

## DEFINITION OF EMBEDDED VALUE

The embedded value report sets out the diluted embedded value, taking into account all shares issued by MMI Holdings Ltd. This report has been prepared in accordance with the embedded value guidance from the Actuarial Society of South Africa (Advisory Practice Note 107).

An embedded value represents the discounted value of expected after-tax future profits from the current business. The embedded value is defined as:

- the adjusted net worth of covered and non-covered business;
- plus the present value of in-force covered business less the opportunity cost of required capital;
- plus the write-up to directors' value of the non-covered business.

### Adjusted net worth (ANW)

The ANW is the excess of assets over liabilities on the statutory basis, but where certain deductions for disregarded assets and impairments are added back.

### Required capital

Required capital includes any assets attributed to the covered business over and above the amount required to back covered business liabilities whose distribution to shareholders is restricted.

### MMI Group Ltd required capital

Stochastic modelling techniques are applied on an ongoing basis to determine and confirm the most appropriate capital levels for covered business. The target is set to maintain supporting capital at such a level that will ensure, within a 95% confidence level, it will at all times cover at least a multiple of

the minimum statutory capital adequacy requirement (CAR) over the ensuing five years. The required capital supporting existing covered business excludes capital required in respect of future new business.

### Other covered business

A multiple of statutory CAR has been used.

### Assets backing required capital

The assumed composition of the assets backing the required capital is consistent with the long-term mandates of the shareholder assets.

### Risk discount rate

The risk discount rate is the rate at which future expected profits are discounted when calculating the value of in-force business or the value of new business. The risk discount rate is determined based on the weighted average cost of capital of the company. This has taken into account the sources of capital used to fund the covered business, ie shareholder equity and subordinate debt finance. The required return on equity was derived through application of the capital asset pricing model. The cost of debt financing was based on the current financing costs.

### Embedded value – Guardrisk

The South African long-term insurer, Guardrisk Life Ltd, was transferred to covered business effective 1 July 2014. This business was included as part of the non-covered directors' valuation of the broader Guardrisk business at 30 June 2014 at R368 million (adjusted net worth of R44 million and write-up of R324 million).

# REPORT ON GROUP EMBEDDED VALUE CONTINUED

AT 30 JUNE 2015

EMBEDDED VALUE RESULTS	2015 Rm	2014 Rm
<b>Covered business</b>		
Reporting excess – long-term insurance business <sup>1</sup>	17 465	17 392
Reclassification to non-covered business	(1 204)	(1 459)
	<b>16 261</b>	15 933
Disregarded assets <sup>2</sup>	(575)	(682)
Difference between statutory and published valuation methods	(839)	(571)
Dilutory effect of subsidiaries <sup>3</sup>	(38)	(34)
Consolidation adjustments <sup>4</sup>	(5)	(77)
Value of MMI Group Ltd preference shares issued	(500)	(500)
<b>Diluted adjusted net worth – covered business</b>	<b>14 304</b>	14 069
<b>Net value of in-force business</b>	<b>21 696</b>	20 324
<b>Diluted embedded value – covered business</b>	<b>36 000</b>	34 393
<b>Non-covered business</b>		
Net assets – non-covered business within life insurance companies	1 204	1 459
Net assets – non-covered business outside life insurance companies	3 256	2 999
Consolidation adjustments and transfers to covered business <sup>4</sup>	(3 024)	(2 291)
Adjustments for dilution <sup>5</sup>	819	720
<b>Diluted adjusted net worth – non-covered business</b>	<b>2 255</b>	2 887
<b>Write-up to directors' value</b>	<b>2 075</b>	2 395
Non-covered business <sup>1</sup>	4 143	4 188
Holding company expenses <sup>6</sup>	(1 578)	(1 383)
International holding company expenses <sup>6</sup>	(490)	(410)
<b>Diluted embedded value – non-covered business</b>	<b>4 330</b>	5 282
<b>Diluted adjusted net worth</b>	<b>16 559</b>	16 956
<b>Net value of in-force business</b>	<b>21 696</b>	20 324
<b>Write-up to directors' value</b>	<b>2 075</b>	2 395
<b>Diluted embedded value</b>	<b>40 330</b>	39 675
Required capital – covered business (adjusted for qualifying debt) <sup>7</sup>	7 306	7 039
Surplus capital – covered business	6 998	7 030
Diluted embedded value per share (cents)	2 514	2 474
Diluted adjusted net worth per share (cents)	1 032	1 057
Diluted number of shares in issue (million) <sup>8</sup>	1 604	1 604

<sup>1</sup> Guardrisk Life Ltd was included as part of non-covered business at 30 June 2014 at a directors' valuation of R368 million. On 1 July 2014 Guardrisk Life Ltd was transferred to covered business (adjusted net worth of R44 million and value of in-force of R324 million).

<sup>2</sup> Disregarded assets include Sage intangible assets of R518 million (2014: R546 million), goodwill and various other items.

<sup>3</sup> For accounting purposes, Metropolitan Health has been consolidated at 100%, while MMI Holdings Namibia, Metropolitan Kenya and Cannon have been consolidated at 96% in the statement of financial position, for the current year. For embedded value purposes, disclosed on a diluted basis, the non-controlling interests and related funding have been reinstated.

<sup>4</sup> Consolidation adjustments include mainly goodwill and intangibles in subsidiaries that are eliminated.

<sup>5</sup> Adjustments for dilution are made up as follows:

- Dilutory effect of subsidiaries (note 3): R103 million (2014: R102 million)
- Treasury shares held on behalf of contract holders: R424 million (2014: R305 million)
- Liability – MMI Holdings Ltd convertible preference shares issued to Kagiso Tiso Holdings: R292 million (2014: R313 million)

<sup>6</sup> The holding company expenses reflect the present value of projected recurring head office expenses. The international holding company expenses reflect the allowance for support services to the international life assurance and health businesses.

<sup>7</sup> The required capital for covered business amounts to R10 604 million (2014: R10 114 million) and is adjusted for qualifying debt of R3 298 million (2014: R3 075 million).

<sup>8</sup> The diluted number of shares in issue takes into account all issued shares, assuming conversion of the convertible redeemable preference shares, and includes the treasury shares held on behalf of contract holders.

<b>ANALYSIS OF NET VALUE OF IN-FORCE BUSINESS PER DIVISION</b>	<b>2015 Rm</b>	<b>2014 Rm</b>
Momentum Retail	<b>10 062</b>	9 674
Gross value of in-force business	<b>11 486</b>	11 212
Less: cost of required capital	<b>(1 424)</b>	(1 538)
Metropolitan Retail	<b>3 661</b>	3 738
Gross value of in-force business	<b>4 374</b>	4 445
Less: cost of required capital	<b>(713)</b>	(707)
Momentum Employee Benefits <sup>1</sup>	<b>5 200</b>	4 242
Gross value of in-force business	<b>5 954</b>	4 892
Less: cost of required capital	<b>(754)</b>	(650)
International	<b>2 108</b>	1 832
Gross value of in-force business	<b>2 310</b>	2 006
Less: cost of required capital	<b>(202)</b>	(174)
Shareholder Capital	<b>665</b>	838
Gross value of in-force business <sup>2</sup>	<b>665</b>	838
Less: cost of required capital	<b>–</b>	–
<b>Net value of in-force business</b>	<b>21 696</b>	20 324

<sup>1</sup> Guardrisk Life Ltd is included within Momentum Employee Benefits at 30 June 2015. The business was transferred effective 1 July 2014 with gross value of in-force of R348 million less cost of capital of R24 million at that date.

<sup>2</sup> The value of in-force in Shareholder Capital represents discretionary margins managed centrally by Balance Sheet Management.

# REPORT ON GROUP EMBEDDED VALUE CONTINUED

AT 30 JUNE 2015

EMBEDDED VALUE PER DIVISION	Adjusted net worth Rm	Net value of in-force Rm	2015 Rm	2014 Rm
<b>Covered business</b>				
South African life licences	12 452	19 588	32 040	31 053
MMI Group Ltd	12 280	19 052	31 332	30 994
Guardrisk Life Ltd <sup>1</sup>	113	536	649	–
Metropolitan Odyssey Ltd	59	–	59	59
International	1 852	2 108	3 960	3 340
MMI Holdings Namibia Ltd	677	1 295	1 972	1 793
Metropolitan Life of Botswana Ltd	354	217	571	341
Metropolitan Lesotho Ltd	370	477	847	783
Other international businesses	451	119	570	423
<b>Total covered business</b>	<b>14 304</b>	<b>21 696</b>	<b>36 000</b>	<b>34 393</b>

	Adjusted net worth Rm	Write-up to directors' value Rm	2015 Rm	2014 Rm
<b>Non-covered business</b>				
Momentum Investments <sup>2</sup>	1 007	1 158	2 165	1 928
Health businesses <sup>3</sup>	445	1 215	1 660	1 761
Momentum Retail (Wealth) <sup>3</sup>	344	473	817	655
Guardrisk business <sup>1,3</sup>	448	998	1 446	1 607
Momentum Short-term Insurance (MSTI)	295	82	377	319
International <sup>4,5</sup>	(532)	(273)	(805)	(386)
MMI Holdings Ltd (after consolidation adjustments) <sup>5</sup>	248	(1 578)	(1 330)	(602)
<b>Total non-covered business</b>	<b>2 255</b>	<b>2 075</b>	<b>4 330</b>	<b>5 282</b>
<b>Total embedded value</b>	<b>16 559</b>	<b>23 771</b>	<b>40 330</b>	<b>39 675</b>
Diluted adjusted net worth – non-covered business	(2 255)			
Adjustments to covered business – adjusted net worth	3 161			
<b>Reporting excess – long-term insurance business</b>	<b>17 465</b>			

<sup>1</sup> Guardrisk Life Ltd was included as part of non-covered business at 30 June 2014 at a directors' valuation of R368 million. On 1 July 2014 Guardrisk Life Ltd was transferred to covered business (adjusted net worth of R44 million and value of in-force of R324 million).

<sup>2</sup> Momentum Investments subsidiaries are valued using forward price-earnings multiples applied to the relevant sustainable earnings bases.

<sup>3</sup> The Health businesses, Momentum Retail (Wealth off-balance sheet) and Guardrisk are valued using embedded value methodology.

<sup>4</sup> Cannon is included within International's non-covered business at 30 June 2015.

<sup>5</sup> The holding company expenses reflect the present value of projected recurring head office expenses. The international holding company expenses reflect the allowance for support services to the international life assurance and health businesses.

ANALYSIS OF CHANGES IN GROUP EMBEDDED VALUE	Notes	Covered business			12 months to	12 months to
		ANW Rm	Gross VIF Rm	Cost of CAR Rm	30.06.2015 Total EV Rm	30.06.2014 Total EV Rm
Profit from new business		(1 345)	2 615	(216)	1 054	875
Embedded value from new business	A	(1 345)	2 513	(214)	954	779
Expected return to end of period	B	–	102	(2)	100	96
Profit from existing business		4 289	(1 162)	136	3 263	3 228
Expected return – unwinding of risk discount rate	B	–	2 551	(338)	2 213	1 786
Release from the cost of required capital	C	–	–	445	445	407
Expected (or actual) net of tax profit transfer to net worth	D	4 128	(4 128)	–	–	–
Operating experience variances	E	474	261	(34)	701	544
Development expenses	F	(79)	–	–	(79)	–
Operating assumption changes	G	(234)	154	63	(17)	491
<b>Embedded value profit from operations</b>		<b>2 944</b>	<b>1 453</b>	<b>(80)</b>	<b>4 317</b>	<b>4 103</b>
Investment return on adjusted net worth	H	664	–	–	664	1 063
Investment variances	I	61	(494)	27	(406)	1 278
Economic assumption changes	J	(23)	12	69	58	(321)
Exchange rate movements		(12)	4	1	(7)	(2)
<b>Embedded value profit – covered business</b>		<b>3 634</b>	<b>975</b>	<b>17</b>	<b>4 626</b>	<b>6 121</b>
Transfer of business from/(to) non-covered business	K	202	348	(27)	523	(6)
Changes in share capital	L	143	73	(14)	202	42
Dividend paid		(3 744)	–	–	(3 744)	(3 271)
<b>Change in embedded value – covered business</b>		<b>235</b>	<b>1 396</b>	<b>(24)</b>	<b>1 607</b>	<b>2 886</b>
<b>Non-covered business</b>						
Change in directors' valuation and other items					(557)	718
Holding company expenses					(275)	(175)
<b>Embedded value profit – non-covered business</b>					<b>(832)</b>	<b>543</b>
Changes in share capital	L				(202)	(42)
Dividend paid					649	1 179
Finance costs – preference shares					(44)	(45)
Transfer of business (to)/from covered business	K				(523)	6
<b>Change in embedded value – non-covered business</b>					<b>(952)</b>	<b>1 641</b>
<b>Total change in group embedded value</b>					<b>655</b>	<b>4 527</b>
<b>Total embedded value profit</b>					<b>3 794</b>	<b>6 664</b>
Return on embedded value (%) – internal rate of return					<b>9.6</b>	19.0

# REPORT ON GROUP EMBEDDED VALUE CONTINUED

AT 30 JUNE 2015

## A. VALUE OF NEW BUSINESS

The value of new business is calculated as the discounted value, at point of sale, using a risk-adjusted discount rate, of the projected stream of after-tax profits for new covered business issued during the financial year under review. The value of new business is also reduced by the cost of required capital for new covered business. In determining the value of new business:

- a policy is only taken into account for new business if at least one premium, that has not subsequently been refunded, is recognised in the financial statements
- premium increases that have been allowed for in the value of in-force covered business are not included as new business at inception
- the expected value of future premium increases, resulting from premium indexation on the new recurring premium business written during the financial year under review, is included in the value of new business
- only client-initiated continuations of individual policies and deferrals of retirement annuity policies after the maturity dates of contracts not previously expected in the present valuation of in-force business, are allowed for
- for employee benefit business, increases in business from new schemes or new benefits on existing schemes are included as new business, but new members or salary-related increases under existing schemes are allowed for in the value of in-force covered business
- for cell captive business, increases in business from new cells or new benefits in existing cells are included as new business; but new members or salary-related increases under existing cells are allowed for in the value of existing in-force business
- renewable recurring premiums under group insurance contracts are treated as in-force covered business

RECONCILIATION OF LUMP SUM INFLOWS	12 months to 30.06.2015 Rm	Restated 12 months to 30.06.2014 Rm
<b>Total lump sum inflows</b>	<b>33 023</b>	29 790
Inflows not included in value of new business	<b>(8 966)</b>	(8 670)
Term extensions on maturing policies	<b>558</b>	465
Retirement annuity proceeds invested in living annuities	<b>822</b>	–
Non-controlling interests and other adjustments	<b>110</b>	(17)
<b>Single premiums included in value of new business</b>	<b>25 547</b>	21 568

<sup>1</sup> The Metropolitan Retail APE and PVP have been changed to only reflect the initial inflows on certain early retirement annuity business (comparatives have been restated). This reduced APE by R64 million (2014: R42 million) and PVP by R635 million (2014: R424 million). This had no impact on value of new business.

<b>VALUE OF NEW BUSINESS 12 months to 30.06.2015</b>	<b>Momentum Retail Rm</b>	<b>Metropolitan Retail<sup>1</sup> Rm</b>	<b>Momentum Employee Benefits Rm</b>	<b>International Rm</b>	<b>Total Rm</b>
Value of new business	246	186	456	66	954
Gross	305	233	552	78	1 168
Less: cost of required capital	(59)	(47)	(96)	(12)	(214)
New business premiums	18 138	2 460	8 351	686	29 635
Recurring premiums	1 077	1 045	1 564	402	4 088
Single premiums	17 061	1 415	6 787	284	25 547
New business premiums (APE)	2 783	1 187	2 243	430	6 643
New business premiums (PVP)	22 924	5 117	20 191	2 164	50 396
Profitability of new business as a percentage of APE	8.8	15.7	20.3	15.3	14.4
Profitability of new business as a percentage of PVP	1.1	3.6	2.3	3.0	1.9

<b>Restated 12 months to 30.06.2014</b>	<b>Momentum Retail Rm</b>	<b>Metropolitan Retail<sup>1</sup> Rm</b>	<b>Momentum Employee Benefits Rm</b>	<b>International Rm</b>	<b>Total Rm</b>
Value of new business	240	236	254	49	779
Gross	312	276	299	61	948
Less: cost of required capital	(72)	(40)	(45)	(12)	(169)
New business premiums	15 948	2 160	6 384	541	25 033
Recurring premiums	1 022	1 083	1 033	327	3 465
Single premiums	14 926	1 077	5 351	214	21 568
New business premiums (APE)	2 515	1 191	1 568	348	5 622
New business premiums (PVP)	20 434	4 948	14 491	1 866	41 739
Profitability of new business as a percentage of APE	9.5	19.8	16.2	14.1	13.9
Profitability of new business as a percentage of PVP	1.2	4.8	1.8	2.6	1.9

<sup>1</sup> The Metropolitan Retail APE and PVP have been changed to only reflect the initial inflows on certain early retirement annuity business (comparatives have been restated). This reduced APE by R64 million (2014: R42 million) and PVP by R635 million (2014: R424 million). This had no impact on value of new business.

<sup>2</sup> Value of new business and new business premiums are net of non-controlling interests.

<sup>3</sup> The value of new business has been calculated on closing assumptions. Investment yields at the point of sale have been used for fixed annuity and guaranteed endowment business, for other business the investment yields at the end of the year have been used.

# REPORT ON GROUP EMBEDDED VALUE CONTINUED

AT 30 JUNE 2015

## A. VALUE OF NEW BUSINESS *continued*

ANALYSIS OF NEW BUSINESS PREMIUMS 12 months to 30.06.2015	Momentum	Metropolitan	Momentum	International	Total
	Retail Rm	Retail <sup>1</sup> Rm	Employee Benefits Rm	Rm	
New business premiums	18 138	2 460	8 351	686	29 635
Recurring premiums	1 077	1 045	1 564	402	4 088
Risk	509	668	843	–	2 020
Savings/investments	568	377	721	–	1 666
International	–	–	–	402	402
Single premiums	17 061	1 415	6 787	284	25 547
Savings/investments	16 418	277	4 652	–	21 347
Annuities	643	1 138	2 135	–	3 916
International	–	–	–	284	284
New business premiums (APE)	2 783	1 187	2 243	430	6 643
Risk	509	668	843	–	2 020
Savings/investments	2 210	405	1 186	–	3 801
Annuities	64	114	214	–	392
International	–	–	–	430	430

Restated 12 months to 30.06.2014	Momentum	Metropolitan	Momentum	International	Total
	Retail Rm	Retail <sup>1</sup> Rm	Employee Benefits Rm	Rm	
New business premiums	15 948	2 160	6 384	541	25 033
Recurring premiums	1 022	1 083	1 033	327	3 465
Risk	501	713	408	–	1 622
Savings/investments	521	370	625	–	1 516
International	–	–	–	327	327
Single premiums	14 926	1 077	5 351	214	21 568
Savings/investments	14 130	201	4 198	–	18 529
Annuities	796	876	1 153	–	2 825
International	–	–	–	214	214
New business premiums (APE)	2 515	1 191	1 568	348	5 622
Risk	501	713	408	–	1 622
Savings/investments	1 934	390	1 045	–	3 369
Annuities	80	88	115	–	283
International	–	–	–	348	348

<sup>1</sup> The Metropolitan Retail APE and PVP have been changed to only reflect the initial inflows on certain early retirement annuity business (comparatives have been restated). This reduced APE by R64 million (2014: R42 million) and PVP by R635 million (2014: R424 million). This had no impact on value of new business.



## Changes in bases and assumptions

The group constantly reviews its embedded value methodologies to align them with evolving practice and to ensure consistency with current practices.

## Assumptions

The main assumptions used in the embedded value calculations are described below.

Principal assumptions (South Africa) <sup>1</sup>	2015 %	2014 %
Pre-tax investment return		
Equities	12.1	12.0
Properties	9.6	9.5
Government stock	8.6	8.5
Other fixed-interest stocks	9.1	9.0
Cash	7.6	7.5
Risk-free return <sup>2</sup>	8.6	8.5
Risk discount rate (RDR)	10.9	10.8
Investment return (before tax) – balanced portfolio <sup>2</sup>	10.8	10.7
Expense inflation base rate <sup>3</sup>	6.8	6.7

<sup>1</sup> The principal assumptions relate only to the South African life insurance business. Assumptions relating to international life insurance businesses are based on local requirements and can differ from the South African assumptions.

<sup>2</sup> The risk-free return was determined with reference to the market interest rate on South African government bonds at the valuation date. The investment return on balanced portfolio business was calculated by applying the above returns to an expected long-term asset distribution.

<sup>3</sup> An additional 1% expense inflation is allowed for in some divisions to reflect the impact of closed books that are in run-off.

## Non-economic

The embedded value calculation uses the same best estimate assumptions with respect to future experience as those used in the financial soundness valuation.

The embedded value of in-force business includes the expected value of future premium increases resulting from premium indexation arrangements on in-force business. The value of new business excludes premium increases during the current year resulting from premium indexation arrangements in respect of in-force business, but includes the expected value of future premium increases in respect of new policies written during the current financial year.

## B. EXPECTED RETURN

The expected return is determined by applying the risk discount rate applicable at the beginning of the reporting year to the present value of in-force covered business at the beginning of the reporting year and adding the expected return on new business, which is determined by applying the current risk discount rate to the value of new business from the point of sale to the end of the year.

## C. RELEASE FROM THE COST OF REQUIRED CAPITAL

The release from the cost of required capital represents the difference between the risk discount rate and the expected after tax investment return on the assets backing the required capital over the year.

## D. EXPECTED (OR ACTUAL) NET OF TAX PROFIT TRANSFER TO NET WORTH

The expected profit transfer for covered business from the present value of in-force to the adjusted net worth is calculated on the statutory valuation method.

# REPORT ON GROUP EMBEDDED VALUE CONTINUED

AT 30 JUNE 2015

## E. OPERATING EXPERIENCE VARIANCES

	12 months to 30.06.2015			12 months to 30.06.2014
	ANW Rm	Net VIF Rm	Embedded value Rm	Embedded value Rm
<b>Momentum Retail</b>	<b>76</b>	<b>153</b>	<b>229</b>	170
Mortality and morbidity <sup>1</sup>	296	12	308	235
Terminations, premium cessations and policy alterations <sup>2</sup>	(211)	129	(82)	5
Expense variance	(35)	–	(35)	43
Other	26	12	38	(113)
<b>Metropolitan Retail</b>	<b>144</b>	<b>3</b>	<b>147</b>	39
Mortality and morbidity <sup>1</sup>	82	10	92	108
Terminations, premium cessations and policy alterations	2	(24)	(22)	(60)
Expense variance	28	–	28	45
FNB Life – share of profits	38	–	38	30
Other	(6)	17	11	(84)
<b>Momentum Employee Benefits</b>	<b>65</b>	<b>7</b>	<b>72</b>	218
Mortality and morbidity <sup>1</sup>	69	6	75	60
Terminations	4	14	18	138
Expense variance	(2)	–	(2)	21
Other	(6)	(13)	(19)	(1)
<b>International</b>	<b>58</b>	<b>61</b>	<b>119</b>	102
Mortality and morbidity <sup>1</sup>	88	21	109	86
Terminations, premium cessations and policy alterations	(14)	3	(11)	17
Expense variance	(30)	2	(28)	6
Other <sup>3</sup>	14	35	49	(7)
<b>Shareholder Capital<sup>4</sup></b>	<b>131</b>	<b>24</b>	<b>155</b>	86
Opportunity cost of required capital	–	(21)	(21)	(71)
<b>Total operating experience variances</b>	<b>474</b>	<b>227</b>	<b>701</b>	544

<sup>1</sup> Overall, mortality and morbidity experience for the 12 months were better compared to what was allowed for in the valuation basis.

<sup>2</sup> Better than expected termination experience on whole life insurance contracts as well as negative persistency on investment contracts contributed to the negative termination experience.

<sup>3</sup> Mainly contributions from Health operations.

<sup>4</sup> Shareholder Capital includes mainly earnings from activities in respect of the management of MMI's capital and shareholder balance sheet risks. Other sources of earnings such as variations in actual tax payments and corporate expenses not allocated to underlying business units are also included here.

## F. DEVELOPMENT EXPENSES

Business development expenses, comprising mainly middle market and other initiatives within Momentum Retail.

## G. OPERATING ASSUMPTION CHANGES

	12 months to 30.06.2015			12 months to 30.06.2014
	ANW Rm	Net VIF Rm	Embedded value Rm	Embedded value Rm
<b>Momentum Retail</b>	(164)	147	(17)	12
Mortality and morbidity assumptions <sup>1</sup>	169	57	226	80
Termination assumptions	–	(37)	(37)	(51)
Renewal expense assumptions <sup>2</sup>	(138)	59	(79)	(30)
Modelling, methodology and other changes <sup>3</sup>	(195)	68	(127)	13
<b>Metropolitan Retail</b>	97	(37)	60	(129)
Mortality and morbidity assumptions <sup>1</sup>	75	23	98	101
Termination assumptions	43	(64)	(21)	(85)
Renewal expense assumptions <sup>2</sup>	34	(7)	27	87
FNB Life	–	–	–	(91)
Modelling, methodology and other changes <sup>3</sup>	(55)	11	(44)	(141)
<b>Momentum Employee Benefits</b>	(63)	37	(26)	461
Mortality and morbidity assumptions <sup>4</sup>	(3)	(72)	(75)	(23)
Termination assumptions <sup>5</sup>	–	81	81	144
Renewal expense assumptions <sup>2</sup>	–	(101)	(101)	366
Modelling, methodology and other changes <sup>3</sup>	(60)	129	69	(26)
<b>International</b>	91	(5)	86	15
Mortality and morbidity assumptions <sup>1</sup>	26	22	48	(7)
Termination assumptions	5	(9)	(4)	10
Renewal expense assumptions	28	(6)	22	17
Modelling, methodology and other changes <sup>3</sup>	32	(12)	20	(5)
<b>Shareholder Capital<sup>6</sup></b>	(195)	86	(109)	(7)
Methodology change: cost of required capital	–	(11)	(11)	139
<b>Total operating assumption changes</b>	<b>(234)</b>	<b>217</b>	<b>(17)</b>	<b>491</b>

<sup>1</sup> Allowance for better than assumed mortality experience on risk business.

<sup>2</sup> Allowance for unit costs in line with budgeted renewal expenses and expected business volumes.

<sup>3</sup> Various modelling and methodology changes, including more explicit allowances for reinsurance modelling at Momentum Retail.

<sup>4</sup> Allowance for lower future profitability on income disability and group life business.

<sup>5</sup> Allowance for better than assumed termination experience on FundsAtWork business.

<sup>6</sup> More explicit allowance for Balance Sheet Management future expenses and enhancements to shareholder investment assets in the cost of required capital.

# REPORT ON GROUP EMBEDDED VALUE CONTINUED

AT 30 JUNE 2015

## H. INVESTMENT RETURN ON ADJUSTED NET WORTH

	12 months to 30.06.2015 Rm	12 months to 30.06.2014 Rm
Investment income	618	722
Capital appreciation and other	77	368
Preference share dividends paid and change in fair value of preference shares	(31)	(27)
<b>Investment return on adjusted net worth</b>	<b>664</b>	<b>1 063</b>

## I. INVESTMENT VARIANCES

Investment variances represent the impact of higher/lower than assumed investment returns on current and expected future after tax profits from in-force business.

## J. ECONOMIC ASSUMPTION CHANGES

The economic assumption changes include the effect of the change in assumed rate of investment return, expense inflation rate and risk discount rate in respect of local and offshore business.

## K. TRANSFER OF BUSINESS (TO)/FROM NON-COVERED BUSINESS

This transfer includes the transfer of Guardrisk Life Ltd to covered business (ie adjusted net asset value of R44 million and net value of in-force of R324 million at 1 July 2014) as well as the alignment of net assets and value of in-force of mainly international subsidiaries between covered and non-covered business.

## L. CHANGES IN SHARE CAPITAL

Changes in share capital include the purchase of the non-controlling interest shareholding in Metropolitan Botswana and recapitalisation of some of the health entities.

## SENSITIVITY OF THE IN-FORCE VALUE AND THE VALUE OF NEW BUSINESS

This section illustrates the effect of different assumptions on the adjusted net worth, the value of in-force business, the value of new business and the cost of required capital. For each sensitivity illustrated, all other assumptions have been left unchanged and, with the exception of the first two sensitivities and the “1% reduction in gross investment return, inflation rate and risk discount rate” sensitivity, the central risk discount rate has been used.

The table below shows the impact on the embedded value (adjusted net worth, value of in-force and cost of required capital) and value of new business (gross and net of the cost of required capital) of a 1% change in the risk discount rate. It also shows the impact of independent changes in a range of other experience assumptions. The effect of an equivalent improvement in these experience assumptions would be to increase the base values by a percentage approximately equal to the reductions shown below.

COVERED BUSINESS: SENSITIVITIES – 30.06.2015	In-force business				New business written		
	Adjusted net worth Rm	Net VIF Rm	Gross VIF Rm	Cost of required capital <sup>3</sup> Rm	Net VNB Rm	Gross VNB Rm	Cost of required capital <sup>3</sup> Rm
<b>Base value</b>	<b>14 304</b>	<b>21 696</b>	<b>24 789</b>	<b>(3 093)</b>	<b>954</b>	<b>1 168</b>	<b>(214)</b>
1% increase in risk discount rate		19 891	23 399	(3 508)	796	1 031	(235)
% change		(8)	(6)	13	(17)	(12)	10
1% reduction in risk discount rate		23 737	26 365	(2 628)	1 141	1 331	(190)
% change		9	6	(15)	20	14	(11)
10% decrease in future expenses		22 805	25 898	(3 093)	1 066	1 280	(214)
% change <sup>1</sup>		5	4	–	12	10	–
10% decrease in lapse, paid-up and surrender rates		22 505	25 622	(3 117)	1 107	1 337	(230)
% change		4	3	1	16	14	7
5% decrease in mortality and morbidity for assurance business		23 217	26 310	(3 093)	1 124	1 338	(214)
% change		7	6	–	18	15	–
5% decrease in mortality for annuity business		21 310	24 438	(3 128)	945	1 159	(214)
% change		(2)	(1)	1	(1)	(1)	–
1% reduction in gross investment return, inflation rate and risk discount rate	14 247	22 260	25 349	(3 089)	1 023	1 237	(214)
% change <sup>2</sup>	–	3	2	–	7	6	–
1% reduction in inflation rate		22 421	25 514	(3 093)	1 043	1 257	(214)
% change		3	3	–	9	8	–
10% fall in market value of equities and properties	13 987	20 626	23 624	(2 998)			
% change	(2)	(5)	(5)	(3)			
10% reduction in premium indexation take-up rate		21 423	24 480	(3 057)	924	1 139	(215)
% change		(1)	(1)	(1)	(3)	(2)	–
10% decrease in non-commission-related acquisition expenses					1 056	1 270	(214)
% change					11	9	–
1% increase in equity/property risk premium		22 135	25 206	(3 071)	991	1 205	(214)
% change		2	2	(1)	4	3	–

<sup>1</sup> No corresponding changes in variable policy charges are assumed, although in practice it is likely that these will be modified according to circumstances.

<sup>2</sup> Bonus rates are assumed to change commensurately.

<sup>3</sup> The change in the value of the cost of required capital is disclosed as nil where the sensitivity test results in an insignificant change in the value.