

European Embedded Value (EEV) basis results

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Description of EEV basis reporting

In broad terms, IFRS profit for long-term business reflects the aggregate of results on a traditional accounting basis. By contrast, EEV is a way of reporting the value of the life insurance business.

The EEV basis results have been prepared in accordance with the EEV Principles dated April 2016, issued by the European Insurance CFO Forum. The EEV Principles provide consistent definitions, a framework for setting actuarial assumptions, and an approach to the underlying methodology and disclosures.

Results prepared under the EEV Principles capture the discounted value of future profits expected to arise from the current book of long-term business. The results are prepared by projecting cash flows, by product, using best estimate assumptions for all relevant factors. Furthermore, in determining these expected profits, full allowance is made for the risks attached to their emergence and the associated cost of capital, taking into account recent experience in assessing likely future persistency, mortality, morbidity and expenses. Further details are explained in notes 13 and 14.

* The additional financial information is not covered by the KPMG LLP independent audit opinion.

European Embedded Value (EEV) Basis Results

POST-TAX OPERATING PROFIT BASED ON LONGER-TERM INVESTMENT RETURNS

	Note	2018 £m	2017 £m note (iii)
Asia operations			
New business	3	2,604	2,368
Business in force	4	1,783	1,337
Long-term business		4,387	3,705
Asset management		159	155
Total		4,546	3,860
US operations			
New business	3	921	906
Business in force	4	1,194	1,237
Long-term business		2,115	2,143
Asset management		3	7
Total		2,118	2,150
UK and Europe operations			
New business	3	352	342
Business in force	4	1,022	673
Long-term business		1,374	1,015
General insurance commission		15	13
Total insurance operations		1,389	1,028
Asset management		392	403
Total		1,781	1,431
Other income and expenditure ^{note (i)}		(726)	(746)
Restructuring costs ^{note (ii)}		(156)	(97)
Operating profit based on longer-term investment returns		7,563	6,598
Analysed as profit (loss) from:			
New business	3	3,877	3,616
Business in force	4	3,999	3,247
Long-term business		7,876	6,863
Asset management and general insurance commission		569	578
Other results		(882)	(843)
		7,563	6,598

Notes

- (i) EEV basis other income and expenditure represents the post-tax IFRS basis results for other operations (including Group and Asia Regional Head Office, holding company borrowings, Africa operations and Prudential Capital) less the unwind of expected margins on the internal management of the assets of the covered business (as explained in note 13(i)(g)).
- (ii) Restructuring costs comprise the post-tax charge recognised on an IFRS basis and the additional amount recognised on an EEV basis for the shareholders' share incurred by the with-profits funds, representing the cost of business transformation and integration.
- (iii) The comparative results have been prepared using previously reported average exchange rates for the year.

POST-TAX SUMMARISED CONSOLIDATED INCOME STATEMENT

	Note	2018 £m	2017 £m
Asia operations		4,546	3,860
US operations		2,118	2,150
UK and Europe operations		1,781	1,431
Other income and expenditure		(726)	(746)
Restructuring costs		(156)	(97)
Operating profit based on longer-term investment returns		7,563	6,598
Short-term fluctuations in investment returns	5	(3,219)	2,111
Effect of changes in economic assumptions	6	146	(102)
Mark to market value movements on core structural borrowings		549	(326)
Impact of US tax reform	16	-	390
(Loss) profit attaching to corporate transactions	17	(451)	80
Total non-operating (loss) profit		(2,975)	2,153
Profit for the year		4,588	8,751
Attributable to:			
Equity holders of the Company		4,585	8,750
Non-controlling interests		3	1
		4,588	8,751

Basic earnings per share

	2018	2017
Based on post-tax operating profit including longer-term investment returns after non-controlling interests (in pence)	293.6p	257.0p
Based on post-tax profit attributable to equity holders of the Company (in pence)	178.1p	340.9p
Weighted average number of shares (millions)	2,575	2,567

MOVEMENT IN SHAREHOLDERS' EQUITY

	Note	2018 £m	2017 £m
Profit for the year attributable to equity holders of the Company		4,585	8,750
Items taken directly to equity:			
Exchange movements on foreign operations and net investment hedges		1,706	(2,045)
External dividends		(1,244)	(1,159)
Mark to market value movements on Jackson assets backing surplus and required capital		(95)	40
Other reserve movements		132	144
Net increase in shareholders' equity	8	5,084	5,730
Shareholders' equity at beginning of year	8	44,698	38,968
Shareholders' equity at end of year	8	49,782	44,698

	31 Dec 2018 £m			31 Dec 2017 £m		
	Long-term business operations	Asset management and other operations	Group total	Long-term business operations	Asset management and other operations	Group total
Comprising:						
Asia operations	24,580	552	25,132	21,191	401	21,592
US operations	14,650	40	14,690	13,257	235	13,492
UK and Europe operations	11,409	2,175	13,584	11,713	1,914	13,627
Other operations	-	(3,624)	(3,624)	-	(4,013)	(4,013)
Shareholders' equity at end of year	50,639	(857)	49,782	46,161	(1,463)	44,698

Representing:

Net assets attributable to equity holders of the Company excluding acquired goodwill, holding company net borrowings and non-controlling interests	50,388	2,105	52,493	45,917	1,562	47,479
Acquired goodwill*	251	1,400	1,651	244	1,214	1,458
Holding company net borrowings at market value ^{note 7}	-	(4,362)	(4,362)	-	(4,239)	(4,239)
	50,639	(857)	49,782	46,161	(1,463)	44,698

* Acquired goodwill for asset management and other operations for 2018 includes goodwill recognised on acquisition of TMB Asset Management Co., Ltd. as discussed in note D1.2 of the IFRS statements.

SUMMARY STATEMENT OF FINANCIAL POSITION

	Note	31 Dec 2018 £m	31 Dec 2017 £m
Total assets less liabilities, before deduction of insurance funds*		431,269	434,615
Less insurance funds:			
Policyholder liabilities (net of reinsurers' share) and unallocated surplus			
of with-profits funds		(414,002)	(418,521)
Less shareholders' accrued interest in the long-term business	8	32,533	28,611
		(381,469)	(389,910)
Less non-controlling interests		(18)	(7)
Total net assets attributable to equity holders of the Company	8	49,782	44,698
Share capital		130	129
Share premium		1,964	1,948
IFRS basis shareholders' reserves		15,155	14,010
Total IFRS basis shareholders' equity	8	17,249	16,087
Additional EEV basis retained profit	8	32,533	28,611
Total EEV basis shareholders' equity	8	49,782	44,698

* Including liabilities in respect of insurance products classified as investment contracts under IFRS 4.

Net asset value per share

	31 Dec 2018	31 Dec 2017
Based on EEV basis shareholders' equity of £49,782 million (31 December 2017: £44,698 million) (in pence)	1,920p	1,728p
Number of issued shares at year end (millions)	2,593	2,587

Annualised return on embedded value*	17%	17%
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* Annualised return on embedded value is based on EEV post-tax operating profit after non-controlling interests, as a percentage of opening EEV basis shareholders' equity.

NOTES ON THE EEV BASIS RESULTS

1 Basis of preparation

The EEV basis results have been prepared in accordance with the EEV Principles dated April 2016, issued by the European Insurance CFO Forum. Where appropriate, the EEV basis results include the effects of adoption of EU-endorsed IFRS.

The directors are responsible for the preparation of the supplementary information in accordance with the EEV Principles. The auditors have reported on the 2018 EEV basis results supplement to the Company's statutory accounts for 2018. Their report was (i) unqualified and (ii) did not include a reference to any matters to which the auditors drew attention by way of emphasis without qualifying their report. The 2017 results have been derived from the EEV basis results supplement to the Company's statutory accounts for 2017. The supplement included an unqualified audit report from the auditors.

A detailed description of the EEV methodology and accounting presentation is provided in note 13.

2 Results analysis by business area

The 2017 comparative results are shown below on both actual exchange rates (AER) and constant exchange rates (CER) bases. The 2017 CER comparative results are translated at 2018 average exchange rates.

Annual premium equivalents (APE)^{note 15}

	Note	2018 £m	2017 £m		% change	
			AER	CER	AER	CER
Asia		3,744	3,805	3,671	(2)%	2%
US		1,542	1,662	1,605	(7)%	(4)%
UK and Europe		1,516	1,491	1,491	2%	2%
Group total	3	6,802	6,958	6,767	(2)%	1%

Post-tax operating profit

	Note	2018 £m	2017 £m		% change	
			AER	CER	AER	CER
Asia operations						
New business	3	2,604	2,368	2,282	10%	14%
Business in force	4	1,783	1,337	1,280	33%	39%
Long-term business		4,387	3,705	3,562	18%	23%
Asset management		159	155	150	3%	6%
Total		4,546	3,860	3,712	18%	22%
US operations						
New business	3	921	906	874	2%	5%
Business in force	4	1,194	1,237	1,195	(3)%	0%
Long-term business		2,115	2,143	2,069	(1)%	2%
Asset management		3	7	7	(57)%	(57)%
Total		2,118	2,150	2,076	(1)%	2%
UK and Europe operations						
New business	3	352	342	342	3%	3%
Business in force	4	1,022	673	673	52%	52%
Long-term business		1,374	1,015	1,015	35%	35%
General insurance commission*		15	13	13	15%	15%
Total insurance operations		1,389	1,028	1,028	35%	35%
Asset management		392	403	403	(3)%	(3)%
Total		1,781	1,431	1,431	24%	24%
Other income and expenditure		(726)	(746)	(740)	3%	2%
Restructuring costs		(156)	(97)	(97)	(61)%	(61)%
Operating profit based on longer-term investment returns		7,563	6,598	6,382	15%	19%
Analysed as profit (loss) from:						
New business	3	3,877	3,616	3,498	7%	11%
Business in force	4	3,999	3,247	3,148	23%	27%
Total long-term business		7,876	6,863	6,646	15%	19%
Asset management and general insurance commission		569	578	573	(2)%	(1)%
Other results		(882)	(843)	(837)	(5)%	(5)%
		7,563	6,598	6,382	15%	19%

* The majority of the general insurance commission is not expected to recur in future years.

Post-tax profit

Note	2018 £m		2017 £m		% change	
			AER	CER	AER	CER
Operating profit based on longer-term investment returns		7,563	6,598	6,382	15%	19%
Short-term fluctuations in investment returns	5	(3,219)	2,111	2,057		
Effect of changes in economic assumptions	6	146	(102)	(91)		
Mark to market value movements on core structural borrowings		549	(326)	(326)		
Impact of US tax reform	16	-	390	376		
(Loss) profit attaching to corporate transactions	17	(451)	80	77		
Total non-operating (loss) profit		(2,975)	2,153	2,093		
Profit for the year		4,588	8,751	8,475	(48)%	(46)%

Basic earnings per share

	2018		2017		% change	
			AER	CER	AER	CER
Based on post-tax operating profit including longer-term investment returns after non-controlling interests (in pence)		293.6p	257.0p	248.6p	14%	18%
Based on post-tax profit attributable to equity holders of the Company (in pence)		178.1p	340.9p	330.2p	(48)%	(46)%

3 Analysis of new business contribution

(i) Group summary for long-term business operations

	2018					
	Annual premium equivalents (APE)	Present value of new business premiums (PVNBP)		New business contribution	New business margin	
		£m	£m		APE %	PVNBP %
	note 15	note 15	£m	%	%	
Asia ^{note (ii)}	3,744	20,754	2,604	70	12.5	
US	1,542	15,423	921	60	6.0	
UK and Europe	1,516	14,073	352	23	2.5	
Total	6,802	50,250	3,877	57	7.7	

	2017					
	Annual premium equivalents (APE)	Present value of new business premiums (PVNBP)		New business contribution	New business margin	
		£m	£m		APE %	PVNBP %
	note 15	note 15	£m	%	%	
Asia ^{note (ii)}	3,805	20,405	2,368	62	11.6	
US	1,662	16,622	906	55	5.5	
UK and Europe	1,491	13,784	342	23	2.5	
Total	6,958	50,811	3,616	52	7.1	

Note

After allowing for foreign exchange effects of £(118) million, the new business contribution has increased by £379 million on a CER basis. The increase is driven by a beneficial effect of pricing, product mix and other actions of £278 million reflecting our strategic emphasis on increasing sales from health and protection business in Asia, together with changes in long-term interest rates and other economic assumptions (£83 million) and higher sales volumes (a contribution of £18 million).

(ii) Asia new business contribution by business unit

	2018 £m		2017 £m	
			AER	CER
China		149	133	131
Hong Kong		1,729	1,535	1,474
Indonesia		122	174	158
Taiwan		46	57	56
Other		558	469	463
Total		2,604	2,368	2,282

4 Operating profit from business in force

(i) Group summary for long-term business operations

	2018 £m			Total
	Asia note (ii)	US note (iii)	UK and Europe note (iv)	
Unwind of discount and other expected returns	1,218	881	474	2,573
Effect of changes in operating assumptions	342	115	330	787
Experience variances and other items	223	198	218	639
Group total	1,783	1,194	1,022	3,999

	2017 £m			Total
	Asia note (ii)	US note (iii)	UK and Europe note (iv)	
Unwind of discount and other expected returns	1,007	694	465	2,166
Effect of changes in operating assumptions	241	196	195	632
Experience variances and other items	89	347	13	449
Group total	1,337	1,237	673	3,247

Note

The movement in operating profit from business in force of £752 million from £3,247 million for 2017 to £3,999 million for 2018 comprises:

	£m
Movement in unwind of discount and other expected returns:	
Growth in opening value of in-force business	368
Effect of interest rates and other economic assumptions	101
Foreign exchange movements	(62)
	407
Movement in effect of changes in operating assumptions, experience variances and other items	345
Net movement in operating profit from business in force	752

(ii) Asia

	2018 £m	2017 £m
Unwind of discount and other expected returns ^{note (a)}	1,218	1,007
Effect of changes in operating assumptions ^{note (b)}	342	241
Experience variances and other items ^{note (c)}	223	89
Total	1,783	1,337

Notes

- (a) The £211 million increase in unwind of discount and other expected returns from £1,007 million in 2017 to £1,218 million in 2018 is primarily driven by the growth in the in-force book and a positive £51 million impact from movements in long-term interest rates and other economic assumptions, partially offset by a negative effect of foreign exchange movements of £(38) million.
- (b) The effects of changes in operating assumptions of £342 million reflects the outcome from the annual review of persistency, claims and expense experience together with the benefit of medical repricing management actions. It also reflects profits arising after reflection of a number of tax changes across a number of countries.
- (c) The £223 million effect of experience variances and other items in 2018 is driven by positive mortality and morbidity experiences in a number of local business units, together with positive persistency variances from participating and health and protection products.

(iii) US

	2018 £m	2017 £m
Unwind of discount and other expected returns ^{note (a)}	881	694
Effect of changes in operating assumptions ^{note (b)}	115	196
Experience variances and other items:		
Spread experience variance	39	71
Amortisation of interest-related realised gains and losses	92	91
Other ^{note (c)}	67	185
	198	347
Total	1,194	1,237

Notes

- (a) The £187 million increase in unwind of discount and other expected returns from £694 million in 2017 to £881 million in 2018 reflects prior period growth in the in-force book, a £30 million benefit from a 30 basis point increase in the US 10-year treasury yield in the year offset by a £(24) million negative effect for foreign exchange movements.
- (b) The effect of operating assumption changes of £115 million (2017: £196 million) mainly relates to routine updates for persistency and policyholder utilisation.
- (c) Other experience variances of £198 million include the effects of positive mortality and persistency experience in the year.

(iv) UK and Europe

	2018 £m	2017 £m
Unwind of discount and other expected returns ^{note (a)}	474	465
Change in longevity assumption basis ^{note (b)}	330	195
Other items ^{note (c)}	218	13
Total	1,022	673

Notes

- (a) Unwind of discount and expected returns for 2018 is broadly consistent with 2017 and reflects the benefit from a 10 basis point increase in the 15-year swap yields offset by the impact from the reinsurance of part of its shareholder annuity portfolio to Rothesay Life as discussed in note 17.
- (b) The credit of £330 million (2017: £195 million) relates to changes to annuitant mortality assumptions to reflect current mortality experience, which has shown a slowdown in life expectancy improvements in recent periods, and the adoption of the Continuous Mortality Investigation (CMI) 2016 model (2017: CMI 2015 model) as the basis for future mortality improvements.
- (c) Other items comprise the following:

	2018 £m	2017 £m
Longevity reinsurance	-	(6)
Impact of specific management actions to improve solvency position	141	127
Provision for cost of undertaking past non-advised annuity sales review and related redress ^{note (d)}	-	(187)
Insurance recoveries in respect of the above costs ^{note (d)}	138	-
Provision for guaranteed minimum pension equalisation ^{note (e)}	(48)	-
Other	(13)	79
	218	13

- (d) The UK business has agreed with the Financial Conduct Authority (FCA) to review annuities sold without advice after 1 July 2008 to its contract-based defined contribution pension customers. A gross provision of £(330) million, post-tax and before costs incurred, was established at 31 December 2017, of which £(187) million was charged in full year 2017. During 2018, the Group agreed with its professional indemnity insurers that they will meet £166 million of the Group's claims costs, which will be paid as the Group incurs costs/redress. This has been recognised on the Group balance sheet at 31 December 2018 and a post-tax credit of £138 million is recognised in the EEV operating profit. For more details, refer to note C11 of the IFRS financial statements.
- (e) An allowance has been made for higher liabilities that may arise when applying the recent High Court decision to equalise guaranteed minimum pension (GMP) benefits between males and females for certain pension products sold by the UK business.

5 Short-term fluctuations in investment returns

(i) Group summary

	2018 £m	2017 £m
Asia operations ^{note (ii)}	(1,029)	887
US operations ^{note (iii)}	(1,481)	582
UK and Europe operations ^{note (iv)}	(721)	621
Other operations	12	21
Group total	(3,219)	2,111

(ii) Asia operations

	2018 £m	2017 £m
Hong Kong	(552)	531
Singapore	(233)	126
Other	(244)	230
Total	(1,029)	887

Note

For 2018, the charge of £(1,029) million mainly represents the reduction of bond and equity values in Hong Kong and lower than expected investment returns on participating and unit-linked business in Indonesia, Singapore and Malaysia.

(iii) US operations

	2018 £m	2017 £m
Investment return related experience on fixed income securities ^{note (a)}	60	(46)
Investment return related impact due to changed expectation of profits on in-force variable annuity business in future periods based on current year		
separate account return, net of related hedging activity and other items ^{note (b)}	(1,541)	628
Total	(1,481)	582

Notes

- (a) The net result relating to fixed income securities reflects a number of offsetting items as follows:
- The impact on portfolio yields of changes in the asset portfolio in the year;
 - The difference between actual realised gains and losses and the amortisation of interest-related realised gains and losses that is recorded within operating profit; and
 - Credit experience (versus the longer-term assumption).
- (b) This item reflects the net impact of:
- Changes in projected future fees and future benefit costs arising from the difference between the actual growth in separate account asset values of negative (5.4) per cent and that assumed of 6.2 per cent (2017: actual growth of 17.5 per cent compared to assumed growth of 5.9 per cent); and
 - Related hedging activity arising from realised and unrealised gains and losses on equity-related hedges and interest rate options, and other items.

(iv) UK and Europe operations

	2018 £m	2017 £m
Insurance operations:		
Shareholder-backed annuity business	(151)	387
With-profits and other business	(557)	229
Asset management	(13)	5
Total	(721)	621

Note

The £(721) million fluctuation in 2018 primarily represents the impact of achieving a (2.5) per cent pre-tax return on the with-profits fund (including unallocated surplus) compared to the assumed rate of return of 4.2 per cent (2017: achieved return of 9 per cent compared to assumed rate of 5 per cent), partially offset by the effect of a partial hedge of future shareholder transfers expected to emerge from the UK's with-profits sub-fund entered into to protect future shareholder with-profit transfers from movements in the UK equity market. It also reflects losses on corporate bonds backing shareholder annuity business, reflecting changes to interest rates and credit spreads over the period.

6 Effect of changes in economic assumptions

(i) Group summary for long-term business operations

	2018 £m	2017 £m
Asia ^{note (ii)}	115	(95)
US ^{note (iii)}	197	(136)
UK and Europe ^{note (iv)}	(166)	129
Group total	146	(102)

(ii) Asia

	2018 £m	2017 £m
Hong Kong	165	(321)
Indonesia	(94)	81
Malaysia	(19)	59
Singapore	70	131
Other	(7)	(45)
Total	115	(95)

Note

The positive effect in 2018 of £115 million largely arises from movements in long-term interest rates, resulting in higher assumed fund earned rates in Hong Kong and Singapore, partially offset by the impact of valuing future profits for health and protection business at higher discount rates in Indonesia and Malaysia.

(iii) US

	2018 £m	2017 £m
Variable annuity business	365	(101)
Fixed annuity and other general account business	(168)	(35)
Total	197	(136)

Note

For 2018, the credit of £197 million mainly reflects the increase in the assumed separate account return following the 30 basis points increase in the US 10-year treasury yield over the year, resulting in higher projected fee income and a decrease in projected benefit costs for variable annuity business. For fixed annuity and other general account business, the impact reflects the effect on the present value of future projected spread income from the combined increase in interest rates and credit spreads in the year. In June 2018, the National Association of Insurance Commissioners (NAIC) formally approved changes to RBC capital factors that reflected the December 2017 US tax reform. Consequently, the effect of changes in economic assumptions for 2018 of £197 million includes a negative £(23) million impact resulting from these changes.

(iv) UK and Europe

	2018 £m	2017 £m
Shareholder-backed annuity business	1	28
With-profits and other business	(167)	101
Total	(166)	129

Note

The charge of £(166) million includes the impact of the movement in expected long-term rates of investment return, resulting from market movements and changes in asset mix in the year, and risk discount rates. In addition, the effect of changes in economic assumptions for with-profits and other business of £(167) million includes a £(78) million charge for the effect on lower fund earned rates on equities and property as a result of the change in UK indexation of capital gains rules effective from 1 January 2018.

7 Net core structural borrowings of shareholder-financed businesses

	31 Dec 2018 £m			31 Dec 2017 £m		
	IFRS basis	Mark to market adjustment	EEV basis at market value	IFRS basis	Mark to market adjustment	EEV basis at market value
Holding company (including central finance subsidiaries) cash and short-term investments	(3,236)	-	(3,236)	(2,264)	-	(2,264)
Central funds						
Subordinated debt	6,676	(44)	6,632	5,272	515	5,787
Senior debt	517	174	691	549	167	716
	7,193	130	7,323	5,821	682	6,503
Bank loan	275	-	275	-	-	-
Holding company net borrowings	4,232	130	4,362	3,557	682	4,239
Prudential Capital bank loan	-	-	-	275	-	275
Jackson surplus notes	196	53	249	184	61	245
Group total	4,428	183	4,611	4,016	743	4,759

Note

In October 2018, the Company issued three tranches of substitutable core structural borrowings as part of the process required before demerger, to rebalance debt across M&G Prudential and Prudential plc. Total proceeds, net of costs, were £1,630 million. In December 2018, the Company paid £434 million to redeem its US\$550 million 7.75 per cent Tier 1 perpetual subordinated notes. The movement in the value of core structural borrowings also includes foreign exchange effects for US dollar denominated debts. For more details on the core structural borrowings, refer to note C6.1 of the IFRS financial statement.

8 Reconciliation of movement in shareholders' equity

	2018 £m				
	Asia operations note (i)	US operations	UK and Europe operations	Other operations note (i)	Group total note (iv)
Long-term business:					
New business ^{note 3}	2,604	921	352	-	3,877
Business in force ^{note 4}	1,783	1,194	1,022	-	3,999
	4,387	2,115	1,374	-	7,876
Asset management and general insurance commission	159	3	407	-	569
Restructuring costs	(19)	(17)	(109)	(11)	(156)
Other results	-	-	-	(726)	(726)
Operating profit based on longer-term investment returns	4,527	2,101	1,672	(737)	7,563
Non-operating items	(925)	(1,313)	(1,263)	526	(2,975)
Non-controlling interests	(1)	-	-	(2)	(3)
Profit for the year attributable to equity holders of the Company	3,601	788	409	(213)	4,585
Other items taken directly to equity:					
Exchange movements on foreign operations and net investment hedges	1,028	862	-	(184)	1,706
Intra-group dividends and investment in operations ^{note (ii)}	(1,177)	(337)	(447)	1,961	-
External dividends	-	-	-	(1,244)	(1,244)
Mark to market value movements on Jackson assets backing surplus and required capital	-	(95)	-	-	(95)
Other movements ^{note (iii)}	81	(20)	(5)	76	132
Net increase in shareholders' equity	3,533	1,198	(43)	396	5,084
Shareholders' equity at beginning of year	21,348	13,492	13,627	(3,769)	44,698
Shareholders' equity at end of year	24,881	14,690	13,584	(3,373)	49,782
Representing:					
IFRS basis shareholders' equity:					
Net assets (liabilities)	5,921	5,624	7,547	(3,494)	15,598
Goodwill	247	-	1,153	251	1,651
IFRS basis shareholders' equity	6,168	5,624	8,700	(3,243)	17,249
Additional retained profit (loss) on an EEV basis	18,713	9,066	4,884	(130)	32,533
EEV basis shareholders' equity	24,881	14,690	13,584	(3,373)	49,782
Balance at beginning of year:					
IFRS basis shareholders' equity:					
Net assets (liabilities)	5,620	5,248	7,092	(3,331)	14,629
Goodwill	61	-	1,153	244	1,458
IFRS basis shareholders' equity	5,681	5,248	8,245	(3,087)	16,087
Additional retained profit (loss) on an EEV basis	15,667	8,244	5,382	(682)	28,611
EEV basis shareholders' equity	21,348	13,492	13,627	(3,769)	44,698

Notes

- (i) Other operations of £(3,373) million represents the shareholders' equity of £(3,624) million as shown in the movement in shareholders' equity and includes goodwill of £251 million (2017: £244 million) related to Asia long-term operations.
- (ii) Intra-group dividends represent dividends that have been declared in the year and investment in operations reflect movements in share capital. The amounts included for these items in the analysis of movement in free surplus (note 10) are as per the holding company cash flow at transaction rates. The difference primarily relates to intra-group loans, foreign exchange and other non-cash items.
- (iii) Other movements include reserve movements in respect of the shareholders' share of actuarial gains and losses on defined benefit pension schemes, share capital subscribed, share-based payments and treasury shares and intra-group transfers between operations which have no overall effect on the Group's embedded value. Also included is the put option recognised on acquisition of TMB Asset Management Co., Ltd. as discussed in note D1.2 of the IFRS financial statements.
- (iv) Group total EEV basis shareholders' equity can be further analysed as follows:

	31 Dec 2018 £m				31 Dec 2017 £m			
	Total long-term business operations note 9	Asset management and general insurance commission	Other operations note (v)	Group total	Total long-term business operations note 9	Asset management and general insurance commission	Other operations note (v)	Group total
IFRS basis shareholders' equity	17,725	2,767	(3,243)	17,249	16,624	2,550	(3,087)	16,087
Additional retained profit (loss) on an EEV basis ^{note (v)}	32,663	-	(130)	32,533	29,293	-	(682)	28,611
EEV basis shareholders' equity	50,388	2,767	(3,373)	49,782	45,917	2,550	(3,769)	44,698

- (v) The additional retained loss on an EEV basis for other operations represents the mark to market value adjustment for holding company net borrowings of a cumulative charge of £(130) million (31 December 2017: £(682) million) as shown in note 7.

9 Analysis of movement in net worth and value of in-force for long-term business

	2018 £m				
	Free surplus	Required capital	Total net worth	Value of in-force business note (i)	Total embedded value
Group					
Shareholders' equity at beginning of year	6,242	10,265	16,507	29,410	45,917
New business contribution ^{note 3}	(815)	619	(196)	4,073	3,877
Existing business – transfer to net worth	3,439	(776)	2,663	(2,663)	-
Expected return on existing business ^{note 4}	201	195	396	2,177	2,573
Changes in operating assumptions and experience variances ^{note 4}	778	69	847	579	1,426
Restructuring costs	(68)	-	(68)	(20)	(88)
Operating profit based on longer-term investment returns	3,535	107	3,642	4,146	7,788
Non-operating items	(720)	(730)	(1,450)	(2,008)	(3,458)
Profit for the year	2,815	(623)	2,192	2,138	4,330
Exchange movements on foreign operations and net investment hedges	201	206	407	1,465	1,872
Intra-group dividends and investment in operations	(1,654)	-	(1,654)	-	(1,654)
Other movements	(77)	-	(77)	-	(77)
Shareholders' equity at end of year	7,527	9,848	17,375	33,013	50,388
Asia					
New business contribution ^{note 3}	(488)	158	(330)	2,934	2,604
Existing business – transfer to net worth	1,370	(253)	1,117	(1,117)	-
Expected return on existing business ^{note 4}	68	55	123	1,095	1,218
Changes in operating assumptions and experience variances ^{note 4}	62	185	247	318	565
Operating profit based on longer-term investment returns	1,012	145	1,157	3,230	4,387
Non-operating items	(393)	15	(378)	(547)	(925)
Profit for the year	619	160	779	2,683	3,462
US					
New business contribution ^{note 3}	(225)	288	63	858	921
Existing business – transfer to net worth	1,462	(171)	1,291	(1,291)	-
Expected return on existing business ^{note 4}	54	69	123	758	881
Changes in operating assumptions and experience variances ^{note 4}	125	6	131	182	313
Restructuring costs	(17)	-	(17)	-	(17)
Operating profit based on longer-term investment returns	1,399	192	1,591	507	2,098
Non-operating items ^{note (ii)}	(812)	164	(648)	(635)	(1,283)
Profit for the year	587	356	943	(128)	815
UK and Europe					
New business contribution ^{note 3}	(102)	173	71	281	352
Existing business – transfer to net worth	607	(352)	255	(255)	-
Expected return on existing business ^{note 4}	79	71	150	324	474
Changes in operating assumptions and experience variances ^{note 4}	591	(122)	469	79	548
Restructuring costs	(51)	-	(51)	(20)	(71)
Operating profit based on longer-term investment returns	1,124	(230)	894	409	1,303
Non-operating items	485	(909)	(424)	(826)	(1,250)
Profit for the year	1,609	(1,139)	470	(417)	53

Notes

- (i) The net value of in-force business comprises the value of future margins from current in-force business less the cost of holding required capital for long-term business as shown below:

	31 Dec 2018 £m				31 Dec 2017 £m			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
Value of in-force business before deduction of cost of capital and time value of guarantees	21,867	11,811	3,083	36,761	17,539	10,486	3,648	31,673
Cost of capital	(566)	(296)	(459)	(1,321)	(588)	(232)	(607)	(1,427)
Cost of time value of guarantees	(981)	(1,446)	-	(2,427)	(186)	(650)	-	(836)
Net value of in-force business	20,320	10,069	2,624	33,013	16,765	9,604	3,041	29,410
Total net worth	4,009	4,581	8,785	17,375	4,182	3,653	8,672	16,507
Total embedded value^{note 8(iv)}	24,329	14,650	11,409	50,388	20,947	13,257	11,713	45,917

* The cost of time value of guarantees arises from the variability of economic outcomes in the future and is, where appropriate, calculated as the difference between a full stochastic valuation and a single deterministic valuation as described in note 13(i)(d). Both valuations reflect the level of policyholder benefits (including guaranteed benefits and discretionary bonuses) and associated charges, together with management actions in response to emerging investment and fund solvency conditions. The increase in the cost of time value of guarantees for Asia operations from £(186) million at 31 December 2017 to £(981) million at 31 December 2018 reflects the interaction between these effects on the two valuations at the respective level of interest rates and equity markets, as well as growth in the business over the year. The increase in the cost of time value of guarantees for the US operations from £(650) million at 31 December 2017 to £(1,446) million at 31 December 2018 primarily reflects the reduction in US equity markets during the fourth quarter of 2018.

- (ii) In June 2018, the National Association of Insurance Commissioners (NAIC) formally approved changes to RBC capital factors that reflected the December 2017 US tax reform. The 2018 EEV results reflect these changes, with a resulting increase in required capital and a corresponding reduction in free surplus of £(165) million.

10 Analysis of movement in free surplus

For EEV covered business, free surplus is the excess of the regulatory basis net assets for EEV reporting purposes (net worth) over the capital required to support the covered business. Where appropriate, adjustments are made to the net worth so that backing assets are included at fair value rather than cost so as to comply with the EEV Principles. In Asia and the US operations, assets deemed to be inadmissible on local regulatory basis are included in net worth where considered fully recognisable on an EEV basis. Free surplus for asset management operations and the UK general insurance commission is taken to be IFRS basis post-tax earnings and shareholders' equity net of goodwill. Free surplus for other operations (including Group and Asia Regional Head Office, holding company borrowings, Africa operations and Prudential Capital) is taken to be EEV basis post-tax earnings and shareholders' equity net of goodwill, with subordinated debt recorded as free surplus to the extent that it is classified as available capital under Solvency II.

(i) Underlying free surplus generated – insurance and asset management operations

The 2017 comparative results are shown below on both actual exchange rates (AER) and constant exchange rates (CER) bases. The 2017 CER comparative results are translated at 2018 average exchange rates.

	2018 £m	2017 £m		% change	
		AER	CER	AER	CER
Asia operations					
Underlying free surplus generated from					
in-force life business	1,500	1,407	1,343	7%	12%
Investment in new business ^{note (iii)(a)}	(488)	(484)	(466)	(1)%	(5)%
Long-term business	1,012	923	877	10%	15%
Asset management	159	155	150	3%	6%
Total	1,171	1,078	1,027	9%	14%
US operations					
Underlying free surplus generated from					
in-force life business	1,641	1,575	1,520	4%	8%
Investment in new business ^{note (iii)(a)}	(225)	(254)	(245)	11%	8%
Long-term business	1,416	1,321	1,275	7%	11%
Asset management	3	7	7	(57)%	(57)%
Total	1,419	1,328	1,282	7%	11%
UK and Europe operations					
Underlying free surplus generated from					
in-force life business	1,277	1,070	1,070	19%	19%
Investment in new business ^{note (iii)(a)}	(102)	(175)	(175)	42%	42%
Long-term business	1,175	895	895	31%	31%
General insurance commission	15	13	13	15%	15%
Total insurance operations	1,190	908	908	31%	31%
Asset management	392	403	403	(3)%	(3)%
Total	1,582	1,311	1,311	21%	21%
Underlying free surplus generated from insurance and asset management operations before restructuring costs	4,172	3,717	3,620	12%	15%
Restructuring costs	(125)	(77)	(77)	(62)%	(62)%
Underlying free surplus generated from insurance and asset management operations	4,047	3,640	3,543	11%	14%
Representing:					
Expected in-force cash flows (including expected return on net assets)	3,640	3,417	3,315	7%	10%
Effects of changes in operating assumptions, operating experience variances and other items before restructuring costs	778	635	618	23%	26%
Underlying free surplus generated from					
in-force life business before restructuring costs	4,418	4,052	3,933	9%	12%
Investment in new business ^{note (iii)(a)}	(815)	(913)	(886)	11%	8%
Total long-term business	3,603	3,139	3,047	15%	18%
Asset management and general insurance commission	569	578	573	(2)%	(1)%
Restructuring costs	(125)	(77)	(77)	(62)%	(62)%
Total	4,047	3,640	3,543	11%	14%

(ii) Underlying free surplus generated – Group total

	2018 £m	2017 £m		% change	
		AER	CER	AER	CER
Underlying free surplus generated from insurance and asset management operations ^{note (i)}	4,047	3,640	3,543	11%	14%
Other income and expenditure	(737)	(756)	(750)	3%	2%
Group total	3,310	2,884	2,793	15%	19%

(iii) Movement in free surplus

	2018 £m					
	Asia operations	US operations	UK and Europe operations	Total insurance and asset management operations	Other operations	Group total
Underlying free surplus generated before restructuring costs	1,171	1,419	1,582	4,172	(726)	3,446
Restructuring costs	(19)	(17)	(89)	(125)	(11)	(136)
Underlying free surplus generated ^{notes (i)(ii)}	1,152	1,402	1,493	4,047	(737)	3,310
Non-operating items ^{note (b)}	(393)	(842)	472	(763)	(22)	(785)
	759	560	1,965	3,284	(759)	2,525
Net cash flows to parent company ^{note (c)}	(699)	(342)	(691)	(1,732)	1,732	-
External dividends	-	-	-	-	(1,244)	(1,244)
Exchange rate movements, timing differences and other items ^{note (d)}	(496)	21	239	(236)	1,505	1,269
Net movement in free surplus	(436)	239	1,513	1,316	1,234	2,550
Balance at beginning of year	2,470	1,928	3,180	7,578	1,774	9,352
Balance at end of year	2,034	2,167	4,693	8,894	3,008	11,902

	2017 £m					
	Asia operations	US operations	UK and Europe operations	Total insurance and asset management operations	Other operations	Group total
Underlying free surplus generated before restructuring costs	1,078	1,328	1,311	3,717	(746)	2,971
Restructuring costs	(14)	-	(63)	(77)	(10)	(87)
Underlying free surplus generated ^{notes(i)(ii)}	1,064	1,328	1,248	3,640	(756)	2,884
Non-operating items ^{note (b)}	330	(1,203)	572	(301)	27	(274)
	1,394	125	1,820	3,339	(729)	2,610
Net cash flows to parent company ^{note (c)}	(645)	(475)	(668)	(1,788)	1,788	-
External dividends	-	-	-	-	(1,159)	(1,159)
Exchange rate movements, timing differences and other items ^{note (d)}	(421)	(140)	22	(539)	226	(313)
Net movement in free surplus	328	(490)	1,174	1,012	126	1,138
Balance at beginning of year	2,142	2,418	2,006	6,566	1,648	8,214
Balance at end of year	2,470	1,928	3,180	7,578	1,774	9,352

Notes

- (a) Free surplus invested in new business primarily represents acquisition costs and amounts set aside for required capital.
- (b) Non-operating items include short-term fluctuations in investment returns, the effect of changes in economic assumptions for long-term business operations and the effect of corporate transactions as described in note 17. In addition, for 2018 this includes the impact of a capital modelling enhancement in the UK and in the US changes to RBC factors following the US tax reform, which were formally approved by the National Association of Insurance Commissioners (NAIC) in June 2018. For 2017 this included the impact of US tax reform (see note 16).
- (c) Net cash flows to parent company for long-term business operations reflect the flows as included in the holding company cash flow at transaction rates.
- (d) Exchange rate movements, timing differences and other items represent:

	2018 £m					
	Asia operations	US operations	UK and Europe operations	Total insurance and asset management operations	Other operations	Group total
Exchange rate movements	88	131	-	219	(6)	213
Mark to market value movements on Jackson assets backing surplus and required capital	-	(95)	-	(95)	-	(95)
Other items ^{note (e)}	(584)	(15)	239	(360)	1,511	1,151
	(496)	21	239	(236)	1,505	1,269

	2017 £m					
	Asia operations	US operations	UK and Europe operations	Total insurance and asset management operations	Other operations	Group total
Exchange rate movements	(113)	(190)	6	(297)	(13)	(310)
Mark to market value movements on Jackson assets backing surplus and required capital	-	40	-	40	-	40
Other items ^{note (e)}	(308)	10	16	(282)	239	(43)
	(421)	(140)	22	(539)	226	(313)

- (e) Other items include the effect of the net issuance of £1.2 billion of subordinated debt for other operations in 2018, intra-group loans and other intra-group transfers between operations and other non-cash items.

11 Expected transfer of value of in-force business and required capital to free surplus

The discounted value of in-force business and required capital for long-term business operations can be reconciled to the 2018 and 2017 total emergence of free surplus as follows:

	2018 £m	2017 £m
Required capital ^{note 9}	9,848	10,265
Value of in-force business (VIF) ^{note 9}	33,013	29,410
Add back: deduction for cost of time value of guarantees ^{note 9}	2,427	836
Other items [*]	(2,169)	(1,371)
Total long-term business operations	43,119	39,140

* 'Other items' represent amounts incorporated into VIF where there is no definitive timeframe for when the payments will be made or receipts received. In particular, other items include the deduction of the shareholders' interest in the with-profits estate, the value of which is derived by increasing final bonus rates so as to exhaust the estate over the lifetime of the in-force with-profits business. This is an assumption to give an appropriate valuation. To be conservative this item is excluded from the expected free surplus generation profile below.

Cash flows are projected on a deterministic basis and are discounted at the appropriate risk discount rate. The modelled cash flows use the same methodology underpinning the Group's EEV reporting and so are subject to the same assumptions and sensitivities.

The table below shows how the VIF generated by the in-force business and the associated required capital for long-term business operations is modelled as emerging into free surplus over future years.

		2018 £m					
		Expected period of conversion of future post-tax distributable earnings and required capital flows to free surplus					
	2018 total as shown above	1-5 years	6-10 years	11-15 years	16-20 years	21-40 years	40+ years
Asia	23,332	6,276	4,185	2,762	2,053	5,399	2,657
US	13,294	6,928	4,094	1,771	378	123	-
UK and Europe	6,493	2,616	1,713	1,053	633	476	2
Total	43,119	15,820	9,992	5,586	3,064	5,998	2,659
	100%	37%	23%	13%	7%	14%	6%

		2017 £m					
		Expected period of conversion of future post-tax distributable earnings and required capital flows to free surplus					
	2017 total as shown above	1-5 years	6-10 years	11-15 years	16-20 years	21-40 years	40+ years
Asia	18,692	5,583	3,638	2,418	1,655	3,845	1,553
US	12,455	6,247	3,993	1,697	401	117	-
UK and Europe	7,993	3,012	2,066	1,289	899	704	23
Total	39,140	14,842	9,697	5,404	2,955	4,666	1,576
	100%	38%	25%	14%	7%	12%	4%

12 Sensitivity of results to alternative assumptions

(i) Sensitivity analysis – economic assumptions

The tables below show the sensitivity of the embedded value as at 31 December 2018 and 31 December 2017 and the new business contribution after the effect of required capital for 2018 and 2017 for long-term business operations to:

- 1 per cent increase in the discount rates;
- 1 per cent increase in interest rates and risk discount rates, including consequential changes (assumed investment returns for all asset classes, market values of fixed interest assets);
- 0.5 per cent decrease in interest rates and risk discount rates, including consequential changes (assumed investment returns for all asset classes, market values of fixed interest assets);
- 1 per cent rise in equity and property yields;
- 10 per cent fall in market value of equity and property assets (embedded value only);
- The statutory minimum capital level in contrast to EEV basis required capital (embedded value only); and
- 5 basis points increase in UK long-term expected defaults.

In each sensitivity calculation, all other assumptions remain unchanged except where they are directly affected by the revised economic conditions.

New business contribution from long-term business operations

	2018 £m				2017 £m			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
New business contribution ^{note 3}	2,604	921	352	3,877	2,368	906	342	3,616
Discount rates – 1% increase	(549)	(42)	(33)	(624)	(477)	(34)	(48)	(559)
Interest rates – 1% increase	(202)	94	43	(65)	(103)	124	44	65
Interest rates – 0.5% decrease	58	(66)	(23)	(31)	(59)	(85)	(23)	(167)
Equity/property yields – 1% rise	130	115	45	290	130	130	52	312
Long-term expected defaults – 5 bps increase	-	-	-	-	-	-	(1)	(1)

Embedded value of long-term business operations

	31 Dec 2018 £m				31 Dec 2017 £m			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
Shareholders' equity ^{note 8}	24,329	14,650	11,409	50,388	20,947	13,257	11,713	45,917
Discount rates – 1% increase	(3,292)	(513)	(648)	(4,453)	(2,560)	(440)	(774)	(3,774)
Interest rates – 1% increase	(1,564)	119	(668)	(2,113)	(944)	26	(635)	(1,553)
Interest rates – 0.5% decrease	366	(273)	363	456	121	(166)	384	339
Equity/property yields – 1% rise	1,041	1,011	377	2,429	873	896	425	2,194
Equity/property market values – 10% fall	(473)	(498)	(461)	(1,432)	(429)	(209)	(479)	(1,117)
Statutory minimum capital	110	217	-	327	169	158	-	327
Long-term expected defaults – 5 bps increase	-	-	(76)	(76)	-	-	(135)	(135)

The sensitivities shown above are for the impact of instantaneous changes on the embedded value of long-term business operations and include the combined effect on the value of in-force business and net assets at the balance sheet dates indicated. If the change in assumptions shown in the sensitivities were to occur, then the effect shown above would be recorded within two components of the profit analysis for the following year, namely the effect of economic assumption changes and short-term fluctuations in investment returns. In addition to the sensitivity effects shown above, the other components of the profit for the following year would be calculated by reference to the altered assumptions, for example new business contribution and unwind of discount, together with the effect of other changes such as altered corporate bond spreads. In addition for changes in interest rates, the effect shown above for Jackson would also be recorded within the fair value movements on assets backing surplus and required capital, which are taken directly to shareholders' equity.

(ii) Sensitivity analysis – non-economic assumptions

The tables below show the sensitivity of the embedded value as at 31 December 2018 and 31 December 2017 and the new business contribution after the effect of required capital for 2018 and 2017 for long-term business operations to:

- 10 per cent proportionate decrease in maintenance expenses (for example a 10 per cent sensitivity on a base assumption of £10 per annum would represent an expense assumption of £9 per annum);
- 10 per cent proportionate decrease in lapse rates (for example a 10 per cent sensitivity on a base assumption of 5 per cent would represent a lapse rate of 4.5 per cent per annum); and
- 5 per cent proportionate decrease in base mortality and morbidity rates (ie increased longevity).

New business contribution from long-term business operations

	2018 £m				2017 £m			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
New business contribution ^{note 3}	2,604	921	352	3,877	2,368	906	342	3,616
Maintenance expenses – 10% decrease	40	11	2	53	38	14	3	55
Lapse rates – 10% decrease	154	24	17	195	133	24	20	177
Mortality and morbidity – 5% decrease	70	4	1	75	69	4	(2)	71

Embedded value of long-term business operations

	31 Dec 2018 £m				31 Dec 2017 £m			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
Shareholders' equity ^{note 8}	24,329	14,650	11,409	50,388	20,947	13,257	11,713	45,917
Maintenance expenses – 10% decrease	254	178	80	512	213	169	64	446
Lapse rates – 10% decrease	972	619	87	1,678	753	659	64	1,476
Mortality and morbidity – 5% decrease	835	141	(294)	682	668	214	(442)	440
Change representing effect on:								
Life business	835	196	13	1,044	668	214	13	895
Annuities	-	(55)	(307)	(362)	-	-	(455)	(455)

13 Methodology and accounting presentation

(i) Methodology

Overview

The embedded value is the present value of the shareholders' interest in the earnings distributable from assets allocated to covered business after sufficient allowance has been made for the aggregate risks in that business. The shareholders' interest in the Group's long-term business comprises:

- The present value of future shareholder cash flows from in-force covered business (value of in-force business), less deductions for:
 - The cost of locked-in required capital; and
 - The time value of cost of options and guarantees;
- Locked-in required capital; and
- The shareholders' net worth in excess of required capital (free surplus).

The value of future new business is excluded from the embedded value.

Notwithstanding the basis of presentation of results as explained in note 13(ii)(c), no smoothing of market or account balance values, unrealised gains or investment return is applied in determining the embedded value or profit. Separately, the analysis of profit is delineated between operating profit based on longer-term investment returns and other constituent items, as explained in note 13(ii)(a).

(a) Covered business

The EEV results for the Group are prepared for 'covered business', as defined by the EEV Principles. Covered business represents the Group's long-term insurance business, including the Group's investments in joint venture and associate insurance operations, for which the value of new and in-force contracts is attributable to shareholders. The post-tax EEV basis results for the Group's covered business are then combined with the post-tax IFRS basis results of the Group's asset management and other operations (including Group and Asia Regional Head Office, holding company borrowings, Africa operations and Prudential Capital). Under the EEV Principles, the results for covered business incorporate the projected margins of attaching internal asset management, as described in note 13(i)(g).

The definition of long-term business operations comprises those contracts falling under the definition for regulatory purposes together with, for US operations, contracts that are in substance the same as guaranteed investment contracts (GICs) but do not fall within the technical definition.

Covered business comprises the Group's long-term business operations, with two exceptions:

- The closed Scottish Amicable Insurance Fund (SAIF) which is excluded from covered business. SAIF is a ring-fenced sub-fund of The Prudential Assurance Company Limited (PAC) long-term fund, established by a Court Approved Scheme of Arrangement in October 1997. SAIF is closed to new business and the assets and liabilities of the fund are wholly attributable to the policyholders of the fund; and
- The presentational treatment of the Group's principal defined benefit pension scheme, the Prudential Staff Pension Scheme (PSPS). The partial recognition of the surplus for PSPS is recognised in 'Other' operations.

A small amount of UK group pensions business is also not modelled for EEV reporting purposes.

(b) Valuation of in-force and new business

The embedded value results are prepared incorporating best estimate assumptions about all relevant factors including levels of future investment returns, expenses, persistency, mortality and morbidity, as described in note 14(vii). These assumptions are used to project future cash flows. The present value of the future cash flows is then calculated using a discount rate which reflects both the time value of money and the non-diversifiable risks associated with the cash flows that are not otherwise allowed for.

New business

In determining the EEV basis value of new business, premiums are included in projected cash flows on the same basis of distinguishing annual and single premium business as set out for statutory basis reporting.

New business premiums reflect those premiums attaching to covered business, including premiums for contracts classified as investment products for IFRS basis reporting. New business premiums for regular premium products are shown on an annualised basis. Internal vesting business is classified as new business where the contracts include an open market option.

The post-tax contribution from new business represents profits determined by applying operating and economic assumptions as at the end of the year. New business profitability is a key metric for the Group's management of the development of the business. In addition, post-tax new business margins are shown by reference to annual premium equivalents (APE) and the present value of new business premiums (PVNBP). These margins are calculated as the percentage of the value of new business profit to APE and PVNBP. APE is calculated as the aggregate of regular premiums on new business written in the period and one-tenth of single premiums. PVNBP is calculated as the aggregate of single premiums and the present value of expected future premiums from regular premium new business, allowing for lapses and the other assumptions made in determining the EEV new business contribution.

Valuation movements on investments

With the exception of debt securities held by Jackson, investment gains and losses during the year (to the extent that changes in capital values do not directly match changes in liabilities) are included directly in the profit for the year and shareholders' equity as they arise.

The results for any covered business conceptually reflect the aggregate of the IFRS results and the movements on the additional shareholders' interest recognised on the EEV basis. Thus the start point for the calculation of the EEV results for Jackson, as for other businesses, reflects the market value movements recognised on an IFRS basis.

However, in determining the movements on the additional shareholders' interest, the basis for calculating the EEV result for Jackson acknowledges that, for debt securities backing liabilities, the aggregate EEV results reflect the fact that the value of in-force business instead incorporates the discounted value of future spread earnings. This value is not affected generally by short-term market movements on securities that, broadly speaking, are held for the longer term.

Fixed income securities backing the free surplus and required capital for Jackson are accounted for at fair value. However, consistent with the treatment applied under IFRS for Jackson securities classified as available-for-sale, movements in unrealised appreciation/depreciation on these securities are accounted for in equity rather than in the income statement, as shown in the movement in shareholders' equity.

(c) Cost of capital

A charge is deducted from the embedded value for the cost of locked-in required capital supporting the Group's long-term business. The cost is the difference between the nominal value of the capital and the discounted value of the projected releases of this capital, allowing for post-tax investment earnings on the capital.

The annual result is affected by the movement in this cost from year to year which comprises a charge against new business profit and generally a release in respect of the reduction in capital requirements for business in force as this runs off.

Where required capital is held within a with-profits long-term fund, the value placed on surplus assets in the fund is already discounted to reflect its expected release over time and no further adjustment is necessary in respect of required capital.

(d) Financial options and guarantees

Nature of financial options and guarantees in Prudential's long-term business

Asia

Subject to local market circumstances and regulatory requirements, the guarantee features described below in respect of UK and Europe business broadly apply to similar types of participating contracts in Asia which are principally written in Hong Kong, Singapore and Malaysia. Participating products have both guaranteed and non-guaranteed elements.

There are also various non-participating long-term products with guarantees. The principal guarantees are those for whole-of-life contracts with floor levels of policyholder benefits that accrue at rates set at inception and do not vary subsequently with market conditions.

US (Jackson)

The principal financial options and guarantees in Jackson are associated with the fixed annuity (FA) and variable annuity (VA) lines of business.

Fixed annuities provide that, at Jackson's discretion, it may reset the interest rate credited to policyholders' accounts, subject to a guaranteed minimum. The guaranteed minimum return varies from 1.0 per cent to 5.5 per cent for both years, depending on the particular product, jurisdiction where issued, and date of issue. At 31 December 2018, 88 per cent of the account values on fixed annuities are for policies with guarantees of 3 per cent or less (31 December 2017: 87 per cent), and the average guarantee rate is 2.6 per cent for both years.

Fixed annuities also present a risk that policyholders will exercise their option to surrender their contracts in periods of rapidly rising interest rates, possibly requiring Jackson to liquidate assets at an inopportune time.

Jackson issues variable annuity (VA) contracts for which it contractually guarantees to the contract holder, subject to specific conditions, either: a) return of no less than total deposits made to the contract adjusted for any partial withdrawals; b) total deposits made to the contract adjusted for any partial withdrawals plus a minimum return; or c) the highest contract value on a specified anniversary date adjusted for any withdrawals following the specified contract anniversary. These guarantees include benefits that are payable upon depletion of funds (Guaranteed Minimum Withdrawal Benefit (GMWB)), as death benefits (Guaranteed Minimum Death Benefits (GMDB)) or as income benefits (Guaranteed Minimum Income Benefits (GMIB)). These guarantees generally protect the policyholders' value in the event of poor equity market performance. Jackson hedges the GMWB and GMDB guarantees through the use of equity options and futures contracts, and essentially fully reinsures the GMIB guarantees.

Jackson also issues fixed index annuities (FIA) that enable policyholders to obtain a portion of an equity-linked return while providing a guaranteed minimum return. The guaranteed minimum returns are of a similar nature to those described above for fixed annuities.

UK and Europe (M&GPrudential)

The only significant financial options and guarantees in M&GPrudential's covered business arise in the with-profits fund.

With-profits products provide returns to policyholders through bonuses that are smoothed. There are two types of bonuses: annual and final. Annual bonuses are declared once a year and, once credited, are guaranteed in accordance with the terms of the particular product. Final bonuses are guaranteed only until the next bonus declaration. The UK with-profits fund also held a provision of £49 million at 31 December 2018 (31 December 2017: £53 million) to honour guarantees on a small number of guaranteed annuity option products.

The Group's main exposure to guaranteed annuity options in M&GPrudential is through the non-covered business of SAIF. A provision of £361 million was held in SAIF at 31 December 2018 (31 December 2017: £503 million) to honour the guarantees. As described in note 13 (i)(a), the assets and liabilities are wholly attributable to the policyholders of the fund. Therefore the movement in the provision has no direct impact on shareholders' funds.

Time value

The value of financial options and guarantees comprises two parts:

- The first part arises from a deterministic valuation on best estimate assumptions (the intrinsic value); and
- The second part arises from the variability of economic outcomes in the future (the time value).

Where appropriate, a full stochastic valuation has been undertaken to determine the time value of the financial options and guarantees.

The economic assumptions used for the stochastic calculations are consistent with those used for the deterministic calculations. Assumptions specific to the stochastic calculations reflect local market conditions and are based on a combination of actual market data, historic market data and an assessment of long-term economic conditions. Common principles have been adopted across the Group for the stochastic asset models, for example, separate modelling of individual asset classes but with an allowance for correlation between the various asset classes. Details of the key characteristics of each model are given in notes 14(iv), (v) and (vi).

In deriving the time value of financial options and guarantees, management actions in response to emerging investment and fund solvency conditions have been modelled. Management actions encompass, but are not confined to, investment allocation decisions, levels of reversionary and terminal bonuses and credited rates. Bonus rates are projected from current levels and varied in accordance with assumed management actions applying in the emerging investment and fund solvency conditions.

In all instances, the modelled actions are in accordance with approved local practice and therefore reflect the options actually available to management. For the UK with-profits fund, the actions assumed are consistent with those set out in the Principles and Practices of Financial Management which explains how regular and final bonus rates within the discretionary framework are determined, subject to the general legislative requirements applicable.

(e) Level of required capital

In adopting the EEV Principles, Prudential has based required capital on the applicable local statutory regulations, including any amounts considered to be required above the local statutory minimum requirements to satisfy regulatory constraints.

For with-profits business in Asia and the UK, the available capital in the fund is sufficient to meet the capital requirements. For M&GPrudential, a portion of future shareholder transfers expected from the with-profits fund is recognised within net worth, together with the associated capital requirements.

For shareholder-backed business, the following capital requirements for long-term business operations apply:

- Asia: the level of required capital has been set to an amount at least equal to local statutory notification requirements. For China operations, the level of required capital follows the approach for embedded value reporting issued by the China Association of Actuaries (CAA) reflecting the C-ROSS regime;
- US: the level of required capital has been set at 250 per cent of the risk-based capital (RBC) required by the National Association of Insurance Commissioners (NAIC) at the Company Action Level (CAL); and
- UK and Europe: the capital requirements are set at the Solvency II Solvency Capital Requirement (SCR) for shareholder-backed business as a whole. Following the announced demerger, from 1 January 2018 this does not allow for diversification outside the planned perimeter of the business to be demerged.

(f) With-profits business and the treatment of the estate

The proportion of surplus allocated to shareholders from the UK with-profits fund has been based on the present level of 10 per cent. The value attributed to the shareholders' interest in the estate is derived by increasing final bonus rates (and related shareholder transfers) so as to exhaust the estate over the lifetime of the in-force with-profits business. In any scenarios where the total assets of the life fund are insufficient to meet policyholder claims in full, the excess cost is fully attributed to shareholders. Similar principles apply, where appropriate, for other with-profits funds of the Group's Asia operations.

(g) Internal asset management

The in-force and new business results from long-term business include the projected value of profits or losses from asset management and service companies that support the Group's covered insurance businesses. The results of the Group's asset management operations include the current year profits from the management of both internal and external funds. EEV basis shareholders' other income and expenditure is adjusted to deduct the unwind of the expected internal asset management profit margin for the year as included in 'Other operations'. The deduction is on a basis consistent with that used for projecting the results for covered insurance business. Group operating profit accordingly includes the variance between actual and expected profit in respect of management of the assets for covered business.

(h) Allowance for risk and risk discount rates

Overview

Under the EEV Principles, discount rates used to determine the present value of future cash flows are set by reference to risk-free rates plus a risk margin.

For Asia and the US, the risk-free rates are based on 10-year local government bond yields. For UK and Europe, the EEV risk-free rate is based on the full term structure of interest rates, ie a yield curve, which is used to determine the embedded value at the end of the reporting period.

The risk margin should reflect any non-diversifiable risk associated with the emergence of distributable earnings that is not allowed for elsewhere in the valuation. In order to better reflect differences in relative market risk volatility inherent in each product group, Prudential sets the risk discount rates to reflect the expected volatility associated with the cash flows for each product category in the embedded value model, rather than at a Group level.

Since financial options and guarantees are explicitly valued under the EEV methodology, risk discount rates under EEV are set excluding the effect of these product features.

The risk margin represents the aggregate of the allowance for market risk, additional allowance for credit risk where appropriate, and allowance for non-diversifiable non-market risk. No allowance is required for non-market risks where these are assumed to be fully diversifiable.

Market risk allowance

The allowance for market risk represents the beta multiplied by an equity risk premium. Except for UK shareholder-backed annuity business (as explained below), such an approach has been used for the Group's businesses.

The beta of a portfolio or product measures its relative market risk. The risk discount rates reflect the market risk inherent in each product group and hence the volatility of product cash flows. These are determined by considering how the profits from each product are affected by changes in expected returns on various asset classes. By converting this into a relative rate of return, it is possible to derive a product-specific beta.

Product level betas reflect the most recent product mix to produce appropriate betas and risk discount rates for each major product grouping.

Additional credit risk allowance

The Group's methodology is to allow appropriately for credit risk. The allowance for total credit risk is to cover:

- Expected long-term defaults;
- Credit risk premium (to reflect the volatility in downgrade and default levels); and
- Short-term downgrades and defaults.

These allowances are initially reflected in determining best estimate returns and through the market risk allowance described above. However, for those businesses largely backed by holdings of debt securities, these allowances in the projected returns and market risk allowances may not be sufficient and an additional allowance may be appropriate.

The practical application of the allowance for credit risk varies depending upon the type of business as described below:

Asia

For Asia, the allowance for credit risk incorporated in the projected rates of return and the market risk allowance are considered to be sufficient. Accordingly, no additional allowance for credit risk is required.

The projected rates of return for holdings of corporate bonds comprise the risk-free rate plus an assessment of long-term spread over the risk-free rate.

US (Jackson)

For Jackson business, the allowance for long-term defaults of 0.17 per cent (31 December 2017: 0.19 per cent) is reflected in the risk margin reserve (RMR) charge that is deducted in determining the projected spread margin between the earned rate on the investments and the policyholder crediting rate.

The risk discount rate incorporates an additional allowance for credit risk premium and short-term downgrades and defaults (0.2 per cent for variable annuity business and 1.0 per cent for non-variable annuity business for both years), as shown in note 14(ii). In determining this allowance a number of factors have been considered. These factors, in particular, include:

- How much of the credit spread on debt securities represents an increased short-term credit risk not reflected in the RMR long-term default assumptions, and how much is liquidity premium (which is the premium required by investors to compensate for the risk of longer-term investments which cannot be easily converted into cash at the fair market value). In assessing this effect, consideration has been given to a number of approaches to estimating the liquidity premium by considering recent statistical data; and
- Policyholder benefits for Jackson fixed annuity business are not fixed. It is possible in adverse economic scenarios to pass on a component of credit losses to policyholders (subject to guarantee features) through lower investment returns credited to policyholders. Consequently, it is only necessary to allow for the balance of the credit risk in the risk discount rate.

The level of the additional allowance is assessed at each reporting period to take account of prevailing credit conditions and as the business in force alters over time. The additional allowance for variable annuity business has been set at one-fifth of the non-variable annuity business to reflect the proportion of the allocated holdings of general account debt securities.

The level of allowance differs from that for UK annuity business for investment portfolio differences and to take account of the management actions available in adverse economic scenarios to reduce crediting rates to policyholders, subject to guarantee features of the products.

UK and Europe (M&G Prudential)

(1) Shareholder-backed annuity business

For shareholder-backed annuity business, Prudential has used a market consistent embedded value (MCEV) approach to derive an implied risk discount rate which is then applied to the projected best estimate cash flows.

In the annuity MCEV calculations, as the assets are generally held to maturity to match liabilities, the future cash flows are discounted using the swap yield curve plus an allowance for liquidity premium based on the Solvency II allowance for credit risk. The Solvency II allowance is set by the European Insurance and Occupational Pensions Authority (EIOPA) using a prudent assumption that all future downgrades will be replaced annually, and allowing for the credit spread floor.

For the purposes of presentation in the EEV results, the results produced on this basis are reconfigured. Under this approach the projected earned rate of return on the debt securities held is determined after allowing for a best estimate credit risk allowance. The remaining elements of prudence within the Solvency II allowance are incorporated into the risk margin included in the discount rate, shown in note 14(iii).

(2) With-profits fund non-profit annuity business

For non-profit annuity business attributable to the UK with-profits fund, the basis for determining the aggregate allowance for credit risk is consistent with that applied for UK shareholder-backed annuity business (as described above). The allowance for credit risk for this business is taken into account in determining the projected cash flows from the with-profits fund, which are in turn discounted at the risk discount rate applicable to all of the projected cash flows from the fund.

(3) With-profits fund holdings of debt securities

The with-profits fund holds debt securities as part of its investment portfolio backing policyholder liabilities and unallocated surplus. The assumed earned rate for with-profit holdings of corporate bonds is defined as the risk-free rate plus an assessment of the long-term spread over riskfree, net of expected long-term defaults. This approach is similar to that applied for equities and properties for which the projected earned rate is defined as the risk-free rate plus a long-term risk premium.

Allowance for non-diversifiable non-market risks

The majority of non-market and non-credit risks are considered to be diversifiable. An allowance for non-diversifiable non-market risks is estimated as set out below:

A base level allowance of 50 basis points is applied to cover the non-diversifiable non-market risks associated with the Group's businesses. For the Group's Asia operations in Indonesia, the Philippines, Taiwan, Thailand and Vietnam, additional allowances are applied for emerging market risk ranging from 100 to 250 basis points. The level of these allowances are reviewed and updated based on an assessment of a range of pre-defined emerging market risk indicators, as well as the Group's exposure and experience in the business units. At 31 December 2018, the China allowance for non-market risk was reduced reflecting the growth in the size of the business, increasing management exposure and experience in the country and an improvement in our risk assessment of the market. For the Group's US business and UK and Europe business, no additional allowance is necessary.

(i) Foreign currency translation

Foreign currency profits and losses have been translated at average exchange rates for the year. Foreign currency assets and liabilities have been translated at year-end exchange rates. The principal exchange rates are shown in note A1 of the IFRS financial statements.

(j) Taxation

In determining the post-tax profit for the year for covered business, the overall tax rate includes the impact of tax effects determined on a local regulatory basis. Tax payments and receipts included in the projected cash flows to determine the value of in-force business are calculated using rates that have been announced and substantively enacted by the end of the reporting period.

(k) Inter-company arrangements

The EEV results for covered business incorporate annuities established in the PAC non-profit sub-fund from vesting pension policies in SAIF (which is not covered business). The EEV results also incorporate the effect of the reinsurance arrangement of non-profit immediate pension annuity liabilities of SAIF to the PAC non-profit sub-fund.

(ii) Accounting presentation

(a) Analysis of post-tax profit

To the extent applicable, the presentation of the EEV post-tax profit for the year is consistent with the classification between operating and non-operating results with the basis that the Group applies for the analysis of IFRS basis results. Operating results reflect underlying results including longer-term investment returns, which are determined as described in note 13(ii)(b) and incorporate the following:

- New business contribution, as defined in note 13(i)(b);
- Unwind of discount on the value of in-force business and other expected returns, as described in note 13(ii)(c);
- The impact of routine changes of estimates relating to operating assumptions, as described in note 13(ii)(d); and
- Operating experience variances, as described in note 13(ii)(e).

Non-operating results comprise:

- Short-term fluctuations in investment returns;
- The mark to market value movements on core structural borrowings;
- The effect of changes in economic assumptions; and
- The impact of corporate transactions undertaken in the year.

In addition, operating results include the effect of changes in tax legislation, unless these changes are one-off and structural in nature, such as the impact of the US tax reform in 2017 (see note 16), or primarily affect the level of projected investment returns, in which case they are reflected as a non-operating result.

Total profit attributable to shareholders and basic earnings per share include these items, together with actual investment returns. The Group believes that operating profit, as adjusted for these items, better reflects underlying performance.

For M&GPrudential, the embedded value incorporates Solvency II transitional measures, which are recalculated using management's estimate of the impact of operating and market conditions at the valuation date. The impact of this recalculation is recorded within the corresponding component of the analysis of post-tax profit.

(b) Investment returns included in operating profit

For the investment element of the assets covering the net worth of long-term insurance business, investment returns are recognised in operating results at the expected long-term rate of return. These expected returns are calculated by reference to the asset mix of the portfolio. For the purpose of calculating the longer-term investment return to be included in the operating result of the with-profits fund of M&GPrudential, where assets backing the liabilities and unallocated surplus are subject to market volatility, asset values at the beginning of the reporting period are adjusted to remove the effects of short-term market movements as explained in note 13(ii)(c).

For the purpose of determining the long-term returns for debt securities of US operations for fixed annuity and other general account business, a risk margin reserve charge is included which reflects the expected long-term rate of default based on the credit quality of the portfolio. For Jackson, interest-related realised gains and losses are amortised to the operating results over the maturity period of the sold bonds and for equity-related investments, a long-term rate of return is assumed, which reflects the aggregation of end-of-period risk-free rates and the equity risk premium. For US variable annuity separate account business, operating profit includes the unwind of discount on the opening value of in-force business adjusted to reflect end-of-period projected rates of return with the excess or deficit of the actual return recognised within non-operating profit, together with related hedging activity.

For UK annuity business, rebalancing of the asset portfolio backing the liabilities to policyholders may, from time to time, take place to align it more closely with the internal benchmark of credit quality that management applies. Such rebalancing will result in a change in the projected yield on the asset portfolio and the allowance for default risk. The net effect of these changes is included in the operating result for the year.

(c) Unwind of discount and other expected returns

The Group's methodology in determining the unwind of discount and other expected returns is by reference to:

- The value of in-force business at the beginning of the year (adjusted for the effect of current year economic and operating assumption changes); and
- Required capital and surplus assets.

In applying this general approach, the unwind of discount included in operating profit for M&GPrudential is described below.

M&GPrudential

The unwind is determined by reference to an implied single risk discount rate. The EEV risk-free rate is based on a yield curve (as set out in note 13(i)(h)), which is used to derive an implied single discount rate which, if this rate had been used, would reproduce the same embedded value as that calculated by reference to the yield curve. The difference between the operating profit determined using the single implied discount rate and that derived using the yield curve is included within non-operating profit.

For with-profits business, the opening value of in-force is adjusted for the effect of short-term investment volatility due to market movements (ie smoothed). In the summary statement of financial position and for total profit reporting, asset values and investment returns are not smoothed. At 31 December 2018, the shareholders' interest in the smoothed surplus assets used for this purpose only were £12 million higher (31 December 2017: £57 million lower) than the surplus assets carried in the statement of financial position.

(d) Effect of changes in operating assumptions

Operating profit includes the effect of changes to non-economic assumptions on the value of in-force at the end of the year. For presentational purposes the effect of changes is delineated to show the effect on the opening value of in-force as operating assumption changes, with the experience variances subsequently being determined by reference to the end-of-year assumptions (see note 13(ii)(e)).

(e) Operating experience variances

Operating profit includes the effect of experience variances on non-economic assumptions, such as persistency, mortality and morbidity, expenses and other factors, which are calculated with reference to the end-of-year assumptions.

(f) Effect of changes in economic assumptions

Movements in the value of in-force business at the beginning of the year caused by changes in economic assumptions, net of the related change in the time value of cost of options and guarantees, are recorded in non-operating results.

14 Assumptions

Principal economic assumptions

The EEV basis results for the Group's operations have been determined using economic assumptions where the long-term expected rates of return on investments and risk discount rates are set by reference to year-end risk-free rates of return (defined below for each of the Group's insurance operations). Expected returns on equity and property asset classes and corporate bonds are derived by adding a risk premium, based on the Group's long-term view, to the risk-free rate.

The total profit that emerges over the lifetime of an individual contract as calculated using the embedded value basis is the same over time as that calculated under the IFRS basis. Since the embedded value basis reflects discounted future cash flows, under the EEV methodology the profit emergence is advanced, thus more closely aligning the timing of the recognition of profit with the efforts and risks of current management actions, particularly with regard to business sold during the year.

(i) Asia

The risk-free rates of return for Asia are defined as 10-year government bond yields at the end of the year.

	Risk discount rate %				10-year government bond yield %		Expected long-term Inflation %	
	New business		In-force business		31 Dec 2018	31 Dec 2017	31 Dec 2018	31 Dec 2017
	31 Dec 2018	31 Dec 2017	31 Dec 2018	31 Dec 2017				
China	8.1	9.7	8.1	9.7	3.3	3.9	3.0	3.0
Hong Kong ^{notes (b)(d)}	4.4	4.1	4.4	4.1	2.7	2.4	2.5	2.5
Indonesia	12.4	10.6	12.4	10.6	8.2	6.4	4.5	4.5
Malaysia ^{note (d)}	6.6	6.4	6.6	6.5	4.1	3.9	2.5	2.5
Philippines	14.5	12.7	14.5	12.7	7.0	5.2	4.0	4.0
Singapore ^{note (d)}	3.4	3.5	4.2	4.4	2.1	2.0	2.0	2.0
Taiwan	4.5	4.3	4.4	3.9	0.9	0.9	1.5	1.5
Thailand	10.0	9.8	10.0	9.8	2.5	2.3	3.0	3.0
Vietnam	12.6	12.6	12.6	12.6	5.1	5.1	5.5	5.5
Total weighted risk discount rate ^{note (a)}	5.4	5.3	5.8	5.7				

Notes

- (a) The weighted risk discount rates for Asia operations shown above have been determined by weighting each market's risk discount rates by reference to the post-tax EEV basis new business contribution and the closing value of in-force business. The changes in the risk discount rates for individual Asia business units reflect the movements in 10-year government bond yields, changes in the economic basis and changes in product mix.
- (b) For Hong Kong the assumptions shown are for US dollar denominated business. For other business units, the assumptions are for local currency denominated business.
- (c) Equity risk premiums in Asia range from 4.0 per cent to 9.4 per cent (2017: 4.0 per cent to 9.4 per cent).
- (d) The mean equity return assumptions for the most significant equity holdings of the Asia operations are:

	31 Dec 2018 %	31 Dec 2017 %
Hong Kong	6.7	6.4
Malaysia	10.6	10.4
Singapore	8.6	8.5

(ii) US

The risk-free rates of return for the US are defined as the 10-year treasury bond yield at the end of the year.

	31 Dec 2018 %	31 Dec 2017 %
Risk discount rate:		
Variable annuity:		
Risk discount rate	7.1	6.8
Additional allowance for credit risk included in risk discount rate ^{note 13(i)(h)}	0.2	0.2
Non-variable annuity:		
Risk discount rate	4.4	4.1
Additional allowance for credit risk included in risk discount rate ^{note 13(i)(h)}	1.0	1.0
Weighted average total:		
New business	6.9	6.7
In-force business	6.8	6.5
US 10-year treasury yield	2.7	2.4
Allowance for long-term defaults included in projected spread ^{note 13(i)(h)}	0.17	0.19
Pre-tax expected long-term nominal rate of return for US equities	6.7	6.4
Expected long-term rate of inflation	2.9	3.0
Equity risk premium	4.0	4.0
S&P equity return volatility	17.5	18.0

Note

Assumed new business spread margins are as follows:

	31 Dec 2018 %		31 Dec 2017 %	
	January to June issues	July to December issues	January to June issues	July to December issues
Fixed annuity business [†]	1.75	1.75	1.50	1.25
Fixed index annuity business*	2.00	2.00	1.75	1.50
Institutional business	0.50	0.50	0.50	0.50

* The assumed spread margin grades up linearly by 25 basis points to a long-term assumption over five years.

† Including the proportion of variable annuity business invested in the general account.

(iii) UK and Europe

The risk-free rate is based on the full term structure of interest rates, ie a yield curve, which is used to determine the embedded value at the end of the reporting period. These yield curves are used to derive pre-tax expected long-term nominal rates of investment return and risk discount rates. For the purpose of determining the unwind of discount in the analysis of operating profit, these yield curves are used to derive a single implied risk discount rate, as explained in note 13(i)(h).

This single implied risk discount rate is shown, along with the 15-year nominal rate of investment return and 15-year rate of inflation based on the inflation yield curve.

	31 Dec 2018 %	31 Dec 2017 %
Shareholder-backed annuity in-force business: ^{note (a)}		
Risk discount rate	4.7	4.0
Pre-tax expected 15-year nominal rates of investment return ^{note (c)}	3.1	2.6
With-profits and other business:		
Risk discount rate: ^{note (b)}		
New business	4.9	4.7
In-force business	5.0	4.8
Pre-tax expected 15-year nominal rates of investment return: ^{note (c)}		
Overseas equities	6.5 to 10.1	6.2 to 10.1
Property	4.4	4.4
15-year gilt yield	1.7	1.6
Corporate bonds	3.5	3.4
Expected 15-year rate of inflation	3.6	3.5
Equity risk premium	4.0	4.0

Notes

(a) For shareholder-backed annuity business, the movements in the pre-tax long-term nominal rates of return and risk discount rates reflect the effect of changes in asset yields.

(b) The risk discount rates for with-profits and other business shown above represents a weighted average total of the rates applied to determine the present value of future cash flows, including the portion of future with-profits business shareholders' transfers recognised in net worth.

(c) The table below shows the pattern of the UK risk-free Solvency II spot yield curve at the end of 31 December:

	1 year	5 year	10 year	15 year	20 year
31 Dec 2018	1.0%	1.2%	1.3%	1.4%	1.5%
31 Dec 2017	0.6%	0.9%	1.2%	1.3%	1.4%

Stochastic assumptions

Details are given below of the key characteristics of the models used to determine the time value of the financial options and guarantees as referred to in note 13(i)(d).

(iv) Asia

- The stochastic cost of guarantees is primarily of significance for the Hong Kong, Malaysia, Singapore and Taiwan operations;
- The principal asset classes are government and corporate bonds;
- The asset return models are similar to the models as described for M&G Prudential below; and

- The volatility of equity returns ranges from 18 per cent to 35 per cent for both years, and the volatility of government bond yields ranges from 1.1 per cent to 2.0 per cent (2017: from 1.1 per cent to 2.0 per cent).

(v) US (Jackson)

- Interest rates and equity returns are projected using a log-normal generator reflecting historical market data;
- Corporate bond returns are based on treasury yields plus a spread that reflects current market conditions; and
- The volatility of equity returns ranges from 17 per cent to 26 per cent (2017: from 18 per cent to 27 per cent), and the standard deviation of interest rates ranges from 3.4 per cent to 3.7 per cent (2017: from 2.5 per cent to 2.8 per cent).

(vi) UK and Europe (M&GPrudential)

- Interest rates are projected using a stochastic interest rate model calibrated to the current market yields;
- Equity returns are assumed to follow a log-normal distribution;
- The corporate bond return is calculated based on a risk-free return plus a mean-reverting spread;
- Property returns are also modelled based on a risk-free return plus a risk premium with a stochastic process reflecting total property returns; and
- The standard deviation of equities and property ranges from 14 per cent to 20 per cent for both years.

Operating assumptions

(vii) Best estimate assumptions

Best estimate assumptions are used for the cash flow projections, where best estimate is defined as the mean of the distribution of future possible outcomes. The assumptions are reviewed actively and changes are made when evidence exists that material changes in future experience are reasonably certain.

Assumptions required in the calculation of the value of options and guarantees, for example relating to volatilities and correlations, or dynamic algorithms linking liabilities to assets, have been set equal to the best estimates and, wherever material and practical, reflect any dynamic relationships between the assumptions and the stochastic variables.

Demographic assumptions

Persistence, mortality and morbidity assumptions are based on an analysis of recent experience, but also reflect expected future experience. Where relevant, when calculating the time value of financial options and guarantees, policyholder withdrawal rates vary in line with the emerging investment conditions according to management's expectations. When projecting cash flows for medical reimbursement business that is repriced annually, explicit allowance is made for expected future premiums inflation and separately for future medical claims inflation. The 2018 EEV results reflect this approach. Previously, medical claims inflation was implicitly allowed for by assuming that all increases in medical claim costs were directly offset by future premium increases with no impact on profits.

Expense assumptions

Expense levels, including those of service companies that support the Group's long-term business operations, are based on internal expense analysis and are appropriately allocated to acquisition of new business and renewal of in-force business. For mature business, it is Prudential's policy not to take credit for future cost reduction programmes until the actions to achieve the savings have been delivered. An allowance is made for short-term required expenses, that are not representative of the longer-term expense loadings of the relevant businesses. At 31 December 2018, the allowance held for these costs across the Group was £(436) million mainly arising in Asia. Expense overruns are reported where these are expected to be short-lived, including businesses that are growing rapidly or are sub-scale.

For Asia operations, the expenses comprise costs borne directly and recharged costs from the Asia Regional Head Office that are attributable to covered business. The assumed future expenses for these operations also include projections of these future recharges. Development expenses are charged as incurred.

Corporate expenditure, which is included in other income and expenditure, comprises:

- Expenditure for Group Head Office, to the extent not allocated to the UK with-profits funds, together with restructuring costs incurred across the group; and
- Expenditure of the Asia Regional Head Office that is not allocated to the covered business or asset management operations which is charged as incurred. These costs are primarily for corporate related activities and are included within corporate expenditure.

(viii) Tax rates

The assumed long-term effective tax rates for operations reflect the incidence of taxable profits and losses in the projected cash flows as explained in note 13(i)(j).

The local statutory corporate tax rates applicable for the most significant operations for 2018 and 2017 are as follows:

	%
Asia operations:	
Hong Kong	16.5 per cent on 5 per cent of premium income
Indonesia	25.0
Malaysia	24.0
Singapore	17.0
US operations	2017: 35.0; 2018: 21.0
UK operations	2017 and 2018: 19.0; from 1 April 2020: 17.0

15 Insurance new business premiums^{note (i)}

	Single premiums		Regular premiums		Annual premium equivalents (APE) note 13(i)(b)		Present value of new business premiums (PVNBP) note 13(i)(b)	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
	Asia	2,316	2,299	3,513	3,575	3,744	3,805	20,754
US	15,423	16,622	-	-	1,542	1,662	15,423	16,622
UK and Europe	13,382	13,044	177	187	1,516	1,491	14,073	13,784
Group total	31,121	31,965	3,690	3,762	6,802	6,958	50,250	50,811
Asia								
Cambodia	-	-	20	16	20	16	89	70
Hong Kong	343	582	1,663	1,667	1,697	1,725	10,200	10,027
Indonesia	205	288	215	268	236	297	910	1,183
Malaysia	84	73	243	271	251	278	1,322	1,398
Philippines	43	62	83	71	87	77	296	287
Singapore	930	859	369	361	462	447	3,611	3,463
Thailand	217	139	95	70	117	84	609	421
Vietnam	20	8	144	133	146	134	708	659
South-east Asia operations including Hong Kong								
	1,842	2,011	2,832	2,857	3,016	3,058	17,745	17,508
China ^{note (ii)}	103	179	292	276	302	294	1,313	1,299
Taiwan	292	46	182	208	211	213	788	634
India ^{note (iii)}	79	63	207	234	215	240	908	964
Total	2,316	2,299	3,513	3,575	3,744	3,805	20,754	20,405
US								
Variable annuities	10,810	11,536	-	-	1,081	1,154	10,810	11,536
Elite Access (variable annuity)	1,681	2,013	-	-	168	201	1,681	2,013
Fixed annuities	340	454	-	-	34	45	340	454
Fixed index annuities	251	295	-	-	25	30	251	295
Wholesale	2,341	2,324	-	-	234	232	2,341	2,324
Total	15,423	16,622	-	-	1,542	1,662	15,423	16,622
UK and Europe								
Bonds	3,539	3,509	-	-	354	351	3,540	3,510
Corporate pensions	69	103	117	130	124	140	443	533
Individual pensions	5,681	5,747	35	32	603	607	5,832	5,897
Income drawdown	2,555	2,218	-	-	256	222	2,555	2,218
Other products	1,538	1,467	25	25	179	171	1,703	1,626
Total	13,382	13,044	177	187	1,516	1,491	14,073	13,784
Group total	31,121	31,965	3,690	3,762	6,802	6,958	50,250	50,811

Notes

- (i) The tables shown above are provided as an indicative volume measure of transactions undertaken in the reporting period that have the potential to generate profits for shareholders. The amounts shown are not, and not intended to be, reflective of premium income recorded in the IFRS income statement.
- (ii) New business in China is included at Prudential's 50 per cent interest in the China life operation.
- (iii) New business in India is included at Prudential's 26 per cent interest in the India life operation.

16 Impact of US tax reform

On 22 December 2017, The Tax Cuts and Jobs Act in the US was enacted into law effective from 1 January 2018. The tax reform package as a whole, which included a reduction in the corporate income tax rate from 35 per cent to 21 per cent and a number of specific measures affecting US life insurers, resulted in a £390 million benefit in non-operating profit reflected within the 2017 results. The positive impact on an EEV basis represented the benefit of future profits being taxed at a lower rate, partially offset by a reduction in the net deferred tax asset held in the balance sheet to reflect remeasurement at the new lower tax rate, together with a reduction in the benefit from the dividend received deduction on taxable profits from variable annuity business. In June 2018, the National Association of Insurance Commissioners (NAIC) formally approved changes to RBC capital factors that reflected the December 2017 US tax reform and the 2018 EEV results reflect these changes as shown in notes 6 and 9.

17 Corporate transactions

Disposals and other corporate transactions

	2018 £m	2017 £m
Transactions associated with M&GPrudential ^{note (i)}	(376)	-
Other transactions ^{note (ii)}	(75)	80
	(451)	80

Notes

(i) Transactions associated with M&GPrudential

The following transactions reduced the Group's EEV by £(376) million, which primarily reflects the loss of profits on the portion of annuity liabilities sold.

Intention to demerge the Group's UK and Europe business and transfer of Hong Kong insurance subsidiaries

In March 2018, the Group announced its intention to demerge its UK and Europe business (M&GPrudential) from Prudential plc, resulting in two separately listed companies. In preparation for the UK demerger process, during December 2018, the legal ownership of Prudential plc's Hong Kong insurance subsidiaries was transferred from The Prudential Assurance Company Limited (M&GPrudential's UK regulated Insurance entity) to Prudential Corporation Asia Limited.

Sale of shareholder annuity portfolio

In March 2018, M&GPrudential reinsured £12.0 billion of its shareholder annuity portfolio (IFRS liabilities valued as at 31 December 2017) to Rothesay Life. Under the terms of the agreement, the reinsurance is expected to be followed by a Part VII transfer of most of the reinsured portfolio by 30 June 2019. The 2018 EEV results include the impact on EEV resulting from this transfer.

(ii) Other transactions

In 2018, other corporate transactions resulted in an EEV loss of £(75) million (2017: £80 million gain). This primarily relates to additional costs incurred in exiting the US broker-dealer business (which realised a post-tax gain of £80 million when the independent broker-dealer network was sold to LPL Financial LLC in 2017) and costs related to the preparation for the announced demerger discussed above.

18 Post balance sheet events

Renewal of strategic bancassurance alliance with United Overseas Bank Limited

In January 2019, the Group announced the renewal of its regional strategic bancassurance alliance with United Overseas Bank Limited (UOB). The new agreement extends the original alliance which commenced in 2010 to 2034 and increases the geographical scope to include a fifth market, Vietnam, alongside the existing markets across Singapore, Malaysia, Thailand and Indonesia.

As part of this transaction, Prudential has agreed to pay UOB an initial fee of £662 million (translated using a Singapore dollar: £ foreign exchange rate of 1.7360) for distribution rights which is not dependent on future sales volumes. This amount will be paid in three instalments of £230 million in February 2019, £331 million in January 2020 and £101 million in January 2021. In line with the Group's policy, these amounts will be capitalised as distribution rights intangible asset.

Additional EEV financial information*

A New business

BASIS OF PREPARATION

The format of the schedules is consistent with the distinction between insurance and investment products as applied for previous financial reporting periods. With the exception of some US institutional business, products categorised as 'insurance' refer to those classified as contracts of long-term insurance business for regulatory reporting purposes, ie falling within one of the classes of insurance specified in Part II of Schedule 1 to the Regulated Activities Order under Prudential Regulation Authority regulations.

The details shown for insurance products include contributions for contracts that are classified under IFRS 4 'Insurance Contracts' as not containing significant insurance risk. These products are described as investment contracts or other financial instruments under IFRS. Contracts included in this category are primarily certain unit-linked and similar contracts written in UK and Europe Insurance Operations, and Guaranteed Investment Contracts and similar funding agreements written in US Insurance Operations.

New business premiums reflect those premiums attaching to covered business, including premiums for contracts designed as investment products for IFRS reporting and for regular premium products are shown on an annualised basis.

Investment products referred to in the tables for funds under management are unit trusts, mutual funds and similar types of retail fund management arrangements. These are unrelated to insurance products that are classified as investment contracts under IFRS 4, as described in the preceding paragraph, although similar IFRS recognition and measurement principles apply to the acquisition costs and fees attaching to this type of business.

Post-tax New Business Profit has been determined using the European Embedded Value (EEV) methodology set out in our EEV basis results supplement.

In determining the EEV basis value of new business written in the period when policies incept, premiums are included in projected cash flows on the same basis of distinguishing annual and single premium business as set out for statutory basis reporting.

Annual premium equivalent (APE) sales are subject to rounding.

* The additional financial information is not covered by the KPMG LLP independent audit opinion.

Notes to Schedules A(i) to A(v)

- (1) Prudential plc reports its results using both actual exchange rates (AER) and constant exchange rates (CER) so as to eliminate the impact of exchange translation.

Local currency : £	Average rate*			Closing rate		
	2018	2017	% appreciation (depreciation) of local currency against GBP	31 Dec 2018	31 Dec 2017	% appreciation (depreciation) of local currency against GBP
China	8.82	8.71	(1)%	8.74	8.81	1%
Hong Kong	10.46	10.04	(4)%	9.97	10.57	6%
Indonesia	18,987.65	17,249.38	(9)%	18,314.37	18,353.44	0%
Malaysia	5.38	5.54	3%	5.26	5.47	4%
Singapore	1.80	1.78	(1)%	1.74	1.81	4%
Thailand	43.13	43.71	1%	41.47	44.09	6%
US	1.34	1.29	(4)%	1.27	1.35	6%
Vietnam	30,732.53	29,279.71	(5)%	29,541.15	30,719.60	4%

* Average rate is for the 12 month period to 31 December.

- (2) Annual premium equivalents (APE), calculated as the aggregate of regular premiums on business written in the period and one-tenth of single premiums, are subject to rounding. Present value of new business premiums (PVNBP) are calculated as the aggregate of single premiums and the present value of expected future premiums from regular premium new business, allowing for lapses and the other assumptions applied in determining the EEV new business profit.
- (3) Balance includes segregated and pooled pension funds, private finance assets and other institutional clients.
- (4) New business in India is included at Prudential's 26 per cent interest in the India life operation.
- (5) Balance sheet figures have been calculated at the closing exchange rates.
- (6) New business in China is included at Prudential's 50 per cent interest in the China life operation.
- (7) Mandatory Provident Fund (MPF) product sales in Hong Kong are included at Prudential's 36 per cent interest in Hong Kong MPF operation.
- (8) Investment flows for the year exclude year-to-date Eastspring Money Market Funds (MMF) gross inflow of £191,523 million (2017: gross inflow of £192,662 million) and net inflow of £1,500 million (2017: net inflow of £1,495 million).
- (9) Total Group Investment Operations funds under management exclude MMF funds under management of £11,602 million at 31 December 2018 (31 December 2017: £9,317 million).

Schedule A(i) New Business Insurance Operations (Actual Exchange Rates)

Note: The 2017 comparative results are shown below on actual exchange rates (AER) as previously reported.

	Single premiums			Regular premiums			APE ^{note(2)}			PVNB ^{note(2)}		
	2018	2017	+/(−)	2018	2017	+/(−)	2018	2017	+/(−)	2018	2017	+/(−)
	£m	£m	%	£m	£m	%	£m	£m	%	£m	£m	%
Asia	2,316	2,299	1%	3,513	3,575	(2)%	3,744	3,805	(2)%	20,754	20,405	2%
US	15,423	16,622	(7)%	-	-	-	1,542	1,662	(7)%	15,423	16,622	(7)%
UK and Europe	13,382	13,044	3%	177	187	(5)%	1,516	1,491	2%	14,073	13,784	2%
Group total	31,121	31,965	(3)%	3,690	3,762	(2)%	6,802	6,958	(2)%	50,250	50,811	(1)%
Asia												
Cambodia	-	-	-	20	16	25%	20	16	25%	89	70	27%
Hong Kong	343	582	(41)%	1,663	1,667	(0)%	1,697	1,725	(2)%	10,200	10,027	2%
Indonesia	205	288	(29)%	215	268	(20)%	236	297	(21)%	910	1,183	(23)%
Malaysia	84	73	15%	243	271	(10)%	251	278	(10)%	1,322	1,398	(5)%
Philippines	43	62	(31)%	83	71	17%	87	77	13%	296	287	3%
Singapore	930	859	8%	369	361	2%	462	447	3%	3,611	3,463	4%
Thailand	217	139	56%	95	70	36%	117	84	39%	609	421	45%
Vietnam	20	8	150%	144	133	8%	146	134	9%	708	659	7%
South-east Asia operations including												
Hong Kong	1,842	2,011	(8)%	2,832	2,857	(1)%	3,016	3,058	(1)%	17,745	17,508	1%
China ^{note (6)}	103	179	(42)%	292	276	6%	302	294	3%	1,313	1,299	1%
Taiwan	292	46	535%	182	208	(13)%	211	213	(1)%	788	634	24%
India ^{note (4)}	79	63	25%	207	234	(12)%	215	240	(10)%	908	964	(6)%
Total Asia	2,316	2,299	1%	3,513	3,575	(2)%	3,744	3,805	(2)%	20,754	20,405	2%
US												
Variable annuities	10,810	11,536	(6)%	-	-	-	1,081	1,154	(6)%	10,810	11,536	(6)%
Elite Access (variable annuity)	1,681	2,013	(16)%	-	-	-	168	201	(16)%	1,681	2,013	(16)%
Fixed annuities	340	454	(25)%	-	-	-	34	45	(24)%	340	454	(25)%
Fixed index annuities	251	295	(15)%	-	-	-	25	30	(17)%	251	295	(15)%
Wholesale	2,341	2,324	1%	-	-	-	234	232	1%	2,341	2,324	1%
Total US	15,423	16,622	(7)%	-	-	-	1,542	1,662	(7)%	15,423	16,622	(7)%
UK and Europe												
Bonds	3,539	3,509	1%	-	-	-	354	351	1%	3,540	3,510	1%
Corporate pensions	69	103	(33)%	117	130	(10)%	124	140	(11)%	443	533	(17)%
Individual pensions	5,681	5,747	(1)%	35	32	9%	603	607	(1)%	5,832	5,897	(1)%
Income drawdown	2,555	2,218	15%	-	-	-	256	222	15%	2,555	2,218	15%
Other products	1,538	1,467	5%	25	25	-	179	171	5%	1,703	1,626	5%
Total UK and Europe	13,382	13,044	3%	177	187	(5)%	1,516	1,491	2%	14,073	13,784	2%
Group total	31,121	31,965	(3)%	3,690	3,762	(2)%	6,802	6,958	(2)%	50,250	50,811	(1)%

During 2018, the Africa business operations sold £38 million APE of new business. Given the relative immaturity of the Africa business, it is incorporated into the Group's EEV results on an IFRS basis and hence excluded from our new business metrics.

Schedule A(ii) New Business Insurance Operations (Constant Exchange Rates)

Note: The 2017 comparative results are shown below on constant exchange rates (CER), ie translated at 2018 average exchange rates.

	Single premiums			Regular premiums			APE ^{note (2)}			PVNBP ^{note (2)}		
	2018	2017	+/(%)	2018	2017	+/(%)	2018	2017	+/(%)	2018	2017	+/(%)
	£m	£m	%	£m	£m	%	£m	£m	%	£m	£m	%
Asia	2,316	2,230	4%	3,513	3,450	2%	3,744	3,671	2%	20,754	19,730	5%
US	15,423	16,045	(4)%	-	-	-	1,542	1,605	(4)%	15,423	16,045	(4)%
UK and Europe	13,382	13,044	3%	177	187	(5)%	1,516	1,491	2%	14,073	13,784	2%
Group total	31,121	31,319	(1)%	3,690	3,637	1%	6,802	6,767	1%	50,250	49,559	1%
Asia												
Cambodia	-	-	-	20	16	25%	20	16	25%	89	67	33%
Hong Kong	343	558	(39)%	1,663	1,600	4%	1,697	1,655	3%	10,200	9,625	6%
Indonesia	205	262	(22)%	215	244	(12)%	236	270	(13)%	910	1,074	(15)%
Malaysia	84	75	12%	243	279	(13)%	251	286	(12)%	1,322	1,438	(8)%
Philippines	43	57	(25)%	83	65	28%	87	71	23%	296	266	11%
Singapore	930	849	10%	369	357	3%	462	442	5%	3,611	3,421	6%
Thailand	217	141	54%	95	71	34%	117	85	38%	609	426	43%
Vietnam	20	8	150%	144	127	13%	146	127	15%	708	628	13%
South-east Asia operations including Hong Kong	1,842	1,950	(6)%	2,832	2,759	3%	3,016	2,952	2%	17,745	16,945	5%
China ^{note (6)}	103	177	(42)%	292	273	7%	302	290	4%	1,313	1,282	2%
Taiwan	292	45	549%	182	203	(10)%	211	208	1%	788	617	28%
India ^{note (4)}	79	58	36%	207	215	(4)%	215	221	(3)%	908	886	2%
Total Asia	2,316	2,230	4%	3,513	3,450	2%	3,744	3,671	2%	20,754	19,730	5%
US												
Variable annuities	10,810	11,136	(3)%	-	-	-	1,081	1,114	(3)%	10,810	11,136	(3)%
Elite Access (variable annuity)	1,681	1,943	(13)%	-	-	-	168	194	(13)%	1,681	1,943	(13)%
Fixed annuities	340	438	(22)%	-	-	-	34	44	(23)%	340	438	(22)%
Fixed index annuities	251	285	(12)%	-	-	-	25	29	(14)%	251	285	(12)%
Wholesale	2,341	2,243	4%	-	-	-	234	224	4%	2,341	2,243	4%
Total US	15,423	16,045	(4)%	-	-	-	1,542	1,605	(4)%	15,423	16,045	(4)%
UK and Europe												
Bonds	3,539	3,509	1%	-	-	-	354	351	1%	3,540	3,510	1%
Corporate pensions	69	103	(33)%	117	130	(10)%	124	140	(11)%	443	533	(17)%
Individual pensions	5,681	5,747	(1)%	35	32	9%	603	607	(1)%	5,832	5,897	(1)%
Income drawdown	2,555	2,218	15%	-	-	-	256	222	15%	2,555	2,218	15%
Other products	1,538	1,467	5%	25	25	-	179	171	5%	1,703	1,626	5%
Total UK and Europe	13,382	13,044	3%	177	187	(5)%	1,516	1,491	2%	14,073	13,784	2%
Group total	31,121	31,319	(1)%	3,690	3,637	1%	6,802	6,767	1%	50,250	49,559	1%

Schedule A(iii) Total Insurance New Business APE (Actual and Constant Exchange Rates)

Note: Comparative results for the first half (H1) and second half (H2) of 2017 are presented on both actual exchange rates (AER) and constant exchange rates (CER). The H2 amounts are presented on year-to-date average exchange rates (including the effect of retranslating H1 results for movements in average exchange rates between H1 and the year-to-date).

	AER				CER			
	2017		2018		2017		2018	
	H1 £m	H2 £m	H1 £m	H2 £m	H1 £m	H2 £m	H1 £m	H2 £m
Asia	1,943	1,862	1,736	2,008	1,840	1,831	1,765	1,979
US	960	702	816	726	906	699	841	701
UK and Europe	721	770	770	746	721	770	770	746
Group total	3,624	3,334	3,322	3,480	3,467	3,300	3,376	3,426
Asia								
Cambodia	8	8	8	12	8	8	9	11
Hong Kong	914	811	742	955	855	800	764	933
Indonesia	144	153	113	123	127	143	113	123
Malaysia	128	150	117	134	131	155	118	133
Philippines	36	41	38	49	32	39	39	48
Singapore	195	252	205	257	192	250	208	254
Thailand	42	42	53	64	43	42	54	63
Vietnam	62	72	61	85	58	69	62	84
South-east Asia operations including Hong Kong	1,529	1,529	1,337	1,679	1,446	1,506	1,367	1,649
China ^{note (6)}	187	107	187	115	183	107	186	116
Taiwan	105	108	108	103	101	107	109	102
India ^{note (4)}	122	118	104	111	110	111	103	112
Total Asia insurance operations	1,943	1,862	1,736	2,008	1,840	1,831	1,765	1,979
US								
Variable annuities	604	550	544	537	570	544	560	521
Elite Access (variable annuity)	110	91	89	79	104	90	93	75
Fixed annuities	24	21	17	17	23	21	17	17
Fixed index annuities	16	14	13	12	15	14	13	12
Wholesale	206	26	153	81	194	30	158	76
Total US	960	702	816	726	906	699	841	701
UK and Europe								
Bonds	174	177	165	189	174	177	165	189
Corporate pensions	75	65	75	49	75	65	75	49
Individual pensions	279	328	316	287	279	328	316	287
Income drawdown	106	116	123	133	106	116	123	133
Other products	87	84	91	88	87	84	91	88
Total UK and Europe	721	770	770	746	721	770	770	746
Group total	3,624	3,334	3,322	3,480	3,467	3,300	3,376	3,426

Schedule A(iv) Investment Operations (Actual Exchange Rates)

Note: The H1 and H2 of 2017 comparative results are shown below on actual exchange rates (AER) as previously reported.

	2017		2018	
	H1 £m	H2 £m	H1 £m	H2 £m
Opening FUM	174,805	193,714	210,423	207,860
Net Flows: ^{note (8)}	9,452	11,026	2,685	(14,186)
- Gross Inflows	34,213	35,201	31,857	26,227
- Redemptions	(24,761)	(24,175)	(29,172)	(40,413)
Other Movements	9,457	5,683	(5,248)	2,727
Group total ^{note (9)}	193,714	210,423	207,860	196,401
M&GPrudential				
Retail:				
Opening FUM	64,209	72,500	79,697	79,821
Net Flows:	5,515	5,528	2,154	(7,022)
- Gross Inflows	15,871	15,078	16,471	8,113
- Redemptions	(10,356)	(9,550)	(14,317)	(15,135)
Other Movements	2,776	1,669	(2,030)	(3,334)
Closing FUM	72,500	79,697	79,821	69,465
Comprising amounts for:				
UK	35,201	35,740	33,786	30,600
Europe (excluding UK)	35,192	42,321	44,571	37,523
South Africa	2,107	1,636	1,464	1,342
	72,500	79,697	79,821	69,465
Institutional: ^{note (3)}				
Opening FUM	72,554	76,618	84,158	85,669
Net Flows:	1,664	4,630	1,394	(6,441)
- Gross Inflows	6,806	8,414	4,930	8,024
- Redemptions	(5,142)	(3,784)	(3,536)	(14,465)
Other Movements	2,400	2,910	117	(1,747)
Closing FUM	76,618	84,158	85,669	77,481
Total M&GPrudential	149,118	163,855	165,490	146,946
PPM South Africa FUM included in total M&GPrudential	5,427	5,963	5,452	5,144
Eastspring - excluding MMF ^{note (8)}				
Third party retail: ^{note (7)}				
Opening FUM	30,793	36,093	38,676	36,086
Net Flows:	2,186	1,567	25	(692)
- Gross Inflows	10,781	11,017	10,118	9,125
- Redemptions	(8,595)	(9,450)	(10,093)	(9,817)
Other Movements*	3,114	1,016	(2,615)	7,946
Closing FUM ^{note (5)}	36,093	38,676	36,086	43,340
Third party institutional:				
Opening FUM	7,249	8,503	7,892	6,284
Net Flows:	87	(699)	(888)	(31)
- Gross Inflows	755	692	338	965
- Redemptions	(668)	(1,391)	(1,226)	(996)
Other Movements	1,167	88	(720)	(138)
Closing FUM ^{note (5)}	8,503	7,892	6,284	6,115
Total Eastspring investment operations (excluding MMF)	44,596	46,568	42,370	49,455

* Other movements during the year for Eastspring investments include an inflow of £8.7 billion funds under management (ex MMF) from the acquisition of TMB Asset Management Co., Ltd. ('TMBAM') in Thailand. See note D1.2 of the consolidated financial statements for further details.

Schedule A(v) Total Insurance New Business Profit (Actual and Constant Exchange Rates)

Note: Comparative results for half year (HY) and full year (FY) 2017 are presented on both actual exchange rates (AER) and constant exchange rates (CER). The full year 2018 results are presented on actual exchange rates.

	AER				CER			
	2017		2018		2017		2018	
	HY £m	FY £m	HY £m	FY £m	HY £m	FY £m	HY £m	FY £m
New business profit (NBP)								
Total Asia insurance operations	1,092	2,368	1,122	2,604	1,030	2,282	1,147	2,604
Total US insurance operations	436	906	466	921	412	874	480	921
Total UK and Europe insurance operations	161	342	179	352	161	342	179	352
Group total	1,689	3,616	1,767	3,877	1,603	3,498	1,806	3,877
APE^{note (2)}								
Total Asia insurance operations	1,943	3,805	1,736	3,744	1,840	3,671	1,765	3,744
Total US insurance operations	960	1,662	816	1,542	906	1,605	841	1,542
Total UK and Europe insurance operations	721	1,491	770	1,516	721	1,491	770	1,516
Group total	3,624	6,958	3,322	6,802	3,467	6,767	3,376	6,802
New business margin (NBP as % of APE)								
Total Asia insurance operations	56%	62%	65%	70%	56%	62%	65%	70%
Total US insurance operations	45%	55%	57%	60%	45%	55%	57%	60%
Total UK and Europe insurance operations	22%	23%	23%	23%	22%	23%	23%	23%
Group total	47%	52%	53%	57%	46%	52%	53%	57%
PVNB^{note (2)}								
Total Asia insurance operations	10,095	20,405	9,132	20,754	9,584	19,730	9,292	20,754
Total US insurance operations	9,602	16,622	8,163	15,423	9,062	16,045	8,412	15,423
Total UK and Europe insurance operations	6,616	13,784	7,088	14,073	6,616	13,784	7,088	14,073
Group total	26,313	50,811	24,383	50,250	25,262	49,559	24,792	50,250
New business margin (NBP as % of PVNB)								
Total Asia insurance operations	10.8%	11.6%	12.3%	12.5%	10.7%	11.6%	12.3%	12.5%
Total US insurance operations	4.5%	5.5%	5.7%	6.0%	4.5%	5.5%	5.7%	6.0%
Total UK and Europe insurance operations	2.4%	2.5%	2.5%	2.5%	2.4%	2.5%	2.5%	2.5%
Group total	6.4%	7.1%	7.2%	7.7%	6.3%	7.1%	7.3%	7.7%

B Reconciliation of expected transfer of value of in-force business and required capital to free surplus

The tables below show how the value of in-force business (VIF) generated by the in-force long-term business and the associated required capital is modelled as emerging into free surplus over the next 40 years. Although a small amount (circa 5 per cent) of the Group's embedded value emerges after this date, analysis of cash flows emerging in the years shown in the tables is considered most meaningful. The modelled cash flows use the same methodology underpinning the Group's embedded value reporting and so are subject to the same assumptions and sensitivities used to prepare our 2018 results.

In addition to showing the amounts, both discounted and undiscounted, expected to be generated from all in-force business at 31 December 2018, the tables also present the expected future free surplus to be generated from the investment made in new business during 2018 over the same 40-year period for long-term business operations.

Expected period of emergence	31 Dec 2018 £m							
	Undiscounted expected generation from all in-force business [*]				Undiscounted expected generation from new business written [*]			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
2019	1,560	1,584	593	3,737	204	205	31	440
2020	1,504	1,674	609	3,787	200	153	34	387
2021	1,446	1,737	591	3,774	195	147	36	378
2022	1,441	1,674	572	3,687	206	154	38	398
2023	1,438	1,625	555	3,618	187	122	42	351
2024	1,371	1,629	537	3,537	166	73	38	277
2025	1,345	1,407	521	3,273	176	60	36	272
2026	1,332	1,249	497	3,078	167	166	35	368
2027	1,309	1,224	472	3,005	155	163	34	352
2028	1,266	1,143	448	2,857	163	147	34	344
2029	1,177	1,056	425	2,658	131	136	32	299
2030	1,169	962	402	2,533	134	129	31	294
2031	1,145	798	379	2,322	122	108	29	259
2032	1,131	645	465	2,241	120	97	30	247
2033	1,115	422	435	1,972	137	85	29	251
2034	1,061	448	405	1,914	119	74	27	220
2035	1,059	242	375	1,676	120	51	25	196
2036	1,081	135	346	1,562	120	49	24	193
2037	1,113	94	319	1,526	120	44	23	187
2038	1,104	102	292	1,498	129	44	22	195
2039-2043	6,131	320	1,137	7,588	884	84	83	1,051
2044-2048	5,843	-	696	6,539	944	-	49	993
2049-2053	5,452	-	329	5,781	922	-	31	953
2054-2058	4,964	-	157	5,121	897	-	17	914
Total free surplus expected to emerge in the next 40 years	47,557	20,170	11,557	79,284	6,718	2,291	810	9,819

* The analysis excludes amounts incorporated into VIF at 31 December 2018 where there is no definitive time frame for when the payments will be made or receipts received. In particular, it excludes the value of the shareholders' interest in the with-profits estate. It also excludes any free surplus emerging after 2058.

The above amounts can be reconciled to the new business amounts as follows:

	2018 £m			
	Asia	US	UK and Europe	Total
Undiscounted expected free surplus generation for years 2019 to 2058	6,718	2,291	810	9,819
Less: discount effect	(3,964)	(905)	(352)	(5,221)
Discounted expected free surplus generation for years 2019 to 2058	2,754	1,386	458	4,598
Discounted expected free surplus generation for years after 2058	863	-	1	864
Less: Free surplus investment in new business	(488)	(225)	(102)	(815)
Other items [†]	(525)	(240)	(5)	(770)
Post-tax EEV new business profit for long-term business operations	2,604	921	352	3,877

[†] Other items represent the impact of the time value of options and guarantees on new business, foreign exchange effects and other non-modelled items. Foreign exchange effects arise as EEV new business profit amounts are translated at average exchange rates and the expected free surplus generation uses year end closing rates.

The undiscounted expected free surplus generation from all in-force business at 31 December 2018 shown below can be reconciled to the amount that was expected to be generated as at 31 December 2017 as follows:

Group	2018 £m	2019 £m	2020 £m	2021 £m	2022 £m	2023 £m	Other £m	Total £m
2017 expected free surplus generation for years 2018 to 2057	3,528	3,462	3,456	3,467	3,318	3,253	49,636	70,120
Less: Amounts expected to be realised in the current year	(3,528)	-	-	-	-	-	-	(3,528)
Add: Expected free surplus to be generated in year 2058*	-	-	-	-	-	-	649	649
Foreign exchange differences	-	129	132	137	132	132	1,916	2,578
New business	-	440	387	378	398	351	7,865	9,819
Operating movements	-	(52)	(60)	(22)	23	56		
Non-operating and other movements	-	(242)	(128)	(186)	(184)	(174)	615	(354)
2018 expected free surplus generation for years 2019 to 2058	-	3,737	3,787	3,774	3,687	3,618	60,681	79,284
Asia operations	2018 £m	2019 £m	2020 £m	2021 £m	2022 £m	2023 £m	Other £m	Total £m
2017 expected free surplus generation for years 2018 to 2057	1,393	1,352	1,299	1,256	1,239	1,202	30,029	37,770
Less: Amounts expected to be realised in the current year	(1,393)	-	-	-	-	-	-	(1,393)
Add: Expected free surplus to be generated in year 2058*	-	-	-	-	-	-	610	610
Foreign exchange differences	-	40	40	41	42	43	1,304	1,510
New business	-	204	200	195	206	187	5,726	6,718
Operating movements	-	(24)	(38)	(42)	(25)	(22)		
Non-operating and other movements	-	(12)	3	(4)	(21)	28	2,499	2,342
2018 expected free surplus generation for years 2019 to 2058	-	1,560	1,504	1,446	1,441	1,438	40,168	47,557
US operations	2018 £m	2019 £m	2020 £m	2021 £m	2022 £m	2023 £m	Other £m	Total £m
2017 expected free surplus generation for years 2018 to 2057	1,464	1,425	1,483	1,551	1,441	1,433	9,847	18,644
Less: Amounts expected to be realised in the current year	(1,464)	-	-	-	-	-	-	(1,464)
Foreign exchange differences	-	89	92	96	90	89	612	1,068
New business	-	205	153	147	154	122	1,510	2,291
Operating movements	-	(25)	(18)	27	58	85		
Non-operating and other movements	-	(110)	(36)	(84)	(69)	(104)	(93)	(369)
2018 expected free surplus generation for years 2019 to 2058	-	1,584	1,674	1,737	1,674	1,625	11,876	20,170
M&G Prudential insurance operations	2018 £m	2019 £m	2020 £m	2021 £m	2022 £m	2023 £m	Other £m	Total £m
2017 expected free surplus generation for years 2018 to 2056	671	685	674	660	638	618	9,760	13,706
Less: Amounts expected to be realised in the current year	(671)	-	-	-	-	-	-	(671)
Add: Expected free surplus to be generated in year 2058*	-	-	-	-	-	-	39	39
New business	-	31	34	36	38	42	629	810
Operating movements	-	(3)	(4)	(7)	(10)	(7)		
Non-operating and other movements	-	(120)	(95)	(98)	(94)	(98)	(1,791)	(2,327)
2018 expected free surplus generation for years 2019 to 2058	-	593	609	591	572	555	8,637	11,557

* Excluding 2018 new business.

At 31 December 2018, the total free surplus expected to be generated over the next five years (2019 to 2023 inclusive), using the same assumptions and methodology as those underpinning our 2018 embedded value reporting was £18.6 billion, an increase of £1.4 billion from the £17.2 billion expected over an equivalent period from the end of 2017.

This increase primarily reflects the new business written in 2018, which is expected to generate £1,954 million of free surplus over the next five years.

At 31 December 2018, the total free surplus expected to be generated on an undiscounted basis in the next 40 years is £79.3 billion, up from the £70.1 billion expected at the end of 2017, reflecting the effect of new business written across all three business operations of £9.8 billion, a positive foreign exchange translation effect of £2.6 billion and a £(0.4) billion net effect reflecting operating, market assumption changes and other items. The £2.3 billion impact in Asia of operating, non-operating and other movements includes the net benefit from changes in operating assumptions following the annual review of experience, together with the benefit of management actions and generally higher interest rates increasing projected returns. The £(0.4) billion impact in the US mainly reflects the effect of lower than expected separate account return in the year, partially offset by the positive effect from persistency assumption updates and higher interest rates increasing future separate account return. The £(2.3) billion impact in the UK and Europe reflects the effect of lower than assumed investment returns on with-profits funds and the reinsurance of part of its shareholder annuity portfolio to Rothesay Life as discussed in note 17. The overall growth in the Group's undiscounted value of free surplus reflects our ability to write both growing and profitable new business.

Actual underlying free surplus generated in 2018 from life business in force, before restructuring costs, at the end of 2018 was £4.4 billion including £0.8 billion of changes in operating assumptions and experience variances. This compares with the expected 2018 realisation at the end of 2017 of £3.5 billion. In the UK and Europe, the difference between the transfer to free surplus recognised in 2018 and the free surplus expected to be generated at 31 December 2017 reflects the reinsurance of the shareholder annuity portfolio to Rothesay Life (as discussed in note 17) which was not known at 2017. This can be analysed further as follows:

	Asia £m	US £m	UK and Europe £m	Total £m
Transfer to free surplus in 2018	1,370	1,462	607	3,439
Expected return on free assets	68	54	79	201
Changes in operating assumptions and experience variances	62	125	591	778
Underlying free surplus generated from in-force life business before restructuring costs in 2018	1,500	1,641	1,277	4,418
2018 free surplus expected to be generated at 31 December 2017	1,393	1,464	671	3,528

The equivalent discounted amounts of the undiscounted expected transfers from in-force business and required capital into free surplus shown previously are as follows:

Expected period of emergence	31 Dec 2018 £m							
	Discounted expected generation from all in-force business				Discounted expected generation from new business written			
	Asia	US	UK and Europe	Total	Asia	US	UK and Europe	Total
2019	1,495	1,497	579	3,571	194	198	31	423
2020	1,353	1,486	568	3,407	176	139	32	347
2021	1,217	1,447	531	3,195	161	126	33	320
2022	1,140	1,307	488	2,935	159	121	34	314
2023	1,071	1,191	450	2,712	138	92	35	265
2024	965	1,120	411	2,496	116	52	31	199
2025	895	910	379	2,184	118	41	28	187
2026	835	760	341	1,936	106	100	26	232
2027	776	694	308	1,778	92	92	24	208
2028	714	610	274	1,598	92	77	22	191
2029	624	527	245	1,396	68	67	20	155
2030	588	452	215	1,255	65	60	18	143
2031	548	355	187	1,090	56	46	16	118
2032	516	273	218	1,007	52	39	16	107
2033	486	164	188	838	56	32	14	102
2034	436	165	163	764	47	25	12	84
2035	415	93	139	647	45	16	10	71
2036	409	52	123	584	43	14	9	66
2037	407	33	110	550	41	12	8	61
2038	386	35	98	519	43	11	6	60
2039-2043	1,951	123	324	2,398	285	26	21	332
2044-2048	1,509	-	110	1,619	251	-	10	261
2049-2053	1,128	-	38	1,166	197	-	2	199
2054-2058	811	-	4	815	153	-	-	153
Total discounted free surplus expected to emerge in the next 40 years	20,675	13,294	6,491	40,460	2,754	1,386	458	4,598

The above amounts can be reconciled to the Group's EEV basis financial statements as follows:

	31 Dec 2018 £m
Discounted expected generation from all in-force business for years 2019 to 2058	40,460
Discounted expected generation from all in-force business for years after 2058	2,659
Discounted expected generation from all in-force business at 31 December 2018	43,119
Add: Free surplus of life operations held at 31 December 2018	7,527
Less: Time value of guarantees	(2,427)
Other non-modelled items	2,169
Total EEV for long-term business operations	50,388

C Foreign currency source of key metrics

The tables below show the Group's free surplus, IFRS and EEV key metrics analysis by contribution by currency group:

Free surplus and Group IFRS results

	Underlying free surplus generated for total insurance and asset management operations note (iii)	IFRS pre-tax operating profit notes (ii),(iv)	IFRS shareholders' funds notes (ii),(iv)
US dollar linked ^{note (i)}	15%	28%	22%
Other Asia currencies	13%	17%	15%
Total Asia	28%	45%	37%
UK sterling ^{notes (ii),(iv)}	39%	15%	49%
US dollar ^{note (iv)}	33%	40%	14%
Total	100%	100%	100%

Group EEV post-tax results

	New business profit	Operating profit notes (ii),(iv)	Shareholders' funds notes (i),(iv)
US dollar linked ^{note (i)}	57%	53%	40%
Other Asia currencies	10%	7%	10%
Total Asia	67%	60%	50%
UK sterling ^{notes (ii),(iv)}	9%	12%	26%
US dollar ^{note (iv)}	24%	28%	24%
Total	100%	100%	100%

Notes

- (i) US dollar linked comprise the Hong Kong and Vietnam operations where the currencies are pegged to the US dollar and the Malaysia and Singapore operations where the currencies are managed against a basket of currencies including the US dollar.
- (ii) For operating profit and shareholders' funds, UK sterling includes amounts in respect of M&G Prudential and other operations (including central operations and Prudential Capital). Operating profit for central operations includes amounts for corporate expenditure for Group Head Office as well as Asia Regional Head Office which is incurred in HK dollars as well as restructuring costs incurred by the Group.
- (iii) For operating free surplus generation, UK sterling includes amounts in respect of restructuring costs incurred by insurance and asset management operations.
- (iv) For shareholders' funds, the US dollar grouping includes US dollar denominated core structural borrowings. Sterling operating profits include all interest payable as sterling denominated, reflecting interest rate currency swaps in place.