

European Embedded Value (EEV) Basis Results

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Description of EEV basis reporting

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

The EEV basis results have been prepared in accordance with the EEV Principles 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.

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

European Embedded Value (EEV) Basis Results

SUMMARISED CONSOLIDATED INCOME STATEMENT

	Note	Half year 2020 \$m			2019 \$m	
		Asia	US Group total		Half year*	Full year
					Group total	Group total
Continuing operations:						
New business	3	912	248	1,160	2,125	4,405
Business in force	4	998	440	1,438	1,652	3,240
Long-term business		1,910	688	2,598	3,777	7,645
Asset management		126	8	134	131	275
Operating profit from long-term and asset management businesses		2,036	696	2,732	3,908	7,920
Other income and expenditure ^{note (i)}				(415)	(467)	(923)
Restructuring and IFRS 17 implementation costs				(102)	(26)	(92)
Operating profit for the period				2,215	3,415	6,905
Short-term fluctuations in investment returns	5			415	2,884	3,254
Effect of changes in economic assumptions	6			(7,026)	(1,774)	(1,868)
Impact of NAIC reform, hedge modelling and other related changes in the US ^{note (ii)}				-	-	(3,457)
Mark-to-market value movements on core structural borrowings	7			17	(636)	(466)
Loss attaching to corporate transactions	8			(423)	(31)	(207)
Non-operating (loss) profit				(7,017)	443	(2,744)
(Loss) profit for the period from continuing operations				(4,802)	3,858	4,161
Profit (loss) for the period from discontinued operations				-	1,657	(4,797)
(Loss) profit for the period				(4,802)	5,515	(636)
Attributable to:						
Equity holders of the Company:						
From continuing operations				(4,824)	3,852	4,152
From discontinued operations				-	1,657	(4,797)
Non-controlling interests from continuing operations				22	6	9
				(4,802)	5,515	(636)

EEV basis basic earnings per share

	2020	2019	
	Half year	Half year	Full year
Based on operating profit from continuing operations, after non-controlling interests (in cents)	84.5¢	132.0¢	266.6¢
Based on (loss) profit for the period attributable to equity holders of the Company (in cents)			
From continuing operations	(185.8)¢	149.1¢	160.5¢
From discontinued operations	-	64.2¢	(185.4)¢
	(185.8)¢	213.3¢	(24.9)¢
Weighted average number of shares in the period (millions)	2,596	2,583	2,587

* The half year 2019 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 at 31 December 2019.

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 12(i)(g)).
- (ii) The \$(3,457) million impact of NAIC reform, hedge modelling and other related changes in the US in full year 2019 related to the implementation of the National Association of Insurance Commissioners' (NAIC) changes to the US statutory reserve and capital framework for variable annuities, early-adopted by Jackson at 31 December 2019. As part of the implementation of these changes, enhancements were made to the model used to allow for hedging within US statutory reporting, which were subsequently utilised within EEV to update the allowance for the long-term cost of hedging under EEV economic assumptions, alongside a number of other changes following the NAIC reform with the objective of bringing the EEV free surplus more in line with the US statutory basis of reporting. No subsequent changes were made to the approach to the long-term cost of hedging allowance for EEV reporting in half year 2020.

MOVEMENT IN EEV BASIS SHAREHOLDERS' EQUITY

	Half year 2020 \$m				2019 \$m	
	Asia	US	Other	Group total	Half year* Group total	Full year Group total
Continuing operations:						
Operating profit from long-term and asset management businesses	2,036	696	-	2,732	3,908	7,920
Other income and expenditure	-	-	(415)	(415)	(467)	(923)
Restructuring and IFRS 17 implementation costs	(29)	(9)	(64)	(102)	(26)	(92)
Operating profit (loss) for the period	2,007	687	(479)	2,215	3,415	6,905
Non-operating (loss) profit	(3,161)	(3,927)	71	(7,017)	443	(2,744)
(Loss) profit for the period from continuing operations	(1,154)	(3,240)	(408)	(4,802)	3,858	4,161
(Loss) profit for the period from discontinued operations ^{note (iv)}					1,657	(4,797)
(Loss) profit for the period	(1,154)	(3,240)	(408)	(4,802)	5,515	(636)
Non-controlling interests	(22)	-	-	(22)	(6)	(9)
Foreign exchange movements on operations	(540)	-	27	(513)	154	666
Intra-group dividends and investment in operations ^{note (i)}	(356)	-	356	-	-	-
External dividends	-	-	(674)	(674)	(1,108)	(1,634)
Mark-to-market value movements on Jackson assets backing surplus and required capital	-	317	-	317	177	206
Other movements ^{note (ii)}	89	124	(288)	(75)	(151)	95
Demerger dividend in specie of M&G plc ^{note (iv)}	-	-	-	-	-	(7,379)
Net (decrease) increase in shareholders' equity	(1,983)	(2,799)	(987)	(5,769)	4,581	(8,691)
Shareholders' equity at beginning of period	39,235	16,342	(866)	54,711	63,402	63,402
Shareholders' equity at end of period	37,252	13,543	(1,853)	48,942	67,983	54,711
Representing:						
Long-term business	35,940	13,531	-	49,471	68,927	54,179
Asset management and other	538	12	(1,879)	(1,329)	(3,061)	(290)
Goodwill attributable to shareholders	774	-	26	800	2,117	822
Shareholders' equity at end of period	37,252	13,543	(1,853)	48,942	67,983	54,711
Shareholders' equity per share at end of period ^{note (iii)}	1,428¢	519¢	(71)¢	1,876¢	2,615¢	2,103¢
Long-term business	37,843	16,336	-	54,179	64,174	64,174
Asset management and other	596	6	(892)	(290)	(2,874)	(2,874)
Goodwill attributable to shareholders	796	-	26	822	2,102	2,102
Shareholders' equity at beginning of period	39,235	16,342	(866)	54,711	63,402	63,402
Shareholders' equity per share at beginning of period ^{note (iii)}	1,508¢	628¢	(33)¢	2,103¢	2,445¢	2,445¢

* The half year 2019 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 at 31 December 2019.

Notes

- (i) Intra-group dividends represent dividends that have been declared in the period. Investment in operations reflects movements in share capital. The amounts included for these items in the analysis of movement in free surplus (note 10) 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 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 30 June 2020 of 2,609 million shares (30 June 2019: 2,600 million shares; 31 December 2019: 2,601 million shares).
- (iv) Discontinued operations for half year and full year 2019 related to the UK and Europe operations (M&G plc) that were demerged from the Group in October 2019. The demerger dividend in specie of M&G plc was recorded at the fair value of M&G plc at the date of the demerger on 18 October 2019. The difference between the fair value and its carrying value, together with profit earned up to the date of the demerger were recorded as loss for the period from the discontinued UK and Europe operations in full year 2019.

SUMMARY STATEMENT OF EEV BASIS FINANCIAL POSITION

	2020 \$m	2019 \$m	
	30 Jun	30 Jun*	31 Dec
Assets less liabilities before deduction of insurance funds	371,825	599,294	396,241
Less insurance funds ^{note}			
Policyholder liabilities (net of reinsurers' share) and unallocated surplus of with-profits funds	(352,518)	(574,228)	(376,572)
Shareholders' accrued interest in the long-term business	29,832	42,946	35,234
	(322,686)	(531,282)	(341,338)
Less non-controlling interests	(197)	(29)	(192)
Total net assets attributable to equity holders of the Company	48,942	67,983	54,711
Share capital	172	165	172
Share premium	2,635	2,512	2,625
IFRS basis shareholders' reserves	16,303	22,360	16,680
IFRS basis shareholders' equity	19,110	25,037	19,477
Shareholders' accrued interest in the long-term business	29,832	42,946	35,234
EEV basis shareholders' equity	48,942	67,983	54,711
Representing:			
Continuing operations	48,942	50,472	54,711
Discontinued UK and Europe operations	-	17,511	-
	48,942	67,983	54,711

* The half year 2019 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 at 31 December 2019.

Note

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

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.

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 10.

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 Singapore life operations, from 31 March 2020 the level of net worth and required capital is based on the Tier 1 Capital position under the new risk-based capital framework (RBC2), which removes certain negative reserves permitted to be recognised in the full RBC2 regulatory position applicable to the Group's Local Capital Summation Method (LCSM), in order to better reflect free surplus and its generation. 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 contains 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 to reflect current market risk-free rates, with the effect that changes in the risk-free rates impact all projected future cash flows. During the first half of 2020, 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 typically have 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. For the purposes of preparing EEV basis results, insurance JVs and associates are included at the Group's proportionate share of the embedded value. Non-insurance subsidiaries, JVs and associates are included at the Group's proportionate share of IFRS net assets, which may differ from a fair value approach.

A description of the EEV methodology and accounting presentation is provided in note 12, including an explanation of the delineation of profit between operating and non-operating items. Further details of best estimate assumptions are provided in note 13.

2 Results analysis by business area

The half year 2019 comparative results are shown below on both actual exchange rates (AER) and constant exchange rates (CER) bases. The half year 2019 CER comparative results are translated at half year 2020 average exchange rates for US dollars following the change in the Group's presentation currency.

Annual premium equivalents and new business profit from continuing operations^{note 14}

	Half year 2020 \$m		Actual exchange rate			Constant exchange rate			
			Half year 2019 \$m		Change %	Half year 2019 \$m		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
Asia	1,665	912	2,560	1,675	(35)%	(46)%	2,540	1,673	(34)%
US	979	248	1,075	450	(9)%	(45)%	1,075	450	(9)%
Group total	2,644	1,160	3,635	2,125	(27)%	(45)%	3,615	2,123	(27)%

Profit for the period

	Half year 2020 \$m	Actual exchange rate		Constant exchange rate	
		Half year 2019 \$m	Change %	Half year 2019 \$m	Change %
Continuing operations:					
Asia					
Long-term business	1,910	2,751	(31)%	2,738	(30)%
Asset management	126	117	8%	115	10%
Total	2,036	2,868	(29)%	2,853	(29)%
US					
Long-term business (Jackson)	688	1,026	(33)%	1,026	(33)%
Asset management	8	14	(43)%	14	(43)%
Total	696	1,040	(33)%	1,040	(33)%
Operating profit from long-term and asset management businesses	2,732	3,908	(30)%	3,893	(30)%
Other income and expenditure	(415)	(467)	11%	(458)	9%
Restructuring and IFRS 17 implementation costs	(102)	(26)	(292)%	(25)	(308)%
Operating profit for the period	2,215	3,415	(35)%	3,410	(35)%
Short-term fluctuations in investment returns	415	2,884		2,894	
Effect of changes in economic assumptions	(7,026)	(1,774)		(1,782)	
Mark-to-market value movements on core structural borrowings	17	(636)		(619)	
Loss attaching to corporate transactions	(423)	(31)		(30)	
Total non-operating (loss) profit from continuing operations	(7,017)	443		463	
(Loss) profit for the period from continuing operations	(4,802)	3,858	(224)%	3,873	(224)%
Profit for the period from discontinued operations	-	1,657	n/a	1,613	n/a
(Loss) profit for the period	(4,802)	5,515	(187)%	5,486	(188)%

EEV basis basic earnings per share

	Half year 2020	Actual exchange rate		Constant exchange rate	
		Half year 2019	Change %	Half year 2019	Change %
Based on operating profit from continuing operations after non-controlling interests (in cents)	84.5¢	132.0¢	(36)%	132.0¢	(36)%
Based on (loss) profit for the period attributable to equity holders of the Company (in cents):					
From continuing operations	(185.8)¢	149.1¢	(225)%	149.9¢	(224)%
From discontinued operations	-	64.2¢	n/a	62.4¢	n/a
	(185.8)¢	213.3¢	(187)%	212.3¢	(188)%

3 Analysis of new business profit

Half year 2020					
	Annual premium equivalents (APE) \$m note 14	Present value of new business premiums (PVNBP) \$m note 14	New business profit \$m note (i)	New business margin	
				APE %	PVNBP %
Asia ^{note (ii)}	1,665	9,173	912	55%	9.9%
US	979	9,789	248	25%	2.5%
Group total	2,644	18,962	1,160	44%	6.1%

Half year 2019					
	Annual premium equivalents (APE) \$m note 14	Present value of new business premiums (PVNBP) \$m note 14	New business profit \$m note (i)	New business margin	
				APE %	PVNBP %
Asia ^{note (ii)}	2,560	14,218	1,675	65%	11.8%
US	1,075	10,752	450	42%	4.2%
Group total	3,635	24,970	2,125	58%	8.5%

Full year 2019					
	Annual premium equivalents (APE) \$m note 14	Present value of new business premiums (PVNBP) \$m note 14	New business profit \$m	New business margin	
				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%

Notes

(i) The movement in new business profit from \$2,125 million for half year 2019 to \$1,160 million for half year 2020 is analysed as follows:

	Asia \$m	US \$m	Group total \$m
Half year 2019 new business profit	1,675	450	2,125
Foreign exchange movement	(2)	-	(2)
Effect of changes in interest rates and other economic assumptions	(78)	(119)	(197)
Impact of US EEV hedge modelling enhancements in full year 2019	-	(47)	(47)
Sales volume, business and product mix and other items	(683)	(36)	(719)
Half year 2020 new business profit	912	248	1,160

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

	2020 \$m	2019 \$m		
	Half year	AER Half year	CER Half year	AER Full year
China JV	127	126	122	262
Hong Kong	353	1,070	1,081	2,042
Indonesia	68	85	82	227
Taiwan	35	28	30	75
Other	329	366	358	916
Total Asia insurance	912	1,675	1,673	3,522

4 Operating profit from long-term business in force

	Half year 2020 \$m			Half year 2019 \$m			Full year 2019 \$m		
	Asia	US	Group total	Asia	US	Group total	Asia	US	Group total
Unwind of discount and other expected returns ^{note (i)}	753	299	1,052	805	459	1,264	1,542	728	2,270
Effect of changes in operating assumptions ^{note (ii)}	118	-	118	169	-	169	539	1	540
Experience variances and other items ^{note (iii)}	127	141	268	102	117	219	285	145	430
Total operating profit from long-term business in force	998	440	1,438	1,076	576	1,652	2,366	874	3,240

Notes

- (i) The movement in unwind of discount and other expected returns from \$1,264 million for half year 2019 to \$1,052 million for half year 2020 is analysed as follows:

	Asia \$m	US \$m	Group total \$m
Half year 2019 unwind of discount and other expected returns	805	459	1,264
Foreign exchange movement	(11)	-	(11)
Effect of changes in interest rates and other economic assumptions	(165)	(76)	(241)
Impact of US EEV hedge modelling enhancements in full year 2019	-	(86)	(86)
Growth in opening value of in-force business and other items	124	2	126
Half year 2020 unwind of discount and other expected returns	753	299	1,052

- (ii) The half year 2020 effect of changes in operating assumptions of \$118 million in Asia principally reflects the beneficial effect on the effective tax rate for Indonesia from changes to local tax legislation in the first half of 2020.
- (iii) In Asia, the half year 2020 effect of experience variances and other items of \$127 million is driven overall by positive mortality and morbidity experience in a number of local business units, together with overall positive persistency experience.

In the US, the effect of experience variances and other items is analysed as shown below. Other items for half year 2020 mainly includes the effect of positive persistency experience.

	2020 \$m	2019 \$m	
	Half year	Half year	Full year
Spread experience variance	(12)	16	38
Amortisation of interest-related realised gains and losses	53	47	102
Other items	100	54	5
Total US experience variances and other items	141	117	145

5 Short-term fluctuations in investment returns

	2020 \$m	2019 \$m	
	Half year	Half year	Full year
Asia			
Hong Kong	966	1,161	1,526
Indonesia	(157)	6	(14)
Malaysia	(30)	10	(20)
Singapore	(18)	198	338
Taiwan	72	120	147
Thailand	(75)	117	319
Other	7	44	155
Total Asia ^{note (i)}	765	1,656	2,451
US			
Investment return related experience on fixed income securities ^{note (ii)}	(123)	(21)	(243)
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)}	(257)	1,275	1,119
Total US	(380)	1,254	876
Other operations	30	(26)	(73)
Group total	415	2,884	3,254

Notes

- (i) In half year 2020, the credit of \$765 million includes higher than expected bond returns following generally lower interest rates across the region, partially 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 period;
 - Credit experience versus the longer-term assumption (which was positive for all periods); 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 return on separate account asset values in the period of negative 3.5 per cent and that assumed (geometric) of positive 1.7 per cent (half year 2019: actual growth of 15.2 per cent compared to assumed growth of 2.3 per cent; full year 2019: actual growth of 24.1 per cent compared to assumed growth of 4.8 per cent); and
 - Related hedging activity arising from realised and unrealised gains and losses on equity and interest rate derivatives compared to the expected long-term allowance for hedging costs recorded in operating profit, and other items.

6 Effect of changes in economic assumptions

	2020 \$m	2019 \$m	
	Half year	Half year	Full year
Asia			
Hong Kong	(3,470)	(618)	(853)
Indonesia	(42)	43	141
Malaysia	10	44	127
Singapore	(179)	(131)	18
Taiwan	(172)	(85)	(142)
Thailand	(2)	(80)	(220)
Other	(71)	106	262
Total Asia ^{note (i)}	(3,926)	(721)	(667)
US			
Variable annuity business ^{note (ii)}	(3,491)	(1,461)	(1,556)
General account business ^{note (iii)}	391	408	355
Total US	(3,100)	(1,053)	(1,201)
Group total	(7,026)	(1,774)	(1,868)

Notes

- (i) In half year 2020, the negative effect of \$(3,926) million primarily arises from movements in long-term interest rates, resulting in lower assumed fund earned rates in Hong Kong, Singapore and Taiwan that impact all projected future cash flows, partially offset by lower risk discount rates. This impact includes a benefit of \$170 million from a change to the calculation of the valuation interest rate used to value long term insurance liabilities in Hong Kong, as discussed in note 1(i) of the additional financial information.
- (ii) In half year 2020, the charge of \$(3,491) million mainly reflects the effect of a decrease in the assumed separate account return following the 120 basis points decrease in the US 10-year treasury yield over the period, resulting in lower projected fee income and an increase in projected benefit costs for variable annuity business, partially offset by lower risk discount rates.
- (iii) For general account business, the credit of \$391 million mainly reflects the increase in the present value of future projected spread income from the combined effect of the decrease in interest rates and increase in credit spreads in the period, partially offset by the effect of an increase in the additional credit risk allowance as described in note 12(i)(h).

7 Net core structural borrowings of shareholder-financed businesses

	2020 \$m			2019 \$m					
	30 Jun			30 Jun			31 Dec		
	IFRS basis	Mark-to-market value adjustment	EEV basis at market value	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)}	(1,907)	-	(1,907)	(3,010)	-	(3,010)	(2,207)	-	(2,207)
Central borrowings:									
Subordinated and other debt not substituted to M&G plc in 2019:									
Subordinated debt	4,271	196	4,467	4,279	207	4,486	4,304	327	4,631
Senior debt ^{note (ii)}	1,628	283	1,911	660	226	886	690	221	911
Bank loan	350	-	350	350	-	350	350	-	350
	6,249	479	6,728	5,289	433	5,722	5,344	548	5,892
Subordinated debt substituted to M&G plc in 2019 ^{note (ii)}	-	-	-	3,931	266	4,197	-	-	-
Total central borrowings	6,249	479	6,728	9,220	699	9,919	5,344	548	5,892
Total net central funds	4,342	479	4,821	6,210	699	6,909	3,137	548	3,685
Jackson Surplus Notes	250	109	359	250	79	329	250	85	335
Net core structural borrowings of shareholder-financed businesses^{note (iii)}	4,592	588	5,180	6,460	778	7,238	3,387	633	4,020

Notes

- (i) Holding company includes central finance subsidiaries.
(ii) In April 2020, the Company issued \$1,000 million 3.125 per cent senior debt maturing on 14 April 2030.
(iii) 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:

	2020 \$m	2019 \$m	
	Half year	Half year	Full year
Mark-to-market value adjustment at beginning of period	633	233	233
Mark-to-market value adjustment on subordinated debt substituted to M&G plc at fair value in October 2019 at beginning of period	-	-	(82)
Change in fair value of debt under IFRS as a result of consent process in preparation for the demerger	-	(219)	-
(Credit) charge in the period included in the income statement*	(17)	766	466
Effect of foreign exchange movements	(28)	(2)	16
Mark-to-market value adjustment at end of period	588	778	633

* The total income statement charge of \$766 million in half year 2019 related to \$636 million from continuing operations and \$130 million from discontinued operations.

8 Loss attaching to corporate transactions

	2020 \$m	2019 \$m	
	Half year	Half year	Full year
Loss on reinsurance of Jackson's in-force fixed and fixed indexed annuity portfolio ^{note (i)}	(423)	-	-
Gain on disposals ^{note (ii)}	-	181	178
Other transactions ^{note (iii)}	-	(212)	(385)
Total	(423)	(31)	(207)

Notes

- (i) In June 2020, the Group announced the reinsurance of substantially all of Jackson's in-force portfolio of fixed and fixed indexed annuity business to Athene Life Re Ltd. Further details are included in note D1 of the IFRS basis results. The effect on the EEV position largely reflects the loss of future profits recorded in the value of in-force business as a result of the reinsurance and the loss of unrealised gains on assets passed to Athene, partly offset by the reinsurance commission received after deducting tax.
(ii) In 2019, the gain on disposals principally related to profits arising from a 4 per cent reduction in the Group's stake 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.
(iii) In 2019, other transactions primarily reflected costs related to the demerger of the Group's UK and Europe operations (M&G plc).

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

	Half year 2020 \$m				
	Free surplus	Required capital	Total net worth	Value of in-force business	Total embedded value
Group ^{note (i)}					
Shareholders' equity at beginning of period	5,395	6,891	12,286	41,893	54,179
New business contribution ^{note 3}	(517)	369	(148)	1,308	1,160
Existing business – transfer to net worth	1,665	(459)	1,206	(1,206)	-
Expected return on existing business ^{note 4}	70	103	173	879	1,052
Changes in operating assumptions and experience variances ^{note 4}	130	121	251	135	386
Restructuring and IFRS 17 implementation costs	(17)	-	(17)	-	(17)
Operating profit	1,331	134	1,465	1,116	2,581
Non-operating (loss) profit	186	1,586	1,772	(8,860)	(7,088)
(Loss) profit for the period	1,517	1,720	3,237	(7,744)	(4,507)
Foreign exchange movements	(72)	(55)	(127)	(378)	(505)
Intra-group dividends and investment in operations	(235)	-	(235)	-	(235)
Other movements	539	-	539	-	539
Shareholders' equity at end of period ^{note (ii)}	7,144	8,556	15,700	33,771	49,471
Asia					
Shareholders' equity at beginning of period	3,624	3,182	6,806	31,037	37,843
New business contribution ^{note 3}	(298)	104	(194)	1,106	912
Existing business – transfer to net worth	1,009	(205)	804	(804)	-
Expected return on existing business ^{note 4}	52	35	87	666	753
Changes in operating assumptions and experience variances ^{note 4}	99	101	200	45	245
Restructuring and IFRS 17 implementation costs	(10)	-	(10)	-	(10)
Operating profit	852	35	887	1,013	1,900
Non-operating (loss) profit	(508)	83	(425)	(2,736)	(3,161)
(Loss) profit for the period	344	118	462	(1,723)	(1,261)
Foreign exchange movements	(72)	(55)	(127)	(378)	(505)
Intra-group dividends and investment in operations	(235)	-	(235)	-	(235)
Other movements	98	-	98	-	98
Shareholders' equity at end of period	3,759	3,245	7,004	28,936	35,940
US					
Shareholders' equity at beginning of period	1,771	3,709	5,480	10,856	16,336
New business contribution ^{note 3}	(219)	265	46	202	248
Existing business – transfer to net worth	656	(254)	402	(402)	-
Expected return on existing business ^{note 4}	18	68	86	213	299
Changes in operating assumptions and experience variances ^{note 4}	31	20	51	90	141
Restructuring and IFRS 17 implementation costs	(7)	-	(7)	-	(7)
Operating profit	479	99	578	103	681
Loss (gain) on reinsurance of in-force fixed and fixed indexed annuity portfolio ^{note 8}	851	(627)	224	(647)	(423)
Other non-operating (loss) profit	(157)	2,130	1,973	(5,477)	(3,504)
(Loss) profit for the period	1,173	1,602	2,775	(6,021)	(3,246)
Intra-group dividends and investment in operations	-	-	-	-	-
Other movements	441	-	441	-	441
Shareholders' equity at end of period	3,385	5,311	8,696	4,835	13,531

Notes

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

	30 Jun 2020 \$m			31 Dec 2019 \$m		
	Asia	US	Group total ^{note (i)}	Asia	US	Group total ^{note (i)}
Value of in-force business before deduction of cost of capital and time value of options and guarantees	30,383	6,674	37,057	32,396	11,417	43,813
Cost of capital	(998)	(481)	(1,479)	(866)	(370)	(1,236)
Time value of options and guarantees ^{note (iii)}	(449)	(1,358)	(1,807)	(493)	(191)	(684)
Net value of in-force business	28,936	4,835	33,771	31,037	10,856	41,893
Total net worth	7,004	8,696	15,700	6,806	5,480	12,286
Total embedded value	35,940	13,531	49,471	37,843	16,336	54,179

- (iii) 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 12(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.

10 Analysis of movement in free surplus

For EEV covered business, free surplus is the excess of the regulatory basis net assets for EEV reporting purposes (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 LCSM surplus over Group minimum capital requirements is set out in note I(i) of the additional financial information.

	Half year 2020 \$m				
	Asia note (a)	US note (b)	Total insurance and asset management	Other	Group total
Operating free surplus generated before impact of US EEV hedge modelling enhancements and restructuring and IFRS 17 implementation costs ^{note (d)}	988	1,029	2,017	(415)	1,602
Impact of US EEV hedge modelling enhancements in full year 2019 ^{note (d)}	-	(535)	(535)	-	(535)
Operating free surplus generated before restructuring and IFRS 17 implementation costs	988	494	1,482	(415)	1,067
Restructuring and IFRS 17 implementation costs	(29)	(9)	(38)	(64)	(102)
Operating free surplus generated	959	485	1,444	(479)	965
Gain on reinsurance of Jackson's in-force fixed and fixed indexed annuity portfolio ^{note 8(i)}	-	851	851	-	851
Other non-operating loss ^{note (e)}	(508)	(157)	(665)	(47)	(712)
Free surplus generated	451	1,179	1,630	(526)	1,104
Net cash flows paid to parent company ^{note (f)}	(400)	-	(400)	400	-
External dividends	-	-	-	(674)	(674)
Foreign exchange movements on foreign operations, timing differences and other items ^{note (g)}	26	441	467	(351)	116
Net movement in free surplus	77	1,620	1,697	(1,151)	546
Balance at beginning of period	4,220	1,777	5,997	3,739	9,736
Balance at end of period^{note (h)}	4,297	3,397	7,694	2,588	10,282
Representing:					
Free surplus excluding distribution rights and other intangibles	3,426	3,377	6,803	(424)	6,379
Distribution rights and other intangibles	871	20	891	3,012	3,903
	4,297	3,397	7,694	2,588	10,282

	Half year 2019 \$m				Discontinued UK and Europe operations	Group total
	Continuing operations					
	Asia note (a)	US note (b)	Total insurance and asset management	Other		
Operating free surplus generated before restructuring and IFRS 17 implementation costs ^{note (d)}	886	1,075	1,961	(467)	-	1,494
Restructuring and IFRS 17 implementation costs	(17)	(1)	(18)	(8)	-	(26)
Operating free surplus generated	869	1,074	1,943	(475)	-	1,468
Non-operating profit (loss) from continuing operations ^{note (e)}	872	(525)	347	(239)	-	108
Free surplus generated from discontinued operations	-	-	-	-	1,260	1,260
Free surplus generated in the period	1,741	549	2,290	(714)	1,260	2,836
Net cash flows to parent company ^{note (f)}	(578)	(525)	(1,103)	1,562	(459)	-
External dividends	-	-	-	(1,108)	-	(1,108)
Foreign exchange movements, timing differences and other items ^{note (g)}	(45)	163	118	377	(972)	(477)
Net movement in free surplus	1,118	187	1,305	117	(171)	1,251
Balance at beginning of period	2,591	2,760	5,351	3,831	5,977	15,159
Balance at end of period ^{note (h)}	3,709	2,947	6,656	3,948	5,806	16,410
Representing:						
Free surplus excluding distribution rights and other intangibles	3,151	2,921	6,072	1,710	5,781	13,563
Distribution rights and other intangibles	558	26	584	2,238	25	2,847
	3,709	2,947	6,656	3,948	5,806	16,410

	Full year 2019 \$m				Discontinued UK and Europe operations	Group total
	Continuing operations					
	Asia note (a)	US note (b)	Total insurance and asset management	Other		
Operating free surplus generated before impact of US EEV hedge modelling enhancements and restructuring costs ^{note (d)}	1,772	2,028	3,800	(923)	-	2,877
Impact of US EEV hedge modelling enhancements	-	(903)	(903)	-	-	(903)
Operating free surplus generated before restructuring and IFRS 17 implementation costs	1,772	1,125	2,897	(923)	-	1,974
Restructuring and IFRS 17 implementation costs	(31)	(5)	(36)	(56)	-	(92)
Operating free surplus generated	1,741	1,120	2,861	(979)	-	1,882
Non-operating (loss) profit from continuing operations ^{note (e)}	1,195	(1,763)	(568)	(448)	-	(1,016)
Free surplus generated from discontinued operations	-	-	-	-	2,512	2,512
Free surplus generated	2,936	(643)	2,293	(1,427)	2,512	3,378
Net cash flows paid to parent company ^{note (f)}	(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 (g)}	(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 (h)}	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

Notes

- (a) Operating free surplus generated by Asia insurance and asset management operations before restructuring and IFRS 17 implementation costs can be analysed as follows:

	Half year 2020 \$m	Half year 2019 \$m		% change	
		AER	CER	AER	CER
Operating free surplus generated from in-force life business	1,160	1,092	1,075	6%	8%
Investment in new business ^{note (c)}	(298)	(323)	(319)	8%	7%
Long-term business	862	769	756	12%	14%
Asset management	126	117	115	8%	10%
Total Asia	988	886	871	12%	13%

- (b) Operating free surplus generated by US insurance and asset management operations before restructuring and IFRS 17 implementation costs can be analysed as follows:

	Half year 2020 \$m	Half year 2019 \$m	% change
Operating free surplus generated from in-force life business before EEV hedge modelling enhancements ^{note (d)}	1,240	1,405	(12)%
Impact of EEV hedge modelling enhancements in full year 2019 ^{note (d)}	(535)	-	n/a
Operating free surplus generated from in-force life business	705	1,405	(50)%
Investment in new business ^{note (c)}	(219)	(344)	36%
Long-term business	486	1,061	(54)%
Asset management	8	14	(43)%
Total US	494	1,075	(54)%

- (c) Free surplus invested in new business primarily represents acquisition costs and amounts set aside for required capital.
- (d) US in-force free surplus generation before EEV hedge modelling enhancements in 2019 included a \$355 million benefit from the release of incremental reserves in the first half of 2019 following the integration of the John Hancock business. The EEV hedge modelling enhancements in full year 2019 reduced the value of in-force business at 31 December 2019, and the subsequent unwind of those cash flows over half year 2020 reduces the expected transfer to net worth and hence operating free surplus generation by \$(535) million.
- (e) Other non-operating items include short-term fluctuations in investment returns, the effect of changes in economic assumptions for long-term business and the effect of other corporate transactions. For half year 2020 these amounts include the benefit of a change to the valuation interest rate used to value long term insurance liabilities in Hong Kong, as discussed in note I(i) of the additional financial information. In addition, for full year 2019 these amounts included the impact of the NAIC reform, hedge modelling and other related changes in the US.
- (f) Net cash flows to parent company for Asia operations reflect the flows as included in the holding company cash flow.
- (g) Foreign exchange movements, timing differences and other items represent:

Half year 2020 \$m					
	Asia	US	Total insurance and asset management	Other	Group total
Foreign exchange movements	(107)	-	(107)	(19)	(126)
Mark-to-market value movements on Jackson assets backing surplus and required capital	-	317	317	-	317
Other items (including intra-group loans and other intra-group transfers between operations and other non-cash items)	133	124	257	(332)	(75)
	26	441	467	(351)	116

	Half year 2019 \$m					
	Continuing operations				Discontinued UK and Europe operations	Group total
	Asia	US	Total insurance and asset management	Other		
Foreign exchange movements	44	-	44	(26)	(7)	11
Mark-to-market value movements on Jackson assets backing surplus and required capital	-	177	177	-	-	177
Other items (including intra-group loans and other intra-group transfers between operations and other non-cash items)	(89)	(14)	(103)	403	(965)	(665)
	(45)	163	118	377	(972)	(477)

	Full year 2019 \$m					
	Continuing operations				Discontinued UK and Europe operations	Group total
	Asia	US	Total insurance and asset management	Other		
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 full year 2019 included the effect of the redemption of \$0.5 billion of subordinated debt.

(h) Free surplus from continuing operations can be analysed as:

30 Jun 2020 \$m					
	Asia	US	Total insurance and asset management	Other	Group total
Long-term business	3,759	3,385	7,144	-	7,144
Asset management and other	538	12	550	2,588	3,138
Total	4,297	3,397	7,694	2,588	10,282

30 Jun 2019 \$m					
	Asia	US	Total insurance and asset management	Other	Group total
Long-term business	3,315	2,883	6,198	-	6,198
Asset management and other	394	64	458	3,948	4,406
Total	3,709	2,947	6,656	3,948	10,604

31 Dec 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

11 Sensitivity of results to alternative economic assumptions

The tables below show the sensitivity of the embedded value as at 30 June 2020 and 31 December 2019 and the new business profit for half year 2020 and full year 2019 to:

- 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;
- 20 per cent fall (10 per cent fall for 2019) in the market value of equity and property assets (embedded value only);
- 1 per cent increase in the risk discount rates. The main driver for changes in the risk discount rates from period to period is changes in the risk-free rates, the impact of which is generally expected to be offset by a corresponding change in assumed investment returns. Both of these effects are factored into the interest rate sensitivities described above; 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 sensitivities reflect the consequential impacts from market movements at the valuation date. In particular, where relevant the 30 June 2020 sensitivities reflect potential tax benefits that would arise under the relief provided by the Coronavirus Aid, Relief, and Economic Security (CARES) Act in the US for 2020. 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 effects shown below would be recorded within two components of the profit analysis for the following period, 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 period would be calculated by reference to the altered assumptions, for example new business profit and unwind of discount and other expected returns, together with the effect of other changes such as altered corporate bond spreads.

New business profit from long-term business

	Half year 2020 \$m			Full year 2019 \$m		
	Asia	US	Group total	Asia	US	Group total
New business profit ^{note 3}	912	248	1,160	3,522	883	4,405
Interest rates and consequential effects – 1% increase	64	143	207	(46)	207	161
Interest rates and consequential effects – 0.5% decrease	(68)	(85)	(153)	(121)	(123)	(244)
Equity/property yields – 1% rise	62	34	96	210	70	280
Risk discount rates – 1% increase	(176)	(3)	(179)	(715)	(22)	(737)

Embedded value of long-term business

	30 Jun 2020 \$m			31 Dec 2019 \$m		
	Asia	US	Group total	Asia	US	Group total
Shareholders' equity ^{note 9}	35,940	13,531	49,471	37,843	16,336	54,179
Interest rates and consequential effects – 1% increase	(510)	1,362	852	(1,408)	798	(610)
Interest rates and consequential effects – 0.5% decrease	(730)	92	(638)	(28)	(686)	(714)
Equity/property yields – 1% rise	1,413	542	1,955	1,758	556	2,314
Equity/property market values – 10% fall	n/a	n/a	n/a	(810)	(1,205)	(2,015)
Equity/property market values – 20% fall	(1,577)	(764)	(2,341)	n/a	n/a	n/a
Risk discount rates – 1% increase	(4,621)	(417)	(5,038)	(5,263)	(509)	(5,772)
Group minimum capital requirements	246	287	533	175	221	396

Overall, the directional movements in the sensitivities from 31 December 2019 to 30 June 2020 reflect the generally lower government bond yields and lower equity markets at 30 June 2020, and, in the case of the US, the actual hedging portfolio in place at both valuation dates, which varies from period to period due to the nature of Jackson's dynamic hedging programme.

Asia insurance operations

Interest rate sensitivities for the Asia long-term business embedded value have been impacted by the generally lower risk-free rates at 30 June 2020 as compared to 31 December 2019, and have become more sensitive to changes in assumed investment returns. For a 1 per cent increase in interest rates the effect of increasing the risk discount rates exceeds the benefit of higher assumed investment returns, but to a lesser extent than at 31 December 2019. For a 0.5 per cent decrease in interest rates the negative impact of lower assumed investment returns outweighs the benefit of lower risk discount rates to a great extent than at 31 December 2019.

US insurance operations

The interest rate and equity/property market values sensitivity movements provided in the table above are at a point in time and reflect the hedging programme in place on the valuation date, while the actual impact on financial results would vary contingent upon a number of factors.

The sensitivity of the US long-term business embedded value to interest rates is driven by the change in assumed investment returns, and the consequential impact on projected future fee income and benefit costs, offset by the impact of market value movements on derivatives and other assets. At the lower interest rates at 30 June 2020, the positive impact from higher assumed investment returns from a 1 per cent increase in risk-free rates is higher than at 31 December 2019. For a 0.5 per cent decrease in interest rates the increase in expected benefit costs has been more than offset by the hedging protection held to manage such a risk.

The equity/property market values sensitivity is driven by a negative effect from lower future fee income and increased projected benefit costs on variable annuity business, partially offset by market value movements on equity derivatives held at the valuation date. Following the substantial fall in interest rates over the first half of 2020, the larger impact from lower future fee income and increased projected benefit costs is more than offset by the additional equity protection in place at 30 June 2020.

12 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 13(iii)(a). 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 13(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.

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 period.

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 profit 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 profit.

Valuation movements on investments

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

The results for the 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 period to period, 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 typically accrue at rates set at inception and do not vary subsequently with market conditions.

US (Jackson)

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. Jackson also historically issued a small amount of income benefits (Guaranteed Minimum Income Benefits (GMIB)), which are now materially fully reinsured.

In June 2020 the Group announced the reinsurance of substantially all of Jackson's in-force portfolio of fixed and fixed indexed annuity business to Athene Life Re Ltd. These contracts included some financial options and guarantees (as described in the Group's 2019 Annual Report), and, as at 30 June 2020, are materially fully reinsured.

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, such as 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 13(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. 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 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 Singapore life operations, from 31 March 2020 the level of net worth and required capital is based on the Tier 1 Capital position under the new risk-based capital framework (RBC2), which removes certain negative reserves permitted to be recognised in the full RBC2 regulatory position applicable to the Group's LCSM position, in order to better reflect free surplus and its generation. 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 largely 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.

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.

Additional credit risk allowance

The Group's methodology allows for credit risk. The total allowance for credit risk covers expected long-term defaults, a 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, the 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 the long-term spread over the risk-free rate.

US (Jackson)

For Jackson, the allowance for long-term defaults of 0.19 per cent at 30 June 2020 (30 June 2019: 0.17 per cent, 31 December 2019: 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 the credit risk premium and short-term downgrades and defaults, as shown in note 13(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 certain lines of 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. In the first half of 2020 the additional allowance for non-variable annuity business was increased by 50 basis points, primarily to reflect additional short-term credit risk arising from the Covid-19 crisis. The additional allowance for variable annuity business has been set at one-fifth of the additional allowance for non-variable annuity business to reflect the long-term proportion of variable annuity business invested in 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. 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 period. Foreign currency transactions are translated at the spot rate prevailing at the date of the transactions. This includes external dividends paid to shareholders in 2019. All subsequent dividends are declared in US dollars and no foreign currency translation is required. 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 period 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 period 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 profit, 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, such as a small impact from the corporate tax changes in the US as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act in half year 2020, 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 in full year 2019; and
- The impact of corporate transactions undertaken in the period, such as the effect of Jackson's reinsurance arrangement with Athene Life Re Ltd in half year 2020, disposals undertaken and costs related to the demerger of M&G plc from Prudential plc in 2019.

Total profit or loss in the period 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 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 13(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 period (adjusted for the effect of changes in economic and operating assumptions in the current period) and required capital and surplus assets.

(d) Effect of changes in operating assumptions

Operating profit includes the effect of changes to operating 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 operating 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.

13 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 largely 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. Both the risk discount rate and expected rates of return are updated at each valuation date to reflect current market risk-free rates, with the effect that changes in the risk-free rates impact all projected future cash flows.

As described in note 12(i)(h), risk discount rates are set equal to the risk-free rate at the valuation date plus 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. Risks that are explicitly allowed for elsewhere in the EEV basis, such as via the cost of capital and the time value of the cost of options and guarantees, are not included in the risk discount rates.

Given the linkage to current risk-free rates, which are at historically low levels, risk discount rates at 30 June 2020 are generally lower than has historically been the case. Under our EEV methodology there is a corresponding reduction in assumed future investment returns, which will also be lower than historical norms, countering the impact of the lower risk discount rates.

(a) Asia^{notes (2)(3)}

	Risk discount rate %					
	New business			In-force business		
	2020	2019		2020	2019	
	30 Jun	30 Jun	31 Dec	30 Jun	30 Jun	31 Dec
China JV	7.9	8.0	8.2	7.9	8.0	8.2
Hong Kong ^{notes (2)(4)}	1.8	3.8	3.7	2.7	3.8	3.7
Indonesia	10.6	11.8	10.8	10.6	11.8	10.8
Malaysia ^{note (4)}	5.5	6.2	5.8	5.6	6.2	5.9
Philippines	10.7	12.5	12.3	10.7	12.5	12.3
Singapore ^{note (4)}	2.5	3.5	3.3	3.0	4.3	3.9
Taiwan	2.8	4.3	3.4	2.4	4.2	3.0
Thailand	9.1	9.6	9.2	9.1	9.6	9.2
Vietnam	4.7	9.1	5.3	5.0	9.0	5.5
Total weighted average ^{note (1)}	4.4	5.0	4.9	4.1	5.2	4.9

	10-year government bond yield %			Expected long-term inflation %		
	2020	2019		2020	2019	
	30 Jun	30 Jun	31 Dec	30 Jun	30 Jun	31 Dec
	30 Jun	30 Jun	31 Dec	30 Jun	30 Jun	31 Dec
China JV	2.9	3.3	3.2	3.0	3.0	3.0
Hong Kong ^{notes (2)(4)}	0.7	2.0	1.9	2.5	2.5	2.5
Indonesia	7.8	7.5	7.2	4.5	4.5	4.5
Malaysia ^{note (4)}	3.0	3.7	3.3	2.5	2.5	2.5
Philippines	2.9	5.0	4.6	4.0	4.0	4.0
Singapore ^{note (4)}	1.0	2.0	1.7	2.0	2.0	2.0
Taiwan	0.5	0.7	0.7	1.5	1.5	1.5
Thailand	1.4	2.1	1.5	3.0	3.0	3.0
Vietnam	3.0	4.7	3.4	5.5	5.5	5.5

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 profit 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 allowance for risk 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 (30 June 2019: 2.6 per cent to 4.5 per cent; 31 December 2019: 2.9 per cent to 4.8 per cent).
- (4) The geometric equity return assumptions for the most significant equity holdings of the Asia businesses are:

	2020 %	2019 %	
	30 Jun	30 Jun	31 Dec
Hong Kong (US dollar denominated business)	3.6	4.6	4.8
Malaysia	7.0	7.4	7.3
Singapore	5.0	5.8	5.7

(b) US

	2020 %	2019 %	
	30 Jun	30 Jun	31 Dec
Risk discount rate:			
Variable annuity:			
Risk discount rate	5.3	6.4	6.5
Additional allowance for credit risk included in risk discount rate ^{note 12(i)(h)}	0.3	0.2	0.2
Non-variable annuity:			
Risk discount rate	2.9	3.7	3.7
Additional allowance for credit risk included in risk discount rate ^{note 12(i)(h)}	1.5	1.0	1.0
Total weighted average:			
New business	4.8	6.1	6.1
In-force business	4.9	6.1	6.2
Allowance for long-term defaults included in projected spread ^{note 12(i)(h)}	0.19	0.17	0.17
US 10-year treasury bond yield	0.7	2.0	1.9
Equity risk premium (geometric)	2.9	2.6	2.9
Pre-tax expected long-term nominal rate of return for US equities (geometric)	3.6	4.6	4.8
Expected long-term rate of inflation	2.7	2.8	2.9
S&P 500 equity return volatility ^{note (ii)(b)}	17.5	17.5	17.5

Note

Assumed new business spread margins are as follows:

	2020 %	2019 %	
	Jan to Jun issues	Jan to Jun issues	Jul to Dec issues
Fixed annuity business*	0.85	1.50	0.85
Fixed indexed annuity business†	0.50	0.50	0.50
Institutional business	1.00	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 25 basis points over five years, increasing by a further 125 basis points to a long-term assumption at the end of the index option period (2019 issues: 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).

(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 12(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 all periods; and
- The volatility of government bond yields ranges from 1.1 per cent to 2.0 per cent for all periods.

(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 all periods; and
- The standard deviation of interest rates ranges from 2.7 per cent to 2.9 per cent (30 June 2019: 3.3 per cent to 3.5 per cent; 31 December 2019: from 3.1 per cent to 3.3 per cent).

(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

Persistence, 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 30 June 2020 the allowance held for these costs across the Group was \$222

million, 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 and IFRS 17 implementation 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 12(i)(j). Except for a reduction in the Indonesia corporate tax rate from 25 per cent to 22 per cent for 2020 and 2021, with a further reduction to 20 per cent from 2022, there has been no material change in the effective tax rates applied for projecting future cash flows.

14 Insurance new business^{note (a)}

	Single premiums			Regular premiums			Annual premium equivalents (APE)			Present value of new business premiums (PVNBP)		
	2020 \$m		2019 \$m	2020 \$m		2019 \$m	2020 \$m		2019 \$m	2020 \$m		2019 \$m
	Half year	Half year	Full year	Half year	Half year	Full year	Half year	Half year	Full year	Half year	Half year	Full year
Asia												
Cambodia	-	-	-	4	14	24	4	15	24	20	66	111
China JV ^{note (b)}	592	468	710	260	303	518	319	350	590	1,479	1,534	2,586
Hong Kong	78	213	387	380	1,052	1,977	388	1,075	2,016	2,671	6,701	12,815
India ^{note (c)}	102	78	155	73	129	245	83	137	260	298	618	1,179
Indonesia	112	121	292	112	144	361	123	156	390	494	666	1,668
Malaysia	45	90	209	118	149	333	123	158	355	688	881	2,090
Philippines	15	14	51	54	70	153	56	71	158	205	239	561
Singapore	420	500	1,217	187	249	539	229	299	660	1,695	2,100	4,711
Taiwan	112	253	544	144	125	278	155	149	332	623	625	1,418
Thailand	65	95	192	84	53	140	90	62	159	389	318	763
Vietnam	9	13	22	94	87	215	95	88	217	611	470	1,342
Total Asia	1,550	1,845	3,779	1,510	2,375	4,783	1,665	2,560	5,161	9,173	14,218	29,244
US												
Variable annuities	6,417	6,283	12,692	-	-	-	643	628	1,270	6,417	6,283	12,692
Elite Access												
(variable annuities)	882	961	2,002	-	-	-	88	96	200	882	961	2,002
Fixed annuities	314	229	1,194	-	-	-	31	23	119	314	229	1,194
Fixed indexed annuities	892	1,201	3,821	-	-	-	89	120	382	892	1,201	3,821
Institutional	1,284	2,078	2,522	-	-	-	128	208	252	1,284	2,078	2,522
Total US	9,789	10,752	22,231	-	-	-	979	1,075	2,223	9,789	10,752	22,231
Group total^{note (d)}	11,339	12,597	26,010	1,510	2,375	4,783	2,644	3,635	7,384	18,962	24,970	51,475

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 22 per cent interest in the associate.
- (d) In half year 2020, the Africa business sold new business APE of \$54 million (half year 2019: \$38 million on an actual exchange rate basis, \$34 million on a constant exchange rate basis; full year 2019: \$82 million on an actual exchange rate basis, \$75 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.

15 Post balance sheet event

Completion of the equity investment by Athene into US business

On 17 July 2020, the Group completed the equity investment by Athene into the US business, which was announced in June 2020. Under the transaction, Athene Life Re Ltd invested \$500 million in Prudential's US business in return for an 11.1 per cent economic interest, for which the voting interest is 9.9 per cent. If the transaction had completed at 30 June 2020, the effect on EEV shareholders' equity would have been a reduction of around \$1.1 billion. There would have been no impact on profit for the period. Further details are included in note D1 of the IFRS basis results.

net outflow of \$(1,264) million; full year 2019: net outflow of \$(1,856) million). The flows exclude any amounts managed by M&G plc, which was demerged from the Group in October 2019.

(7) Balance sheet figures have been calculated at the closing exchange rates.

Schedule A(i) Insurance operations (actual and constant exchange rates)

AER	Single premiums			Regular premiums			APE ^{note (2)}			PVNBP ^{note (2)}		
	2020 Half year	2019 Half year	+ / (-) %	2020 Half year	2019 Half year	+ / (-) %	2020 Half year	2019 Half year	+ / (-) %	2020 Half year	2019 Half year	+ / (-) %
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
Asia												
Cambodia	-	-	-	4	14	(71)%	4	15	(73)%	20	66	(70)%
China JV ^{note (3)}	592	468	26%	260	303	(14)%	319	350	(9)%	1,479	1,534	(4)%
Hong Kong	78	213	(63)%	380	1,052	(64)%	388	1,075	(64)%	2,671	6,701	(60)%
India ^{note (4)}	102	78	31%	73	129	(43)%	83	137	(39)%	298	618	(52)%
Indonesia	112	121	(7)%	112	144	(22)%	123	156	(21)%	494	666	(26)%
Malaysia	45	90	(50)%	118	149	(21)%	123	158	(22)%	688	881	(22)%
Philippines	15	14	7%	54	70	(23)%	56	71	(21)%	205	239	(14)%
Singapore	420	500	(16)%	187	249	(25)%	229	299	(23)%	1,695	2,100	(19)%
Taiwan	112	253	(56)%	144	125	15%	155	149	4%	623	625	(0)%
Thailand	65	95	(32)%	84	53	58%	90	62	45%	389	318	22%
Vietnam	9	13	(31)%	94	87	8%	95	88	8%	611	470	30%
Total Asia	1,550	1,845	(16)%	1,510	2,375	(36)%	1,665	2,560	(35)%	9,173	14,218	(35)%
US												
Variable annuities	6,417	6,283	2%	-	-	-	643	628	2%	6,417	6,283	2%
Elite Access (variable annuity)	882	961	(8)%	-	-	-	88	96	(8)%	882	961	(8)%
Fixed annuities	314	229	37%	-	-	-	31	23	35%	314	229	37%
Fixed indexed annuities	892	1,201	(26)%	-	-	-	89	120	(26)%	892	1,201	(26)%
Wholesale	1,284	2,078	(38)%	-	-	-	128	208	(38)%	1,284	2,078	(38)%
Total US	9,789	10,752	(9)%	-	-	-	979	1,075	(9)%	9,789	10,752	(9)%
Group total	11,339	12,597	(10)%	1,510	2,375	(36)%	2,644	3,635	(27)%	18,962	24,970	(24)%

* In half year 2020, the Africa business operations sold APE new business of \$54 million (half year 2019: \$38 million on an actual 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.

CER	Single premiums			Regular premiums			APE ^{note (2)}			PVNBP ^{note (2)}		
	2020 Half year	2019 Half year	+ / (-) %	2020 Half year	2019 Half year	+ / (-) %	2020 Half year	2019 Half year	+ / (-) %	2020 Half year	2019 Half year	+ / (-) %
	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%	\$m	\$m	%
Asia												
Cambodia	-	-	-	4	14	(71)%	4	14	(71)%	20	66	(70)%
China JV ^{note (3)}	592	449	32%	260	292	(11)%	319	337	(5)%	1,479	1,479	-
Hong Kong	78	215	(64)%	380	1,063	(64)%	388	1,086	(64)%	2,671	6,771	(61)%
India ^{note (4)}	102	74	38%	73	123	(41)%	83	130	(36)%	298	584	(49)%
Indonesia	112	119	(6)%	112	140	(20)%	123	152	(19)%	494	648	(24)%
Malaysia	45	88	(49)%	118	145	(19)%	123	153	(20)%	688	854	(19)%
Philippines	15	15	-	54	71	(24)%	56	73	(23)%	205	246	(17)%
Singapore	420	485	(13)%	187	241	(22)%	229	290	(21)%	1,695	2,041	(17)%
Taiwan	112	262	(57)%	144	129	12%	155	155	-	623	645	(3)%
Thailand	65	96	(32)%	84	53	58%	90	62	45%	389	318	22%
Vietnam	9	12	(25)%	94	87	8%	95	88	8%	611	469	30%
Total Asia	1,550	1,815	(15)%	1,510	2,358	(36)%	1,665	2,540	(34)%	9,173	14,121	(35)%
US												
Variable annuities	6,417	6,283	2%	-	-	-	643	628	2%	6,417	6,283	2%
Elite Access (variable annuity)	882	961	(8)%	-	-	-	88	96	(8)%	882	961	(8)%
Fixed annuities	314	229	37%	-	-	-	31	23	35%	314	229	37%
Fixed indexed annuities	892	1,201	(26)%	-	-	-	89	120	(26)%	892	1,201	(26)%
Wholesale	1,284	2,078	(38)%	-	-	-	128	208	(38)%	1,284	2,078	(38)%
Total US	9,789	10,752	(9)%	-	-	-	979	1,075	(9)%	9,789	10,752	(9)%
Group total	11,339	12,567	(10)%	1,510	2,358	(36)%	2,644	3,615	(27)%	18,962	24,873	(24)%

* In half year 2020, the Africa business operations sold APE new business of \$54 million (half year 2019: \$34 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.

Schedule A(ii) Insurance new business APE (actual and constant exchange rates)

	2019 \$m				2020 \$m
	AER		CER		AER
	H1	H2	H1	H2	H1
Asia					
Cambodia	15	9	14	10	4
China JV ^{note (3)}	350	240	337	242	319
Hong Kong	1,075	941	1,086	950	388
India ^{note (4)}	137	123	130	117	83
Indonesia	156	234	152	226	123
Malaysia	158	197	153	192	123
Philippines	71	87	73	89	56
Singapore	299	361	290	355	229
Taiwan	149	183	155	187	155
Thailand	62	97	62	94	90
Vietnam	88	129	88	128	95
Total Asia	2,560	2,601	2,540	2,590	1,665
US					
Variable annuities	628	642	628	642	643
Elite Access (variable annuity)	96	104	96	104	88
Fixed annuities	23	96	23	96	31
Fixed indexed annuities	120	262	120	262	89
Wholesale	208	44	208	44	128
Total US	1,075	1,148	1,075	1,148	979
Group total	3,635	3,749	3,615	3,738	2,644

Note

Comparative results for the first half (H1) and second half (H2) of 2019 are presented on both actual exchange rates (AER) and constant exchange rates (CER). The H2 amounts are presented on year-to-date average exchange rates (including the effect of retranslating H1 results for movements in average exchange rates between H1 and the year to date).

Schedule A(iii) Insurance new business profit (actual and constant exchange rates)

	2019				2020
	AER		CER		AER
	HY	FY	HY	FY	HY
New business profit (\$m)					
Asia	1,675	3,522	1,673	3,515	912
US	450	883	450	883	248
Group total	2,125	4,405	2,123	4,398	1,160
APE (\$m)^{note (2)}					
Asia	2,560	5,161	2,540	5,130	1,665
US	1,075	2,223	1,075	2,223	979
Group total	3,635	7,384	3,615	7,353	2,644
New business margin (NBP as a % of APE)					
Asia	65%	68%	66%	69%	55%
US	42%	40%	42%	40%	25%
Group total	58%	60%	59%	60%	44%
PVNB (P) (\$m)^{note (2)}					
Asia	14,218	29,244	14,121	29,081	9,173
US	10,752	22,231	10,752	22,231	9,789
Group total	24,970	51,475	24,873	51,312	18,962
New business margin (NBP as a % of PVNB (P))					
Asia	11.8%	12.0%	11.8%	12.1%	9.9%
US	4.2%	4.0%	4.2%	4.0%	2.5%
Group total	8.5%	8.6%	8.5%	8.6%	6.1%

Schedule A(iv) Investment operations (actual exchange rates)

	2019 \$m		2020 \$m
	H1	H2	H1
Eastspring investment operations (excluding those managed on behalf of M&G plc):			
Third-party retail: ^{note (5)}			
Opening FUM	55,198	62,441	73,644
Net Flows: ^{note (6)}	2,682	3,313	(8,026)
- Gross Inflows	19,628	23,005	19,983
- Redemptions	(16,946)	(19,692)	(28,009)
Other Movements*	4,561	7,890	(6,272)
Closing FUM ^{note (7)}	62,441	73,644	59,346
Third-party institutional:			
Opening FUM	7,788	9,431	11,024
Net Flows:	1,274	1,071	(336)
- Gross Inflows	1,661	1,802	1,621
- Redemptions	(387)	(731)	(1,957)
Other Movements	369	522	(731)
Closing FUM ^{note (7)}	9,431	11,024	9,957
Total third-party (excluding MMF)	71,872	84,668	69,303

* Other movements in H2 2019 included an inflow of \$7.0 billion funds under management (excluding MMF) from the acquisition of Thanachart Fund Management Co., Ltd. ('TFUND') in Thailand.

B Calculation of return on embedded value

Operating return on embedded value is calculated as the annualised post-tax EEV operating profit for the period as a percentage of average EEV basis shareholders' equity.

	Half year 2020*			
	Asia	US	Other	Group
EEV basis operating profit for the period from continuing operations, net of tax (\$ million)	2,036	696	(517)	2,215
Average EEV basis shareholders' equity (\$ million)	38,244	14,943	(1,360)	51,827
Operating return on average shareholders' equity (%)	11%	9%	n/a	9%

* Half year profits are annualised by multiplying by two.

	Half year 2019*†		Full year 2019†	
	Asia	US	Asia	US
EEV basis operating profit for the period from continuing operations, net of tax (\$ million)	2,868	1,040	6,138	1,782
Average EEV basis shareholders' equity (\$ million)	33,758	19,141	35,622	17,526
Operating return on average shareholders' equity (%)	17%	11%	17%	10%

* Half year profits are annualised by multiplying by two.

† Given the significant changes in Group shareholders' equity as a result of the demerger of the UK and Europe operations in October 2019, the 2019 comparatives excluded the presentation of a Group return on shareholders' funds. Additionally, the half year and full year 2019 comparatives for Asia and US operations have been re-presented from those previously published to reflect the use of average rather than opening or closing shareholders' equity to be on a comparable basis with the half year 2020 calculation.

New business profit over embedded value is calculated as the annualised post-tax EEV new business profit for the period as a percentage of average EEV basis shareholders' equity.

	Half year 2020*		Half year 2019*†		Full year 2019†	
	Asia	US	Asia	US	Asia	US
New business profit (\$ million)	912	248	1,675	450	3,522	883
Average EEV basis shareholders' equity (\$ million)	38,244	14,943	33,758	19,141	35,622	17,526
New business profit over embedded value (%)	5%	3%	10%	5%	10%	5%

* Half year new business profits are annualised by multiplying by two.

† The half year and full year 2019 comparatives for Asia and US operations have been re-presented from those previously published to reflect the use of average rather than opening or closing shareholders' equity to be on a comparable basis with the half year 2020 calculation.

Average EEV basis shareholders' equity has been based on opening and closing balances as follows:

	Half year 2020 \$m				Half year 2019 \$m		Full year 2019 \$m	
	Asia	US	Other	Group	Asia	US	Asia	US
Balance at beginning of period	39,235	16,342	(866)	54,711	32,008	18,709	32,008	18,709
Balance at end of period	37,252	13,543	(1,853)	48,942	35,507	19,573	39,235	16,342
Average EEV basis shareholders' equity	38,244	14,943	(1,360)	51,827	33,758	19,141	35,622	17,526

C Calculation of EEV shareholders' funds per share

EEV shareholders' funds per share is calculated as closing EEV shareholders' equity divided by the number of issued shares at 30 June 2020 of 2,609 million (30 June 2019: 2,600 million; 31 December 2019: 2,601 million). EEV shareholders' funds per share excluding goodwill attributable to shareholders is calculated in the same manner, except goodwill attributable to shareholders is deducted from closing EEV shareholders' equity.

30 Jun 2020				
	Asia	US	Other	Group total
Closing EEV shareholders' equity (\$ million)	37,252	13,543	(1,853)	48,942
Less: Goodwill attributable to shareholders (\$ million)	(774)	-	(26)	(800)
Closing EEV shareholders' equity excluding goodwill attributable to shareholders (\$ million)	36,478	13,543	(1,879)	48,142
Shareholders' funds per share (in cents)	1,428¢	519¢	(71)¢	1,876¢
Shareholders' funds per share excluding goodwill attributable to shareholders (in cents)	1,398¢	519¢	(72)¢	1,845¢

30 Jun 2019				
	Asia	US	Other	Group total
Closing EEV shareholders' equity (\$ million)	35,507	19,573	(4,608)	50,472
Less: Goodwill attributable to shareholders (\$ million)	(649)	-	-	(649)
Closing EEV shareholders' equity excluding goodwill attributable to shareholders (\$ million)	34,858	19,573	(4,608)	49,823
Shareholders' funds per share (in cents)	1,366¢	753¢	(177)¢	1,941¢
Shareholders' funds per share excluding goodwill attributable to shareholders (in cents)	1,341¢	753¢	(177)¢	1,916¢

31 Dec 2019				
	Asia	US	Other	Group total
Closing EEV shareholders' equity (\$ million)	39,235	16,342	(866)	54,711
Less: Goodwill attributable to shareholders (\$ million)	(796)	-	(26)	(822)
Closing EEV shareholders' equity excluding goodwill attributable to shareholders (\$ million)	38,439	16,342	(892)	53,889
Shareholders' funds per share (in cents)	1,508¢	628¢	(33)¢	2,103¢
Shareholders' funds per share excluding goodwill attributable to shareholders (in cents)	1,478¢	628¢	(34)¢	2,072¢