06

European Embedded Value (EEV) basis results

Index to European Embedded Value (EEV) basis results

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 issued by the European Insurance CFO Forum in 2016. The EEV Principles provide consistent definitions, a framework for setting actuarial assumptions and an approach to the underlying methodology and disclosures. All results are stated net of tax and converted using actual exchange rates (AER) unless otherwise stated. AER are actual historical exchange rates for the specific accounting period.

European Embedded Value (EEV) basis results

Summarised consolidated income statement

	Note	2019 $m Asia	2019 $m US	2019 $m Group total	2018 $m Group total
Continuing operations:					
New business	3	3,522	883	4,405	4,707
Business in force	4	2,366	874	3,240	3,975
Long-term business		5,888	1,757	7,645	8,682
Asset management		250	25	275	216
Operating profit from long-term business and asset management		6,138	1,782	7,920	8,898
Other income and expenditure note (i)				(923)	(969)
Restructuring costs note (ii)				(92)	(63)
Operating profit from continuing operations				6,905	7,866
Short-term fluctuations in investment returns	5			3,254	(3,335)
Effect of changes in economic assumptions	6			(1,868)	416
Impact of NAIC reform, hedge modelling and other related changes in the US	7			(3,457)	–
Mark-to-market value movements on core structural borrowings	8			(466)	733
Loss attaching to corporate transactions	9			(207)	(100)
Non-operating loss from continuing operations				(2,744)	(2,286)
Profit for the year from continuing operations				4,161	5,580
(Loss) profit for the year from discontinued operations				(4,797)	546
(Loss) profit for the year				(636)	6,126
Attributable to:					
Equity holders of the Company:					
From continuing operations				4,152	5,576
From discontinued operations				(4,797)	546
Non-controlling interests from continuing operations				9	4
				(636)	6,126

EEV basis basic earnings per share

	2019	2018
Based on operating profit from continuing operations after non-controlling interests (in cents)	266.6¢	305.3¢
Based on (loss) profit for the year attributable to equity holders of the Company (in cents)		
From continuing operations	160.5¢	216.5¢
From discontinued operations	(185.4)¢	21.2¢
	(24.9)¢	237.7¢
Weighted average number of shares in the year (millions)	2,587	2,575

Notes

(i) EEV basis other income and expenditure represents the post-tax IFRS basis results for other operations (including interest costs on core structural borrowings, corporate expenditure for head office functions in London and Hong Kong, the Group's treasury function and Africa operations) less the unwind of expected margins on the internal management of the assets of the covered business (as explained in note 14(i)(g)).

(ii) Restructuring costs include group-wide costs incurred for IFRS 17 implementation in 2019 from continuing operations.

Movement in shareholders' equity

	2019 $m						2018* $m
	Asia	US	Other	Total continuing operations	Discontinued UK and Europe operations	Group total	Group total
Continuing operations:							
Operating profit from long-term and asset management businesses	6,138	1,782	–	7,920		7,920	8,898
Other income and expenditure	–	–	(923)	(923)		(923)	(969)
Restructuring costs	(31)	(5)	(56)	(92)		(92)	(63)
Operating profit (loss) from continuing operations	6,107	1,777	(979)	6,905		6,905	7,866
Non-operating profit (loss) from continuing operations	1,962	(3,802)	(904)	(2,744)		(2,744)	(2,286)
Profit (loss) for the year from continuing operations	8,069	(2,025)	(1,883)	4,161		4,161	5,580
(Loss) profit for the year from discontinued operations note (iv)	–	–	–	–	(4,797)	(4,797)	546
Profit (loss) for the year	8,069	(2,025)	(1,883)	4,161	(4,797)	(636)	6,126
Non-controlling interests	(6)	–	(3)	(9)		(9)	(4)
Foreign exchange movements on operations	409	–	34	443	223	666	(1,574)
Intra-group dividends and investment in operations note (i)	(1,270)	(525)	7,276	5,481	(5,481)	–	–
External dividends	–	–	(1,634)	(1,634)	–	(1,634)	(1,662)
Mark-to-market value movements on Jackson assets backing surplus and required capital	–	206	–	206	–	206	(127)
Other movements note (ii)	25	(23)	(40)	(38)	133	95	176
Demerger dividend in specie of M&G plc	–	–	–	–	(7,379)	(7,379)	–
Net increase (decrease) in shareholders' equity	7,227	(2,367)	3,750	8,610	(17,301)	(8,691)	2,935
Shareholders' equity at beginning of year	32,008	18,709	(4,616)	46,101	17,301	63,402	60,467
Shareholders' equity at end of year	39,235	16,342	(866)	54,711	–	54,711	63,402
Representing:							
Long-term business	37,843	16,336	–	54,179	–	54,179	64,174
Asset management and other	596	6	(892)	(290)	–	(290)	(2,874)
Goodwill note (v)	796	–	26	822	–	822	2,102
Shareholders' equity at end of year	39,235	16,342	(866)	54,711	–	54,711	63,402
Shareholders' equity per share at end of year note (iii)	1,508¢	628¢	(33)¢	2,103¢	–	2,103¢	2,445¢
Long-term business	30,985	18,658	–	49,643	14,531	64,174	62,116
Asset management and other	389	51	(4,616)	(4,176)	1,302	(2,874)	(3,621)
Goodwill note (v)	634	–	–	634	1,468	2,102	1,972
Shareholders' equity at beginning of year	32,008	18,709	(4,616)	46,101	17,301	63,402	60,467
Shareholders' equity per share at beginning of year note (iii)	1,234¢	722¢	(178)¢	1,778¢	667¢	2,445¢	2,337¢

* The 2018 comparative results have been re-presented from those previously published to reflect the change in the Group's presentation currency from pounds sterling to US dollars and the reclassification of the Group's UK and Europe operations as discontinued operations in 2019 (see note 1).

Notes

(i) Intra-group dividends represent dividends that have been declared in the year. Dividends payable by the discontinued UK and Europe operations (M&G plc) to Prudential plc includes a $3,841 million pre-demerger dividend, cash dividends paid in the period of $684 million and restructuring impacts related to the demerger. Investment in operations reflects movements in share capital. The amounts included for these items in the analysis of movement in free surplus (note 11) for Asia 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.

(ii) Other movements include reserve movements in respect of the shareholders' share of actuarial gains and losses on defined benefit pension schemes that were transferred to M&G plc at 30 June 2019, share capital subscribed, share-based payments, treasury shares and intra-group transfers between operations that have no overall effect on the Group's shareholders' equity.

(iii) Based on the number of issued shares at the end of 2019 of 2,601 million shares (end of 2018/beginning of 2019: 2,593 million shares, beginning of 2018: 2,587 million shares).

(iv) On 21 October 2019, the Group completed the demerger of its UK and Europe operations (M&G plc), resulting in two separately listed companies. The demerger dividend in specie of M&G plc has been recorded at the fair value of M&G plc at the date of the demerger. The difference between the fair value and its carrying value, together with profit earned up to the date of the demerger have been recorded as loss for the year from the discontinued UK and Europe operations.

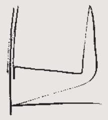
(v) Representing goodwill attributable to shareholders.

Summary statement of financial position

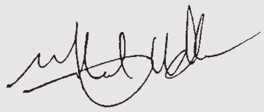
	31 Dec 2019 $m	31 Dec 2018 $m
Assets less liabilities before deduction of insurance funds	396,241	549,264
Less insurance funds:*		
Policyholder liabilities (net of reinsurers' share) and unallocated surplus of with-profits funds	(376,572)	(527,273)
Shareholders' accrued interest in the long-term business	35,234	41,434
	(341,338)	(485,839)
Less non-controlling interests	(192)	(23)
Total net assets attributable to equity holders of the Company	54,711	63,402
Share capital	172	166
Share premium	2,625	2,502
IFRS basis shareholders' reserves	16,680	19,300
IFRS basis shareholders' equity	19,477	21,968
Shareholders' accrued interest in the long-term business	35,234	41,434
EEV basis shareholders' equity	54,711	63,402
Representing		
Continuing operations	54,711	46,101
Discontinued UK and Europe operations	–	17,301
EEV basis shareholders' equity	54,711	63,402

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

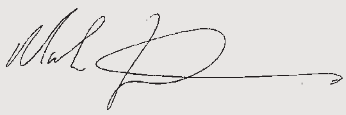
The supplementary information on pages 333 to 357 was approved by the Board of Directors on 10 March 2020.



Paul Manduca
Chairman



Mike Wells
Group Chief Executive



Mark FitzPatrick
Group Chief Financial Officer
and Chief Operating Officer

Notes on the EEV basis results

1 Basis of preparation

The EEV basis results have been prepared in accordance with the EEV Principles issued by the European Insurance CFO Forum in 2016. The EEV Principles provide consistent definitions, a framework for setting actuarial assumptions and an approach to the underlying methodology and disclosures. 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 Group completed the demerger of its UK and Europe operations, M&G plc, from the Prudential plc Group on 21 October 2019. In line with the treatment of the results under IFRS, the EEV basis results for the Group's UK and Europe operations have been reclassified as discontinued operations and removed from the Group's key performance indicators (KPIs). In the subsequent notes, comparative amounts have been represented to show continuing operations only in order to present the results on a comparable basis. The Directors have also elected to change the Group's presentation currency from pounds sterling to US dollars. The 2018 comparative results have been accordingly re-presented from those previously published for these changes (see note A1 of the Group IFRS financial statements for exchange rates used).

Overview

Results prepared under the EEV Principles represent the present value of the shareholders' interest in the post-tax future profits (on a local statutory basis) expected to arise from the current book of long-term 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 expected future shareholder cash flows from the in-force covered business (value of in-force business), less explicit allowance for the cost of locked-in required capital and the time value of financial options and guarantees across a range of economic scenarios;
- Locked-in required capital, based on the applicable local statutory regulations, including any amounts considered to be required above the local statutory minimum requirements to satisfy regulatory constraints (the application of this principle to each business unit is set out below); and
- The shareholders' total net worth in excess of required capital (free surplus). Free surplus is defined in note 11.

Required capital

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

- Asia: the level of required capital has been set to an amount at least equal to local statutory notification requirements. For China JV life operations, the level of required capital follows the approach for embedded value reporting issued by the China Association of Actuaries (CAA) reflecting the China Risk Oriented Solvency System (C-ROSS) regime; and
- 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).

Key assumptions

The value of in-force business is determined by projecting post-tax future profits (on a local statutory basis) by product, using best estimate assumptions for operating factors such as persistency, mortality, morbidity and expenses. Explicit allowances are made for the cost of holding required capital under the applicable local statutory regimes and the time value of financial options and guarantees (TVOG). The TVOG is determined by weighting the probability of outcomes across a large number of different economic scenarios, and is less applicable to health and protection business that generally contain more limited financial options or guarantees.

As well as best estimate assumptions for operating factors, the projected cash flows assume a level of future investment return and are discounted using a risk discount rate. Both the risk discount rate and investment return are updated at each valuation date in line with changes in the risk-free rates. During 2019, this has had an overall negative effect on new business and in-force profitability. Different products will be sensitive to different assumptions, for example, spread-based products or products with guarantees are likely to benefit from higher assumed investment returns.

Risk discount rates are set equal to the risk-free rate at the valuation date plus a product-specific allowance for market and non-market risks, excluding risks explicitly captured elsewhere such as via the TVOG. Products such as participating and unit-linked business will have typically a higher allowance for market risk as compared to health and protection products due to a higher proportion of equity-type assets within the investment portfolio. Other product design and business features also affect the risks attached to the emergence of shareholder cash flows, for example, the construct of with-profits funds in some business units can reduce the sensitivity of both policyholder and shareholder cash flows for participating products. Risk discount rates in any one business unit will reflect a blend of the risks attaching to the products written in that business.

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

A description of the EEV methodology and accounting presentation is provided in note 14, including an explanation of the delineation of profit between operating profit based on longer-term investment returns and non-operating items. Further details of best estimate assumptions are provided in note 15.

2 Results analysis by business area

The 2018 comparative results are shown below on both actual exchange rates (AER) and constant exchange rates (CER) bases. The 2018 CER comparative results are translated at 2019 average exchange rates for US dollars following the change in the Group's presentation currency.

Annual premium equivalents (APE) from continuing operations note 16

	2019 $m		Actual exchange rate 2018 $m		Actual exchange rate Change %		Constant exchange rate 2018 $m		Constant exchange rate Change %	
	Annual premium equivalent	New business profit	Annual premium equivalent	New business profit	Annual premium equivalent	New business profit	Annual premium equivalent	New business profit	Annual premium equivalent	New business profit
Asia	5,161	3,522	4,999	3,477	3%	1%	4,959	3,460	4%	2%
US	2,223	883	2,059	1,230	8%	(28)%	2,059	1,230	8%	(28)%
Group total	**7,384**	**4,405**	7,058	4,707	5%	(6)%	7,018	4,690	5%	(6)%

Profit for the year

	2019 $m	Actual exchange rate 2018 $m	Actual exchange rate Change %	Constant exchange rate 2018 $m	Constant exchange rate Change %
Continuing operations:					
Asia					
Long-term business	5,888	5,858	1%	5,843	1%
Asset management	250	212	18%	209	20%
Total	6,138	6,070	1%	6,052	1%
US					
Long-term business	1,757	2,824	(38)%	2,824	(38)%
Asset management	25	4	525%	4	525%
Total	1,782	2,828	(37)%	2,828	(37)%
Operating profit from long-term business and asset management	7,920	8,898	(11)%	8,880	(11)%
Other income and expenditure	(923)	(969)	5%	(936)	1%
Restructuring costs	(92)	(63)	(46)%	(61)	(51)%
Operating profit from continuing operations	6,905	7,866	(12)%	7,883	(12)%
Short-term fluctuations in investment returns	3,254	(3,335)		(3,333)	
Effect of changes in economic assumptions	(1,868)	416		417	
Impact of NAIC reform, hedge modelling and other related changes in the US	(3,457)	–		–	
Mark-to-market value movements on core structural borrowings	(466)	733		702	
Loss attaching to corporate transactions	(207)	(100)		(99)	
Total non-operating loss from continuing operations	(2,744)	(2,286)		(2,313)	
Profit for the year from continuing operations	4,161	5,580	(25)%	5,570	(25)%
(Loss) profit for the year from discontinued operations	(4,797)	546	(979)%	522	(1,019)%
(Loss) profit for the year	(636)	6,126	(110)%	6,092	(110)%

2 Results analysis by business area continued

EEV basis basic earnings per share

		Actual exchange rate		Constant exchange rate	
	2019	**2018**	**Change %**	**2018**	**Change %**
Based on operating profit from continuing operations after non-controlling interests (in cents)	266.6¢	305.3¢	(13)%	306.1¢	(13)%
Based on (loss) profit for the year attributable to equity holders of the Company (in cents):					
From continuing operations	160.5¢	216.5¢	(26)%	216.3¢	(26)%
From discontinued operations	(185.4)¢	21.2¢	(975)%	20.3¢	(1,013)%
	(24.9)¢	237.7¢	(110)%	236.6¢	(111)%

3 Analysis of new business contribution

	2019				
				New business margin	
	Annual premium equivalents (APE) $m note 16	**Present value of new business premiums (PVNBP)** $m note 16	**New business contribution** $m note (i)	**APE** %	**PVNBP** %
Asia note (ii)	5,161	29,244	3,522	68%	12.0%
US	2,223	22,231	883	40%	4.0%
Group total	7,384	51,475	4,405	60%	8.6%

	2018				
				New business margin	
	Annual premium equivalents (APE) $m note 16	**Present value of new business premiums (PVNBP)** $m note 16	**New business contribution** $m note (i)	**APE** %	**PVNBP** %
Asia note (ii)	4,999	27,711	3,477	70%	12.5%
US	2,059	20,593	1,230	60%	6.0%
Group total	7,058	48,304	4,707	67%	9.7%

Notes

(i) The movement in new business contribution from $4,707 million for 2018 to $4,405 million for 2019 from continuing operations is analysed as follows:

	Asia $m	**US** $m	**Group total** $m
2018 new business contribution	3,477	1,230	4,707
Foreign exchange movement	(17)	–	(17)
Effect of changes in interest rates and other economic assumptions	(35)	(155)	(190)
Impact of US EEV hedge modelling enhancements note 7	–	(114)	(114)
Sales volume, business and product mix and other items	97	(78)	19
2019 new business contribution	3,522	883	4,405

(ii) Asia new business contribution is analysed as follows:

	2019 $m	**2018** $m	
		AER	**CER**
China JV	262	199	190
Hong Kong	2,042	2,309	2,310
Indonesia	227	163	163
Taiwan	75	61	56
Other	916	745	741
Total Asia	3,522	3,477	3,460

4 Operating profit from long-term business in force

	2019 $m			2018 $m		
	Asia	US	Group total	Asia	US	Group total
Unwind of discount and other expected returns note (i)	1,542	728	2,270	1,626	1,176	2,802
Effect of changes in operating assumptions note (ii)	539	1	540	457	154	611
Experience variances and other items note (iii)	285	145	430	298	264	562
Total operating profit from long-term business in force	2,366	874	3,240	2,381	1,594	3,975

Notes

(i) The movement in unwind of discount and other expected returns from $2,802 million for 2018 to $2,270 million for 2019 from continuing operations is analysed as follows:

	Asia $m	US $m	Group total $m
2018 unwind of discount and other expected returns	1,626	1,176	2,802
Foreign exchange movement	(12)	–	(12)
Effect of changes in interest rates and other economic assumptions	(234)	(104)	(338)
Impact of US EEV hedge modelling enhancements note 7	–	(210)	(210)
Growth in opening value of in-force business and other items	162	(134)	28
2019 unwind of discount and other expected returns	1,542	728	2,270

(ii) The 2019 effect of changes in operating assumptions of $539 million in Asia principally reflects the outcome from the annual review of persistency, claims and expense experience, together with the benefit of medical repricing management actions and the beneficial effect on the effective tax rate for China JV from changes to tax legislation in the first half of 2019.

(iii) In Asia, the 2019 effect of experience variances and other items of $285 million is driven overall by positive mortality and morbidity experience in a number of local business units, together with positive persistency variance from participating and health and protection products.

In the US, the effect of experience variances and other items is analysed as follows:

	2019 $m	2018 $m
Spread experience variance	38	52
Amortisation of interest-related realised gains and losses	102	123
Other items	5	89
Total US experience variances and other items	145	264

5 Short-term fluctuations in investment returns

	2019 $m	2018 $m
Asia		
Hong Kong	1,526	(737)
Indonesia	(14)	(103)
Malaysia	(20)	(109)
Singapore	338	(311)
Taiwan	147	(37)
Thailand	319	(61)
Other	155	(16)
Total Asia note (i)	2,451	(1,374)
US		
Investment return related experience on fixed income securities note (ii)	(243)	80
Investment return related impact due to changed expectation of profits on in-force variable annuity business in future periods based on current period separate account return, net of related hedging activity and other items note (iii)	1,119	(2,057)
Total US	876	(1,977)
Other operations	(73)	16
Group total	3,254	(3,335)

5 Short-term fluctuations in investment returns continued

Notes

(i) For 2019, the credit of $2,451 million mainly represents the increase in bond and equity values in Hong Kong and higher than expected investment returns in Singapore, Thailand and Taiwan. The small losses in Indonesia and Malaysia represent bond gains being more than offset by lower than expected equity returns.

(ii) 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;
– Credit experience versus the longer-term assumption (which in 2019 was positive); and
– The difference between actual realised gains and losses and the amortisation of interest-related realised gains and losses that is recorded within operating profit.

(iii) 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 24.1 per cent and that assumed of 4.8 per cent (geometric) (2018: actual growth of negative 5.4 per cent compared to assumed growth of positive 5.3 per cent (geometric)); and
– Related hedging activity arising from realised and unrealised gains and losses on equity and interest rate derivatives compared to the updated expected long-term allowance for hedging costs recorded in operating profit, and other items.

6 Effect of changes in economic assumptions

	2019 $m	**2018** $m
Asia		
Hong Kong	(853)	220
Indonesia	141	(126)
Malaysia	127	(25)
Singapore	18	93
Taiwan	(142)	(19)
Thailand	(220)	37
Other	262	(27)
Total Asia note (i)	(667)	153
US		
Variable annuity business note (ii)	(1,556)	487
Fixed annuity and other general account business note (iii)	355	(224)
Total US	(1,201)	263
Group total	(1,868)	416

Notes

(i) In 2019, the negative effect of $(667) million largely arises from movements in long-term interest rates, resulting in lower assumed fund earned rates in Hong Kong, Thailand and Taiwan, partially offset by the positive effect of lower risk discount rates in Indonesia and Malaysia in valuing future profits for health and protection business and the effect of changes to the basis of setting economic assumptions as described in note 14(i)(h) and note 15(i).

(ii) In 2019, the charge of $(1,556) million mainly reflects the effect of a decrease in the assumed separate account return, following the 80 basis points decrease in the US 10-year treasury yield over the year, partially offset by the increase in US equity risk premium as described in note 15(i), resulting in lower projected fee income and an increase in projected benefit costs for variable annuity business.

(iii) For fixed annuity and other general account business, the impact of $355 million reflects the increase in the present value of future projected spread income from the combined decrease in interest rates and credit spreads in the year.

7 Impact of NAIC reform, hedge modelling and other related changes in the US

	2019 $m
Impact of NAIC reform adopted at 31 December 2019 note (i)	37
Impact of hedge modelling changes and other NAIC reform related changes note (ii)	(3,494)
Total EEV impact of NAIC reform, hedge modelling and other related changes in the US	(3,457)

Notes

(i) The National Association of Insurance Commissioners (NAIC) has implemented changes to the US statutory reserve and capital framework for variable annuities, effective from 1 January 2020. Jackson has chosen to early adopt the changes at 31 December 2019 for US statutory reporting and the Group has updated EEV accordingly. The impact on Group EEV is a $37 million benefit, with the increase in the cost of capital from higher capital requirements more than offset by the timing benefit from releasing policyholder liabilities earlier than previously anticipated. The impact on the various components of EEV as at 31 December 2019 is shown below. As discussed in note 14(i)(e), the below is based on a capital requirement of 250 per cent of the risk-based capital company action level and so the impact on free surplus is not equal to the effect on Jackson's US statutory position.

	Free surplus $m	**Required capital** $m	**Total net worth** $m	**Value of in-force business** $m	**Total embedded value** $m
Impact of NAIC reform adopted at 31 December 2019	(64)	343	279	(242)	37

Given that the NAIC reform was adopted at 31 December 2019, with the exception of the amounts shown above there are no other impacts from this change recorded in the 2019 EEV consolidated income statement or in the analysis of movement in free surplus. If the changes had been adopted with effect from 1 January 2019, the Group's 2019 EEV results would not be expected to be materially different.

(ii) Following the implementation of the NAIC's changes to the US statutory reserve and capital framework, enhancements were made to the model used to allow for hedging within US statutory reporting. As a consequence, the Group has chosen to utilise the enhanced model within EEV to update its allowance for the long-term cost of hedging under EEV economic assumptions. In common with established practice for such changes, the EEV income statement has been prepared on the basis that this change had been effected at the start of the year, at a cost of $(3,233) million, included in non-operating profit.

The initial impact on EEV is shown as a reduction in the value of in-force business as at 1 January 2019, and so the unwind of those cash flows over the year reduces the expected transfer to net worth and hence operating free surplus generation by $(903) million. This leads to an equal and offsetting benefit in short-term fluctuations as the excess of the actual cost of hedging in 2019 over the expected cost falls accordingly. There is no impact on total free surplus generation for 2019. See note 11 for the US free surplus results.

There were no changes to Jackson's hedging philosophy during 2019, which continues to focus on the underlying economics of the products whilst managing the volatility in the statutory position. The revised allowance for the long-term cost of hedging is expected to give a more refined indication of the expected long-term cost of the dynamic hedging programme under EEV economic assumptions, albeit it is not intended to reflect the exact derivatives held at a given point in time. In common with other long-term assumptions, the allowance for the expected cost of hedging in EEV will be kept under review, particularly in light of future experience under the new variable annuity statutory capital regime.

In addition to the enhancement to the cost of hedging described above, a number of other changes have been made to EEV reporting following the NAIC reform, coupled with the objective of bringing the EEV free surplus more in line with the US statutory basis of reporting. The total impact of these changes as recorded in EEV non-operating profit was $(261) million. A reconciliation of EEV free surplus to surplus under the Group's LCSM capital measure at 31 December 2019 by segment is provided in note I(i) in the additional financial information.

8 Net core structural borrowings of shareholder-financed businesses

	31 Dec 2019 $m			31 Dec 2018 $m		
	IFRS basis	**Mark-to-market value adjustment**	**EEV basis at market value**	**IFRS basis**	**Mark-to-market value adjustment**	**EEV basis at market value**
Holding company cash and short-term investments note (i)	(2,207)	–	(2,207)	(4,121)	–	(4,121)
Central borrowings:						
Subordinated debt held post demerger of M&G plc note (ii)	4,304	327	4,631	4,785	(138)	4,647
Senior debt	690	221	911	658	222	880
Bank loan	350	–	350	350	–	35
Central funds before amounts substituted to M&G plc	5,344	548	5,892	5,793	84	5,877
Subordinated debt substituted to M&G plc in 2019 note (iii)	–	–	–	3,718	82	3,800
Total central borrowings	5,344	548	5,892	9,511	166	9,677
Total net borrowings for central operations	3,137	548	3,685	5,390	166	5,556
Jackson Surplus Notes	250	85	335	250	67	317
Net core structural borrowings of shareholder-financed businesses note (iv)	3,387	633	4,020	5,640	233	5,873

Notes

(i) Holding company includes central finance subsidiaries.

(ii) In May 2019, the Company redeemed its £400 million 11.375 per cent subordinated notes.

(iii) In October 2019, Prudential plc transferred subordinated debt to M&G plc as part of the demerger. In addition to the subordinated debt held at 31 December 2018 as shown in the table above, the debt transferred included the further £300 million 3.875 per cent subordinated debt raised in July 2019.

(iv) The movement in the value of core structural borrowings includes foreign exchange effects for pounds sterling denominated debts, which are included in 'Exchange movements on foreign operations'. The movement in the mark-to-market value adjustment can be analysed as follows:

	2019 $m	**2018** $m
Mark-to-market value adjustment at beginning of year	233	1,005
Mark-to-market value adjustment on subordinated debt substituted to M&G plc at fair value at beginning of year	(82)	–
Charge (credit) in respect of mark-to-market movements included in the income statement*	466	(733)
Effect of foreign exchange movements for pounds sterling denominated debts	16	(39)
Mark-to-market value adjustment at end of year	633	233

* Relates to continuing debt only.

9 Gain (loss) attaching to corporate transactions

	2019 $m	2018 $m
Gain on disposals note (i)	178	–
Other corporate transactions note (ii)	(385)	(100)
Total	(207)	(100)

Notes

(i) In 2019, the $178 million gain on disposals mainly relates to profits arising from a reduction in the Group's stake (from 26 per cent to 22 per cent) in its associate in India, ICICI Prudential Life Insurance Company, and the disposal of Prudential Vietnam Finance Company Limited, a wholly owned subsidiary that provides consumer finance.

(ii) In 2019, other corporate transactions undertaken by continuing operations resulted in an EEV loss of $(385) million (2018: $(100) million). This primarily reflects costs related to the demerger of M&G plc from Prudential plc.

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

	2019 $m				
	Free surplus	Required capital	Total net worth	Value of in-force business	Total embedded value
Group					
Shareholders' equity at beginning of year	9,587	12,542	22,129	42,045	64,174
Demerger of UK and Europe operations	(4,676)	(6,513)	(11,189)	(3,342)	(14,531)
Shareholders' equity at beginning of year from continuing operations note	4,911	6,029	10,940	38,703	49,643
New business contribution note 3	(1,158)	899	(259)	4,664	4,405
Existing business – transfer to net worth	3,081	(613)	2,468	(2,468)	–
Expected return on existing business note 4	141	159	300	1,970	2,270
Changes in operating assumptions and experience variances note 4	558	103	661	309	970
Restructuring costs	(5)	–	(5)	–	(5)
Operating profit from continuing operations	2,617	548	3,165	4,475	7,640
Non-operating profit (loss) from continuing operations	(568)	262	(306)	(1,534)	(1,840)
Profit for the year from continuing operations	2,049	810	2,859	2,941	5,800
Foreign exchange movements	66	52	118	251	369
Intra-group dividends and investment in operations	(1,633)	–	(1,633)	–	(1,633)
Other movements	2	–	2	(2)	–
Shareholders' equity at end of year note	5,395	6,891	12,286	41,893	54,179
Asia					
Shareholders' equity at beginning of year	2,202	2,904	5,106	25,879	30,985
New business contribution note 3	(619)	241	(378)	3,900	3,522
Existing business – transfer to net worth	1,914	(320)	1,594	(1,594)	–
Expected return on existing business note 4	80	67	147	1,395	1,542
Changes in operating assumptions and experience variances note 4	147	116	263	561	824
Operating profit based on longer-term investment returns	1,522	104	1,626	4,262	5,888
Non-operating profit	1,195	122	1,317	645	1,962
Profit for the year	2,717	226	2,943	4,907	7,850
Foreign exchange movements	66	52	118	251	369
Intra-group dividends and investment in operations	(1,108)	–	(1,108)	–	(1,108)
Other movements	(253)	–	(253)	–	(253)
Shareholders' equity at end of year	3,624	3,182	6,806	31,037	37,843

	2019 $m				
	Free surplus	**Required capital**	**Total net worth**	**Value of in-force business**	**Total embedded value**
US					
Shareholders' equity at beginning of year	2,709	3,125	5,834	12,824	18,658
New business contribution note 3	(539)	658	119	764	883
Existing business – transfer to net worth	1,167	(293)	874	(874)	–
Expected return on existing business note 4	61	92	153	575	728
Changes in operating assumptions and experience variances note 4	411	(13)	398	(252)	146
Restructuring costs	(5)	–	(5)	–	(5)
Operating profit based on longer-term investment returns	1,095	444	1,539	213	1,752
Non-operating profit (loss)	(1,763)	140	(1,623)	(2,179)	(3,802)
Profit (loss) for the year	(668)	584	(84)	(1,966)	(2,050)
Intra-group dividends and investment in operations	(525)	–	(525)	–	(525)
Other movements	255	–	255	(2)	253
Shareholders' equity at end of year	1,771	3,709	5,480	10,856	16,336

Note
The net value of in-force business for continuing operations 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 2019 $m			31 Dec 2018 $m		
	Asia	**US**	**Group total**	**Asia**	**US**	**Group total**
Value of in-force business before deduction of cost of capital and time value of options and guarantees	32,396	11,417	43,813	27,849	15,043	42,892
Cost of capital	(866)	(370)	(1,236)	(721)	(377)	(1,098)
Time value of options and guarantees*	(493)	(191)	(684)	(1,249)	(1,842)	(3,091)
Net value of in-force business	31,037	10,856	41,893	25,879	12,824	38,703
Total net worth	6,806	5,480	12,286	5,106	5,834	10,940
Total embedded value	37,843	16,336	54,179	30,985	18,658	49,643

* The time value of options and guarantees (TVOG) arises from the variability of economic outcomes in the future and is, where appropriate, calculated as the difference between an average outcome across a range of economic scenarios, calibrated around a central scenario, and the outcome from one central economic scenario, as described in note 14(i)(d). The TVOG and the outcome from the central economic scenario are linked; as the central economic scenario is updated for market conditions and the outcome reflects more or less of the guaranteed benefit payouts and associated product charges, there will be consequential changes to the TVOG.

11 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 (total net worth) over the capital required to support the covered business. Where appropriate, adjustments are made to total net worth so that backing assets are included at fair value rather than at cost to comply with the EEV Principles. In the Group's Asia and US operations, assets deemed to be inadmissible on a local regulatory basis are included in net worth where considered recognisable on an EEV basis, with the exception of deferred tax assets in the US that are inadmissible under the local regulatory basis, which have been included in the value of in-force business (VIF) within the Group's EEV results. Free surplus for asset management and other operations (including assets and liabilities of the Group's central operations, the Group's treasury function and Africa operations) is taken to be IFRS basis post-tax earnings and shareholders' equity, net of goodwill attributable to shareholders, with subordinated debt recorded as free surplus to the extent that it is classified as available capital under the Group's capital regime. A reconciliation of EEV free surplus to the Group's Local Capital Summation Method (LCSM) surplus over Group minimum capital requirements is set out in note I(i) in the additional financial information.

	2019 $m					
	Continuing operations					
	Asia note (a)	US note (b)	Total insurance and asset management	Other note (e)	Discontinued UK and Europe operations	Group total
Operating free surplus generated before impact of US EEV hedge modelling enhancements and restructuring costs	1,772	2,028	3,800	(923)		2,877
Impact of US EEV hedge modelling enhancements note 7	–	(903)	(903)	–		(903)
Operating free surplus generated before restructuring costs	1,772	1,125	2,897	(923)		1,974
Restructuring costs	(31)	(5)	(36)	(56)		(92)
Operating free surplus generated	1,741	1,120	2,861	(979)		1,882
Non-operating profit (loss) from continuing operations note (f)	1,195	(1,763)	(568)	(448)		(1,016)
Free surplus generated from discontinued operations note (g)	–	–	–	–	2,512	2,512
Free surplus generated in the year	2,936	(643)	2,293	(1,427)	2,512	3,378
Net cash flows paid to parent company note (h)	(950)	(525)	(1,475)	2,159	(684)	–
Demerger dividend in specie of M&G plc	–	–	–	–	(7,379)	(7,379)
External dividends	–	–	–	(1,634)	–	(1,634)
Foreign exchange movements on foreign operations, timing differences and other items note (i)	(357)	185	(172)	810	(426)	212
Net movement in free surplus	1,629	(983)	646	(92)	(5,977)	(5,423)
Balance at beginning of year	2,591	2,760	5,351	3,831	5,977	15,159
Balance at end of year note (j)	4,220	1,777	5,997	3,739	–	9,736
Representing:						
Free surplus excluding distribution rights and other intangibles	3,624	1,753	5,377	1,227	–	6,604
Distribution rights and other intangibles	596	24	620	2,512	–	3,132
	4,220	1,777	5,997	3,739	–	9,736

	2018 $m					
	Continuing operations					
	Asia note (a)	US note (b)	Total insurance and asset management	Other	Discontinued UK and Europe operations	Group total
Operating free surplus generated before restructuring costs	1,563	1,895	3,458	(969)		2,489
Restructuring costs	(25)	(23)	(48)	(15)		(63)
Operating free surplus generated	1,538	1,872	3,410	(984)		2,426
Non-operating loss from continuing operations note (f)	(525)	(1,124)	(1,649)	(29)		(1,678)
Free surplus generated from discontinued operations	–	–	–	–	2,624	2,624
Free surplus generated in the year	1,013	748	1,761	(1,013)	2,624	3,372
Net cash flows to parent company note (h)	(916)	(452)	(1,368)	2,259	(891)	–
External dividends	–	–	–	(1,662)	–	(1,662)
Foreign exchange movements, timing differences and other items note (i)	(847)	(144)	(991)	1,847	(58)	798
Net movement in free surplus	(750)	152	(598)	1,431	1,675	2,508
Balance at beginning of year	3,341	2,608	5,949	2,400	4,302	12,651
Balance at end of year	2,591	2,760	5,351	3,831	5,977	15,159
Representing:						
Free surplus excluding distribution rights and other intangibles	2,050	2,733	4,783	2,300	5,968	13,051
Distribution rights and other intangibles	541	27	568	1,531	9	2,108
	2,591	2,760	5,351	3,831	5,977	15,159

Notes

(a) Operating free surplus generated by Asia insurance and asset management operations before restructuring costs can be analysed as follows:

	2019 $m	2018 $m		% change	
		AER	CER	AER	CER
Operating free surplus generated from in-force life business	2,141	2,003	2,004	7%	7%
Investment in new business note (c)	(619)	(652)	(646)	5%	4%
Long-term business	1,522	1,351	1,358	13%	12%
Asset management	250	212	209	18%	20%
Total Asia	1,772	1,563	1,567	13%	13%

(b) Operating free surplus generated by US insurance and asset management operations before restructuring costs can be analysed as follows:

	2019 $m	2018 $m	% change
Operating free surplus generated from in-force life business before EEV hedge modelling enhancements note (d)	2,542	2,191	16%
Impact of EEV hedge modelling enhancements note 7	(903)	–	–
Operating free surplus generated from in-force life business	1,639	2,191	(25)%
Investment in new business note (c)	(539)	(300)	(80)%
Long-term business	1,100	1,891	(42)%
Asset management	25	4	525%
Total US	1,125	1,895	(41)%

(c) Free surplus invested in new business primarily represents acquisition costs and amounts set aside for required capital.

(d) The increase in the US in-force free surplus generation before the EEV hedge modelling enhancements described in note 7 includes a $355 million benefit from the release of incremental reserves following the integration of the recently acquired John Hancock business.

(e) Other operating free surplus generated for "other business" includes $(145) million (2018: $(103) million) of interest costs (net of tax) on debt that was substituted to M&G plc in October 2019.

(f) Non-operating items include short-term fluctuations in investment returns, the effect of changes in economic assumptions for long-term business, the impact of NAIC reform, hedge modelling and other related changes in the US (as described in note 7) and the effect of corporate transactions (as described in note 9). In particular, for other business it includes $(383) million for demerger costs (post-tax). In addition, for 2018 this included the impact in the US of changes to RBC factors following the US tax reform, which were formally approved by the NAIC in June 2018.

(g) Free surplus generated from the discontinued UK and Europe operations in 2019 includes profit for the period of ownership up to the demerger in October 2019 and fair value adjustment at the date of the demerger.

(h) Net cash flows to parent company for Asia operations reflect the flows as included in the holding company cash flow.

11 Analysis of movement in free surplus continued

(i) Foreign exchange movements, timing differences and other items represent:

	2019 $m					
	Continuing operations					
	Asia	US	Total insurance and asset management	Other	Discontinued UK and Europe operations	Group total
Foreign exchange movements	99	–	99	91	77	267
Mark-to-market value movements on Jackson assets backing surplus and required capital	–	206	206	–	–	206
Other items (including intra-group loans and other intra-group transfers between operations and other non-cash items)*	(456)	(21)	(477)	719	(503)	(261)
	(357)	185	(172)	810	(426)	212

* The Group total for other items in 2019 included the effect of the redemption of $0.5 billion of subordinated debt.

	2018 $m					
	Continuing operations					
	Asia	US	Total insurance and asset management	Other	Discontinued UK and Europe operations	Group total
Foreign exchange movements	(67)	3	(64)	(170)	(377)	(611)
Mark-to-market value movements on Jackson assets backing surplus and required capital	–	(127)	(127)	–	–	(127)
Other items (including intra-group loans and other intra-group transfers between operations and other non-cash items)*	(780)	(20)	(800)	2,017	319	1,536
	(847)	(144)	(991)	1,847	(58)	798

* The Group total for other items in 2018 included the effect of the net issuance of $1.5 billion of subordinated debt.

(j) Free surplus from continuing operations at 31 December 2019 represents:

	2019 $m				
	Asia	US	Total insurance and asset management	Other	Group total
Long-term business	3,624	1,771	5,395	–	5,395
Asset management and other	596	6	602	3,739	4,341
Total	4,220	1,777	5,997	3,739	9,736

12 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 the Group's continuing long-term business operations can be reconciled to the 2019 and 2018 total emergence of free surplus as follows:

	31 Dec 2019 $m	31 Dec 2018 $m
Required capital note 10	6,891	6,029
Value of in-force business (VIF) note 10	41,893	38,703
Other items*	205	1,915
Total continuing long-term business operations	48,989	46,647

* 'Other items' represent the impact of the time value of options and guarantees and amounts incorporated into VIF where there is no definitive timeframe for when the payments will be made or receipts received. These items are 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 the Group's continuing long-term business operations is modelled as emerging into free surplus over future years.

	31 Dec 2019 $m						
		Expected period of conversion of future post-tax distributable earnings and required capital flows to free surplus					
	2019 total as shown above	**1-5 years**	**6-10 years**	**11-15 years**	**16-20 years**	**21-40 years**	**40+ years**
Asia	34,295	8,561	6,335	4,394	3,398	7,715	3,892
US	14,694	6,408	4,735	2,424	825	302	–
Group total	48,989	14,969	11,070	6,818	4,223	8,017	3,892
	100%	30%	23%	14%	9%	16%	8%

	31 Dec 2018 $m						
		Expected period of conversion of future post-tax distributable earnings and required capital flows to free surplus from continuing long-term operations					
	2018 total as shown above	**1-5 years**	**6-10 years**	**11-15 years**	**16-20 years**	**21-40 years**	**40+ years**
Asia	29,715	7,993	5,330	3,518	2,615	6,876	3,383
US	16,932	8,824	5,214	2,256	481	157	–
Group total	46,647	16,817	10,544	5,774	3,096	7,033	3,383
	100%	36%	23%	12%	7%	15%	7%

13 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 2019 and 31 December 2018 and the new business contribution for 2019 and 2018 for continuing long-term business to:

- 1 per cent increase in the discount rates;
- 1 per cent increase in interest rates, including consequential changes in assumed investment returns for all asset classes, market values of fixed interest assets and risk discount rates (but excluding changes in the allowance for market risk);
- 0.5 per cent decrease in interest rates, including consequential changes in assumed investment returns for all asset classes, market values of fixed interest assets and risk discount rates (but excluding changes in the allowance for market risk);
- 1 per cent rise in equity and property yields;
- 10 per cent fall in market value of equity and property assets (embedded value only); and
- The Group minimum capital requirements under the LCSM in contrast to EEV basis required capital (embedded value only).

The sensitivities shown below are for the impact of instantaneous (and permanent) 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 (including derivatives) held at the valuation dates indicated. The results only allow for limited management actions such as changes to future policyholder bonuses where applicable. If such economic conditions persisted, the financial impacts may differ to the instantaneous impacts shown below. In this case management could also take additional actions to help mitigate the impact of these stresses. No change in the assets held at the valuation date is assumed when calculating sensitivities. If the changes in assumptions shown in the sensitivities were to occur, the effect shown below would be recorded within two components of the profit analysis for the following year, namely the effect of changes in economic assumptions and short-term fluctuations in investment returns. In addition, for changes in interest rates, the effect shown below for the US (Jackson) would also be recorded within mark-to-market value movements on Jackson assets backing surplus and required capital, which are taken directly to shareholders' equity. In addition to the sensitivity effects shown below, 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 and other expected returns, together with the effect of other changes such as altered corporate bond spreads.

13 Sensitivity of results to alternative assumptions continued

(i) Sensitivity analysis – economic assumptions continued

New business contribution from continuing long-term business

	2019 $m			2018 $m		
	Asia	US	Group total	Asia	US	Group total
New business contribution note 3	3,522	883	4,405	3,477	1,230	4,707
Discount rates – 1% increase	(715)	(22)	(737)	(733)	(56)	(789)
Interest rates and consequential effects – 1% increase	(46)	207	161	(270)	126	(144)
Interest rates and consequential effects – 0.5% decrease	(121)	(123)	(244)	77	(88)	(11)
Equity/property yields – 1% rise	210	70	280	174	154	328

Embedded value of continuing long-term business

	31 Dec 2019 $m			31 Dec 2018 $m		
	Asia	US	Group total	Asia	US	Group total
Shareholders' equity note 10	37,843	16,336	54,179	30,985	18,658	49,643
Discount rates – 1% increase	(5,263)	(509)	(5,772)	(4,193)	(653)	(4,846)
Interest rates and consequential effects – 1% increase	(1,408)	798	(610)	(1,992)	152	(1,840)
Interest rates and consequential effects – 0.5% decrease	(28)	(686)	(714)	466	(348)	118
Equity/property yields – 1% rise	1,758	556	2,314	1,326	1,288	2,614
Equity/property market values – 10% fall	(810)	(1,205)	(2,015)	(602)	(634)	(1,236)
Group minimum capital requirements	175	221	396	140	276	416

The directional movements in the sensitivities from 31 December 2018 to 31 December 2019 reflect the generally lower government bond yields and higher equity markets at 31 December 2019, and the actual hedging portfolio in place at both valuation dates, which varies due to the nature of Jackson's dynamic hedging programme.

(ii) Sensitivity analysis – non-economic assumptions

The tables below show the sensitivity of the embedded value as at 31 December 2019 and 31 December 2018 and the new business contribution for 2019 and 2018 for continuing 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 (ie increased longevity) and morbidity rates.

New business contribution from continuing long-term business operations

	2019 $m			2018 $m		
	Asia	US	Group total	Asia	US	Group total
New business contribution note 3	3,522	883	4,405	3,477	1,230	4,707
Maintenance expenses – 10% decrease	67	15	82	53	15	68
Lapse rates – 10% decrease	211	24	235	206	32	238
Mortality and morbidity – 5% decrease	116	(2)	114	93	5	98

Embedded value of continuing long-term business operations

	31 Dec 2019 $m			31 Dec 2018 $m		
	Asia	US	Group total	Asia	US	Group total
Shareholders' equity note 10	37,843	16,336	54,179	30,985	18,658	49,643
Maintenance expenses – 10% decrease	411	200	611	323	227	550
Lapse rates – 10% decrease	1,459	624	2,083	1,238	788	2,026
Mortality and morbidity – 5% decrease	1,323	94	1,417	1,063	180	1,243
Change representing effect on:						
Life business	1,323	168	1,491	1,063	250	1,313
Annuities	–	(74)	(74)	–	(70)	(70)

14 Methodology and accounting presentation

(i) Methodology

(a) Covered business

The EEV basis 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 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 interest costs on core structural borrowings, corporate expenditure for head office functions in London and Hong Kong, the Group's treasury function and Africa operations). Under the EEV Principles, the results for covered business incorporate the projected margins of attaching internal asset management, as described in note (g) below.

The definition of long-term insurance business 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 under the technical definition.

(b) Valuation of in-force and new business

The EEV basis results are prepared incorporating best estimate assumptions about all relevant factors including levels of future investment returns, persistency, mortality, morbidity and expenses, as described in note 15(iii). These assumptions are used to project future cash flows. The present value of the projected future cash flows is then calculated using a discount rate, as shown in note 15(i), which reflects both the time value of money and all other 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 regular and single premium business as set out in the Group's new business sales reporting.

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

New business contribution represents profit determined by applying operating and economic assumptions as at the end of the period. New business profitability is a key metric for the Group's management of the development of the business. In addition, 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.

14 Methodology and accounting presentation continued

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 post-tax IFRS basis results and the movements in the additional shareholders' interest recognised on an EEV basis. Therefore, the start point for the calculation of the EEV basis results for Jackson, as for other businesses, reflects the market value movements recognised on an IFRS basis.

In determining the movements in the additional shareholders' interest, for Jackson's debt securities backing liabilities, the aggregate EEV basis results reflect the fact that the value of in-force business incorporates the discounted value of expected future spread earnings. This value is generally not affected by short-term market movements in debt securities that, broadly speaking, are held for the longer term. Consequently, within EEV total net worth, Jackson's debt securities backing liabilities are held on a statutory basis (largely at book value), while those backing surplus and required capital are accounted for at fair value. Consistent with the treatment applied under IFRS, for Jackson's debt securities classified as available-for-sale, movements in unrealised appreciation and depreciation on these securities are accounted for directly in equity rather than in the income statement, as shown in 'Mark-to-market value movements on Jackson assets backing surplus and required capital' in the statement of 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 held and the discounted value of the projected releases of this capital, allowing for post-tax investment earnings on the capital.

The EEV results are 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 within the fund is already adjusted to reflect its expected release over time and so no further adjustment to the shareholder position is necessary.

(d) Financial options and guarantees

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

Asia

Participating products in Asia, principally written in Hong Kong, Singapore and Malaysia, have both guaranteed and non-guaranteed elements. These products provide returns to policyholders through bonuses that are smoothed. There are two types of bonuses: regular and final. Regular bonuses are declared once a year and, once credited, are guaranteed in accordance with the terms of the particular products. Final bonuses are guaranteed only until the next bonus declaration.

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 variable annuity and fixed annuity lines of business.

Jackson issues variable annuity contracts for which it contractually guarantees to the contract holder, subject to specific conditions, either: a) 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 Benefits (GMWB)) or as death benefits (Guaranteed Minimum Death Benefits (GMDB)). These guarantees generally protect the policyholder's contract 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, with an expected long-term future hedging cost allowed for within the EEV value of in-force business to reflect the equity options and futures expected to be held based on the Group's current dynamic hedging programme and consideration of past practice. This allowance was re-estimated in 2019 following the NAIC reform for variable annuity business, as described in note 7. Jackson also historically issued a small amount of income benefits (Guaranteed Minimum Income Benefits (GMIB)), which are now materially fully reinsured.

Fixed annuities provide that at Jackson's discretion it may reset the interest rate credited to policyholders' accounts, subject to a guaranteed minimum return, depending on the particular product, jurisdiction where issued and the date of issue.

Jackson also issues fixed index annuities that enable policyholders to obtain a portion of an equity-linked return while providing a guaranteed minimum return, which is of a similar nature to those for fixed annuities.

Time value

The value of financial options and guarantees comprises the intrinsic value (arising from a deterministic valuation on best estimate assumptions) and the time value (arising from the variability of economic outcomes in the future).

Where appropriate, a full stochastic valuation has been undertaken to determine the time value of 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 with an allowance for correlations between various asset classes. Details of the key characteristics of each model are given in note 15(ii).

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 regular and final 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 available to management.

The time value of financial options and guarantees reflects how the market value of the assets (including derivatives) held to manage the liability portfolios are expected to vary across the range of economic scenarios considered. For instance, in some economic scenarios the derivative portfolio may project gains in excess of the cost of the underlying guarantees on an EEV basis.

If the calculation of the time value of options and guarantees results in a positive outcome for a particular product (for example for variable annuity business in the US at 31 December 2019) then the figure is capped at zero, reflecting the strong interaction between the outcome of the central economic scenario and the time value of financial options and guarantees in these circumstances, and the reported value of in-force business before deduction of cost of capital and time value of options and guarantees will reflect the outcome from the full stochastic valuation.

(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 shareholder-backed businesses, the following capital requirements for long-term business apply:

— Asia: the level of required capital has been set to an amount at least equal to local statutory notification requirements. For China JV life 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; and
— 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).

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

For the Group's relevant Asia operations, the proportion of surplus allocated to shareholders from the with-profits funds has been based on the applicable profit distribution between shareholders and policyholders. The EEV methodology includes the value attributed to the shareholders' interest in the residual estate 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. As required, adjustments are also made to reflect any capital requirements for with-profits business in Asia in excess of the available capital of the with-profits funds.

(g) Internal asset management

The in-force and new business results from long-term business include the projected future profit or loss 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 period profit 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 margins on the internal management of the assets of the life funds for the period as included in 'Other' operations. The deduction is on a basis consistent with that used for projecting the results for covered insurance business. Accordingly, Group operating profit includes the variance between the actual and expected profit margin in respect of the management of the assets for the covered business.

(h) Allowance for risk and risk discount rates

Overview

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

The risk-free rates are based on local government bond yields at the valuation date and are generally assumed to remain constant throughout the projection.

The risk margin reflects 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 expected future cash flows for each product group 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 exclude 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.

14 Methodology and accounting presentation continued

Market risk allowance

The allowance for market risk represents the beta multiplied by an equity risk premium.

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-specific cash flows. These are determined by considering how the profit from each product is 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 product mix at the valuation date to produce appropriate betas and risk discount rates for each major product group.

In 2019, the Group reconsidered the application of this methodology for certain Asia businesses to reflect a more granular assessment of the underlying market risks when determining the beta, alongside other refinements. These refinements resulted in the change in the risk discount rate for Vietnam shown in note 15(i)(a), and had an impact of $67 million via the effect of change in economic assumptions in note 6. There were small consequential effects on new business contribution and in-force operating profit, which were overall not material in the context of the Group's results.

Additional credit risk allowance

The Group's methodology allows for credit risk. The total allowance for 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 on 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 is 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, the allowance for long-term defaults of 0.17 per cent at 31 December 2019 (31 December 2018: 0.17 per cent) is reflected in the risk margin reserve 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, as shown in note 15(i)(b). In determining this allowance, a number of factors have been considered, in particular including:

— How much of the credit spread on debt securities represents an increased short-term credit risk not reflected in the risk margin reserve 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 that 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 estimate 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.

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 covered business. For the Group's businesses in less mature markets (such as the Philippines and Thailand), additional allowances are applied for emerging market risk ranging from 100 to 250 basis points. The level and application of these allowances are reviewed and updated based on an assessment of the Group's exposure and experience in the markets. During 2019, the allowance for emerging market risk was removed for Indonesia, Taiwan and Vietnam reflecting the growth in the size of the businesses and increasing management exposure and experience in the local markets. For the Group's business in more mature markets, 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 transactions are translated at the spot rate prevailing at the date of the transactions. This includes external dividends paid to shareholders. Prudential will determine and declare its dividend in US dollars commencing with dividends paid in 2020, including the 2019 second interim dividend. Foreign currency assets and liabilities have been translated at closing exchange rates. The principal exchange rates are shown in note A1 of the Group 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 future cash flows to determine the value of in-force business are calculated using tax rates that have been announced and substantively enacted by the end of the reporting period.

(ii) Accounting presentation

(a) Analysis of post-tax profit

To the extent applicable, the presentation of the EEV basis profit or loss for the year is consistent with the classification between operating and non-operating results that the Group applies for the analysis of IFRS basis results. Operating results are determined as described in note (b) below and incorporate the following:

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

In addition, operating results include the effect of changes in tax legislation, unless these changes are one-off and structural in nature or primarily affect the level of projected investment returns, in which case they are reflected as a non-operating result.

Non-operating results comprise:

- Short-term fluctuations in investment returns;
- Mark-to-market value movements on core structural borrowings;
- Effect of changes in economic assumptions;
- Impact of NAIC reform, hedge modelling and other related changes in the US; and
- The impact of corporate transactions undertaken in the year.

Total profit or loss in the year 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.

(b) Investment returns included in operating profit

For the investment element of the assets covering the total net worth of long-term insurance business, investment returns are recognised in operating results at the expected long-term rates of return. These expected returns are calculated by reference to the asset mix of the portfolio.

For the purpose of determining the long-term returns for debt securities of Jackson 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; for equity-related investments, a long-term rate of return is assumed (as disclosed in note 15(i)(b)), which reflects the aggregation of risk-free rates and the equity risk premium at the end of the reporting period. For variable annuity separate account business, operating profit includes the unwind of discount on the opening value of in-force business adjusted to reflect projected rates of return at the end of the reporting period, with the excess or deficit of the actual return recognised within non-operating results, together with related hedging activity variances.

(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 changes in economic and operating assumptions in the current year) and required capital and surplus assets.

(d) Effect of changes in operating assumptions

Operating profit includes the effect of changes to non-economic assumptions on the value of in-force business at the end of the reporting period. For presentational purposes the effect of changes is delineated to show the effect on the opening value of in-force business as operating assumption changes, with the experience variances subsequently being determined by reference to the assumptions at the end of the reporting period, as discussed below.

(e) Operating experience variances

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

(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 changes in the time value of financial options and guarantees, are recorded in non-operating results.

15 Assumptions

(i) Principal economic assumptions

The EEV basis results for the Group's covered business have been determined using economic assumptions where both the long-term expected rates of return on investments and risk discount rates are set by reference to risk-free rates of return at the end of the reporting period. The risk-free rates of return are based on local government bond yields, which are generally assumed to remain constant throughout the projection, and are shown 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 to the risk-free rate based on the Group's long-term view. In the majority of business units, equity risk premiums were increased during 2019 by 25 basis points from those applied at 2018. The related expected return on equity assets and risk discount rates have been increased accordingly. As described in note 14(i)(h), the resulting risk discount rates incorporate allowances for market risk, additional credit risk and non-diversifiable non-market risks appropriate to the features and risks of the underlying products and markets, after considering risks allowed for explicitly elsewhere in the EEV basis, such as cost of capital and the time value of the cost of options and guarantees.

The total profit that emerges over the lifetime of an individual contract as calculated under the EEV basis is the same as that calculated under the IFRS basis. Since the EEV 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.

(a) Asia notes(2)(3)

	Risk discount rate %				Government bond yield %		Expected long-term inflation %	
	New business		In-force business					
	31 Dec 2019	31 Dec 2018	31 Dec 2019	31 Dec 2018	31 Dec 2019	31 Dec 2018	31 Dec 2019	31 Dec 2018
China JV	8.2	8.1	8.2	8.1	3.2	3.3	3.0	3.0
Hong Kong notes (2)(4)	3.7	4.4	3.7	4.4	1.9	2.7	2.5	2.5
Indonesia	10.8	12.4	10.8	12.4	7.2	8.2	4.5	4.5
Malaysia note (4)	5.8	6.6	5.9	6.6	3.3	4.1	2.5	2.5
Philippines	12.3	14.5	12.3	14.5	4.6	7.0	4.0	4.0
Singapore note (4)	3.3	3.4	3.9	4.2	1.7	2.1	2.0	2.0
Taiwan	3.4	4.5	3.0	4.4	0.7	0.9	1.5	1.5
Thailand	9.2	10.0	9.2	10.0	1.5	2.5	3.0	3.0
Vietnam	5.3	12.6	5.5	12.6	3.4	5.1	5.5	5.5
Total weighted average note (1)	4.9	5.4	4.9	5.8				

Notes

(1) Total weighted average risk discount rates for Asia shown above have been determined by weighting each business's risk discount rates by reference to the EEV basis new business contribution and the net closing value of in-force business. The changes in the risk discount rates for individual Asia businesses reflect the movements in the local government bond yields, changes in the equity risk premiums, changes in the allowance for market risk as described in note 14(i)(h) and changes in product mix.

(2) For Hong Kong, the assumptions shown are for US dollar denominated business. For other businesses, the assumptions shown are for local currency denominated business.

(3) Equity risk premiums (geometric) in Asia range from 2.9 per cent to 4.8 per cent (31 December 2018: 2.6 per cent to 4.5 per cent).

(4) The geometric equity return assumptions for the most significant equity holdings of the Asia businesses are:

	31 Dec 2019 %	31 Dec 2018 %
Hong Kong (US dollar denominated business)	4.8	5.3
Malaysia	7.3	7.9
Singapore	5.7	5.8

(b) US

	31 Dec 2019 %	31 Dec 2018 %
Risk discount rate:		
Variable annuity:		
Risk discount rate	6.5	7.1
Additional allowance for credit risk included in risk discount rate note 14(i)(h)	0.2	0.2
Non-variable annuity:		
Risk discount rate	3.7	4.4
Additional allowance for credit risk included in risk discount rate note 14(i)(h)	1.0	1.0
Total weighted average:		
New business	6.1	6.9
In-force business	6.2	6.8
Allowance for long-term defaults included in projected spread note 14(i)(h)	0.17	0.17
US 10-year treasury bond yield	1.9	2.7
Equity risk premium (geometric)	2.9	2.6
Pre-tax expected long-term nominal rate of return for US equities (geometric)	4.8	5.3
Expected long-term rate of inflation	2.9	2.9
S&P 500 equity return volatility note (ii)(b)	17.5	17.5

Note

Assumed new business spread margins are as follows:

	2019 %		2018 %	
	January to June issues	July to December issues	January to June issues	July to December issues
Fixed annuity business*	1.50	0.85	1.75	1.75
Fixed index annuity business†	0.50	0.50	2.00	2.00
Institutional business	0.50	0.50	0.50	0.50

* Including the proportion of variable annuity business invested in the general account. The assumed spread margin grades up linearly by 25 basis points to a long-term assumption over five years.

† The assumed spread margin grades up linearly by 100 basis points over five years, increasing by a further 50 basis points to a long-term assumption at the end of the index option period (2018 issues: grades up linearly by 25 basis points to a long-term assumption over five years).

(ii) Stochastic assumptions

Details are given below of the key characteristics of the models used to determine the time value of financial options and guarantees as referred to in note 14(i)(d).

(a) Asia

- The stochastic cost of guarantees is primarily of significance for the Hong Kong, Malaysia, Singapore, Taiwan and Vietnam businesses;
- The principal asset classes are government bonds, corporate bonds and equity;
- 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;
- 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 for both years.

(b) 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;
- The volatility of equity returns ranges from 17 per cent to 26 per cent for both years; and
- The standard deviation of interest rates ranges from 3.1 per cent to 3.3 per cent (2018: from 3.4 per cent to 3.7 per cent).

15 Assumptions continued

(iii) Operating assumptions

Best estimate assumptions are used for projecting future cash flows, 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 time value of financial 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

Persistency, mortality and morbidity assumptions are based on an analysis of recent experience, and 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 future cash flows for medical reimbursement business that is repriced annually, explicit allowance is made for expected future premium inflation and separately for future medical claims inflation.

Expense assumptions

Expense levels, including those of the service companies that support the Group's long-term business, 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 2019 the allowance held for these costs across the Group was $313 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, expenses comprise costs borne directly and costs recharged from the Group head office function in Hong Kong that are attributable to the covered business. The assumed future expenses for these businesses also include projections of these future recharges. Development expenses are allocated to Asia covered business and are charged as incurred.

Corporate expenditure, which is included in other income and expenditure, comprises expenditure of the Group head office function in Hong Kong that is not allocated to the covered business or asset management, primarily for corporate related activities that are charged as incurred, and expenditure of the Group head office function in London, together with restructuring costs incurred across the Group.

Tax rates

The assumed long-term effective tax rates for operations reflect the expected incidence of taxable profit and loss in the projected future cash flows as explained in note 14(i)(j). Except for the change in China JV effective tax rate as discussed in note 4, there has been no change in the effective tax rates applied for projecting future cash flows.

16 Insurance new business

Continuing operations:	Single premiums 2019 $m	Single premiums 2018 $m	Regular premiums 2019 $m	Regular premiums 2018 $m	Annual premium equivalents (APE) 2019 $m	Annual premium equivalents (APE) 2018 $m	Present value of new business premiums (PVNBP) 2019 $m	Present value of new business premiums (PVNBP) 2018 $m
Asia								
Cambodia	–	–	24	26	24	26	111	119
Hong Kong	387	458	1,977	2,222	2,016	2,266	12,815	13,619
Indonesia	292	274	361	287	390	315	1,668	1,215
Malaysia	209	112	333	324	355	335	2,090	1,765
Philippines	51	57	153	111	158	117	561	395
Singapore	1,217	1,242	539	493	660	617	4,711	4,821
Thailand	192	290	140	127	159	156	763	813
Vietnam	22	27	215	192	217	195	1,342	946
South-east Asia including Hong Kong	2,370	2,460	3,742	3,782	3,979	4,027	24,061	23,693
China JV note (b)	710	138	518	390	590	403	2,586	1,753
Taiwan	544	389	278	243	332	282	1,418	1,052
India note (c)	155	105	245	276	260	287	1,179	1,213
Total Asia	3,779	3,092	4,783	4,691	5,161	4,999	29,244	27,711
US								
Variable annuities	12,692	14,433	–	–	1,270	1,443	12,692	14,434
Elite Access (variable annuity)	2,002	2,245	–	–	200	225	2,002	2,244
Fixed annuities	1,194	454	–	–	119	46	1,194	454
Fixed index annuities	3,821	335	–	–	382	33	3,821	335
Institutional	2,522	3,126	–	–	252	312	2,522	3,126
Total US	22,231	20,593	–	–	2,223	2,059	22,231	20,593
Group total note (d)	26,010	23,685	4,783	4,691	7,384	7,058	51,475	48,304

Notes

(a) The tables shown above are provided as an indicative volume measure of transactions undertaken in the reporting period that have the potential to generate profit for shareholders. The amounts shown are not, and not intended to be, reflective of premium income recorded in the Group IFRS income statement.

(b) New business in China JV is included at Prudential's 50 per cent interest in the joint venture.

(c) New business in India is included at Prudential's interest in the associate (with effect from 27 March 2019: 22 per cent; 2018: 26 per cent).

(d) In 2019, the Africa business sold new business APE of $82 million (2018: $51 million on an actual exchange rate basis, $47 million on a constant exchange rate basis). Given the relative immaturity of the Africa business, it is incorporated into the Group's EEV basis results on an IFRS basis and is excluded from new business sales and profit metrics.

Statement of directors' responsibilities in respect of the European Embedded Value (EEV) basis supplementary information

The directors have chosen to prepare supplementary information in accordance with the European Embedded Value Principles issued by the European Insurance CFO Forum in 2016 ('the EEV Principles') using the methodology and assumptions set out in the Notes on the EEV basis results.

When compliance with the EEV Principles is stated, those principles require the directors to prepare supplementary information in accordance with the Embedded Value Methodology (EVM) contained in the EEV Principles and to disclose and explain any non-compliance with the EEV guidance included in the EEV Principles.

In preparing the EEV supplementary information, the directors have:

- Prepared the supplementary information in accordance with the EEV Principles;
- Identified and described the business covered by the EVM;
- Applied the EVM consistently to the covered business;
- Determined assumptions on a realistic basis, having regard to past, current and expected future experience and to any relevant external data, and then applied them consistently;
- Made estimates that are reasonable and consistent; and
- Described the basis on which business that is not covered business has been included in the supplementary information, including any material departures from the accounting framework applicable to the Group's financial statements.

Independent auditor's report to Prudential plc on the European Embedded Value (EEV) basis supplementary information

Opinions and conclusions arising from our audit

Our opinion on the EEV basis supplementary information is unmodified

We have audited the EEV basis supplementary information of Prudential plc ('the Company') for the year ended 31 December 2019 set out in the EEV basis results and Notes on the EEV basis results pages. The EEV basis supplementary information should be read in conjunction with the Group financial statements.

In our opinion, the EEV basis supplementary information of the Company for the year ended 31 December 2019 has been properly prepared, in all material respects, in accordance with the European Embedded Value Principles issued by the European Insurance CFO Forum in 2016 ('the EEV Principles') using the methodology and assumptions set out in the Notes on the EEV basis results.

Respective responsibilities of directors and auditor

As explained more fully in the Directors' Responsibilities Statement set out on page 358, the directors have accepted responsibility for the preparation of the supplementary information on the EEV basis in accordance with the EEV Principles.

Our responsibility is to audit, and express an opinion on, the supplementary information in accordance with the terms of our engagement and in accordance with International Standards on Auditing (UK). Those standards require us to comply with the Financial Reporting Council's Ethical Standard.

Scope of an audit of financial statements performed in accordance with ISAs (UK)

A description of the scope of an audit of financial statements is provided on our website at www.kpmg.com/uk/auditscopeukco2014a. This report is made subject to important explanations regarding our responsibilities, as published on that website, which are incorporated into this report as if set out in full and should be read to provide an understanding of the purpose of this report, the work we have undertaken and the basis of our opinions.

The purpose of this report and restrictions on its use by persons other than the Company

This report is made solely to the Company in accordance with the terms of our engagement. Our audit work has been undertaken so that we might state to the Company those matters we have been engaged to state in this report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company for our audit work, for this report, or for the opinions we have formed.

Philip Smart

Philip Smart

for and on behalf of KPMG LLP,
Statutory Auditor
Chartered Accountants
London

10 March 2020