UK Risk Settlement Market Update - April 2022, based on 31 December 2021 data.

Annuities & Equity Release PVNBP increased by 12% to £2,762 million (HY21: £2,466 million) driven by higher BPA and Equity Release volumes. Equity Release PVNBP grew by 27% reflecting increased demand for equity release products as well as the positive reaction to changes to our proposition. BPA volumes increased 15% to £1,862 million (HY21: £1,622 million) as we chose to maintain pricing discipline in a competitive market. Individual annuity PVNBP decreased by 8% due to lower internal annuity volumes. In July we have executed or are in exclusive negotiation for a further £1 billion of trades.

Annuities & Equity Release VNB increased to £75 million (HY21: £50 million) due to higher BPA volumes and margins. The improvement in BPA margins is due to higher availability and allocation of corporate bonds and illiquid assets, compared to 2021, when yields available in the market were low. Individual annuity VNB decreased due to lower volumes and mix changes.

Operating profit increased 31% to £346 million (HY21: £265 million) reflecting higher BPA volumes and improved mix of assets used to back new business volumes. Individual annuity operating profit has decreased due to lower volumes and margins. Equity release operating profit has increased mainly as a result of higher new business volumes.

Protection & Health

Aviva is the only provider of scale in the UK offering coverage across health, group protection and individual protection. We are second in the group protection market by book size[1] and we are third in the health[2] market. We have developed strong relationships with our intermediary partners, including financial advisers, estate agents and other third parties. We have invested for growth in these markets, focusing on our digital proposition and bringing new health & wellbeing products to market. Pricing and underwriting discipline as well as cost efficiency are key drivers for profitability in this sector.

Protection & Health PVNBP increased by 6% to £1,327 million (HY21: £1,255 million) with strong growth in Group Protection and Health more than offsetting slightly lower Individual Protection sales. Individual Protection volumes decreased by 7% reflecting lower than expected consumer demand driven by a slowdown in the housing market compared to 2021, which benefitted from the end of stamp duty relief, and inflationary pressures in the current period.

Protection & Health VNB increased by 5% to £100 million (HY21: £95 million), driven by an increase in Group Protection and Health volumes. Individual Protection VNB was negatively impacted by changes in the yield curve.

Operating profit decreased by 11% to £95 million (HY21: £107 million) as a result of the non-recurrence of favourable Group Income Protection claims experience in 2021.

Heritage

Aviva has one of the largest back books in the UK, with AUM of £72 billion. We manage legacy pension and savings policies for approximately 1.5 million customers, honouring promises made over many years. Heritage is an important part of the Group as a predictable source of capital and cash as well as supporting our annuity and wealth propositions and Aviva Investors. The Heritage business is in run-off, and profit is driven by effective management of AUM run-off and cost efficiencies.

Heritage operating profit increased to £184 million (HY21: £138 million) due to the impact of market movements on policyholder tax. Excluding these items, operating profit was lower than the prior period, reflecting the expected run off of this book and lower revenues, driven by market volatility during the period.

Ireland Life

Our core lines of business are protection and annuity business, pre and post retirement unit-linked contracts, as well as unit-linked savings and investments. We are the market leader in the income protection market[3].

Ireland Life PVNBP increased by 5% to £858 million (HY21: £820 million) driven by strong sales of unit-linked business, particularly single premium. This was partially offset by lower protection sales. VNB increased to £16 million (HY21: £10 million) driven primarily by improvements in unit-linked and protection margins from our new single product offerings.

Ireland Life operating profit was £26 million (HY21: £nil) driven by reduced expenses, improved underlying profits as well as modelling improvements. We continue to invest in the future of our business through strategic initiatives.

Other

An operating loss of £71 million (HY21: operating loss of £38 million) reflects the impact of a reduction in the carrying value of DAC driven by market movements, non-product specific project overheads and an absence of material gains and losses from management actions and other non-recurring items.

Controllable costs

UK & Ireland Life baseline controllable costs decreased 6% to £515 million (HY21: £545 million). The benefit from our cost reduction initiatives have more than offset the increase in operational costs and investment in our brand and propositions. Baseline controllable costs exclude £52 million (HY21: £26 million) of strategic investment, cost reduction implementation, IFRS 17 and other costs that were not included in the 2018 costs savings target.

Cash remittances

Cash remitted to Group by UK & Ireland Life was £706 million (HY21: £983 million). Excluding the £415 million dividend in 2021 from our internal reinsurance vehicle, the increase in cash remittances reflects UK & Ireland Life's balance sheet strength despite the current economic and market uncertainty.

1 Swiss Re Group Watch 2021.
2 LaingBuisson, Health Cover UK Market Report, 16th edition.
3 Aviva calculation derived from the Milliman Life and Pensions New Business 2021 Report, which is based on responses from a number of key companies within the Irish Life market.

Solvency II operating performance

Operating own funds generation	6 months 2022 £m	6 months 2021 £m	Sterling % change	Full year 2021 £m
Wealth	**74**	67	10 %	103
Annuities & Equity Release	**169**	143	18 %	392
Protection & Health	**56**	77	(27)%	132
Heritage	**27**	—	100 %	47
Other[1]	**(13)**	(82)	84 %	260
UK Life	**313**	205	53 %	934
Ireland Life	**15**	12	25 %	19
Total	**328**	217	51 %	953

1 Other represents changes in assumptions and modelling, non-recurring items and non-product specific overheads.

Solvency II operating own funds generation (OFG)

Solvency II OFG increased to £328 million (HY21: £217 million) due to the following:

- Wealth increased by 10% as increased Solvency II OFG on existing business has offset lower new business contribution from Workplace and Platform businesses;
- Annuities & Equity Release increased by 18% driven by higher BPA volumes and margins, reflecting higher availability and allocation of corporate bonds and illiquid assets compared to 2021, when yields available in the market were low;
- Protection & Health decreased by 27% to £56 million (HY21: £77 million) due to non-recurrence of favourable claims experience in HY22; and
- Other has increased by 84% due to non-recurrence of adverse management actions included in the first half of 2021.

Solvency II return on capital

Solvency II return on capital increased by 1.7pp to 5.1% (HY21 restated: 3.4%) due to the increase in operating own funds generation above and lower opening own funds.

Solvency II operating capital generation (OCG)

Solvency II OCG decreased to £427 million (HY21: £484 million). The increase in OFG has been offset by higher new business strain from annuity business and lower benefit from management actions and other OCG than the first half of 2021 which included the impact of additional equity hedging benefitting our solvency capital requirement.

6.ii – General Insurance: UK & Ireland and Canada

£m (unless otherwise stated)	UK & Ireland 6 months 2022	UK & Ireland 6 months 2021	UK & Ireland Sterling % change	UK & Ireland Constant currency %	UK & Ireland Full year 2021	Canada 6 months 2022	Canada 6 months 2021	Canada Sterling % change	Canada Constant currency %	Canada Full year 2021
Operating profit	**171**	191	(11)%	(10)%	356	**204**	229	(11)%	(15)%	406
COR	**95.6 %**	93.6 %	2.0 pp		94.3 %	**91.7 %**	88.8 %	2.9 pp		90.7 %
GWP	**2,840**	2,705	5 %	5 %	5,352	**1,854**	1,661	12 %	6 %	3,455
Baseline controllable costs[1]	**350**	357	(2)%	(1)%	713	**197**	189	4 %	3 %	399
Cash remittances	**59**	52	13 %	13 %	261	**14**	17	(18)%	(21)%	156
Solvency II operating own funds generation	**193**	121	60 %	60 %	339	**174**	194	(10)%	(15)%	332
Solvency II return on capital[2]	**16.5 %**	10.1 %	6.4 pp	6.4 pp	14.1 %	**19.9 %**	25.3 %	(5.4)pp	(6.1)pp	21.6 %
Solvency II operating capital generation	**124**	122	2 %	2 %	296	**155**	202	(23)%	(27)%	338

1 Baseline controllable costs exclude strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline.
2 For UK general insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets.

Overview

Aviva is a leading insurer across the UK, Ireland and Canada general insurance markets. In the UK and Ireland, we provide insurance solutions to c.6 million customers, number one in the UK market and number three in Ireland[1]. Aviva Canada is the third largest General insurer in Canada[2].

We are continuing to grow our general insurance businesses with a focus on extending our leadership in the UK, Ireland and Canada. General insurance performance in the first half of 2022 has been impacted by headwinds in weather and rising inflationary pressures, combined with the return to more normal claims frequency following impacts of the COVID-19 pandemic. Despite this, we continue to grow market share through new business growth, whilst maintaining pricing and portfolio discipline and a continued focus on cost base.

In 2022 we continue to focus on executing our market strategies and growing our business, while responding to the impact of increasing inflation on general insurance markets, principally impacting claims and economic activity. Our strategy is to invest for profitable growth, build best-in-class capabilities, and lead the industry on sustainability.

UK & Ireland General Insurance

Operating performance

Operating profit and COR

Operating profit	6 months 2022 £m	6 months 2021 £m	Sterling % change	Constant currency %	Full year 2021 £m
Underwriting result	**101**	128	(21)%	(21)%	230
Long-term investment return	**55**	41	34 %	34 %	85
Other[3]	**3**	—	100 %	100 %	3
UK	**159**	169	(6)%	(6)%	318
Ireland	**12**	22	(45)%	(41)%	38
Total	**171**	191	(11)%	(10)%	356

COR	6 months 2022 %	6 months 2021 %	Change	Full year 2021 %
Personal lines	**97.1 %**	94.2 %	2.9 pp	94.6 %
Commercial lines	**93.9 %**	93.6 %	0.3 pp	94.6 %
UK	**95.6 %**	93.9 %	1.7 pp	94.6 %
Ireland	**96.2 %**	89.9 %	6.3 pp	91.7 %
Total	**95.6 %**	93.6 %	2.0 pp	94.3 %

1 Aviva's estimates based on a combination of the 2020 ABI General Insurance Premium Distribution and competitor results.
2 Aviva's estimates based on analysis of FY21 competitor results.
3 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.

Overall UK & Ireland operating profit decreased 11% to £171 million (HY21: £191 million), due to a lower underwriting result, partially offset by increased investment return. The UK underwriting result has seen challenges driven by increased weather losses and a reduction in frequency benefits compared to the prior year. These impacts have been reduced as we maintained pricing discipline and increased new business wins. Long-term investment return increased by £14 million due to yields from reinvestment in hedged equities and corporate bonds.

UK COR of 95.6% is 1.7pp higher than prior year (HY21: 93.9%), following a return to more normal claims frequency (3.5pp) together with higher UK weather costs relative to a benign 2021 weather experience (2.6pp), offset by improvements in underwriting performance in commercial lines, supported by strong rate momentum. Commercial lines COR of 93.9% (HY21: 93.6%), was 0.3pp higher, as a result of weather, partly offset by improvements in underwriting performance in both small and medium-sized enterprise (SME) and Global Corporate and Specialty (GCS), as we continue to grow market share through profitable new business growth and high levels of retention, supported by strong rate momentum. Personal lines COR of 97.1% (HY21: 94.2%), was 2.9pp higher owing to lower frequency benefits in motor lines and higher weather costs. We continue to maintain pricing discipline in a soft market to support underwriting performance and continue to deliver cost savings from ongoing simplification which is driving a lower expense ratio.

Ireland COR increased 6.3pp to 96.2% (HY21: 89.9%), driven by the non repeat of 2021 favourable experience from lower motor frequency due to COVID-19 lockdowns and the currently challenging personal lines market conditions in the form of inflation and motor softening.

Gross Written Premiums (GWP)

GWP	6 months 2022 £m	6 months 2021 £m	Sterling % change	Constant Currency %	Full year 2021 £m
Personal lines	**1,198**	1,213	(1)%	(1)%	2,334
Commercial lines	**1,430**	1,280	12 %	12 %	2,609
UK	**2,628**	2,493	5 %	5 %	4,943
Ireland	**212**	212	— %	3 %	409
Total	**2,840**	2,705	5 %	5 %	5,352

UK and Ireland GWP increased by 5% to £2,840 million (HY21:£2,705 million).

In the UK, we continued our strong trading momentum, growing 5% to £2,628 million (HY21: £2,493 million). Commercial lines GWP grew 12% to £1,430 million (HY21: £1,280 million), driven by a favourable rating environment, high retention levels and strong new business growth, benefitting from our investment in underwriting talent and strong broker relationships. Within commercial lines, there was a 11% increase in GWP in GCS, with growth within all of our selected lines of business and 12% growth in SME, led by mid-market and our digitally traded business. Personal lines GWP of £1,198 million (HY21: £1,213 million) was 1% lower. Retail premiums were stable, with growth in Home business partially offsetting a reduction in Motor, as we maintained pricing discipline in a soft rating environment. Intermediated premiums were slightly down as we reshape our portfolio towards more profitable segments including growth in speciality high net worth business.

Ireland GWP was stable at £212 million (HY21: £212 million), with an uplift of 3% year-on-year on a constant currency basis. Personal lines GWP is 11% lower year-on-year largely due to a decrease in average motor market premiums and lower new business volume. Our personal lines retention remains stable year-on-year with notable improvements in retention of strategic partners. We achieved strong growth in commercial lines GWP which increased 11% to £119 million (HY21: £107 million). The outperformance was driven by strong retention across all products and supportive rate environment in Property and Liability.

Controllable costs

Baseline controllable costs in the UK decreased to £311 million (HY21: £319 million), reflecting continued cost reductions in our personal lines business and the simplification of our IT structure. This reduction in costs against a backdrop of growing premiums has led to a decrease of 0.8pp in the expense ratio. We continue to support profitable growth by investing in underwriting and improving customer propositions. In Ireland, baseline controllable costs are broadly flat year-on-year with higher staff costs due to investment in commercial underwriting expertise to support growth offset by savings from non-staff cost cutting initiatives in areas such as document management and marketing. Baseline controllable costs for UK and Ireland exclude £8 million (HY21: £4 million) of strategic investment, cost reduction implementation, IFRS 17 and other costs that were not included in the 2018 costs savings target.

Solvency II operating performance

Solvency II operating own funds generation (OFG) and Solvency II return on capital

£m (unless otherwise stated)	6 months 2022	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Solvency II operating own funds generation	**193**	121	60 %	60 %	339
Solvency II return on capital[1]	**16.5 %**	10.1 %	6.4 pp	6.4 pp	14.1 %

1 For UK general insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets.

Solvency II OFG in the UK and Ireland was £193 million (HY21: £121 million), £72 million higher than the first half of 2021 due to improved underlying performance and higher long-term investment returns partially offset by adverse weather impacts from storms in the UK in the first quarter of 2022. Solvency II return on capital has increased to 16.5% (HY21: 10.1%) driven by the movement in Solvency II OFG.

Solvency II operating capital generation (OCG)

£m	6 months 2022	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Solvency II operating capital generation	**124**	122	2 %	2 %	296

UK & Ireland Solvency II OCG increased 2% to £124 million (HY21: £122 million), with increases in operating own funds generation being largely offset by increases in capital requirements due to re-risking activity (investment in hedged equities and corporate bonds) in the first half of the year.

Cash remittances

£m	6 months 2022	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Cash remittances	**59**	52	13 %	13 %	261

Cash remittances to Group from the UK and Ireland were £59 million (HY21: £52 million).

Canada

Operating performance

Operating profit and COR

Operating profit	6 months 2022 £m	6 months 2021 £m	Sterling % change	Constant currency %	Full year 2021 £m
Underwriting result	**141**	174	(18)%	(22)%	293
Long-term investment return	**65**	57	13 %	8 %	117
Other[1]	**(2)**	(2)	(75)%	(67)%	(4)
Total	**204**	229	(11)%	(15)%	406

COR	6 months 2022 %	6 months 2021 %	Change	Full year 2021 %
Personal lines	**94.4 %**	87.9 %	6.5 pp	92.6 %
Commercial lines	**86.8 %**	90.6 %	(3.8)pp	86.8 %
Total	**91.7 %**	88.8 %	2.9 pp	90.7 %

1 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.

In the period, operating profit decreased 11% to £204 million (HY21: £229 million) due to a lower underwriting result, partially offset by increased investment returns. Underwriting result of £141 million (HY21: £174 million), was mainly driven by increased claims frequency resulting from a harsher winter season combined with an increase in driving behaviour, heightened claims severity including the impact of inflation and higher catastrophic weather losses. This was partially offset by favourable prior year reserve development and the impact of our continued actions around pricing, indemnity management and risk selection. Long-term investment return was higher by 8% on a constant currency basis mainly due to higher reinvestment yields and growth in the portfolio.

COR deteriorated to 91.7% (HY21: 88.8%) due to increased claims experience, partially offset by lower commissions. Personal lines COR of 94.4% (HY21: 87.9%) was 6.5pp higher year-on-year, driven by increased claims frequency and catastrophic weather losses, partially offset by favourable prior year reserve development, lower commissions from profit share agreements with our distributors, along with prudent underwriting and rate actions. Despite increased claims frequency, personal lines profitability is still significantly better than the last six pre-COVID-19 years and reflects claims frequency that is below the long-term average. Commercial lines COR of 86.8% (HY21: 90.6%) was 3.8pp lower year-on-year primarily due to decreased commissions from profit share agreements with our distributors and favourable prior year reserve development, partially offset by increased claims severity.

Gross Written Premiums (GWP)

GWP	6 months 2022 £m	6 months 2021 £m	Sterling % change	Constant currency %	Full year 2021 £m
Personal lines	**1,138**	1,047	9 %	4 %	2,187
Commercial lines	**716**	614	17 %	11 %	1,268
Total	**1,854**	1,661	12 %	6 %	3,455

Canada GWP was £1,854 million (HY21: £1,661 million), up 6% on a constant currency basis. In personal lines, GWP of £1,138 million (HY21: £1,047 million) was higher due to Ontario motor rate increases in the current year compared to rate reductions in the prior year and new business growth in our direct business. Commercial lines GWP increased to £716 million (HY21: £614 million) due to increased rate in the prevailing hard market and strong new business growth in mid-market and large corporate accounts.

Controllable costs

Baseline controllable costs were £197 million (HY21: £189 million), up 3% on a constant currency basis, slightly higher than prior period as we continue to invest in our core capabilities and digital direct business.

Solvency II operating performance

Solvency II operating own funds generation (OFG) and Solvency II return on capital

£m (unless otherwise stated)	6 months 2022	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Solvency II operating own funds generation	**174**	194	(10)%	(15)%	332
Solvency II return on capital	**19.9 %**	25.3 %	(5.4)pp	(6.1)pp	21.6 %

Solvency II OFG in Canada decreased to £174 million (HY21: £194 million) mainly due to less favourable weather and non-recurrence of COVID-19 frequency benefits. This has been partly offset by beneficial prior year reserve developments. The Solvency II return on capital is 19.9% (HY21: 25.3%). The reduction in the Solvency II OFG drives (2.3)pp of the sterling % change of (5.4)pp in the Solvency II return on capital, with the remainder due to higher opening own funds.

Solvency II operating capital generation (OCG)

£m (unless otherwise stated)	**6 months 2022**	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Solvency II operating capital generation	**155**	202	(23)%	(27)%	338

Solvency II OCG in Canada decreased to £155 million (HY21: £202 million). This is due to decreased Solvency II OFG described above and increased capital requirement from inflationary impacts on expected profits.

Cash remittances

£m (unless otherwise stated)	**6 months 2022**	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Cash remittances	**14**	17	(18)%	(21)%	156

Cash remittances to Group from Canada were £14 million (HY21: £17 million), (18)% lower than prior year due to reduced profitability.

6.iii – Aviva Investors

£m (unless otherwise stated)	6 months 2022	6 months 2021	Sterling % change	Full year 2021
Aviva Investors revenue	**190**	192	(1)%	403
Baseline controllable costs	**(165)**	(168)	(2)%	(345)
	25	24	4 %	58
Cost reduction implementation and strategic investment costs	**(11)**	(5)	120 %	(17)
Operating profit	**14**	19	(26)%	41
Cost income ratio	**87 %**	87 %	— pp	86 %
Cash remittances	**—**	—	— %	15
Net flows	**(4.3)bn**	0.8 bn	(613)%	(4.6)bn
Of which: External net flows[1]	**0.2 bn**	1.1 bn	(81)%	3.3 bn
Of which: Internal net flows[1]	**(1.0)bn**	(0.3)bn	(274)%	(1.8)bn
Of which: Strategic actions	**(3.5)bn**	—	(100)%	(6.1)bn
Assets under management[2]	**232 bn**	258 bn	(10)%	268 bn
Solvency II operating own funds generation	**14**	18	(22)%	36
Solvency II return on capital	**7.0 %**	9.3 %	(2.3)pp	9.3 %
Solvency II operating capital generation	**16**	33	(52)%	53

1 External and internal net flows above exclude net flows from strategic actions that are separately presented.
2 Assets under management at 30 June 2021 have been re-presented in line with disclosures at 31 December 2021 to reflect movements in continuing and discontinued business, and a re-classification of certain funds between internal and external.

Overview

Aviva Investors is a global asset manager that combines our insurance heritage, investment capabilities and sustainability expertise to deliver investment outcomes that matter most to customers of Aviva and external clients. Aviva Investors manages £232 billion of assets, with £191 billion managed for the Aviva Group.

By combining our insurance heritage with our skills and experience in asset allocation, portfolio construction and risk management, we provide a range of asset management solutions to our institutional, wholesale and retail clients. We have a highly diversified range of capabilities, with expertise in real assets, multi-assets, equities and credit. Our goal is to support Aviva becoming the UK's leading insurer and the go-to customer brand while also leveraging our expertise and scale for the benefit of external clients.

The key drivers of our strategy are:

- Customer: deliver our customers' investment needs through strong investment performance, a superior client experience and ESG stewardship, while maintaining a rigorous risk and control culture.
- Simplification: use data and automation to streamline processes and continue to simplify our businesses to become more efficient and deliver better customer outcomes.
- Growth: continue to grow in both our Aviva client business, supporting its growth in Bulk Annuities, Workplace Pensions and Wealth, and our external business, by being recognised for our focused expertise and strength in sustainable investing.
- People: develop a high-performance culture with an emphasis on collaboration and accountability, by taking a tailored approach to talent management and career development that embeds our diversity and inclusion strategy.

Our focus on sustainable investing provides further opportunities for growth while playing an active role in the fight against climate change, promoting biodiversity, human rights and building stronger communities. We have committed to a Net Zero company target by 2040 and have also signed up to the Net Zero Asset Managers Initiative. We provide our ESG investing expertise to the UK & Ireland Life business.

Operating performance

Operating profit

Operating profit decreased to £14 million (HY21: £19 million), or increased to £25 million (HY21: £24 million) excluding cost reduction implementation and strategic investment costs, driven by a bigger impact of cost reduction initiatives which included the completion of the first phase of the transition to a new scalable real assets operating model with loan servicing successfully outsourced to Mount Street.

Aviva Investors revenue was lower by 1% at £190 million (HY21: £192 million). The benefits of fees from a higher level of real assets origination activity for Aviva were offset by the adverse impact of volatile markets elsewhere in the investment portfolio. Average assets under management[1] decreased by 2% compared to the first half of last year and 30 June 2022 assets under management have decreased by 13% since start of the year, driven by market movements which have been negative across all asset classes.

Controllable costs

Despite significant inflationary pressures, including pay rises in a competitive market for talent, baseline controllable costs decreased by 2% to £165 million (HY21: £168 million) as we benefitted from cost management initiatives started in 2021.

Our cost income ratio remained stable at 87% (HY21: 87%), reflecting increased efficiency which was offset by the drop in revenues. We continue to drive down our costs by simplifying our business and focusing our product range but in the short term our cost income ratio may be impacted by volatility in investment markets and our revenues.

1 Average assets under management calculated based on monthly assets under management balances for the period.

Net flows and assets under management

Assets under management represent all assets managed by Aviva Investors. This includes assets managed by Aviva Investors on behalf of Aviva's Life and non-life operations, reported as internal assets in the table below. These internal assets are included within the Group's statement of financial position. Assets under management also include assets managed by Aviva Investors on behalf of external clients, which are not included in the Group's statement of financial position.

	Internal legacy £m	Internal core £m	External £m	6 months 2022 Total £m	6 months 2021 Total £m
Assets under management at 1 January	87,651	128,797	51,332	**267,780**	260,286
Total inflows	4,325	19,529	2,181	**26,035**	27,011
Total outflows	(6,862)	(17,945)	(1,979)	**(26,786)**	(26,182)
Net flows (excluding strategic actions)	(2,537)	1,584	202	**(751)**	829
Strategic actions[1]	—	(54)	(3,448)	**(3,502)**	—
Total net flows	(2,537)	1,530	(3,246)	**(4,253)**	829
Net flows into liquidity funds and cash	(377)	(5,277)	(408)	**(6,062)**	256
Market and foreign exchange movements	(9,814)	(8,695)	(7,214)	**(25,723)**	(2,989)
Assets under management[2] at 30 June[3]	74,923	116,355	40,464	**231,742**	258,382

1 Strategic actions relate to actions from clients previously part of the Group and corporate actions.
2 Aviva Investors administer an additional £39 billion (HY21 : £43 billion, 2021: £44 billion) of assets classified as assets under administration which are not included in assets under management.
3 Assets under management at 30 June 2021 have been re-presented in line with disclosures at 31 December 2021 to reflect movements in continuing and discontinued business, and a re-classification of certain funds between internal and external.

Assets under management decreased by £36 billion during the first half of 2022 to £232 billion (2021: £268 billion) primarily driven by market movements which were negative across all asset classes.

Net flows decreased to £(4.3) billion (HY21: £0.8 billion) of which £(3.5) billion related to strategic actions including £(3.0) billion net outflows from actions by entities previously part of the Aviva Group and £(0.5) billion due to corporate actions. External client net flows (excluding strategic actions) were resilient in light of the difficult market conditions, but reduced to £0.2 billion (HY21: £1.1 billion), mainly driven by lower inflows following the sale of our US investment grade capability in Q4 2021. Increase in internal net outflows (excluding strategic actions) to £(1.0) billion (HY21: £(0.3) billion) reflects lower than typical legacy redemptions in the prior period due to COVID-19 disruption partly offset by a new mandate in the current period from Aviva Life & Pensions Ireland bringing in assets previously managed by external fund managers. This significant mandate win, with further assets expected to transition in 2022, demonstrates the synergies of Aviva's business model, our expertise in managing insurance assets and our strength in ESG with all assets transferring into our Article 8[1] multi-asset funds.

Net flows in our liquidity business of £(6.1) billion (HY21: £0.3 billion) largely reflect the final Group dividend and capital return payment in the first half of 2022.

While the short-term momentum for flows could be impacted by the continuing market volatility, our longer term outlook remains positive as we continue to build and deliver growth through our strengths in ESG, real assets, infrastructure, credit and sustainable equities.

Solvency II operating performance

Solvency II operating own funds generation (OFG) and Solvency II return on capital

Solvency II OFG decreased to £14 million (HY21: £18 million) as a result of lower operating profit as discussed above. Solvency II return on capital was 7.0% (HY21: 9.3%) driven by the lower Solvency II operating own funds generation.

Solvency II operating capital generation (OCG)

Solvency II OCG decreased to £16 million (HY21: £33 million) due to a decrease in Solvency II OFG and year-on-year solvency capital requirement movement.

1 An Article 8 Fund under Sustainable Finance Disclosure Regulation is defined as a fund which 'promotes, among other characteristics, environmental or social characteristics, or a combination of those characteristics, provided that the companies in which the investments are made follow good governance practices'.

6.iv – International investments

£m (unless otherwise stated)	6 months 2022	6 months 2021	Sterling % change	Constant currency %	Full year 2021
Operating profit	**55**	55	— %	(5)%	97
Cash remittances	**19**	11	73 %	62 %	11
New business - Life Insurance					
VNB	**46**	59	(23)%	(27)%	78
PVNBP	**569**	617	(8)%	(13)%	1,122
Solvency II operating own funds generation	**75**	84	(11)%	(16)%	124
Solvency II return on capital	**15.3 %**	18.5 %	(3.2)pp	(3.9)pp	13.6 %
Solvency II operating capital generation	**33**	37	(11)%	(16)%	55

Overview

International investments comprise our joint ventures and associates in China, Singapore and India, providing us with value creation potential and optionality in attractive and fast-growing markets.

Our joint venture in Singapore (Aviva Singlife) was formed on the sale of Aviva's majority holding in Aviva Ltd (Aviva Singapore) on 30 November 2020, to a consortium led by Singapore Life Ltd (Singlife) to support the creation of one of the country's leading insurance companies. The combination brought together Aviva Singapore's scale and leading franchise with Singlife's innovative and digitally focused capabilities. Aviva has a 26% shareholding in Aviva Singlife.

In China we have a 50% shareholding in Aviva-COFCO Life Insurance Company Ltd. This joint venture has a core agency channel, maintaining a team of more than 12,000 agents nationwide as of December 2021.

In India we have a life insurance business through our joint venture with Dabur Invest. Corp. On 1 April 2022, Aviva agreed to acquire an additional 25% shareholding in Aviva India. The transaction is subject to regulatory approval and other customary closing conditions and is expected to complete in the second half of 2022. On completion, Aviva will hold a 74% shareholding and Aviva India will become a subsidiary of the Aviva Group.The business is a provider of savings, protection and retirement products through bancassurance, retail agency channels and a direct sales force.

New business and operating performance

Operating profit was £55 million (HY21: £55 million) and operating own funds generation was £75 million (HY21: £84 million). Improved performance in China was offset by a reduction in Singapore, due to a particularly strong first half in Singapore in the prior period, following the successful launch of a long-term care product. During 2021 volumes in China benefitted from a marketing campaign for the new version of their Critical Illness product - in the absence of similar actions in 2022, PVNBP from international investments has decreased to £569 million (HY21: £617 million) and VNB to £46 million (HY21: £59 million).

Cash remittances

Cash remittances to Group increased to £19 million (HY21: £11 million), and relate to dividends from China, with HY22 benefitting from the increased dividend pay-out ratio as agreed with COFCO in April 2022.

7 – Profit drivers
7.i – Life business profit drivers

Profit drivers and the supporting income and expense analysis in this section relate to UK & Ireland life.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
New business income	**363**	325	799
Underwriting margin	**222**	201	419
Investment return	**696**	717	1,452
Total income	**1,281**	1,243	2,670
Acquisition expenses	**(192)**	(216)	(419)
Administration expenses[1]	**(489)**	(471)	(985)
Total expenses	**(681)**	(687)	(1,404)
Other[2]	**29**	(30)	115
Life business operating profit	**629**	526	1,381
Health business operating profit	**22**	19	47
Total operating profit	**651**	545	1,428

1 Includes strategic investment, cost reduction implementation, IFRS 17 and other costs not included in the 2018 costs savings target baseline of £52 million (HY21: £26 million).
2 Other represents amortisation of deferred acquisition costs (DAC), changes in assumptions and modelling, non-recurring items, including provision for legacy customer remediation, and non-product specific items.

Income: New business income and underwriting margin

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
New business income	**363**	325	799
Acquisition expenses	**(192)**	(216)	(419)
Net contribution	**171**	109	380
Annual premium equivalent (APE) (£m)	**2,433**	2,262	4,797
As margin on APE (%)	**7 %**	5 %	8 %
Underwriting margin (£m)	**222**	201	419
Analysed by:			
Expenses	**51**	46	96
Mortality and longevity	**170**	152	323
Persistency	**1**	3	—

Income: Investment return

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Unit-linked margin (£m)	**512**	530	1,061
As annual management charge on average reserves (bps)	**53**	58	56
Average reserves (£bn)[1]	**193**	183	189
Participating business (£m)[2]	**44**	48	104
As bonus on average reserves (bps)	**24**	24	27
Average reserves (£bn)[1]	**36**	40	39
Spread margin (£m)	**143**	142	283
As spread margin on average reserves (bps)	**39**	37	37
Average reserves (£bn)[1]	**73**	77	77
Expected return on shareholder assets (£m)[3]	**(3)**	(3)	4
Total (£m)	**696**	717	1,452
Total Average reserves (£bn)[1]	**302**	300	305

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

Expenses

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Acquisition expenses (£m)	**(192)**	(216)	(419)
APE (£m)	**2,433**	2,262	4,797
As acquisition expense ratio on APE (%)	**8 %**	10 %	9 %
Administration expenses (£m)[1]	**(489)**	(471)	(985)
As existing business expense ratio on average reserves (bps)	**32**	31	32
Total Average reserves (£bn)[2]	**302**	300	305

1 Includes, cost reduction implementation, IFRS 17, strategic investment and other costs not included in the 2018 costs savings target baseline of £52 million (HY21: £26 million).
2 An average of the insurance or investment contract liabilities over the reporting period, including business which is not consolidated within the statement of financial position.

7.ii – General insurance profit drivers

6 months 2022	UK Personal £m	UK Commercial £m	Total UK £m	Ireland £m	Total UK & Ireland £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Total continuing operations £m
Gross written premiums	1,198	1,430	2,628	212	2,840	1,138	716	1,854	4,694
Net written premiums	1,151	1,223	2,374	198	2,572	1,109	640	1,749	4,321
Net earned premiums	1,136	1,114	2,250	188	2,438	1,120	597	1,717	4,155
Net claims incurred	(707)	(692)	(1,399)	(115)	(1,514)	(723)	(304)	(1,027)	(2,541)
Of which claims handling costs			(57)	(6)	(63)			(61)	(124)
Earned commission	(267)	(225)	(492)	(29)	(521)	(211)	(134)	(345)	(866)
Earned expenses	(128)	(130)	(258)	(37)	(295)	(123)	(81)	(204)	(499)
Underwriting result	34	67	101	7	108	63	78	141	249
Long-term investment return (LTIR)			55	5	60			65	125
Other[1]			3	—	3			(2)	1
Operating profit			159	12	171			204	375
Claims ratio	62.2 %	62.1 %	62.2 %	61.0 %	62.1 %	64.6 %	50.9 %	59.8 %	61.2 %
Of which:									
Prior year reserve development (%)			2.3 %	(4.4)%	1.8 %			(1.2)%	0.5 %
Weather claims over/(under) long-term average (%)			0.2 %	(3.0)%	(0.1)%			(0.3)%	(0.2)%
Commission ratio	23.6 %	20.2 %	21.9 %	15.3 %	21.4 %	18.8 %	22.4 %	20.0 %	20.8 %
Expense ratio	11.3 %	11.6 %	11.5 %	19.9 %	12.1 %	11.0 %	13.5 %	11.9 %	12.0 %
Combined operating ratio	97.1 %	93.9 %	95.6 %	96.2 %	95.6 %	94.4 %	86.8 %	91.7 %	94.0 %
Assets supporting general insurance business									
Debt securities					3,357			5,305	8,662
Equity securities					556			178	734
Investment property					292			—	292
Cash and cash equivalents					1,740			535	2,275
Other[2]					1,311			311	1,622
Assets at 30 June 2022					7,256			6,329	13,585
Debt securities					3,106			5,012	8,118
Equity securities					633			207	840
Investment property					271			—	271
Cash and cash equivalents					2,346			368	2,714
Other[2]					712			430	1,142
Assets at 31 December 2021					7,068			6,017	13,085
Average assets					7,162			6,173	13,335
LTIR as % of average assets					1.7 %			2.1 %	1.9 %

1 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.
2 Includes loans and other financial investments.

6 months 2021	UK Personal £m	UK Commercial £m	Total UK £m	Ireland £m	Total UK & Ireland £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Total continuing operations £m
Gross written premiums	1,213	1,280	2,493	212	2,705	1,047	614	1,661	4,366
Net written premiums	1,169	1,067	2,236	198	2,434	1,021	544	1,565	3,999
Net earned premiums	1,104	976	2,080	189	2,269	1,038	510	1,548	3,817
Net claims incurred	(616)	(586)	(1,202)	(105)	(1,307)	(568)	(264)	(832)	(2,139)
Of which claims handling costs			(60)	(7)	(67)			(57)	(124)
Earned commission	(290)	(205)	(495)	(29)	(524)	(232)	(127)	(359)	(883)
Earned expenses	(133)	(122)	(255)	(37)	(292)	(112)	(71)	(183)	(475)
Underwriting result	65	63	128	18	146	126	48	174	320
Long-term investment return (LTIR)			41	4	45			57	102
Other[1]			—	—	—			(2)	(2)
Operating profit			169	22	191			229	420
Claims ratio	55.8 %	60.0 %	57.8 %	55.2 %	57.6 %	54.7 %	51.8 %	53.8 %	56.0 %
Of which:									
Prior year reserve development (%)			3.3 %	1.2 %	3.1 %			3.2 %	3.1 %
Weather claims (under)/over long-term average (%)			(2.4)%	(3.2)%	(2.5)%			(2.6)%	(2.6)%
Commission ratio	26.3 %	21.0 %	23.8 %	15.5 %	23.1 %	22.4 %	24.9 %	23.2 %	23.1 %
Expense ratio	12.1 %	12.6 %	12.3 %	19.2 %	12.9 %	10.8 %	13.9 %	11.8 %	12.5 %
Combined operating ratio	94.2 %	93.6 %	93.9 %	89.9 %	93.6 %	87.9 %	90.6 %	88.8 %	91.6 %
Assets supporting general insurance business									
Debt securities					2,518			4,856	7,374
Equity securities					2			224	226
Investment property					290			—	290
Cash and cash equivalents					2,709			310	3,019
Other[2]					1,313			460	1,773
Assets at 30 June 2021					6,832			5,850	12,682
Debt securities					2,402			4,773	7,175
Equity securities					2			238	240
Investment property					352			—	352
Cash and cash equivalents					2,678			217	2,895
Other[2]					1,497			396	1,893
Assets at 31 December 2020					6,931			5,624	12,555
Average assets					6,882			5,737	12,619
LTIR as % of average assets					1.3 %			2.0 %	1.6 %

1 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.
2 Includes loans and other financial investments.

Full year 2021	UK Personal £m	UK Commercial £m	Total UK £m	Ireland £m	Total UK & Ireland £m	Canada Personal £m	Canada Commercial £m	Total Canada £m	Total continuing operations £m
Gross written premiums	2,334	2,609	4,943	409	5,352	2,187	1,268	3,455	8,807
Net written premiums	2,250	2,162	4,412	382	4,794	2,136	1,120	3,256	8,050
Net earned premiums	2,216	2,019	4,235	381	4,616	2,085	1,062	3,147	7,763
Net claims incurred	(1,293)	(1,249)	(2,542)	(216)	(2,758)	(1,262)	(519)	(1,781)	(4,539)
Of which claims handling costs			(117)	(15)	(132)			(117)	(249)
Earned commission	(548)	(408)	(956)	(60)	(1,016)	(438)	(252)	(690)	(1,706)
Earned expenses	(254)	(253)	(507)	(74)	(581)	(232)	(151)	(383)	(964)
Underwriting result	121	109	230	31	261	153	140	293	554
Long-term investment return (LTIR)			85	7	92			117	209
Other[1]			3	—	3			(4)	(1)
Operating profit			318	38	356			406	762
Claims ratio	58.4 %	61.9 %	60.0 %	56.6 %	59.7 %	60.5 %	48.9 %	56.6 %	58.5 %
Of which:									
Prior year reserve development (%)			1.1 %	(1.4)%	0.9 %			(0.3)%	0.4 %
Weather claims over/(under) long-term average (%)			0.4 %	(1.9)%	0.2 %			(0.4)%	(0.1)%
Commission ratio	24.7 %	20.2 %	22.6 %	15.7 %	22.0 %	21.0 %	23.7 %	21.9 %	22.0 %
Expense ratio	11.5 %	12.5 %	12.0 %	19.4 %	12.6 %	11.1 %	14.2 %	12.2 %	12.4 %
Combined operating ratio	94.6 %	94.6 %	94.6 %	91.7 %	94.3 %	92.6 %	86.8 %	90.7 %	92.9 %
Assets supporting general insurance business									
Debt securities					3,106			5,012	8,118
Equity securities					633			207	840
Investment property					271			—	271
Cash and cash equivalents					2,346			368	2,714
Other[2]					712			430	1,142
Assets at 31 December 2021					7,068			6,017	13,085
Debt securities					2,402			4,773	7,175
Equity securities					2			238	240
Investment property					352			—	352
Cash and cash equivalents					2,678			217	2,895
Other[2]					1,497			396	1,893
Assets at 31 December 2020					6,931			5,624	12,555
Average assets					7,000			5,820	12,820
LTIR as % of average assets					1.3 %			2.0 %	1.6 %

1 Includes the result of non-insurance operations, unwind of discount rate and pension scheme net finance costs.
2 Includes loans and other financial investments.

Financial supplement

A1 – Reconciliation of Group adjusted operating profit to IFRS (loss)/profit for the period

	Note	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
UK & Ireland Life	6.i	**651**	545	1,428
UK & Ireland General Insurance	6.ii	**171**	191	356
Canada	6.ii	**204**	229	406
Aviva Investors	6.iii	**14**	19	41
International investments	6.iv	**55**	55	97
		1,095	1,039	2,328
Corporate centre costs and Other operations	A2	**(138)**	(134)	(379)
Group debt costs and other interest	A3	**(128)**	(180)	(315)
Group adjusted operating profit from continuing operations		**829**	725	1,634
Group adjusted operating profit from discontinued operations		**—**	407	631
Group adjusted operating profit before tax attributable to shareholders' profits		**829**	1,132	2,265
Adjusted for the following:				
Life business: Investment variances and economic assumption changes	A4	**(537)**	(259)	(805)
Non-life business: Short-term fluctuation in return on investments	A5	**(1,080)**	(155)	(149)
General insurance and health business: Economic assumption changes	A5	**147**	(23)	(85)
Impairment of goodwill, joint ventures, associates and other amounts expensed	A6	**(14)**	—	—
Amortisation and impairment of intangibles acquired in business combinations	A7	**(25)**	(30)	(66)
Amortisation and impairment of acquired value of in-force business	A8	**(91)**	(100)	(199)
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	A9	**—**	(513)	1,572
Other	A10	**(27)**	(55)	(204)
Adjusting items before tax		**(1,627)**	(1,135)	64
IFRS (loss)/profit before tax attributable to shareholders' profits from continuing operations and discontinued operations		**(798)**	(3)	2,329
Tax on group adjusted operating profit		**(149)**	(263)	(470)
Tax on other activities		**314**	68	177
		165	(195)	(293)
IFRS (loss)/profit for the period		**(633)**	(198)	2,036

Other Group adjusted operating profit items

A2 – Corporate centre costs and Other operations

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Cost reduction implementation and IFRS 17 costs	**(39)**	(34)	(115)
Strategic investment	**(15)**	—	—
Other projects	**(13)**	(12)	(76)
Project spend	**(67)**	(46)	(191)
Central spend	**(68)**	(73)	(169)
Corporate centre costs	**(135)**	(119)	(360)
Other operations	**(3)**	(15)	(19)
Total	**(138)**	(134)	(379)

Corporate centre costs of £135 million (HY21: £119 million) increased by £16 million. As we are now a simpler group we are addressing our central spend and are taking initiatives to reduce this as reflected in the decrease of £5 million from £73 million in the first half of 2021 to £68 million in the first half of 2022.

A3 – Group debt costs and other interest

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Subordinated debt	**(132)**	(168)	(304)
Other	**(5)**	(11)	(11)
Total external debt	**(137)**	(179)	(315)
Internal lending arrangements	**(12)**	(17)	(31)
Net finance income on main UK pension scheme	**21**	16	31
Total	**(128)**	(180)	(315)

External debt costs of £137 million (HY21: £179 million) decreased by £42 million as a result of the £1 billion debt tender and loan repayments during the prior year as well as a £500 million loan repayment in 2022. Costs of internal lending arrangements of £12 million (HY21: £17 million) decreased by £5 million due to early repayment of capital towards the end of 2021 which is partially offset by higher interest rates. Net finance income on the main UK pension scheme of £21 million (HY21: £16 million) increased by £5 million due to an increase in interest rates and an increase in opening assets.

Non-operating profit items
A4 – Life business: Investment variances and economic assumption changes

(a) Definitions

Group adjusted operating profit for life business is based on expected long-term investment returns on financial investments backing shareholder funds over the period, with consistent allowance for the corresponding expected movements in liabilities. Group adjusted operating profit includes the effect of variances in experience for operating items, such as mortality, persistency and expenses, and the effect of changes in operating assumptions. Changes due to economic items, such as market value movements and interest rate changes, which give rise to variances between actual and expected investment returns, and the impact of changes in economic assumptions on liabilities, are disclosed separately outside Group adjusted operating profit, in investment variances and economic assumption changes.

(b) Methodology

The expected investment returns and corresponding expected movements in life business liabilities are calculated separately for each principal life business unit.

The expected return on investments for both policyholders' and shareholders' funds is based on opening economic assumptions applied to the expected funds under management over the reporting period. Expected investment return assumptions are derived actively, based on market yields on risk-free fixed interest assets at the end of each financial year. The same margins are applied on a consistent basis across the Group to gross risk-free yields, to obtain investment return assumptions for equity and property. Expected funds under management are equal to the opening value of funds under management, adjusted for sales and purchases during the period arising from expected operating experience.

The actual investment return is affected by differences between the actual and expected funds under management, changes in asset mix, as well as other market movements. To the extent that these differences arise from the operating experience of the life business, or management decisions to change asset mix, the effect is included in the Group adjusted operating profit. The residual difference between actual and expected investment return is included in investment variances, outside Group adjusted operating profit but included in profit before tax.

The movement in liabilities included in Group adjusted operating profit reflects both the change in liabilities due to the expected return on investments, and the impact of experience variances and assumption changes for non-economic items. This would include movements in liabilities due to changes in the discount rate arising from discretionary management decisions that impact on product profitability over the lifetime of products.

The effect of differences between actual and expected economic experience on liabilities, and changes to economic assumptions used to value liabilities, are taken outside Group adjusted operating profit. For many types of life business, including unit-linked and with-profits funds, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit. The profit impact of economic volatility on other life business depends on the degree of matching of assets and liabilities, and exposure to financial options and guarantees.

(c) Assumptions

The expected rate of investment return is determined using consistent assumptions at the start of the period between operations, having regard to local economic and market forecasts of investment return and asset classification under IFRS.

The principal assumptions underlying the calculation of the expected investment return for equity and property are:

	Equity			Property		
	6 months 2022	6 months 2021	Full year 2021	**6 months 2022**	6 months 2021	Full year 2021
United Kingdom	4.4 %	3.9 %	3.9 %	**2.9 %**	2.4 %	2.4 %
Eurozone	**3.8 %**	3.2 %	3.2 %	**2.3 %**	1.7 %	1.7 %

The expected return on equity and property has been calculated by reference to the ten-year mid-price swap rate for an AA rated bank in the relevant currency plus a risk premium. The use of risk premium reflects management's long-term expectations of asset return in excess of the swap yield from investing in different asset classes. The asset risk premiums are set out in the table below:

All territories	**6 months 2022**	6 months 2021	Full year 2021
Equity risk premium	**3.5 %**	3.5 %	3.5 %
Property risk premium	**2.0 %**	2.0 %	2.0 %

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

Territories	**6 months 2022**	6 months 2021	Full year 2021
United Kingdom	**0.9 %**	0.4 %	0.4 %
Eurozone	**0.3 %**	(0.3)%	(0.3)%

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.

(d) Investment variances and economic assumption changes

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

Life business	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Investment variances and economic assumptions	**(537)**	(259)	(805)

Investment variances and economic assumption changes led to a loss of £537 million (HY21: loss of £259 million), primarily driven by a significant increase in interest rates, partially offset by gains from hedging negative global equity returns and a reduction in the allowance for risk of default on assets backing annuities reflecting reduced asset values. The adverse impact of interest rates and the beneficial impact from equities reflect the fact that we hedge on a Solvency II basis as that drives the ability of markets to remit cash rather than an IFRS basis. For example, when equity markets fall we suffer a loss from the decrease in the value of future annual management charges on unit-linked products on an economic basis which are not recognised under IFRS, however, the profit from hedges in place are recognised on both Solvency II and IFRS bases.

The variance in the six month period to 30 June 2021 was mainly due to an increase in interest rates and positive global equity returns, partially offset by a reduction in the allowance for risk of default on assets backing annuities.

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

(a) Definitions

Group adjusted operating profit for non-life business is based on an expected long-term investment return over the period. Any variance between the total investment return (including realised and unrealised gains) and the expected return over the period is disclosed separately outside Group adjusted operating profit, in short-term fluctuations.

(b) Methodology

The long-term investment return is calculated separately for each principal non-life market. In respect of equities and investment properties, the return is calculated by multiplying the opening market value of the investments, adjusted for sales and purchases during the year, by the long-term rate of investment return.

The long-term rate of investment return is determined using consistent assumptions between operations, having regard to local economic and market forecasts of investment return. The allocated long-term return for other investments (including debt securities) is the actual income receivable for the year. Actual income and long-term investment return both contain the amortisation of the discounts/premium arising on the acquisition of fixed income securities. For other operations, the long-term return reflects assets backing non-life business held in Group centre investments.

Market value movements which give rise to variances between actual and long-term investment returns are disclosed separately in short-term fluctuations outside Group adjusted operating profit.

The impact of realised and unrealised gains and losses on Group centre investments is included in short-term fluctuations on other operations.

(c) Assumptions

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

	Long-term rate of return on equities			Long-term rate of return on property		
	6 months 2022	6 months 2021	Full year 2021	**6 months 2022**	6 months 2021	Full year 2021
United Kingdom	**4.4 %**	3.9 %	3.9 %	**2.9 %**	2.4 %	2.4 %
Eurozone	**3.8 %**	3.2 %	3.2 %	**2.3 %**	1.7 %	1.7 %
Canada	**5.5 %**	4.7 %	4.7 %	**4.0 %**	3.2 %	3.2 %

The long-term rates of return on equities and properties have been calculated by reference to the ten-year mid-price swap rate for an AA rated bank in the relevant currency plus a risk premium. The underlying reference rates and risk premiums for the United Kingdom and eurozone are shown in note A4(c).

(d) Analysis of investment return

The total investment income on our non-life business, including short-term fluctuations, is as follows:

General Insurance and Health	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Analysis of investment income:			
– Net investment (expense)/income	**(832)**	(91)	7
– Foreign exchange (losses)/gains and other charges	**(24)**	36	47
	(856)	(55)	54
Analysed between:			
– Long-term investment return, reported within Group adjusted operating profit	**127**	130	253
– Short-term fluctuations in investment return, reported outside Group adjusted operating profit	**(983)**	(185)	(199)
	(856)	(55)	54
Short-term fluctuations:			
– General insurance and health	**(983)**	(185)	(199)
– Other operations[1]	**(97)**	30	50
Total short-term fluctuations	**(1,080)**	(155)	(149)

1 Other operations represents short-term fluctuations on Group centre investments.

The short-term fluctuations during the first half of 2022 represented a loss of £1,080 million, primarily due to rising interest rates. Additionally there were further losses from equity market falls, foreign exchange losses and credit spreads widening.

The short-term fluctuations during the first half of 2021 represented a loss of £155 million, primarily due to rising interest rates reducing the value of fixed interest securities, partially offset by foreign exchange gains.

(e) Economic assumption changes

In the general insurance and health business, there is a positive impact of £147 million (HY21: loss of £23 million; 2021: loss of £85 million) which has arisen primarily as a result of an increase in the interest rates used to discount claim reserves for both periodic payment orders (PPOs) and latent claims, with some offset from an increase in the estimated future inflation rate used to value PPOs.

A6 – Impairment of goodwill, joint ventures, associates and other amounts expensed

The impairment of goodwill, associates and joint ventures is a charge of £14 million (HY21: £nil), which relates to full impairment of an investment in an associate held by the life business in the UK.

A7 – Amortisation and impairment of intangibles acquired in business combinations

The amortisation of intangible assets acquired in business combinations is a charge of £25 million (HY21: £30 million charge). There is no impairment of intangible assets acquired in business combinations (HY21: £nil).

A8 – Amortisation and impairment of acquired value of in-force business

Amortisation of acquired value of in-force business (AVIF) is a charge of £91 million (HY21: £100 million charge), which relates solely to amortisation of AVIF in respect of the Group's subsidiaries and joint ventures. There is no impairment of AVIF (HY21: £nil).

A9 – Profit/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates

There were no disposals or remeasurements of subsidiaries, joint ventures and associates in the period. The profit/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates at 30 June 2021 and 31 December 2021 is analysed below.

	6 months 2021 £m	Full year 2021 £m
Disposals of discontinued operations		
Aviva France[1]	—	128
Aviva Vita	65	65
Aviva Italy[2]	—	233
Aviva Poland	—	1,671
Other	(41)	(9)
Held for sale remeasurements of discontinued operations		
Aviva France[1]	(538)	(538)
Total (loss)/gain on disposals and remeasurements of discontinued operations	(514)	1,550
Profit on disposal from continuing operations	1	22
Total (loss)/gain on disposals and remeasurements	(513)	1,572

1 A £538 million loss on remeasurement in respect of Aviva France was recognised at 30 June 2021, with a subsequent £128 million gain on disposal recognised when the disposal completed on 30 September 2021.
2 Aviva Italy excludes Aviva Vita, which is disclosed separately.

Further details of these items are provided in note B3.

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. At 30 June 2022, other items are a charge of £27 million (HY21: £55 million) which comprises the following:

- The following items which are disclosed outside of Group adjusted operating profit as they relate to acquisition and disposal activity that we consider to be strategic in nature:
  - A charge of £15 million arising from third party reinsurance, accepted by Aviva from the former Aviva France general insurance entity, which was terminated on 31 December 2021.
  - A charge of £1 million relating to provisions for indemnities entered into through acquisition and disposal activity.
- A charge of £10 million relating to fees and charges associated with the share buyback and return of capital to ordinary shareholders.
- A charge of £1 million relating to the cost of the employee free share award, which recognises the contribution our employees have made to the return of capital to ordinary shareholders.

IFRS capital

A11 – IFRS Net asset value

	6 months 2022 £m	**pence per share[2]**	6 months 2021 £m	pence per share[2]	Full year 2021 £m	pence per share[2]
Equity attributable to shareholders of Aviva plc at 1 January[1]	**19,002**	**678p**	19,354	493p	19,354	514p
Group adjusted operating profit	**829**	**29p**	1,132	29p	2,265	60p
Investment return variances and economic assumption changes	**(1,470)**	**(53)p**	(437)	(11)p	(1,039)	(28)p
Amortisation and impairment of intangibles, joint ventures, associates and other amounts expensed	**(39)**	**(1)p**	(30)	(1)p	(66)	(2)p
Amortisation and impairment of acquired value of in-force business	**(91)**	**(3)p**	(100)	(3)p	(199)	(5)p
(Loss)/profit on the disposal and remeasurements of subsidiaries, joint ventures and associates	**—**	**—**	(513)	(13)p	1,572	42p
Other[3]	**(27)**	**(1)p**	(55)	(1)p	(204)	(5)p
Tax on operating profit and on other activities	**165**	**6p**	(195)	(5)p	(293)	(8)p
Non-controlling interests	**(11)**	**—**	(34)	(1)p	(70)	(2)p
(Loss)/profit after tax attributable to shareholders of Aviva plc	**(644)**	**(23)p**	(232)	(6)p	1,966	52p
Available for sale (AFS) securities fair value and other reserve movements	**(8)**	**—**	(45)	(1)p	(73)	(2)p
Ordinary dividends	**(541)**	**(19)p**	(824)	(21)p	(1,110)	(29)p
Preference share dividend	**(9)**	**—**	(9)	—	(17)	—
Foreign exchange rate movements	**184**	**6p**	(96)	(2)p	(315)	(8)p
Remeasurements of pension schemes (net of tax)	**(405)**	**(15)p**	(123)	(3)p	(100)	(3)p
Shares purchased in buyback	**(336)**	**(12)p**	—	—	(663)	(18)p
Redemption of B shares	**(3,750)**	**(134)p**	—	—	—	—
Other net equity movements	**(40)**	**(1)p**	(46)	(1)p	(40)	(1)p
Equity attributable to shareholders of Aviva plc at 30 June/31 December[1]	**13,453**	**480p**	17,979	457p	19,002	505p

1 Excluding preference shares of £200 million (HY21: £200 million, 2021: £200 million).
2 The IFRS net asset value per share is based on the actual number of shares in issue at the closing balance sheet date. Therefore, for each period reported, the opening pence per share is updated from the previously reported closing pence per share and includes the effects of the reduction of the 79,987,629 shares (HY21: nil shares; 2021: 165,237,860 shares) acquired as part of the share buyback programme announced on 12 August 2021 and the reduction of 884,957,280 shares (HY21: nil shares, 2021: nil shares) under the share capital consolidation on 16 May 2022 (see note B21(c)). Number of shares as at 30 June 2022: 2,803 million (HY21: 3,930 million, 2021: 3,766 million).
3 Other in the first half of 2022 mainly relates to a charge from third party reinsurance of £14 million and costs of fees associated with return of capital to shareholders of £10 million. Other in 2021 includes net charges of £67 million from onerous contracts and indemnity provisions arising from acquisition and disposal activity, a £76 million charge associated with reinsurance accepted from the former Aviva France general insurance entity, a charge of £51 million relating to the redemption payment in excess of the market value of debt repaid, a charge of £7 million relating to the cost of voluntary amendments to ground rent leases held by an Aviva Investors fund and a £3 million stamp duty charge on share buybacks.

At 30 June 2022, IFRS net asset value per share was 480 pence (HY21: 457 pence, 2021: 505 pence). The decrease of 25 pence, compared to 31 December 2021, primarily reflects adverse investment variances and economic assumption changes, payments of dividends and remeasurement of pension scheme, offset by operating profit .

A12 – IFRS return on equity

6 months 2022	Operating profit			
	Before tax attributable to shareholders' profits £m	After tax attributable to shareholders' profits £m	Weighted average shareholders' funds including non-controlling interests £m	Return on equity %[1]
UK & Ireland Life	651	539	12,429	8.7 %
UK & Ireland General Insurance	171	142	1,157	24.5 %
Canada	204	161	1,612	19.9 %
Aviva Investors	14	9	502	3.8 %
UK, Ireland, Canada and Aviva Investors	1,040	851	15,700	10.8 %
International investments	55	55	885	12.5 %
Other Group activities[2]	(129)	(115)	6,272	N/A
Return on capital employed from continuing operations	966	791	22,857	6.9 %
Discontinued operations	—	—	—	— %
Return on total capital employed	966	791	22,857	6.9 %
Subordinated debt	(132)	(107)	(5,215)	4.1 %
Senior debt	(5)	(4)	(711)	1.0 %
Return on total equity	829	680	16,931	8.0 %
Less: Non-controlling interests		(11)	(252)	8.4 %
Tier 1 notes		—	(248)	— %
Preference shares		(9)	(200)	8.6 %
Return on equity shareholders' funds		660	16,231	8.1 %
Return on equity shareholders' funds (normalised)[3]		660	14,355	9.2 %

1 IFRS return on equity is calculated on an annualised basis.
2 The other Group activities operating loss before tax of £129 million comprises corporate centre costs of £135 million, other operations loss of £3 million, interest expense on internal lending arrangements of £12 million, partly offset by finance income on the main UK pension scheme of £(21) million.
3 Return on equity shareholders' funds (normalised) is calculated as if the share consolidation completed on 16 May 2022 as part of the £3.75 billion capital return, had taken place on 1 January 2022.

6 months 2021	Operating profit			
	Before tax attributable to shareholders' profits £m	After tax attributable to shareholders' profits £m	Weighted average shareholders' funds including non-controlling interests £m	Return on equity %[1]
UK & Ireland Life	545	403	12,345	6.5 %
UK & Ireland General Insurance	191	173	1,358	25.5 %
Canada	229	176	1,569	22.4 %
Aviva Investors	19	16	417	7.7 %
UK, Ireland, Canada and Aviva Investors	984	768	15,689	9.8 %
International investments	55	55	810	13.6 %
Other Group activities[2]	(135)	(121)	6,553	N/A
Return on capital employed from continuing operations	904	702	23,052	6.1 %
Discontinued operations	407	312	3,985	15.7 %
Return on total capital employed	1,311	1,014	27,037	7.5 %
Subordinated debt	(168)	(136)	(6,256)	4.3 %
Senior debt	(11)	(9)	(969)	1.9 %
Return on total equity	1,132	869	19,812	8.8 %
Less: Non-controlling interests		(35)	(945)	7.4 %
Tier 1 notes		—	—	— %
Preference shares		(9)	(200)	9.0 %
Return on equity shareholders' funds		825	18,667	8.8 %

1 IFRS return on equity is calculated on an annualised basis.
2 The other Group activities operating loss before tax of £135 million comprises corporate centre costs of £119 million, other operations loss of £15 million, interest expense on internal lending arrangements of £17 million, partly offset by finance income on the main UK pension scheme of £(16) million.

Full year 2021	Operating profit Before tax attributable to shareholders' profits £m	After tax attributable to shareholders' profits £m	Weighted average shareholders' funds including non-controlling interests £m	Return on equity %
UK & Ireland Life	1,428	1,125	12,282	9.2 %
UK & Ireland General Insurance	356	338	1,353	25.0 %
Canada	406	315	1,592	19.8 %
Aviva Investors	41	35	438	8.0 %
UK, Ireland, Canada and Aviva Investors	2,231	1,813	15,665	11.6 %
International investments	97	97	808	12.0 %
Other Group activities[1]	(379)	(351)	6,836	N/A
Return on capital employed from continuing operations	1,949	1,559	23,309	6.7 %
Discontinued operations	631	491	2,923	16.8 %
Return on total capital employed	2,580	2,050	26,232	7.8 %
Subordinated debt	(304)	(246)	(5,855)	4.2 %
Senior debt	(11)	(9)	(839)	1.1 %
Return on total equity	2,265	1,795	19,538	9.2 %
Less: Non-controlling interests		(71)	(757)	9.4 %
Tier 1 notes		—	—	— %
Preference shares		(17)	(200)	8.5 %
Return on equity shareholders' funds		1,707	18,581	9.2 %

1 The other Group activities operating loss before tax of £379 million comprises corporate centre costs of £360 million, other operations loss of £19 million, interest expense on internal lending arrangements of £31 million, partly offset by finance income on the main UK pension scheme of £(31) million.

A13 – Group capital under IFRS basis

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

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
UK & Ireland Life	**12,454**	12,037	12,403
UK & Ireland General Insurance[1]	**1,032**	1,299	1,281
Canada	**1,630**	1,637	1,593
Aviva Investors	**509**	423	494
UK, Ireland, Canada and Aviva Investors	**15,625**	15,396	15,771
International investments	**911**	819	858
Other Group activities[1,2]	**3,584**	5,725	8,958
Capital employed from continuing operations	**20,120**	21,940	25,587
Discontinued operations	**—**	3,318	—
Total capital employed	**20,120**	25,258	25,587
Financed by			
Equity shareholders' funds	**13,453**	17,979	19,002
Non-controlling interests	**252**	884	252
Tier 1 notes	**496**	—	—
Preference shares	**200**	200	200
Subordinated debt	**4,998**	5,478	5,432
Senior debt	**721**	717	701
Total capital employed[3]	**20,120**	25,258	25,587

1 Capital employed for United Kingdom General Insurance excludes £924 million (HY21: £924 million; 2021: £924 million) of goodwill which does not support the general insurance business for capital purposes and is included in other Group activities.
2 Other Group activities include centrally held tangible net assets, the main UK staff pension scheme surplus and also reflect 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 Goodwill, AVIF and other intangibles are maintained within the capital base. Goodwill includes goodwill in subsidiaries of £1,749 million (HY21: £1,767 million; 2021: £1,741 million) and goodwill in joint ventures of £62 million (HY21: £62 million; 2021: £62 million). AVIF and other intangibles comprise £1,842 million (HY21: £2,098 million; 2021: £1,950 million) of intangibles in subsidiaries and £159 million (HY21: £142 million; 2021: £138 million) of intangibles in joint ventures, net of deferred tax liabilities of £(412) million (HY21: £(445) million; 2021: £(433) million and the non-controlling interest share of intangibles of £nil (HY21: £(23) million; 2021: £nil). The comparative amounts of goodwill and AVIF and other intangible assets in joint ventures for HY21 have been amended from those previously reported following a review in the second half of 2021 of the fair value of identifiable net assets acquired in Aviva Singlife Holdings Pte Ltd.

Total capital employed is financed by a combination of equity shareholders' funds, preference capital, subordinated debt and other borrowings.

On 21 April 2022 the Group's 8.250% £500 million Tier 2 subordinated notes reached their final maturity and were redeemed.

On 15 June 2022 the Group issued £500 million of 6.875% fixed rate reset perpetual restricted tier 1 contingent convertible notes (the RT1 Notes). The RT1 Notes are callable at par between 15 December 2031 and 15 June 2032 (the First Reset Date) inclusive and thereafter every five years after the First Reset Date. If not called, the coupon from 15 June 2032 will be reset to the prevailing five year benchmark gilt yield plus 4.649%. The notes have no fixed maturity date. Optional cancellation of coupon payments is at the discretion of the Group and mandatory cancellation is upon the occurrence of certain conditions.

The RT1 notes are therefore treated as equity and the coupon payment is recognised directly in equity. On the occurrence of certain conversion trigger events the notes are convertible into ordinary shares of the Group at the prevailing conversion price. The notes are treated as restricted tier 1 own funds for Solvency II purposes.

At 30 June 2022 the market value of our external debt (subordinated debt and senior debt) and preference shares (including both Aviva plc preference shares of £200 million (HY21: £200 million) and General Accident plc preference shares, within non-controlling interests, of £250 million (HY21: £250 million)) was £6,653 million (HY21: £7,971 million).

IFRS financial statements

Condensed consolidated income statement

For the six month period ended 30 June 2022

	Note	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Continuing operations				
Income				
Gross written premiums		**8,883**	8,269	19,398
Premiums ceded to reinsurers		**(1,510)**	(1,392)	(4,701)
Premiums written net of reinsurance		**7,373**	6,877	14,697
Net change in provision for unearned premiums		**(220)**	(229)	(307)
Net earned premiums		**7,153**	6,648	14,390
Fee and commission income		**715**	728	1,488
Net investment (expense)/income		**(30,777)**	7,351	17,138
Share of profit after tax of joint ventures and associates		**60**	48	146
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates		**—**	1	22
		(22,849)	14,776	33,184
Expenses				
Claims and benefits paid, net of recoveries from reinsurers		**(6,340)**	(6,248)	(12,493)
Change in insurance liabilities, net of reinsurance	B8(b)	**14,198**	3,485	1,699
Change in investment contract provisions		**16,021**	(8,446)	(15,304)
Change in unallocated divisible surplus		**138**	1	(175)
Fee and commission expense		**(1,730)**	(1,600)	(3,172)
Investment income/(expense) attributable to unitholders		**592**	(274)	(224)
Other expenses		**(1,162)**	(1,013)	(2,211)
Finance costs		**(235)**	(285)	(503)
		21,482	(14,380)	(32,383)
(Loss)/profit before tax from continuing operations		**(1,367)**	396	801
Tax attributable to policyholders' returns	B5(d)	**569**	(119)	(245)
(Loss)/profit before tax attributable to shareholders' profits from continuing operations		**(798)**	277	556
Tax credit/(expense)	B5(a)	**734**	(280)	(465)
Less: tax attributable to policyholders' returns	B5(d)	**(569)**	119	245
Tax attributable to shareholders' profits		**165**	(161)	(220)
(Loss)/profit from continuing operations		**(633)**	116	336
Profit for the period from discontinued operations		**—**	200	150
(Loss)/profit on disposal of discontinued operations		**—**	(514)	1,550
(Loss)/profit from discontinued operations	B3(c)	**—**	(314)	1,700
(Loss)/profit for the period		**(633)**	(198)	2,036
Attributable to:				
Equity holders of Aviva plc		**(644)**	(232)	1,966
Non-controlling interests		**11**	34	70
(Loss)/profit for the period		**(633)**	(198)	2,036
Earnings per share	B6			
Basic (pence per share)		**(18.8)**	(6.2)	50.1
Diluted (pence per share)		**(18.8)**	(6.2)	49.7
Continuing operations - basic (pence per share)		**(18.8)**	2.5	7.7
Continuing operations - diluted (pence per share)		**(18.8)**	2.5	7.6

Condensed consolidated statement of comprehensive income

For the six month period ended 30 June 2022

	Note	**6 months 2022 £m**	6 months 2021 £m	Full year 2021 £m
(Loss)/profit for the period from continuing operations		**(633)**	116	336
Other comprehensive income from continuing operations:				
Items that may be reclassified subsequently to income statement				
Share of other comprehensive (loss)/income of joint ventures and associates		**(8)**	(6)	5
Foreign exchange rate movements		**191**	(26)	(34)
Aggregate tax effect – shareholder tax on items that may be reclassified subsequently to income statement	B5(b)	**(7)**	6	(7)
Items that will not be reclassified to income statement				
Remeasurements of pension schemes		**(583)**	26	59
Aggregate tax effect – shareholder tax on items that will not be reclassified subsequently to income statement	B5(b)	**178**	(149)	(159)
Total other comprehensive loss, net of tax from continuing operations		**(229)**	(149)	(136)
Total comprehensive (loss)/income for the period from continuing operations		**(862)**	(33)	200
(Loss)/profit for the period from discontinued operations	B3(c)	**—**	(314)	1,700
Other comprehensive loss, net of tax from discontinued operations	B3(c)	**—**	(219)	(241)
Total comprehensive (loss)/income for the period from discontinued operations		**—**	(533)	1,459
Total comprehensive (loss)/income for the period		**(862)**	(566)	1,659
Attributable to:				
Equity holders of Aviva plc				
From continuing operations		**(873)**	(44)	178
From discontinued operations		**—**	(529)	1,444
Non-controlling interests				
From continuing operations		**11**	11	22
From discontinued operations		**—**	(4)	15
		(862)	(566)	1,659

Condensed consolidated statement of changes in equity

For the six month period ended 30 June 2022

	Note	**6 months 2022 £m**	6 months 2021 £m	Full year 2021 £m
Balance at 1 January		**19,454**	20,560	20,560
(Loss)/profit for the period		**(633)**	(198)	2,036
Other comprehensive loss		**(229)**	(368)	(377)
Total comprehensive (loss)/income for the period		**(862)**	(566)	1,659
Dividends and appropriations	B7	**(550)**	(833)	(1,127)
Non-controlling interests share of dividends declared in the period		**(11)**	(48)	(60)
Reserves credit for equity compensation plans		**6**	28	24
Shares purchased under equity compensation plans		**(46)**	(67)	(64)
Shares purchased in buyback[1]	B21(a)	**(336)**	—	(663)
Return of capital to ordinary shareholders via B share scheme[2]	B21(b)	**(3,750)**	—	—
Issue of tier 1 notes[3]		**496**	—	—
Net forfeited dividend income		**—**	(1)	—
Changes in non-controlling interests in subsidiaries		**—**	(9)	(9)
Transfer to profit on disposal of subsidiaries, joint ventures and associates		**—**	(1)	(866)
Balance at 30 June/31 December		**14,401**	19,063	19,454

1 On 12 August 2021, the Group announced a share buyback of ordinary shares for an aggregate purchase price of up to £750 million. On 16 December 2021 Aviva announced the increase and extension of the share buyback programme to £1 billion. In the year ended 31 December 2021, £663 million of shares had been purchased and shares with a nominal value of £42 million were cancelled. In the period to 30 June 2022 a further £336 million of shares were purchased and shares with a nominal value of £19 million have been cancelled.

2 On 2 March 2022, Aviva announced a proposed return of capital, via a B share scheme £3,750 million B Share Scheme for the holders of ordinary shares. 3,687,322,000 B shares were issued for nil consideration with a nominal value of 101.69 pence per share on 16 May 2022, resulting in a total of £3,750 million being credited to the B share capital account. At the same time, the merger reserve was reduced by £3,750 million. On 17 May 2022, the B shares were redeemed at 101.69 pence per share, which resulted in a £3,750 million reduction in the B share capital account and a corresponding increase in the capital redemption reserve. Retained earnings reduced by £3,750 million on payment of the return of capital to ordinary shareholders.

3 On 15 June 2022, the Group issued £500 million of 6.875% fixed rate reset perpetual restricted tier 1 contingent convertible notes (the RT1 Notes). The RT1 Notes are callable at par between 15 December 2031 and 15 June 2032 (the First Reset Date) inclusive and thereafter every five years after the First Reset Date. If not called, the coupon from 15 June 2032 will be reset to the prevailing five year benchmark gilt yield plus 4.649%. The notes have no fixed maturity date. Optional cancellation of coupon payments is at the discretion of the Group and mandatory cancellation is upon the occurrence of certain conditions. On the occurrence of certain conversion trigger events the notes are convertible into ordinary shares of the Group at the prevailing conversion price.

Condensed consolidated statement of financial position

As at 30 June 2022

	Note	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Assets				
Goodwill		**1,749**	1,767	1,741
Acquired value of in-force business and intangible assets		**1,842**	2,098	1,950
Interests in, and loans to, joint ventures		**2,025**	1,720	1,855
Interests in, and loans to, associates		**87**	132	118
Property and equipment		**411**	468	428
Investment property		**7,373**	6,787	7,003
Loans		**33,963**	40,070	38,624
Financial investments		**229,551**	253,637	264,961
Reinsurance assets	B11	**13,521**	13,189	15,032
Deferred tax assets		**302**	134	138
Current tax assets		**294**	209	170
Receivables		**6,197**	8,806	6,088
Deferred acquisition costs		**2,693**	2,712	2,721
Pension surpluses and other assets		**2,092**	2,801	2,769
Prepayments and accrued income		**2,641**	2,001	2,391
Cash and cash equivalents	B19	**13,744**	10,654	12,485
Assets of operations classified as held for sale	B3(b)	**—**	112,541	—
Total assets		**318,485**	459,726	358,474
Equity				
Capital				
Ordinary share capital	B21	**922**	982	941
Preference share capital		**200**	200	200
		1,122	1,182	1,141
Capital reserves				
Share premium	B21	**1,253**	1,244	1,248
Capital redemption reserve	B21	**3,855**	44	86
Merger reserve	B22	**5,224**	8,974	8,974
		10,332	10,262	10,308
Treasury shares		**(83)**	(55)	(51)
Currency translation reserve		**539**	719	314
Other reserves		**(129)**	(236)	(66)
Retained earnings	B23	**1,872**	6,307	7,556
Equity attributable to shareholders of Aviva plc		**13,653**	18,179	19,202
Tier 1 notes		**496**	—	—
Equity excluding non-controlling interests		**14,149**	18,179	19,202
Non-controlling interests		**252**	884	252
Total equity		**14,401**	19,063	19,454
Liabilities				
Gross insurance liabilities	B9	**107,379**	119,174	122,250
Gross liabilities for investment contracts	B10	**156,812**	165,335	172,452
Unallocated divisible surplus	B13	**1,825**	1,788	1,960
Net asset value attributable to unitholders		**12,832**	18,020	16,427
Pension deficits and other provisions		**716**	1,061	1,001
Deferred tax liabilities		**1,215**	1,901	1,983
Current tax liabilities		**25**	33	35
Borrowings	B14	**6,911**	7,637	7,344
Payables and other financial liabilities		**13,273**	13,683	12,609
Other liabilities		**3,096**	2,826	2,959
Liabilities of operations classified as held for sale	B3(b)	**—**	109,205	—
Total liabilities		**304,084**	440,663	339,020
Total equity and liabilities		**318,485**	459,726	358,474

Condensed consolidated statement of cash flows

For the six month period ended 30 June 2022

The cash flows presented in this statement cover all the Group's activities and include flows from both policyholder and shareholder activities. All cash and cash equivalents are available for use by the Group.

	Note	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Continuing operations				
Cash flows from operating activities				
Cash generated from operating activities[1]		**6,148**	517	(2,554)
Tax paid		**(155)**	(241)	(304)
Total net cash from operating activities		**5,993**	276	(2,858)
Cash flows from investing activities				
Disposals of subsidiaries, joint ventures and associates, net of cash transferred		**—**	13	23
Purchases of property and equipment		**(6)**	(37)	(86)
Proceeds on sale of property and equipment		**2**	52	159
Purchases of intangible assets		**(21)**	(13)	(22)
Total net cash (used in)/from investing activities		**(25)**	15	74
Cash flows from financing activities				
Proceeds from issue of ordinary shares		**5**	2	6
Return of capital to ordinary shareholders via B share scheme	B21(b)	**(3,750)**	—	—
Shares purchased in buyback	B21(a)	**(336)**	—	(663)
Treasury shares purchased for employee trusts		**(74)**	(69)	(69)
New borrowings drawn down, net of expenses		**136**	134	229
Repayment of borrowings[2]		**(665)**	(2,062)	(2,197)
Net repayment of borrowings		**(529)**	(1,928)	(1,968)
Interest paid on borrowings		**(225)**	(279)	(489)
Repayment of leases		**(32)**	(38)	(71)
Preference dividends paid	B7	**(9)**	(9)	(17)
Ordinary dividends paid	B7	**(541)**	(824)	(1,110)
Issue of tier 1 notes[3]		**496**	—	—
Dividends paid to non-controlling interests of subsidiaries		**(11)**	(10)	(21)
Other		**(1)**	(2)	—
Total net cash used in financing activities		**(5,007)**	(3,157)	(4,402)
Total net increase/(decrease) in cash and cash equivalents from continuing operations		**961**	(2,866)	(7,186)
Cash flows used in discontinued operations		**—**	(704)	(286)
Cash flow on disposals from discontinued operations		**—**	308	3,364
Net cash flows from discontinued operations		**—**	(396)	3,078
Cash and cash equivalents at 1 January		**11,878**	16,182	16,182
Effect of exchange rate changes on cash and cash equivalents		**72**	(178)	(196)
Cash and cash equivalents at 30 June/31 December	B19	**12,911**	12,742	11,878

1 Cash flows from operating activities include interest received of £1,846 million (HY21: £2,096 million, 2021: £3,605 million) and dividends received of £2,187 million (HY21: £2,036 million, 2021: £4,461 million). Cash flows from operating activities in the 12 month period ended 31 December 2021 and in the six month period ended 30 June 2022, include impacts from the investment of proceeds from the disposal of discontinued operations into financial investments during 2021, and subsequent disinvestment from those financial investments in the six month period ended 30 June 2022 ahead of the return of capital to ordinary shareholders. This activity is reflected as an increase in cash generated from operating activities in the six month period ended 30 June 2022 (2021: reduction).

2 Repayment of borrowings includes the redemption of £500 million (HY21: £1,878 million, 2021: £1,878 million) subordinated debt and senior notes.

3 On 15 June 2022, the Group issued £500 million of 6.875% fixed rate reset perpetual restricted tier 1 contingent convertible notes (the RT1 Notes). The RT1 Notes are callable at par between 15 December 2031 and 15 June 2032 (the First Reset Date) inclusive and thereafter every five years after the First Reset Date. If not called, the coupon from 15 June 2032 will be reset to the prevailing five year benchmark gilt yield plus 4.649%. The notes have no fixed maturity date. Optional cancellation of coupon payments is at the discretion of the Group and mandatory cancellation is upon the occurrence of certain conditions. The RT1 notes are therefore treated as equity and the coupon payment is recognised directly in equity. On the occurrence of certain conversion trigger events the notes are convertible into ordinary shares of the Group at the prevailing conversion price.

B1 – Basis of preparation

(a) The condensed consolidated interim financial statements for the six months to 30 June 2022 have been prepared in accordance with IAS 34 Interim Financial Reporting as adopted by the UK, and the Disclosure Guidance and Transparency Rules of the Financial Conduct Authority.

The results for the six months ended 30 June 2022 are unaudited but have been reviewed by the Auditor, PricewaterhouseCoopers LLP (PwC). The interim results do not constitute statutory accounts as defined in Section 434 of the Companies Act 2006. The comparative results for the year ended 31 December 2021 have been taken from the Group's 2021 Annual Report and Accounts. Therefore, these interim financial statements should be read in conjunction with the Group's 2021 Annual Report and Accounts that were prepared in accordance with UK-adopted international accounting standards and the legal requirements of the Companies Act 2006. PwC reported on the 2021 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 2021 Annual Report and Accounts have been filed with the Registrar of Companies.

(b) Items included in the financial statements of each of the Group's entities are measured in the currency of the primary economic environment in which that entity operates (the functional currency). The consolidated financial statements are stated in pounds sterling, which is the Company's functional and presentational currency. Unless otherwise noted, the amounts shown in these financial statements are in millions of pounds sterling (£m).

Going concern

A detailed going concern review has been undertaken as part of the 2022 interim reporting process. This review includes consideration of the Group's current and forecast solvency and liquidity positions over a minimum two-year period, which aligns to management's 2022-2024 business plan and evaluates the results of stress and scenario testing. Stress and scenario testing (including reverse stress testing) is used to test the resilience of business plans and to inform decision-making. These tests are driven by the Group's risk profile at a range of severities, as well as a range of other scenarios, as part of the Group solvency and liquidity management processes.

Even in severe downside scenarios, no material uncertainty in relation to going concern has been identified, due to the Group's strong solvency and liquidity positions providing considerable resilience to external shocks, underpinned by the Group's approach to risk management (see note B18).

After making enquiries, the directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for a period of at least twelve months from the date of approval of the financial statements. For this reason, the Group continues to adopt the going concern basis in preparing the financial statements.

New standards, interpretations and amendments to published standards that have been adopted by the Group

The Group has adopted the following amendments to standards which became effective for the annual reporting period beginning on 1 January 2022. The amendments have been issued and endorsed by the UK and do not have a significant impact on the Group's consolidated financial statements.

(i) COVID-19-Related Rent Concessions beyond 30 June 2021 - Amendment to IFRS 16

(ii) Property, Plant and Equipment: Proceeds before intended use - Amendments to IAS 16

(iii) Reference to the Conceptual Framework - Amendments to IFRS 3

(iv) Onerous Contracts - Cost of Fulfilling a Contract - Amendments to IAS 37

(v) Annual Improvements to IFRS Standards 2018-2020 Cycle

B2 – Exchange rates

The Group's principal overseas operations during the period were located within the eurozone and in Canada. 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 2022	6 months 2021	Full year 2021
Eurozone			
Average rate (€1 equals)	**£0.84**	£0.87	£0.86
Period end rate (€1 equals)	**£0.86**	£0.86	£0.84
Canada			
Average rate ($CAD1 equals)	**£0.61**	£0.58	£0.58
Period end rate ($CAD1 equals)	**£0.64**	£0.58	£0.58
Poland			
Average rate (PLN1 equals)	**N/A**	£0.19	£0.19
Period end rate (PLN1 equals)	**N/A**	£0.19	£0.18

Profits/(losses) attributable to discontinued operations disposed during 2021 were translated using the period average rate up until their disposal date. Closing balance sheets of disposed operations were translated using the closing rate on the date of disposal for the purpose of calculating the profit/(loss) on disposal.

B3 – Strategic transactions

This note provides details of the disposals and acquisitions of subsidiaries, joint ventures and associates that the Group has made during the period, and discontinued operations.

(a) Disposals and remeasurements

The Group's divestment programme was completed in 2021 and there were no disposals in the six months period ended 30 June 2022. The gain on the disposal and remeasurement of subsidiaries, joint ventures and associates for the six months period ended 30 June 2022 was £nil. The gain/loss on the disposal and remeasurement of subsidiaries, joint ventures and associates in the comparative periods is analysed below.

	6 months 2021 £m	Full year 2021 £m
Disposals of discontinued operations		
Aviva France[1]	—	128
Aviva Vita	65	65
Aviva Italy[2]	—	233
Aviva Poland	—	1,671
Other	(41)	(9)
Held for sale remeasurements of discontinued operations		
Aviva France[1]	(538)	(538)
Total (loss)/gain on disposals and remeasurements of discontinued operations	(514)	1,550
Profit on disposal from continuing operations	1	22
Total (loss)/gain on disposals and remeasurements	(513)	1,572

1 A £538 million loss on remeasurement in respect of Aviva France was recognised at 30 June 2021, with a subsequent £128 million gain upon disposal recognised when the disposal completed on 30 September 2021.
2 Aviva Italy excludes Aviva Vita, which is disclosed separately.

The following operations were disposed during 2021:

- The entire shareholding in Aviva France was sold to Aéma Group for cash consideration of €3,200 million (approximately £2,752 million). At 30 June 2021 the Group's holding in France was classified as held for sale resulting in a remeasurement loss of £538 million. The transaction completed on 30 September 2021, resulting in a profit on disposal of £128 million and a net £410 million charge over the year.
- The entire 80% shareholding in the Italian Life Insurer Aviva Vita S.p.A. (Aviva Vita) was sold to its partner UBI Banca. The transaction completed on 1 April 2021 and resulted in a profit on disposal of £65 million.
- The entire shareholdings of the remaining Italian General Insurance and Life businesses (Aviva Italy) were sold on 1 October 2021 and 1 December 2021 respectively, with a total profit on disposal of £233 million.
- The entire shareholding in Aviva's life insurance business in Poland and Lithuania, and its Polish general insurance, asset management and pensions businesses were sold to Allianz for net cash consideration of €2,369 million (approximately £2,034 million). The transaction completed on 30 November 2021 resulting in a profit on disposal of £1,671 million.
- The entire 40% shareholding in Aviva's joint venture in Turkey (AvivaSA Emeklilik ve Hayat AS) was sold on 6 May 2021 resulting in a loss on disposal of £41 million and the entire shareholding in Aviva Vietnam Life Insurance Limited was sold on 29 December 2021 resulting in a profit on disposal of £32 million.

For further information on these disposals see note 3 of the Group's 2021 Annual Report and Accounts.

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

There were no assets and liabilities of operations classified as held for sale as at 30 June 2022 or 31 December 2021. At 30 June 2021 the Group's holdings in France, Italy, Poland and Vietnam were classified as held for sale and the assets and liabilities of these operations classified as held for sale as at 30 June 2021 were as follows:

	30 June 2021 Total £m
Assets	
Acquired value of in-force business and other intangible assets	133
Interests in, and loans to, joint ventures and associates	77
Property and equipment	181
Investment property	5,273
Loans	1,085
Financial investments	100,418
Reinsurance assets	371
Other assets	2,072
Cash and cash equivalents	2,931
Total assets	112,541
Liabilities	
Gross insurance liabilities	30,959
Gross liabilities for investment contracts	65,225
Unallocated divisible surplus	5,975
Net assets attributable to unit holders	2,905
Borrowings	75
Other liabilities	4,066
Total liabilities	109,205
Net assets[1]	3,336

1 Net assets at 30 June 2021 include amounts attributable to non-controlling interests of £301 million for France, £243 million for Italy and £86 million for Poland.

Cumulative income recognised in other comprehensive income relating to disposal groups classified as held for sale was £nil at 30 June 2022 and 31 December 2021. The income recognised at 30 June 2021 was as follows:

Operations classified as held for sale	30 June 2021 Total £m
Cumulative income recognised in other comprehensive income	250

(c) Discontinued operations

In accordance with IFRS 5 Non-current assets held for sale and discontinued operations, the results of the operations specified in note B3(b) above were reclassified as held for sale and discontinued operations in the 2021 interim condensed consolidated financial statements. The operations were disposed of in the second half of 2021 and were included as discontinued operations in the Group's 2021 Annual Report and Accounts. There were no operations classified as held for sale or as discontinued operations at 30 June 2022.

Profit from discontinued operations for the comparative periods has been shown as a single line in the condensed consolidated income statement and net cash flows from discontinued operations for the comparative periods has been shown as a single line in the condensed consolidated statement of cash flows. Notes to the condensed consolidated statement of financial position are presented on a total Group basis and, as a result, comparative income statement and cash flow movements included within these notes may not reconcile to the corresponding comparatives presented in the condensed consolidated income statement and the condensed consolidated statement of cash flows.

Further analysis of the results and cash flows for the discontinued operations presented in the condensed consolidated financial statements for the comparatives periods are analysed below.

Income Statement

Discontinued operations	6 months 2021 £m	Full year 2021 £m
Gross written premiums	6,081	10,194
Premiums ceded to reinsurers	(77)	(115)
Net written premiums	6,004	10,079
Net change in provision for unearned premiums	(146)	(41)
Net earned premiums	5,858	10,038
Net investment income	824	1,430
Other income	309	500
Share of profit after tax of joint ventures and associates	10	10
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(514)	1,550
Total income	6,487	13,528
Claims and benefits paid, net of recoveries from reinsurers	(4,193)	(6,426)
Change in insurance liabilities, net of reinsurance	(2,360)	(3,732)
Change in investment contract provisions	(1,323)	(2,207)
Change in unallocated divisible surplus	1,867	2,074
Other expenses	(758)	(1,464)
Total expenses	(6,767)	(11,755)
(Loss)/profit before tax from discontinued operations	(280)	1,773
Tax attributable to policyholders' returns	—	—
(Loss)/profit before tax attributable to shareholders' profits from discontinued operations	(280)	1,773
Tax attributable to shareholders' profits	(34)	(73)
(Loss)/profit for the period from discontinued operations	(314)	1,700

Reconciliation of Group adjusted operating profit to profit for the period

Discontinued operations	6 months 2021 £m	Full year 2021 £m
Group adjusted operating profit from discontinued operations	407	631
Adjusted for the following:		
Reclassification of unallocated interest	(25)	(37)
Life business: Investment variances and economic assumption changes	(152)	(171)
Non-life business: Short-term fluctuation in return on investments	(8)	(28)
General insurance and health business: Economic assumption changes	16	(5)
Amortisation and impairment of intangibles acquired in business combinations	(3)	(12)
Amortisation and impairment of acquired value of in-force business	(1)	(1)
(Loss)/profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(514)	1,550
Other[1]	—	(154)
Adjusting items before tax	(687)	1,142
(Loss)/profit before tax attributable to shareholders' profits from discontinued operations	(280)	1,773

1 Other in 2021 comprise net charges of £78 million from onerous contracts and indemnity provisions arising from acquisition and disposal activity and a £76 million charge associated with reinsurance accepted from the former Aviva France general insurance entity.

Other Comprehensive Income

Discontinued operations	6 months 2021 £m	Full year 2021 £m
Other comprehensive income from discontinued operations:		
Items that may be reclassified subsequently to income statement		
Investments classified as available for sale		
Fair value losses	(45)	(62)
Fair value losses transferred to profit on disposals	(9)	(16)
Foreign exchange rate movements	(179)	(182)
Aggregate tax effect - shareholder tax on items that may be reclassified	14	19
Total other comprehensive loss for the period from discontinued operations	(219)	(241)

Cash flows

Discontinued operations	6 months 2021 £m	Full year 2021 £m
Total net cash used in operating activities	(620)	(232)
Cash proceeds from disposal of subsidiaries, joint ventures and associates	466	6,136
Less: Net cash and cash equivalents divested with subsidiaries	(188)	(2,772)
Other investing activities	(12)	(14)
Total net cash from investing activities	266	3,350
Total net cash used in financing activities	(42)	(40)
Net cash flows (used in)/from discontinued operations	(396)	3,078

(d) Acquisitions
There have been no acquisitions completed in the six months period ended 30 June 2022 or in 2021.

Succession Wealth
On 1 March 2022, Aviva entered into an agreement to acquire Succession Jersey Limited ("Succession Wealth") for consideration of £385 million. The transaction significantly enhances Aviva's presence in the fast-growing UK wealth market as more people seek advice for their retirement options. The transaction is subject to regulatory approval and is expected to complete in the second half of 2022.

Aviva Life Insurance Company India Limited ("Aviva India")
On 1 April 2022, Aviva agreed to acquire an additional 25% shareholding in Aviva India. The transaction is subject to regulatory approval and other customary closing conditions and is expected to complete in the second half of 2022. On completion, Aviva will hold a 74% shareholding and Aviva India will become a subsidiary of the Aviva Group.

(e) Significant restrictions
In certain jurisdictions the ability of subsidiaries to transfer funds to the Group in the form of cash dividends or to repay loans and advances is subject to local corporate or insurance laws and regulations and solvency requirements. There are no protective rights of non-controlling interests which significantly restrict the Group's ability to access or use the assets and settle the liabilities of the Group.

B4 – Segmental information

The Group's results can be segmented either by activity or by geography. Our primary reporting format is along market reporting lines, with supplementary information being given by business activity. This note provides segmental information on the consolidated income statement. Financial performance of our key markets are presented as UK & Ireland Life, General Insurance (which brings together our UK & Ireland GI businesses and Canada) and Aviva Investors. Our international businesses are presented as International investments (consisting of our interest in Singapore, China and India). In 2021 we completed disposals of all discontinued operations which concluded our divestment programme. Segmental information is presented for continuing operations only, an analysis of results from discontinued operations, for the comparative periods is presented in note B3(c).

(a) Operating segments
UK & Ireland Life
The principal activities of our UK & Ireland Life operations are life insurance, long-term health and accident insurance, savings, pensions and annuity business.

General Insurance
UK & Ireland
The principal activities of our UK & Ireland General Insurance operations are the provision of insurance cover to individuals and businesses, for risks associated mainly with motor vehicles, property and liability (such as employers' liability and professional indemnity liability) and medical expenses.

Canada
The principal activity of our Canada General Insurance operation is the provision of personal and commercial lines insurance products principally distributed through insurance brokers.

Aviva Investors
Aviva Investors operates in a number of international markets, in particular the UK, North America and Asia Pacific. Aviva Investors manages policyholders' and shareholders' invested funds, provides investment management services for institutional pension fund mandates and manages a range of retail investment products. These include investment funds, unit trusts, open-ended investment companies and individual savings accounts.

International investments
International investments comprise our long-term business operations in China, India and Singapore. These have been aggregated into a single reporting segment in line with IFRS 8 Operating Segments.

Other Group activities
Other Group activities includes investment return on centrally held assets, head office (Corporate Centre) expenses such as Group treasury and finance functions, financing costs arising on central borrowings, the elimination entries for certain inter-segment transactions and group consolidation adjustments.

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, including investment market performance.

(i) Segmental income statement for the six month period ended 30 June 2022

Continuing operations	UK & Ireland Life £m	General Insurance: UK & Ireland GI £m	General Insurance: Canada £m	General Insurance: Aviva Investors £m	International investments £m	Other Group activities £m	Total continuing operations £m
Gross written premiums	4,189	2,840	1,854	—	—	—	8,883
Premiums ceded to reinsurers	(1,137)	(268)	(105)	—	—	—	(1,510)
Premiums written net of reinsurance	3,052	2,572	1,749	—	—	—	7,373
Net change in provision for unearned premiums	(54)	(134)	(32)	—	—	—	(220)
Net earned premiums	2,998	2,438	1,717	—	—	—	7,153
Fee and commission income	540	56	15	86	—	18	715
	3,538	2,494	1,732	86	—	18	7,868
Net investment (expense)/income	(29,354)	(542)	(291)	16	—	(606)	(30,777)
Inter-segment revenue	—	—	—	117	—	—	117
Share of profit after tax of joint ventures and associates	28	—	—	—	19	13	60
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	—	—	—	—
Segmental income[1]	(25,788)	1,952	1,441	219	19	(575)	(22,732)
Claims and benefits paid, net of recoveries from reinsurers	(4,098)	(1,317)	(911)	—	—	(14)	(6,340)
Change in insurance liabilities, net of reinsurance	14,362	(57)	(107)	—	—	—	14,198
Change in investment contract provisions	16,038	—	—	(17)	—	—	16,021
Change in unallocated divisible surplus	138	—	—	—	—	—	138
Fee and commission expense	(533)	(687)	(497)	(12)	—	(1)	(1,730)
Investment income attributable to unitholders	—	—	—	—	—	592	592
Other expenses	(467)	(189)	(71)	(176)	—	(259)	(1,162)
Inter-segment expenses	(108)	(3)	(3)	—	—	(3)	(117)
Finance costs	(88)	(1)	(3)	—	—	(143)	(235)
Segmental expenses	25,244	(2,254)	(1,592)	(205)	—	172	21,365
(Loss)/profit before tax	(544)	(302)	(151)	14	19	(403)	(1,367)
Tax attributable to policyholders' returns	569	—	—	—	—	—	569
Profit/(loss) before tax attributable to shareholders' profits from continuing operations	25	(302)	(151)	14	19	(403)	(798)
Adjusting items:							
Reclassification of unallocated interest	(1)	(6)	13	—	—	(6)	—
Life business: Investment variances and economic assumption changes	507	—	—	—	30	—	537
Non-life business: Short-term fluctuation in return on investments	—	617	346	—	—	117	1,080
General insurance and health business: Economic assumption changes	—	(138)	(9)	—	—	—	(147)
Impairment of goodwill, joint ventures, associates and other amounts expensed	14	—	—	—	—	—	14
Amortisation and impairment of intangibles acquired in business combinations	20	—	5	—	—	—	25
Amortisation and impairment of acquired value of in-force business	85	—	—	—	6	—	91
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	—	—	—	—
Other[2]	1	—	—	—	—	26	27
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits from continuing operations	651	171	204	14	55	(266)	829

1 Total reported income, excluding inter-segment revenue, includes £(22,866) million from the United Kingdom (Aviva plc's country of domicile). Income is attributed on the basis of geographical origin which does not differ materially from revenue by geographical destination, as most risks are located in the countries where the contracts were written.

2 Other includes a charge of £16 million relating to costs associated with acquisition and disposal activity, a charge of £10 million relating to cost of fees and charges associated with the return of capital to ordinary shareholders and a charge of £1 million relating to the cost of the employee free share award.

(ii) Segmental income statement for the six month period ended 30 June 2021

Continuing operations	UK & Ireland Life £m	General Insurance: UK & Ireland GI £m	General Insurance: Canada £m	General Insurance: Aviva Investors £m	International investments £m	Other Group activities £m	Total continuing operations £m
Gross written premiums	3,903	2,705	1,661	—	—	—	8,269
Premiums ceded to reinsurers	(1,025)	(271)	(96)	—	—	—	(1,392)
Premiums written net of reinsurance	2,878	2,434	1,565	—	—	—	6,877
Net change in provision for unearned premiums	(47)	(165)	(17)	—	—	—	(229)
Net earned premiums	2,831	2,269	1,548	—	—	—	6,648
Fee and commission income	556	52	15	100	—	5	728
	3,387	2,321	1,563	100	—	5	7,376
Net investment income/(expense)	7,177	(75)	(32)	20	—	261	7,351
Inter-segment revenue	—	—	—	107	—	—	107
Share of (loss)/profit after tax of joint ventures and associates	(6)	—	1	—	47	6	48
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	1	1	—	—	(1)	1
Segmental income[1]	10,558	2,247	1,533	227	47	271	14,883
Claims and benefits paid, net of recoveries from reinsurers	(4,284)	(1,226)	(738)	—	—	—	(6,248)
Change in insurance liabilities, net of reinsurance	3,698	(123)	(90)	—	—	—	3,485
Change in investment contract provisions	(8,426)	—	—	(20)	—	—	(8,446)
Change in unallocated divisible surplus	1	—	—	—	—	—	1
Fee and commission expense	(409)	(680)	(496)	(13)	—	(2)	(1,600)
Investment expense attributable to unitholders	—	—	—	—	—	(274)	(274)
Other expenses	(511)	(152)	(67)	(175)	—	(108)	(1,013)
Inter-segment expenses	(99)	(3)	(3)	—	—	(2)	(107)
Finance costs	(88)	(1)	(3)	—	—	(193)	(285)
Segmental expenses	(10,118)	(2,185)	(1,397)	(208)	—	(579)	(14,487)
Profit/(loss) before tax	440	62	136	19	47	(308)	396
Tax attributable to policyholders' returns	(119)	—	—	—	—	—	(119)
Profit/(loss) before tax attributable to shareholders' profits from continuing operations	321	62	136	19	47	(308)	277
Adjusting items:							
Reclassification of unallocated interest	7	(5)	12	—	—	(39)	(25)
Life business: Investment variances and economic assumption changes	103	—	—	—	4	—	107
Non-life business: Short-term fluctuation in return on investments	—	92	81	—	—	(26)	147
General insurance and health business: Economic assumption changes	—	43	(4)	—	—	—	39
Impairment of goodwill, joint ventures, associates and other amounts expensed	—	—	—	—	—	—	—
Amortisation and impairment of intangibles acquired in business combinations	22	—	5	—	—	—	27
Amortisation and impairment of acquired value of in-force business	95	—	—	—	4	—	99
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	(1)	(1)	—	—	1	(1)
Other[2]	(3)	—	—	—	—	58	55
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits from continuing operations	545	191	229	19	55	(314)	725

1 Total reported income, excluding inter-segment revenue, includes £12,130 million from the United Kingdom (Aviva plc's country of domicile). Income is attributed on the basis of geographical origin which does not differ materially from revenue by geographical destination, as most risks are located in the countries where the contracts were written.

2 Other includes a charge of £51 million in relation to the redemption payment in excess of the market value of debt repaid as part of the Group's deleveraging strategy, a charge of £7 million relating to the cost of voluntary amendments to a small proportion of ground rent leases held by the Aviva Investor REaLM Ground Rent Fund and a net release of £3 million of certain provisions assumed as part of historic acquisition activities.

(iii) Segmental income statement for the year ended 31 December 2021

Continuing operations	UK & Ireland Life £m	General Insurance: UK & Ireland GI £m	General Insurance: Canada £m	General Insurance: Aviva Investors £m	International investments £m	Other Group activities £m	Total continuing operations £m
Gross written premiums	10,591	5,352	3,455	—	—	—	19,398
Premiums ceded to reinsurers	(3,944)	(558)	(199)	—	—	—	(4,701)
Premiums written net of reinsurance	6,647	4,794	3,256	—	—	—	14,697
Net change in provision for unearned premiums	(20)	(178)	(109)	—	—	—	(307)
Net earned premiums	6,627	4,616	3,147	—	—	—	14,390
Fee and commission income	1,150	102	31	186	—	19	1,488
	7,777	4,718	3,178	186	—	19	15,878
Net investment income/(expense)	16,778	9	(23)	138	—	236	17,138
Inter-segment revenue	—	—	—	235	—	—	235
Share of profit/(loss) after tax of joint ventures and associates	94	—	1	—	76	(25)	146
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	5	11	6	—	—	—	22
Segmental income[1]	24,654	4,738	3,162	559	76	230	33,419
Claims and benefits paid, net of recoveries from reinsurers	(8,396)	(2,520)	(1,577)	—	—	—	(12,493)
Change in insurance liabilities, net of reinsurance	2,219	(321)	(199)	—	—	—	1,699
Change in investment contract provisions	(15,174)	—	—	(130)	—	—	(15,304)
Change in unallocated divisible surplus	(175)	—	—	—	—	—	(175)
Fee and commission expense	(845)	(1,334)	(968)	(21)	—	(4)	(3,172)
Investment expense attributable to unitholders	—	—	—	—	—	(224)	(224)
Other expenses	(1,063)	(309)	(147)	(367)	—	(325)	(2,211)
Inter-segment expenses	(219)	(5)	(7)	—	—	(4)	(235)
Finance costs	(185)	(2)	(5)	—	—	(311)	(503)
Segmental expenses	(23,838)	(4,491)	(2,903)	(518)	—	(868)	(32,618)
Profit/(loss) before tax	816	247	259	41	76	(638)	801
Tax attributable to policyholders' returns	(245)	—	—	—	—	—	(245)
Profit/(loss) before tax attributable to shareholders' profits from continuing operations	571	247	259	41	76	(638)	556
Adjusting items:							
Reclassification of unallocated interest	13	(11)	25	—	—	(64)	(37)
Life business: Investment variances and economic assumption changes	622	—	—	—	12	—	634
Non-life business: Short-term fluctuation in return on investments	—	48	122	—	—	(49)	121
General insurance and health business: Economic assumption changes	—	83	(4)	—	—	1	80
Impairment of goodwill, joint ventures, associates and other amounts expensed	—	—	—	—	—	—	—
Amortisation and impairment of intangibles acquired in business combinations	44	—	10	—	—	—	54
Amortisation and impairment of acquired value of in-force business	189	—	—	—	9	—	198
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	(5)	(11)	(6)	—	—	—	(22)
Other[2]	(6)	—	—	—	—	56	50
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits from continuing operations	1,428	356	406	41	97	(694)	1,634

1 Total reported income, excluding inter-segment revenue, includes £28,320 million from the United Kingdom (Aviva plc's country of domicile). Income is attributed on the basis of geographical origin which does not differ materially from revenue by geographical destination, as most risks are located in the countries where the contracts were written.

2 Other in 2021 includes a charge of £51 million in relation to the redemption payment in excess of the market values of debt repaid as part of the Group's deleveraging strategy, a net release of £8 million of certain provisions assumed as part of historic acquisition activities, a charge of £7 million relating to the cost of voluntary amendments to a small proportion of ground rent leases, release of a £6 million provision relating to a tax indemnity associated with a historical disposal, a charge of £3 million relating to stamp duty on share buybacks and a charge of £3 million related to costs associated with disposal activity.

(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 savings and pension fund business. Long-term business also includes our share of the other life and related business written in our associates and joint ventures, as well as lifetime mortgage business written in the UK.

General insurance and health

Our general insurance and health business provides insurance cover to individuals and to small and medium-sized businesses, for risks associated mainly with motor vehicles, property and liability, such as employers' liability and professional indemnity liability, and medical expenses.

Fund management

Our fund management business invests policyholders' and shareholders' funds and provides investment management services for institutional pension fund mandates. It manages a range of retail investment products, including investment funds, unit trusts, open-ended investment companies and individual savings accounts. Clients include Aviva Group businesses and third-party financial institutions, pension funds, public sector organisations, investment professionals and private investors.

Other

Other includes service companies, head office expenses such as Group treasury and finance functions, and certain financing costs and taxes not allocated to business segments and elimination entries for certain inter-segment transactions and group consolidation adjustments.

(i) Segmental income statement – products and services for the six month period ended 30 June 2022

Continuing operations	Long-term business £m	General insurance and health[1] £m	Fund management £m	Other £m	Total continuing operations £m
Gross written premiums[2]	3,876	5,007	—	—	8,883
Premiums ceded to reinsurers	(1,136)	(374)	—	—	(1,510)
Premiums written net of reinsurance	2,740	4,633	—	—	7,373
Net change in provision for unearned premiums	—	(220)	—	—	(220)
Net earned premiums	2,740	4,413	—	—	7,153
Fee and commission income	540	68	85	22	715
	3,280	4,481	85	22	7,868
Net investment expense	(29,353)	(832)	—	(592)	(30,777)
Inter-segment revenue	—	—	117	—	117
Share of profit after tax of joint ventures and associates	47	—	—	13	60
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	—	—	—	—
Segmental income	(26,026)	3,649	202	(557)	(22,732)
Claims and benefits paid, net of recoveries from reinsurers	(3,917)	(2,409)	—	(14)	(6,340)
Change in insurance liabilities, net of reinsurance	14,362	(164)	—	—	14,198
Change in investment contract provisions	16,021	—	—	—	16,021
Change in unallocated divisible surplus	138	—	—	—	138
Fee and commission expense	(504)	(1,213)	(12)	(1)	(1,730)
Investment income attributable to unitholders	—	—	—	592	592
Other expenses	(445)	(305)	(176)	(236)	(1,162)
Inter-segment expenses	(108)	(7)	—	(2)	(117)
Finance costs	(81)	(4)	—	(150)	(235)
Segmental expenses	25,466	(4,102)	(188)	189	21,365
(Loss)/profit before tax	(560)	(453)	14	(368)	(1,367)
Tax attributable to policyholders' returns	569	—	—	—	569
Profit/(loss) before tax attributable to shareholders' profits from continuing operations	9	(453)	14	(368)	(798)
Adjusting items	669	850	—	108	1,627
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits from continuing operations	678	397	14	(260)	829

1 General insurance and health business segment includes gross written premiums of £313 million relating to health business. The remaining business relates to property and liability insurance.
2 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £144 million, which all relates to property and liability insurance.

(ii) Segmental income statement – products and services for the six month period ended 30 June 2021

Continuing operations	Long-term business £m	General insurance and health[1] £m	Fund management £m	Other £m	Total continuing operations £m
Gross written premiums[2]	3,619	4,650	—	—	8,269
Premiums ceded to reinsurers	(1,026)	(366)	—	—	(1,392)
Premiums written net of reinsurance	2,593	4,284	—	—	6,877
Net change in provision for unearned premiums	—	(229)	—	—	(229)
Net earned premiums	2,593	4,055	—	—	6,648
Fee and commission income	556	63	98	11	728
	3,149	4,118	98	11	7,376
Net investment income/(expense)	7,177	(106)	(1)	281	7,351
Inter-segment revenue	—	—	108	—	108
Share of profit/(loss) after tax of joint ventures and associates	42	1	(1)	6	48
Profit/(loss) on the disposal and remeasurement of subsidiaries, joint ventures and associates	—	2	—	(1)	1
Segmental income	10,368	4,015	204	297	14,884
Claims and benefits paid, net of recoveries from reinsurers	(4,123)	(2,125)	—	—	(6,248)
Change in insurance liabilities, net of reinsurance	3,703	(218)	—	—	3,485
Change in investment contract provisions	(8,446)	—	—	—	(8,446)
Change in unallocated divisible surplus	1	—	—	—	1
Fee and commission expense	(388)	(1,198)	(13)	(1)	(1,600)
Investment expense attributable to unitholders	—	—	—	(274)	(274)
Other expenses	(479)	(253)	(173)	(108)	(1,013)
Inter-segment expenses	(101)	(7)	—	—	(108)
Finance costs	(75)	(3)	—	(207)	(285)
Segmental expenses	(9,908)	(3,804)	(186)	(590)	(14,488)
Profit/(loss) before tax	460	211	18	(293)	396
Tax attributable to policyholders' returns	(119)	—	—	—	(119)
Profit/(loss) before tax attributable to shareholders' profits from continuing operations	341	211	18	(293)	277
Adjusting items	237	224	—	(13)	448
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits from continuing operations	578	435	18	(306)	725

1 General insurance and health business segment includes gross written premiums of £284 million relating to health business. The remaining business relates to property and liability insurance.
2 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £100 million, which all relates to property and liability insurance.

(iii) Segmental income statement – products and services for the year ended 31 December 2021

Continuing operations	Long-term business £m	General insurance and health[1] £m	Fund management £m	Other £m	Total continuing operations £m
Gross written premiums[2]	10,081	9,317	—	—	19,398
Premiums ceded to reinsurers	(3,944)	(757)	—	—	(4,701)
Premiums written net of reinsurance	6,137	8,560	—	—	14,697
Net change in provision for unearned premiums	—	(307)	—	—	(307)
Net earned premiums	6,137	8,253	—	—	14,390
Fee and commission income	1,152	125	183	28	1,488
	7,289	8,378	183	28	15,878
Net investment income/(expense)	16,864	(9)	4	279	17,138
Inter-segment revenue	—	—	237	—	237
Share of profit/(loss) after tax of joint ventures and associates	165	5	—	(24)	146
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	5	17	—	—	22
Segmental income	24,323	8,391	424	283	33,421
Claims and benefits paid, net of recoveries from reinsurers	(8,070)	(4,423)	—	—	(12,493)
Change in insurance liabilities, net of reinsurance	2,230	(531)	—	—	1,699
Change in investment contract provisions	(15,304)	—	—	—	(15,304)
Change in unallocated divisible surplus	(175)	—	—	—	(175)
Fee and commission expense	(799)	(2,348)	(21)	(4)	(3,172)
Investment expense attributable to unitholders	—	—	—	(224)	(224)
Other expenses	(1,007)	(521)	(362)	(321)	(2,211)
Inter-segment expenses	(221)	(13)	—	(3)	(237)
Finance costs	(160)	(7)	—	(336)	(503)
Segmental expenses	(23,506)	(7,843)	(383)	(888)	(32,620)
Profit/(loss) before tax	817	548	41	(605)	801
Tax attributable to policyholders' returns	(245)	—	—	—	(245)
Profit/(loss) before tax attributable to shareholders' profits from continuing operations	572	548	41	(605)	556
Adjusting items	894	259	—	(75)	1,078
Group adjusted operating profit/(loss) before tax attributable to shareholders' profits from continuing operations	1,466	807	41	(680)	1,634

1 General insurance and health business segment includes gross written premiums of £510 million relating to health business. The remaining business relates to property and liability insurance.
2 Gross written premiums include inward reinsurance premiums assumed from other companies amounting to £208 million, which all relates to property and liability insurance.

B5 – Tax

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

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

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

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Continuing operations			
Current tax			
For the period	**30**	152	228
Prior period adjustments	**(1)**	(8)	33
Total current tax from continuing operations	**29**	144	261
Deferred tax			
Origination and reversal of temporary differences	**(762)**	38	133
Changes in tax rates or tax laws	**—**	99	88
Write back of deferred tax assets	**(1)**	(1)	(17)
Total deferred tax from continuing operations	**(763)**	136	204
Total tax (credited)/charged to income statement from continuing operations	**(734)**	280	465
Total tax charged to income statement from discontinued operations	**—**	34	73
Total tax (credited)/charged to income statement	**(734)**	314	538

(ii) The Group, as a proxy for policyholders in the UK and Ireland, is required to record taxes on investment income and gains each year. Accordingly, the tax benefit or expenses attributable to UK and Ireland life insurance policyholder returns is included in the tax (credit)/charge. The tax credit attributable to policyholder returns included in the credit above is £(569) million (HY21: charge of £119 million; 2021: charge of £245 million).

(iii) The tax (credit)/charge from continuing operations above, comprising current and deferred tax, can be analysed as follows:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Continuing operations			
UK tax	**(696)**	253	366
Overseas tax	**(38)**	27	99
	(734)	280	465

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

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

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Current tax from continuing operations			
In respect of pensions and other post-retirement obligations	**(12)**	(16)	(17)
In respect of foreign exchange movements	**7**	(6)	7
	(5)	(22)	(10)
Deferred tax from continuing operations			
In respect of pensions and other post-retirement obligations	**(166)**	165	176
Total tax (credited)/charged to other comprehensive income arising from continuing operations	**(171)**	143	166
Total tax credited to other comprehensive income from discontinued operations	**—**	(14)	(19)
Total tax (credited)/charged to other comprehensive income	**(171)**	129	147

(ii) There is no tax charge/(credit) attributable to policyholders' return included above in either 2022 or 2021.

(c) Tax charged/(credited) to equity

No tax has been directly charged/(credited) to equity in either 2022 or 2021.

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 2022 £m	Shareholder £m	Policyholder £m	6 months 2021 £m	Shareholder £m	Policyholder £m	Full Year 2021 £m
(Loss)/profit before tax from continuing operations	**(798)**	**(569)**	**(1,367)**	277	119	396	556	245	801
(Loss)/profit before tax from discontinued operations	**—**	**—**	**—**	(280)	—	(280)	1,773	—	1,773
Total (loss)/profit before tax	**(798)**	**(569)**	**(1,367)**	(3)	119	116	2,329	245	2,574
Tax calculated at standard UK corporation tax rate of 19.00% (2021: 19.00%)	**(152)**	**(108)**	**(260)**	(1)	23	22	442	47	489
Reconciling items									
Different basis of tax – policyholders	**—**	**(463)**	**(463)**	—	96	96	—	200	200
Adjustment to tax charge in respect of prior periods	**—**	**—**	**—**	(9)	—	(9)	(13)	—	(13)
Non-assessable income and items not taxed at the full statutory rate	**14**	**—**	**14**	(15)	—	(15)	(19)	—	(19)
Non-taxable profit on sale of subsidiaries and associates	**—**	**—**	**—**	96	—	96	(314)	—	(314)
Disallowable expenses	**19**	**—**	**19**	30	—	30	40	—	40
Different local basis of tax on overseas profits	**(9)**	**2**	**(7)**	27	—	27	104	(2)	102
Change in future local statutory tax rates	**—**	**—**	**—**	87	—	87	89	—	89
Movement in deferred tax not recognised	**(28)**	**—**	**(28)**	(3)	—	(3)	(22)	—	(22)
Tax effect of profit from joint ventures and associates	**(4)**	**—**	**(4)**	(10)	—	(10)	(16)	—	(16)
Other	**(5)**	**—**	**(5)**	(7)	—	(7)	2	—	2
Total tax (credited)/charged to income statement	**(165)**	**(569)**	**(734)**	195	119	314	293	245	538

The tax (credit)/charge attributable to policyholder returns is removed from the Group's total profit before tax in arriving at the Group's profit before tax attributable to shareholders' profits. As the net of tax profits attributable to with-profits and unit-linked policyholders is zero, the Group's pre-tax profit attributable to policyholders is an amount equal and opposite to the tax charge/(credit) attributable to policyholders included in the total tax charge.

The UK Government has enacted an increase in the UK corporation tax rate to 25% to take effect from 1 April 2023. This rate has been used in the calculation of the UK's deferred tax assets and liabilities as at 30 June 2022, 30 June 2021 and 31 December 2021. As a result, the Group's deferred tax liabilities increased by £235 million in the year ended 31 December 2021.

On 20 July 2022 the UK government published draft legislation for consultation on The Organisation for Economic Co-operation and Development proposals to reform the international tax system and introduce a global minimum rate of corporation tax. The proposals are complex and there remains considerable uncertainty about the final form of the rules and the accompanying guidance in all countries. Accordingly, the potential impact cannot yet be reliably estimated. The proposed minimum tax rate of 15% is significantly below the statutory corporation tax rates in the UK and Canada. The Group continues to monitor the progress of proposed legislation.

B6 – Earnings per share

This note shows how to calculate earnings per share on profit attributable to ordinary shareholders, based both on the present shares in issue (the basic earnings per share) and the potential future shares in issue, including conversion of share options granted to employees (the diluted earnings per share). We have also shown the same calculations based on our Group adjusted operating profit as we believe this gives an important indication of operating performance. Consideration of both these measures gives a full picture of the performance of the business in the period. In addition a normalised operating earnings per share is disclosed in (a) (iv) to show operating earnings per share as if the return of capital to ordinary shareholders had taken place on 1 January 2022.

(a) Basic earnings per share

(i) The profit attributable to ordinary shareholders is:

	6 months 2022			6 months 2021			Full year 2021		
	Group adjusted operating profit £m	**Adjusting items £m**	**Total £m**	Group adjusted operating profit £m	Adjusting items £m	Total £m	Group adjusted operating profit £m	Adjusting items £m	Total £m
Continuing operations									
Profit/(loss) before tax attributable to shareholders' profits	**829**	**(1,627)**	**(798)**	725	(448)	277	1,634	(1,078)	556
Tax attributable to shareholders' profits	**(149)**	**314**	**165**	(168)	7	(161)	(330)	110	(220)
Profit/(loss) from continuing operations	**680**	**(1,313)**	**(633)**	557	(441)	116	1,304	(968)	336
Amount attributable to non-controlling interests	**(11)**	**—**	**(11)**	(10)	—	(10)	(21)	—	(21)
Cumulative preference dividends for the period	**(9)**	**—**	**(9)**	(9)	—	(9)	(17)	—	(17)
Profit/(loss) attributable to ordinary shareholders from continuing operations	**660**	**(1,313)**	**(653)**	538	(441)	97	1,266	(968)	298
Profit/(loss) attributable to ordinary shareholders from discontinued operations	**—**	**—**	**—**	287	(626)	(339)	441	1,209	1,650
Profit/(loss) attributable to ordinary shareholders	**660**	**(1,313)**	**(653)**	825	(1,067)	(242)	1,707	241	1,948

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

	6 months 2022			6 months 2021			Full year 2021		
	Before tax £m	**Net of tax, NCI and preference dividends £m**	**Per share p**	Before tax £m	Net of tax, NCI and preference dividends £m	Per share p	Before tax £m	Net of tax, NCI and preference dividends £m	Per share p
Continuing operations									
Group adjusted operating profit attributable to ordinary shareholders[1]	**829**	**660**	**19.0**	725	538	13.7	1,634	1,266	32.5
Adjusting items:									
Reclassification of unallocated interest	**—**	**—**	**—**	25	25	0.6	37	37	1.0
Life business: Investment variances and economic assumption changes	**(537)**	**(455)**	**(13.1)**	(107)	(109)	(2.8)	(634)	(549)	(14.1)
Non-life business: Short-term fluctuation in return on investments	**(1,080)**	**(844)**	**(24.3)**	(147)	(100)	(2.6)	(121)	(76)	(1.9)
General insurance and health business: Economic assumption changes	**147**	**120**	**3.5**	(39)	(32)	(0.8)	(80)	(65)	(1.7)
Impairment of goodwill, joint ventures, associates and other amounts expensed	**(14)**	**(14)**	**(0.4)**	—	—	—	—	—	—
Amortisation and impairment of intangibles acquired in business combinations	**(25)**	**(19)**	**(0.6)**	(27)	(25)	(0.6)	(54)	(47)	(1.2)
Amortisation and impairment of acquired value of in-force business	**(91)**	**(75)**	**(2.2)**	(99)	(153)	(3.9)	(198)	(234)	(6.0)
Profit/(loss) on disposal and remeasurement of subsidiaries, joint ventures and associates	**—**	**—**	**—**	1	(1)	—	22	(6)	(0.2)
Other	**(27)**	**(26)**	**(0.7)**	(55)	(46)	(1.1)	(50)	(28)	(0.7)
(Loss)/profit attributable to ordinary shareholders from continuing operations	**(798)**	**(653)**	**(18.8)**	277	97	2.5	556	298	7.7
Discontinued operations									
Group adjusted operating profit attributable to ordinary shareholders[1]	**—**	**—**	**—**	407	287	7.3	631	441	11.3
Adjusting items	**—**	**—**	**—**	(687)	(626)	(16.0)	1,142	1,209	31.1
(Loss)/profit attributable to ordinary shareholders from discontinued operations	**—**	**—**	**—**	(280)	(339)	(8.7)	1,773	1,650	42.4
(Loss)/profit attributable to ordinary shareholders	**(798)**	**(653)**	**(18.8)**	(3)	(242)	(6.2)	2,329	1,948	50.1

1 Group adjusted operating earnings per share from continuing operations and discontinued operations is 19.0 pence (HY21: 21.0 pence, 2021: 43.8 pence).

(iii) The calculation of basic earnings per share uses a weighted average of 3,474 million (HY21: 3,927 million, 2021: 3,889 million) ordinary shares in issue, after deducting treasury shares. The actual number of shares in issue at 30 June 2022 was 2,803 million (HY21: 3,930 million, 2021: 3,766 million) or 2,782 million (HY21: 3,916 million, 2021: 3,754 million) excluding treasury shares.

(iv) On 31 March 2022, Aviva completed the share buyback programme originally announced on 12 August 2021 and extended to an aggregate purchase of up to £1 billion on 16 December 2021. During the period £336 million (2021: £663 million) of shares were purchased and shares with a nominal value of £19 million (2021: £42 million) were cancelled, giving rise to an additional capital redemption reserve of an equivalent amount. On 2 March 2022, Aviva announced a further return of capital to ordinary shareholders of £3,750 million via a B Share Scheme which completed on 16 May 2022. At the same time, the Company's share capital was consolidated and the number of ordinary shares in issue reduced by 884,957,280 (see note B21). If the share consolidation had taken place on 1 January 2022, this would have resulted in normalised operating earnings per share of 23.5 pence for the six months ended 30 June 2022.

(b) Diluted earnings per share

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

	6 months 2022			6 months 2021			Full year 2021		
	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
Continuing operations									
(Loss)/profit attributable to ordinary shareholders	(653)	3,474	(18.8)	97	3,927	2.5	298	3,889	7.7
Dilutive effect of share awards and options[1]		37	—		31	—		33	(0.1)
Diluted earnings per share from continuing operations	(653)	3,511	(18.8)	97	3,958	2.5	298	3,922	7.6
Discontinued operations									
(Loss)/profit attributable to ordinary shareholders	—	—	—	(339)	3,927	(8.7)	1,650	3,889	42.4
Dilutive effect of share awards and options		—	—		31	—		33	(0.3)
Diluted earnings per share from discontinued operations	—	—	—	(339)	3,958	(8.7)	1,650	3,922	42.1
Diluted earnings per share	(653)	3,511	(18.8)	(242)	3,958	(6.2)	1,948	3,922	49.7

1 Excluded from the diluted (pence per share) figures are 37 million ordinary shares issued during the six months period ended 30 June 2022. If exercised, these would have a 0.2 pence per share anti-dilutive effect and are excluded in accordance with IAS 33 Earnings per share. The Group expects these share awards and options to be exercised.

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

	6 months 2022			6 months 2021			Full year 2021		
	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
Continuing operations									
Group adjusted operating profit attributable to ordinary shareholders	660	3,474	19.0	538	3,927	13.7	1,266	3,889	32.5
Dilutive effect of share awards and options		37	(0.2)		31	(0.1)		33	(0.2)
Diluted Group adjusted operating profit per share from continuing operations	660	3,511	18.8	538	3,958	13.6	1,266	3,922	32.3
Discontinued operations									
Group adjusted operating profit attributable to ordinary shareholders	—	—	—	287	3,927	7.3	441	3,889	11.3
Dilutive effect of share awards and options		—	—		31	—		33	(0.1)
Diluted Group adjusted operating profit per share from discontinued operations	—	—	—	287	3,958	7.3	441	3,922	11.2
Diluted Group adjusted operating profit per share	660	3,511	18.8	825	3,958	20.9	1,707	3,922	43.5

B7 – Dividends and appropriations

This note analyses the total dividends and other appropriations paid during the period, as set out in the table below. Details are also provided of the interim dividend for 2022, which is not accrued in these financial statements and is therefore excluded from the table.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Ordinary dividends declared and charged to equity in the year			
Final 2021 – 14.70 pence per share, paid on 19 May 2022	541	—	—
Interim 2021 – 7.35 pence per share, paid on 7 October 2021	—	—	286
Final 2020 – 14.00 pence per share, paid on 14 May 2021	—	549	549
Interim 2020 – 7.00 pence per share, paid on 21 January 2021	—	275	275
	541	824	1,110
Preference dividends declared and charged to equity in the year	9	9	17
	550	833	1,127

Subsequent to 30 June 2022, the directors declared an interim dividend for 2022 of 10.3p pence per ordinary share, amounting to £289 million. The dividend will be paid on 28 September 2022 and will be accounted for as an appropriation of retained earnings in the year ending 31 December 2022. Refer to shareholder services in the 'Other information' section for further details.

See note B21 for information on share buyback and return of capital to ordinary shareholders.

B8 – Contract liabilities and associated reinsurance

The Group's liabilities for insurance and investment contracts it has sold, and the associated reinsurance, is covered in the following notes:

- Note B9 covers insurance liabilities;
- Note B10 covers liabilities for investment contracts;
- Note B11 details the associated reinsurance assets on these liabilities; and
- Note B12 shows the effects of changes in the assumptions on the liabilities.

(a) Carrying amount

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

	30 June 2022			30 June 2021			Full year 2021		
	Gross provisions £m	Reinsurance assets £m	Net £m	Gross provisions £m	Reinsurance assets £m	Net £m	Gross provisions £m	Reinsurance assets £m	Net £m
Long-term business									
Insurance liabilities	**(89,919)**	**6,437**	**(83,482)**	(129,461)	6,765	(122,696)	(105,783)	7,887	(97,896)
Liabilities for participating investment contracts	**(19,089)**	**—**	**(19,089)**	(85,675)	—	(85,675)	(21,337)	—	(21,337)
Liabilities for non-participating investment contracts	**(137,723)**	**5,093**	**(132,630)**	(144,885)	4,567	(140,318)	(151,115)	5,132	(145,983)
	(246,731)	**11,530**	**(235,201)**	(360,021)	11,332	(348,689)	(278,235)	13,019	(265,216)
Outstanding claims provisions	**(1,374)**	**68**	**(1,306)**	(2,619)	86	(2,533)	(1,288)	61	(1,227)
	(248,105)	**11,598**	**(236,507)**	(362,640)	11,418	(351,222)	(279,523)	13,080	(266,443)
General insurance and health									
Outstanding claims provisions	**(7,809)**	**834**	**(6,975)**	(8,894)	801	(8,093)	(7,304)	637	(6,667)
Provisions for claims incurred but not reported	**(3,153)**	**759**	**(2,394)**	(3,562)	1,017	(2,545)	(3,156)	999	(2,157)
	(10,962)	**1,593**	**(9,369)**	(12,456)	1,818	(10,638)	(10,460)	1,636	(8,824)
Provision for unearned premiums	**(5,124)**	**330**	**(4,794)**	(5,596)	324	(5,272)	(4,718)	316	(4,402)
Provision arising from liability adequacy tests[1]	**—**	**—**	**—**	(1)	—	(1)	(1)	—	(1)
	(16,086)	**1,923**	**(14,163)**	(18,053)	2,142	(15,911)	(15,179)	1,952	(13,227)
Total	**(264,191)**	**13,521**	**(250,670)**	(380,693)	13,560	(367,133)	(294,702)	15,032	(279,670)
Less: Classified as held for sale	**—**	**—**	**—**	96,184	(371)	95,813	—	—	—
	(264,191)	**13,521**	**(250,670)**	(284,509)	13,189	(271,320)	(294,702)	15,032	(279,670)

1 Provision arising from liability adequacy tests relates to general insurance business only. Additional liabilities arising from liability adequacy test for life operations, where applicable, are included in unallocated divisible surplus. At 30 June 2022 this provision is £nil (HY21: £nil, 2021: £nil) for the life operations.

(b) Change in contract liabilities, net of reinsurance, recognised as an expense

The purpose of the following table is to reconcile the change in insurance liabilities, net of reinsurance, shown on the condensed consolidated income statement, to the change in insurance liabilities recognised as an expense in the relevant movement tables in the following notes. The components of the reconciliation are the change in provision for outstanding claims on long-term business (which is not included in a separate movement table), and the unwind of discounting on general insurance reserves (which is included within finance costs in the income statement). For general insurance and health, the change in the provision for unearned premiums is not included in the reconciliation as, within the income statement, this is included within earned premiums.

6 months 2022	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note B9(b))	**(15,930)**	**1,491**	**(14,439)**
Change in provision for outstanding claims	**81**	**(4)**	**77**
	(15,849)	**1,487**	**(14,362)**
General insurance and health			
Change in insurance liabilities (note B9(c) and B11(c))	**92**	**74**	**166**
Change in provision arising from liability adequacy tests	**(1)**	**—**	**(1)**
Less: Unwind of discount	**(4)**	**3**	**(1)**
	87	**77**	**164**
Total change in insurance liabilities	**(15,762)**	**1,564**	**(14,198)**
Less: Change in insurance liabilities from discontinued operations	**—**	**—**	**—**
Total change in insurance liabilities from continued operations	**(15,762)**	**1,564**	**(14,198)**

6 months 2021	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note B9(b))	(1,834)	355	(1,479)
Change in provision for outstanding claims	114	(2)	112
	(1,720)	353	(1,367)
General insurance and health			
Change in insurance liabilities (note B9(c) and B11(c))	136	108	244
Change in provision arising from liability adequacy	(1)	—	(1)
Less: Unwind of discount	(1)	—	(1)
	134	108	242
Total change in insurance liabilities	(1,586)	461	(1,125)
Less: Change in insurance liabilities from discontinued operations	(2,367)	7	(2,360)
Total change in insurance liabilities from continued operations	(3,953)	468	(3,485)

Full year 2021	Gross £m	Reinsurance £m	Net £m
Long-term business			
Change in insurance liabilities (note B9(b))	2,521	(951)	1,570
Change in provision for outstanding claims	(291)	1	(290)
	2,230	(950)	1,280
General insurance and health			
Change in insurance liabilities (note B9(c) and B11(c))	641	114	755
Change in provision arising from liability adequacy tests	(1)	—	(1)
Less: Unwind of discount	(2)	1	(1)
	638	115	753
Total change in insurance liabilities	2,868	(835)	2,033
Less: Change in insurance liabilities from discontinued operations	(3,736)	4	(3,732)
Total change in insurance liabilities from continued operations	(868)	(831)	(1,699)

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

B9 – Insurance liabilities

(a) Carrying amount

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

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Long-term business			
Participating insurance liabilities	**19,139**	42,071	21,570
Unit-linked non-participating insurance liabilities	**7,721**	14,237	8,703
Other non-participating insurance liabilities	**63,059**	73,153	75,510
	89,919	129,461	105,783
Outstanding claims provisions	**1,374**	2,619	1,288
	91,293	132,080	107,071
General insurance and health			
Outstanding claims provisions	**7,809**	8,894	7,304
Provision for claims incurred but not reported	**3,153**	3,562	3,156
	10,962	12,456	10,460
Provision for unearned premiums	**5,124**	5,596	4,718
Provision arising from liability adequacy tests[1]	**—**	1	1
	16,086	18,053	15,179
Total	**107,379**	150,133	122,250
Less: Classified as held for sale	**—**	(30,959)	—
	107,379	119,174	122,250

1 Provision arising from liability adequacy tests relates to general insurance business only. Additional liabilities arising from liability adequacy test for life operations, where applicable, are included in unallocated divisible surplus. At 30 June 2022 this provision is £nil (HY21: £nil, 2021: £nil) for the life operations.

(b) Movements in long-term business liabilities

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

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**105,783**	135,409	135,409
Liabilities in respect of new business	**2,119**	3,879	10,420
Expected change in existing business	**(2,829)**	(3,219)	(6,884)
Variance between actual and expected experience	**(1,304)**	1,341	2,209
Impact of operating assumption changes	**—**	(47)	(898)
Impact of economic assumption changes	**(13,896)**	(3,878)	(2,427)
Other movements recognised as an expense[1]	**(20)**	90	101
Change in liability recognised as an expense (note B8(b))	**(15,930)**	(1,834)	2,521
Effect of portfolio transfers, acquisitions and disposals[2]	**—**	(2,861)	(30,570)
Foreign exchange rate movements	**69**	(1,249)	(1,565)
Other movements	**(3)**	(4)	(12)
Carrying amount at 30 June/31 December	**89,919**	129,461	105,783

1 Other movements recognised as an expense in 2022 relates primarily to model changes in Ireland Life while 2021 relates primarily to provisions for bonus distribution to with-profits policyholders and legacy unclaimed assets in the UK.
2 The movement in 2021 includes the disposal of France, Italy, Poland and Vietnam businesses.

For many types of long-term business, including unit-linked and participating insurance liabilities, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit.

The variance between actual and expected experience of £(1.3) billion in the period to 30 June 2022 is primarily the result of global equity market falls resulting in lower than expected returns. Economic assumption changes of £(13.9) billion are driven by an increase in valuation interest rates in response to increasing interest rates and spread widening, primarily in respect of UK annuity business.

For participating insurance liabilities, a movement in liabilities is generally offset by a corresponding adjustment to the unallocated divisible surplus and does not impact profit. Where assumption changes impact profit, these are included in the effect of changes in assumptions and estimates during the year (see note B12), together with the impact of movements in related non-financial assets.

(c) Movements in general insurance and health liabilities

The following changes have occurred in the general insurance and health claims liabilities during the period:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**10,460**	12,384	12,384
Impact of changes in assumptions	**(278)**	(36)	39
Claim losses and expenses incurred in the current year	**2,897**	2,960	6,333
(Decrease)/increase in estimated claim losses and expenses incurred in prior periods	**(22)**	73	(41)
Incurred claims losses and expenses	**2,597**	2,997	6,331
Less:			
Payments made on claims incurred in the current year	**(1,042)**	(1,039)	(3,029)
Payments made on claims incurred in prior periods	**(1,650)**	(1,990)	(2,980)
Recoveries on claim payments	**183**	167	317
Claims payments made in the period, net of recoveries	**(2,509)**	(2,862)	(5,692)
Unwind of discounting	**4**	1	2
Changes in claims reserve recognised as an expense (note B8(b))	**92**	136	641
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	—	(2,476)
Foreign exchange rate movements	**410**	(64)	(89)
Carrying amount at 30 June/31 December	**10,962**	12,456	10,460

1 The movement in 2021 relates to the disposal of the France, Italy and Poland businesses and includes the termination of reinsurance accepted from the former France general insurance entity.

B10 – Liability for investment contracts

This note analyses our gross liabilities for investment contracts by type of product and describes the calculation of these liabilities.

(a) Carrying amount

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

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Long-term business			
Liabilities for participating investment contracts	**19,089**	85,675	21,337
Liabilities for non-participating investment contracts	**137,723**	144,885	151,115
Total	**156,812**	230,560	172,452
Less: Liabilities classified as held for sale	**—**	(65,225)	—
	156,812	165,335	172,452

(b) Group practice

Investment contracts are those that do not transfer significant insurance risk from the contract holder to the issuer and are therefore treated as financial instruments under IFRS.

Many investment contracts contain a discretionary participation feature in which the contract holder has a contractual right to receive additional benefits as a supplement to guaranteed benefits. These are referred to as participating contracts and are measured according to the methodology for long-term business liabilities. They are not measured at fair value as there is currently no agreed definition of fair valuation for discretionary participation features under IFRS. In the absence of such a definition, it is not possible to provide a range of estimates within which a fair value is likely to fall. Investment contracts with discretionary participation features are in scope of IFRS 17 insurance contracts and will be measured according to IFRS 17 principles for annual reporting periods beginning on or after 1 January 2023.

Of the non-participating investment contracts measured at fair value, £137,653 million at 30 June 2022 (HY21: £144,741 million, 2021: £151,016 million) are unit-linked in structure and the fair value liability is equal to the current fund value, including any unfunded units, plus if required, additional non-unit reserves based on a discounted cash flow analysis. These contracts are generally classified as Level 1 in the fair value hierarchy, as the unit reserve is calculated as the publicly quoted unit price multiplied by the number of units in issue, and any non-unit reserve is insignificant.

(c) Movements in participating investment contracts

The following movements have occurred in the gross provisions for participating investment contracts during the period:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**21,337**	97,073	97,073
Liabilities in respect of new business	**6**	2,374	3,621
Expected change in existing business	**(809)**	(2,944)	(4,196)
Variance between actual and expected experience	**(1,077)**	1,855	2,499
Impact of operating assumption changes	**—**	(1)	(31)
Impact of economic assumption changes	**(407)**	(294)	(132)
Other movements recognised as an expense[1]	**32**	(42)	(49)
Change in liability recognised as an expense[2]	**(2,255)**	948	1,712
Effect of portfolio transfers, acquisitions and disposals[3]	**—**	(9,429)	(74,179)
Foreign exchange rate movements	**7**	(2,917)	(3,269)
Carrying amount at 30 June/31 December	**19,089**	85,675	21,337

1 Other movements recognised as an expense relate to changes in liabilities for special bonus distributions to with-profits policyholders in UK Life. 2022 also includes model changes in Ireland Life.
2 Total interest expense for participating investment contracts recognised in profit or loss is £(1,604) million (HY21: £878 million, 2021: £2,362 million).
3 This relates to disposal of the France and Italy businesses in 2021.

The variance between actual and expected experience of £(1.1) billion in the period to 30 June 2022 is primarily due to negative global equity performance and lower bond and gilt values due to interest rate rises.

The impact of assumption changes in the analysis shows the resulting movement in the carrying value of participating investment contract liabilities. For participating business, a movement in liabilities is generally offset by a corresponding adjustment to the unallocated divisible surplus and does not impact profit. Where assumption changes do impact profit, these are included in the effect of changes in assumptions and estimates during the year shown in note B12, together with the impact of movements in related non-financial assets.

(d) Movements in non-participating investment contracts

The following movements have occurred in the gross provisions for non-participating investment contracts during the period:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**151,115**	138,183	138,183
Liabilities in respect of new business	**1,679**	2,203	5,089
Expected change in existing business	**(2,240)**	(2,155)	(3,436)
Variance between actual and expected experience	**(12,984)**	9,865	15,786
Impact of operating assumption changes	**—**	—	(57)
Impact of economic assumption changes	**(57)**	21	33
Other movements recognised as an expense[2]	**18**	—	1
Change in liability	**(13,584)**	9,934	17,416
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	(2,814)	(3,862)
Foreign exchange rate movements	**192**	(418)	(622)
Carrying amount at 30 June/31 December	**137,723**	144,885	151,115

1 The movement relates to disposal of the France, Italy and Poland businesses in 2021.
2 Other movements recognised as an expense in 2022 relates to model changes in Ireland Life.

For unit-linked investment contracts, movements in asset values are offset by corresponding changes in liabilities, limiting the net impact on profit. The variance between actual and expected experience of £(13.0) billion in the period to 30 June 2022 is primarily the result of global equity market falls resulting in lower than expected returns.

The impact of assumption changes in the above analysis shows the resulting movement in the carrying value of non-participating investment contract liabilities. The impacts of assumption changes on profit are included in the effect of changes in assumptions and estimates during the year shown in note B12, which combines participating and non-participating investment contracts together with the impact of movements in related non-financial assets.

B11 – Reinsurance assets

This note details the reinsurance assets on our insurance and investment contract liabilities.

(a) Carrying amount

The reinsurance assets at 30 June / 31 December comprised:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Long-term business			
Insurance contracts	**6,437**	6,765	7,887
Participating investment contracts	**—**	—	—
Non-participating investment contracts[1]	**5,093**	4,567	5,132
	11,530	11,332	13,019
Outstanding claims provisions	**68**	86	61
	11,598	11,418	13,080
General insurance and health			
Outstanding claims provisions	**834**	801	637
Provisions for claims incurred but not reported	**759**	1,017	999
	1,593	1,818	1,636
Provisions for unearned premiums	**330**	324	316
	1,923	2,142	1,952
	13,521	13,560	15,032
Less: Assets classified as held for sale	**—**	(371)	—
Total	**13,521**	13,189	15,032

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.

(b) Movements in long- term business liabilities

The following movements have occurred in the reinsurance assets on our long- term business and investment contract liabilities during the period:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**13,019**	11,037	11,037
Assets in respect of new business	**37**	181	1,987
Expected change in existing business assets	**(262)**	(279)	(411)
Variance between actual and expected experience	**365**	518	920
Impact of non-economic assumption changes	**—**	(45)	(517)
Impact of economic assumption changes	**(1,629)**	(341)	(367)
Other movements recognised as an expense[1]	**(17)**	8	183
Change in assets[2]	**(1,506)**	42	1,795
Effect of portfolio transfers, acquisitions and disposals[3]	**—**	(16)	(158)
Foreign exchange rate movements	**17**	(39)	(62)
Other movements[4]	**—**	308	407
Carrying amount at 30 June/31 December	**11,530**	11,332	13,019

1 Other movements recognised as an expense during 2022 relate to model changes in Ireland life. 2021 relates to reinsurance ceded for annuity business in Ireland life.
2 Change in assets does not reconcile with values in note B9(b) due to the inclusion of reinsurance assets classified as non-participating investment contracts where, for such contracts, deposit accounting is applied on the income statement.
3 Movement in 2021 relates to the disposal of the France, Italy and Poland businesses.
4 Following a review in 2021 assets were reclassified from financial investments to reinsurance assets. (HY21: £308 million, 2021: £407 million)

The impact of assumption changes in the above analysis shows the resulting movement in the carrying value of reinsurance assets, with corresponding movements in gross insurance contract liabilities. For participating businesses, a movement in reinsurance assets is generally offset by a corresponding adjustment to the unallocated divisible surplus and does not impact profit. Where assumption changes impact profit, these are included in the effect of changes in assumptions and estimates during the year (see note B12), together with the impact of movements in related liabilities and other non-financial assets.

(c) Movements in general insurance and health claims liabilities

The following movements have occurred in the reinsurance assets on our general insurance and health claims liabilities during the period:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**1,636**	1,933	1,933
Impact of changes in assumptions	**(131)**	(58)	(46)
Reinsurers' share of claim losses and expenses			
Incurred in current year	**103**	77	191
Incurred in prior years	**51**	14	6
Reinsurers' share of incurred claim losses and expenses	**154**	91	197
Less:			
Reinsurance recoveries received on claims			
Incurred in current year	**(3)**	(6)	(24)
Incurred in prior years	**(97)**	(135)	(242)
Reinsurance recoveries received in the year	**(100)**	(141)	(266)
Unwind of discounting	**3**	—	1
Change in reinsurance asset recognised as income (note B8(b))	**(74)**	(108)	(114)
Effect of portfolio transfers, acquisitions and disposals[1]	**—**	—	(181)
Foreign exchange rate movements	**31**	(7)	(2)
Carrying amount at 30 June/31 December	**1,593**	1,818	1,636

1 The 2021 movement relates to the disposal of the France, Italy and Poland businesses and the termination of reinsurance treaty accepted from the former Aviva France general insurance entity.

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

This note analyses the impact of changes in estimates and assumptions over the period, on liabilities for insurance and investment contracts, and related assets and liabilities, such as unallocated divisible surplus, reinsurance, deferred acquisition costs and acquired value of in-force business and does not allow for offsetting movements in the value of backing financial assets.

	Effect on profit 6 months 2022 £m	Effect on profit 6 months 2021 £m	Effect on profit Full year 2021 £m
Assumptions			
Long-term insurance business			
Interest rates and inflation	**10,055**	2,425	1,264
Expenses	**—**	1	31
Persistency rates	**—**	—	9
Mortality and morbidity for assurance contracts	**—**	—	45
Mortality for annuity contracts	**—**	—	269
Tax and other assumptions	**—**	—	20
Long-term investment business			
Expenses	**—**	2	2
General insurance and health business			
Change in discount rate assumptions inclusive of inflation	**147**	(23)	(85)
Total	**10,202**	2,405	1,555

The impact of interest rates on long-term insurance business relates primarily to annuities in the UK (including any change in credit default and reinvestment risk provisions), where an increase in the valuation interest rate, in response to increasing interest rates, has decreased liabilities.

In the general insurance and health business, an impact of £147 million (HY21: £(23) million, 2021: £(85) million) has arisen primarily as a result of a material increase in the interest rates used to discount claim reserves for both periodic payment orders (PPOs) and latent claims, with some offset from an increase in the estimated future inflation rate used to value PPOs.

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 undefined.

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

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Carrying amount at 1 January	**1,960**	10,970	10,970
Change in participating fund assets	**(4,728)**	(2,399)	(2,591)
Change in participating fund liabilities	**4,590**	539	700
Other movements[1]	**—**	(8)	(8)
Change in liability recognised as an expense	**(138)**	(1,868)	(1,899)
Effect of portfolio transfers, acquisition and disposals[2]	**—**	(1,003)	(6,724)
Foreign exchange rate movements	**3**	(336)	(387)
	1,825	7,763	1,960
Less: Classified as held for sale	**—**	(5,975)	—
Carrying amount at 30 June/31 December	**1,825**	1,788	1,960

1 Other movements in 2021 relate to the release of additional liabilities arising from the liability adequacy test for France that was established in 2020.
2 The movement in 2021 relates to disposal of the France, Italy and Poland businesses.

The amount of UDS at 30 June 2022 has decreased to £1.8 billion (HY21: £1.8 billion, 2021: £2.0 billion) due to market movements as a result of increasing interest rates and falling global equity markets.

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 or comparative prior periods..

B14 – Borrowings

Our borrowings are classified as either core structural borrowings, which are included within the Group's capital employed, or operational borrowings drawn by operating subsidiaries. This note shows the carrying values of each type.

(a) Analysis of total borrowings

Total borrowings comprise:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Core structural borrowings, at amortised cost	**5,719**	6,195	6,133
Operational borrowings, at amortised cost	**82**	303	71
Operational borrowings, at fair value	**1,110**	1,214	1,140
	1,192	1,517	1,211
	6,911	7,712	7,344
Less: Liabilities classified as held for sale	**—**	(75)	—
	6,911	7,637	7,344

(b) Core structural borrowings

The carrying amounts of these borrowings are:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Subordinated debt			
6.125% £700 million subordinated notes 2036	**696**	696	696
6.125% £800 million undated subordinated notes	**502**	501	502
6.875% £600 million subordinated notes 2058	**595**	595	595
8.250% £500 million subordinated notes 2022	**—**	516	506
6.125% €650 million subordinated notes 2043	**259**	258	252
3.875% €700 million subordinated notes 2044	**603**	599	586
5.125% £400 million subordinated notes 2050	**396**	396	396
3.375% €900 million subordinated notes 2045	**772**	768	751
4.375% £400 million subordinated notes 2049	**396**	395	395
4.000% £500 million subordinated notes 2055	**493**	493	493
4.000% C$450 million subordinated notes 2030	**286**	261	260
	4,998	5,478	5,432
Senior notes			
0.625% €500 million senior notes 2023	**271**	270	264
1.875% €750 million senior notes 2027	**398**	395	387
	669	665	651
Commercial paper	**52**	52	50
Total	**5,719**	6,195	6,133

On 21 April 2022 the Group's 8.250% £500 million Tier 2 subordinated notes reached their final maturity date and were redeemed.

All borrowings are stated at amortised cost.

(c) Operational borrowings

The carrying amounts of these borrowings are:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Amounts owed to financial institutions			
Loans	**82**	303	71
Securitised mortgage loan notes			
UK lifetime mortgage business[1]	**1,110**	1,214	1,140
Total	**1,192**	1,517	1,211

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

(d) Subsequent events

On 8 August 2022 the Group notified bondholders of its 6.125% £800 million undated subordinated notes of its intention to redeem the notes in full at their optional first call date on 29 September 2022.

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 2022 £m	30 June 2021 £m	31 December 2021 £m
Total IAS 19 obligations to main staff pension schemes	**322**	559	485
Deficits in other staff pension schemes	**—**	75	—
Total IAS 19 obligations to staff pension schemes	**322**	634	485
Restructuring provisions	**92**	43	119
Other provisions	**302**	520	397
Total Provisions	**716**	1,197	1,001
Less: Liabilities classified as held for sale	**—**	(136)	—
Total	**716**	1,061	1,001

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

ii) Pension obligations

The Group operates a number of defined benefit and defined contribution pension schemes. The material defined benefit schemes are in the UK, Ireland and Canada. The assets and liabilities of these schemes as at 30 June 2022 are shown below.

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Total fair value of scheme assets	**14,560**	18,989	19,337
Present value of defined benefit obligation	**(12,803)**	(16,801)	(17,068)
Restriction to surplus in Friends First Pension Scheme	**(5)**	—	—
Net IAS 19 surplus in the schemes	**1,752**	2,188	2,269
Surpluses included in other assets[1]	**2,074**	2,747	2,754
Deficits included in provisions	**(322)**	(559)	(485)
Net IAS 19 surplus in the schemes	**1,752**	2,188	2,269

1 Pension surpluses and other assets on the condensed consolidated statement of financial position totalling £2,092 million (HY21: £2,801 million, 2021: £2,769 million) includes pension surpluses of £2,074 million (HY21: £2,747 million, 2021: £2,754 million) and other assets of £18 million (HY21: £54 million, 2021: £15 million).

(b) Movements in the schemes' surpluses and deficits

Movements in the pension schemes' surpluses and deficits in the six months period ended 30 June 2022 comprise:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Net IAS 19 surplus in the schemes at 1 January	**2,269**	2,034	2,034
Administrative expenses	**(8)**	(9)	(19)
Total pension cost charged to net operating expenses	**(8)**	(9)	(19)
Net interest credited to investment income/(finance costs)[1]	**21**	14	27
Total recognised in income statement	**13**	5	8
Remeasurements:			
Actual return on these assets	**(4,577)**	(906)	(315)
Less: Interest income on scheme assets	**(177)**	(131)	(260)
Return on scheme assets excluding amounts in interest income	**(4,754)**	(1,037)	(575)
Gains from change in financial assumptions	**4,500**	1,022	549
(Losses)/Gains from change in demographic assumptions	**(110)**	17	235
Experience (losses)/gains	**(214)**	25	(150)
Change in the restriction to surplus in the Friends First Pension Scheme	**(5)**	—	—
Total remeasurements recognised in other comprehensive income[2]	**(583)**	27	59
Employer contributions	**57**	117	161
Foreign exchange rate movements	**(4)**	5	7
Net IAS 19 surplus in the schemes at 30 June/ 31 December	**1,752**	2,188	2,269

1 Net interest income of £29 million (HY21: £20 million, 2021: £40 million) has been credited to investment income and net interest expense of £8 million (HY21: £6 million, 2021: £13 million) has been charged to finance costs.

2 Net remeasurements of pension schemes recorded in the condensed consolidated statement of comprehensive income of £583 million loss (HY21: £26 million gain, 2021: £59 million gain) includes £583 million of remeasurement losses (HY21: £27 million gains, 2021: £59 million gains) on the main pension schemes and £nil in relation to other schemes (HY21: £1 million losses, 2021: £nil).

The reduction in the surplus in the six months period ended 30 June 2022 is primarily due to remeasurements recognised in other comprehensive income. The remeasurements arose partly from the Aviva Staff Pension Scheme (ASPS) carrying out a bulk annuity buy-in transaction with Aviva Life & Pensions UK Limited, a Group Company (see note B16). Due to different measurement bases applying for accounting purposes, the premium paid by the scheme exceeded the valuation of the plan asset and was recognised as an actuarial loss in the actual return on assets within other comprehensive income. The plan asset is transferable and so has not been subject to consolidation within the Group's financial statements. Further actuarial losses arose as a result of updated demographic assumptions and experience losses (principally relating to actual inflation experience). The impact of economic movements was broadly neutral, with the actuarial gains from the change in financial assumptions (in particular the increase in discount rate) offset by a reduction in assets.

Under the IAS 19 valuation basis, the Group applies the principles of IFRIC 14, IAS 19 The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction, whereby a surplus is only recognised to the extent that the Company is able to access the surplus either through an unconditional right of refund to the surplus or through reduced future contributions relating to ongoing service, which have been substantively enacted or contractually agreed. The Group has determined that it can derive economic benefit from the surplus in the ASPS via a reduction to future employer contributions for defined contribution members, which could theoretically be paid from the surplus funds in the ASPS. In the RAC 2003 Pension Scheme (RAC) and Friends Provident Pension Scheme (FPPS) in the UK and in the Aviva Ireland Staff Pension Fund (AISPF) in Ireland, the Group has determined that the rules set out in the scheme's governing documentation provide for an unconditional right to a refund from any future surplus funds.

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 2021 Annual Report and Accounts.

In the period to 30 June 2022, the Aviva Staff Pension Scheme (ASPS) completed one (HY21: one, 2021: three) bulk annuity buy-in transaction with Aviva Life & Pensions UK Limited (AVLAP), a Group company. Total premiums of £796 million (HY21: £703 million, 2021: £2,456 million) were paid by the scheme to AVLAP, with AVLAP recognising total gross liabilities of £658 million (HY21: £637 million, 2021: £2,184 million). Total premiums are presented gross of associated costs incurred by the Group and there are differences between measurement bases used to calculate the premium and the valuation of the associated liabilities on recognition. The ASPS recognised total plan assets of £536 million (HY21: £517 million, 2021: £1,760 million), with the difference between the plan assets recognised and the premiums paid being recognised as an actuarial loss through Other Comprehensive Income. As at 30 June 2022, AVLAP recognised cumulative technical provisions of £3,838 million (HY21: £2,646 million, 2021: £4,264 million) in relation to buy-in transactions with the ASPS which have been included within the Group's gross liabilities, and the ASPS held a transferable plan asset of £3,140 million (HY21: £2,253 million, 2021: £3,543 million) which does not eliminate on consolidation.

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); and
- 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; and
- In circumstances where internal models are not used to validate broker prices, or the observability of inputs used by brokers is unavailable, the investment is classified as Level 3.

Level 3

Inputs to Level 3 fair values are unobservable inputs for the asset or liability. Unobservable inputs may have been used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. However, the fair value measurement objective remains the same, i.e. an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. Unobservable inputs reflect the assumptions the business unit considers that market participants would use in pricing the asset or liability. Examples are investment properties and commercial and equity release mortgage loans.

The majority of the Group's assets and liabilities measured at fair value are based on quoted market information or observable market data. Of the total assets and liabilities measured at fair value 16.5% (HY21: 16.8%, 2021: 15.7%) of assets and 1.0% (HY21: 1.1%, 2021: 0.9%) of liabilities are based on estimates and recorded as Level 3. Where estimates are used, these are based on a combination of independent third-party evidence and internally developed models, calibrated to market observable data where possible. Third-party valuations using significant unobservable inputs validated against Level 2 internally modelled valuations are classified as Level 3, where there is a significant difference between the third-party price and the internally modelled value. Where the difference is insignificant, the instrument would be classified as Level 2.

(b) Changes to valuation techniques

There were no changes in the valuation techniques during the period compared to those described in the Group's 2021 Annual Report and Accounts.

(c) Comparison of the carrying amount and fair values of financial instruments

Set out below is a comparison of the carrying amounts and fair values of financial assets and liabilities, excluding those classified as held for sale. These amounts may differ where the assets or liabilities are carried on a measurement basis other than fair value, e.g. amortised cost.

	30 June 2022		30 June 2021		31 December 2021	
	Fair value £m	Carrying amount £m	Fair value £m	Carrying amount £m	Fair value £m	Carrying amount £m
Financial assets						
Loans[1]	**33,963**	**33,963**	40,065	40,070	38,622	38,624
Financial investments	**229,551**	**229,551**	253,637	253,637	264,961	264,961
Fixed maturity securities	**112,344**	**112,344**	123,282	123,282	133,251	133,251
Equity securities	**84,635**	**84,635**	93,044	93,044	95,169	95,169
Other investments (including derivatives)	**32,572**	**32,572**	37,311	37,311	36,541	36,541
Financial liabilities						
Non-participating investment contract	**137,723**	**137,723**	143,894	143,894	151,115	151,115
Net asset value attributable to unitholders	**12,832**	**12,832**	18,020	18,020	16,427	16,427
Borrowings[1]	**6,990**	**6,911**	8,856	7,637	8,375	7,344
Derivative liabilities	**8,042**	**8,042**	5,922	5,922	5,763	5,763

1 Within the fair value total, the estimated fair value has been provided for the portion of the loans and borrowings that are carried at amortised cost.

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

- Receivables
- Cash and cash equivalents
- Loans at amortised cost
- Payables and other financial liabilities

(d) Fair value hierarchy analysis

An analysis of assets and liabilities measured at amortised cost and fair value categorised by fair value hierarchy is given below.

	Fair value hierarchy					
At 30 June 2022	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	**—**	**—**	**7,373**	**7,373**	**—**	**7,373**
Loans	**—**	**—**	**27,008**	**27,008**	**6,955**	**33,963**
Financial investments measured at fair value						
Fixed maturity securities	**23,509**	**81,611**	**7,224**	**112,344**	**—**	**112,344**
Equity securities	**84,282**	**—**	**353**	**84,635**	**—**	**84,635**
Other investments (including derivatives)	**27,227**	**3,884**	**1,461**	**32,572**	**—**	**32,572**
Financial assets classified as held for sale	**—**	**—**	**—**	**—**	**—**	**—**
Total	**135,018**	**85,495**	**43,419**	**263,932**	**6,955**	**270,887**
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	**137,723**	**—**	**—**	**137,723**	**—**	**137,723**
Net asset value attributable to unit holders	**12,820**	**—**	**12**	**12,832**	**—**	**12,832**
Borrowings	**—**	**—**	**1,110**	**1,110**	**5,801**	**6,911**
Derivative liabilities	**483**	**7,026**	**533**	**8,042**	**—**	**8,042**
Financial liabilities classified as held for sale	**—**	**—**	**—**	**—**	**—**	**—**
Total	**151,026**	**7,026**	**1,655**	**159,707**	**5,801**	**165,508**

1 In addition to the balances in this table, included within reinsurance assets in the condensed statement of financial position and note B11 are £5,093 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.

	Fair value hierarchy			
30 June 2022	Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement				
Properties occupied by group companies	**—**	**—**	**15**	**15**
Total	**—**	**—**	**15**	**15**
Less: Assets classified as held for sale	**—**	**—**	**—**	**—**
Total (excluding assets classified as held for sale)	**—**	**—**	**15**	**15**

IFRS 13 Fair Value Measurement permits assets and liabilities to be measured at fair value on either a recurring or non-recurring basis. Recurring fair value measurements are those that other IFRSs require or permit in the statement of financial position at the end of each reporting period, whereas non-recurring fair value measurements of assets or liabilities are those that other IFRSs require or permit in the statement of financial position in particular circumstances. The value of freehold owner-occupied properties measured on a non-recurring basis at 30 June 2022 was £15 million (HY21: £159 million, 2021: £15 million), stated at their revalued amounts in line with the requirements of IAS 16 Property, Plant and Equipment.

At 30 June 2021	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	—	—	6,787	6,787	—	6,787
Loans	—	—	29,625	29,625	10,445	40,070
Financial investments measured at fair value						
Fixed maturity securities	26,614	87,742	8,926	123,282	—	123,282
Equity securities	92,682	—	362	93,044	—	93,044
Other investments (including derivatives)	29,357	6,488	1,466	37,311	—	37,311
Financial assets classified as held for sale	45,304	41,096	19,291	105,691	1,085	106,776
Total	193,957	135,326	66,457	395,740	11,530	407,270
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	143,894	—	—	143,894	—	143,894
Net asset value attributable to unit holders	17,765	—	255	18,020	—	18,020
Borrowings	—	—	1,214	1,214	6,423	7,637
Derivative liabilities	398	5,026	498	5,922	—	5,922
Financial liabilities classified as held for sale	3,866	328	2	4,196	75	4,271
Total	165,923	5,354	1,969	173,246	6,498	179,744

1 In addition to the balances in this table, included within reinsurance assets in the condensed statement of financial position and note B11 are £4,567 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.

30 June 2021	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement				
Properties occupied by group companies	—	—	159	159
Total	—	—	159	159
Less: Assets classified as held for sale	—	—	(145)	(145)
Total (excluding assets classified as held for sale)	—	—	14	14

At 31 December 2021	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	—	—	7,003	7,003	—	7,003
Loans	—	—	29,980	29,980	8,644	38,624
Financial investments measured at fair value						
Fixed maturity securities	34,520	90,254	8,477	133,251	—	133,251
Equity securities	94,819	—	350	95,169	—	95,169
Other investments (including derivatives)	29,043	5,968	1,530	36,541	—	36,541
Financial assets classified as held for sale	—	—	—	—	—	—
Total	158,382	96,222	47,340	301,944	8,644	310,588
Financial liabilities measured at fair value						
Non-participating investment contracts[1]	151,115	—	—	151,115	—	151,115
Net asset value attributable to unit holders	16,417	—	10	16,427	—	16,427
Borrowings	—	—	1,140	1,140	6,204	7,344
Derivative liabilities	410	4,908	445	5,763	—	5,763
Financial liabilities classified as held for sale	—	—	—	—	—	—
Total	167,942	4,908	1,595	174,445	6,204	180,649

1 In addition to the balances in this table, included within reinsurance assets in the condensed statement of financial position and note B11 are £5,132 million of non-participating investment contracts, which are legally reinsurance but do not meet the definition of a reinsurance contract under IFRS. These assets are financial instruments measured at fair value through profit and loss and are classified as Level 1 assets.

At 31 December 2021	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total fair value £m
Non-recurring fair value measurement				
Properties occupied by group companies	—	—	15	15
Total	—	—	15	15
Less: Assets classified as held for sale	—	—	—	—
Total (excluding assets classified as held for sale)	—	—	15	15

(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 (HY21: no significant transfers; 2021: no significant transfers).

Transfers to/from Level 3

£290 million (HY21: £844 million, 2021: £189 million) of assets transferred into Level 3 and £473 million (HY21: £1,645 million, 2021: £1,370 million) of assets transferred out of Level 3 relate principally to fixed maturity securities held by our business in the UK. These are transferred between Levels 2 and 3 depending on the availability of observable inputs and whether the counterparty and broker quotes are corroborated using valuation models with observable inputs.

£297 million (HY21: £nil, 2021: £nil) of liabilities transferred into Level 3 relate to derivatives held by our business in the UK. These have been transferred into Level 3 following a change to using an internally-derived valuation model from the previous counterparty supplied valuations to ensure consistency of approach with the associated assets and liabilities held at fair value.

(f) 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		
30 June 2022	Investment Property £m	Loans £m	Fixed maturity securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets classified as held for sale £m	Net asset value attributable to unitholders £m	Derivative liabilities £m	Borrowings £m	Financial liabilities classified as held for sale £m
Opening balance at 1 January 2022	**7,003**	**29,980**	**8,477**	**350**	**1,530**	**—**	**(10)**	**(445)**	**(1,140)**	**—**
Total net gains/(losses) recognised in the income statement[1]	**308**	**(3,600)**	**(1,336)**	**(16)**	**(125)**	**—**	**—**	**193**	**(7)**	**—**
Purchases	**244**	**2,278**	**808**	**5**	**42**	**—**	**(2)**	**(1)**	**—**	**—**
Issuances	**—**	**70**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Disposals	**(194)**	**(1,723)**	**(515)**	**(10)**	**(25)**	**—**	**—**	**1**	**—**	**—**
Settlements	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**16**	**37**	**—**
Transfers into Level 3	**—**	**—**	**253**	**11**	**26**	**—**	**—**	**(297)**	**—**	**—**
Transfers out of Level 3	**—**	**—**	**(470)**	**—**	**(3)**	**—**	**—**	**—**	**—**	**—**
Reclassification to held for sale	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Foreign exchange rate movements	**12**	**3**	**7**	**13**	**16**	**—**	**—**	**—**	**—**	**—**
Balance at 30 June 2022	**7,373**	**27,008**	**7,224**	**353**	**1,461**	**—**	**(12)**	**(533)**	**(1,110)**	**—**

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

	Assets							Liabilities		
At 30 June 2021	Investment Property £m	Loans £m	Fixed maturity securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets classified as held for sale £m	Net asset value attributable to unitholders £m	Derivative liabilities £m	Borrowings £m	Financial liabilities classified as held for sale £m
Opening balance at 1 January 2021	11,369	29,839	19,053	407	6,659	1,033	(150)	(571)	(1,166)	(98)
Total net gains/(losses) recognised in the income statement[1]	344	(862)	(1,323)	32	(37)	17	—	59	(94)	44
Total net (losses)/gains recognised in other comprehensive income	(5)	—	—	—	1	—	—	—	—	—
Purchases	1,059	1,508	1,735	10	1,116	(972)	(72)	(5)	—	—
Issuances	—	91	—	—	—	—	(45)	—	—	—
Disposals	(470)	(941)	(1,020)	(15)	(439)	(58)	12	—	—	52
Settlements	—	—	—	—	—	—	—	17	46	—
Transfers into Level 3	—	—	837	7	—	—	—	—	—	—
Transfers out of Level 3	—	—	(1,642)	(3)	—	—	—	—	—	—
Reclassification to held for sale	(5,273)	—	(8,328)	(73)	(5,617)	19,291	—	2	—	(2)
Foreign exchange rate movements	(237)	(10)	(386)	(3)	(217)	(20)	—	—	—	2
Balance at 30 June 2021	6,787	29,625	8,926	362	1,466	19,291	(255)	(498)	(1,214)	(2)

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

	Assets									Liabilities
31 December 2021	Investment Property £m	Loans £m	Fixed maturity securities £m	Equity securities £m	Other investments (including derivatives) £m	Financial assets classified as held for sale £m	Net asset value attributable to unitholders £m	Derivative liabilities £m	Borrowings £m	Financial liabilities classified as held for sale £m
Opening balance at 1 January 2021	11,369	29,839	19,053	407	6,659	1,033	(150)	(571)	(1,166)	(98)
Total net gains/(losses) recognised in the income statement[1]	1,206	(1,252)	(648)	19	(102)	17	—	34	(52)	44
Purchases	1,505	3,639	1,288	18	170	13	—	(9)	—	—
Issuances	—	142	—	—	—	—	—	—	—	—
Disposals	(6,709)	(2,374)	(9,681)	(91)	(5,001)	(1,043)	140	6	78	52
Settlements	—	—	—	—	—	—	—	16	—	—
Transfers into Level 3	—	—	189	—	—	—	—	—	—	—
Transfers out of Level 3	—	—	(1,361)	(3)	(6)	—	—	79	—	—
Reclassification to held for sale	—	—	—	—	—	—	—	—	—	—
Foreign exchange rate movements	(368)	(14)	(363)	—	(190)	(20)	—	—	—	2
Balance at 31 December 2021	7,003	29,980	8,477	350	1,530	—	(10)	(445)	(1,140)	—

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

Total net losses recognised in the income statement in the first half of 2022 in respect of Level 3 assets measured at fair value amounted to £4,769 million (HY21: net losses of £1,829 million) with net gains in respect of liabilities of £186 million (HY21: net gains of £9 million). Net losses of £4,780 million (HY21: net losses of £1,902 million) attributable to assets and net gains of £1 million (HY21: net losses of £35 million) attributable to liabilities relate to those still held at 30 June 2022.

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

(i) Investment property

- Investment property is valued in the UK at least annually by external chartered surveyors in accordance with guidance issued by The Royal Institution of Chartered Surveyors, and using estimates during the intervening period. Outside the UK, valuations are produced by external qualified professional appraisers in the countries concerned. Investment properties are valued on an income approach that is based on current rental income plus anticipated uplifts at the next rent review, lease expiry, or break option taking into consideration lease incentives and assuming no further growth in the estimated rental value of the property. The uplift and discount rates are derived from rates implied by recent market transactions on similar properties. These inputs are deemed unobservable. The yield used to value the investment property can vary significantly depending on a number of factors including location, type of property and sector. The yield used to value the portfolio ranges from 110 bps to 1981 bps (2021: 113bps to 2094bps) with higher yields predominately relating to properties in the retail and leisure sectors. Over 95% of the portfolio is valued using spreads within the range from 110bps to 714bps (2021: 113 bps to 870bps).

(ii) Loans

- Commercial mortgage loans and Primary Healthcare loans held by our UK Life business are valued using a Portfolio Credit Risk Model. This model calculates a Credit Risk Adjusted Value for each loan. The risk adjusted cash flows are discounted using a yield curve, taking into account the term dependent gilt yield curve and global assumptions for the liquidity premium. Loans valued using this model have been classified as Level 3 as the liquidity premium is deemed to be non-market observable. At 30 June 2022 the liquidity premium used in the discount rate was 125 bps (2021: 150 bps).
- Equity release mortgage loans held by our UK Life business are valued using an internal model, with fair value initially being equal to the transaction price. The value of these loans is dependent on the expected term of the mortgage and the forecast property value at the end of the term, and is calculated by adjusting future cash flows for credit risk and discounting using a yield curve plus an allowance for illiquidity. At 30 June 2022 the illiquidity premium used in the discount rate was 160 bps (2021: 180 bps).
- The mortgages have a no negative equity guarantee ('NNEG') such that the cost of any potential shortfall between the value of the loan and the realised value of the property, at the end of the term, is recognised by a deduction to the value of the loan. Property valuations at the reporting date are obtained by taking the most recent valuation for the property and indexing using market observable regional house price indices. NNEG is calculated using base property growth rates reduced for the cost of potential dilapidations, using a stochastic model. In addition, a cost of capital charge is applied to reflect the variability in these cash flows. The base property growth rate assumption is RPI +0.75% which equates to a long-term average growth rate of 4.3% pa at 30 June 2022 (2021: 4.4%). The growth rates include an adjustment for the 5-year period 2022-2026 to reflect the market view of short-term growth being lower than long-term growth. After applying the cost of capital charge, dilapidations and the stochastic distribution, the effective net long-term growth rate equates to 0.6% pa (2021: 0.6%).
- Infrastructure and Private Finance Initiative (PFI) loans held by our UK Life business are valued using a discounted cash flow model. This adds spreads for credit and illiquidity to a risk-free discount rate. Credit spreads used in the discount rate are calculated using an internally developed methodology which depends on the credit rating of each loan, credit spreads on publicly traded bonds and an estimated recovery rate in event of default and are deemed to be unobservable. At 30 June 2022 the illiquidity premium used in the discount rate was 110 bps (2021: 95bps) for the PFI loans and ranged from 25 bps to 210 bps (2021: 25bps to 210bps) for the infrastructure loans.

(iii) Fixed maturity securities

- Structured bond type, non-standard debt products and privately placed notes held by our life business in the UK do not trade in an active market. These fixed maturity securities are valued using discounted cash flow models, designed to appropriately reflect the credit and illiquidity risk of the instrument. These securities have been classified as Level 3 because the valuation approach includes significant unobservable inputs and an element of subjectivity in determining appropriate credit and illiquidity spreads.
- Other fixed maturity securities held by our life business in the UK 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.
- The unobservable credit and illiquidity spreads used in the discount rate range from 19 bps to 757 bps (2021: 24bps to 822bps) with 99% of the modelled assets valued using spreads within the range from 19 bps to 314 bps (2021: 24 bps to 297 bps).

(iv) Equity securities

- Equity securities which primarily comprise private equity holdings held in the UK are valued by a number of third-party specialists. These are valued using a range of techniques, including earnings multiples, forecast cash flows and price/earnings ratios which are deemed to be unobservable.

(v) Other investments (including derivatives)

- Other investments are held for index-linked, unit-linked and with-profit funds and are valued based on external valuation reports received from fund managers. The investments consist of:
    - Unit trusts;
    - Other investment funds including property funds; and
    - Derivatives.
- Where valuations are at a date other than the balance sheet date, as is the case for some private equity funds, adjustments are made for items such as subsequent draw-downs and distributions and the fund manager's carried interest.

(vi) Financial assets of operations classified as held for sale

- There were no operations classified as held for sale at 30 June 2022 and 31 December 2021. Financial assets of operations classified as held for sale at 30 June 2021 were held by our businesses in France, Italy, Poland and Vietnam and consisted primarily of fixed maturity securities which were not traded in an active market and had been valued using third-party or counterparty valuations of £8,328 million, discretionary managed funds of £5,617 million and investment property of £5,182 million. These assets are included within the relevant asset category within the 30 June 2021 sensitivity table below.

(vii) Liabilities

- The principal liabilities classified as Level 3 are securitised mortgage loan notes, presented within Borrowings, which are valued using a similar technique to the related Level 3 securitised mortgage assets. These liabilities are included within the relevant liability category within the sensitivity table below.

Sensitivities

The valuation of Level 3 assets involves a high degree of judgement and estimation uncertainty due to the reliance of valuation models on unobservable inputs. Where possible, the Group tests the sensitivity of the fair values of Level 3 assets and liabilities to changes in unobservable inputs to reasonable alternatives. Level 3 valuations are sourced from independent third parties when available and, where appropriate, validated against internally-modelled valuations, third-party models or broker quotes. Where third-party pricing sources are unwilling to provide a sensitivity analysis for their valuations, the Group undertakes, where feasible, sensitivity analysis on the following basis:

- For third-party valuations validated against internally-modelled valuations using significant unobservable inputs, the sensitivity of the internally-modelled valuation to changes in unobservable inputs to a reasonable alternative is determined.
- For third-party valuations either not validated or validated against a third-party model or broker quote, the third-party valuation in its entirety is considered an unobservable input. Sensitivities are determined by flexing inputs of internal models to a reasonable alternative, including the yield, NAV multiple or other suitable valuation multiples of the financial instrument implied by the third-party valuation. For example, for a fixed income security the implied yield would be the rate of return which discounts the security's contractual cash flows to equal the third-party valuation.

Valuation uncertainty on assets which rely on either unobservable long-term assumptions or comparable market transactions as valuation inputs was impacted by the economic disruption resulting from the COVID-19 pandemic during 2020. During 2021 and 2022 the level of comparable market evidence available has increased and market views around long-term economic assumptions such as residential and commercial property growth rate assumptions have stabilised, reducing the impacts on valuation uncertainty caused by the pandemic. Material uncertainty declarations previously included in valuation reports on certain of the Group's properties at 30 June 2021 were removed in the second half of 2021.

The tables below show the sensitivity of the fair value of Level 3 assets and liabilities to changes in unobservable inputs to a reasonable alternative:

30 June 2022	Fair value £bn	Most significant unobservable input	Reasonable alternative	Sensitivities Positive impact £bn	Sensitivities Negative impact £bn
Investment property	**7.4**	Equivalent rental yields	+/-5-10%	**0.4**	**(0.4)**
Loans					
Commercial mortgage loans and Primary Healthcare loans	**10.5**	Illiquidity premium	+/-20 bps	**0.1**	**(0.1)**
		Base property growth rate	+/-100 bps p.a.	**0.1**	**(0.1)**
Equity release mortgage loans	**10.8**	Base property growth rate	+/-40 bps p.a.	**0.2**	**(0.2)**
		Current property market values	+/-10%	**0.2**	**(0.3)**
Infrastructure and Private Finance Initiative (PFI) loans	**5.4**	Illiquidity premium	+/-25 bps[1]	**0.2**	**(0.2)**
Other	**0.3**	Illiquidity premium	+/-25 bps[1]	**—**	**—**
Fixed maturity securities					
Structured bond-type and non-standard debt products	**0.5**	Market spread (credit, liquidity and other)	+/-25 bps	**—**	**—**
Privately placed notes	**3.0**	Credit spreads	+/-25 bps[1]	**0.1**	**(0.1)**
Other fixed maturity securities	**3.7**	Credit and liquidity spreads	+/-20-25 bps	**0.2**	**(0.2)**
Equity securities	**0.4**	Market spread (credit, liquidity and other)	+/-25 bps	**0.1**	**(0.1)**
Other investments					
Property Funds	**0.2**	Market multiples applied to net asset values	+/-15-20%	**—**	**—**
Other investments (including derivatives)	**1.2**	Market multiples applied to net asset values	+/-10-40%[2]	**0.2**	**(0.1)**
Liabilities					
Borrowings	**(1.1)**	Illiquidity premium	+/-50 bps	**—**	**—**
Other liabilities (including derivatives)	**(0.5)**	Independent valuation vs counterparty	N/A	**—**	**—**
Total Level 3 investments	**41.8**			**1.8**	**(1.8)**

1 On discount rate spreads.
2 Dependent on investment category.

30 June 2021	Fair value £bn	Most significant unobservable input	Reasonable alternative	Sensitivities Positive impact £bn	Sensitivities Negative impact £bn
Investment property	12.1	Equivalent rental yields	+/-5-10%	0.9	(0.9)
Loans					
Commercial mortgage loans and Primary Healthcare loans	12.1	Illiquidity premium	+/-20 bps	0.1	(0.1)
		Base property growth rate	+/-100 bps p.a.	0.1	(0.1)
Equity release mortgage loans	11.8	Base property growth rate	+/-40 bps p.a.	0.2	(0.2)
		Current property market values	+/-10%	0.3	(0.4)
Infrastructure and Private Finance Initiative (PFI) loans	5.2	Illiquidity premium	+/-25 bps[1]	0.1	(0.1)
Other	0.5	Illiquidity premium	+/-25 bps[1]	—	—
Fixed maturity securities					
Structured bond-type and non-standard debt products	6.5	Market spread (credit, liquidity and other)	+/-25 bps	0.1	(0.1)
Privately placed notes	1.8	Credit spreads	+/-25 bps[1]	0.1	(0.1)
Other fixed maturity securities	9.0	Credit and liquidity spreads	+/-20-25 bps	0.3	(0.3)
Equity securities	0.4	Market spread (credit, liquidity and other)	+/-25 bps	0.1	(0.1)
Other investments					
Property Funds	1.5	Market multiples applied to net asset values	+/-15-20%	0.3	(0.3)
Other investments (including derivatives)	5.6	Market multiples applied to net asset values	+/-10-40%[2]	0.3	(0.2)
Liabilities					
Borrowings	(1.2)	Illiquidity premium	+/-50 bps	—	—
Other liabilities (including derivatives)	(0.8)	Independent valuation vs counterparty	N/A	—	—
Total Level 3 investments	64.5			2.9	(2.9)

1 On discount rate spreads.
2 Dependent on investment category.

31 December 2021	Fair value £bn	Most significant unobservable input	Reasonable alternative	Sensitivities Positive impact £bn	Sensitivities Negative impact £bn
Investment property	7.0	Equivalent rental yields	+/-5-10%	0.4	(0.4)
Loans					
Commercial mortgage loans and Primary Healthcare loans	11.7	Illiquidity premium	+/-20 bps	0.1	(0.1)
		Base property growth rate	+/-100 bps p.a.	0.1	(0.1)
Equity release mortgage loans	11.9	Base property growth rate	+/-40 bps p.a.	0.2	(0.2)
		Current property market values	+/-10%	0.3	(0.3)
Infrastructure and Private Finance Initiative (PFI) loans	6.1	Illiquidity premium	+/-25 bps[1]	0.2	(0.2)
Other	0.3	Illiquidity premium	+/-25 bps[1]	—	—
Fixed maturity securities					
Structured bond-type and non-standard debt products	0.5	Market spread (credit, liquidity and other)	+/-25 bps	—	—
Privately placed notes	3.7	Credit spreads	+/-25 bps[1]	0.1	(0.1)
Other fixed maturity securities	4.3	Credit and liquidity spreads	+/-20-25 bps	0.1	(0.1)
Equity securities	0.3	Market spread (credit, liquidity and other)	+/-25 bps	0.1	(0.1)
Other investments					
Property Funds	0.2	Market multiples applied to net asset values	+/-15-20%	—	—
Other investments (including derivatives)	1.3	Market multiples applied to net asset values	+/-10-40%[2]	0.2	(0.2)
Liabilities					
Borrowings	(1.1)	Illiquidity premium	+/-50 bps	0.1	(0.1)
Other liabilities (including derivatives)	(0.5)	Independent valuation vs counterparty	N/A	—	—
Total Level 3 investments	45.7			1.9	(1.9)

1 On discount rate spreads.
2 Dependent on investment category.

The above tables demonstrate the effect of a change in one unobservable input while other assumptions remain unchanged. In reality, there may be a correlation between the unobservable inputs and other factors. It should also be noted that some of these sensitivities are non-linear, and larger or smaller impacts should not be interpolated or extrapolated from these results.

B18 – Risk management

Risk management is key to Aviva's success. We accept the risks inherent to our core business lines of life, health and general insurance and asset management. We diversify these risks through our scale, the variety of the products and services we offer and the channels through which we sell them. We receive premiums which we invest to maximise risk-adjusted returns, so that we can fulfil our promises to customers while providing a return to our shareholders. In doing so we prefer retaining those risks we believe we can manage to generate a return.

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.

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 2022 has been characterised by increasing uncertainty over global macroeconomic growth and inflation prospects. UK retail price inflation is currently at its highest rate for 40 years and predicted by the Bank of England to rise further in the second half of 2022. In response, the Bank of England, US Federal Reserve Bank and other central banks have begun to increase interest rates and unwind their asset purchase schemes, with further interest rate rises projected in the second half of the year.

The uncertain risk environment has been increased by the escalation in February 2022 of tensions between Russia and Ukraine into full-scale armed conflict between the two countries. Many countries have responded with severe economic sanctions on Russia and Belarus and connected companies and individuals. There is considerable uncertainty over how the conflict might develop, including the possibility of the conflict spreading to neighbouring countries, some of which are members of the North Atlantic Treaty Organisation (NATO).

The conflict has resulted in a significant increase in volatility in equity, credit, currency and commodity markets. In particular, the prices of oil, gas, wheat and other commodities have increased significantly since the conflict began and has been a driver for increasing inflation, adversely impacting disposable incomes and economic growth. There is a growing risk that heightened inflation expectations lead to a wage-price spiral, resulting in a prolonged period of high inflation and low growth. Pressure on central banks to more aggressively tighten monetary policy to counteract inflation is likely to increase, tempered by concerns over the impact on economic growth. Restrictions to Russian gas exports have raised concern over the continuity of electricity and gas supply in the UK and the rest of Europe at periods of peak consumption during the 2022-23 winter months, with the prospect of power rationing for industrial users.

As a result of the escalation in the Russia-Ukraine conflict on 24 February 2022, the Group's crisis management framework was invoked with the meeting of the Aviva plc Crisis Leadership Team to assess the Group's response, provide strategic direction and manage communications.

The biggest immediate threat to the Group's capital and liquidity positions remains the overall macroeconomic environment and potential stagflation, driven by the risks of persistent inflation, an escalation in the Russia-Ukraine conflict and tightening monetary and fiscal policy.

Further downside risks include a re-emergence of the COVID-19 pandemic and further lockdowns in China, as well as a deterioration in UK-EU relations potentially resulting in a trade war. Areas of uncertainty include credit downgrades, interest rate reductions, falls in commercial and residential property prices and defaults on the commercial mortgage portfolio.

We continue to closely track these developments in our businesses and take appropriate actions to ensure that the impact on our businesses and our customers is limited. The Group's Financial Event Response Plan ('FERP') provides an operational framework that enables senior management to respond quickly, in the event of elevated financial market stress, as a result of an escalation in the Russia-Ukraine conflict or any other trigger. The Group continues to maintain strong solvency and liquidity positions through a range of scenarios and stress testing. These scenarios allow for the potential impacts of trigger events both directly on operations of the Group and the wider macroeconomic environment, and the Group has considerable resilience to external shocks, even in severe downside scenarios.

Climate change continues to gain increasing focus from regulators and government bodies. Aviva remains committed to supporting a low carbon economy that will improve the resilience of our economy, society and the financial system in line with the 2015 Paris Agreement target on climate change. Within our sustainability ambition, our plan is to become a Net Zero company by 2040 across our operations, supply chain, underwriting and investments. Our sustainability ambition in addition to taking action on climate change also encompasses building stronger more resilient communities where we operate and running ourselves as a sustainable business.

The Group is in the process of implementing the new international accounting standard for insurance contracts. The adoption of IFRS 17 significantly impacts the measurement and presentation of the contracts in scope of the standard. In May 2022, the UK Endorsement Board approved the standard for application to annual reporting periods beginning on or after 1 January 2023.

IFRS 17 introduces the concept of a contractual service margin (CSM) liability that defers future unearned profit on insurance contracts. The recognition of a CSM for our life businesses is expected to result in a material reduction in the IFRS net asset value of the Group on transition to IFRS 17, with a stock of future profits held on the balance sheet as a liability and released over time.

The cash flows and underlying capital generation of our businesses are unaffected by IFRS 17, and the standard will have no impact on our Solvency II performance metrics or the Group financial targets we have announced. Furthermore, we do not expect IFRS 17 to impact on the dividend policy and dividend guidance.

In April 2022, HM Treasury published a consultation on proposed changes to Solvency II regulation in the UK. Proposed changes being consulted on include a reduction in the risk margin of around 60-70 per cent for long-term life insurers, changes to the calibration of retained credit risk used to calculate the matching adjustment; an increase in flexibility to allow insurers to invest in long-term assets such as infrastructure; and a reduction in the current reporting and administrative burden on firms. Whilst the outcome remains uncertain, these changes could impact the future capital position of the Group.

In January 2022, new regulations on renewal pricing in the UK retail insurance market became effective. The new regulations provide, amongst other things, market-wide restrictions on renewal pricing exceeding the equivalent new business price. There remains some uncertainty over the long-term effect of these reforms on consumer and competitor behaviour, impacting customer retention and pricing for existing and new customers. Similar renewal pricing reforms take effect in the Republic of Ireland from 1 July 2022.

The FCA published on 27 July 2022 its policy statement and finalised guidance on a new Consumer Duty, which will set a higher level of protection for consumers. The Group's implementation plan is being progressed and will be approved by end-October 2022.

Risk profile

We continue to manage our risk profile to reflect Aviva's objective of maintaining financial strength, reducing capital volatility and reallocating capital in line with the Group's strategy. At Group and business unit level, there is a capital risk appetite which requires that sufficient capital resources be maintained to cover a stress scenario. In the period, the Group position remained within appetite. 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 risk appetite. In addition, we renewed our Group-wide catastrophe reinsurance programme to reduce the Group's potential loss to an extreme insurance loss event.

During 2020 and 2021 Aviva completed the sale of a number of businesses as part of the rationalisation of the group. The Group retains a residual exposure in respect of certain of these disposed businesses as a result of the representations, warranties or indemnities provided, and the continued provision of certain services by agreement for a transitional period after completion, which we are carefully monitoring and managing.

On 1 April 2022, Aviva agreed to acquire an additional 25% shareholding in Aviva India. The transaction is subject to regulatory approval and other customary closing conditions and is expected to complete in the second half of 2022. On completion, Aviva will hold a 74% shareholding and Aviva India will become a subsidiary of the Aviva Group.

Material risks and uncertainties

In accordance with the requirements of the Financial Conduct Authority (FCA) Handbook (DTR 4.2.7) we provide an update here on the material risks and uncertainties facing the Group. The types of risks to which the Group is exposed have not changed significantly during the first half of the year and remain credit, market, liquidity, life and health insurance, general insurance, asset management and operational risks. These risks are described below. Further detail on these risks is given within note 57 of the Group's 2021 Annual Report and Accounts.

(a) Credit risk

Credit risk is the risk of financial loss as a result of the default or failure of third parties to meet their payment obligations to Aviva, or variations in market values as a result of changes in expectations related to these risks. Aviva has a strong record of managing credit risk and we see credit as an area where we can make a good return for the benefit of both our policyholders and shareholders. In general, we prefer to take credit risk over equity and property risks, due to the better expected risk adjusted return, our credit risk analysis capability and the structural investment advantages conferred to insurers with long-dated, relatively illiquid liabilities.

Our approach to managing credit risk recognises that there is a risk of adverse financial impact resulting from fluctuations in credit quality of third parties including default, rating transition and credit spread movements. Our credit risks arise principally through exposures to debt security investments, structured asset investments, bank deposits, derivative counterparties, mortgage lending and reinsurance counterparties.

The Group manages its credit risk at business unit and Group level. All business units are required to implement credit risk management processes (including limits frameworks), operate specific risk management committees, and ensure detailed reporting and monitoring of their exposures against pre-established risk criteria. At Group level, we manage and monitor all exposures across our business units on a consolidated basis, and operate a Group limit framework that must be adhered to by all.

The Group has minimal direct investment exposure to Russia and Ukraine, and no exposure to Belarus. The Group is taking necessary actions to divest its direct investment and continues to monitor its exposure to Russia and Ukraine.

While increasing credit spreads and interest rates as a result of the monetary policy response to the inflationary pressures of the conflict will positively impact the Group's regulatory capital cover ratio, this may be partially offset or even exceeded by the negative impact of credit downgrades, counterparty defaults, claims and maintenance expenses and lapse rates, if high inflation persists and the economy stagnates or falls. Conversely, rising credit spreads will adversely impact IFRS shareholders' equity, see (h) sensitivity test analysis.

As a result of the deteriorating macroeconomic environment, we are exposed to the potential impact of increased defaults and downgrades on our commercial mortgage loans although we maintain conservative loan-to-value across this portfolio. Our capital position includes an allowance for the expected potential impacts from downgrades and defaults.

Financial assets are graded according to current external credit ratings issued. AAA is the highest possible rating. Investment grade financial assets are classified within the range of AAA to BBB ratings. Financial assets which fall outside this range are classified as sub-investment grade. The following table provides information regarding the aggregated credit risk exposure of the Group for financial assets with external credit ratings. 'Not rated' assets capture assets not rated by external ratings agencies.

As at 30 June 2022	AAA	AA	A	BBB	Below BBB	Not rated	Carrying value £m
Fixed maturity securities	17.2 %	38.2 %	21.7 %	13.1 %	4.0 %	5.8 %	112,344
Reinsurance assets	— %	82.7 %	12.2 %	1.7 %	— %	3.4 %	13,521
Other investments	— %	— %	0.1 %	— %	— %	99.9 %	32,572
Loans	4.1 %	14.3 %	— %	0.5 %	— %	81.1 %	33,963
Total							**192,400**

As at 31 December 2021	AAA	AA	A	BBB	Below BBB	Not rated	Carrying value £m
Fixed maturity securities	13.3 %	43.2 %	22.2 %	12.1 %	3.7 %	5.5 %	133,251
Reinsurance assets	— %	76.7 %	18.9 %	3.8 %	— %	0.6 %	15,032
Other investments	— %	0.1 %	— %	— %	— %	99.9 %	36,541
Loans	16.4 %	4.3 %	— %	0.5 %	— %	78.8 %	38,624
Total							223,448

At 30 June 2022, a significant proportion of assets remain investment grade in line with 2021. We have remained focused on high quality assets.

(b) Market risk

Market risk is the risk of adverse financial impact resulting directly or indirectly from fluctuations in interest rates, inflation, foreign currency exchange rates, equity and property prices.

We continue to limit our direct equity exposure in line with our risk preferences. At a business unit level, investment limits and local investment regulations require that business units hold diversified portfolios of assets thereby reducing exposure to individual equities. The Group does not have material holdings of unquoted equity securities.

Equity risk is also managed using a variety of derivative instruments, including futures and options. Businesses actively model the performance of equities through the use of risk models, in particular to understand the impact of equity performance on guarantees, options and bonus rates. An equity hedging strategy remains in place to help control the Group's overall direct and indirect exposure to equities.

Exposure to interest rate risk is monitored through several measures that include duration, capital modelling, sensitivity testing and stress and scenario testing. While increasing interest rates positively impact the Group's regulatory capital cover ratio, they adversely impact the IFRS shareholders' equity, see (h) sensitivity test analysis.

Some of the Group's products, principally participating contracts in the UK, expose us to the risk that changes in interest rates will impact on profits through a change in the interest spread (the difference between the amounts that we are required to pay under the contracts and the investment income we are able to earn on the investments supporting our obligations under those contracts).

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 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. 30 June 2022, hedges with notional values of £3,236 million (Canadian dollar £1,008 million, Euro £661 million and US dollar £1,567 million) were in place.

Aviva launched a formal Group-wide programme of change activity in 2019 to manage the transition to alternative risk-free rates from LIBOR and other IBOR benchmarks. The majority of Aviva's exposure to IBOR rates existed within the UK insurance business and Aviva Investors, where Aviva has reviewed all financial instruments, engaged with counterparties to either transition to alternative risk-free rates or have exited positions where required. Significant progress has been made, with a substantive majority of Aviva's original IBOR exposure already resolved.

Aviva has adhered to the ISDA Fallback Protocol for all its in-scope GBP LIBOR exposures. The remaining direct exposure relate to a small number of loans and a securitisation which are linked to synthetic GBP LIBOR and are expected to transition in the second half of 2022. Beyond, 31st December 2022, we anticipate holding LIBOR exposures in relation to a small number of currently fixed-rate public bonds that would revert to LIBOR-referencing floating rates in the event of a non-call by the issuer at the next call date. We continue to assess the likelihood of this event.

Aviva has adhered to the ISDA Fallback Protocol for all its in-scope USD LIBOR exposures and we continue to work with borrowers on the transition of our remaining direct USD LIBOR loan exposures in advance of the discontinuation of these benchmarks after 30 June 2023. Aviva's exposure to Canadian Dollar Offered Rate (CDOR) relates to a small number of interest rate swaps whose transition will be planned prior to CDOR's termination after 28th June 2024.

Aviva has worked closely with UK regulators, impacted clients, industry experts and industry associations to ensure a smooth and transparent transition of the exposures. The programme continues to address all risks posed by the transition, including the risk of non-transition of outstanding exposures. No change to the Company's risk management strategy has been required in response to the transition. At 30 June 2022, £711 million of non-derivative financial assets, £32 million of derivative financial assets and £39 million of derivative financial liabilities had yet to transition to an alternative risk-free rate.

(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. The relatively illiquid nature of insurance liabilities is a potential source of additional investment return by allowing us to invest in higher yielding, but less liquid assets such as commercial mortgages and infrastructure loans. The Group seeks to ensure that it maintains sufficient financial resources to meet its obligations as they fall due through the application of a Group liquidity risk policy and business standard and through the development of its liquidity risk management plan. At Group and business unit level, there is a liquidity risk appetite which requires that sufficient liquid resources be maintained to cover net outflows in a stress scenario. In the period, the Group position remained within appetite.

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 (HY21: £1.70 billion) from a range of leading international banks to further mitigate this risk.

Consistent with our dividend policy and capital framework, we aim to deliver significant cash remittances from our key markets over the next three years and grow Solvency II own funds generation which will be a key driver for long-term cash generation.

(d) Life insurance risk

Longevity risk remains the Group's most significant life insurance risk due to the Group's annuity portfolio and is amplified by the current low level of interest rates. We are also exposed to longevity risk through the Aviva Staff Pension Scheme, to which our economic exposure has been reduced since 2014 by entering into a longevity swap covering currently approximately £5 billion of pensioner in-payment scheme liabilities. We purchase reinsurance for longevity risk for our annuity business and this also includes the bulk annuity buy-in transactions with the Aviva Staff Pension Scheme carried out since 2019.

The profile of our life insurance risks, primarily longevity, persistency, mortality and expense risk, has remained stable in the first half of 2022 however we are closely monitoring the impact external factors could have on our risk profile. The current increased level of inflation is expected to put upward pressure on expenses, for example through indexation clauses in some outsourcer contracts, and mitigating actions have been put in place. The outlook for persistency experience could also be adversely impacted by increased inflation which may change consumer spending and saving habits. Inflation-linked long-term liabilities are managed through a hedging strategy, that includes investment in RPI-linked bonds and other assets.

Provisions made for insurance liabilities are inherently uncertain. Due to this uncertainty, life insurance reserves are regularly reviewed by qualified and experienced actuaries and analysts 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.

The Group's life insurance risk exposure is not currently expected to be impacted by the Russia-Ukraine conflict, other than via the on-going adverse impact experienced to date on policy maintenance expenses from heightened general price inflation, and the resulting squeeze on disposable income adversely impacting lapse rates and new business.

The overall impact of COVID-19 on the profile of our life insurance risks, primarily longevity, persistency, mortality and expense risk, continues to remain limited at 30 June 2022.

We have reinsurance in place across all our markets to reduce our net exposure to potential losses. In the UK we have extensive quota share reinsurance in place on Individual Protection business and for UK Group Life Protection we use surplus reinsurance for very large individual claims.

(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), as well as global exposure to corporate speciality risks. This risk is taken on, in line with our underwriting and pricing expertise, to provide an appropriate level of return for an acceptable level of risk. Underwriting discipline and a robust governance process is at the core of the Group's underwriting strategy. The Group's health insurance business (including private health insurance, critical illness cover, income protection and personal accident insurance, as well as a range of corporate healthcare products) exposes the Group to morbidity risk (the proportion of our customers falling sick) and medical expense inflation.

Provisions made for insurance liabilities are inherently uncertain. Due to this uncertainty, general and health insurance reserves are regularly reviewed by qualified and experienced actuaries at the business unit and Group level in accordance with the Group's reserving framework. These and other key risks, including the occurrence of unexpected claims from a single source or cause and inadequate reinsurance protection/risk transfer, are subject to an overarching risk management framework and various mechanisms to govern and control our risks and exposures.

We recognise that the severity and frequency of weather-related events has the potential to adversely impact provisions for insurance liabilities and our earnings, with the result that there is some variability in our results from period to period. Large catastrophic (CAT) losses arising as a result of these events are explicitly considered in our economic capital modelling to ensure we are resilient to such CAT scenarios.

The removal of the majority of government restrictions related to COVID-19 across the Group's markets has led to claims frequency increasing to and stabilising at more normal levels, but there continues to be a significant degree of uncertainty in relation to business interruption claims arising from COVID-19.

For the significant majority of the Group's UK General Insurance commercial policies, where policy wordings are determined by the Company, cover is based on a specified list of diseases. These policies exclude business interruption due to new and emerging diseases, like COVID-19. Business interruption losses stemming from the COVID-19 outbreak are therefore not covered under the significant majority of policies. The FCA test case sought to provide legal clarity in terms of the events and the cover provided by a variety of policy wordings, including broker determined policy wordings where we are the lead or follow insurer. Following the judgement received on 15 September 2020 and the subsequent Supreme Court appeal on 15 January 2021, the legal uncertainty in the UK around gross losses has been significantly reduced although various secondary litigation on specific broker wordings has been heard to test related issues. The judgment (subject to any appeals) is awaited at the reporting date. In order to provide clarity to policyholders and mitigate exposure to future events of a similar nature, exclusions were also added to relevant policy wordings in our UK, Canadian and Irish businesses. In Canada, we are party to a number of litigation proceedings, including class actions that challenge coverage under our commercial property policies; however, we believe we have a strong argument that there is no pandemic coverage under these policies. In Ireland, the vast majority of commercial insurance products do not respond to business interruption losses arising from the COVID-19 pandemic. The Group purchases reinsurance protection on its property portfolio that includes coverage for business interruption and is collecting or seeking reinsurance recoveries of business interruption losses that are covered by reinsurance.

The Group's general insurance business does not have material underwriting exposure to Russia and the Ukraine, and does not conduct operations in the affected region. All commercial underwriting lines with exposures above £1 million have been reviewed and all have clear war exclusions. While heightened claims inflation as a result of the conflict will weigh adversely on profitability, this can be mitigated via new business pricing actions. However, our ability to price for inflation is dependent on market, competitor and customer behaviour and the time lag between premium earning and claims emergence means that some adverse impact on profitability is expected.

(f) Asset management risk

Aviva is directly exposed to the risks associated with operating an asset management business through its ownership of Aviva Investors. The underlying risk profile of our asset management risk is derived from investment performance, specialist investment professionals and leadership, product development capabilities, fund liquidity, margin, client retention, regulatory developments, fiduciary and contractual responsibilities. Funds invested in illiquid assets such as commercial property are particularly exposed to liquidity risk.

The risk profile is regularly monitored with issues escalated to the Aviva Investors Risk Management Committee and ultimately to the Aviva Investors Holdings Limited Board Risk Committee.

(g) Operational risk

Aviva's ongoing ambition is for its Board, colleagues, customers, regulators and other external stakeholders to continue to have full confidence in the way that it manages risk across all areas of its business. 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. The Group maintains constructive relationships with its regulators around the world and responds appropriately to developments in relation to key regulatory changes.

The Operational Risk Appetite framework enables management and the Board to assess the overall quality of the operational risk environment relative to risk appetite and, where a Business Unit (or the Group) are outside of appetite, require clear and robust plans to be put in place in order to return to appetite.

In the first half of 2022, we continue to embed the changes initiated by our 2021 risk improvement programme which further simplified and strengthened the risk management capabilities across the organisation, allowing us to operate a stronger control environment, better support the business to understand and embed risk accountabilities, reduce the complexity of how the business thinks about and manages risks and create greater collaboration across the first and second lines of defence to provide higher quality advice and challenge.

We have implemented measures to improve the Group's operational resilience and be ready for new PRA and FCA regulations on operational resilience and outsourcing and third-party risk management which took effect on 31 March 2022. This includes undertaking resilience and crisis response exercises to test our ability to deliver important business services within impact tolerances in severe but plausible scenarios. Jointly with WNS, our outsourcing provider, we are proactively monitoring the political situation in Sri Lanka. Political unrest disruption scenarios are included in our crisis response scenario library.

The Russia-Ukraine conflict and increasing geo-political tensions more generally have heightened the risk of cyber security attacks on the Group or its suppliers, in particular via denial of service attacks and data and intellectual property theft. Although to date no serious cyber security incidents have been reported, the Group has strengthened its perimeter controls. The Group has engaged with its suppliers to ensure they have put in place all reasonable measures to ensure that services to Aviva remain unaffected.

The Group actively monitors social and other media in order to manage misinformation about our business, products, colleagues and customers should we be targeted by a hostile actor in the context of the situation in Ukraine or elsewhere, taking corrective media action if necessary.

The Group has in place systems and controls to ensure it does not provide financial services and/or funds to individuals or connected companies subject to sanctions, arising from the Russia-Ukraine conflict, and that for any client relationships existing before the imposition of sanctions assets are frozen and policies cancelled.

(h) Sensitivity test analysis

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

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

Sensitivity factor	Description of sensitivity factor applied
Interest rate and investment return	The impact of a change in market interest rates by a 1% increase or decrease. The test allows consistently for similar changes to investment returns and movements in the market value of backing fixed interest securities.
Credit spreads	The impact of a 0.5% increase in credit spreads over risk-free interest rates on corporate bonds and other non-sovereign credit assets. 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 (life insurance only)	The impact of an increase in mortality/morbidity rates for assurance contracts by 5%.
Annuitant mortality (long-term insurance only)	The impact of a reduction in mortality rates for annuity contracts by 5%.
Gross loss ratios (non-long-term insurance only)	The impact of an increase in gross loss ratios for general insurance and health business by 5%.

Long-term business sensitivities

30 June 2022 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	(110)	115	(15)	(65)	30	(30)	10	(5)
Insurance non-participating	(980)	1,210	(615)	(125)	105	(210)	(140)	(730)
Investment participating	(45)	60	—	(25)	25	(35)	—	—
Investment non-participating	—	—	—	5	(5)	—	—	—
Assets backing life shareholders' funds	(55)	60	(40)	5	(5)	—	—	—
Total	(1,190)	1,445	(670)	(205)	150	(275)	(130)	(735)

30 June 2022 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	(110)	115	(15)	(65)	30	(30)	10	(5)
Insurance non-participating	(980)	1,210	(620)	(125)	105	(210)	(140)	(730)
Investment participating	(45)	60	—	(25)	25	(35)	—	—
Investment non-participating	—	—	—	5	(5)	—	—	—
Assets backing life shareholders' funds	(45)	45	(25)	5	(5)	—	—	—
Total	(1,180)	1,430	(660)	(205)	150	(275)	(130)	(735)

31 December 2021 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	(115)	135	(10)	(65)	40	(35)	10	(5)
Insurance non-participating	(1,175)	1,410	(640)	(155)	135	(220)	(145)	(900)
Investment participating	(50)	65	—	(25)	25	(40)	—	—
Investment non-participating	—	—	—	5	(10)	—	—	—
Assets backing life shareholders' funds	(50)	55	(45)	—	—	—	—	—
Total	(1,390)	1,665	(695)	(240)	190	(295)	(135)	(905)

31 December 2021 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	(115)	135	(10)	(65)	40	(35)	10	(5)
Insurance non-participating	(1,175)	1,410	(640)	(155)	135	(220)	(145)	(900)
Investment participating	(50)	65	—	(25)	25	(40)	—	—
Investment non-participating	—	—	—	5	(10)	—	—	—
Assets backing life shareholders' funds	(40)	40	(30)	5	(5)	—	—	—
Total	(1,380)	1,650	(680)	(235)	185	(295)	(135)	(905)

Changes in sensitivities between 31 December 2021 and 30 June 2022 reflect underlying movements in the value of assets and liabilities, including the impact of the relative duration of assets and liabilities, and asset liability management actions. The sensitivities to economic and demographic movements relate mainly to business in the UK.

General insurance and health business sensitivities

30 June 2022 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	**(220)**	**250**	**(80)**	**100**	**(100)**	**(70)**	**(140)**
Net of reinsurance	**(250)**	**270**	**(80)**	**100**	**(100)**	**(70)**	**(130)**

30 June 2022 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	**(220)**	**250**	**(80)**	**100**	**(100)**	**(20)**	**(140)**
Net of reinsurance	**(250)**	**270**	**(80)**	**100**	**(100)**	**(20)**	**(130)**

31 December 2021 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	(400)	480	(80)	105	(105)	(120)	(230)
Net of reinsurance	(415)	470	(80)	105	(105)	(120)	(225)

31 December 2021 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	(400)	480	(80)	105	(105)	(20)	(230)
Net of reinsurance	(415)	470	(80)	105	(105)	(20)	(225)

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.

Fund management and non-insurance business sensitivities

30 June 2022 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 June 2022 Impact on shareholders' equity before tax £m	**Interest rates +1%**	**Interest rates -1%**	**Credit spreads +0.5%**	**Equity/ property +10%**	**Equity/ property -10%**
Total	**—**	**—**	**35**	**—**	**—**

31 December 2021 Impact on profit before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	—	—	35	—	—

31 December 2021 Impact on shareholders' equity before tax £m	Interest rates +1%	Interest rates -1%	Credit spreads +0.5%	Equity/ property +10%	Equity/ property -10%
Total	—	—	35	—	—

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.

For general insurance business, interest rate sensitivities impact the assets but only those liabilities 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 2022 £m	30 June 2021 £m	31 December 2021 £m
Cash at bank and in hand	**5,396**	5,905	4,833
Cash equivalents	**8,348**	7,680	7,652
	13,744	13,585	12,485
Bank overdrafts	**(833)**	(843)	(607)
	12,911	12,742	11,878

Cash and cash equivalents reconciles to the statement of financial position as follows:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Cash and cash equivalents (excluding bank overdrafts)	**13,744**	13,585	12,485
Less: Assets classified as held for sale	**—**	(2,931)	—
	13,744	10,654	12,485

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 53 of the Group's 2021 Annual Report and Accounts. An update on material risks is provided in note B18.

B21 – Ordinary share capital

This note gives details of Aviva plc's ordinary share capital and shows the movements during the period.

(a) Share buyback

On 31 March 2022, Aviva completed the share buyback programme originally announced on 12 August 2021 and extended to an aggregate purchase of up to £1 billion on 16 December 2021. In total, 245,225,489 shares were purchased with a nominal value of £61 million and were subsequently cancelled, giving rise to an additional capital redemption reserve of an equivalent amount. The 245,225,489 shares were acquired at an average price of 408 pence per share.

(b) Return of capital to ordinary shareholders via B share scheme

On 2 March 2022, Aviva announced a proposed return of capital, including a £3,750 million B Share Scheme for the holders of ordinary shares. 3,687,322,000 B shares were issued for nil consideration with a nominal value of 101.69 pence per share on 16 May 2022, resulting in a total of £3,750 million being credited to the B share capital account. At the same time, the merger reserve was reduced by £3,750 million. On 17 May 2022, the B shares were redeemed at 101.69 pence per share, which resulted in a £3,750 million reduction in the B share capital account and a corresponding increase in the capital redemption reserve. Retained earnings reduced by £3,750 million on payment of the return of capital to ordinary shareholders.

(c) Details of the Company's ordinary share capital

On 16 May 2022, the Company's share capital was consolidated whereby 76 new ordinary shares of 32 17/19 pence were issued for each holding of 100 ordinary shares of 25 pence each. The number of ordinary shares in issue reduced by 884,957,280 from 3,687,322,000 to 2,802,364,720.

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
The allotted, called up and fully paid share capital of the Company at 30 June 2022 was: 2,802,715,545 ordinary shares of 32 17/19 pence each (30 June 2021: 3,929,570,703 and 31 December 2021: 3,766,095,426 ordinary shares of 25 pence each)	**922**	982	941

At the General Meeting that took place on 9 May 2022, the Company was authorised to allot up to a further maximum nominal amount of

- £614,553,667 of which £307,276,833 can be in connection with an offer by way of a rights issue
- £150 million of new ordinary shares in relation to any issue of Solvency II compliant capital instruments

(d) Movement in issued share capital

	Number of shares			Share capital £m	Capital redemption reserve £m	Share premium £m
	25p each	32 17/19p each	B shares			
At 1 January	**3,766,095,426**	**—**	**—**	**941**	**86**	**1,248**
Shares issued under the Group's Employee and Executive Share Option Schemes	**1,214,203**	**350,825**	**—**	**—**	**—**	**5**
Shares cancelled through buyback	**(79,987,629)**	**—**	**—**	**(19)**	**19**	**—**
Shares issued under the B share scheme	**—**	**—**	**3,687,322,000**	**3,750**	**—**	**—**
Shares cancelled following B share scheme redemption	**—**	**—**	**(3,687,322,000)**	**(3,750)**	**3,750**	**—**
Share consolidation	**(3,687,322,000)**	**2,802,364,720**	**—**	**—**	**—**	**—**
At 30 June	**—**	**2,802,715,545**	**—**	**922**	**3,855**	**1,253**

	30 June 2021				31 December 2021			
	Number of shares 25p each	Share capital £m	Capital redemption reserve £m	Share premium £m	Number of shares 25p each	Share capital £m	Capital redemption reserve £m	Share premium £m
At 1 January	3,928,490,420	982	44	1,242	3,928,490,420	982	44	1,242
Shares issued under the Group's Employee and Executive Share Option Schemes	1,080,283	—	—	2	2,842,866	1	—	6
Shares cancelled through buyback	—	—	—	—	(165,237,860)	(42)	42	—
At 30 June/31 December	3,929,570,703	982	44	1,244	3,766,095,426	941	86	1,248

Ordinary shares in issue in the Company rank pari passu with any new ordinary shares issued in the Company. All the ordinary shares in issue carry the same right to receive all dividends and other distributions declared, made or paid by the Company.

B22 – Merger reserve

Prior to 1 January 2004, certain significant business combinations were accounted for using the 'pooling of interests method' (or merger accounting), which treats the merged groups as if they had been combined throughout the current and comparative accounting periods.

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
At 1 January	**8,974**	8,974	8,974
Issue of B share capital	**(3,750)**	—	—
At 30 June/31 December	**5,224**	8,974	8,974

Merger accounting principles for these combinations gave rise to a merger reserve in the consolidated statement of financial position, being the difference between the nominal value of new shares issued by the Parent Company for the acquisition of the shares of the subsidiary and the subsidiary's own share capital and share premium account.

The merger reserve is also used where more than 90% of the shares in a subsidiary are acquired and the consideration includes the issue of new shares by the Company, thereby attracting merger relief under the Companies Act 1985 and, from 1 October 2009, the Companies Act 2006.

On 16 May 2022 the Company issued 3,687,322,000 B shares reducing the Company's merger reserve by £3,750 million (see note B21(b)).

B23 – Retained earnings

This note analyses the movements in the consolidated retained earnings during the period.

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Balance at 1 January	**7,556**	7,468	7,468
(Loss)/profit for the period attributable to equity shareholders	**(644)**	(232)	1,966
Remeasurements of pension schemes[1] (note B15)	**(583)**	26	59
Dividends and appropriations (note B7)	**(550)**	(833)	(1,127)
Shares purchased in buyback	**(336)**	—	(663)
Return of capital to ordinary shareholders via B share scheme (note B21(b))	**(3,750)**	—	—
Net shares issued under equity compensation plans	**1**	21	3
Effect of changes in non-controlling interests in existing subsidiaries	**—**	7	—
Forfeited dividend income[2]	**—**	(1)	—
Fair value gains realised from other reserves	**—**	—	9
Aggregate tax effect	**178**	(149)	(159)
Balance at 30 June/31 December	**1,872**	6,307	7,556

1 Net remeasurements of pension schemes recorded in the consolidated statement of comprehensive income of £(583) million (HY21: £26 million, 2021: £59 million) includes £583 million of remeasurement gains (HY21: £27 million gains, 2021: £59 million gains) on the main pension schemes.

2 The Group has a shareholder forfeiture programme, where the shares of shareholders with whom Aviva has lost contact over the last 12 years will be forfeited and sold on. Any associated unclaimed dividends will be reclaimed by the Group. After covering administration costs, the majority of the money will be put into a charitable foundation.

B24 – Subsequent events

For details of subsequent events relating to borrowings, see note B14(d).

Directors' responsibility statement

The directors confirm that these condensed consolidated interim financial statements have been prepared in accordance with IAS 34 Interim Financial Reporting as adopted by the UK, 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 and Accounts.

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

Amanda Blanc
Group Chief Executive Officer

9 August 2022

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 6 month period ended 30 June 2022 (the 'period').

Based on our review, nothing has come to our attention that causes us to believe that the interim financial statements are not prepared, in all material respects, in accordance with UK adopted International Accounting Standard 34, 'Interim Financial Reporting' and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

The interim financial statements comprise:

- the condensed consolidated statement of financial position as at 30 June 2022;
- the condensed consolidated income statement and condensed consolidated statement of comprehensive income for the period then ended;
- the condensed consolidated statement of cash flows for the period then ended;
- the condensed consolidated statement of changes in equity for the period then ended; and
- the explanatory notes to the interim financial statements.

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

Basis for conclusion

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

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

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

Conclusions relating to going concern

Based on our review procedures, which are less extensive than those performed in an audit as described in the Basis for conclusion section of this report, nothing has come to our attention to suggest that the directors have inappropriately adopted the going concern basis of accounting or that the directors have identified material uncertainties relating to going concern that are not appropriately disclosed. This conclusion is based on the review procedures performed in accordance with this ISRE. However, future events or conditions may cause the group to cease to continue as a going concern.

Responsibilities for the interim financial statements and the review

Our responsibilities and those of the directors

The Half year report, including the interim financial statements, is the responsibility of, and has been approved by the directors. The directors are responsible for preparing the Half year report in accordance with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority. In preparing the Half year report, including the interim financial statements, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

Our responsibility is to express a conclusion on the interim financial statements in the Half year report based on our review. Our conclusion, including our Conclusions relating to going concern, is based on procedures that are less extensive than audit procedures, as described in the Basis for conclusion paragraph of this report. This report, including the conclusion, has been prepared for and only for the company for the purpose of complying with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and for no other purpose. We do not, in giving this conclusion, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

PricewaterhouseCoopers LLP
Chartered Accountants
London
9 August 2022

Analysis of assets

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

C1 – Summary of total assets by fund

(a) Group assets by fund

30 June 2022	Policyholder assets £m	Participating fund assets £m	Shareholder assets £m	Total £m
Goodwill and acquired value of in-force business and intangible assets	—	—	3,591	3,591
Interests in joint ventures and associates	308	744	1,060	2,112
Property and equipment	—	67	344	411
Investment property	4,836	2,139	398	7,373
Loans	1,398	2,211	30,354	33,963
Financial investments				
Fixed maturity securities	37,632	23,187	51,525	112,344
Equity securities	76,138	7,388	1,109	84,635
Other investments	26,281	4,040	2,251	32,572
Reinsurance assets	5,093	279	8,149	13,521
Deferred tax assets	—	—	302	302
Current tax assets	—	—	294	294
Receivables and other financial assets	721	508	4,968	6,197
Deferred acquisition costs and other assets	51	681	4,053	4,785
Prepayments and accrued income	551	595	1,495	2,641
Cash and cash equivalents	5,495	1,536	6,713	13,744
Total	**158,504**	**43,375**	**116,606**	**318,485**
Total %	**49.8 %**	**13.6 %**	**36.6 %**	**100.0 %**
2021 Total	174,509	50,992	132,973	358,474
2021 Total %	48.7 %	14.2 %	37.1 %	100.0 %

(b) Assets under management by fund

30 June 2022	Policyholder assets £m	Participating fund assets £m	Shareholder assets £m	External funds £m	Total £m
Assets managed on behalf of the Group's subsidiaries					
Investment property	4,836	2,139	398	—	7,373
Loans	1,398	2,211	30,354	—	33,963
Fixed maturity securities	37,632	23,187	51,525	—	112,344
Equity securities	76,138	7,388	1,109	—	84,635
Other investments	26,281	4,040	2,251	—	32,572
Cash and cash equivalents	5,495	1,536	6,713	—	13,744
Other	5,423	703	148	—	6,274
	157,203	41,204	92,498	—	290,905
Assets managed on behalf of third parties[1]					
Aviva Investors	—	—	—	40,464	40,464
UK Platform[2]	—	—	—	40,280	40,280
Other	—	—	—	37	37
Less: third-party funds and UK Platform included in assets managed on behalf of Group's subsidiaries	—	—	—	(18,393)	(18,393)
	—	—	—	62,388	62,388
Total	**157,203**	**41,204**	**92,498**	**62,388**	**353,293**
Total %	**44.5 %**	**11.7 %**	**26.1 %**	**17.7 %**	**100.0 %**
2021 Total	173,387	48,191	107,687	72,141	401,406
2021 Total %	43.2 %	12.0 %	26.8 %	18.0 %	100.0 %

1 AUM managed on behalf of third parties cannot be directly reconciled to the financial statements.
2 UK Platform relates to the assets under management in the UK Wealth business.

C2 – Summary of valuation bases for total shareholder assets

30 June 2022	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	—	3,591	—	3,591
Interests in joint ventures and associates	—	—	1,060	1,060
Property and equipment	15	329	—	344
Investment property	398	—	—	398
Loans	26,869	3,485	—	30,354
Financial investments				
Fixed maturity securities	51,525	—	—	51,525
Equity securities	1,109	—	—	1,109
Other investments	2,251	—	—	2,251
Reinsurance assets	—	8,149	—	8,149
Deferred tax assets	—	—	302	302
Current tax assets	—	—	294	294
Receivables and other financial assets	—	4,968	—	4,968
Deferred acquisition costs and other assets	—	4,053	—	4,053
Prepayments and accrued income	—	1,495	—	1,495
Cash and cash equivalents	6,713	—	—	6,713
Total	**88,880**	**26,070**	**1,656**	**116,606**
Total %	**76.2 %**	**22.4 %**	**1.4 %**	**100.0 %**
2021 Total	103,913	27,736	1,324	132,973
2021 Total %	78.1 %	20.9 %	1.0 %	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.

C3 – Analysis of financial investments by fund

The asset allocation as at 30 June 2022 across the Group, split according to the type of the liability the assets are backing, is shown in the table below.

	Shareholder business assets					
30 June 2022	General insurance & health & other[1] £m	Annuity and non-profit £m	Total shareholder assets £m	Policyholder (unit-linked assets) £m	Participating fund assets (UK style with-profits) £m	Carrying value in the statement of financial position £m
Fixed maturity securities (note C4)						
Government bonds	6,273	14,891	21,164	15,822	9,537	46,523
Corporate bonds	4,267	17,921	22,188	17,023	9,496	48,707
Other	3,804	4,369	8,173	4,787	4,154	17,114
	14,344	37,181	51,525	37,632	23,187	112,344
Loans (note C5)						
Mortgage loans	—	19,607	19,607	—	20	19,627
Other loans	2,042	8,705	10,747	1,398	2,191	14,336
	2,042	28,312	30,354	1,398	2,211	33,963
Equity securities (note C6)	926	183	1,109	76,138	7,388	84,635
Investment property (note C7)	292	106	398	4,836	2,139	7,373
Other investments (note C8)	1,145	1,106	2,251	26,281	4,040	32,572
Total	**18,749**	**66,888**	**85,637**	**146,285**	**38,965**	**270,887**
2021 Total	23,792	78,075	101,867	162,541	46,180	310,588

1 Of the £18,749 million of assets 41% relates to other shareholder business assets.

C4 – Analysis of shareholder fixed maturity securities

(a) Fair value hierarchy

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

- Inputs to Level 1 fair values are quoted prices (unadjusted) in active markets for identical assets;
- Inputs to Level 2 fair values are inputs other than quoted prices included within Level 1 that are observable for the asset, either directly or indirectly. If the asset has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset; and
- Inputs to Level 3 fair values are unobservable inputs for the asset. Unobservable inputs may have been used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset at the measurement date. However, the fair value measurement objective remains the same, i.e. an exit price at the measurement date from the perspective of a market participant that holds the asset. Unobservable inputs reflect the assumptions the business unit considers that market participants would use in pricing the asset. Examples are investment property and commercial and equity release mortgage loans.

30 June 2022	Fair value hierarchy Level 1 £m	Level 2 £m	Level 3 £m	Total £m
UK government	8,206	1,577	107	9,890
Non-UK government	941	8,160	2,173	11,274
Europe	102	3,006	1,378	4,486
North America	839	4,051	498	5,388
Asia Pacific & Other	—	1,103	297	1,400
Corporate bonds - public utilities	—	2,694	1,457	4,151
Other corporate bonds	—	15,739	2,298	18,037
Other	—	7,945	228	8,173
Total	9,147	36,115	6,263	51,525
Total %	17.7 %	70.1 %	12.2 %	100.0 %
2021 Total	17,101	39,113	7,525	63,739
2021 Total %	26.8 %	61.4 %	11.8 %	100.0 %

(b) External ratings

30 June 2022	External ratings AAA £m	AA £m	A £m	BBB £m	Less than BBB £m	Non-rated £m	Total £m
Government							
UK government	—	9,487	166	—	—	86	9,739
UK local authorities	—	—	112	—	—	39	151
Non-UK government	6,460	2,982	740	93	24	975	11,274
	6,460	12,469	1,018	93	24	1,100	21,164
Corporate							
Public utilities	—	101	1,030	1,859	—	1,161	4,151
Other corporate bonds	2,450	3,255	7,078	3,442	66	1,746	18,037
	2,450	3,356	8,108	5,301	66	2,907	22,188
Certificates of deposit	145	4,362	1,990	—	—	2	6,499
Structured							
Residential mortgage backed security non-agency prime	1	—	61	1	—	—	63
	1	—	61	1	—	—	63
Commercial mortgage backed security	316	51	120	50	—	18	555
Asset backed security	177	258	39	104	22	41	641
	493	309	159	154	22	59	1,196
Wrapped credit	—	10	294	98	4	9	415
Total	9,549	20,506	11,630	5,647	116	4,077	51,525
Total %	18.5 %	39.8 %	22.6 %	11.0 %	0.2 %	7.9 %	100.0 %
2021 Total	9,093	29,896	13,561	6,288	95	4,806	63,739
2021 Total %	14.3 %	46.9 %	21.3 %	9.9 %	0.1 %	7.5 %	100.0 %

C5 – Analysis of loans

(a) Overview

The Group's loan portfolio of £33,963 million (2021: £38,624 million) is principally made up of the following:

- Policy loans of £14 million (2021: £14 million), which are generally collateralised by a lien or charge over the underlying policy;
- Loans and advances to banks of £6,535 million (2021: £8,297 million), which primarily relate to loans of cash collateral received in stock lending transactions and are therefore fully collateralised by other securities;
- Mortgage loans collateralised by property assets of £19,627 million (2021: £21,684 million); and
- Healthcare, infrastructure and private financial initiative (PFI) loans of £7,082 million (2021: £7,994 million).

Loans with fixed maturities, including policy loans and loans and advances to banks, are recognised when cash is advanced to borrowers. These loans are carried at their unpaid principal balances and adjusted for amortisation of premium or discount, non-refundable loan fees and related direct costs. These amounts are deferred and amortised over the life of the loan using the effective interest rate method.

For certain mortgage loans, the Group has taken advantage of the fair value option under IAS 39 Financial Instruments: Recognition Measurement to present the mortgages, associated borrowings, other liabilities and derivative financial instruments at fair value, since they are managed together on a fair value basis. These mortgage loans are not traded in active markets and are classified within level 3 of the fair value hierarchy as the significant valuation assumptions and inputs are not deemed to be market observable. Of the Group's total loan portfolio, 57.8% (2021: 56.1%) is invested in mortgage loans. The shareholder risk relating to these loans is discussed further below.

Healthcare, infrastructure and PFI loans included within shareholder assets are £7,082 million (2021: £7,994 million). These loans are secured against the income from healthcare and education premises and as such are not considered further in this section.

(b) Analysis of shareholder mortgage loans

Mortgage loans included within shareholder assets are £19,607 million (2021: £21,663 million) and are held in the UK. The narrative below focuses on explaining the risks arising as a result of these exposures.

30 June 2022	Total £m
Non-securitised mortgage loans	
– Residential (Equity release)	**8,752**
– Commercial	**6,593**
– Healthcare, Infrastructure and PFI mortgage loans	**2,263**
	17,608
Securitised mortgage loans	**1,999**
Total	**19,607**
2021 Total	21,663

Non-securitised mortgage loans

Residential

The UK non-securitised residential mortgage portfolio has a total value as at 30 June 2022 of £8,752 million (2021: £9,699 million). The movement in the year is due to £447 million of new lending offset by a decrease in the fair value of £1,280 million. Additional accrued interest in the year is offset against the value of redemptions. These mortgages are all in the form of equity release, whereby homeowners mortgage their property to release cash equity. Due to the structure of equity release mortgages, whereby interest amounts due are not paid in cash but instead rolled into the amount outstanding, they predominantly have a current Loan to Value (LTV) of below 70%. The average LTV across the portfolio is 25.6% (2021: 27.5%).

Commercial

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

30 June 2022	>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	**—**	**27**	**—**	**—**	**—**	**45**	**—**	**27**	**582**	**5,912**	**6,593**
Total	**—**	**27**	**—**	**—**	**—**	**45**	**—**	**27**	**582**	**5,912**	**6,593**

All of the £6,593 million (2021: £7,225 million) of mortgage loans within shareholder assets are used to back annuity liabilities and are stated on a fair value basis. The UK loan exposures are calculated on a discounted cash flow basis, and include a risk adjustment through the use of a Credit Risk Adjusted Value (CRAV).

For commercial mortgages, loan service collection ratios, a key indicator of mortgage portfolio performance, increased to 2.34x (2021: 2.31x). Loan Interest Cover (LIC), which is defined as the annual net rental income (including rental deposits less ground rent) divided by the annual loan interest service, increased to 2.67x (2021: 2.65x). Average mortgage LTV decreased from 56.0% in 2021 to 50.3%. As at 30 June 2022, there were no loans with balances in arrears (2021: nil).

Commercial mortgages and Healthcare, Infrastructure and PFI loans are held at fair value on the asset side of the statement of financial position. The related insurance liabilities are valued using a discount rate derived from the gross yield on assets, with adjustments to allow for risk. £15,521 million of shareholder loan assets are backing annuity liabilities and comprise of commercial mortgage loans (£6,593 million), Healthcare, Infrastructure and PFI mortgage loans (£2,263 million) and Healthcare, Infrastructure and PFI other loans (£6,665 million).

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 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. The Group continues to actively manage this position.

Healthcare, Infrastructure and PFI

Healthcare, Infrastructure and PFI mortgage loans included within shareholder assets of £2,263 million (2021: £2,508 million) are secured against healthcare premises, education, social housing and emergency services related premises. For all such loans, Government support is provided through either direct funding or reimbursement of rental payments to the tenants to meet income service and provide for the debt to be reduced substantially over the term of the loan. Although the loan principal is not Government guaranteed, the nature of these businesses provides considerable comfort of an ongoing business model and low risk of default.

On a market value basis, we estimate the average LTV of these mortgages to be 63.8% (2021: 68.3%), although this is not considered to be a key risk indicator due to the Government support noted above and the social need for these premises. The Group therefore consider these loans to be lower risk relative to other mortgage loans.

Securitised mortgage loans

As at 30 June 2022, the Group has £1,999 million (2021: £2,231 million) of securitised mortgage loans within shareholder assets. Funding for the securitised residential mortgage assets was obtained by issuing loan note securities. Of these loan notes approximately £211 million (2021: £213 million) are held by Group companies. The remainder is held by third parties external to Aviva. As any cash shortfall arising once all mortgages have been redeemed is borne by the loan note holders, the majority of the credit risk of these mortgages is borne by third parties rather than by shareholders. The average LTV across the securitised mortgage loans is 43.7% (2021: 49.5%).

Valuation allowance

The Group carries a valuation allowance within insurance liabilities against the risk of default for assets backing annuities. The total valuation allowance in respect of corporate bonds was £0.9 billion (2021: £1.4 billion) over the remaining term of the portfolio at 30 June 2022. The total valuation allowance in respect of mortgages, including healthcare mortgages but excluding equity release, was £0.3 billion at 30 June 2022 (2021: £0.5 billion). The total valuation allowance in respect of equity release mortgages was £0.8 billion at 30 June 2022 (2021: £1.2 billion). The risk allowances made for corporate bonds (including overseas government bonds and structured finance assets), mortgages (including healthcare mortgages, commercial mortgages and infrastructure assets) and equity release equated to 37 bps, 27 bps, and 83 bps respectively at 30 June 2022 (2021: 44 bps, 30 bps and 91 bps respectively).

C6 – Analysis of shareholder equity securities

	30 June 2022				31 December 2021			
	Fair value hierarchy				Fair value hierarchy			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Public utilities	**9**	**—**	**—**	**9**	7	—	—	7
Banks, trusts and insurance companies	**54**	**—**	**164**	**218**	43	—	154	197
Industrial miscellaneous and all other	**752**	**—**	**2**	**754**	808	—	1	809
Non-redeemable preference shares	**128**	**—**	**—**	**128**	162	—	—	162
Total	**943**	**—**	**166**	**1,109**	1,020	—	155	1,175
Total %	**85.0 %**	**— %**	**15.0 %**	**100.0 %**	86.8 %	— %	13.2 %	100.0 %

C7 – Analysis of shareholder investment property

	30 June 2022				31 December 2021			
	Fair value hierarchy				Fair value hierarchy			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Leased to third parties under operating leases	**—**	**—**	**398**	**398**	—	—	412	412
Total	**—**	**—**	**398**	**398**	—	—	412	412
Total %	**— %**	**— %**	**100.0 %**	**100.0 %**	— %	— %	100.0 %	100.0 %

C8 – Analysis of shareholder other financial investments

	30 June 2022				31 December 2021			
	Fair value hierarchy				Fair value hierarchy			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Unit trusts and other investment vehicles	**90**	**44**	**282**	**416**	87	160	275	522
Derivative financial instruments	**73**	**1,277**	**252**	**1,602**	—	1,953	377	2,330
Minority holdings in property management undertakings	**—**	**—**	**135**	**135**	—	—	128	128
Other	**2**	**—**	**96**	**98**	1	—	96	97
Total	**165**	**1,321**	**765**	**2,251**	88	2,113	876	3,077
Total %	**7.3 %**	**58.7 %**	**34.0 %**	**100.0 %**	2.8 %	68.7 %	28.5 %	100.0 %

Other information

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Alternative Performance Measures

In order to fully explain the performance of our business, we discuss and analyse our results in terms of financial measures which include a number of Alternative Performance Measures (APMs). APMs are non-GAAP measures which are used to supplement the disclosures prepared in accordance with other regulations, such as International Financial Reporting Standards (IFRS) and Solvency II. We believe these measures provide useful information to enhance the understanding of our financial performance. However, APMs should be viewed as complementary to, rather than as a substitute for, the amounts determined according to other regulations.

The APMs utilised by Aviva may not be the same as those used by other insurers and may change over time. The calculation of APMs is consistent with previous periods unless otherwise stated.

At 31 December 2021, the Solvency II Return on Equity (Solvency II RoE) and Solvency II Return on Capital (Solvency II RoC) APMs were amended following a review of the basis of preparation. In the numerator, Transitional Measures on Technical Provisions (TMTP) run-off was replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis. This change in approach was considered more relevant because it enables a better comparison of Solvency II return across Life and General Insurance business. In addition, for Solvency II RoE only, the denominator was adjusted to exclude excess capital above the Group's target Solvency II shareholder cover ratio (the return on excess capital has also been removed from the numerator for consistency), thus removing distortions that would arise from temporarily holding excess capital. Comparative amounts at 30 June 2021 have been restated to reflect these changes.

Further details on APMs derived from IFRS measures and APMs derived from Solvency II measures are provided in the following sections. A further section describes Other APMs.

APMs derived from IFRS measures

A number of APMs relating to IFRS are utilised to measure and monitor the Group's performance

- Group adjusted operating profit
- Combined operating ratio
- Claims, commission, and expense ratios
- Operating earnings per share
- Controllable costs
- IFRS return on equity
- IFRS net asset value per share
- Assets Under Management and Assets Under Administration
- Net flows
- Aviva Investors revenue
- Cost income ratio

Definitions and additional information, including reconciliation to the relevant amounts in the IFRS Financial Statements and, where appropriate, commentary on the material reconciling items are included within this section.

Group adjusted operating profit

Group operating profit is an APM that supports decision making and internal performance management of the Group's operating segments that incorporates an expected return on investments supporting the life and non-life insurance businesses. The Group considers this measure meaningful to stakeholders as it enhances the understanding of the Group's operating performance over time by separately identifying non-operating items. The various items excluded from Group adjusted operating profit, but included in IFRS profit before tax, are:

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

Group adjusted operating profit for the life insurance business is based on expected investment returns on financial investments backing shareholder and policyholder funds over the reporting period, with allowance for the corresponding expected movements in liabilities. The expected rate of return is determined using consistent assumptions between operations, having regard to local economic and market forecasts of investment return and asset classification.

For fixed interest securities classified as fair value through profit or loss, the expected investment returns are based on average prospective yields for the actual assets held less an adjustment for credit risk. Where such securities are classified as available for sale the expected return comprises interest or dividend payments and amortisation of the premium or discount at purchase. The expected return on equities and properties is calculated by reference to the opening 10-year swap rate in the relevant currency plus an appropriate risk margin.

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

Group adjusted operating profit for the non-life insurance business is based on expected investment returns on financial investments backing shareholder funds over the period. Expected investment returns are calculated for equities and properties by multiplying the opening market value of the investments, adjusted for sales and purchases during the year, by the long-term rate of return. This rate of return is the same as that applied for the long-term business expected returns. The long-term return for other investments (including fixed maturity securities) is the actual income receivable for the period. Actual income and long-term investment return both contain the amortisation of the discounts/premium arising on the acquisition of fixed income securities.

Changes due to market value movements and interest rate changes, which give rise to variances between actual and expected investment returns, are disclosed separately outside Group adjusted operating profit. The impact of changes in the discount rate applied to claims provisions is also disclosed outside Group adjusted operating profit.

The exclusion of short-term investment variances from this APM reflects the long-term nature of much of our business. The Group adjusted operating profit, which is used in managing the performance of our operating segments, excludes the impact of economic variances, to provide a comparable measure year-on-year.

Impairment, amortisation and profit or loss on disposal
Group adjusted operating profit also excludes impairment of goodwill, associates and joint ventures; amortisation and impairment of other intangible assets acquired in business combinations; amortisation and impairment of acquired value of in-force business; and the profit or loss on disposal and remeasurement of subsidiaries, joint ventures and associates. These items principally relate to merger and acquisition activity which we view as strategic in nature, hence they are excluded from the Group adjusted operating profit APM as this is principally used to manage the performance of our operating segments when reporting to the Group chief operating decision maker.

Other items
These items are, in the directors' view, required to be separately disclosed by virtue of their nature or incidence to enable a full understanding of the Group's financial performance. Other items at 30 June 2022 comprise:

- The following items which are disclosed outside of Group adjusted operating profit as they relate to acquisition and disposal activity that we consider to be strategic in nature:
  - £15 million arising from third party reinsurance, accepted by Aviva from the former Aviva France general insurance entity, which was terminated on 31 December 2021.
  - A charge of £1 million relating to provisions for indemnities entered into through acquisition and disposal activity.
- A charge of £10 million relating to fees and charges associated with the share buyback and return of capital to ordinary shareholders.
- A charge of £1 million relating to the cost of the employee free share award, which recognises the contribution our employees have made to the return of capital to ordinary shareholders.

Other items at 30 June 2021 comprised:

- A charge of £51 million relating to the redemption payment in excess of the market value of debt repaid as part of the Group's deleveraging strategy. This is disclosed outside of Group Adjusted Operating Profit as the costs arise from a strategic decision relating to the financing of the Group as a whole and not to the operating performance of the Group or its operating segments;
- A charge of £7 million relating to the cost of voluntary amendments to a small proportion of ground rent leases held by the Aviva Investor REaLM Ground Rent Fund; and
- A net release of £3 million of certain provisions assumed as part of historic acquisition activities.

Other items at 31 December 2021 comprised:

- The following items are disclosed outside of Group adjusted operating profit as they relate to acquisition and disposal activity that we consider to be strategic in nature:
  - A charge of £76 million arising from third party reinsurance, accepted by Aviva from the former Aviva France general insurance entity, which was terminated on 31 December 2021;
  - A charge of £45 million relating to costs associated with the disposals of France, Italy, Aviva Vita, Poland, Singapore, Turkey and Vietnam, comprising IT contracts that have become onerous, severance costs associated with senior management and relocation costs; and
  - Net charges of £22 million relating to provisions for indemnities entered into through acquisition and disposal activity.
- A charge of £51 million relating to the redemption payment in excess of the market value of debt repaid as part of the Group's deleveraging strategy. This is disclosed outside of Group adjusted operating profit as the costs arise from a strategic decision relating to the financing of the Group as a whole and not to the operating performance of the Group or its operating segments;
- A charge of £7 million relating to the cost of voluntary amendments to a small proportion of ground rent leases held by the Aviva Investors REaLM Ground Rent Fund; and
- A charge of £3 million relating to stamp duty costs on share buybacks.

The Group adjusted operating profit APM should be viewed as complementary to IFRS measures. It is important to consider Group adjusted operating profit and profit for the year together to understand the performance of the business in the period.

The table below presents a reconciliation between our consolidated operating (loss)/profit and (loss)/profit before tax attributable to shareholders' profits.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
UK & Ireland Life	**651**	545	1,428
UK & Ireland General Insurance	**171**	191	356
Canada	**204**	229	406
Aviva Investors	**14**	19	41
UK, Ireland, Canada and Aviva Investors	**1,040**	984	2,231
International investments	**55**	55	97
	1,095	1,039	2,328
Corporate centre costs and Other operations	**(138)**	(134)	(379)
Group debt costs and other interest	**(128)**	(180)	(315)
Group adjusted operating profit before tax attributable to shareholders' profits from continuing operations	**829**	725	1,634
Group adjusted operating profit before tax attributable to shareholders' profits from discontinued operations	**—**	407	631
Group adjusted operating profit before tax attributable to shareholders' profits	**829**	1,132	2,265
Adjusted for the following:			
Life business: Investment variances and economic assumption changes	**(537)**	(259)	(805)
Non-life business: Short-term fluctuation in return on investments	**(1,080)**	(155)	(149)
General insurance and health business: Economic assumption changes	**147**	(23)	(85)
Impairment of goodwill, associates and joint ventures and other amounts expensed	**(14)**	—	—
Amortisation and impairment of intangibles acquired in business combinations	**(25)**	(30)	(66)
Amortisation and impairment of acquired value of in-force business	**(91)**	(100)	(199)
Profit on the disposal and remeasurement of subsidiaries, joint ventures and associates	**—**	(513)	1,572
Other	**(27)**	(55)	(204)
Adjusting items before tax	**(1,627)**	(1,135)	64
IFRS (loss)/profit before tax attributable to shareholders' profits	**(798)**	(3)	2,329
Tax on Group adjusted operating profit	**(149)**	(263)	(470)
Tax on other activities	**314**	68	177
	165	(195)	(293)
IFRS (loss)/profit for the period	**(633)**	(198)	2,036

Combined operating ratio (COR)

COR is a useful financial measure of general insurance underwriting profitability calculated as total underwriting costs in our insurance entities expressed as a percentage of net earned premiums. It is used to monitor the profitability of lines of business. A COR below 100% indicates profitable underwriting. The Group COR is shown below.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Continuing operations			
Incurred claims – GI & Health (as per note B4)[1]	**(2,573)**	(2,343)	(4,954)
Adjusted for the following:			
Incurred claims – Health	**179**	166	338
Change in discount rate assumptions	**(147)**	38	77
Total incurred claims (included in COR)	**(2,541)**	(2,139)	(4,539)
Commission and expenses – GI & Health (as per note B4)[2]	**(1,518)**	(1,451)	(2,869)
Adjusted for the following:			
Amortisation and impairment of intangibles acquired in business combinations	**5**	5	10
Foreign exchange gains/(losses)	**24**	(33)	(48)
Commission income	**9**	9	16
Other	**11**	15	22
Commission and expenses – Health & Other Non GI	**104**	97	199
Total commission and expenses (included in COR)[3]	**(1,365)**	(1,358)	(2,670)
Total underwriting costs from continuing operations	**(3,906)**	(3,497)	(7,209)
Total underwriting costs from discontinued operations	**—**	(796)	(1,448)
Total underwriting costs	**(3,906)**	(4,293)	(8,657)
Net earned premiums – GI & Health	**4,413**	4,055	8,253
Adjusted for:			
Net earned premiums – Health	**(258)**	(238)	(490)
Net earned premiums (included in COR) from continuing operations	**4,155**	3,817	7,763
Net earned premiums (included in COR) from discontinued operations	**—**	833	1,430
Net earned premiums (included in COR)	**4,155**	4,650	9,193
Combined operating ratio - continuing operations	**94.0%**	91.6 %	92.9%
Combined operating ratio	**94.0%**	92.3 %	94.1%

1 Corresponds to the sum of claims and benefits paid, net of recoveries from reinsurers and the change in insurance liabilities, net of reinsurance per note B4(b).
2 Corresponds to the sum of fee and commission expense and other expenses per note B4(b).
3 Commission and expenses (included in COR) is comprised of £(866) million earned commission (HY21: £(883) million, 2021: £(1,706) million) and £(499) million earned expenses (HY21: £(475) million, 2021: £(964) million).

Claims, commission, and expense ratios

Financial measures of the performance of our general insurance business which are calculated as incurred claims, earned commissions or earned expenses expressed as a percentage of net earned premiums, which can be derived from the COR table above. The ratios are meaningful to stakeholders because they enhance understanding of the profitability of the business sold.

Operating earnings per share (Operating EPS)

Operating EPS is calculated based on the Group adjusted operating profit attributable to ordinary shareholders net of tax, deducting non-controlling interests and preference dividends divided by the weighted average number of ordinary shares in issue, after deducting treasury shares. Operating EPS is considered meaningful to stakeholders because it enhances the understanding of the Group's operating performance over time by adjusting for the effects of non-operating items. A reconciliation between operating EPS and basic EPS can be found in note B6.

Controllable costs

Controllable costs is a useful measure of the controllable operational overheads associated with maintaining our businesses. These predominantly consist of staff costs, central costs, property and IT related costs and other expenses. Controllable costs also include indirect acquisition costs, such as underwriting overheads, and claims handling costs. These are considered to be controllable by the operating segments.

Controllable costs excludes:

- Impairment of goodwill, associates and joint ventures; amortisation and impairment of other intangible assets acquired in business combinations; and amortisation and impairment of acquired value of in-force business. These items relate to merger, acquisition and disposal activity which we view as strategic in nature, hence they are excluded from controllable costs which is principally used to manage the performance of our operating segments.
- Costs in relation to product governance and mis-selling. These costs represent compensation and redress payments made to policyholders and are excluded from controllable costs because they have characteristics of claims payments.
- Premium based taxes, fees and levies that vary directly with premiums. These costs are by their nature a direct cost incurred as a result of generating premium income, and therefore not a controllable operational overhead.
- Other amounts that, in management's view, are not representative of underlying day-to-day expenses involved in running the business, and that would distort the year-on-year controllable costs trend such as GI instalment income and charges reported as 'Other' outside of Group adjusted operating profit.

A reconciliation of other expenses in the IFRS condensed consolidated income statement to controllable costs is set out below:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Continuing operations			
Other expenses (IFRS income statement)	**1,162**	1,013	2,211
Add: other acquisition costs	**446**	440	895
Add: claims handling costs	**136**	136	272
Less: amortisation and impairment of intangibles acquired in business combinations	**(25)**	(27)	(54)
Less: amortisation and impairment of acquired value of in-force business	**(85)**	(94)	(189)
(Less)/add: foreign exchange (losses)/gains	**(55)**	135	201
Add/(less): product governance and mis-selling costs	**28**	(19)	(12)
Less: premium based income taxes, fees and levies	**(111)**	(107)	(195)
Less: other costs	**(17)**	(30)	(33)
Controllable costs from continuing operations	**1,479**	1,447	3,096
Controllable costs from discontinued operations	**—**	375	590
Controllable costs	**1,479**	1,822	3,686

Baseline controllable costs are controllable costs included in the scope of the 2018 cost saving target baseline. Baseline controllable costs excludes:

- Cost reduction implementation and IFRS 17 costs. These costs are expected to cease by the end of 2023 and are excluded from baseline controllable costs in line with the defined cost reduction target.
- Strategic investment on significant programmes supporting growth, customer experience, efficiency or agility to transform Group performance. These costs are expected to cease by the end of 2025.
- Other costs relating to recently acquired entities, non-insurance operations relating to Europe and Asia and the impact of foreign exchange movements which were not included in the 2018 cost savings target baseline.

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Controllable costs from continuing operations	**1,479**	1,447	3,096
Less: Cost reduction implementation, IFRS 17 costs and other	**(103)**	(75)	(242)
Less: Strategic Investment	**(34)**	—	—
Baseline controllable costs from continuing operations	**1,342**	1,372	2,854

IFRS Return on Equity (RoE)

The IFRS RoE calculation is based on Group adjusted operating profit after tax attributable to ordinary shareholders expressed as a percentage of weighted average ordinary shareholders' equity (excluding non-controlling interests and preference share capital). IFRS RoE is a useful measure of growth and performance of the business on an IFRS basis. A reconciliation of IFRS RoE can be found in note A12.

IFRS net asset value (NAV) per share

IFRS NAV per share is calculated as the equity attributable to shareholders of Aviva plc, less preference share capital (both within the consolidated statement of financial position), divided by the actual number of shares in issue at the balance sheet date. IFRS NAV per share is meaningful as a measure of the value generated by the Group in terms of the equity shareholders' face value per share investment.

	30 June 2022	30 June 2021	31 December 2021
Equity attributable to shareholders of Aviva plc at 30 June/31 December[1] (£m)	**13,453**	17,979	19,002
Number of shares in issue at 30 June/31 December (in millions)	**2,803**	3,930	3,766
IFRS NAV per share	**480p**	457p	505p

1 Excluding preference shares of £200 million (HY21: £200 million, 2021: £200 million).

Assets Under Management (AUM) and Assets Under Administration (AUA)

AUM represent all assets managed or administered by or on behalf of the Group's subsidiaries, including those assets managed by Aviva Investors and by third parties. AUM include managed assets that are reported within the Group's statement of financial position and those assets belonging to external clients outside the Aviva Group which are therefore not included in the Group's statement of financial position.

Consistent with previous years, Aviva Investors AUA comprises AUM plus £38,964 million (2021: £43,582 million) of assets managed by third parties on platforms administered by Aviva Investors. Both AUM and AUA are monitored as they reflect the potential earnings arising from investment returns and fee and commission income and measure the size and scale of the Group's fund management business. A reconciliation of amounts appearing in the Group's statement of financial position to AUM is shown below:

	30 June 2022 £m	30 June 2021 £m[1]	31 December 2021 £m
Assets managed on behalf of the Group's subsidiaries			
Assets included in statement of financial position			
Financial investments	**229,551**	354,054	264,961
Investment properties	**7,373**	12,061	7,003
Loans	**33,963**	41,155	38,624
Cash and cash equivalents	**13,744**	13,586	12,485
Other	**6,274**	6,919	6,192
	290,905	427,775	329,265
Less: third-party funds and UK Platform included above	**(18,393)**	(26,516)	(22,836)
	272,512	401,259	306,429
Assets managed on behalf of third parties[2]			
Aviva Investors	**40,464**	74,086	51,332
UK Platform[3]	**40,280**	39,394	43,101
Other	**37**	7,941	544
	80,781	121,421	94,977
Total AUM[4]	**353,293**	522,680	401,406

1 Includes assets classified as held for sale.
2 AUM managed on behalf of third parties cannot be directly reconciled to the financial statements.
3 UK Platform relates to the assets under management in the UK Wealth business.
4 Includes AUM of £231,742 million (HY21: £258,382 million, 2021: £267,780 million) managed by Aviva Investors continuing operations and £nil million (HY21: £98,962 million, 2021: £nil million) within Aviva Investors discontinued operations.

Net flows

Net flows is used by management as a key measure of growth in AUM, from which income is generated through asset management charges (AMCs). This measure is predominantly used in Aviva Investors and the Wealth business within UK & Ireland Life.

It is the net position of inflows and outflows. Inflows include IFRS net written premiums, deposits made under investment contracts, and other funds received from customers into AUM which are not included in the Group's statement of financial position. Outflows include IFRS net claims paid, redemptions and surrenders under investment contracts, and other funds withdrawn by customers from AUM which are not included in the Group's statement of financial position.

Aviva Investors net flows includes flows on internal assets which are managed on behalf of Group companies, and external flows on assets belonging to clients outside the Group which are not included in the Group's statement of financial position.

Net flows excludes market and other movements. Net flows when positive in the period can be referred to as net inflows and when negative as net outflows.

Aviva Investors revenue

Aviva Investors revenue includes AMCs received, plus transaction fees and other related income, and is stated net of fees and commissions paid. It is a useful measure of revenue earned from fund management activities. Aviva Investors recognises fee income in the segmental income statement within both fee and commission income and inter-segment revenue. Fees and commissions paid are classified in fee and commission expense.

Cost income ratio (CIR)

Cost income ratio is used to monitor profitable growth in Aviva Investors and is useful as it gives a simple view of how efficiently the business is being run, allowing management to clearly see how costs are moving in relation to income.

Cost income ratio is calculated as Aviva Investors' baseline controllable costs divided by Aviva Investors revenue.

			Aviva Investors
	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Aviva Investors revenue	**190**	192	403
Baseline controllable costs	**165**	168	345
Cost income ratio	**87 %**	87 %	86 %

APMs derived from Solvency II measures

The Group is a regulated entity under the Solvency II regulatory framework and therefore uses a number of APMs that are derived from Solvency II measures in addition to those that are derived from IFRS based measures.

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

- Solvency II shareholder cover ratio
- Value of new business on an adjusted Solvency II basis (VNB)
- Solvency II operating own funds generation (Solvency II OFG)
- Solvency II operating capital generation (Solvency II OCG)
- Solvency II return on capital (Solvency II RoC)
- Solvency II return on equity (Solvency II RoE)
- Solvency II net asset value per share (Solvency II NAV per share)
- Solvency II debt leverage ratio

The Solvency II regulatory framework requires insurers to hold own funds in excess of the Solvency Capital Requirement (SCR). Own funds are available capital resources determined under Solvency II. This includes the excess of assets over liabilities in the Solvency II balance sheet, calculated on best estimate, market consistent assumptions and includes transitional measures on technical provisions (TMTP), subordinated liabilities that qualify as capital under Solvency II, and off-balance sheet own funds.

The SCR is calculated at Group level using a risk-based capital model which is calibrated to reflect the cost of mitigating the risk of insolvency to a 99.5% confidence level over a one-year time horizon – equivalent to a 1 in 200 year event – against financial and non-financial shocks. As a number of subsidiaries utilise the standard formula rather than a risk-based capital model to assess capital requirements, the overall Group SCR is calculated using a partial internal model, and it is shown after the impact of diversification benefit. The Group diversification between markets is the SCR diversification arising from the sum of the SCR for each market (e.g. UK & Ireland Life, UK & Ireland GI, Canada, Aviva Investors, International investments) being higher than the SCR at Group.

The key differences between the two bases are as follows:

- Elimination of goodwill and other intangible assets
- Valuation adjustments to reflect insurance assets and liabilities valued on a best estimate basis using market-implied assumptions
- Valuation adjustments and the impact of the difference between consolidation methodologies under Solvency II and IFRS
- Tax effect of all other reconciling items in the table below which are shown gross of tax
- Recognition of subordinated debt capital, non-controlling interests and adjustments for ring-fenced funds restrictions

The reconciliation from total Group equity on an IFRS basis to Solvency II regulatory own funds is presented below.

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Total Group equity on an IFRS basis	**14,401**	19,063	19,454
Elimination of goodwill and other intangible assets			
Goodwill	**(1,749)**	(1,767)	(1,741)
Acquired value of in-force business	**(1,460)**	(1,638)	(1,544)
Deferred acquisition costs (net of deferred income)	**(2,586)**	(2,595)	(2,617)
Other intangibles	**(382)**	(460)	(406)
Liability valuation differences (net of transitional deductions)	**12,550**	16,286	11,625
Inclusion of risk margin (net of transitional deductions)	**(1,269)**	(2,743)	(1,601)
Revaluation of subordinated liabilities	**(46)**	(531)	(449)
Other accounting differences	**278**	(458)	155
Net deferred tax	**(1,027)**	(1,446)	(597)
Estimated Solvency II net assets (gross of non-controlling interests)	**18,710**	23,711	22,279
Difference between Solvency II net assets and regulatory own funds	**2,830**	3,418	3,294
Estimated Solvency II regulatory own funds	**21,540**	27,129	25,573

Solvency II shareholder cover ratio

The estimated Solvency II shareholder cover ratio, which is derived from own funds divided by the SCR using a 'shareholder view', is one of the indicators of the Group's balance sheet strength. The shareholder view is considered by management to be more representative of the shareholders' risk-exposure and the Group's ability to cover the SCR with eligible own funds and aligns with management's approach to dynamically manage its capital position. In arriving at the shareholder position, the following adjustments are typically made to the regulatory Solvency II position:

- The contribution to the Group's SCR and own funds of the most material fully ring-fenced with-profits funds and staff pension schemes in surplus are excluded. These exclusions have no impact on Solvency II surplus as these funds are self-supporting on a Solvency II capital basis with any surplus capital above SCR not recognised.
- A notional reset of the TMTP, calculated using the same method as used for formal TMTP resets. This presentation avoids step changes to the Solvency II position that arise only when the formal TMTP reset points are triggered. The 30 June 2022 Solvency II position includes a notional reset (an application for a formal reset has been submitted to the regulator and our regulatory position will be updated once approved, expected in Q3 2022) while the 31 December 2021 Solvency II position included a formal, rather than notional, reset of the TMTP in line with the regulatory requirement to reset the TMTP at least every two years and hence no adjustment was required.
- Adjustments are made if the Solvency II shareholder cover ratio does not fully reflect the effect of future regulatory changes that are known as at each reporting date. These adjustments are made in order to show a more representative view of the Group's solvency position. No adjustments for future regulatory changes were made at 30 June 2022 or 31 December 2021. The 30 June 2021 Solvency II position includes a pro forma adjustment for the impact of a regulatory change to GBP risk-free rates.

A reconciliation of the Solvency II regulatory surplus to the Solvency II shareholder surplus is provided below:

	30 June 2022			30 June 2021			31 December 2021		
	Own funds £m	SCR £m	Surplus £m	Own funds £m	SCR £m	Surplus £m	Own funds £m	SCR £m	Surplus £m
Estimated Solvency II regulatory surplus	**21,540**	**(10,290)**	**11,250**	27,129	(14,975)	12,154	25,573	(12,499)	13,074
Adjustments for:									
Fully ring-fenced with-profit funds	**(1,711)**	**1,711**	**—**	(2,266)	2,266	—	(2,205)	2,205	—
Staff pension schemes in surplus	**(1,045)**	**1,045**	**—**	(1,151)	1,151	—	(1,218)	1,218	—
Notional reset of TMTP	**(775)**	**(175)**	**(950)**	280	—	280	—	—	—
PPE[1]	**—**	**—**	**—**	(305)	—	(305)	—	—	—
Pro forma adjustments[2]	**—**	**—**	**—**	(92)	(43)	(135)	—	—	—
Estimated Solvency II shareholder surplus	**18,009**	**(7,709)**	**10,300**	23,595	(11,601)	11,994	22,150	(9,076)	13,074

1 French insurers are permitted to place a part of the Provision pour Participation aux Excédents (PPE) into Solvency II own funds. At 30 June 2021 PPE of £0.3 billion is included within Group regulatory own funds but remains excluded from the shareholder position as agreed with the regulator. At 31 December 2021 and 30 June 2022 this is no longer included following the disposal of France.

2 The 30 June 2021 Solvency II position includes a pro forma adjustment for the impact of a regulatory change to GBP risk-free rates. From 31 July 2021, these rates are based on Sterling Overnight Index Average (SONIA) rather than London Inter-Bank Offered Rate (LIBOR).

A summary of the shareholder view of the Group's Solvency II position is shown in the table below:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Own Funds	**18,009**	23,595	22,150
Solvency Capital Requirement	**(7,709)**	(11,601)	(9,076)
Estimated Solvency II Surplus	**10,300**	11,994	13,074
Estimated Shareholder Cover Ratio	**234 %**	203 %	244 %

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

VNB measures the additional value to shareholders created through the writing of new life business in the period. It reflects Solvency II assumptions and allowance for risk, and is defined as the increase in Solvency II own funds resulting from life business written in the period, including the impact of interactions between in-force and new business, adjusted to:

- Remove the impact of the contract boundary restrictions under Solvency II;
- Include businesses which are not within the scope of Solvency II own funds (e.g. UK non-life Retail business and UK Equity Release); and
- Reflect a gross of tax and non-controlling interests basis, and other differences as set out in the footnote to the table below.

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

6 months 2022	UK & Ireland Life £m	International investments £m	Discontinued operations £m	Group £m
VNB (gross of tax and non-controlling interests)	**300**	**46**	**—**	**346**
Solvency II contract boundary restrictions – new business	**(53)**	**—**	**—**	**(53)**
Solvency II contract boundary restrictions – increments / renewals on in-force business	**77**	**—**	**—**	**77**
Businesses which are not in the scope of Solvency II own funds	**(116)**	**—**	**—**	**(116)**
Tax and Other[1]	**(49)**	**(10)**	**—**	**(59)**
Solvency II own funds impact of new business (net of tax and non-controlling interests)	**159**	**36**	**—**	**195**

6 months 2021	UK & Ireland Life £m	International investments £m	Discontinued operations £m	Group £m
VNB (gross of tax and non-controlling interests)	265	59	233	557
Solvency II contract boundary restrictions – new business	(45)	—	(130)	(175)
Solvency II contract boundary restrictions – increments / renewals on in-force business	79	—	43	122
Businesses which are not in the scope of Solvency II own funds	(87)	—	(1)	(88)
Tax and Other[1]	(52)	(11)	(91)	(154)
Solvency II own funds impact of new business (net of tax and non-controlling interests)	160	48	54	262

Full year 2021	UK & Ireland Life £m	International investments £m	Discontinued operations £m	Group £m
VNB (gross of tax and non-controlling interests)	668	78	328	1,074
Solvency II contract boundary restrictions – new business	(91)	—	(151)	(242)
Solvency II contract boundary restrictions – increments / renewals on in-force business	101	—	58	159
Businesses which are not in the scope of Solvency II own funds	(204)	—	(1)	(205)
Tax and Other[1]	(114)	(15)	(144)	(273)
Solvency II own funds impact of new business (net of tax and non-controlling interests)	360	63	90	513

1 Other includes the impact of 'look through profits' in service companies (where not included in Solvency II) of £(13) million (HY21: £(39) million), and the reduction in value when moving to a net of non-controlling interests basis of £nil (HY21: £(20) million), the difference between locally applicable capital requirements for the smaller Asian markets (Indonesia, Vietnam, Hong Kong), and the value of new business on an adjusted Solvency II basis of £nil (HY21: £(16) million) and the assumed take up of tax-free lump sum payments at retirement (not included in Solvency II Own Funds) on BPAs of £nil (HY21: £(2) million). Aviva Vietnam was sold during December 2021, so the adjustment relating to Small Asian Markets only applied until then.

VNB is calculated using economic assumptions as at the point of sale, taken as those appropriate to the start of each quarter. For contracts that are repriced more frequently, weekly or monthly economic assumptions have been used. The economic assumptions follow Solvency II rules for risk-free rates, volatility adjustment and matching adjustment.

The operating assumptions are consistent with the Solvency II balance sheet. When these assumptions are updated, the year-to-date VNB will capture the impact of the assumption change on all business sold that year.

Matching Adjustment (MA)

The MA is an addition to the rate used to discount Solvency II best estimate liabilities, to reflect the return on the matching assets used. An MA is applied to certain obligations based on the allocation of assets backing new business at each year-end date. This allocation may be different to the MA applied at the portfolio level. Aviva applies an MA to certain obligations in UK Life, using methodology which is set out in the Solvency and Financial Condition Report (SFCR).

The MA used for 2022 UK new business (where applicable) was 94 bps (HY21: 69bps; 2021: 85bps).

New business margin

New business margin is calculated as value of new business on an adjusted Solvency II basis (VNB) divided by the present value of new business premiums (PVNBP) and expressed as a percentage.

Present value of new business premiums (PVNBP)

PVNBP measures sales in the Group's life insurance business. PVNBP is derived from the present value of new regular premiums expected to be received over the term of the new contracts plus 100% of single premiums from new business written in the financial period and is expressed at the point of sale. The discounted value of regular premiums is calculated using the same methodology as for VNB. PVNBP also includes any changes to existing contracts which were not anticipated at the outset of the contract that generate additional shareholder risk and associated premium income of the nature of a new policy.

The table below presents a reconciliation of sales to IFRS net written premiums:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Present value of new business premiums[1]	**17,412**	22,735	46,202
General insurance and health net written premiums	**4,633**	5,365	10,207
Long-term health and collectives business	**(1,579)**	(1,671)	(3,274)
Effect of capitalisation factor on regular premium long-term business[2]	**(7,494)**	(7,945)	(15,555)
Joint ventures and associates[3]	**(299)**	(282)	(625)
Annualisation impact of regular premium long-term business[4]	**(174)**	(225)	(361)
Deposits[5]	**(5,424)**	(6,023)	(11,561)
IFRS gross written premiums from existing long-term business[6]	**1,434**	1,975	3,722
Long-term insurance and savings business premiums ceded to reinsurers	**(1,136)**	(1,048)	(3,979)
Total IFRS net written premiums	**7,373**	12,881	24,776
Analysed as:			
IFRS net written premiums from continuing business	**7,373**	6,877	14,697
IFRS net written premiums from discontinued operations	**—**	6,004	10,079
	7,373	12,881	24,776
Analysed as:			
Long-term insurance and savings net written premiums	**2,740**	7,516	14,569
General insurance and health net written premiums	**4,633**	5,365	10,207
	7,373	12,881	24,776

1 £16,843 million (HY21: £16,240 million, 2021: £35,625 million) relates to UK & Ireland Life, £569 million (HY21: £617 million, 2021: £1,121 million) relates to International investments and £nil million (HY21: £5,878, 2021: £9,456) relates to discontinued operations.
2 Discounted value of regular premiums expected to be received over the term of the new contract, adjusted for expected levels of persistency.
3 Total long-term new business sales include our share of sales from joint ventures and associates. Under IFRS, premiums from these sales are excluded.
4 The impact of annualisation is removed in order to reconcile the non-GAAP new business sales to IFRS premiums.
5 Under IFRS, only the margin earned from non-participating investment contracts is recognised in the IFRS income statement.
6 The non-GAAP measure of sales focuses on new business written in the period under review while the IFRS income statement includes premiums received from all business, both new and existing.

Solvency II operating own funds generation (Solvency II OFG)

Solvency II operating own funds generation measures the amount of Solvency II own funds generated from operating activities and incorporates an expected return on investments supporting the life and non-life insurance businesses. Solvency II operating own funds generation is used to assess sustainable growth. The Group considers this measure meaningful to stakeholders as it enhances the understanding of the Group's operating performance over time by separately identifying non-operating items.

The expected investment returns assumed within Solvency II OFG are consistent with the returns used for Group adjusted operating profit. Solvency II OFG includes the effect of variances in experience for non-economic items, such as mortality, persistency and expenses, the effect of changes in non-economic assumptions (for example, longevity) and model changes that are non-economic in nature.

Consistent with the Group adjusted operating profit APM, Solvency II OFG is determined on start of period economic assumptions and therefore excludes economic variances and economic assumption changes.

Solvency II operating own funds generation is the own funds component of Solvency II OCG (see below).

Solvency II operating capital generation (Solvency II OCG)

Solvency II operating capital generation (Solvency II OCG) measures the amount of Solvency II capital the Group generates from operating activities. Capital generated enhances Solvency II surplus which can be used to support sustainable cash remittances from our businesses, which in turn, supports the Group's dividend as well as funding further investment to provide sustainable growth.

Solvency II OCG reflects Solvency II OFG and operating movements in the SCR including the impact of capital actions, for example, strategic changes in asset mix including changes in hedging exposure.

An analysis of the components of Solvency II OCG is presented below:

	6 months 2022 £m	6 months 2021 £m	Full year 2021 £m
Solvency II own funds impact of new business (net of tax and non-controlling interests)	**195**	262	513
Operating own funds generation from life existing business	**188**	272	694
Operating own funds generation from non-life	**370**	403	737
Management actions and other operating own funds generation[1]	**31**	32	296
Group centre & others	**(135)**	(114)	(340)
Group debt costs	**(111)**	(145)	(255)
Solvency II operating own funds generation	**538**	710	1,645
Solvency II operating SCR impact	**18**	(132)	(84)
Solvency II OCG	**556**	578	1,561

1 Management actions and other includes the impact of capital actions, non-economic assumption changes and other non-recurring items.

Solvency II OCG is a key component of the movement in Solvency II shareholder surplus. The tables below provide an analysis of the change in Solvency II shareholder surplus.

	6 months 2022			6 months 2021			Full year 2021		
Shareholder view movement	**Own funds £m**	**SCR £m**	**Surplus £m**	Own funds £m	SCR £m	Surplus £m	Own funds £m	SCR £m	Surplus £m
Group Solvency II shareholder surplus at 1 January	**22,150**	**(9,076)**	**13,074**	25,770	(12,770)	13,000	25,770	(12,770)	13,000
Operating capital generation	**538**	**18**	**556**	710	(132)	578	1,645	(84)	1,561
Non-operating capital generation	**(369)**	**1,349**	**980**	(744)	1,092	348	(1,310)	1,156	(154)
Dividends[1]	**(560)**	**—**	**(560)**	(568)	—	(568)	(874)	—	(874)
(Repayment)/issue of debt	**—**	**—**	**—**	(1,506)	—	(1,506)	(1,506)	—	(1,506)
Capital return / Share buyback	**(3,750)**	**—**	**(3,750)**	—	—	—	(1,000)	—	(1,000)
Disposals completed	**—**	**—**	**—**	(67)	209	142	(575)	2,622	2,047
Estimated Solvency II shareholder surplus at 30 June/31 December	**18,009**	**(7,709)**	**10,300**	23,595	(11,601)	11,994	22,150	(9,076)	13,074

1 Dividends includes £9 million of Aviva plc preference dividends (HY21: £9 million) and £10 million of General Accident plc preference dividends (HY21: £10 million).

Solvency II return on equity (Solvency II RoE)

Solvency II RoE is used as an economic value measure by the Group to assess growth and performance.

Solvency II RoE is calculated as:

- Operating own funds generation less preference dividends, equity RT1 notes coupons and excluding the return on excess capital above target capital, adjusted to replace the run-off of TMTP with the economic cost of holding TMTP (calculated as Group Weighted Average Cost of Capital plus 1-yr swap rate, multiplied by the opening TMTP on a shareholder basis), divided by:
- Opening Unrestricted tier 1 shareholder Solvency II own funds adjusted to exclude excess capital. Excess capital is derived as Solvency II shareholder own funds in excess of those needed to meet our target shareholder cover ratio (currently 180%).

The denominator better reflects the long-term target Solvency II shareholder cover ratio which removes distortions in the evaluation of growth and performance that would otherwise arise where the Group is temporarily holding excess capital.

Solvency II RoE is calculated on an annualised basis.

The tables below provide a summary of the Group's regulatory Solvency II own funds by tier and a reconciliation between unrestricted tier 1 regulatory own funds and unrestricted tier 1 shareholder own funds:

Regulatory view	30 June 2022 £m	31 December 2021 £m	31 December 2020 £m
Unrestricted regulatory tier 1 own funds	15,297	19,120	20,850
Restricted Tier 1	1,451	967	1,317
Tier 2	4,539	5,363	6,740
Tier 3[1]	253	123	355
Estimated Solvency II regulatory own funds	21,540	25,573	29,262

1 Tier 3 regulatory own funds at 30 June 2022 consists of £253 million net deferred tax assets (2021: £123 million net deferred tax assets, 2020: £259 million subordinated debt plus £96 million net deferred tax assets).

Shareholder view	**30 June 2022 £m**	**31 December 2021 £m**	31 December 2020 £m
Unrestricted regulatory tier 1 own funds	15,297	19,120	20,850
Adjustments for:			
Fully ring-fenced with-profit funds	(1,711)	(2,205)	(2,492)
Staff pension schemes in surplus	(1,045)	(1,218)	(1,179)
Notional reset of TMTP	(775)	—	564
PPE	—	—	(385)
Unrestricted shareholder tier 1 own funds	11,766	15,697	17,358

The Solvency II return on equity is shown below:

	6 months 2022 £m	**Restated 6 months 2021 £m[1]**	Full year 2021 £m
Solvency II operating own funds generation	**538**	710	1,645
Adjustment to replace TMTP run-off with economic cost of TMTP	**28**	43	43
Adjustment to remove return on excess capital	**(8)**	—	(2)
Adjusted Solvency II operating own funds generation	**558**	753	1,686
Less preference share dividends	**(19)**	(19)	(38)
	539	734	1,648
Opening Unrestricted tier 1 shareholder Solvency II own funds	**15,697**	17,358	17,358
Adjustment to remove excess capital above target Solvency II shareholder cover ratio	**(5,813)**	(2,784)	(2,784)
Adjusted opening unrestricted tier 1 shareholder Solvency II own funds	**9,884**	14,574	14,574
Solvency II return on equity	**10.9 %**	10.1 %	11.3 %

1 At 31 December 2021, Solvency II RoE APM was amended following review of basis of preparation. HY21 has been restated to reflect the changes. In the numerator, Transitional Measures on Technical Provisions (TMTP) run-off has been replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis and the return on excess capital has been removed. The denominator has been adjusted to exclude excess capital above the Group's target Solvency II shareholder cover ratio.

Group Solvency II RoE on a continuing basis has been disclosed as at 30 June 2021 and 31 December 2021.

Group Solvency II RoE on a continuing basis excludes the contribution from our discontinued operations and is therefore more representative of the Group's performance going forward. It has been calculated on a consistent basis to Group Solvency II RoE except that an adjustment is made to remove the contribution of discontinued operations from the numerator and the denominator.

Given all disposals completed by 31 December 2021, Group Solvency II RoE on a continuing basis is not required from 2023 onwards.

The table below provides a reconciliation between Group Solvency II RoE and Group Solvency II RoE on a continuing basis:

	Restated 6 months 2021 £m[1]			Full year 2021 £m		
	Solvency II OFG (post TMTP adjustment) £m	Opening own funds £m	Solvency II return on equity %	Solvency II OFG (post TMTP adjustment) £m	Opening own funds £m	Solvency II return on equity %
Group Solvency II return on equity at 31 December	734	14,574	10.1 %	1,648	14,574	11.3 %
Adjustment to remove impacts of discontinued operations[2]	(316)	(3,254)	N/A	(433)	(3,254)	N/A
Group Solvency II return on equity on a continuing basis	418	11,320	7.4 %	1,215	11,320	10.7 %

1 At 31 December 2021, Solvency II RoE APM was amended following review of basis of preparation. Results for the period to 30 June 2021 have been restated to reflect the changes. In the numerator, Transitional Measures on Technical Provisions (TMTP) run-off has been replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis and the return on excess capital has been removed. The denominator has been adjusted to exclude excess capital above the Group's target Solvency II shareholder cover ratio.
2 When calculating opening unrestricted tier 1 shareholder Solvency II own funds attributable to discontinued operations, adjusted to exclude excess capital, restricted tier 1, tier 2 and tier 3 capital repaid during 2021 is assumed to be attributable to discontinued operations.

Solvency II return on capital (Solvency II RoC)

Solvency II return on capital is an unlevered economic value measure as it is used to assess growth and performance in our markets before taking debt into account. It is calculated on an annualised basis.

Solvency II RoC is calculated as:

- Operating own funds generation adjusted to replace the run-off of TMTP with the economic cost of holding TMTP (calculated as Group Weighted Average Cost of Capital plus 1-yr swap rate) multiplied by the opening TMTP on a shareholder basis), divided by:
- Opening shareholder Solvency II own funds.

For UK general insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds. This removes any distortions arising from our general insurance legal entity structure and therefore ensures consistency in measuring performance across markets. This is only applicable to UK general insurance Solvency II return on capital and not to the aggregated Group Solvency II return on equity measure.

A reconciliation of Solvency II return on capital by market to Group return on equity is provided below.

6 months 2022	Solvency II OFG (post TMTP adjustment) £m	Opening shareholder own funds £m	Solvency II return on capital/equity %
Market Solvency II return on capital			
UK & Ireland Life	356	13,830	5.1 %
UK & Ireland General Insurance[1]	193	2,339	16.5 %
Canada	174	1,746	19.9 %
Aviva Investors	14	400	7.0 %
UK, Ireland, Canada and Aviva Investors	737	18,315	8.0 %
International investments	75	982	15.3 %
Reconciliation to Group Solvency II return on equity			
Corporate centre costs and Other[1]	(135)	2,853	N/A
Less: Senior and subordinated debt	(111)	(5,880)	N/A
Less: Adjustment to remove excess capital above target Solvency II shareholder cover ratio	(8)	(5,813)	N/A
Less: Preference shares[2]	(19)	(450)	N/A
Less: Net deferred tax assets	—	(123)	N/A
Solvency II return on equity at 30 June	539	9,884	10.9 %

1 For UK general insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets. This is only applicable to UK general insurance Solvency II return on capital and not to the aggregated Group Solvency II return on equity measure, with the reversal of the impact included in Corporate centre costs and Other opening own funds.
2 Preference shares includes £10 million of dividends and £250 million of capital in respect of General Accident plc.

Restated 6 months 2021[1]	Solvency II OFG (post TMTP adjustment) £m	Opening shareholder own funds £m	Solvency II return on capital/equity %
Market Solvency II return on capital			
UK & Ireland Life	260	15,073	3.4 %
UK & Ireland General Insurance[2]	121	2,401	10.1 %
Canada	194	1,534	25.3 %
Aviva Investors	18	385	9.4 %
UK, Ireland, Canada and Aviva Investors	593	19,393	6.1 %
International investments	84	909	18.5 %
Discontinued operations	341	6,362	10.7 %
Reconciliation to Group Solvency II return on equity			
Corporate centre costs and Other[2]	(120)	(894)	N/A
Less: Senior and subordinated debt	(145)	(7,866)	N/A
Less: Adjustment to remove excess capital above target Solvency II shareholder cover ratio	—	(2,784)	N/A
Less: Direct capital instrument and Preference shares[3]	(19)	(450)	N/A
Less: Net deferred tax assets	—	(96)	N/A
Solvency II return on equity at 30 June	734	14,574	10.1 %

1 At 31 December 2021, Solvency II RoE APM was amended following review of basis of preparation. HY21 has been restated to reflect the changes. In the numerator, Transitional Measures on Technical Provisions (TMTP) run-off has been replaced with the economic cost of holding equivalent capital to the opening value of TMTP on a shareholder basis and the return on excess capital has been removed. The denominator has been adjusted to exclude excess capital above the Group's target Solvency II shareholder cover ratio.
2 For UK general insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets. This is only applicable to UK general insurance Solvency II return on capital and not to the aggregated Group Solvency II return on equity measure, with the reversal of the impact included in Corporate centre costs and Other opening own funds.
3 Preference shares includes £10 million of dividends and £250 million of capital in respect of General Accident plc.

Full Year 2021	Solvency II OFG (post TMTP adjustment) £m	Opening shareholder own funds £m	Solvency II return on capital/equity %
Market Solvency II return on capital			
UK & Ireland Life	996	15,073	6.6 %
UK & Ireland General Insurance[1]	339	2,401	14.1 %
Canada	332	1,534	21.6 %
Aviva Investors	36	385	9.3 %
UK, Ireland, Canada and Aviva Investors	1,703	19,393	8.8 %
International investments	124	909	13.6 %
Discontinued operations	458	6,362	7.2 %
Reconciliation to Group Solvency II return on equity			
Corporate centre costs and Other[1]	(342)	(894)	N/A
Less: Senior and subordinated debt	(255)	(7,866)	N/A
Less: Adjustment to remove excess capital above target Solvency II shareholder cover ratio	(2)	(2,784)	N/A
Less: Direct capital instrument and Preference shares[2]	(38)	(450)	N/A
Net deferred tax assets	—	(96)	N/A
Solvency II return on equity at 31 December	1,648	14,574	11.3 %

1 For UK general insurance only, capital held for internal risk appetite purposes is used instead of opening shareholder Solvency II own funds to ensure consistency in measuring performance across markets. This is only applicable to UK general insurance Solvency II return on capital and not to the aggregated Group Solvency II return on equity measure, with the reversal of the impact included in Corporate centre costs and Other opening own funds.
2 Preference shares includes £21 million of dividends and £250 million of capital in respect of General Accident plc.

Solvency II net asset value per share (Solvency II NAV per share)

Solvency II NAV per share is used to monitor the value generated by the Group in terms of the equity shareholders' face value per share investment. This is calculated as the closing unrestricted tier 1 Solvency II shareholder own funds, divided by the actual number of shares in issue as at the balance sheet date. Consistent with Solvency II RoE, it is an economic value measure used by the Group to assess growth.

The Solvency II NAV per share is shown below:

	30 June 2022	30 June 2021	31 December 2021
Unrestricted tier 1 shareholder Solvency II own funds (£m)	**11,766**	17,022	15,697
Number of shares in issue (in millions)	**2,803**	3,930	3,766
Solvency II NAV per share	**420p**	433p	417p

Solvency II debt leverage ratio

Solvency II debt leverage ratio is calculated as total debt expressed as a percentage of Solvency II regulatory own funds plus senior debt and commercial paper. Solvency II regulatory debt includes subordinated debt, preference share capital and tier 1 notes. The Solvency II debt leverage ratio provides a measure of the Group's financial strength.

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
Solvency II regulatory debt	**5,990**	6,457	6,330
Senior notes	**669**	665	651
Commercial paper	**52**	52	50
Total debt	**6,711**	7,174	7,031
Estimated Solvency II regulatory own funds, senior debt and commercial paper	**22,261**	27,846	26,274
Solvency II debt leverage ratio	**30 %**	26 %	27 %

A reconciliation from IFRS subordinated debt to Solvency II regulatory debt is provided below:

	30 June 2022 £m	30 June 2021 £m	31 December 2021 £m
IFRS borrowings	**6,911**	7,712	7,344
Less: Borrowings not classified as Solvency II regulatory debt			
Senior notes	**(669)**	(665)	(651)
Commercial paper	**(52)**	(52)	(50)
Operational borrowings	**(1,192)**	(1,517)	(1,211)
IFRS subordinated debt	**4,998**	5,478	5,432
Revaluation of subordinated liabilities	**46**	531	449
Other movements	**—**	(2)	(1)
Solvency II subordinated debt	**5,044**	6,007	5,880
Preference share capital and tier 1 notes	**946**	450	450
Solvency II regulatory debt	**5,990**	6,457	6,330

Other APMs

Cash remittances

Cash paid by our operating businesses to the Group, for the period between March 2022 and the end of the month preceding the results announcement comprised of dividends and interest on internal loans. Dividend payments by operating businesses may be subject to insurance regulations that restrict the amount that can be paid. The business monitors total cash remittances at a Group level and in each of its markets. Cash remittances are considered a useful measure as they support the payments of external dividends. Cash remittances eliminate on consolidation and hence are not directly reconcilable to the Group's IFRS consolidated statement of cash flows.

In 2022 a review was undertaken of the basis of allocation of remittances from Aviva's internal reinsurance vehicle. From April 2022, remittances are allocated to business units using an aggregate capital basis, previously remittances were allocated on a first in, first out basis.

Excess centre cash flow

This represents the cash remitted by business units to the Group centre less central operating expenses and debt financing costs. Excess centre cash flow is a measure of the cash available to pay dividends, reduce debt or invest back into our business. Excess centre cash flow does not include cash movements such as disposal proceeds or capital injections. Excess centre cash flow when positive in the period can be referred to as excess centre cash inflows and when negative as excess centre cash outflows.

Centre liquidity

Centre liquidity comprises cash and liquid assets and represents amounts as at the end of the month preceding results announcements. It provides meaningful information because it shows the liquidity at the Group centre available to meet debt interest and central costs and to pay dividends to shareholders. Centre liquidity includes cash remittances which eliminate on consolidation and hence centre liquidity is not directly reconcilable to the Group's IFRS consolidated statement of cash flows.

Annual Premium Equivalent (APE)

APE is a measure of sales in our life insurance business. APE is calculated as the sum of new regular premiums plus 10% of new single premiums written in the period. This provides useful information on sales and new business when considered alongside VNB.

Shareholder services

2022 Financial Calendar

Ordinary dividend timetable:	Interim
Ordinary ex-dividend date	18 August 2022
Dividend record date	19 August 2022
Last day for Dividend Reinvestment Plan and currency election	7 September 2022
Dividend payment date[1]	28 September 2022
Other key dates:	
Quarter three market update[2]	9 November 2022

1 Please note that the ADR local payment date will be approximately four business days after the proposed dividend date for ordinary shares.
2 This date is provisional and subject to change.

Dividend payment options

Shareholders can receive their dividends in the following ways:

- Directly into a nominated UK bank account;
- Directly into a nominated Eurozone bank account;
- The Global Payment Service provided by our Registrar, Computershare Investor Services PLC (Computershare). This enables shareholders living outside of the UK and the Single Euro Payments Area to elect to receive their dividends or interest payments in a choice of over 125 international currencies; or
- The Dividend Reinvestment Plan enables eligible shareholders to reinvest their cash dividend in additional Aviva ordinary shares.

You can find further details regarding these payment options at www.aviva.com/dividends and register your choice by contacting Computershare using the contact details below, online at www.computershare.com/AvivaInvestorCentre or by returning a dividend mandate form. You must register for one of these payment options to receive any dividend payments from Aviva.

Manage your shareholding online

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

www.computershare.com/AvivaInvestorCentre

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

Shareholder contacts

Ordinary and preference shares – Contact

For any queries regarding your shareholding, please contact Computershare

- By telephone: 0371 495 0105

  We are open Monday to Friday, 8.30am to 5.30pm UK time, excluding public holidays. Please call +44 117 378 8361 if calling from outside of the UK.

- By email: AvivaSHARES@computershare.co.uk
- In writing: Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol, BS99 6ZZ

American Depository Receipts (ADRs) - Contact

For any queries regarding Aviva ADRs, please contact Citibank Shareholder Services (Citibank)

- By telephone: 1 877 248 4237 (1 877-CITI-ADR)

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

- By email: Citibank@shareholders-online.com
- In writing: Citibank Shareholder Services, PO Box 43077, Providence, Rhode Island, 02940-3077 USA

Group Company Secretary

Shareholders may contact the Group Company Secretary

- By telephone: +44 (0)20 7283 2000
- By email: Aviva.shareholders@aviva.com
- In writing: Kirstine Cooper, Group Company Secretary, St Helen's, 1 Undershaft, London, EC3P 3DQ