MCEV financial statements

Directors' Report

The directors submit their Market Consistent Embedded Value (MCEV) financial statements for Aviva plc for the year ended 31 December 2013.

Results

The MCEV results for the year are shown in the consolidated income statement on page 3.

Total MCEV operating profit before tax has increased to £2,723 million *(2012: £2,003 million),* primarily due to increase in long-term business profits to £2,316 million *(2012: £1,828 million)*. MCEV operating profit before tax from continuing operations increased to £2,433 million *(2012: £2,393 million)* mainly reflecting higher profits in France and Asia. The MCEV operating profit before tax from discontinued operations is £290 million *(2012: £390 million loss)* and mainly reflects favourable impacts in our US business which was disposed in 2013. Further details on the MCEV operating results for the long term business can be found in Note F3.

Total MCEV profit for the year was £3,433 million *(2012: £1,875 million)*. In addition to the increase in operating profit, there were higher economic variances driven by narrowing spreads on government and corporate bonds in Italy and Spain and a reduction in the cost of guarantees in France, together with narrowing spreads on corporate bonds and commercial mortgages in the UK.

Equity attributable to shareholders on an MCEV basis is £13,309 million compared to £12,634 million at 2012. This reflects the profit for the year, which was partially offset by the payment of the dividend.

Principal Activity

The Company is the holding company of the Aviva plc group of companies (Group) whose principal activities are the provision of general insurance, life assurance, long term savings and fund management services.

Directors who served during the year

The directors as at the date of this Report and who served during the year are shown below:
Mark Wilson – appointed Group CEO on 1 January 2013
Sir Adrian Montague – appointed 14 January 2013
Bob Stein – appointed 28 January 2013
Trevor Matthews – resigned with effect from 8 May 2013
Richard Goeltz – retired 8 May 2013
Russell Walls – retired 8 May 2013
Michael Mire – appointed 12 September 2013
Patricia Cross – appointed 1 December 2013
Patrick Regan – tendered his resignation on 22 January 2014 and will leave the Board and the Group before the AGM.

Disclosure of information to the auditor

In accordance with section 418 of the Companies Act 2006, the directors in office at the date of approval of this Report confirm that, so far as they are each aware, there is no relevant audit information of which the Company's auditor, PricewaterhouseCoopers LLP (PwC), is unaware and each director has taken all steps that ought to have been taken as a director to be aware of any relevant audit information and to establish that PwC is aware of that information.

Statement of directors' responsibilities in respect of the Market Consistent Embedded Value (MCEV) basis

When compliance with the European Insurance CFO Forum Market Consistent Embedded Value Principles (MCEV Principles), published in October 2009, is stated, those principles require the directors to prepare supplementary information in accordance with the methodology contained in the MCEV Principles and to disclose and explain any non-compliance with the guidance included in the MCEV Principles.

In preparing this supplementary information, the directors have done so in accordance with these MCEV Principles with the exception of stating held for sale operations at their expected fair value, as represented by expected sales proceeds, less cost to sell and have also complied with the guidance as set out in the Basis of Preparation. Specifically the directors have:

- determined assumptions on a realistic basis, having regard to past, current and expected future experience and to relevant external data, and then applied them consistently;
- made estimates that are reasonable and consistent; and,
- provided additional disclosures when compliance with the specific requirements of the MCEV Principles is insufficient to enable users to understand the impact of particular transactions, other events and conditions and the Group's financial position and financial performance.

By order of the Board on 5 March 2014

Mark Wilson
Group Chief Executive Officer

Patrick Regan
Chief Financial Officer

MCEV financial statements

Consolidated income statement – MCEV basis

For the year ended 31 December 2013

	2013 £m			Restated[1] 2012 £m		
	Continuing Operations	Discontinued[2] Operations	Total	Continuing Operations	Discontinued[2] Operations	Total
Operating profit/(loss) before tax attributable to shareholders' profits						
United Kingdom & Ireland	**903**	**—**	**903**	923	—	923
Europe	**1,220**	**—**	**1,220**	1,171	—	1,171
Asia	**195**	**—**	**195**	107	—	107
Other	**(2)**	**—**	**(2)**	5	—	5
United States[3]	**—**	**—**	**—**	—	(378)	(378)
Long-term business for continuing operations (note F3)	**2,316**	**—**	**2,316**	2,206	(378)	1,828
United States[3]	**—**	**272**	**272**	—	—	—
General insurance and health	**797**	**—**	**797**	894	—	894
Fund management[4] (note F4)	**52**	**31**	**83**	24	4	28
Other operations[5] (note F5)	**(80)**	**(4)**	**(84)**	(170)	(4)	(174)
Market operating profit/(loss)	**3,085**	**299**	**3,384**	2,954	(378)	2,576
Corporate centre	**(150)**	**—**	**(150)**	(136)	—	(136)
Group debt costs and other interest	**(502)**	**(9)**	**(511)**	(537)	(12)	(549)
Operating profit/(loss) before tax attributable to shareholders' profits (excluding Delta Lloyd as an associate)	**2,433**	**290**	**2,723**	2,281	(390)	1,891
Share of operating profit (before tax) of Delta Lloyd as an associate	**—**	**—**	**—**	112	—	112
Operating profit/(loss) before tax attributable to shareholders' profits	**2,433**	**290**	**2,723**	2,393	(390)	2,003
Integration and restructuring costs (note F6)	**(354)**	**(3)**	**(357)**	(464)	(3)	(467)
Operating profit/(loss) before tax attributable to shareholders' profits after integration and restructuring costs	**2,079**	**287**	**2,366**	1,929	(393)	1,536
Adjusted for the following:						
Economic variances on long-term business	**1,820**	**452**	**2,272**	1,901	(6)	1,895
Short-term fluctuation in return on investments on non-long-term business	**(336)**	**—**	**(336)**	7	—	7
Economic assumption changes on general insurance and health business	**33**	**—**	**33**	(21)	—	(21)
Impairment of goodwill	**(86)**	**—**	**(86)**	(154)	(782)	(936)
Amortisation and impairment of intangibles	**(99)**	**(9)**	**(108)**	(110)	(97)	(207)
Profit on the disposal and remeasurement of subsidiaries and associates[6]	**165**	**808**	**973**	(1)	1,095	1,094
Exceptional items (note F7)	**(256)**	**—**	**(256)**	51	—	51
Non-operating items before tax (excluding Delta Lloyd as an associate)	**1,241**	**1,251**	**2,492**	1,673	210	1,883
Share of Delta Lloyd's non-operating items (before tax) as an associate	**—**	**—**	**—**	(523)	—	(523)
Non-operating items before tax	**1,241**	**1,251**	**2,492**	1,150	210	1,360
Share of Delta Lloyd's tax expense, as an associate	**—**	**—**	**—**	107	—	107
Profit/(loss) before tax attributable to shareholders' profits	**3,320**	**1,538**	**4,858**	3,186	(183)	3,003
Tax on operating profit	**(813)**	**(83)**	**(896)**	(780)	134	(646)
Tax on other activities	**(347)**	**(182)**	**(529)**	(516)	34	(482)
	(1,160)	**(265)**	**(1,425)**	(1,296)	168	(1,128)
Profit/(loss) for the year	**2,160**	**1,273**	**3,433**	1,890	(15)	1,875
Attributable to:						
Equity shareholders' of Aviva plc	**1,631**	**1,273**	**2,904**	1,035	(15)	1,020
Non-controlling Interest	**529**	**—**	**529**	855	—	855
	2,160	**1,273**	**3,433**	1,890	(15)	1,875

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 Discontinued operations represents the results of the US life and related internal asset management business (US Life) until the date of disposal (2 October 2013). For further details see F1 Basis of Preparation.
3 From 1 January 2013 the US life operations, which were sold in October 2013, were reported within non-covered business on an IFRS basis as set out in F1 Basis of Preparation. In 2012 comparatives the US life operations are within covered business on an MCEV basis and then remeasured at FY12 to fair value less cost to sell.
4 Excludes the proportion of the results of Aviva Investors fund management businesses and other fund management operations within the Group that arises from the provision of fund management services to our long-term businesses. These results, for continuing operations, are included within the long-term business MCEV operating earnings consistent with the MCEV methodology. In the comparative period, US operations are treated consistently with continuing operations. While in the current period, operating earnings for US fund management operations are included in this line item.
5 Excludes the proportion of the results of subsidiaries providing services to the long-term business. These results are included within the long-term MCEV operating earnings consistent with the MCEV methodology.
6 Includes profit in respect of disposal and remeasurement of held for sale operations to expected fair value less cost to sell. This includes profit or loss on completion of the sales of US business, Aseval, Ark Life, Russia, Romania pensions and Malaysia. In 2012, US business was classified as held for sale and remeasured to fair value less cost to sell, resulting in a profit of £1,095 million on MCEV basis. The profit of £808 million in 2013 reflects the actual sale price over remeasured value at the end of 2012. For further details see F17(d) – Principal assumptions.

Earnings per share – MCEV basis

For the year ended 31 December 2013

	2013 £m			Restated[1] 2012 £m		
	Continuing Operations	Discontinued Operations[2]	Total	Continuing Operations	Discontinued Operations[2]	Total
Operating earnings/(losses) per share on an MCEV basis after tax, attributable to ordinary shareholders of Aviva plc						
Basic (pence per share)	**45.0p**	**7.0p**	**52.0p**	40.4p	(8.8)p	31.6p
Diluted[3] (pence per share)	**44.4p**	**6.9p**	**51.3p**	39.8p	(8.8)p	31.2p
Earnings/(losses) after tax on an MCEV basis, attributable to ordinary shareholders of Aviva plc						
Basic (pence per share)	**52.5p**	**43.3p**	**95.8p**	33.1p	(0.5)p	32.6p
Diluted[3] (pence per share)	**51.8p**	**42.7p**	**94.5p**	32.6p	(0.5)p	32.1p

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 Discontinued operations represents the results of the US life and related internal asset management business (US Life) until the date of disposal (2 October 2013). For further details see F1 Basis of Preparation.
3 Losses have an anti-dilutive effect. Therefore the basic and diluted earnings for discontinued operations in 2012 have remained the same.

Consolidated statement of comprehensive income – MCEV basis

For the year ended 31 December 2013

	2013 £m	Restated[1] 2012 £m
Profit for the year from continuing operations	**2,160**	1,890
Profit/(loss) for the year from discontinued operations[2]	**1,273**	(15)
Total profit for the year	**3,433**	1,875
Other comprehensive income from continuing operations:		
Items that may be reclassified subsequently to income statement		
Share of other comprehensive income of joint ventures and associates	**—**	(7)
Foreign exchange rate movements	**(12)**	(145)
Aggregate tax effect – shareholders tax on items that may be reclassified	**(6)**	18
Items that will not be reclassified to income statement		
Remeasurement of pension schemes	**(674)**	(980)
Aggregate tax effect – shareholders tax on items that will not be reclassified	**125**	188
Other comprehensive income, net of tax from continuing operations	**(567)**	(926)
Other comprehensive income, net of tax from discontinued operations[2]	**(319)**	(14)
Total other comprehensive income, net of tax	**(886)**	(940)
Total comprehensive income for the year from continuing operations	**1,593**	964
Total comprehensive income for the year from discontinued operations[2]	**954**	(29)
Total comprehensive income for the year	**2,547**	935
Attributable to:		
Equity shareholders of Aviva plc	**1,971**	102
Non-controlling Interests	**576**	833
	2,547	935

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 Discontinued operations represents the results of the US life and related internal asset management business (US Life) until the date of disposal (2 October 2013). For further details see F1 Basis of Preparation.

Consolidated statement of changes in equity – MCEV basis

For the year ended 31 December 2013

	2013 £m	Restated[1] 2012 £m
Balance at 1 January	**16,230**	15,495
Total comprehensive income for the year	**2,547**	935
Dividends and appropriations	**(538)**	(847)
Shares issued in lieu of dividends	**—**	127
Capital contributions from non-controlling interests	**1**	20
Share of dividends declared in the period applicable to non-controlling interests	**(134)**	(102)
Issue of fixed rate tier 1 notes	**—**	392
Transfer to (loss)/profit on disposal of subsidiaries, joint ventures and associates	**(820)**	187
Non-controlling interest in disposed subsidiaries	**(491)**	(13)
Shares acquired by employee trusts	**(32)**	(33)
Shares distributed by employee trusts	**5**	8
Reserves credit for equity compensation plans	**37**	42
Shares issued under equity compensation plans	**—**	1
Aggregate tax effect – shareholder tax	**52**	18
Total equity	**16,857**	16,230
Non-controlling interests	**(2,166)**	(2,214)
Balance at 31 December	**14,691**	14,016

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.

Consolidated statement of financial position – MCEV basis

As at 31 December 2013

	2013 £m	Restated[1] 2012 £m
Assets		
Goodwill	**1,476**	1,520
Acquired value of in-force business and other intangible assets	**1,068**	1,084
Additional value of in-force long-term business[2]	**5,840**	4,870
Interest in, and loans to, joint ventures	**1,200**	1,390
Interest in, and loans to, associates	**267**	265
Property and equipment	**313**	391
Investment property	**9,451**	9,939
Loans	**23,879**	24,537
Financial investments	**192,961**	188,743
Reinsurance assets	**7,220**	6,684
Deferred tax assets	**244**	188
Current tax assets	**76**	67
Receivables	**7,060**	7,476
Deferred acquisition costs and other assets	**3,051**	3,778
Prepayments and accrued income	**2,498**	2,700
Cash and cash equivalents	**24,999**	23,102
Assets of operations classified as held for sale	**3,113**	42,603
Total assets	**284,716**	319,337
Equity[3]		
Capital		
Ordinary share capital	**736**	736
Preference share capital	**200**	200
	936	936
Capital reserves		
Share premium	**1,165**	1,165
Merger reserve	**3,271**	3,271
	4,436	4,436
Shares held by employee trusts	**(31)**	(32)
Other reserves[2]	**371**	1,171
Retained earnings	**2,348**	1,389
Additional retained earnings on an MCEV basis[2]	**5,249**	4,734
Equity attributable to shareholders of Aviva plc[4]	**13,309**	12,634
Direct capital instruments and fixed rate tier 1 notes	**1,382**	1,382
Non-controlling interests[2]	**2,166**	2,214
Total equity	**16,857**	16,230
Liabilities		
Gross insurance liabilities	**110,555**	113,091
Gross liabilities for investment contracts	**116,058**	110,494
Unallocated divisible surplus	**6,713**	6,931
Net asset value attributable to unitholders	**10,362**	9,983
Provisions	**984**	1,119
Deferred tax liabilities	**563**	547
Current tax liabilities	**116**	112
Borrowings	**7,819**	8,179
Payables and other financial liabilities	**9,194**	9,398
Other liabilities	**2,472**	1,842
Liabilities of operations classified as held for sale	**3,023**	41,411
Total liabilities	**267,859**	303,107
Total equity and liabilities	**284,716**	319,337

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 The summarised consolidated statement of financial position presented above is unaltered from the corresponding IFRS summarised consolidated statement of financial position with the exception of the following: representing the excess of the Life MCEV, including non-controlling interests, over the corresponding Life IFRS net assets as the additional value of in-force long-term business; and reflecting this excess within equity as additional retained profit on an MCEV basis and other reserves, with corresponding adjustments to non-controlling interests.
3 The presentation of equity has changed compared to that published in the 2012 MCEV Supplement. The new presentation is consistent with that used in the IFRS financial statements in the Group's Annual Report and Accounts 2013. Preference share capital is now included in capital.
4 The presentation of equity has changed compared to that published in the 2012 MCEV Supplement. The new presentation is consistent with that used in the IFRS financial statements in the Group's Annual Report and Accounts 2013. This line now represents equity attributable to all shareholders, including preference shareholders.

Reconciliation of shareholders' equity on IFRS and MCEV bases

As at 31 December 2013

			2013 £m			Restated[1] 2012 £m
	IFRS	**Adjustment**	**MCEV**	IFRS	Adjustment	MCEV
Share capital[2]	**936**	**—**	**936**	936	—	936
Capital reserves	**4,436**	**—**	**4,436**	4,436	—	4,436
Shares held by employee trusts	**(31)**	**—**	**(31)**	(32)	—	(32)
Other reserves[3]	**475**	**(104)**	**371**	1,675	(504)	1,171
Retained earnings	**2,348**	**—**	**2,348**	1,389	—	1,389
Additional retained earnings on an MCEV basis	**—**	**5,249**	**5,249**	—	4,734	4,734
Equity attributable to shareholders of Aviva plc[4]	**8,164**	**5,145**	**13,309**	8,404	4,230	12,634
Direct capital instruments and fixed rate tier 1 notes	**1,382**	**—**	**1,382**	1,382	—	1,382
Non-controlling Interests	**1,471**	**695**	**2,166**	1,574	640	2,214
Total equity	**11,017**	**5,840**	**16,857**	11,360	4,870	16,230

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 The presentation of equity has changed compared to that published in the 2012 MCEV Supplement. The new presentation is consistent with that used in the IFRS financial statements in the Group's Annual Report and Accounts 2013. Preference share capital is now included in capital.
3 The adjustment to "Other reserves" relates to the movement in AFS securities.
4 The presentation of equity has changed compared to that published in the 2012 MCEV Supplement. The new presentation is consistent with that used in the IFRS financial statements in the Group's Annual Report and Accounts 2013. This line now represents equity attributable to all shareholders, including preference shareholders.

Reconciliation of IFRS total equity to Life MCEV

As at 31 December 2013

			2013 £m			Restated[1] 2012 £m
	Life and related businesses	**General business and other**	**Group**	Life and related businesses	General business and other	Group
Total assets included in the IFRS statement of financial position	**248,851**	**30,025**	**278,876**	285,412	29,055	314,467
Liabilities of the long-term business	**(237,449)**	**—**	**(237,449)**	(272,450)	—	(272,450)
Liabilities of the general insurance and other businesses	**—**	**(30,410)**	**(30,410)**	—	(30,657)	(30,657)
Total equity on an IFRS basis	**11,402**	**(385)**	**11,017**	12,962	(1,602)	11,360
Additional value of in-force long-term business	**5,840**	**—**	**5,840**	4,870	—	4,870
Total equity on a MCEV basis	**17,242**	**(385)**	**16,857**	17,832	(1,602)	16,230
Notional allocation of IAS 19 pension fund surplus to long-term business[2]	**(170)**			(440)		
Goodwill and intangible assets allocated to long-term business[3]	**(581)**			(895)		
Life MCEV (gross of non-controlling interests)	**16,491**			16,497		
Non-controlling interests	**(1,501)**			(1,556)		
Life MCEV (net of non-controlling interests)	**14,990**			14,941		

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 The value of the Aviva Staff Pension Scheme surplus has been notionally allocated between segments, based on current funding. Within the long-term business net assets on an MCEV basis, the Life proportion has been included. The pension fund surplus notionally allocated to long-term business is net of the agreed funding borne by the UK with-profit funds.
3 Goodwill and intangible assets includes amounts related to associated undertakings and joint ventures and are after adjustments reflected in the additional value of in-force long-term business in the consolidated statement of financial position. In 2013, there is an adjustment to impair goodwill and intangible assets by a further £28 million *(2012: £94 million)*, compared to IFRS. In aggregate, the goodwill and intangibles on an MCEV basis is £125 million *(2012: £94 million)* lower than on an IFRS basis, allowing for exchange rate movements. Refer to the next table for goodwill allocated to long-term business on IFRS basis.

Reconciliation of IFRS total equity to life MCEV net worth

As at 31 December 2013

	2013 £m	2012 £m
Net assets on a statutory IFRS net basis	**11,017**	11,360
Adjusting for general business and other net assets on a statutory IFRS net basis	**385**	1,602
Life and related businesses net assets on a statutory IFRS net basis	**11,402**	12,962
Goodwill and other intangibles	**(706)**	(989)
Acquired value of in-force business	**(132)**	(245)
Adjustment for share of joint ventures and associates	**(7)**	(9)
Adjustment for assets to regulatory value net of tax	**(52)**	94
Adjustment for DAC and DIR net of tax	**(1,067)**	(1,134)
Adjustment for differences in technical provisions	**(337)**	(488)
Other accounting and tax differences	**825**	940
Life MCEV net worth (gross of non-controlling interests)	**9,926**	11,131
MCEV value of in-force (gross of non-controlling interests)[1]	**6,565**	5,366
Life MCEV (gross of non-controlling interests)	**16,491**	16,497
Non-controlling interests	**(1,501)**	(1,556)
Life MCEV (net of non-controlling interests)	**14,990**	14,941

1 Comprises PVFP of £9,040 million *(2012:£8,616 million)*, FC of £(499) million *(2012:£(569) million)*, CNHR of £(1,006) million *(2012:£(1,381 million)* and TVOG of £(970) million *(2012:£(1,300) million)*.

Differences between the reconciling items for 2013 and 2012 arise mainly from the United States business which was disposed in October 2013. For 2012 comparatives, IFRS net assets included the expected fair value less costs to sell for the US and the total difference from the amount included for the US in the MCEV net worth was included in Other accounting and tax differences. The MCEV for the United States and other held for sale operations were at their expected fair value less cost to sell, which was adjusted in the MCEV value of in-force rather than the MCEV net worth. Operations that are held for sale at 31 December 2013 are treated similarly in the current period.

For both 2013 and 2012 figures, the adjustments for DAC and DIR and differences in technical provisions mainly relate to the UK & Ireland.

Group MCEV analysis of earnings

For the year ended 31 December 2013

Net of tax & non-controlling interests 2013	Covered business[1,4] £m A	Non-covered but related to life business[2] £m B	Total life business[3] £m A+B	Non-covered relating to non-life £m C	Total non-covered business[4] £m B+C	Total £m A+B+C
Opening Group MCEV	**14,941**	**1,175**	**16,116**	**(2,100)**	**(925)**	**14,016**
Opening Adjustments[5]	**(1,058)**	**1,058**	**—**	**—**	**1,058**	**—**
Adjusted opening Group MCEV	**13,883**	**2,233**	**16,116**	**(2,100)**	**133**	**14,016**
Operating MCEV earnings	**1,501**	**195**	**1,696**	**(80)**	**115**	**1,616**
Non-operating MCEV earnings	**671**	**149**	**820**	**468**	**617**	**1,288**
Total MCEV earnings	**2,172**	**344**	**2,516**	**388**	**732**	**2,904**
Other movements in IFRS net equity	**—**	**(585)**	**(585)**	**(285)**	**(870)**	**(870)**
Capital and dividend flows	**(601)**	**16**	**(585)**	**(711)**	**(695)**	**(1,296)**
Foreign exchange variances	**83**	**1**	**84**	**(147)**	**(146)**	**(63)**
Acquired/divested business	**(547)**	**(1,410)**	**(1,957)**	**1,957**	**547**	**—**
Closing Group MCEV	**14,990**	**599**	**15,589**	**(898)**	**(299)**	**14,691**
Direct capital instruments and fixed rate tier 1 notes						**(1,382)**
Equity attributable to shareholders of Aviva plc on an MCEV basis[6]						**13,309**

1 Covered business represents the business that the MCEV calculations cover, as detailed in F1 Basis of Preparation. The embedded value is presented net of non-controlling interests and tax.
2 Non-covered but related to life business represents the adjustments to the MCEV, including goodwill, to calculate the long-term business net assets on an MCEV basis. Note that US Life, disposed in 2013, was part of non-covered but related to life business with effect from 1 January 2013.
3 Net assets for the total life businesses on an MCEV basis presented net of non-controlling interests.
4 Covered business includes an adjustment for held for sale and disposed operations through the acquired/divested business line which is reflected as non-operating earnings for non-covered business, consistent with where the profit would arise on completion of the sale.
5 Represents the transfer of the held for sale US life operations from covered business to non-covered but related to life business as explained in F1 Basis of Preparation.
6 The presentation of equity has changed compared to that published in the 2012 MCEV Supplement. The new presentation is consistent with that used in the IFRS financial statements in the Group's Annual Report and Accounts 2013. This line now represents equity attributable to all shareholders, including preference shareholders.

Net of tax & non-controlling interests (Restated[1] 2012)	Covered business[2,5] £m A	Non-covered but related to life business[3] £m B	Total life business[4] £m A+B	Non-covered relating to non-life £m C	Total non-covered business[5] £m B+C	Total £m A+B+C
Opening Group MCEV	12,274	2,533	14,807	(788)	1,745	14,019
Operating MCEV earnings	1,070	—	1,070	(77)	(77)	993
Non-operating MCEV earnings	713	(1,203)	(490)	517	(686)	27
Total MCEV earnings	1,783	(1,203)	580	440	(763)	1,020
Other movements in IFRS net equity	—	(145)	(145)	(637)	(782)	(782)
Capital and dividend flows	(283)	—	(283)	178	178	(105)
Foreign exchange variances	(60)	(41)	(101)	(35)	(76)	(136)
Acquired/divested business	1,227	31	1,258	(1,258)	(1,227)	—
Closing Group MCEV	14,941	1,175	16,116	(2,100)	(925)	14,016
Direct capital instruments and fixed rate tier 1 notes						(1,382)
Equity attributable to shareholders of Aviva plc on an MCEV basis[6]						12,634

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 Covered business represents the business that the MCEV calculations cover, as detailed in F1 Basis of Preparation. The embedded value is presented net of non-controlling interests and tax.
3 Non-covered but related to life business represents the adjustments to the MCEV, including goodwill, to calculate the long-term business net assets on an MCEV basis.
4 Net assets for the total life businesses on an MCEV basis presented net of non-controlling interests.
5 Covered business includes an adjustment for held for sale operations through the acquired/divested business line which is reflected as non-operating earnings for non-covered business, consistent with where the profit would arise on completion of the sale.
6 The presentation of equity has changed compared to that published in the 2012 MCEV Supplement. The new presentation is consistent with that used in the IFRS financial statements in the Group's Annual Report and Accounts 2013. This line now represents equity attributable to all shareholders, including preference shareholders.

F1 – Basis of preparation

The consolidated income statement and consolidated statement of financial position on pages 3 to 6 present the Group's results and financial position for the covered life and related businesses on the Market Consistent Embedded Value (MCEV) basis and for its non-covered businesses and non-covered but related to life businesses on the International Financial Reporting Standards (IFRS) basis.

The MCEV methodology adopted is in accordance with the MCEV Principles© published by the CFO Forum in October 2009 with the exception of stating held for sale operations at their expected fair value, as represented by expected sale proceeds, less cost to sell.

The CFO Forum Guidance is not adopted in a number of respects:

- Guidance 2.1 requires that covered business includes contracts regarded as long-term life insurance business. However the US operations are not included in the covered business from 1 January 2013 as, from this date MCEV was not used to manage the business due to the planned sale of the operation, which was completed on 2 October 2013.
- Guidance 17.4 requires that sensitivities are provided for the total MCEV results. However, the sensitivity analysis in note F18 excludes held for sale operations, reflecting that these operations are stated at expected fair value less cost to sell.
- Guidance 17.3.29 indicates that changes to models to reflect improvements or rectify errors should be included in the 'other operating variances' line in the analysis of earnings. Where possible, such model refinements have been reported in the analysis of earnings on the line where the impact would have occurred in order to provide better information when considering assumption changes/experience variances over multiple reporting periods.
- Guidance 17.3.32 and 17.3.47 indicates that, when a company has more than one geographical area of operation, the business classifications disclosed should be consistent with those used for the IFRS financial statements. While MCEV results have been aligned with Aviva's management structure following the changes announced in the first quarter of 2013 the classifications have been presented at a more aggregated level than those segments presented in note 5 of the IFRS financial statements in the Group's Annual Report and Accounts 2013, which are in line with IFRS 8.

The directors consider that the MCEV methodology gives useful insight into the drivers of financial performance of the Group's life and related businesses. This basis values future cash flows from assets consistently with market prices, including explicit allowance for the impact of uncertainty in future investment returns and other risks. Embedded value is also consistent with the way pricing is assessed and the business is managed.

The results for our 2013 and 2012 report have been audited by our auditors, PricewaterhouseCoopers LLP. The PriceWaterhouse Coopers LLP report can be found on page 38.

Covered business

The MCEV calculations cover the following lines of business unless specifically noted below:

- Life insurance
- Long-term health and accident insurance
- Savings and annuity business
- Managed pension fund business
- Equity release business in the UK

Business covered includes that written by our life insurance subsidiaries as well as our share of certain life and related business written in our associated undertakings and joint ventures. Consistent with the segments in our IFRS financial statements, health business written in Singapore is not classified as covered business, although treated as long-term business locally.

Covered business includes the Group's share of our joint ventures including our associated undertakings in India, China, Turkey, Malaysia (until disposal in April 2013), Taiwan and South Korea. In addition, the results of Group companies providing significant administration, fund management and other services and of Group holding companies have been included to the extent that they relate to covered business. Together these businesses are referred to as "Life and related businesses".

The following are not included within covered business:

- US operations from 1 January 2013, as described under Treatment of US operations below. The sale of the US business completed on 2 October 2013
- Delta Lloyd in the current and comparative period. From 6 May 2011 to 5 July 2012, Delta Lloyd was an associate and was removed from the covered business as MCEV was not used to manage the operation. From 5 July 2012 up to when Delta Lloyd was sold on 8 January 2013, Aviva's remaining investment holding was not included within covered business. For 'Group' MCEV reporting, which includes general insurance and other non-covered business, Delta Lloyd was included on an IFRS basis.

F1 – Basis of preparation continued

Held for Sale operations (excluding US)

Aviva's methodology adopts the MCEV Principles published by the CFO Forum in October 2009 with the exception of stating held for sale operations at their expected fair value less cost to sell in the consolidated statement of financial position.

It is considered that the CFO Forum MCEV Principles were designed to define the approach to valuing covered business on an ongoing basis and do not explicitly define the appropriate treatment of covered business operations that are held for sale. For these operations, where there is an expected sale price, the directors believe it is reasonable to value the shareholders' interest as the expected fair value less cost to sell thus reflecting the expected value upon completion of the transaction.

Certain life covered operations are classified as held for sale, consistent with the IFRS classification as detailed in note F17. The life covered MCEV for the held for sale operations has been adjusted within the value of in force business and this adjustment has been reported in the analysis of earnings through the acquired/divested business line, resulting in an increase to the closing MCEV at 31 December 2013 of £45 million (*31 December 2012: £175 million*). The adjustment reflects the amount needed to align the contribution to shareholder equity with the expected fair value less cost to sell. There is no impact to the life and related business MCEV operating profits and total earnings. The consolidated income statement includes a profit on disposal and remeasurement of subsidiaries and associates, based on the expected fair value less cost to sell, of £45 million (*31 December 2012: £175 million*) in relation to the life covered held for sale operations.

In line with the preparation of the consolidated statement of financial position - MCEV basis, the assets and liabilities of held for sale operations are stated at the IFRS values with any differences in measurement on an MCEV basis reflected in the additional value of in-force long term business.

Within the sensitivity analysis F18, and other disclosures where applicable, held for sale operations are excluded, reflecting that these operations are stated at expected fair value less cost to sell. Further details are provided against each applicable disclosure.

Treatment of US Operations

For 2012, the US was included in covered business. Following the classification of the United States business as Held for Sale on 21 December 2012, the US was re-measured to expected fair value less cost to sell, in line with treatment of other Held for Sale operations, as described above. This resulted in an increase to the closing life MCEV at 31 December 2012 of £1,095 million to £1,058 million. This adjustment was reported in the analysis of earnings through the acquired/divested line, and hence there was no impact to the life and related business MCEV operating profits and total earnings.

From 1 January 2013 the results for the held for sale operations in the US are not included within the covered business as from this date MCEV was not used to manage this business. For Group MCEV reporting, which includes general insurance and other non-covered business, the US operations were included prior to sale on an IFRS basis within non-covered but related to life business. The transfer to non-covered but related to life business is reported as an 'opening adjustment' in both the Group MCEV and covered business analysis of earnings. There is no impact to the total earnings from the transfer as the US operations are reported on both an IFRS and MCEV basis at the sale price less cost to sell. The sale of the Aviva US business completed on 2 October 2013 and the transaction proceeds received were based on the estimated earnings and other improvements in statutory surplus over the period from 30 June 2012 to 30 September 2013. The final purchase price is subject to customary completion adjustments. The process to agree completion adjustments is on-going and is expected to complete by mid-2014. Until the outcome of this process is known there remains uncertainty on the final determination of the completion adjustment. We have recorded a profit on disposal of £808 million in 2013, calculated, reflecting management's best estimate of the expected proceeds. In the Group MCEV analysis to earnings, this is presented as a movement from non-covered but related to life business to non-covered relating to non-life business in the acquired/divested business line with no net impact on Group MCEV.

In line with IFRS, the results for the sold operations in the United States are presented as discontinued operations.

New business premiums

New business premiums include:

- premiums arising from the sale of new contracts during the period;
- non-contractual additional premiums; and
- expected renewals on new contracts and expected future contractual alterations to new contracts.

The Group's definition of new business under MCEV includes contracts that meet the definition of "non-participating investment" contracts under IFRS.

For products sold to individuals, premiums are considered to represent new business where a new contract has been signed, or where underwriting has been performed. Renewal premiums include contractual renewals, non-contractual variations that are reasonably predictable and recurrent single premiums that are pre-defined and reasonably predictable.

For group products, new business includes new contracts and increases to aggregate premiums under existing contracts. Renewal premiums are based on the level of premium received during the reporting period and allow for premiums expected to be received beyond the expiry of any guaranteed premium rates.

Life and pensions operating earnings

For life and pensions operating earnings, Aviva uses normalised investment returns. The use of asset risk premia reflects management's long-term expectations of asset returns in excess of the swap yield from investing in different asset classes.

The normalised investment return on equities and property has been calculated by reference to the ten-year swap rate in the relevant currency plus an appropriate risk premium. The expected return on bonds has been calculated by reference to the swap rate consistent with the duration of the backing assets in the relevant currency plus an appropriate risk margin (expected return is equivalent to the gross redemption yield less an allowance for defaults).

F1 – Basis of preparation continued

The expected existing business contribution (in excess of reference rate) is calculated using the start of period implied discount rate (IDR), which itself is based on the normalised investment returns. The methodology applies the IDR to the Value of In Force (VIF) and Required Capital (RC) components of the MCEV and adds to this the total expected return for Free Surplus (FS) to derive the total expected return, in a manner consistent with that previously used under European Embedded Value reporting. This total is presented as the expected existing business contribution (reference rate), expected existing business contribution (in excess of reference rate) and expected return on shareholders' net worth (grossed up for tax for pre-tax presentation), with only the excess contribution being impacted by the approach. For businesses where the IDR is unpublished, the expected return in excess of the reference rate is calculated as the excess of the real world equivalent embedded value (EqEV) over the MCEV amortised over the average duration of the portfolio. The approach to expected return has no impact on total return or on the closing balance sheet.

MCEV methodology

Overview

Under the MCEV methodology, profit is recognised as it is earned over the life of products defined within covered business. The total profit recognised over the lifetime of a policy is the same as under the IFRS basis of reporting, but the timing of recognition is different.

Calculation of the embedded value

The shareholders' interest in the life and related businesses is represented by the embedded value. The embedded value is the total of the net worth of the life and related businesses and the value of in-force covered business. Calculations are performed separately for each business and are based on the cash flows of that business, after allowing for both external and intra-Group reinsurance. Where one life business has an interest in another, the net worth of that business excludes the interest in the dependent company.

The embedded value is calculated on an after-tax basis applying current legislation and practice together with future known changes. Consistent with CFO Forum guidance issued in 2012, no explicit allowance has been made for the developing European regulation regime (Solvency II) and associated consequences. Where gross results are presented, these have been calculated by grossing up post-tax results at the relevant rate of corporation tax for each country based on opening period tax rates, apart from the UK, where a 23% tax rate was used for 2013 for grossing up (*2012: 24%*).

Net Worth

The net worth is the market value of the shareholders' funds and the shareholders' interest in the surplus held in the non-profit component of the long-term business funds, determined on a statutory solvency basis and adjusted to add back any non-admissible assets, and consists of the required capital and free surplus.

Required capital is the market value of assets attributed to the covered business over and above that required to back liabilities for covered business, for which distribution to shareholders is restricted. Required capital is reported net of implicit items permitted on a local regulatory basis to cover minimum solvency margins which are assessed at a local entity level. The level of required capital for each business unit is generally set equal to the highest of:

- The level of capital at which the local regulator is empowered to take action;
- The capital requirement of the business unit under the Group's economic capital requirements; and
- The target capital level of the business unit;

where "highest of" is assessed as the basis yielding the lowest level of free assets.

This methodology reflects the level of capital considered by the directors to be appropriate to manage the business, and includes any additional shareholder funds not available for distribution, such as the reattributed inherited estate in the UK. The same definition of required capital is used for both existing and new business except in certain entities in Italy and Spain where new business reflects the targeted capital level which better reflects the capital requirements of the new business. The total required capital for the entities in question is based on the overall biting constraint. There is a true-up within economic variances for the difference between calculating the new business required capital on a target rather than economic capital basis, where this is the biting constraint.

For Aviva US, the required capital is set at 325% of the NAIC Company Action Level, in line with management targets and target credit ratings, for the comparative period.

The level of required capital across the business units expressed as a percentage of the EU minimum solvency margin (or equivalent) can be found in F17.

The free surplus is the market value of any assets allocated to, but not required to support, the in-force covered business at the valuation date.

Value of in-force covered business (VIF)

The value of in-force covered business consists of the following components:

- present value of future profits;
- time value of financial options and guarantees;
- frictional costs of required capital; and
- cost of residual non-hedgeable risks.

F1 – Basis of preparation continued

Present value of future profits (PVFP)

This is the present value of the distributable profits to shareholders arising from the in-force covered business projected on a best estimate basis.

Distributable profits generally arise when they are released following actuarial valuations. These valuations are carried out in accordance with any local statutory requirements designed to ensure and demonstrate solvency in long-term business funds. Future distributable profits will depend on experience in a number of areas such as investment return, discontinuance rates, mortality, administration costs, as well as management and policyholder actions. Releases to shareholders arising in future years from the in-force covered business and associated required capital can be projected using assumptions of future experience.

Future profits are projected using best estimate non-economic assumptions and market consistent economic assumptions. In principle, each cash flow is discounted at a rate that appropriately reflects the riskiness of that cash flow, so higher risk cash flows are discounted at higher rates. In practice, the PVFP is calculated using the "certainty equivalent" approach, under which the reference rate is used for both the investment return and the discount rate. This approach ensures that asset cash flows are valued consistently with the market prices of assets without options and guarantees. Further information on the risk-free rates is given in note F17.

The PVFP includes the capitalised value of profits and losses arising from subsidiary companies providing administration, investment management and other services to the extent that they relate to covered business. This is referred to as the "look through" into service company expenses. In addition, expenses arising in holding companies that relate directly to acquiring or maintaining covered business have been allowed for. Where external companies provide services to the life and related businesses, their charges have been allowed for in the underlying projected cost base.

Time value of financial options and guarantees (TVOG)

The PVFP calculation is based on a single (base) economic scenario; however, a single scenario cannot appropriately allow for the effect of certain product features. If an option or guarantee affects shareholder cash flows in the base scenario, the impact is included in the PVFP and is referred to as the intrinsic value of the option or guarantee; however, future investment returns are uncertain and the actual impact on shareholder profits may be higher or lower. The value of in-force business needs to be adjusted for the impact of the range of potential future outcomes. Stochastic modelling techniques can be used to assess the impact of potential future outcomes, and the difference between the intrinsic value and the total stochastic value is referred to as the time value of the option or guarantee.

Stochastic modelling typically involves projecting the future cash flows of the business under thousands of economic scenarios that are representative of the possible future outcomes for market variables such as interest rates and equity returns. Under a market consistent approach, the economic scenarios generated reflect the market's tendency towards risk aversion. Allowance is made, where appropriate, for the effect of management and/or policyholder actions in different economic conditions on future assumptions such as asset mix, bonus rates and surrender rates.

Stochastic models are calibrated to market yield curves and volatility levels at the valuation date. Tests are performed to confirm that the scenarios used produce results that replicate the market price of traded instruments.

Where evidence exists that persistency rates are linked to economic scenarios, dynamic lapse assumptions are set that vary depending on the individual scenarios. This cost is included in the TVOG. Dynamic lapses are modelled for parts of the UK, US (for the comparative period), French, Italian and Spanish businesses. Asymmetries in non-economic assumptions that are linked to economic scenarios, but that have insufficient evidence for credible dynamic assumptions, are allowed for within mean best estimate assumptions.

Frictional costs of required capital

The additional costs to a shareholder of holding the assets backing required capital within an insurance company rather than directly in the market are called frictional costs. They are explicitly deducted from the PVFP. The additional costs allowed for are the taxation costs and any additional investment expenses on the assets backing the required capital. The level of required capital has been set out above in the net worth section.

Frictional costs are calculated by projecting forwards the future levels of required capital in line with drivers of the capital requirement. Tax on investment return and investment expenses are payable on the assets backing required capital, up until the point that they are released to shareholders.

Cost of residual non-hedgeable risks (CNHR)

The cost of residual non-hedgeable risks (CNHR) covers risks not already allowed for in the time value of options and guarantees or the PVFP. The allowance includes the impact of both non-hedgeable financial and non-financial risks. The most significant risk not included in the PVFP or TVOG is operational risk.

Asymmetric risks allowed for in the TVOG or PVFP are described earlier in the basis of preparation. No allowance has been made within the cost of non-hedgeable risk for symmetrical risks as these are diversifiable by investors.

US capital solutions

Credit has been taken within the US embedded value and value of new business, for the comparative period, for the anticipated reduction in capital requirements based on management's intention to enact transactions which allow recognition of additional assets that can be held against certain reserves, reducing shareholder capital requirements. These 'AXXX/XXX' transactions are fixed-term and are assumed to renew at current market rates. Enacting such transactions is common practice within the US market, and by the end of 2012, transactions had been enacted for all business written from 2006 to 2012.

New business tax

New business for US (for the comparative period) and Italy has been valued on a basis with tax applied at the relevant corporation rate and consequential movements in the value of the associated deferred tax asset included as a variance within existing business operating return.

F1 – Basis of preparation continued

Participating business

Future regular bonuses on participating business are projected in a manner consistent with current bonus rates and expected future market-consistent returns on assets deemed to back the policies.

For with-profit funds in the UK and Ireland, for the purpose of recognising the value of the estate, it is assumed that terminal bonuses are increased to exhaust all of the assets in the fund over the future lifetime of the in-force with-profit policies. However, under stochastic modelling there may be some extreme economic scenarios when the total assets in the Group's with-profit funds are not sufficient to pay all policyholder claims. The average additional shareholder cost arising from this shortfall has been included in the TVOG.

For profit-sharing business in continental Europe, where policy benefits and shareholder value depend on the timing of realising gains, the apportionment of unrealised gains between policyholders and shareholders reflect contractual requirements as well as existing practice. Under certain economic scenarios where additional shareholder injections are required to meet policyholder payments, the average additional cost has been included in the TVOG.

For the comparative period the embedded value of the US spread-based products anticipates the application of management discretion allowed for contractually within the policies, subject to contractual guarantees. This includes the ability to change the crediting rates and indexed strategies available within the policy. Consideration is taken of the economic environment assumed in future projections and returns in excess of the reference rate are not assumed. Anticipated market and policyholder reaction to each management action has been considered.

Consolidation adjustments

The effect of transactions between the Group's life companies such as loans and reinsurance arrangements have been included in the results split by territory in a consistent manner. No elimination is required on consolidation.

As the MCEV methodology incorporates the impact of profits and losses arising from subsidiary companies providing administration, investment management and other services to the Group's life companies, the equivalent profits and losses have been removed from the relevant segment (other operations or fund management) and are instead included within the results of life and related businesses. In addition, the underlying basis of calculation for these profits has changed from the IFRS basis to the MCEV basis.

The capitalised value of the future profits and losses from such service companies are included in the embedded value and value of new business calculations for the relevant business, but the net assets (representing historical profits and other amounts) remain under other operations or fund management. In order to reconcile the profits arising in the financial period within each segment with the assets on the opening and closing statement of financial positions, a transfer of IFRS profits from life and related business to the appropriate segment is deemed to occur. An equivalent approach has been adopted for expenses within our holding companies.

The assessments of goodwill, intangibles and pension schemes relating to life insurance business utilise the IFRS measurement basis with any required adjustment reflected in the additional value of the in force long-term business in the consolidated statement of financial position.

Exchange rates

The Group's principal overseas operations during the period were located within the Eurozone, the US (for the comparative period) and Poland.

The results and cash flows of these operations have been translated at the average rates for that period and the assets and liabilities have been translated at the period end rates. Please refer to note F17.

Restatement of prior period figures

Restatements of IFRS financial statements have been consistently reflected in the Group MCEV financial statements. These reflect:

- A change in accounting requirements for employee benefits (IAS 19) resulting in an increase to profit before tax for the full year 2012 of £150 million in the consolidated income statement, with a corresponding decrease in other comprehensive income. There is no change to total comprehensive income or equity reported in the consolidated statement for this period.
- A change in accounting requirement for consolidated financial statements (IFRS 10) resulting in a net decrease in both total assets and total liabilities on an IFRS basis of £1,222 million as at 31 December 2012 in the consolidated statement of financial position. There is no impact on profit or equity reported for the period ending 31 December 2012.
- In the first quarter of 2013, the Group announced modifications to its management structure. As a result, the Group's operating segments were reviewed to align them with the revised organisational reporting structure. This has resulted in changes to the reportable operating segments as described in note 5 of the IFRS financial statements in the Group's Annual Report and Accounts 2013. The geographical analysis in MCEV is presented at a more aggregated level than the reportable operating segments.
- IAS1 Presentation of Financial Statements (amended) requires the grouping of items presented in other comprehensive income according to whether they will subsequently be reclassified to the income statement. The criteria when items are required to be reclassified from other comprehensive income to the income statement are set out in the "Accounting policies" section in the IFRS financial statements in the Group's Annual Report and Accounts 2013. The adoption of the amendments to IAS 1 results in a revised presentation of the statement of comprehensive income.

F2 – Development of MCEV

The life covered MCEV (net of tax and minority interest) is £14,990 million, an increase of £1,107 million in the period from the adjusted opening MCEV of £13,883 million. This movement comprises total earnings of £2,172 million in the year, reduced by dividends and other capital flows from the covered business of £601 million and £547 million respectively. These flows reflect the transfer of part of our Spanish business to Bankia and disposal of other smaller ventures. These items were partially offset by a positive movement in exchange rates.

The opening adjustment, which reduced the MCEV by £1,058 million, from £14,941 million to £13,883 million, is due to the re-classification of Aviva USA to non-covered business.

Key indicators

	2013 £m	Restated 2012 £m		
		Continuing operations	Discontinued operations	Total
Present value of new business premiums (gross tax, gross non-controlling interests)	**20,548**	20,646	4,039	24,685
New business margins (gross tax, gross non-controlling interests)	**4.1%**	3.6%	(6.9)%	1.9%
Value of new business	**836**	746	(280)	466
Expected returns	**1,379**	1,861	631	2,492
Experience variances	**58**	(78)	(170)	(248)
Operating assumption changes	**(88)**	(74)	(386)	(460)
Other operating variances	**131**	(249)	(173)	(422)
Operating earnings (gross tax, gross non-controlling interests)	**2,316**	2,206	(378)	1,828
Economic variances	**1,820**	1,901	(6)	1,895
Other non-operating variances	**(322)**	(42)	(3)	(45)
Non-operating earnings (gross tax, gross non-controlling interests)	**1,498**	1,859	(9)	1,850
New business surplus generation	**(321)**	(389)	(319)	(708)
Existing business surplus generation	**1,530**	1,615	360	1,975
Operating capital generation (net tax, net non-controlling interests)	**1,209**	1,226	41	1,267

Please note that all comparative figures quoted in the commentary below relate to restated 2012 results for continuing operations only.

Profitability (gross of tax and non-controlling interests)

Operating earnings for FY13 are £2,316 million *(FY12: £2,206 million)* and total MCEV earnings are £3,814 million *(FY12: £4,065 million).*

New Business
VNB has increased by 12% to £836 million (*FY12: £746 million)*, primarily driven by France, Asia, UK and Ireland and Poland. In France, this is due to increased volume and a movement towards unit-linked products. The increase in Asia reflects expense efficiencies and an improved business mix. Increases in the UK, due to pricing actions taken in the second half of 2012 on the annuity book, and in Poland, primarily due to higher volumes, also contribute to the overall increase. New business volumes remained broadly neutral on a PVNBP basis, as higher sales across most European markets were offset by lower sales in the UK, however margins have improved significantly to 4.1% *(FY12: 3.6%)*.

Expected Return
The total expected return was lower at £1,379 million *(FY12: £1,861 million).*

Expected return from existing business was £1,158 million *(FY12: £1,577 million)* and expected return on shareholders' net worth was £221 million *(FY12: £284 million)*. The reduction from the previous year is principally driven by changes in Italy and the UK. In Italy, expected return includes an anticipated release of allowances for guarantees in the opening MCEV. This allowance was significantly lower at the start of 2013, reflecting the recovery in economic conditions since the start of 2012 (which had an impact of £(220) million on expected return during 2013). In the UK the expected return reduced significantly reflecting a lower IDR at FY12 and a de-risking of shareholder funds.

Management Actions and Other Variances
Experience variances and operating assumption changes total £(30) million *(FY12: £(152) million*). Experience variances have been predominantly positive across the Group, but have been more than offset by the negative impact of strengthening persistency assumptions. In the UK, the positive impact of expense assumption changes following expense savings over the year is partially offset by the negative impact in France due to strengthening the unit cost assumption.

Other operating variances of £131 million *(FY12: £(249) million)* primarily reflect the benefit from agreements made to reduce long-term guarantees as soon as contractually possible on with-profit business in Italy. In addition, management actions in France have reduced the expected value of guaranteed minimum death benefits ("GMDB") giving rise to an increase in operating profits.

F2 – Development of MCEV continued

Non-operating earnings

Non-operating earnings in the period were £1,498 million *(FY12: £1,859 million).*

Economic variances are £1,820 million *(FY12: £1,901 million)*, due to favourable economic movements across most businesses particularly in the UK, France, Spain and Italy. In the UK positive variances arising due to narrowing credit spreads and asset out-performance have been partially offset by a reduction in the level of liquidity premium, adverse credit default experience on commercial mortgages and losses due to increases in the risk-free rate. In Italy, France and Spain positive economic variances have been driven by narrowing credit spreads.

Other non-operating variances are £(322) million *(FY12: £(42) million*), primarily driven by negative impacts in Poland, where the pension legislation change has reduced non-operating earnings by £344 million, and in France, due to the introduction of a dividend tax. These are partially offset by the allowance for the future drop in corporation tax in the UK from 23% to 20%.

Life Operating Capital Generation (OCG) (net of tax and non-controlling interests)

The profitability of the business can be analysed into impacts on free surplus, required capital and value of in force business (see note F8). This shows how investment in new business generates additional future profit, how expected profits and releases of capital emerge from existing business in the period, as well as how experience has changed from what was anticipated in the opening value.

Total Life OCG at FY13 is £1,209 million *(FY12: £1,226 million).*

New Business Strain

Investment in writing new business was £321 million *(FY12: £389 million),* reflecting the benefit of re-pricing of individual annuity business in the UK, together with savings in acquisition costs and the impact of lower new business volumes. This investment included locking in £160 million *(FY12: £155 million*) of required capital, which will be released over time, and £161 million *(FY12: £234 million*) of net worth strain, and has resulted in an increased value of future profits of £754 million *(FY12: £739 million).*

Expected Transfer to Free Surplus

Total Life expected free surplus generation is £1,234 million *(FY12: £1,189 million).*

The expected emergence of profits and run-off of required capital associated with the in-force portfolio contributed £1,217 million to OCG *(FY12: £1,133 million*). In addition, OCG benefits from the transfer to free surplus from the expected return on shareholders' net worth of £17 million *(FY12: £56 million).*

Management actions and other variances

In aggregate, experience variances, assumption changes and other operating variances contribute £296 million to OCG *(FY12: £426 million).*

The impact of experience variances and operating assumption changes on free surplus is small at £26 million *(FY12: £112 million),* with the impact of higher than expected project costs in the UK being more than offset by the positive impact of longevity assumption changes in the UK.

Other operating variances have a positive impact of £270 million *(FY12: £314 million)*. This includes the impact of actions to convert future value into free surplus, as is normal industry practice, and the reserving benefit arising from actions which improve expected profitability, including reducing guarantees. At FY13 this is primarily driven by the positive impact of reinsurance transactions in the UK and Singapore and the reduction of GMDB guarantees in France.

F3 – Geographical analysis of life MCEV earnings

The table below presents the components of the life and pensions MCEV earnings. These components are calculated using economic assumptions as at the start of the year (in-force business) or start of the quarter or more frequently (new business) and operating (demographic and expenses) assumptions as at the end of the period.

Gross of tax and non-controlling interests 2013	UK & Ireland £m	Europe £m	Asia £m	Other £m	Total £m
Value of new business	441	303	92	—	836
Earnings from existing business					
– expected existing business contribution (reference rate)	162	138	19	—	319
– expected existing business contribution (in excess of reference rate)[1]	270	547	22	—	839
	432	685	41	—	1,158
Experience Variances					
– maintenance expense	10	(19)	—	1	(8)
– project and other related expenses[2]	(82)	(7)	4	—	(85)
– mortality/morbidity	32	6	9	1	48
– lapses[3]	28	42	(5)	—	65
– other	15	16	7	—	38
	3	38	15	2	58
Operating assumption changes:					
– maintenance expense	157	(127)	27	(4)	53
– project and other related expenses	16	—	—	—	16
– mortality/morbidity	35	21	12	(1)	67
– lapses	(125)	(73)	(2)	—	(200)
– other[4]	(61)	38	(1)	—	(24)
	22	(141)	36	(5)	(88)
Expected return on shareholders' net worth	84	122	14	1	221
Other operating variances	(79)	213	(3)	—	131
Operating earnings before tax and non-controlling interests	903	1,220	195	(2)	2,316
Economic variances[5]					1,820
Other non-operating variances[5]					(322)
Earnings before tax and non-controlling interests					3,814
Tax on operating earnings					(630)
Tax on other activities					(496)
Earnings after tax and before non-controlling interests					2,688

1 The expected existing business contribution (in excess of reference rate) for Europe is lower at FY13 than FY12 as the release of the allowance for guarantees in Italy is lower.
2 Within the UK project and other related expenses reflect higher than expected expenditure on development of systems and processes.
3 Persistency experience has improved in most of our businesses reflecting a more stable economic outlook.
4 Other UK assumption changes reflect the change in the assumed level of non-hedgeable risks. In Europe other operating assumption changes relate to a reduction in the guaranteed annuity take up rate in Italy.
5 Please see F2 for further information on economic and non-operating variances. In 2013 the impact from any change in tax legislation is shown in other non-operating variances. For the comparative period the reduction in future UK tax rates was included in economic variances.

UK **maintenance expense operating assumption change** is primarily driven by the capitalisation of the benefit of recent expense reductions. In Europe the negative impact of expense assumption change relates primarily to France, following a review of expense allocation.

Positive **mortality/morbidity operating assumption changes** primarily reflect change to annuitant mortality assumptions in the UK.

Despite the positive experience variances due to short term provision releases in the UK, there is a negative impact from **lapse assumption changes**, primarily due to the strengthening of the assumptions on early retirement. The negative impact in Europe is a result of strengthening of long term persistency assumptions primarily in Poland.

Other operating variances include management actions taken to reduce guarantees on existing business in Italy and France. In the UK and Ireland this is due to management actions enhancing benefits to with-profits policyholders.

F3 – Geographical analysis of life MCEV earnings continued

Gross of tax and non-controlling interests Restated 2012	UK & Ireland £m	Europe £m	Asia £m	Other £m	Continuing operations £m	Discontinued operations £m	Total £m
Value of new business	412	271	63	—	746	(280)	466
Earnings from existing business:							
– expected existing business contribution (reference rate)	229	234	24	—	487	85	572
– expected existing business contribution (in excess of reference rate)	403	682	5	—	1,090	483	1,573
	632	916	29	—	1,577	568	2,145
Experience Variances							
– maintenance expense[1]	(28)	(11)	—	1	(38)	(16)	(54)
– project and other related expenses[1]	(75)	(2)	(2)	—	(79)	(21)	(100)
– mortality/morbidity[2]	(2)	24	3	—	25	(24)	1
– lapses[3]	(8)	30	(12)	(1)	9	1	10
– other[4]	(7)	8	3	1	5	(110)	(105)
	(120)	49	(8)	1	(78)	(170)	(248)
Operating assumption changes:							
– maintenance expense[5]	10	(32)	(3)	4	(21)	—	(21)
– project and other related expenses	—	—	—	—	—	—	—
– mortality/morbidity[6]	(34)	32	9	—	7	(220)	(213)
– lapses[7]	(7)	(244)	—	—	(251)	(72)	(323)
– other[8]	(24)	215	—	—	191	(94)	97
	(55)	(29)	6	4	(74)	(386)	(460)
Expected return on shareholders' net worth	112	155	16	1	284	63	347
Other operating variances[9]	(58)	(191)	1	(1)	(249)	(173)	(422)
Operating earnings before tax and non-controlling interests	923	1,171	107	5	2,206	(378)	1,828
Economic variances[10]					1,901	(6)	1,895
Other non-operating variances[10]					(42)	(3)	(45)
Earnings before tax and non-controlling interests					4,065	(387)	3,678
Tax on operating earnings					(576)	132	(444)
Tax on other activities					(619)	4	(615)
Earnings after tax and before non-controlling interests					2,870	(251)	2,619

1 Adverse expense experience occurred across a number of businesses. Within the UK the maintenance expense variance reflects a one-off realignment of investment expense allocation between With Profit and Non Profit business and project and other related expenses include higher expenditures related to increased level of regulatory change.
2 Mortality experience continues to be better than the assumption set across a number of our businesses.
3 Persistency experience remains volatile across most of our business, in part reflecting the wider economic circumstances. Positive lapse variance in Europe reflects increased lapses on business with guarantees in Italy.
4 Other experience includes the marginal impact of new business on the value of deferred losses in the US and Italy as well as other tax variances in the US and the impact of policyholders switching to with profit funds in France.
5 Maintenance expense assumptions have been revised based on recent analysis.
6 Mortality assumptions have been updated in the UK and US, primarily related to annuities.
7 Persistency assumptions have been updated in a number of businesses and include additional provisions in Europe reflecting economic circumstances.
8 Other operating assumption changes in Europe relate to a change to assumed management actions in relation to product charges in Poland.
9 Other operating variances relate to modelling refinements in the UK, France and Italy and the cost of capital transactions and model refinements in the US.
10 Economic variances reflect narrowing credit spreads on corporate bonds and sovereign debt (Italy), reduction in interest rates and equity market improvements, partly offset by increasing credit spreads on commercial mortgages in the UK. Other non-operating variances reflect exceptional costs due to Project Simplify and Solvency II. Allowance for reduction in future UK tax rates increases economic variances by £140 million in 2012. In 2013, the impact from any change in tax legislation is shown in other non-operating variances.

F3 – Geographical analysis of life MCEV earnings continued

Net of tax and non-controlling interests 2013	UK & Ireland £m	Europe £m	Asia £m	Other £m	Total £m
Value of new business	**340**	**177**	**76**	**—**	**593**
Earnings from existing business					
– expected existing business contribution (reference rate)	**126**	**88**	**15**	**—**	**229**
– expected existing business contribution (in excess of reference rate)[1]	**209**	**265**	**17**	**—**	**491**
	335	**353**	**32**	**—**	**720**
Experience variances					
– maintenance expense	**8**	**(7)**	**—**	**1**	**2**
– project and other related expenses[2]	**(63)**	**(5)**	**3**	**—**	**(65)**
– mortality/morbidity	**25**	**4**	**7**	**—**	**36**
– lapses[3]	**22**	**23**	**(4)**	**—**	**41**
– other	**12**	**8**	**6**	**—**	**26**
	4	**23**	**12**	**1**	**40**
Operating assumption changes:					
– maintenance expense[4]	**121**	**(73)**	**24**	**(2)**	**70**
– project and other related expenses	**12**	**—**	**—**	**—**	**12**
– mortality/morbidity[5]	**27**	**14**	**9**	**(1)**	**49**
– lapses[6]	**(96)**	**(42)**	**(2)**	**—**	**(140)**
– other[7]	**(47)**	**18**	**(1)**	**—**	**(30)**
	17	**(83)**	**30**	**(3)**	**(39)**
Expected return on shareholders' net worth	**64**	**58**	**11**	**1**	**134**
Other operating variances[8]	**(64)**	**119**	**(2)**	**—**	**53**
Operating earnings after tax and non-controlling interests	**696**	**647**	**159**	**(1)**	**1,501**
Economic variances[9]					**868**
Other non-operating variances[9]					**(197)**
Earnings after tax and non-controlling interests					**2,172**

1 The expected existing business contribution (in excess of reference rate) for Europe is lower at FY13 than FY12 as the release of the allowance for guarantees in Italy is lower.
2 Within the UK project and other related expenses reflect higher than expected expenditure on development of systems and processes.
3 Persistency experience has improved in most of our businesses reflecting a more stable economic outlook.
4 UK maintenance expense assumption change is primarily driven by the capitalisation of the benefit of recent expense reductions. In Europe the negative impact of expense assumption change relates primarily to France, following a review of expense allocation.
5 Positive mortality/morbidity operating assumption changes primarily reflect change to annuitant mortality assumptions in the UK.
6 Despite the positive experience variances due to short term provision releases in the UK, there is a negative impact from lapese assumption changes, primarily due to the strengthening of the assumptions on early retirement. The negative impact in Europe is a result of strengthening of long term lapse assumptions primarily in Poland.
7 Other UK assumption changes reflect the change in the assumed level of non-hedgeable risks. In Europe, other operating assumption changes relate to a reduction in the guaranteed annuity take up rate in Italy.
8 Other operating variances include management actions taken to reduce guarantees on existing business in Italy and France. In the UK and Ireland this is due to management actions enhancing benefits to with-profits policyholders.
9 Please see F2 for further information on economic and non-operating variances. In 2013 the impact from any change in tax legislation is shown in other non-operating variances. For the comparative period the reduction in future UK tax rates was included in economic variances.

F3 – Geographical analysis of life MCEV earnings continued

Net of tax and non-controlling interests Restated 2012	UK & Ireland £m	Europe £m	Asia £m	Other £m	Continuing operations £m	Discontinued operations £m	Total £m
Value of new business	313	142	50	—	505	(182)	323
Earnings from existing business							
– expected existing business contribution (reference rate)	173	149	17	—	339	55	394
– expected existing business contribution (in excess of reference rate)	303	270	4	—	577	314	891
	476	419	21	—	916	369	1,285
Experience variances							
– maintenance expense[1]	(21)	(5)	—	1	(25)	(11)	(36)
– project and other related expenses[1]	(57)	(2)	(2)	—	(61)	(13)	(74)
– mortality/morbidity[2]	(1)	12	3	—	14	(16)	(2)
– lapses[3]	(7)	(8)	(7)	—	(22)	1	(21)
– other[4]	(4)	(12)	2	—	(14)	(72)	(86)
	(90)	(15)	(4)	1	(108)	(111)	(219)
Operating assumption changes:							
– maintenance expenses[5]	7	(34)	(2)	3	(26)	—	(26)
– project and other related expenses	(1)	—	—	—	(1)	—	(1)
– mortality/morbidity[6]	(26)	19	7	—	—	(143)	(143)
– lapses[7]	(6)	(124)	(1)	—	(131)	(47)	(178)
– other[8]	(17)	152	—	—	135	(61)	74
	(43)	13	4	3	(23)	(251)	(274)
Expected return on shareholders' net worth	85	72	12	—	169	41	210
Other operating variances[9]	(45)	(99)	1	—	(143)	(112)	(255)
Operating earnings after tax and non-controlling interests	696	532	84	4	1,316	(246)	1,070
Economic variances[10]					753	(4)	749
Other non-operating variances[10]					(35)	(1)	(36)
Earnings after tax and non-controlling interests					2,034	(251)	1,783

1 Adverse expense experience occurred across a number of businesses. Within the UK the maintenance expense variance reflects a one-off realignment of investment expense allocation between With Profit and Non Profit business and project and other related expenses include higher expenditures related to increased level of regulatory change.
2 Mortality experience continues to be better than the assumption set across a number of our businesses.
3 Persistency experience remains volatile across most of our business, in part reflecting the wider economic circumstances. Positive lapse variance in Europe reflects increased lapses on business with guarantees in Italy.
4 Other experience includes the marginal impact of new business on the value of deferred losses in the US and Italy as well as other tax variances in the US and the impact of policyholders switching to with profit funds in France.
5 Maintenance expense assumptions have been revised based on recent analysis.
6 Mortality assumptions have been updated in the UK and US, primarily related to annuities.
7 Persistency assumptions have been updated in a number of businesses and include additional provisions in Europe reflecting economic circumstances.
8 Other operating assumption changes in Europe relate to a change to assumed management actions in relation to product charges in Poland.
9 Other operating variances relate to modelling refinements in the UK, France and Italy and the cost of capital transactions and model refinements in the US.
10 Economic variances reflect narrowing credit spreads on corporate bonds and sovereign debt (Italy), reduction in interest rates and equity market improvements, partly offset by increasing credit spreads on commercial mortgages in the UK. Other non-operating variances reflect exceptional costs due to Project Simplify and Solvency II. Allowance for reduction in future UK tax rates increases economic variances by £106 million in 2012. In 2013, the impact from any change in tax legislation is shown in other non-operating variances.

F4 – Geographical analysis of fund management operating earnings

The summarised consolidated income statement on an MCEV basis includes earnings from the Group's fund management operations as analysed below. This excludes the proportion of the results of Aviva Investors fund management businesses and other fund management operations within the Group that arise from the provision of fund management services to our Life businesses.

These results are included within the Life MCEV operating earnings.

	2013 £m	Restated[1] 2012 £m
Aviva Investors	**27**	12
United Kingdom	**23**	11
Asia	**2**	1
Total – continuing operations	**52**	24
Total – discontinued operations[2]	**31**	4
Total	**83**	28

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 Discontinued operations in 2013 represent the result for US operations on an IFRS basis. In the comparatives US operations are on a MCEV basis and exclude results for fund management services related to life business.

F5 – Other operations

Where subsidiaries provide services to our life business, that proportion has been excluded. For MCEV reporting, these results are included within the Life MCEV operating return.

	2013 £m	Restated[1] 2012 £m
United Kingdom & Ireland	**(20)**	(20)
Europe	**(7)**	(6)
Asia	**(12)**	(12)
Other operations[2]	**(41)**	(132)
Total – continuing operations	**(80)**	(170)
Total – discontinued operations[3]	**(4)**	(4)
Total	**(84)**	(174)

1 The income statement and other primary MCEV financial statements have been restated as set out in F1 Basis of Preparation.
2 Other operations include Group and head office costs.
3 Discontinued operations in 2013 represent the result for US operations on an IFRS basis. In the comparatives US operations are on a MCEV basis and exclude results for other operations related to life business

In 2013, we found evidence of improper allocation of trades in fixed income securities in Aviva Investors by two former employees. This occurred between 2006 – 2012. These breaches of our dealing policy involved late allocation of trades which favoured external hedge funds to the detriment of certain Aviva UK Life funds. The relevant regulatory authorities were notified at an early stage and have been kept fully apprised of the issue.

A thorough review of internal control processes relating to the dealing policy has been carried out by management and reviewed by PwC. Measures to improve controls have been implemented.

There is a total adverse impact on group operating profit from this activity of £132 million. This reflects the compensation of £126 million expected to be claimed in respect of these breaches and other associated costs of £6 million. These amounts are shown in operating profit in 'Other operations'.

Of this total, £96 million reflects the compensation expected to be claimed from, and other associated costs within, Aviva Investors. Compensation of £36 million relating to this matter is expected to be claimed from a group holding company.

Other operations also includes the Ireland pension scheme curtailment gain of £145 million.

F6 – Integration and restructuring costs

Integration and restructuring costs for continuing business during 2013 were £354 million (*FY12: £464 million*) and mainly include expenses associated with the Group's transformation programme. Compared with the prior period, integration and restructuring costs reduced by 24% mainly due to transformation activity in UK and Ireland's general insurance business during the first half of 2012 which was not repeated in 2013 and a reduction in Solvency II implementation costs to £76 million (*FY12*: *£95 million*), as the project moves towards completion.

F7 – Exceptional items

Exceptional 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. Exceptional items related to continuing operations were £256 million negative (*FY12: £51 million positive*). This includes the reduction of £344 million in VIF as a result of changes in pension regulation in Poland, gross £119 million due to changes in taxation in France and gross £18 million due to changes in taxation in Italy, partially offset by a benefit of £225 million gross due to the reduction in corporation tax rate in the UK.

F8 – Analysis of life and pension earnings

The following table provides an analysis of the movement in embedded value for covered business. The analysis is shown separately for free surplus, required capital and the value of in-force covered business, and includes amounts transferred between these categories. All figures are shown net of tax and non-controlling interests.

Net of tax and non-controlling interests 2013	Free surplus £m	Required capital[1] £m	VIF £m	Total MCEV £m
Opening MCEV	**2,078**	**7,789**	**5,074**	**14,941**
Opening Adjustments[2]	**(252)**	**(1,463)**	**657**	**(1,058)**
Adjusted Opening MCEV	**1,826**	**6,326**	**5,731**	**13,883**
New business value	**(321)**	**160**	**754**	**593**
Expected existing business contribution (reference rate)	**—**	**—**	**229**	**229**
Expected existing business contribution (in excess of reference rate)	**—**	**—**	**491**	**491**
Expected return on shareholders' net worth	**17**	**117**	**—**	**134**
Transfers from VIF and required capital to the free surplus	**1,217**	**(334)**	**(883)**	**—**
Experience variances	**(100)**	**130**	**10**	**40**
Assumption changes	**126**	**27**	**(192)**	**(39)**
Other operating variances	**270**	**200**	**(417)**	**53**
	296	**357**	**(599)**	**54**
Operating MCEV earnings	**1,209**	**300**	**(8)**	**1,501**
Economic variances	**(83)**	**11**	**940**	**868**
Other non-operating variances[3]	**119**	**—**	**(316)**	**(197)**
Total MCEV earnings	**1,245**	**311**	**616**	**2,172**
Capital & dividend flows[4]	**(597)**	**(4)**	**—**	**(601)**
Foreign exchange variances	**(4)**	**84**	**3**	**83**
Acquired/divested business[5]	**(160)**	**(166)**	**(221)**	**(547)**
Closing MCEV	**2,310**	**6,551**	**6,129**	**14,990**

1 Required capital is shown net of implicit items permitted by local regulators to cover minimum solvency margins.
2 Represents the removal of the US life held for sale operations from covered business on 1 January 2013 as set out in F1 Basis of Preparation.
3 Other non-operating variances are primarily driven by the impact of pension legislation changes in Poland as well as the impact of tax regulation changes in France and the UK.
4 Included within capital and dividend flows is the transfer to Life and related businesses from other segments consisting of service company profits and losses during the reported period that have emerged from the value of in-force. Since the 'look through' into service companies includes only future profits and losses, these amounts must be eliminated from the closing embedded value.
5 Acquired/divested business includes the adjustment for held for sale operations and the disposal of Aseval, Ark Life, Malaysia, Russia and Romania pensions.

	Continuing operations				Discontinued operations				Total
Net of tax and non-controlling interests 2012	Free surplus £m	Required capital[1] £m	VIF £m	Total MCEV £m	Free surplus £m	Required capital[1] £m	VIF £m	Total MCEV £m	Total MCEV £m
Opening MCEV	1,355	6,390	4,327	12,072	(11)	1,575	(1,362)	202	12,274
New business value	(389)	155	739	505	(319)	298	(161)	(182)	323
Expected existing business contribution (reference rate)	—	—	339	339	—	—	55	55	394
Expected existing business contribution (in excess of reference rate)	—	—	577	577	—	—	314	314	891
Expected return on shareholders' net worth	56	113	—	169	(7)	48	—	41	210
Transfers from VIF and required capital to the free surplus	1,133	(246)	(887)	—	587	(375)	(212)	—	—
Experience variances	112	(162)	(58)	(108)	(212)	53	48	(111)	(219)
Assumption changes	—	30	(53)	(23)	—	—	(251)	(251)	(274)
Other operating variances	314	30	(487)	(143)	(8)	—	(104)	(112)	(255)
	426	(102)	(598)	(274)	(220)	53	(307)	(474)	(748)
Operating MCEV earnings	1,226	(80)	170	1,316	41	24	(311)	(246)	1,070
Economic variances	(390)	121	1,022	753	216	(67)	(153)	(4)	749
Other non-operating variances[2]	(71)	—	36	(35)	(4)	—	3	(1)	(36)
Total MCEV earnings	765	41	1,228	2,034	253	(43)	(461)	(251)	1,783
Capital & dividend flows[3]	(299)	—	—	(299)	16	—	—	16	(283)
Foreign exchange variance	5	(88)	27	(56)	(6)	(69)	71	(4)	(60)
Acquired/divested business[4]	—	(17)	149	132	—	—	1,095	1,095	1,227
Closing MCEV	1,826	6,326	5,731	13,883	252	1,463	(657)	1,058	14,941

1 Required capital is shown net of implicit items permitted by local regulators to cover minimum solvency margins.
2 Other non-operating variances relate to costs for Solvency II implementation and other restructuring exercises, as well as the impact of regulatory changes in Poland and Turkey.
3 Included within capital and dividend flows is the transfer to Life and related businesses from other segments consisting of service company profits and losses during the reported period that have emerged from the value of in-force. Since the 'look through' into service companies includes only future profits and losses, these amounts must be eliminated from the closing embedded value.
4 Acquired/divested business includes the adjustment for held for sale operations, the acquisition of Pelayo Vida on 17 January 2012, and the divesture of Czech, Hungarian, Romanian and Sri Lankan Life businesses.

F9 – Operating capital generation

The operating capital generation is the free surplus component of the operating MCEV earnings (see note F8). The table below shows the operating capital generation for existing and new business.

Net of tax and non-controlling interests 2013	United Kingdom & Ireland £m	Europe £m	Asia & Other £m	Total £m
Existing business				
Transfer from VIF to net worth	**358**	**448**	**77**	**883**
Return on net worth	**64**	**58**	**12**	**134**
Impact of experience variances and assumption changes on net worth	**521**	**61**	**71**	**653**
Release of required capital to free surplus	**(381)**	**210**	**31**	**(140)**
Total existing business free surplus generation	**562**	**777**	**191**	**1,530**
New business				
Impact on net worth	**(26)**	**(90)**	**(45)**	**(161)**
Reduction in free surplus from required capital	**43**	**(182)**	**(21)**	**(160)**
Total new business free surplus generation	**17**	**(272)**	**(66)**	**(321)**
Total free surplus generation	**579**	**505**	**125**	**1,209**

Net of tax and non-controlling interests Restated 2012	United Kingdom & Ireland £m	Europe £m	Asia & Other £m	Total continuing operations £m	Total discontinued operations[1] £m	Total £m
Existing business						
Transfer from VIF to net worth	364	451	72	887	212	1,099
Return on net worth	85	72	12	169	41	210
Impact of experience variances and assumption changes on net worth	194	72	58	324	(167)	157
Release of required capital to free surplus	67	126	42	235	274	509
Total existing business free surplus generation	710	721	184	1,615	360	1,975
New business						
Impact on net worth	(78)	(101)	(55)	(234)	(21)	(255)
Reduction in free surplus from required capital	41	(167)	(29)	(155)	(298)	(453)
Total new business free surplus generation	(37)	(268)	(84)	(389)	(319)	(708)
Total free surplus generation	673	453	100	1,226	41	1,267

1 Represents the results of the United States.

The above table includes the impact of a true-up of a prior estimate of required capital in Europe, negatively impacting Free Surplus Generation by £88 million.

F10 – Segmental analysis of life and related business embedded value

Net of tax and non-controlling interests £m	2013 Free surplus £m	2013 Required Capital[1] £m	2013 VIF £m	2013 Total MCEV £m	Restated 2012 Free surplus £m	Restated 2012 Required Capital[1] £m	Restated 2012 VIF £m	Restated 2012 Total MCEV £m	Movement in Total MCEV £m
United Kingdom	**1,444**	**3,131**	**2,802**	**7,377**	1,230	2,648	2,621	6,499	**878**
Ireland	**131**	**165**	**370**	**666**	96	246	480	822	**(156)**
United Kingdom & Ireland	**1,575**	**3,296**	**3,172**	**8,043**	1,326	2,894	3,101	7,321	**722**
France	**227**	**2,213**	**1,231**	**3,671**	80	2,106	984	3,170	**501**
Poland	**202**	**111**	**969**	**1,282**	161	113	1,282	1,556	**(274)**
Italy[2,3]	**62**	**484**	**77**	**623**	(42)	598	(172)	384	**239**
Spain[3]	**32**	**204**	**137**	**373**	58	294	178	530	**(157)**
Other Europe	**10**	**15**	**102**	**127**	25	29	105	159	**(32)**
Europe	**533**	**3,027**	**2,516**	**6,076**	282	3,140	2,377	5,799	**277**
Asia	**197**	**223**	**431**	**851**	180	282	240	702	**149**
Other	**5**	**5**	**10**	**20**	38	10	13	61	**(41)**
Total – excluding United States	**2,310**	**6,551**	**6,129**	**14,990**	1,826	6,326	5,731	13,883	**1,107**
Total – United States					252	1,463	(657)	1,058	**(1,058)**
Total	**2,310**	**6,551**	**6,129**	**14,990**	2,078	7,789	5,074	14,941	**49**

1 Required capital is shown net of implicit items permitted by local regulators to cover minimum solvency margins.
2 At 31 December 2012, Italy had a positive free surplus on a statutory basis.
3 Required capital in Italy and Spain reflects the current economic environment and is in excess of regulatory requirements.

The required capital across our life businesses varies between 100% and 200% of EU minimum or equivalent (*100% to 325% at FY12)*. The figures have changed since FY12 given that the US is no longer included in covered business. The weighted average level of required capital for our life business expressed as a percentage of the EU minimum (or equivalent) solvency margin has decreased to 114% (*FY12: 134%*). These levels of required capital are used in the calculation of the Group's embedded value to evaluate the cost of locked in capital. At 31 December 2013 the aggregate regulatory requirements based on the EU minimum test amounted to £5.8 billion (*FY12: £5.8 billion*). At this date, the actual net worth held in our long-term business, was £8.9 billion (*FY12: £9.9 billion*) which represents 153% (*FY12: 170%*) of these minimum requirements.

F11 – Present value of life new business premiums

The tables below set out the present value of new business premiums (PVNBP) written by the life and related businesses, gross of tax and non-controlling interests. The PVNBP calculation is equal to total single premium sales received in the period plus the discounted value of regular premiums expected to be received over the term of the new contracts, and is expressed at the point of sale.

The premium volumes and projection assumptions used to calculate the present value of regular premiums for each product are the same as those used to calculate the value of new business, so the components of the new business margin are on a consistent basis.

The weighted average capitalisation factor (WACF) is the multiple of the annualised regular premium which gives the present value at point of sale of the regular premiums.

Gross of tax and non-controlling interests 2013	**Regular premiums £m**	**WACF**	**Present value of regular premiums £m**	**Single premiums £m**	**Present value of new business premiums £m**
United Kingdom	**783**	**5.0**	**3,921**	**5,458**	**9,379**
Ireland	**26**	**4.4**	**114**	**355**	**469**
United Kingdom & Ireland	**809**	**5.0**	**4,035**	**5,813**	**9,848**
France	**89**	**8.1**	**723**	**3,786**	**4,509**
Poland	**38**	**9.0**	**341**	**145**	**486**
Italy	**51**	**5.5**	**280**	**1,955**	**2,235**
Spain	**52**	**5.6**	**290**	**934**	**1,224**
Other Europe	**103**	**4.6**	**473**	**71**	**544**
Europe	**333**	**6.3**	**2,107**	**6,891**	**8,998**
Asia	**286**	**5.4**	**1,536**	**108**	**1,644**
Other	**—**	**—**	**—**	**58**	**58**
Total life and pensions	**1,428**	**5.4**	**7,678**	**12,870**	**20,548**

Gross of tax and non-controlling interests Restated 2012	Regular premiums £m	WACF	Present value of regular premiums £m	Single premiums £m	Present value of new business premiums £m
United Kingdom	771	4.9	3,793	6,617	10,410
Ireland	33	3.8	127	505	632
United Kingdom & Ireland	804	4.9	3,920	7,122	11,042
France	74	7.9	584	3,054	3,638
Poland	36	7.3	261	112	373
Italy	54	5.9	317	1,654	1,971
Spain	67	5.6	375	920	1,295
Other Europe	86	4.1	352	119	471
Europe	317	6.0	1,889	5,859	7,748
Asia	282	5.3	1,482	283	1,765
Other	—	—	—	91	91
Total life and pensions – continuing operations	1,403	5.2	7,291	13,355	20,646
Total life and pensions – discontinued operations[1]	130	11.1	1,440	2,599	4,039
Total life and pensions	1,533	5.7	8,731	15,954	24,685

1 Represents the results of the United States.

F12 – Geographical analysis of value of new business

The tables below set out the present value of new business premiums (PVNBP) written by the life and related businesses, the value of the new business and the resulting margin, firstly gross and then net of tax and non-controlling interests. The value generated by new business written during the period is the present value of the projected stream of after-tax distributable profit from that business, including expected profit between point of sale and the valuation date. It reflects the additional value to shareholders created through the activity of writing new business including the impacts of interactions between in force and new business with the exception of tax as noted in the basis of preparation. The value of new business has been calculated using economic assumption at the point of sale which has been implemented with the assumptions being taken as those appropriate to the start of each quarter. For contracts that are re-priced more frequently, weekly or monthly economic assumptions have been used. The operating assumptions are consistent with those used to determine the embedded value. The value of new business is shown after the effect of the frictional costs of holding required capital, and after the effect of the costs of residual non-hedgeable risks on the same basis as for the in-force covered business.

Gross of tax and non-controlling interests	Present value of new business premiums 2013 £m	Present value of new business premiums Restated 2012 £m	Value of new business 2013 £m	Value of new business Restated 2012 £m	New business margin 2013 %	New business margin Restated 2012 %
United Kingdom	**9,379**	10,410	**435**	420	**4.6%**	4.0%
Ireland	**469**	632	**6**	(8)	**1.3%**	(1.3)%
United Kingdom & Ireland	**9,848**	11,042	**441**	412	**4.5%**	3.7%
France	**4,509**	3,638	**166**	119	**3.7%**	3.3%
Poland	**486**	373	**51**	35	**10.5%**	9.4%
Italy	**2,235**	1,971	**15**	29	**0.7%**	1.5%
Spain	**1,224**	1,295	**33**	56	**2.7%**	4.3%
Other Europe	**544**	471	**38**	32	**7.0%**	6.8%
Europe	**8,998**	7,748	**303**	271	**3.4%**	3.5%
Asia	**1,644**	1,765	**92**	63	**5.6%**	3.6%
Other	**58**	91	**—**	—	**0.0%**	0.0%
Total life and pensions – continuing operations	**20,548**	20,646	**836**	746	**4.1%**	3.6%
Total life and pensions – discontinued operations[1]		4,039		(280)		(6.9)%
Total life and pensions	**20,548**	24,685	**836**	466	**4.1%**	1.9%

1 Prior period represents the results of the United States.

Net of tax and non-controlling interests	Present value of new business premiums 2013 £m	Present value of new business premiums Restated 2012 £m	Value of new business 2013 £m	Value of new business Restated 2012 £m	New business margin 2013 %	New business margin Restated 2012 %
United Kingdom	**9,379**	10,410	**335**	319	**3.6%**	3.1%
Ireland	**448**	474	**5**	(6)	**1.1%**	(1.3)%
United Kingdom & Ireland	**9,827**	10,884	**340**	313	**3.5%**	2.9%
France	**3,788**	2,996	**96**	67	**2.5%**	2.2%
Poland	**440**	339	**38**	26	**8.6%**	7.7%
Italy	**933**	841	**4**	8	**0.4%**	1.0%
Spain	**689**	719	**9**	15	**1.3%**	2.1%
Other Europe	**544**	470	**30**	26	**5.5%**	5.5%
Europe	**6,394**	5,365	**177**	142	**2.8%**	2.6%
Asia	**1,643**	1,748	**76**	50	**4.6%**	2.9%
Other	**58**	91	**—**	—	**0.0%**	0.0%
Total life and pensions – continuing operations	**17,922**	18,088	**593**	505	**3.3%**	2.8%
Total life and pensions – discontinued operations[1]		4,039		(182)		(4.5)%
Total life and pensions	**17,922**	22,127	**593**	323	**3.3%**	1.5%

1 Prior period represents the results of the United States.

F13 – Maturity profile of business

(a) Total in-force business

To show the discounted profile of the VIF emergence, the value of VIF in the statements of financial position has been split into five-year tranches depending on the date when the profit is expected to emerge.

Net of non-controlling interests 31 December 2013 £m	**0-5[1]**	**6-10**	**11-15**	**16-20**	**20+**	**Total**
United Kingdom & Ireland	**539**	**875**	**628**	**286**	**844**	**3,172**
Europe	**979**	**673**	**401**	**223**	**240**	**2,516**
Asia and Other	**212**	**93**	**74**	**31**	**31**	**441**
Total	**1,730**	**1,641**	**1,103**	**540**	**1,115**	**6,129**

1 For held for sale operations, the VIF emergence is reported in the 0-5 column.

Net of non-controlling interests Restated 31 December 2012 £m	0-5[1]	6-10	11-15	16-20	20+	Total
United Kingdom & Ireland	496	893	639	261	812	3,101
Europe	900	517	352	227	381	2,377
Asia and Other	208	137	32	11	(135)	253
Total – excluding United States	1,604	1,547	1,023	499	1,058	5,731
Total – United States	(657)	—	—	—	—	(657)
Total	947	1,547	1,023	499	1,058	5,074

1 For held for sale operations, the VIF emergence is reported in the 0-5 column.

(b) New business

To show the discounted profile of the VIF emergence, the value of new business has been split into five-year tranches depending on the date when the profit is expected to emerge.

Net of non-controlling interests 31 December 2013 £m	**0-5[1]**	**6-10**	**11-15**	**16-20**	**20+**	**Total**
United Kingdom & Ireland	**89**	**64**	**45**	**32**	**136**	**366**
Europe	**97**	**69**	**41**	**28**	**32**	**267**
Asia and Other	**73**	**25**	**12**	**5**	**6**	**121**
Total	**259**	**158**	**98**	**65**	**174**	**754**

1 For held for sale operations, the VIF emergence is reported in the 0-5 column.

Net of non-controlling interests Restated 31 December 2012 £m	0-5[1]	6-10	11-15	16-20	20+	Total
United Kingdom & Ireland	85	73	50	35	148	391
Europe	112	55	35	19	21	242
Asia and Other	53	29	11	9	4	106
Total – continuing operations	250	157	96	63	173	739
Total – discontinued operations[2]	(161)	—	—	—	—	(161)
Total	89	157	96	63	173	578

1 For held for sale operations, the VIF emergence is reported in the 0-5 column.
2 Represents the results of the United States.

F14 – Risk allowance within present value of in-force (VIF)

Within the VIF in the tables, there are additional allowances for risks not included within the basic present value of future profits calculation.

Net of non-controlling interests 31 December 2013 £m	PVFP £m	Frictional costs £m	Non-hedgeable risks £m	Time value of financial options and guarantees £m	VIF £m
United Kingdom	**3,565**	**(249)**	**(458)**	**(56)**	**2,802**
Ireland	**395**	**(7)**	**(18)**	**—**	**370**
United Kingdom & Ireland	**3,960**	**(256)**	**(476)**	**(56)**	**3,172**
France	**2,300**	**(155)**	**(212)**	**(702)**	**1,231**
Poland	**1,150**	**(9)**	**(111)**	**(61)**	**969**
Italy	**142**	**(10)**	**(30)**	**(25)**	**77**
Spain	**177**	**(9)**	**(25)**	**(6)**	**137**
Other Europe	**104**	**(1)**	**(1)**	**—**	**102**
Europe	**3,873**	**(184)**	**(379)**	**(794)**	**2,516**
Asia	**564**	**(31)**	**(73)**	**(29)**	**431**
Other	**11**	**—**	**(1)**	**—**	**10**
Total	**8,408**	**(471)**	**(929)**	**(879)**	**6,129**

The removal of the United States from covered business as set out in F1 Basis of Preparation has reduced the total risk allowances. Excluding the United States, relative to FY12:

- Frictional costs have become more negative by £65 million primarily due to economic movements in France.
- The allowance for non-hedgeable risks has become less negative by £165 million, primarily in Poland, due to the pension legislation change in Poland which has reduced the allowance for future legislation risk, given the lower value now at risk.
- The Time Value of Options and Guarantees has become less negative by £25 million, although this is the aggregate of a number of significant positive and negative changes. In particular, the value has become less negative due to management actions in the European businesses and favourable economics in Asia. This is partially offset by the impact of pensions legislation change in Poland, which has increased the volatility of future management charges.

Net of non-controlling interests Restated 31 December 2012 £m	PVFP £m	Frictional costs £m	Non-hedgeable risks £m	Time value of financial options and guarantees £m	VIF £m
United Kingdom	3,334	(241)	(436)	(36)	2,621
Ireland	512	(8)	(24)	—	480
United Kingdom & Ireland	3,846	(249)	(460)	(36)	3,101
France	2,050	(105)	(225)	(736)	984
Poland	1,545	(8)	(244)	(11)	1,282
Italy	(96)	(7)	(34)	(35)	(172)
Spain	241	(5)	(39)	(19)	178
Other Europe	108	(1)	(2)	—	105
Europe	3,848	(126)	(544)	(801)	2,377
Asia	427	(31)	(89)	(67)	240
Other	14	—	(1)	—	13
Total – excluding United States	8,135	(406)	(1,094)	(904)	5,731
Total – United States	(50)	(141)	(158)	(308)	(657)
Total	8,085	(547)	(1,252)	(1,212)	5,074

F15 – Implied discount rates (IDR)

In the valuation of a block of business, the IDR is the rate of discount such that a traditional embedded value calculation for the covered business equates to the MCEV.

The cash flows projected are the expected future cash flows including expected investment cash flows from equities, bonds and properties earning a risk premium in excess of risk free, statutory reserves and required capital. The risk premiums used are consistent with those used in the expected existing business contribution within operating earnings. As the risk premiums are positive, a discount rate higher than risk-free is required to give a value equal to the market-consistent embedded value.

Average derived risk discount rates are shown below for the embedded value.

	31 December 2013 %	Restated 31 December 2012 %
United Kingdom	**6.8%**	7.2%
Ireland[1]	**1.9%**	1.9%
United Kingdom & Ireland	**6.4%**	6.4%
France	**7.0%**	6.7%
Poland	**6.3%**	5.2%
Italy[1,2,3]	**4.3%**	14.9%
Spain[1]	**8.4%**	12.9%
Other Europe[1]	**9.8%**	6.5%
Europe	**6.5%**	8.0%
Asia[1]	**4.9%**	5.6%
Other	**—**	—
Total – excluding United States[1]	**6.4%**	7.2%
Total – United States[1,4]	**n/a**	n/a
Total	**6.4%**	n/a

1 IDRs have been calculated excluding held for sale operations, reflecting that they are stated at expected fair value less cost to sell.
2 The 2012 IDR for Italy has been amended since FY12 from 13.4% to 14.9% to reflect a correction in the real world investment return assumptions. The revised FY12 IDR has been used to determine the expected existing business contribution (in excess of the reference rate) for 2013 in the analysis of life MCEV earnings.
3 The IDR for Italy has decreased since FY12 following significant narrowing of government bond spreads and increases in risk-free rates, which has reduced substantially the difference between the risk-free and real-world returns.
4 Where there is a significant difference in projected real world and risk neutral profits and the value of the in force business plus required capital is negative or close to zero, the IDR is not well defined and consequently IDR is not meaningful.

F16 – Summary of non-controlling interest in life and related businesses' MCEV results

31 December 2013	**Ireland £m**	**France £m**	**Spain £m**	**Italy £m**	**Poland £m**	**Asia £m**	**Total £m**	**Share-holders' Interest £m**	**Group £m**
Value of new business after tax	**—**	**13**	**14**	**6**	**4**	**—**	**37**	**593**	**630**
Life MCEV operating (loss)/earnings after tax	**—**	**(2)**	**26**	**147**	**14**	**—**	**185**	**1,501**	**1,686**
Life MCEV (loss)/earnings after tax	**—**	**(6)**	**149**	**412**	**(39)**	**—**	**516**	**2,172**	**2,688**
Closing covered businesses' embedded value	**—**	**281**	**311**	**741**	**166**	**2**	**1,501**	**14,990**	**16,491**

31 December 2012	Ireland £m	France £m	Spain £m	Italy £m	Poland £m	Asia £m	Total £m	Share-holders' Interest £m	Group £m
Value of new business after tax	(2)	12	24	10	3	1	48	323	371
Life MCEV operating earnings after tax	13	36	79	154	30	2	314	1,070	1,384
Life MCEV earnings after tax	15	75	60	626	59	1	836	1,783	2,619
Closing covered businesses' embedded value	272	280	406	381	214	3	1,556	14,941	16,497

Non-controlling interest in life and related businesses is not impacted by the treatment of held for sale operations. There are no non-controlling interests in the United Kingdom or United States (comparative period only).

F17 – Principal assumptions

(a) Economic assumptions – Deterministic calculations

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

In setting the risk-free rate we have, wherever possible, used the mid-price swap yield curve for an AA-rated bank. The curve is extrapolated beyond the last available market data point to an ultimate forward rate using the Nelson-Siegel functional form if necessary. For markets in which there is no reliable swap yield curve, the relevant government bond yields are used. For certain business, swap rates are adjusted for a 'liquidity premium' in deriving the risk free rates, and these adjustments are shown below the reference rate table.

Required capital is shown as a multiple of the EU statutory minimum solvency margin or equivalent.

The principal economic assumptions used are as follows:

Reference rate (spot, swap rates) and expense inflation

United Kingdom	2013	2012	2011
Reference Rate			
1 year	**0.6%**	0.6%	1.2%
5 years	**2.2%**	1.0%	1.6%
10 years	**3.1%**	1.9%	2.3%
15 years	**3.5%**	2.6%	2.8%
20 years	**3.6%**	2.9%	3.0%
Expense inflation	**3.4%**	2.8%	2.8%

Eurozone	2013	2012	2011
Reference Rate			
1 year	**0.4%**	0.3%	1.4%
5 years	**1.3%**	0.8%	1.7%
10 years	**2.2%**	1.6%	2.4%
15 years	**2.7%**	2.1%	2.8%
20 years	**2.9%**	2.3%	2.8%
Expense inflation[1]	**2.5%**	2.5%	2.5%

1 Based on France, the largest Eurozone business.

Poland	2013	2012	2011
Reference Rate			
1 year	**2.7%**	3.4%	4.9%
5 years	**3.7%**	3.4%	4.8%
10 years	**4.3%**	3.5%	5.0%
15 years	**4.4%**	3.4%	4.7%
20 years	**4.3%**	3.2%	4.3%
Expense inflation	**3.8%**	2.1%	2.9%

United States	2013	2012	2011
Reference Rate			
1 year	**n/a**	0.3%	0.7%
5 years	**n/a**	0.9%	1.2%
10 years	**n/a**	1.9%	2.1%
15 years	**n/a**	2.4%	2.5%
20 years	**n/a**	2.7%	2.6%
Expense inflation	**n/a**	2.0%	2.0%

For service companies, expense inflation relates to the underlying expenses rather than the fees charged to the life company.

The following adjustments are made to the swap rate for immediate annuity type contracts and for all contracts for Aviva USA (comparative period only).

The risk-free rate is taken as the swap yield curve for the currency of the liability, adjusted by adding the following to each swap rate:

	New business								Embedded value	
	4Q 2013	**3Q 2013**	**2Q 2013**	**1Q 2013**	4Q 2012	3Q 2012	2Q 2012	1Q 2012	**2013**	2012
UK immediate annuities[1]	**1.06%**	**1.17%**	**1.21%**	**1.24%**	1.19%	1.49%	1.46%	1.34%	**1.07%**	1.30%
UK bulk purchase annuities[1]	**1.06%**	**1.17%**	**1.21%**	**1.24%**	1.19%	1.49%	1.46%	1.34%	**1.07%**	1.30%
Ireland immediate annuities	**0.08%**	**0.10%**	**0.10%**	**0.11%**	n/a	n/a	n/a	n/a	**0.07%**	n/a
France	**n/a**	**n/a**	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**0.28%**	0.44%
Spain	**0.09%**	**0.19%**	**0.23%**	**0.17%**	0.13%	0.09%	0.28%	0.35%	**0.18%**	0.30%
US immediate annuities	**n/a**	**n/a**	**n/a**	**n/a**	0.83%	0.95%	1.00%	1.26%	**n/a**	0.91%
US deferred annuities and all other contracts	**n/a**	**n/a**	**n/a**	**n/a**	0.70%	0.81%	0.84%	1.07%	**n/a**	0.77%

1 An additional provision of £250 million (*FY12: £150 million*) has been set aside by the UK due to the uncertainty in their estimation of future liquidity premium on mark to model assets (commercial, healthcare and equity release mortgages). This additional provision reduces total MCEV only.

The approach to estimating the market level of liquidity premium in corporate bond assets is consistent with the formula structure proposed by CFO/CRO Forum and adopted in the Solvency II Fifth Quantitative Impact Study (QIS5).

F17 – Principal assumptions continued

(a) Economic assumptions – Deterministic calculations continued

The formula is:

United Kingdom/Europe:	50% of (iBoxx Corporate bond spread – 40bp)
USA:	60% of (iBoxx Corporate bond spread – 40bp)

For assets valued on a marked to model basis (e.g., commercial mortgages), the liquidity premium is consistent with the underlying model valuation.

Adjustments are made where liabilities are not fully backed by assets earning a liquidity premium and for contracts that are exposed to some lapse risk (15% reduction to the market level liquidity premium). There has been no change to the types of contracts to which a liquidity premium is applied, and it is applied to all components of the MCEV with the exception of the adjustment for the "look-through" into service company expenses.

Risk premium – used for operating profit, Implied Discount Rates (IDR), Internal Rates of Return (IRR) and payback period

For life and pensions operating earnings, Aviva uses normalised investment returns. The normalised investment returns are expressed as a swap rate based on the typical duration of the assets held plus an asset risk premium. More detail is given in note F1 Basis of preparation.

The use of asset risk premia only impacts operating earnings as expected returns reflect management's long-term expectations of asset returns in excess of the reference rate from investing in different asset classes. This assumption does not impact the embedded value or value of new business as asset risk premia are not recognised until earned. The asset risk premia set out in the table below are added to the ten year swap rate to calculate expected returns.

All territories	2013	2012	2011
Equity risk premium	**3.5%**	3.5%	3.5%
Property risk premium	**2.0%**	2.0%	2.0%

Future returns on fixed interest investments are calculated from prospective yields less an adjustment for credit risk; this includes an adjustment for credit risk on all Eurozone sovereign debt.

Required capital and tax

	Tax rates[1]			Required capital (% EU minimum or equivalent)	
	2013	2012	2011	**2013**	2012
United Kingdom[2]	**20.0%**	23.0%	25.0%	**100%/200%**	100%/200%
Ireland[3]	**12.5%**	12.5%	12.5%	**180.0%**	174%/180%
France	**34.4%**	34.4%	34.4%	**107.5%**	107.5%
United States	**n/a**	35.0%	35.0%	**n/a**	325%
Spain[4]	**30.0%**	30.0%	30.0%	**188.1%**	177%
Italy[5]	**34.3%**	34.3%	34.3%	**191.7%**	243%
Poland	**19.0%**	19.0%	19.0%	**125.5%**	125.5%

1 Current tax legislation and rates have been assumed to continue unaltered except where changes in future tax rates have been substantively enacted.
2 The required capital in the United Kingdom under MCEV is 100% for unit-linked and other non-participating business and annuity business with 200% for BPA business. In addition, the reattribution of the inherited estate has led to additional capital being locked in to support the with-profit business, and this has been included within required capital.
3 Required capital in Ireland for the comparative period under MCEV is 174% for bancassurance and 180% for retail business.
4 This is the aggregate required capital for in force business in Spain. The increase in 2012 and 2013 reflects the current economic environment. New business metrics continue to use management target levels of required capital (123%-134% of EU minimum), which better reflects the capital requirements of the new business.
5 This is the aggregate required capital level for in force business in Italy and reflects the current economic environment. New business metrics continue to use management target levels of required capital (115%-120% of EU minimum), which better reflects the capital requirements of the new business

Legislation was substantively enacted in July 2013 to reduce the main rate of UK Corporation tax to 21% from 1 April 2014, with a further reduction to 20% from 1 April 2015. This reduction to 20% is considered a known future change for MCEV purposes and has been reflected in the Group's MCEV net assets as at 31 December 2013, increasing net MCEV by £173 million.

In France a 3% dividend distribution tax was introduced with effect from 17 August 2012. This applies to the distributions of profits from Aviva France to its Aviva parent company in the UK. A provision has been included in the Group MCEV net assets at 31 December 2013 and results in a reduction in net assets of £74 million.

Other economic assumptions

Required capital relating to with-profit business is generally assumed to be covered by the surplus within the with-profit funds and no effect has been attributed to shareholders. Where the fund is insufficient and additional shareholder support is required, this is included within required capital, including the RIEESA in the UK. Bonus rates on participating business have been set at levels consistent with the economic assumptions. The distribution of profit between policyholders and shareholders within the with-profit funds assumes that the shareholder interest in conventional with-profit business in the UK and Ireland continues at the current rate of one-ninth of the cost of bonus. In the UK shareholder transfers from the New With-Profit Sub Fund (NWPSF) will cease after 2016, with these transfers being directed into the RIEESA from that date. This will accelerate the release of the RIEESA which will be a source of future shareholder returns.

F17 – Principal assumptions continued

(b) Economic assumptions – Stochastic calculations

The calculation of time value of options and guarantees allows for expected management and policyholder actions in response to varying future investment conditions. The management actions modelled include changes to asset mix, bonus rates and rates of interest and other guarantees granted to policyholders. Modelled policyholder actions are described under 'Non-economic assumptions'.

Model – United Kingdom and United States

Swap rates are generated by a model, the LIBOR Market Model Plus (LMM+), which projects a full swap curve at monthly intervals.

Forward rates are assumed to have a distribution that lies between the log-normal and normal distributions. Although this no longer guarantees non-negative interest rates, it maintains interest rates within a more plausible range than the standard Libor Market Model, and gives a better fit to certain swaption volatility surfaces. The model is calibrated to volatilities for swaptions for ten year swaps for a range of option terms and strike rates. Swaption volatilities are provided by SuperDerivatives. In the case of the United States, an adjustment is made to the starting reference rate as described above. After making this adjustment the interest rate model is calibrated to the swaption implied volatilities supplied by SuperDerivatives. Tests have been performed to ensure that sufficient scenarios have been used that the result converges to the stochastic value of the business being valued.

The total annual return on equities is calculated as the return on one-year swaps plus an excess return. For the UK, a stochastic volatility jump defusion model is used, which allows for varying levels of volatility over time and across strike prices. Option volatilities are taken from Markit. For the US, this excess return is modelled using a log-normal model where volatility varies by time horizon. This allows the model to capture the term structure of implied volatilities. The model is calibrated to at-the-money options of a variety of terms.

The model also generates property total returns and real yield curves, which are significant asset classes for the UK only. In the absence of liquid market data, the property volatilities are based on historic data.

Assumptions for correlations between asset classes have been set based on historic data.

Model – Europe and Asia

Swap rates are generated by a model, the LIBOR Market Model (LMM) that projects a full swap curve at monthly intervals. Forward rates are assumed to have a log-normal distribution which guarantees non-negative interest rates. The model is calibrated to at-the-money options of a variety of terms and tenors. Swaption volatilities are taken from SuperDerivatives. Tests have been performed to ensure that sufficient scenarios have been used that the result converges to the stochastic value of the business being valued.

The total annual return on equities is calculated as the return on one-year swaps plus an excess return. This excess return is generally modelled using a log-normal model where volatility varies by time horizon. This allows the model to capture the term structure of implied volatilities. For most business, the model is calibrated to at-the-money options of a variety of terms; the exception is the model in Poland which uses a fixed volatility based on historic data, given the lack of a deep and liquid market for options in Poland. Option volatilities are taken from Markit.

Assumptions for correlations between asset classes have been set based on historic data.

Asset classes

The significant asset classes for UK participating business are equities, property and long-term fixed rate bonds. The most significant assumptions are the distribution of future long-term interest rates (nominal and real) and swaption implied volatilities.

For many businesses, including France and the US (comparative period only), the most important assets are fixed rate bonds of various durations. For Poland the most significant asset class is equity.

Summary statistics

Swaption implied volatilities

The implied volatility is that determined by Black-Scholes' formula to reproduce the market price of the option. The following table sets out the swaption implied volatilities.

	2013 Swap length				2012 Swap length			
Option length	**10 years**	**15 years**	**20 years**	**25 years**	10 years	15 years	20 years	25 years
UK Sterling								
10 years	**16.3%**	**16.0%**	**15.5%**	**15.2%**	17.1%	16.4%	16.0%	15.7%
15 years	**15.4%**	**14.9%**	**14.2%**	**13.8%**	15.2%	14.8%	14.2%	13.9%
20 years	**15.1%**	**14.3%**	**13.5%**	**13.0%**	14.8%	14.1%	13.4%	13.1%
25 years	**14.9%**	**14.2%**	**13.2%**	**12.5%**	14.9%	14.1%	13.5%	13.1%
Euro								
10 years	**23.3%**	**22.3%**	**21.7%**	**21.1%**	24.6%	24.0%	23.5%	23.1%
15 years	**23.3%**	**21.5%**	**20.2%**	**19.3%**	25.5%	24.2%	22.7%	21.8%
20 years	**23.0%**	**20.3%**	**18.4%**	**17.5%**	25.7%	23.0%	20.9%	20.1%
25 years	**21.8%**	**18.7%**	**16.9%**	**15.9%**	23.6%	20.5%	18.8%	18.2%
US dollar								
10 years	**n/a**	**n/a**	**n/a**	**n/a**	23.0%	21.6%	21.2%	21.5%
15 years	**n/a**	**n/a**	**n/a**	**n/a**	21.9%	20.1%	20.1%	20.8%
20 years	**n/a**	**n/a**	**n/a**	**n/a**	20.4%	19.0%	18.8%	19.4%
25 years	**n/a**	**n/a**	**n/a**	**n/a**	20.4%	20.0%	20.4%	20.9%
Poland Zloty[1]								
10 years	**19.2%**	**19.0%**	**18.6%**	**18.1%**	n/a	n/a	n/a	n/a
15 years	**16.6%**	**16.3%**	**15.8%**	**15.2%**	n/a	n/a	n/a	n/a
20 years	**15.1%**	**14.7%**	**14.2%**	**13.6%**	n/a	n/a	n/a	n/a
25 years	**13.8%**	**13.3%**	**12.8%**	**12.3%**	n/a	n/a	n/a	n/a

1 Based on implied volatilities from modeled returns.

F17 – Principal assumptions continued

Equity implied volatilities

The implied volatility is that determined by the Black-Scholes formula to reproduce the market price of the option, except for Poland as noted above. The following table sets out the equity implied volatilities.

							2013
Option length	**UK**	**Ireland**	**France**	**US**	**Spain**	**Italy**	**Poland**
5 years	**18.9%**	**20.1%**	**20.1%**	**n/a**	**23.4%**	**20.1%**	**30.0%**
10 years	**22.1%**	**20.6%**	**20.6%**	**n/a**	**24.1%**	**20.6%**	**30.0%**
15 years	**22.4%**	**21.4%**	**21.4%**	**n/a**	**24.7%**	**21.4%**	**30.0%**

							2012
Option length	UK	Ireland	France	US	Spain	Italy	Poland
5 years	23.4%	24.6%	24.6%	23.9%	27.4%	24.6%	n/a
10 years	26.3%	24.7%	24.7%	26.6%	28.0%	24.7%	n/a
15 years	26.8%	25.0%	25.0%	27.7%	28.2%	25.0%	n/a

Property implied volatilities

Best estimate levels of volatility have been used in the absence of meaningful option prices from which implied levels of volatility can be derived.

For the UK, model property implied volatility is 15% for 31 December 2013 (*31 December 2012: 15%*).

(c) Non-economic assumptions

Demographic assumptions

Assumed future mortality, morbidity and lapse rates have been derived from an analysis of Aviva's recent operating experience with a view to giving a best estimate of future experience. We have anticipated future changes in experience where that is appropriate, for example we have allowed for improvements in future policyholder longevity.

We have set the assumptions based on a best estimate of shareholder outcomes. In particular, where the policyholder behaviour varies with economic experience, we have set assumptions which are dynamic, that is, vary depending on the economic assumptions.

For example, surrender and option take up rate assumptions that vary according to the investment scenario under consideration have been used in the calculation of the time value of options and guarantees, based on our assessment of likely policyholder behaviour in different investment scenarios.

Additionally, where demographic experience is not driven by economic scenarios but is asymmetric on a stand-alone basis, the best estimate assumption considers the weighted-average expected experience, not simply the median or most likely outcome.

Expense assumptions

Management expenses and operating expenses of holding companies attributed to life and related businesses have been included in the MCEV calculations and split between expenses relating to the acquisition of new business, the maintenance of business in-force and project expenses. Future expense assumptions include an allowance for maintenance expenses and a proportion of recurring project expenses. Certain expenses of an exceptional nature, when they occur, are identified separately and are generally charged as incurred. No future productivity gains have been anticipated, although in a number of start-up operations an allowance is made for the spreading of fixed costs over a larger volume of business.

Where subsidiary companies provide administration, investment management or other services to our life businesses, the value of profits or losses arising from these services have been included in the embedded value and value of new business.

Poland Pensions legislation change

During 2013 a review of the Pillar II Pensions system (OFE) was carried out and on 4 September 2013, the Polish government announced a preferred option to change the system, with the draft law being published on 10 October 2013. The changes are significant and in summary involve the transfer of over 50% of existing pensions assets to the state system along with an additional gradual transfer 10 years before retirement; in addition new premiums will be credited to the state system unless pension scheme members specifically state otherwise.

The document enacting the law was signed by the President on 27 December 2013 and became law on 1 February 2014. Given the scale of the changes, the impact on the value of the Poland pensions business is significant, reducing the value in force by £236 million (net of tax and minority interests), based on an assumption of 70% of existing customers directing future premiums to the state system. The impact is less than had been initially estimated as the final legislation did not restrict the level of management charges to be applied to the funds, as had been initially expected.

F17 – Principal assumptions continued

Non-hedgeable risk

For the balance sheet and operating profit, a charge of 3.9% (*FY 12: 3.6%*) has been applied to the group-diversified capital required on a 1-in-200 one-year basis over the remaining lifetime of in-force business. The charge is set so as to give an aggregate allowance that is in excess of the expected operational risk costs arising from the in-force covered business over its remaining lifetime. The increase in the charge since FY 12 results from a reassessment of the group diversification benefit.

The capital levels used are projected to be sufficient to cover non-hedgeable risks at the 99.5% confidence level one-year after the valuation date. The capital is equal to the capital from the ICA results for those risks considered including allowance for management actions consistent with the base MCEV. Diversification benefits are included between non-hedgeable risks of the covered business. No diversification benefit is assumed with hedgeable risks of the covered business or with non-covered business in general. The capital has been projected as running off over the remaining life of the in-force portfolio in line with the drivers of the capital requirement.

In addition to the operational risk allowance, financial non-hedgeable risks and other product level asymmetries have been allowed for. These allowances are not material as significant financial non-hedgeable risks and product level asymmetries are either modelled explicitly and included in the TVOG or are included in the PVFP through the use of appropriate best estimate assumptions.

Other

It has been assumed that there will be no changes to the methods and bases used to calculate the statutory technical provisions and current surrender values, except where driven by varying future investment conditions under stochastic economic scenarios.

(d) Held for sale operations, sold operations and other disposals

During 2013, certain life covered operations were either sold or classified as held for sale (consistent with the IFRS classification).

US long-term business

On 21 December 2012 the Group announced that it had agreed to sell the US life operations, consisting of Aviva Life and Annuity Company and the associated internal asset management operations of Aviva Investors North America, Inc, to Athene Holding Ltd for consideration of £1.0 billion including the shareholder loan (£1.1 billion including repayment of external loan) and these operations were classified as held for sale. Following this, the US Life segment was remeasured to fair value less costs to sell resulting in an increase to the closing MCEV at 31 December 2012 of £1,095 million, and from 1 January 2013 was no longer included within the covered business.

The sale of the Aviva US business completed on 2 October 2013 and the transaction proceeds received were based on the estimated earnings and other improvements in the statutory surplus over the period from 30 June 2012 to 30 September 2013. The final purchase price is subject to customary completion adjustments. The process to agree completion adjustments is on-going and is expected to complete by mid-2014. Until the outcome of this process is known there remains uncertainty on the final determination of the completion adjustment. We have recorded a profit on disposal of £808 million in 2013, calculated, reflecting management's best estimate of the expected proceeds.

The profit on disposal is calculated as the excess of the expected net cash consideration (£877 million) plus the currency translation and investment valuation reserves recycled to the income statement on completion (£644 million) over and above the IFRS net assets (£713 million).

Please refer to F1 - Basis of Preparation and Note 4 of the IFRS financial statements in the Group's Annual report and accounts 2013, for further details on this remeasurement and presentation.

Spanish long-term business – Aseval

On 18 December 2012 Aviva reached a settlement with Bankia S.A. ("Bankia") to transfer the Group's entire holding in Aseval Aseguradora Valenciana, Sociedad Anónima de Seguros y Reaseguros ("Aseval"), a Spanish life assurance company, to Bankia and Aseval was classified as held for sale. Following classification as held for sale, Aseval, included within the 'Europe' operating segment, was remeasured to fair value less costs to sell resulting in an increase to the closing MCEV at 31 December 2012 of £127 million. The transfer completed on 24 April 2013 with cash consideration of £502 million and profit on disposal of £39 million.

Irish long-term business – Ark Life

Our Irish long-term business is carried out through a subsidiary, Aviva Life Holdings Ireland Limited ("ALHI"), which is 75% owned by Aviva and 25% owned by Allied Irish Bank ("AIB"). ALHI holds four subsidiaries, one of which is Ark Life Assurance Company Limited ("Ark Life") which carries out bancassurance business via a distribution agreement with AIB. The original distribution agreement was renewable in 2011 but, on 15 December 2011, AIB notified the Group that they did not wish to renew it and the existing shareholders' agreement governing ALHI was terminated.

The termination of this agreement triggered the ability for both parties to exercise put and call options that will result in the unwind of the original structure such that the Ark Life business returns 100% to AIB and the Group will purchase the 25% minority stake in ALHI. The formal exercise of these options was approved on 17 January 2012 and, as a result, the Ark Life business became held for sale on that date. Following classification as held for sale, Ireland, included within the 'United Kingdom & Ireland' operating segment, was remeasured to fair value less costs to sell resulting in an increase to the closing MCEV at 31 December 2012 of £20 million. The transaction completed on 8 March 2013 with cash consideration of £117 million and profit on disposal of £89 million.

Malaysian long-term business

During 2012, the Group's Malaysian joint ventures, CIMB Aviva Assurance Berhad and CIMB Aviva Takaful Berhad, were classified as held for sale following the decision of management to seek to dispose of the business. On 17 January 2013, agreement was reached to sell Aviva's interests in these businesses to Sun Life Assurance Company of Canada. Following classification as held for sale, these businesses, included within the 'Asia' operating segment, were remeasured to fair value less costs to sell resulting in an increase to the closing MCEV at 31 December 2012 of £28 million. The transaction completed on 12 April 2013 with cash consideration of £153 million and profit on disposal of £6 million.

F17 – Principal assumptions continued

Italian long-term business – Eurovita

During the period the Italian long-term business Eurovita Assicurazioni S.p.A ("Eurovita") was classified as held for sale, as a result of management determining that the value of this business will principally be recovered through sale. Following classification as held for sale, Eurovita, included within the "Europe" operating segment, was re-measured to fair value less cost to sell resulting in a decrease to the closing MCEV at 31 December 2013 of £7 million.

Korean long-term business

During 2013, the Group's Korean joint venture business, Woori Aviva Life Insurance ("WALI"), was classified as held for sale following the decision of management to seek to dispose of the business. Following classification as held for sale, WALI, included within the "Asia" operating segment, was remeasured to fair value less cost to sell, resulting in an increase to the closing MCEV at 31 December 2013 of £48 million.

Indonesian long-term business

During 2013, the Group's 60% stake in the Indonesian business "Aviva Indonesia" has been classified as held for sale with the intention to structure the business as a joint venture where Aviva's ownership is 50%. Following classification as held for sale, Aviva Indonesia was remeasured to fair value less cost to sell, resulting in an increase to the closing MCEV at 31 December 2013 of £4 million.

Other held for sale operations

During the year the Group entered into negotiations to dispose of Aviva Russia. On 27 February 2013 the Group announced the sale of the business to Blagosostoyanie. This business is included in the consolidated statement of financial position at 31 December 2012 at its closing MCEV. The transaction completed on 8 April 2013 for a net consideration of £30 million and a loss on disposal of £2 million.

The sale of our Romania pensions business, which was classified as held for sale in 2012, completed on 7 May 2013, with a profit on disposal of £1 million. This business is included in the consolidated statement of financial position at 31 December 2012 at its closing MCEV.

During 2010, the Group's Taiwan joint venture, First-Aviva Life Insurance Co. Ltd., was classified as held for sale following the decision of management to seek to dispose of the business. A sale of this business was not completed in 2013 and management have reviewed its classification as held for sale and determined that the classification remains appropriate. The disposal is expected to be completed within 12 months of the balance sheet date. As the expected sale proceeds are not known, this business is included in the consolidated statement of financial position at its closing MCEV.

Poland joint venture

On 20 December 2013, Aviva transferred a portion of its holdings in BZ WBK-Aviva Towarzystwo Ubezpieczeri na Zyciz S.A. and BZ WBIK-Aviva Towarzystwo Uberzpiecezeri Ogolnych S.A. to Bank Zachodni WBK S.A., its partner in these operations. Prior to this transfer, Aviva owned 50% of these operations, with the transfer leaving Aviva with 34% share. This is reflected as a decrease in the closing MCEV at 31 December 2013 of £3 million.

F17 – Principal assumptions continued

(e) Other assumptions

Valuation of debt

Borrowings in the MCEV consolidated statement of financial position are valued on an IFRS basis, consistent with the IFRS financial statements in the Group's Annual Report and Accounts 2013. At 31 December 2013 the market value of the Group's external debt, subordinated debt, preference shares including General Accident plc preference shares of £250 million (classified as non-controlling interests) and direct capital instrument was £7,573 million (*31 December 2012: £7,260 million*).

	2013 £m	2012 £m
Borrowings per summarised consolidated statement of financial position – MCEV basis	**7,819**	8,179
Add: Amount included in held for sale	**29**	145
Less: Securitised mortgage funding	**(1,313)**	(1,332)
Borrowings excluding non-recourse funding – MCEV basis	**6,535**	6,992
Less: Operational financing by businesses	**(1,410)**	(1,853)
External debt and subordinated debt – MCEV basis	**5,125**	5,139
Add: Preference shares (including General Accident plc), direct capital instrument and fixed rate tier 1 notes	**1,832**	1,832
External debt, subordinated debt, preference shares, direct capital instrument and fixed tier 1 notes – MCEV basis	**6,957**	6,971
Effect of marking these instruments to market	**616**	289
Market value of external debt, subordinated debt, preference shares, direct capital instrument and fixed rate tier 1 notes	**7,573**	7,260

Exchange rates

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

	2013	2012
Eurozone		
Average rate (€1 equals)	**£0.85**	£0.81
Period end rate (€1 equals)	**£0.83**	£0.81
Poland		
Average rate (PLN1 equals)	**£0.20**	£0.19
Period end rate (PLN1 equals)	**£0.20**	£0.20
United States		
Average rate ($US1 equals)	**£0.64**	£0.63
Period end rate ($US1 equals)	**£0.60**	£0.62

F18 – Sensitivity analysis

(a) Economic assumptions

The following tables show the sensitivity of the embedded value and the value of new business to:

- 10 basis point increase in the liquidity premium adjustment, where applicable;
- one percentage point increase and decrease in the risk-free rate with a floor of 0%, including all consequential changes (including assumed investment returns for all asset classes, market values of fixed interest assets, risk discount rates);
- 10% increase and decrease in market values of equity and property assets;
- 25% multiplicative increase in equity, property and swaption volatilities;
- 50 basis point increase and decrease in credit spreads with no change to liquidity premium; and
- decrease in the level of required capital to 100% EU minimum (or equivalent).

In each sensitivity calculation, all other assumptions remain unchanged except where they are directly affected by the revised economic conditions. For example, future bonus rates are automatically adjusted to reflect sensitivity changes to future investment returns. Some of the sensitivity scenarios may have consequential effects on valuation bases, where the basis for certain blocks of business is actively updated to reflect current economic circumstances. Consequential valuation impacts on the sensitivities are allowed for where an active valuation basis is used. Where businesses have a target asset mix, the portfolio is re-balanced after a significant market movement otherwise no re-balancing is assumed.

For new business, the sensitivities reflect the impact of a change immediately after inception of the policy.

In general, the magnitude of the sensitivities will reflect the size of the embedded values, though this will vary as the sensitivities have different impacts on the different components of the embedded value. In addition, other factors can have a material impact, such as the nature of the options and guarantees, as well as the types of investments held.

The credit spread sensitivities assume that the change relates to credit risk and not liquidity risk; in practice, credit spread movements may be partially offset due to changes in liquidity risk. Own sovereign debt is excluded from credit spread sensitivities.

Sensitivities will also vary according to the current economic assumptions, mainly due to the impact of changes to both the intrinsic cost and time value of options and guarantees. Options and guarantees are the main reason for the asymmetry of the sensitivities where the guarantee impacts to different extents under the different scenarios.

No sensitivities have been included for held for sale operations, reflecting that these operations are stated at expected fair value less cost to sell.

Life and related business embedded value

			Interest rates		
2013 Embedded value (net of non-controlling interests)	**As reported in F10 £m**	**10bp increase in adjustment to risk-free rates £m**	**1% increase £m**	**1% decrease £m**	**Swaption implied volatilities 25% increase £m**
United Kingdom & Ireland	**8,043**	**235**	**(265)**	**280**	**(5)**
France	**3,671**	**5**	**65**	**(255)**	**(145)**
Poland, Italy, Spain and Other Europe	**2,405**	**5**	**(55)**	**65**	**—**
Asia and Other	**871**	**—**	**30**	**(60)**	**—**
Total	**14,990**	**245**	**(225)**	**30**	**(150)**

		Equity/Property			Credit Spread		
2013 Embedded value (net of non-controlling interests)	**As reported in F10 £m**	**10% increase in Market values £m**	**10% decrease in Market values £m**	**Volatility 25% increase £m**	**50bps increase £m**	**50bps decrease £m**	**EU minimum capital or equivalent £m**
United Kingdom & Ireland	**8,043**	**225**	**(235)**	**(80)**	**(1,015)**	**1,100**	**—**
France	**3,671**	**245**	**(255)**	**(130)**	**(40)**	**40**	**25**
Poland, Italy, Spain and Other Europe	**2,405**	**25**	**(25)**	**(15)**	**(30)**	**35**	**5**
Asia and Other	**871**	**15**	**(15)**	**—**	**(20)**	**20**	**10**
Total	**14,990**	**510**	**(530)**	**(225)**	**(1,105)**	**1,195**	**40**

F18 – Sensitivity analysis continued

New business

2013 Value of new business (net of tax and non-controlling interests)	As reported in F12 £m	10bp increase in adjustment to risk-free rates £m	Interest rates 1% increase £m	Interest rates 1% decrease £m	Swaption implied volatilities 25% increase £m
United Kingdom & Ireland	340	18	(11)	14	—
France	96	—	4	(13)	(5)
Poland, Italy, Spain and Other Europe	81	—	(4)	3	—
Asia and Other	76	—	12	(16)	—
Total	**593**	**18**	**1**	**(12)**	**(5)**

2013 Value of new business (net of tax and non-controlling interests)	As reported in F12 £m	Equity/Property 10% increase in Market values £m	Equity/Property 10% decrease in Market values £m	Equity/Property Volatility 25% increase £m	Credit Spread 50bps increase £m	Credit Spread 50bps decrease £m	EU minimum capital or equivalent £m
United Kingdom & Ireland	340	—	—	—	(75)	81	—
France	96	8	(6)	(1)	(3)	1	—
Poland, Italy, Spain and Other Europe	81	—	—	—	(1)	1	1
Asia and Other	76	—	—	—	—	—	2
Total	**593**	**8**	**(6)**	**(1)**	**(79)**	**83**	**3**

(b) Non-economic assumptions

The following tables below show the sensitivity of the embedded value and the value of new business to the following changes in non-economic assumptions:

- 10% decrease in maintenance expenses (a 10% sensitivity on a base expense assumption of £10 pa would represent an expense assumption of £9 pa). Where there is a "look through" into service company expenses the fee charged by the service company is unchanged while the underlying expense decreases;
- 10% decrease in lapse rates (a 10% sensitivity on a base assumption of 5% pa would represent a lapse rate of 4.5% pa); and
- 5% decrease in both mortality and morbidity rates disclosed separately for life assurance and annuity business.

No future management actions are modelled in reaction to the changing non-economic assumptions. In each sensitivity calculation all other assumptions remain unchanged. No changes to valuation bases have been included.

No sensitivities have been included for held for sale operations, reflecting that these operations are stated at expected fair value less cost to sell.

Life and related business embedded value

2013 Embedded value (net of non-controlling interests)	As reported in F10 £m	10% decrease in maintenance expenses £m	10% decrease in lapse rates £m	5% decrease in mortality/ morbidity rates – life assurance £m	5% decrease in mortality/ morbidity rates – annuity business £m
United Kingdom & Ireland	8,043	210	60	65	(380)
France	3,671	100	35	25	(25)
Poland, Italy, Spain and Other Europe	2,405	40	95	20	—
Asia and Other	871	30	15	5	—
Total	**14,990**	**380**	**205**	**115**	**(405)**

New Business

2013 Value of new business (net of tax and non-controlling interests)	As reported in F12 £m	10% decrease in maintenance expenses £m	10% decrease in lapse rates £m	5% decrease in mortality/ morbidity rates – life assurance £m	5% decrease in mortality/ morbidity rates – annuity business £m
United Kingdom & Ireland	340	32	13	4	(16)
France	96	3	3	1	—
Poland, Italy, Spain and Other Europe	81	4	10	3	—
Asia and Other	76	6	4	1	—
Total	**593**	**45**	**30**	**9**	**(16)**

Audit opinion

Independent auditors' report to the directors of Aviva plc on the consolidated MCEV financial statements

Introduction

We have audited the consolidated MCEV financial statements of Aviva plc for the year ended 31 December 2013 which comprise the Consolidated income statement – MCEV basis, Earnings per share – MCEV basis, the Consolidated statement of comprehensive income – MCEV basis, the Consolidated statement of changes in equity – MCEV basis, the Consolidated statement of financial position – MCEV basis, the Reconciliation of shareholders' equity on IFRS and MCEV bases, the Reconciliation of IFRS total equity to Life MCEV, the Reconciliation of IFRS total equity to Life MCEV net worth, the Group MCEV analysis of earnings and the related notes on pages 3 to 37 ("the consolidated MCEV financial statements"). The consolidated MCEV financial statements have been prepared by the directors of Aviva plc in accordance with the MCEV Principles issued in June 2008 by the European Insurance CFO Forum as amended in October 2009 ('the CFO Forum Principles') and the Basis of Preparation set out on pages 10 to 14 and should be read in conjunction with the Aviva plc Annual Report and Accounts 2013.

Respective responsibilities of directors and auditors

The directors are responsible for preparing the consolidated MCEV financial statements in accordance with the MCEV basis set out in Note F1 – Basis of preparation. Our responsibility, as set out in our letter of engagement dated 7 May 2013, is to audit and express an opinion on the consolidated MCEV financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

This report, including the opinion, has been prepared for and only for the Company's directors as a body in accordance with our letter of engagement dated 7 May 2013 and for no other purpose. We do not, in giving this opinion, 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.

Scope of the audit of the consolidated MCEV financial statements

An audit involves obtaining evidence about the amounts and disclosures in the consolidated MCEV financial statements sufficient to give reasonable assurance that the consolidated MCEV financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the basis of preparation is appropriate to the Company's circumstances and has been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by directors; and the overall presentation of the consolidated MCEV financial statements. In addition, we read all the financial and non-financial information in the Full Year 2013 MCEV Supplement to identify material inconsistencies with the audited consolidated MCEV financial statements. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

Basis for Qualified Opinion on the consolidated MCEV financial statements

As explained in Note F1 – Basis of Preparation to the consolidated MCEV financial statements, the net assets of the held for sale operations were stated at their expected fair value less costs to sell in the comparative period because the directors believed this to be a better assessment of the value to shareholders' from these operations at that date. At 1 January 2013, the carrying value of the held for sale operations was £1,270 million in excess of their MCEV. Following the disposal of the held for sale operations in the year ended 31 December 2013 the profit on the disposal and remeasurement of subsidiaries and associates has been calculated as the difference between the expected fair value less costs to sell at 1 January 2013 and the actual fair value of the consideration received less transaction costs. By stating the held for sale operations at a value in excess of their MCEV in the comparative period and up to the date of disposal the consolidated MCEV financial statements did not comply with the CFO Forum Principles. In the current year, the profit on the disposal and remeasurement of subsidiaries and associates has therefore not been calculated in compliance with the CFO Forum Principles.

If the consolidated MCEV financial statements had been prepared in accordance with the CFO Forum Principles the profit for the year would have increased by £1,270 million to £4,703 million. There is no impact on the total equity as at 31 December 2013.

Qualified Opinion on the consolidated MCEV financial statements

In our opinion, except for the effects of the matter described in the Basis for Qualified Opinion paragraph, the consolidated MCEV financial statements for the year ended 31 December 2013 have been properly prepared, in all material respects, in accordance with the CFO Forum Principles and the Basis of preparation set out on pages 10 to 14.

PricewaterhouseCoopers LLP
Chartered Accountants

London
5 March 2014

1. The maintenance and integrity of the Aviva plc website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website.
2. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Glossary

Product definitions

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

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

Critical illness cover
Pays out a lump sum if the insured person is diagnosed with a serious illness that meets the plan definition.

Deferred annuities
An annuity (or pension) due to be paid from a future date or when the policyholder reaches a specified age. A deferred annuity may be funded by a policyholder by payment of a series of regular contributions or by a capital sum.

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

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

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

Income drawdown
The policyholder can transfer money from any pension fund to an income drawdown plan from which they receive an income. The remainder of the pension fund continues to be invested, giving it the potential for growth.

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

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

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

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

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

Pension
A means of providing income in retirement for an individual and possibly his/her dependants.

Personal pension
A pension plan tailored to the individual policyholder, which includes the options to stop, start or change their payments.

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

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

Collective investment scheme (SICAVs)
This is an open-ended investment fund, structured as a legally independent joint stock company, whose units are issued in the form of shares.

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

Stakeholder pensions
Low cost and flexible pension plans available in the UK, governed by specific regulations.

Term assurance
A simple form of life insurance, offering cover over a fixed number of years during which a lump sum will be paid out if the life insured dies.

Unit trusts
A form of open ended collective investment constituted under a trust deed, in which investors can buy and sell units.

Whole life
A protection policy that remains in force for the insured's whole life; a lump sum will be paid out on death. Traditional whole life contracts have fixed premium payments that typically cannot be missed without lapsing the policy. Flexible whole life contracts allow the policyholder to vary the premium and/or amount of life cover, within certain limits.

General terms

Annual premium equivalent (APE)
Used as a measure of annual sales, taking the annual premium of regular premium contracts plus 10% of single premium contracts.

Available for sale (AFS)
Securities that have been acquired neither for short-term sale nor to be held to maturity. These are shown at fair value on the statement of financial position and changes in value are taken straight to equity instead of the income statement.

Association of British Insurers (ABI)
A major trade association for UK insurance companies, established in July 1985.

Acquired value of in force (AVIF)
The present value of future profits on a portfolio of long-term insurance and investment contracts, acquired either directly or through the purchase of a subsidiary.

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

Combined operating ratio (COR)
COR is calculated as incurred claims expressed as a percentage of net earned premiums, plus written commissions and written expenses expressed as a percentage of net written premiums.

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

Fair value
The amount for which an asset can be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Financial Conduct Authority (FCA)
One of the two bodies (along with the PRA) which replaced the Financial Services Authority from 1 April 2013. The FCA is a company limited by guarantee and is independent of the Bank of England. It is responsible for the conduct business regulation of all firms (including those firms subject to prudential regulation by the PRA) and the prudential regulation of firms not regulated by the PRA. The FCA has three statutory objectives: securing an appropriate degree of protection for consumers, protecting and enhancing the integrity of the UK financial system and promoting effective competition in the interests of consumers.

Funds under management
Represents all assets actively managed or administered by or on behalf of the Group including those funds managed by third parties.

Gross written premiums
The total earnings or revenue generated by sales of insurance products, before any reinsurance is taken into account. Not all premiums written will necessarily be treated as income in the current financial year, because some of them could relate to insurance cover for a subsequent period.

Independent Financial Advisers (IFAs)
A person or organisation, authorised under the FCA, to give advice on financial matters and to sell the products of all financial service providers.

Internal rate of return (IRR)
A discount rate used to measure profitability. The rate used is that which will bring a series of cash flows to a net present value of nil.

International financial reporting standards (IFRS)
These are accounting regulations designed to ensure comparable statement of financial position preparation and disclosure, and are the standards that all publicly listed companies in the European Union are required to use.

Operating profit
This is also referred to as adjusted operating profit or operating profit (IFRS basis). It is based on expected investment returns, and stated before tax and before non-operating items including, impairment of goodwill, exceptional and other items.

Inherited estate
In the UK, the assets of the long-term with-profit funds less the realistic reserves for non-profit policies written within the with-profit funds, less asset shares aggregated across the with-profit policies and any additional amounts expected at the valuation date to be paid to in-force policyholders in the future in respect of smoothing costs and guarantees.

Long-term and savings business
Collective term for life insurance, pensions, savings, investments and related business.

Net written premiums
Total gross written premiums for the given period, less premiums paid over or 'ceded' to reinsurers.

New business strain (NBS)
The name given to the initial impact on shareholders' net assets when an insurance contract is sold. This "strain" arises because, in addition to meeting costs associated with the sale of contracts, insurance companies must meet capital and reserving requirements at the outset of a contract that are often significantly higher than the premiums received.

Present value of new business (PVNBP)
Present value of new regular premiums plus 100% of single premiums, calculated using assumptions consistent with those used to determine the value of new business under Market Consistent Embedded Value (MCEV) principles published by the CFO Forum.

Prudential Regulatory Authority (PRA)
One of the two bodies (along with the FCA) which replaced the Financial Services Authority from 1 April 2013. The PRA is a part of the Bank of England and is responsible for the prudential regulation of deposit taking institutions, insurers and major investment firms. The PRA has two statutory objectives: to promote the safety and soundness of these firms and, specifically for insurers, to contribute to the securing of an appropriate degree of protection for policyholders.

Solvency II
These are insurance regulations designed to harmonise EU insurance regulation. Primarily this concerns the amount of capital that European insurance companies must hold under a measure of capital and risk. Solvency II is due to become effective from 1 January 2016.

Turnbull Guidance on Internal Control
The Turnbull Guidance sets out best practice on internal controls for UK listed companies, and provides additional guidance in applying certain sections of the UK Corporate Governance Code.

UK Corporate Governance Code
The code sets out guidance in the form of principles and provisions on how companies should be directed and controlled to follow good governance practice.

Value of new business (VNB)
VNB is the present value of future profits from new business written at the point of sale. It is calculated on a market consistent basis using economic assumptions set at the start of each quarter and the same operating assumptions as those used to determine the embedded value at the end of the reporting period and is stated after the effect of any frictional costs. Unless otherwise stated, it is quoted net of tax and minority interests.

Market Consistent Embedded Value (MCEV) terms

Asymmetric risk
Risks that will cause shareholder profits to vary where the variation above and below the average are not equal in distribution.

CFO Forum
The CFO Forum (www.cfoforum.nl) is a high-level group formed by the chief financial officers of major European listed and non-listed insurance companies. Its aim is to discuss issues relating to proposed new accounting regulations for their businesses and how they can create greater transparency for investors.

The forum was created in 2002, the Market Consistent Embedded Value Principles were launched in June 2008. The principles are a further development of the European Embedded Value Principles first launched in May 2004.

Cost of non-hedgeable risks
This is the cost of undertaking those risks for which a deep and liquid market in which to hedge that risk does not exist. This can include both financial risks and non-financial risks such as mortality, persistency and expense.

Covered business
The contracts to which the MCEV methodology has been applied.

Financial options and guarantees
Features of the covered business conferring potentially valuable guarantees underlying, or options to change, the level or nature of policyholder benefits and exercisable at the discretion of the policyholder, whose potential value is impacted by the behaviour of financial variables.

Free surplus
The amount of any capital and surplus allocated to, but not required to support, the in-force covered business.

Frictional costs
The additional taxation and investment costs incurred by shareholders through investing the Required Capital in the Company rather than directly.

Group MCEV
A measure of the total consolidated value of the Group with covered life business included on an MCEV basis and non-covered business (including pension schemes and goodwill) included on an IFRS basis.

Gross risk-free yields
Gross of tax yields on risk-free fixed interest investments, generally swap rates under MCEV.

Implicit items
Amounts allowed by local regulators to be deducted from capital amounts when determining the EU required minimum margin.

Life business
Subsidiaries selling life and pensions contracts that are classified as covered business under MCEV.

Life MCEV
The MCEV balance sheet value of covered business as at the reporting date. Excludes non-covered business such as pension schemes and goodwill.

Life MCEV operating earnings
Operating earnings on the MCEV basis relating to the lines of business included in the embedded value calculations.

Life MCEV earnings
Total earnings on the MCEV basis relating to the lines of business included in the embedded value calculations. In addition to life operating earnings this includes actual investment experience and other non-operating items.

Look-through basis
Inclusion of the capitalised value of profits and losses arising from subsidiary companies providing administration, investment management and other services to the extent that they relate to covered business.

Market consistent
A measurement approach where economic assumptions are such that projected asset cash flows are valued consistently with current market prices for traded assets.

Net worth
The market value of the shareholders' funds and the shareholders' interest in the surplus held in the non-profit component of the long-term business funds, determined on a statutory solvency basis and adjusted to add back any non-admissible assets, and consists of the required capital and free surplus.

New business margin
New business margins are calculated as the value of new business divided by the present value of new business premiums (PVNBP), and expressed as a percentage.

Real world equivalent Embedded Value (EqEV)
As for other embedded value measures, EqEV is a way of measuring the current value to shareholders of the in-force portfolio of a life and pensions business. EqEV includes the value of future profits and uses a set of realistic assumptions, including real world expected investment returns, allowing for the impact of the uncertainty in these returns in the risk discount rate.

Required capital
The amount of assets, over and above the value placed on liabilities in respect of covered business, whose distribution to shareholders is restricted.

Risk-free rate (reference rate in CFO Forum terminology)
The risk-free rate is taken as swaps except for all contracts that contain features similar to immediate annuities and are backed by appropriate assets, including paid up group deferred annuities and deferred annuities, (and for the comparative period, all other contracts in the US). The adjusted risk-free rate is taken as swaps plus the additional return available for products where backing asset portfolios can be held to maturity.

Service companies
Companies providing administration or fund management services to the covered business.

Solvency cover
The excess of the regulatory value of total assets over total liabilities, divided by the regulatory value of the required minimum solvency margin.

Solvency margin
The excess of assets over liabilities and the worldwide minimum solvency margins, excluding goodwill and the additional value of in-force long-term business, and excluding the surplus held in the Group's life funds. The Group solvency calculation is determined according to the Prudential Regulation Authority application of EU Insurance Groups Directive rules.

Spread business
Contracts where a significant source of shareholder profits is the taking of credit spread risk that is not passed on to policyholders. The most significant spread business in Aviva are immediate annuities, (and for the comparative period, US deferred annuities and life business).

Statutory basis
The valuation basis and approach used for reporting financial statements to local regulators.

Stochastic techniques
Techniques that allow for the potential future variability in assumptions.

Symmetric risks
Risks that will cause shareholder profits to vary where the variation above and below the average are equal and opposite. Financial theory says that investors do not require compensation for non-market risks that are symmetrical as the risks can be diversified away by investors.

Time value and intrinsic value
A financial option or guarantee has two elements of value, the time value and intrinsic value. The intrinsic value is the discounted value of the option or guarantee at expiry, assuming that future economic conditions follow best estimate assumptions. The time value is the additional value arising from uncertainty about future economic conditions.