

Embedded value report

Zurich Insurance Group Annual Report 2013

Embedded value report

Zurich produces and reports embedded value in accordance with the Market Consistent Embedded Value (MCEV) Principles and Guidance issued by the European Insurance CFO Forum (CFO Forum) in October 2009 to provide an economic view of the value of the life business to shareholders and to support financial management and strategic decision making. This report provides an overview of the movement in the MCEV over the calendar year 2013 and new business value added from new sales during the year, including further splits into constituent parts and geographical regions.

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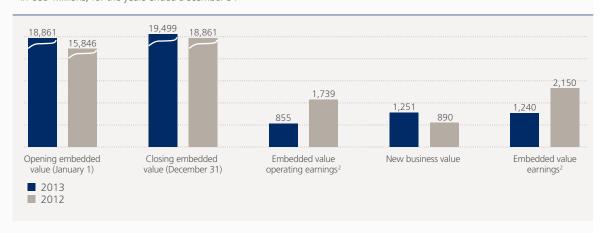
This report describes the development of embedded value of the Zurich Insurance Group (the Group) for the year ended December 31, 2013.

The majority of this report, sections 1 to 10, relates to Global Life, but summary information relating to total Group MCEV is given in section 11.

Embedded value report – executive summary

Key results

in USD millions, for the years ended December 31



Embedded value key results

in USD millions, for the years ended December 31	2013¹	2012¹	Change
Opening embedded value	18,861	15,846	3,016
Closing embedded value	19,499	18,861	638
Embedded value operating earnings ²	855	1,739	(883)
of which new business value	1,251	890	361
Embedded value earnings ²	1,240	2,150	(910)

¹ As of December 31, 2012, Zurich Santander businesses were included in embedded value. New business for 2012 did not include Zurich Santander or new operations in Asia. See Annual Report 2012 for details.

Embedded value operating earnings were USD 855 million. The earnings were negatively impacted by management changes to expense methodology, most of the impact of which is reflected in development expenses. The earnings included USD 689 million of expected emergence of value from business in-force and USD 1,251 million of new business value, offset by USD 1,084 million of operating variances.

New business value of USD 1,251 million increased by USD 361 million or 41 percent compared with 2012. Including the new business value of USD 195 million, not reflected in the 2012 results, for the insurance businesses acquired from Banco Santander S.A. (Zurich Santander) and Zurich Insurance Malaysia Berhad (ZIMB) and excluding the impact in 2012 from the Social Security business in Chile, new business value increased by USD 185 million or 20 percent on a local currency basis. This increase was driven by generally improved volumes and profitability in some European and Asia-Pacific and Middle East markets.

Embedded value earnings were USD 1,240 million. The earnings were negatively impacted, as noted above for embedded value operating earnings, by management changes to expense methodology.

² Embedded value operating earnings and embedded value earnings are gross of new business value non-controlling interests. Net of new business value non-controlling interests, embedded value operating earnings is reduced to USD 665 million and USD 1,693 million in 2013 and 2012, respectively, and embedded value earnings is reduced to USD 1,049 million and USD 2,104 million in 2013 and 2012, respectively. New business value non-controlling interests was USD 190 million and USD 46 million in 2013 and 2012, respectively.

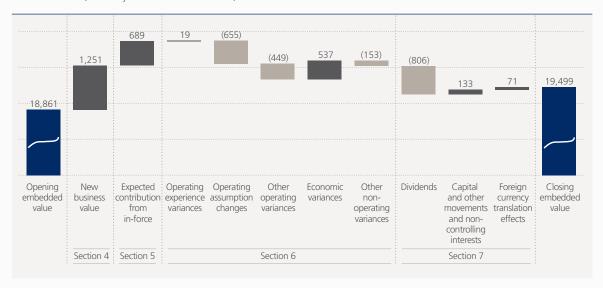
Embedded value report continued

1. Analysis of embedded value earnings

The graph and table below show how embedded value has increased from USD 18,861 million to USD 19,499 million during 2013. Each movement is described in its own section of the report, as detailed on the graph below.

Embedded value development

in USD millions, for the year ended December 31, 2013



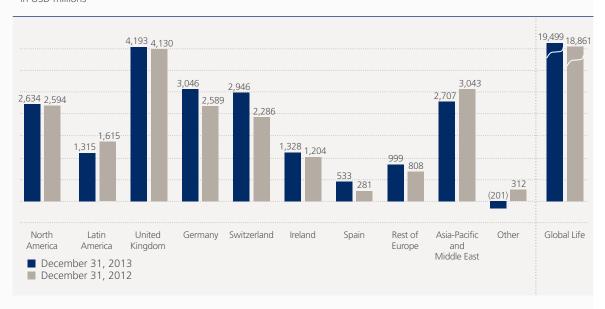
Analysis of embedded value earnings

in USD millions,			2013			2012
for the years ended December 31			Share-	Value of		
	Required	Free	holders'	business		
	capital	surplus	net assets	in-force	Total	Total
Opening embedded value	5,222	2,280	7,502	11,359	18,861	15,846
Dividends in the first six months of the year ¹	_	(465)	(465)	_	(465)	(534)
Capital and other movements in the first six months of the year ¹	(56)	259	204	(88)	116	
New business value ²	851	(1,626)	(776)	2,026	1,251	890
New business value net of non-controlling interests	677	(1,400)	(723)	1,783	1,060	844
Expected contribution at reference rate	22	102	124	75	199	274
Expected contribution in excess of reference rate	22	156	178	312	491	680
Expected transfer to shareholders' net assets	(419)	1,674	1,254	(1,254)	-	_
Operating experience variances	28	56	84	(65)	19	(220)
Operating assumption changes	147	(90)	58	(712)	(655)	(226)
Other operating variances	(361)	370	9	(458)	(449)	342
Embedded value operating earnings ²	289	642	932	(76)	855	1,739
Economic variances	1	287	288	249	537	405
Other non-operating variances	241	(249)	(8)	(144)	(153)	6
Embedded value earnings ²	531	680	1,211	29	1,240	2,150
Dividends in the last six months of the year ¹	_	(342)	(342)	_	(342)	1,059
Capital and other movements in the last six months of the year ¹	75	120	195	13	208	
New business value non-controlling interests	(174)	227	53	(243)	(190)	(46)
Foreign currency translation effects	(29)	30	1	71	71	387
Closing embedded value	5,569	2,790	8,359	11,140	19,499	18,861

² Embedded value operating earnings and embedded value earnings are gross of new business value non-controlling interests. Net of new business value non-controlling interests, embedded value operating earnings is reduced to USD 665 million and USD 1,693 million in 2013 and 2012, respectively, and embedded value earnings is reduced to USD 1,049 million and USD 2,104 million in 2013 and 2012, respectively. New business value non-controlling interests was USD 190 million and USD 46 million in 2013 and 2012, respectively.

Embedded value by geographical region

in USD millions



In **North America**, embedded value increased by USD 40 million, as operating earnings were partially offset by operating assumption changes.

In **Latin America**, embedded value decreased by USD 300 million mainly as a result of a change in the valuation interest rate used in Chile, exchange rate impacts and management changes to expense methodology.

In the **UK**, embedded value increased by USD 63 million, with contributions from new business value being partially offset by negative economic variances.

In **Germany**, embedded value increased by USD 457 million mainly driven by modeling changes, profits from companies outside the main life insurance entity, exchange rate impacts and other economic impacts.

In **Switzerland**, embedded value increased by USD 660 million as a result of strong operating earnings and positive economic variances that were partially offset by dividend payments.

In **Ireland**, a stable new business value, positive economic variances and exchange rate impacts were the main contributors to the increase in embedded value of USD 124 million.

In **Spain**, embedded value increased by USD 252 million as a result of continued strong new business performance and positive economic variances.

In the **Rest of Europe**, embedded value increased by USD 191 million, mainly from positive economic variances in Italy partially offset by dividend payments.

In **Asia-Pacific and Middle East**, embedded value decreased by USD 336 million mainly as a result of assumption changes and management changes to expense methodology.

In **Other**, embedded value decreased by USD 513 million, mainly as a result of management changes to expense methodology. Of this reduction, USD 173 million resulted from expenses charged against the shareholders' net assets of Global Life's central unit during the year ended December 31, 2013, and USD 347 million from the capitalized value of certain central overhead expenses now treated as a recurring maintenance expense, charged against the value of business in-force in Global Life's central unit.

Embedded value report continued

2. Free surplus

Required capital is the amount of shareholders' net assets required to cover the target capital requirement, covering both minimum solvency margin and target excess solvency margin. Free surplus is shareholders' net assets less required capital.

Shareholders'	net
assets	

in USD millions, as of December 31		2012			
	Shareholders'		Required capital		
	net assets	Required capital	(% SM) ¹	Free surplus	Free surplus
North America	605	545	355%	59	(53)
Latin America	975	502	110%	473	593
of which:					
Zurich Santander	497	243	119%	254	360
Europe	5,701	3,585	136%	2,116	1,288
United Kingdom	1,599	906	138%	693	(3)
Germany	1,983	902	130%	1,081	1,167
Switzerland	627	467	146%	160	13
Ireland	493	419	150%	73	36
Spain	308	344	125%	(35)	(83)
Rest of Europe	691	547	130%	144	159
Asia-Pacific and Middle East	1,172	837	135%	334	400
Other	(93)	100	145%	(193)	53
Global Life	8,359	5,569	141%	2,790	2,280

¹ SM is the local minimum solvency margin.

In **North America**, free surplus increased by USD 113 million mainly as a result of a change in reinsurance arrangements.

In Latin America, free surplus decreased by USD 120 million mainly as a result of dividend payments.

In the **UK**, free surplus increased by USD 697 million mainly due to expected transfer of profits from business in-force exceeding the strain of writing new business and changes to the treatment of internal reinsurance.

In **Germany**, expected transfer of profits from business in-force was more than offset by adverse development of assets held outside the main life insurance entities and, in total, free surplus decreased by USD 87 million.

In **Switzerland**, expected transfer of profits from business in-force and improved economic conditions increased free surplus by USD 437 million, which were offset by dividend payments and other variances.

In **Ireland**, free surplus increased by USD 38 million as a result of the expected transfer of profits from business in-force exceeding the strain of writing new business.

In **Spain**, free surplus increased mainly due to positive economic variances and expected contribution from in-force, partially offset by dividend payments.

In **Rest of Europe**, free surplus decreased by USD 14 million. The main drivers were dividend payments, offset by positive economic variances.

In **Asia-Pacific and Middle East**, free surplus decreased by USD 65 million due to various operating variances exceeding capital injections into the region.

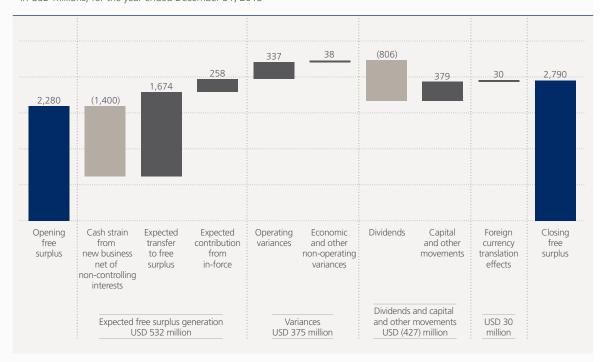
In **Other**, free surplus decreased by USD 247 million due to expenses charged to Global Life's central unit, in part resulting from management changes to expense methodology, and dividend payments made to the Group.

3. Analysis of free surplus generation

The graph below shows how the free surplus value has increased from USD 2,280 million to USD 2,790 million during 2013

Free surplus development

in USD millions, for the year ended December 31, 2013



Expected free surplus generation includes cash strain from new business net of non-controlling interests, expected transfer to free surplus and expected contribution from in-force to free surplus. This was USD 532 million in 2013. The cash strain on new business of USD 1,400 million results from the combination of initial cash consumption of USD 723 million and the increase in required capital of USD 677 million. The expected transfer to shareholders' net assets increased free surplus by USD 1,674 million and was driven by expected profits of USD 1,254 million and the release of required capital of USD 419 million. The expected contribution from in-force to free surplus was USD 258 million.

Variances arising on operating and economic assumptions increased free surplus by USD 375 million. Variances represent the difference between actual experience during the period and that implied by assumptions on the emergence of free surplus, and actual market development over the period.

Dividends and capital and other movements decreased free surplus by USD 427 million as dividends of USD 806 million paid to the Group exceeded capital and other movements of USD 379 million into the life business.

Foreign currency translation effects increased the U.S. dollar free surplus by USD 30 million.

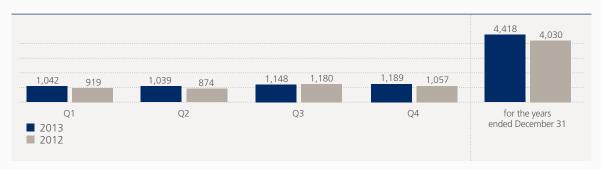
Embedded value report continued

4. New business¹

Global Life

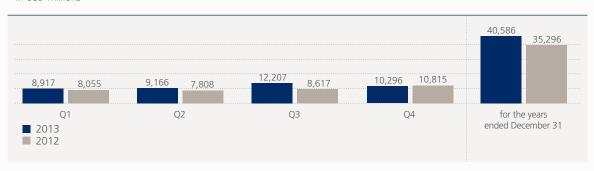
Annual premium equivalent (APE)

in USD millions



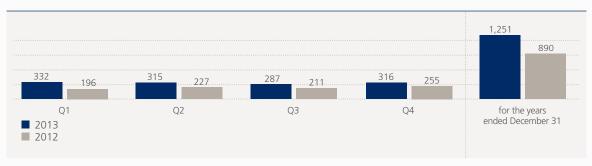
Present value of new business premiums (PVNBP)

in USD millions



New business value

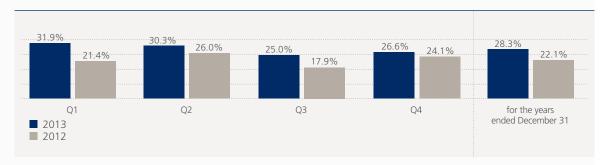
in USD millions



¹ New business for 2012 did not include Zurich Santander or Zurich Insurance Malaysia Berhad (ZIMB). The new business value from Zurich Santander and ZIMB for 2012 was USD 195 million.

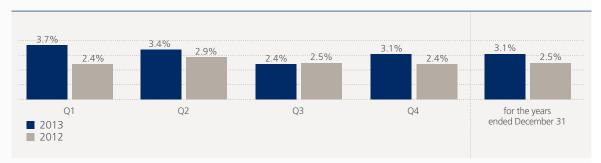
New business margin (%APE)

in percent



New business margin (%PVNBP)

in percent



New business
by quarter

in USD millions			2013					2012		
	Q1	Q2	Q3	Q4	Q4 YTD	Q1	Q2	Q3	Q4	Q4 YTD
Annual premium equivalent										
(APE) ¹	1,042	1,039	1,148	1,189	4,418	919	874	1,180	1,057	4,030
New annual premiums	684	706	783	807	2,981	582	529	906	661	2,677
New single premiums	3,583	3,330	3,649	3,816	14,378	3,371	3,451	2,741	3,964	13,527
Present value of new business										
premiums (PVNBP) ²	8,917	9,166	12,207	10,296	40,586	8,055	7,808	8,617	10,815	35,296
Average annual premium multiplier	7.8	8.3	10.9	8.0	8.8	8.1	8.2	6.5	10.4	8.1
New business value	332	315	287	316	1,251	196	227	211	255	890
New business margin (% of APE)	31.9%	30.3%	25.0%	26.6%	28.3%	21.4%	26.0%	17.9%	24.1%	22.1%
New business margin										
(% of PVNBP)	3.7%	3.4%	2.4%	3.1%	3.1%	2.4%	2.9%	2.5%	2.4%	2.5%

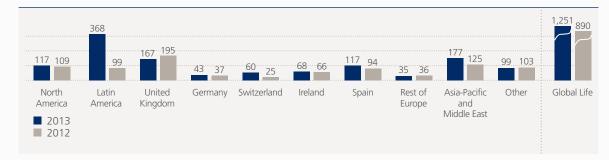
APE is measured as new annual premiums plus 10 percent of new single premiums.
 PVNBP is measured as new single premiums plus the present value of new annual premiums.

Embedded value report continued

Geographical region

New business value by geographical region

in USD millions, for the years ended December 31



New business by geographical region

in USD millions, for the years ended December 31							New business margin			
chaca becember 51	AF	PΕ	PVI	NBP	New busir	ness value	% o	f APE	% of PVNBP	
	2013	20121	2013	20121	2013	2012¹	2013	2012¹	2013	2012¹
North America	162	125	1,406	1,227	117	109	72.4%	87.1%	8.3%	8.9%
Latin America	1,178	755	6,158	2,458	368	99	31.2%	13.2%	6.0%	4.0%
of which:										
Zurich Santander	821	_	4,381	_	268	-	32.6%	_	6.1%	_
Europe	2,376	2,538	27,751	26,998	490	453	20.6%	17.9%	1.8%	1.7%
United Kingdom	1,019	1,194	15,422	14,112	167	195	16.4%	16.4%	1.1%	1.4%
Germany	363	453	2,937	4,503	43	37	11.8%	8.2%	1.5%	0.8%
Switzerland	225	220	2,651	2,544	60	25	26.7%	11.5%	2.3%	1.0%
Ireland	420	355	3,637	3,033	68	66	16.1%	18.5%	1.9%	2.2%
Spain	155	149	1,410	1,335	117	94	75.4%	62.9%	8.3%	7.0%
Rest of Europe	195	167	1,694	1,471	35	36	17.9%	21.5%	2.1%	2.4%
Asia-Pacific and Middle East	530	464	3,368	3,058	177	125	33.5%	26.9%	5.3%	4.1%
Other	173	147	1,903	1,554	99	103	57.4%	70.1%	5.2%	6.6%
Global Life	4,418	4,030	40,586	35,296	1,251	890	28.3%	22.1%	3.1%	2.5%

¹ New business for 2012 did not include Zurich Santander or Zurich Insurance Malaysia Berhad (ZIMB). The new business value from Zurich Santander and ZIMB for 2012 was LISD 195 million

North America increased APE by USD 36 million or 29 percent, driven by increased sales of individual protection business. Changes in the mix of business resulted in reduced margins. New business value increased by USD 8 million or 7 percent.

Zurich Santander delivered strong APE of USD 821 million. Strong sales of protection business were the result of an incentive campaign in Brazil. With strong margins, Zurich Santander delivered new business value of USD 268 million.

In the rest of Zurich's businesses in **Latin America**, APE decreased by USD 399 million or 50 percent on a local currency basis. This was the result of the successful participation in the Social Security biennial bid process in Chile in 2012. New business value was stable.

Overall in **Europe**, APE decreased by USD 162 million or 7 percent on a local currency basis. The main reductions were in the UK and Germany. Margins increased strongly in Switzerland and Spain, contributing to the increase in new business value of USD 36 million or 6 percent on a local currency basis.

In the **UK**, APE decreased by USD 176 million or 14 percent on a local currency basis as a result of reduced sales of individual savings business following the implementation of new regulation on intermediary commission payments, partially offset by increased sales of corporate pensions business in the third quarter. Margins were stable with the positive impact of lower corporation tax rates offset by lower profitability from corporate business. Overall new business value decreased by USD 28 million or 13 percent on a local currency basis.

Embedded value report

In **Germany**, APE decreased by USD 90 million or 22 percent on a local currency basis, mainly driven by lower sales of savings business. However, new business value increased by USD 6 million or 12 percent on a local currency basis as a result of improved margins on saving business more than offsetting the APE decrease.

In **Switzerland**, APE increased by USD 5 million or 1 percent on a local currency basis. As a result of increased profitability on individual life due to re-pricing and a change in the mix of business, new business value increased by USD 35 million.

In **Ireland**, APE increased by USD 65 million or 15 percent on a local currency basis benefitting from cross-border sales, mainly to Italy. The effect on new business value from this increased volume was offset by reduced margins on domestic Irish business. In total, new business value was increased by USD 2 million.

In **Spain**, APE increased by USD 5 million, while new business value increased by USD 23 million or 20 percent on a local currency basis as a consequence of increased sales of highly profitable protection business.

In **Rest of Europe**, APE increased by USD 29 million or 13 percent on a local currency basis. However, new business value decreased by USD 1 million as a result of lower margins on savings business in Italy.

In **Asia-Pacific and Middle East**, APE increased by USD 66 million or 17 percent on a local currency basis. The increase arose from the inclusion of Zurich Insurance Malaysia Berhad (ZIMB) in new business reporting and from new local life insurance businesses in Singapore, Indonesia and Taiwan in 2013. New business value increased by USD 53 million or 47 percent on a local currency basis.

In **Other**, APE increased by USD 26 million or 15 percent on a local currency basis. New business value decreased by USD 4 million or 5 percent on a local currency basis due to a reduction in margins.

Embedded value report continued

5. Expected contribution and expected transfer to shareholders' net assets

Expected contribution at reference rate

The expected contribution at reference rate is the projected change in embedded value over the year using risk free investment returns applicable at the start of the year. The expected contribution at reference rate was USD 199 million.

Expected contribution in excess of reference rate

The expected contribution in excess of reference rate is the additional embedded value expected to be created if "real world" expected investment returns applicable at the start of the year were to emerge. The expected contribution in excess of reference rate was USD 491 million.

Expected transfer to shareholders' net assets

The expected transfer to shareholders' net assets shows the profits expected to emerge during the year in respect of business in-force at the start of the year. The net effect on embedded value is zero, because the change in the value of business in-force is offset by an equal and opposite change in shareholders' net assets.

6. Operating, economic and other non-operating variances

Annual Report 2013

Operating, economic and other non-operating variances

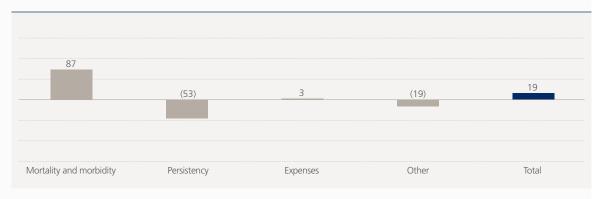
in USD millions, for the year ended December 31, 2013	Operating experience	Operating assumption	Other operating	Economic	Other non-operating
	variances	changes	variances	variances	variances
North America	(13)	(265)	(51)	57	26
Latin America	18	(19)	(48)	(191)	(2)
of which:					
Zurich Santander	7	22	4	37	(5)
Europe	22	(95)	390	706	(121)
United Kingdom	(6)	(83)	(15)	(100)	(91)
Germany	2	(47)	357	38	(40)
Switzerland	12	103	111	302	8
Ireland	9	(47)	(68)	73	_
Spain	14	(24)	(5)	153	_
Rest of Europe	(9)	2	8	239	2
Asia-Pacific and Middle East	_	(226)	(225)	(28)	(54)
Other	(8)	(50)	(515)	(6)	(2)
Global Life	19	(655)	(449)	537	(153)

Operating experience variances

Operating experience variances measure the difference between actual experience during the period and that implied by the operating assumptions. Experience variances occur in the normal course of business as short-term experience fluctuates around long-term assumptions.

Embedded value split of operating experience variance

in USD millions, for the year ended December 31, 2013



- **Mortality and morbidity** experience increased embedded value by USD 87 million. The main positive experience variance of USD 56 million arose in Chile from the disability and survival business.
- **Persistency** experience decreased embedded value by USD 53 million. The main negative experience was USD 51 million in Latin America.
- Expenses experience increased embedded value by USD 3 million. Following management changes to expense methodology introduced during 2013, an expense variance resulting from costs exceeding long-term expense assumptions for start-up businesses, reported as "expenses" in the operating experience variance in the Half Year Report 2013, is reported as "development expenses" included in other operating variances in this report.
- Other operating experience variances reduced embedded value by USD 19 million.

Embedded value report continued

Operating assumption changes

Changes in assumptions about future operating experience also have an impact on operating variances.

Embedded value split of operating assumption changes

in USD millions, for the year ended December 31, 2013



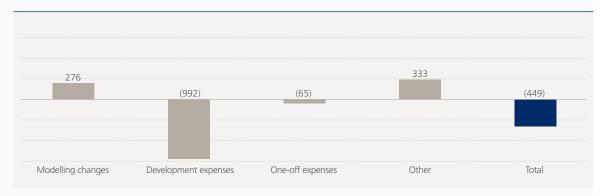
- Mortality and morbidity assumption updates increased embedded value by USD 47 million. The main impacts arose in Germany, Asia-Pacific and Middle East and Switzerland contributing USD 45 million, USD 37 million and USD 20 million respectively, partially offset by a decrease in North America of USD 30 million.
- **Persistency** assumption updates negatively impacted embedded value by USD 237 million. The main drivers were North America, Asia-Pacific and Middle East and the UK contributing USD 138 million, USD 87 million and USD 85 million respectively, partially offset by an increase in Switzerland of USD 133 million.
- Expense assumption changes reduced embedded value by USD 199 million. The main contributors were Asia-Pacific and Middle East and Ireland contributing USD 163 million and USD 33 million respectively.
- Other assumption changes decreased embedded value by USD 265 million. The main contributors were a decrease of USD 82 million in North America, mainly due to a reduction in the assumed take-up rate of policy loans, and a decrease of USD 63 million in Germany, partly as a result of policyholder dividend declaration impacts.

Other operating variances

Other operating variances include modeling changes, development and one-off expenses and other operating variances not captured elsewhere.

Embedded value split of other operating variances

in USD millions, for the year ended December 31, 2013



- **Modeling changes** increased embedded value by USD 276 million. In Germany, modeling changes increased embedded value by USD 189 million. The major changes related to risk, reducing the cost of residual non-hedgeable risk. In Switzerland, enhancements to the valuation models, in particular the disability model, increased embedded value by USD 47 million.
- Development expenses reduced embedded value by USD 992 million. During 2013 there were management changes to expense methodology in embedded value reporting. These changes reduced embedded value as of December 31, 2013, and the impact of these changes is included in development expenses. The major impacts were USD 246 million for the capitalized value of future projected excess maintenance expenses for start-up operations and associated regional office expenses and USD 347 million for the capitalized value of certain central overhead expenses now treated as a recurring maintenance expense.

Development expenses also include USD 134 million for the excess of initial and maintenance expenses over the long-term expense assumptions incurred during 2013 by start-up operations in North America, Latin America and Asia-Pacific and Middle East and their associated regional offices, and USD 173 million charged against the shareholders' net assets of region Other during 2013.

Other development expenses were predominantly for platform developments, expansion and other projects in the UK and Ireland.

- One-off expenses reduced embedded value by USD 65 million, mainly driven by the costs of implementing efficiency improvements and other projects in Switzerland and Ireland.
- Other operating variances had a positive impact on embedded value of USD 333 million. The main contribution arose in Germany where profits from companies outside the main life insurance entity and other experience variances increased embedded value.

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Embedded value report continued

Economic variances

Economic variances arise from the difference between actual economic experience during the year and the expected experience implied by the economic assumptions at the start of the year. Economic variances also include the impact of changes in assumptions in respect of future economic experience at the end of the year. In total, economic variances increased embedded value by USD 537 million in 2013.

In 2013, risk free rates increased for each major currency and in particular for the U.S. dollar and the pound sterling, while the liquidity premium spread decreased for each major currency, particularly for the pound sterling. Yields on sovereign debt were volatile across Europe, but spreads have reduced during the year. These movements are most significant for spread business and traditional participating business and as a result investment performance was positive in Switzerland, Italy, Germany and Spain. Outside Europe, increased interest rates negatively affected the economic variance on protection business in Asia-Pacific and Middle East.

Other non-operating variances

Other non-operating variances include the impact of legal, tax and regulatory changes implemented during the year as well as other one-off items.

Other non-operating variances decreased embedded value by USD 153 million, mainly driven by a reduction in the value of business in-force in the UK in the light of new regulation, which will be effective from April 2014, on payments to platform service providers, and USD 40 million in Germany.

7. Dividends and capital and other movements and other adjustments

Dividends and capital and other movements

Dividends and capital and other movements reflect dividends paid by Global Life to the Group, shown as a negative number in the table below, net of capital and other movements received from the Group, shown as a positive number in the table. Capital and other movements can also relate to the value of business in-force in respect of acquisitions and disposals, or corporate restructuring.

Dividends and capital and other movements

in USD millions, for the year ended December 31, 2013	Total
North America	10
Latin America	(173)
of which:	
Zurich Santander	(203)
Europe	(388)
United Kingdom	55
Germany	(78)
Switzerland	(161)
Ireland	13
Spain	(37)
Rest of Europe	(180)
Asia-Pacific and Middle East	89
Other	(21)
Global Life	(483)

Changes in value for Global Life arising from dividends and capital and other movements are offset by equal and opposite value changes in the non-covered businesses of the Group and therefore have no impact on Group MCEV as shown in section 11, except as noted below.

North America paid a dividend of USD 136 million to the Group, partially offset by a capital transfer from non-covered business.

In Latin America, the net dividends and capital movements reduced embedded value by USD 173 million.

In **Europe**, the net dividends and capital movements were USD 388 million. The main contributions to this were a dividend payment by Switzerland of USD 163 million and dividend payments by Rest of Europe of USD 153 million. In the UK, the main drivers of capital movements of USD 55 million were a change in the treatment of an internal reinsurance treaty which increased embedded value by USD 113 million, with equal and offsetting impacts in other segments of the Group, and a non-life insurance entity which was reclassified and excluded from entities covered by MCEV valuation principles reducing embedded value by USD 88 million, with equal impact on Group MCEV.

In Asia Pacific and Middle East, capital injections amounted to USD 104 million.

In **Other**, a dividend of USD 26 million was paid.

Other adjustments

The adjustment to embedded value to remove non-controlling interests from new business value is shown separately and it largely arose from the interests of non-controlling shareholders in Zurich Santander and Spain.

Foreign currency translation effects represent the impact of adjusting opening embedded value, and movements during the year which are translated at average exchange rates during the year, to end-of-year exchange rates. The net effect of the change of the U.S. dollar against other currencies increased the U.S. dollar embedded value by USD 71 million.

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Embedded value report continued

8. Value of business in-force

Components of value of business in-force

in USD millions, as of December 31		2013						
					Value of	Value of		
					business	business		
	CE ¹	FC ²	TVFOG ³	CRNHR ⁴	in-force	in-force		
North America	2,475	(81)	(157)	(207)	2,029	2,120		
Latin America	446	(46)	(3)	(56)	340	534		
of which:								
Zurich Santander	323	(22)	(3)	(20)	279	205		
Europe	9,196	(521)	(821)	(511)	7,342	6,724		
United Kingdom	2,834	(65)	(16)	(159)	2,594	3,119		
Germany	1,982	(364)	(396)	(159)	1,063	658		
Switzerland	2,607	(30)	(152)	(106)	2,319	2,002		
Ireland	905	(16)	(15)	(39)	835	781		
Spain	266	(15)	_	(26)	224	31		
Rest of Europe	603	(30)	(242)	(23)	307	134		
Asia-Pacific and Middle East	1,746	(80)	(12)	(118)	1,536	1,766		
Other	(59)	(6)	_	(43)	(107)	215		
Global Life	13,803	(735)	(994)	(935)	11,140	11,359		

 $^{^{\}rm 1}\,$ CE is the certainty equivalent value of business in-force. $^{\rm 2}\,$ FC is the frictional costs.

Maturity profile of value of business in-force

The value in-force (VIF) maturity profile sets out when the VIF profits are expected to emerge as free surplus. It does not include the release of required capital to free surplus which usually accompanies the emergence of the VIF profit. The VIF emergence is determined after taking into account frictional costs, the cost of residual non-hedgeable risk and the time value of financial options and guarantees.

Maturity profile of value of business in-force

in USD millions, as of December 31	2	013	2012		
	VIF	% of Total	VIF	% of Total	
1 to 5 years	3,923	35%	3,929	35%	
6 to 10 years	2,856	26%	2,891	25%	
11 to 15 years	1,892	17%	2,111	19%	
16 to 20 years	1,096	10%	1,193	11%	
more than 20 years	1,373	12%	1,236	11%	
Total	11,140	100%	11,359	100%	

The VIF maturity profile shows that 35 percent of the VIF should emerge as free surplus over the next five years and 61 percent over the next ten years.

TVFOG is the time value of financial options and guarantees including the application of a liquidity premium.
 CRNHR is the cost of residual non-hedgeable risk (see section 12 d) for further details).

9. Reconciliation of shareholders' equity to embedded value

Reconciliation of shareholders' equity to embedded value

in USD billions, as of December 31, 2013	Total
Shareholders' equity ¹	19.6
Less intangible assets	
Goodwill	(0.4)
Deferred policy acquisition costs and deferred origination costs	(15.3)
Other intangibles and present value of future profits	(4.0)
Deferred front-end fees	5.8
Pension scheme liabilities ²	1.1
Less non-controlling interests ³	0.1
Other adjustments ⁴	1.6
Embedded value shareholders' net assets	8.4
Value of business in-force	11.1
Embedded value	19.5

Shareholders' equity is the Global Life share of total shareholders' equity as reported in the Consolidated financial statements prepared on the basis of the Group's accounting policies set out in note 3 of the Consolidated financial statements.
 Pension scheme liabilities are deducted from shareholders' equity but are not deducted from embedded value shareholders' net assets.
 Primarily from non-controlling interests in Zurich Santander and Spain.
 Other adjustments include tax differences, policyholders' share of intangibles, reserving differences and asset valuation differences including the write-off in embedded value shareholders' net assets of an intangible asset to which certain project-based costs were related.

Embedded value report continued

10. Sensitivities

Sensitivities	in USD millions, as of December 31, 2013	Change in	Change in
		embedded	new business
		value ¹	value ¹
	Reported embedded value and new business value ¹	19,499	1,251
	Base embedded value and base new business value ¹	19,113	904
	Operating sensitivities		
	10% increase in initial expenses	n/a	(5%)
	10% decrease in maintenance expenses	3%	7%
	10% increase in voluntary discontinuance rates	(3%)	(12%)
	10% decrease in voluntary discontinuance rates	4%	14%
	5% improvement in mortality and morbidity for assurances	2%	10%
	5% improvement in mortality for annuities	(1%)	(1%)
	Required capital set equal to minimum solvency capital	_	1%
	Economic sensitivities		
	100 basis points increase in risk free yield curve	(2%)	(1%)
	100 basis points decrease in risk free yield curve ²	2%	(1%)
	10% fall in equity market values	(1%)	n/a
	10% fall in property market values	(1%)	n/a
	25% increase in implied volatilities for risk free yields	(1%)	_
	25% decrease in implied volatilities for risk free yields	1%	1%
	25% increase in implied volatilities for equities and properties	(1%)	_
	25% decrease in implied volatilities for equities and properties	1%	_

¹ Values used to calculate the sensitivities exclude a liquidity premium and are net of new business value non-controlling interests. These adjustments for the sensitivity calculations reduce the reported embedded value and new business value by USD 386 million and USD 347 million, respectively.

Risk free forward annual yields are decreased by 100 basis points at each duration. However, if a risk free forward annual yield at a given duration is less than 100 basis

The key assumption changes represented by each of these sensitivities are given in section 12 q).

In each sensitivity calculation, all other assumptions remain unchanged except where they are directly affected by the revised assumption. The results include the impact of assumption changes on the time value of financial options and guarantees. The 100 basis points decrease in risk free yield curve increases the value of some products, such as term assurance, with fixed future cash flows discounted at lower rates. This increase is offset by a reduction in the value of other products, such as those where lower assumed investment returns reduce profitability.

points, the decrease is to zero at that duration, not to a negative rate.

11. Group MCEV

The Group MCEV is presented in the following table as the Global Life covered business valued using MCEV Principles and the non-covered businesses which are valued at the unadjusted shareholders' equity. Non-covered businesses include the life businesses in Non-Core Businesses managed outside Global Life and all other Group businesses including General Insurance and Farmers.

Group MCEV

in USD billions,	Covered	Non-covered	Total
for the year ended December 31, 2013	business MCEV	businesses	Group MCEV
Opening Group MCEV	18.9	16.5	35.4
Operating MCEV earnings ¹	0.9	3.1	4.0
Non-operating MCEV earnings	0.4	0.0	0.4
Total MCEV earnings	1.2	3.1	4.3
Other movements in shareholders' equity ²	(0.2)	(2.4)	(2.6)
Adjustments ³	(0.4)	(2.4)	(2.9)
Closing Group MCEV	19.5	14.7	34.2

For non-covered businesses this is set equal to the Net Income After Tax over the period.
 For covered business this is equal to new business value non-controlling interests. For non-covered businesses this is equal to the change in non-controlling interests and unrealized gains and losses excluding the foreign currency translation effects over the period.
 Adjustments include dividends, capital and other movements and foreign currency translation effects.

Embedded value report continued

12. Embedded value methodology

The Group has applied Market Consistent Embedded Value (MCEV) Principles and Guidance issued by the European Insurance CFO Forum in October 2009, for its Embedded value report for the companies and businesses in its Global Life segment (the covered business). The Embedded value report primarily relates to Global Life. Total Group MCEV is shown in section 11. The embedded value methodology adopted by the Group is based on a "bottom-up" market consistent approach to allow explicitly for market risk. In particular, asset and liability cash flows are valued using risk discount rates consistent with those applied to similar cash flows in capital markets, and options and guarantees are valued using market consistent models calibrated to observable market prices. Where markets exhibit a limited capacity, the valuation is based on historical averages. Embedded value excludes any value from future new business.

All amounts shown in U.S. dollars are rounded. All ratios and variances are calculated using the underlying amounts rather than the rounded amounts.

a) Covered business

Covered business includes all business written by companies that are included in Global Life, unless otherwise stated. In particular:

- life and critical illness;
- savings (with profit, non-profit and unit-linked);
- pensions and annuity; and
- long-term health and accident.

For certain smaller companies in Global Life, no embedded value has been calculated but these companies have been included in embedded value at shareholders' equity, as calculated in accordance with the Group's accounting policies. The contribution from these companies to embedded value is less than 5 percent.

b) Reporting of embedded value

In line with MCEV Principles, embedded value is split between shareholders' net assets, including free surplus and required capital, and the value of business in-force.

The results are disclosed in a format that the Group considers to be appropriate for the market consistent methodology adopted.

c) Shareholders' net assets

Shareholders' net assets represent the market value of net assets held in respect of the covered business, and consist of the required capital and free surplus. The level of required capital reflects the amount of capital considered by the directors of each legal entity to be appropriate to manage the business. This is set at least at the level equal to the regulatory required capital of each legal entity, at which the regulator would intervene to request a capital injection and in addition, for the main companies, an adequate buffer to cover short-term volatilities in solvency due to financial and non-financial risks or to achieve the capital required to maintain the desired credit rating.

The free surplus comprises the market value of shareholders' net assets allocated to the covered business in excess of the assets backing the required capital.

In the UK, insurers are required to assess capital requirements on two separate bases, Pillar 1 and Pillar 2. For Zurich Assurance Ltd, Pillar 2 was more onerous at December 31, 2012, and Pillar 1 was more onerous at December 31, 2013. The amounts of required capital and free surplus shown in this report as of December 31, 2012 and December 31, 2013 applicable to Zurich Assurance Ltd reflect those positions. The required capital modelled for embedded value is based on the Group's target Pillar 1 required capital, and the analysis of change is performed on a Pillar 1 basis.

Shareholders' net assets are based on local statutory and regulatory accounting. Adjustments are made to embedded value where appropriate, for example in respect of any unrealized gains attributable to shareholders. Any such adjustments are made consistently with the calculation of the value of business in-force.

d) Value of business in-force

The value of business in-force is the present value of future projected profits, distributable after tax to shareholders from the covered business. It is defined as the certainty equivalent value of business in-force less frictional costs, the time value of financial options and guarantees, and the cost of residual non-hedgeable risk. These components are explained below.

Certainty equivalent (CE) value is the value calculated using discount rates consistent with those applied to the underlying cash flows in the capital markets. It includes the intrinsic value but excludes the time value of financial options and guarantees which is allowed for separately, as described below.

Frictional costs (FC) reflect a deduction for the cost of holding the required capital. Under the Group's market consistent framework, the FC represents tax in respect of the future investment return on required capital together with the cost of future investment management expenses on required capital. In Germany, the policyholders' share of investment income on the required capital is also included.

For the purpose of these calculations, required capital is assumed to run off in line with existing business.

The allowance for FC is included both in the value of business in-force and in new business value. For new business value, FC is applied to the minimum solvency capital required to be held in respect of that business.

No allowance is made for "agency costs" as these are considered to be subjective and depend on the view of each shareholder.

Time value of financial options and guarantees (TVFOG) represents additional costs in excess of the intrinsic value of options and guarantees which are already allowed for in the CE value. These are based on the variability of investment returns which need to be allowed for explicitly under MCEV Principles. The time value is calculated on a market consistent basis using stochastic modeling techniques, and after making allowance for expected management and policyholder behavior.

For products with significant guarantees, the time value has been calculated on a market consistent basis by deducting the average present value of shareholder cash flows using 1,000 stochastic economic simulations from the CE value (both for the value of business in-force and separately for new business value).

For most products, the average value has been calculated using Monte Carlo simulations. For a small number of products, the TVFOG has been derived using closed form solutions.

Where appropriate, the calculation of the TVFOG makes allowance for:

- dynamic actions that would be taken by management under different economic simulations, for example to implement a life business' investment strategy; and
- dynamic policyholder behavior, for example changes in surrender behavior as interest rates rise or fall, or take-up rates of guaranteed annuity options.

The **cost of residual non-hedgeable risk (CRNHR)** is an explicit deduction for non-hedgeable financial risks (non-hedgeable asset/liability management risks and reinsurance credit risk), and non-financial risks (mortality, persistency, expenses and operational risk). The CE value allows for best estimate shareholder cashflows. The CRNHR is largely an allowance for uncertainty in shareholder cashflows, and for risks which are not already considered in the CE value or the TVFOG, such as operational risk. Most residual non-hedgeable risks have a symmetric impact on embedded value apart from operational risk.

CRNHR is calculated as a charge on the capital held for residual non-hedgeable risks. This is calculated according to Zurich's internal risk based capital model by applying 2,000 shocks to the embedded value assumptions. To align with the MCEV Principles the risk based capital is scaled to a 99.5 percent confidence level by using empirical distributions where available, or by assuming probability distributions as appropriate.

The capital is projected over the lifetime of the business using appropriate risk drivers for each risk type. The present value of the risk capital is calculated by applying the swap curve as of the valuation date. The CRNHR allows for diversification across risk types and across geographical segments. This approach complies with MCEV Principles except

Embedded value report continued

Guidance 9.7 which does not allow for diversification benefits between covered and non-covered business. The Embedded value report does allow for diversification benefits between covered and non-covered business, which is consistent with the management view of the business and adds an estimated USD 545 million to embedded value.

A 4 percent cost of capital charge has been applied to the diversified present value of non-hedgeable risk based capital.

e) New business

New business covers new contracts sold during the reporting period and includes recurring single premiums, new premiums written during the period on existing contracts and variations to premiums on existing contracts where these premiums and variations have not previously been assumed to be part of business in-force. Where recurring single premiums are projected over time to derive the corresponding new business value, they are treated as annual premium for the volume definition. Group Life business valued with a contract renewal assumption is treated as annual premium.

New business is valued at the point of sale. Explicit allowance is made for FC, TVFOG, and CRNHR. New business value is valued using actual new business volumes, except in Germany. See section 12 f).

The value generated by new business written during the period is the present value of the projected stream of after tax distributable profits from that business.

In certain profit sharing funds, the new business written can affect the TVFOG for business written in prior years. This effect is taken into account in the new business value by valuing the new business on a marginal approach, the difference between embedded value with and without the new business. This captures the effect of cross-subsidies between business in-force and new business due to, for example, different interest rate guarantees operating in a shared common pool of assets.

New business is valued on a discrete quarter basis. Once calculated and reported, new business value for a quarter will not change in subsequent quarters in local currency terms. For details on the assumptions used for new business see section 13.

New business amounts in the Embedded value report are reported before the effects of non-controlling interests. New business value is reduced by USD 190 million and USD 46 million after the effects of non-controlling interests in 2013 and 2012, respectively.

f) Asset and liability data

The majority of the Group's embedded value has been calculated using a "hard close" approach, such that all asset and liability data reflect the actual position as of the valuation date.

Germany has followed an approach where liability model points are set up in advance, using the structure of a previous run, and then projected to the valuation date by scaling to match the expected balance sheet figures. New business model points are determined quarterly. For each quarter, new business model points are scaled to the expected APE in the quarter.

g) Market consistent discounting

The Group has adopted a "bottom-up" market consistent approach for the projection and discounting of future cash flows in the calculation of embedded value. As a result, the risks inherent in the cash flows are allowed for in a way that is consistent with the way the market is expected to allow for such risks.

In principle, this method values each cash flow using a discount rate consistent with that applied to such a cash flow in the capital markets. For example, an equity cash flow is valued using an equity risk discount rate, and a debt security cash flow is valued using a debt security discount rate. If a higher return is assumed for equities, the equity cash flow is discounted at this higher rate.

In practice, the Group has applied a computational method known as a "risk neutral" approach. This involves projecting the assets and liabilities using a distribution of asset returns where all asset types, on average, earn the same risk free rate.

The risk free yield curve assumptions are based on the swap curve in each major currency (U.S. dollars, euro, British pounds and Swiss francs). For liabilities where payouts are either independent or move linearly with markets,

deterministic techniques (referred to as "certainty equivalent") have been used. In such cases, the projection and discounting are based on the same risk free yield curve. Further details are set out under "Economic assumptions" in section 13.

h) Economic scenario generator

All operations use actual yield curves observable as of the valuation date for the calculation of the certainty equivalent value of business in-force.

The calculations of the TVFOG are based on stochastic simulations using an economic scenario generator provided by Barrie & Hibbert. The outputs ("simulations") have been calibrated to conform to the economic parameters specified by the Group.

The simulations used for calculation of TVFOG reflect the actual yield curves and implied volatilities observable as of the valuation date.

Simulations are produced for the economies in the U.S., the UK, Switzerland and the eurozone. In each economic area, risk free nominal interest rates are modeled using a LIBOR market model. The excess return on other asset classes relative to the total returns on risk free assets are then modeled using a multi-factor lognormal model. Hong Kong uses U.S. dollar simulations because their principal liabilities are U.S. dollar-denominated. Chile uses closed form solutions rather than simulations. Other operations, not mentioned above, have no significant options and guarantees. Further details are set out under "Economic assumptions" in section 13.

i) Expenses

Initial commissions and renewal commissions directly attributable to policies are allocated to those policies.

In 2013, management changes have been made to the methodology for allocating expenses between those which are included in unit costs and those which are charged as expenses in operating experience variances or as development expenses or one-off expenses in other operating variances.

Business units allocate expenses incurred by them between those expenses that form the unit cost base for assumption setting, and those that are excluded from the unit cost base. Any expense excluded from the unit cost base requires approval from the Global Life Chief Financial Officer.

Expenses that form the unit cost base for assumption setting are split into initial expenses and maintenance expenses. The initial expenses impact the new business value directly. The maintenance expenses form the basis for the maintenance expense assumptions and impact the new business value and value of business in-force directly.

Expenses excluded from the unit cost base for embedded value reporting are split into development expenses and one-off expenses. Development expenses relate to expenses incurred to improve the long-term capacity of the business or to reduce its future unit costs, and include certain expenses for start-up operations, certain expenses for regional offices, and certain central overhead expenses not reflected in the long-term assumptions of the business units. They also include certain project-based costs and certain distribution expenses. One-off expenses are those that are not expected to recur and are short-term in nature. Development expenses and one-off expenses do not impact the new business value.

The expenses of start-up operations and of regional offices focused on developing or supporting new businesses are likely to exceed the levels of expense that can be absorbed by the initial level of business generated in those business units. In these cases, expenses included in the unit cost base are based on long-term initial and maintenance expense assumptions which are then the basis for new business value. Expenses incurred in excess of those in the long-term assumptions are written off substantially as development expenses. The value of business in-force reflects the long-term maintenance expense assumptions and the projected excess of maintenance expenses over the long-term maintenance expense assumptions relating to business in-force. The value of such excess is written off to other operating variances as development expenses. This is a management change to expense methodology in 2013 and the projected excess maintenance expenses for start-up operations and regional office expenses is USD 246 million, reported as a development expense. In previous years, such expenses were reported annually as incurred.

In previous years, certain central expenses not reflected in the long-term assumptions of the business units were written off to other operating variances as development expenses as incurred. As of December 31, 2013 these are treated as a maintenance expense for embedded value reporting and a capitalized value of the projected amount is

Embedded value report continued

included as a negative value of business in-force for region Other. The impact of this change at December 31, 2013 is USD 347 million and is reported as a development expense.

In previous years, certain project-based costs related to intangible assets were reported as variances in line with amortization. In 2013, as part of the management changes to expense methodology, all such intangible assets were written off through development expenses in embedded value. This reduced embedded value by USD 83 million as of December 31, 2013. This is not an impairment of value of these intangible assets.

Certain payments to distributors or sales agents are made in exchange for an expectation of new business production over a period longer than one year. Such payments, whether up-front or payable in stages, are reported as development expenses.

All expenses in embedded value are net of tax appropriate to the business unit to which the expense is charged.

j) Holding companies

Holding companies allocated to Global Life have been consolidated in embedded value at their shareholders' equity. Related expenses have been included in the projection assumptions. Holding companies outside Global Life are not included in embedded value of the covered business.

k) Consolidation adjustments

Where a reinsurance arrangement exists between two life companies within Global Life, the value of the reinsurance is shown in embedded value of the region to which the ceding company belongs.

Embedded value is shown net of non-controlling interests. Where the Group has a controlling interest in a subsidiary company, the new business value and the premium information are shown gross of non-controlling interests. The non-controlled share of new business value is eliminated through "new business value non-controlling interests".

I) Debt

Where a loan exists between a company in Global Life and a Group company outside Global Life, the loan is included in embedded value at the same value included in the balance sheet of the other Group company.

m) "Look through" principle – service companies

There are some companies within Global Life that provide administration and distribution services. These are valued on a "look through" basis. The results do not include any Group service companies outside Global Life.

In Germany, the majority of distribution and administration is provided by service companies. These are valued on a "look through" basis. These companies also provide limited services to companies outside Global Life. The value of business in-force and new business value reflect the services provided to companies within Global Life. The shareholders' net assets of Global Life include, however, the full shareholders' net assets of these service companies.

In Switzerland, an investment management company provides asset management services to pension schemes written in foundations and other pension funds. The present value of the net asset management fees, after tax, is included in embedded value and new business value.

n) Employee pension schemes

In the Group's Consolidated financial statements, actuarial gains and losses arising from defined benefit pension and other defined benefit post-retirement plans are recognized in full in the period in which they occur and are presented on a separate line in the statement of comprehensive income, with a liability recognized for employee benefit deficits under IAS 19. This adjustment has not been made in the detailed embedded value described in this Embedded value report. If the adjustment had been made embedded value as of the valuation date would have been lower by USD 1,099 million. The actuarial and economic assumptions used for this adjustment are consistent with those used for the equivalent allowance made in the Group's Consolidated financial statements.

Expense assumptions for each life business include expected pension scheme costs in respect of future service entitlements.

o) Change in legislation or solvency regime

The impacts of changes in legislation or solvency regimes are included in economic variance for the analysis of movement when they occur.

p) Translation to Group presentation currency

To align embedded value reporting with the Group's Consolidated financial statements, relevant results have been translated to the Group presentation currency, U.S. dollar, using average exchange rates for the period. This applies to new business value and new business volumes (APE and PVNBP) for the current period and comparative figures. This approach has also been applied to the analysis of movement. Valuations as at a specified date are translated at end-of-period exchange rates.

The rates can be found in note 1 of the audited Consolidated financial statements as of December 31, 2013.

q) Sensitivities

The key assumption changes represented by each of the sensitivities in section 10 are as follows:

Operating sensitivities

A 10 percent increase in initial expenses was considered for new business value only.

A 10 percent decrease in maintenance expenses means that, for example, a base assumption of USD 30 per annum would decrease to USD 27 per annum.

A 10 percent decrease in voluntary discontinuance rates means that, for example, a base assumption of 5 percent per annum would decrease to 4.5 percent per annum.

A 5 percent improvement in mortality and morbidity assumptions for assurances means that, for example, if the actuarial mortality assumption for assurances was 90 percent of a particular table, this would decrease to 85.5 percent.

A 5 percent improvement in mortality assumptions for annuities means that, for example, if the actuarial mortality assumption for annuities was 90 percent of a particular table, this would decrease to 85.5 percent.

Required Capital set to Minimum Solvency Capital means that frictional costs are applied to minimum solvency capital only and frictional costs on excess solvency capital are released.

Economic sensitivities

A 100 basis points increase and decrease was applied to the risk free forward yield curve across all durations. For the 100 basis points decrease sensitivity, if a risk free forward annual yield at a given duration is less than 100 basis points, the decrease is to zero at that duration, not to a negative rate.

A 10 percent fall in equity and property market values was assessed for embedded value only.

A 25 percent increase in implied risk free volatilities means that, for example, a volatility of 20 percent per annum would increase to 25 percent per annum.

A 25 percent increase in implied equity and property volatilities means that, for example, a volatility of 20 percent per annum would increase to 25 percent per annum.

In each sensitivity calculation, all other assumptions remain unchanged except where they are directly affected by the revised conditions. The results include any impact of the assumption changes on the time value of financial options and guarantees.

Embedded value report continued

13. Embedded value assumptions

Projections of future shareholder cash flows expected to emerge from covered business and for new business are determined using best estimate operating assumptions. These assumptions, including mortality, morbidity, persistency and expenses, reflect recent experience and are reviewed annually and updated as appropriate. Allowance is made for future improvements in annuitant mortality based on experience and externally published data. Favorable changes in future operating efficiency are not anticipated in the assumptions – in particular for expenses and persistency.

For the purposes of calculating the value of business in-force, future economic assumptions, for example, investment returns and inflation, are based on period end conditions and assumed risk discount rates are consistent with these conditions.

For the purposes of calculating new business value, for each discrete quarter of new business, economic assumptions are based on market conditions at the start of the quarter. New business operating assumptions are reviewed annually and updated as appropriate with effect from the first quarter of the next calendar year. In general the operating assumptions remain unchanged throughout the year.

a) Economic assumptions

Market consistent framework

The Group has adopted a computational method known as "risk neutral." With this method the key economic assumptions are:

- risk free rates;
- implied volatilities of different assets; and,
- correlations between different asset returns.

Expected asset returns in excess of the risk free rate have no bearing on the calculated embedded value other than in the expected contribution used for the analysis of embedded value earnings. The expected return for equities comprises an equity risk premium added to the start of period one year swap rate. The expected return on corporate bonds is equal to the start of period one year swap rate plus a risk premium estimated by comparing the market yield on corporate bonds with the swap rates for equivalent durations. In addition, a reduction must be made to the yield to allow for the expected level of defaults.

Choice of "risk free yield curve"

The risk free yield curve is derived from mid-market swap rates applicable to each economy as of the valuation date. These curves were used to extract forward reinvestment yields that are used for all asset classes. The yield curves are consistent with the assumptions used by investment banks to derive their option prices and their use ensures consistency with the derivation of implied volatilities. They also have the advantage of being available for most of the markets in which the Group operates. Domestic yield curves are used by businesses in other countries, except Hong Kong and Argentina which use the U.S. dollar, as their liabilities are principally U.S. dollar-denominated.

Implied asset volatility and correlations

The Group's embedded value model is based on market consistent assumptions. Interest volatility is derived from the implied volatility of interest rate swaptions. Swaption implied volatilities vary both by the term of the option and also the term of the underlying swap contract, a fact that is reflected in the economic scenarios. The equity volatilities are based on at-the-money forward European options on capital indices, consistent with traded options in the market. Volatility of property investments is derived from relevant historical return data for each modeled economy. Assumptions for long-term equity volatility and long-term correlations between equity, property and bond indices are prepared with reference to historical analysis.

Inflation

Inflation assumptions have been derived from the yields on index linked government bonds relative to the corresponding nominal government yield curve, where such index linked government bonds exist. Where appropriate, allowance has been made for expense inflation to exceed the assumed level of price inflation reflecting the contribution of salary related expenses to life company expenses. In Switzerland, reference was made to Swiss Financial Market Supervisory Authority (FINMA) published rate.

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Risk discount rate

Under the "risk neutral" approach, risk discount rates are based on the same risk free yield curves as those used to project the investment return.

For stochastic modeling, the risk discount rates are simulation specific and also vary by calendar year consistently with the projected risk free yields in each simulation.

Liquidity premiums

The CFO Forum engaged Barrie & Hibbert who estimated a liquidity premium proxy to be equal to 50 percent times the credit spread over swaps less 40 basis points where credit spreads over swaps are equal to the credit spread on a representative corporate bond index less the swap rate for each particular currency.

The Group applies liquidity premium in the operating currencies of U.S. dollar, euro, British pound and Swiss franc in its embedded value.

The liquidity premium is applied to the following lines of business:

- 100 percent for annuities;
- 75 percent for contracts with participating features, universal life contracts and fixed interest annuities in the U.S.;
- 0 percent for all other lines of business.

All sensitivities in the report relate to the base yield curve with no liquidity premium.

Expected contribution

The expected contribution for the analysis of embedded value earnings is based on a projection from the start of period to the end of period. This requires assumptions regarding the investment returns expected to be achieved over the period on different asset classes. The investment return assumptions (for this purpose only) are based on the "real world" returns expected by the Group. The use of "real world" investment assumptions gives a more realistic basis for the expected contribution calculation and allows for the risk underlying each asset. Any under or over performance will be reported through economic variance.

For fixed interest assets, the "real world" investment return assumptions are based on the gross redemption yield on the assets, less an allowance for defaults where appropriate, together with an adjustment to reflect the change over the period implied in the yield curve assumptions.

For equity assets for units where there is a substantial equity allocation, the investment return assumption is based on the long-term "real world" expected return. For equity assets for units without a material equity allocation the investment return assumption is based on the one year swap rate at the start of period plus a margin to reflect the additional risk associated with investment in this asset class.

For property assets, the investment return assumptions are based on the one year swap rate at the start of period plus a margin to reflect the additional risk associated with investment in this asset class.

These assumptions have been set by asset class and separately for each sub-fund in each life business in order to best reflect the actual assets held.

Participating business

Rates of future bonus or crediting rates have been set at levels consistent with the "risk neutral" investment return assumptions and current bonus plans. In the UK, bonus rates have been set so as to exhaust any remaining assets in the relevant long-term funds. In certain scenarios shareholder injections may be required to meet existing guaranteed benefits and this additional cost is included in the TVFOG.

In other European life businesses and in the U.S., bonuses have been set to be consistent with the investment return assumptions and with the book value approach used by these life businesses in practice. Existing practice, contractual and regulatory requirements as well as the reasonable expectations of policyholders are considered in setting bonuses.

Embedded value report continued

Taxation

Current income tax legislation and rates have been assumed to continue unaltered, except where changes in future such tax rates or practices have been announced.

b) Operating assumptions

Demographic assumptions

The assumed future mortality, morbidity and lapse rates have been derived from recent operating experience and relevant industry statistics. Where operating experience or industry statistics are limited, the assumptions are derived from a best estimate of future developments and are subject to regular review as more experience emerges. Where appropriate, surrender and option take-up rate assumptions that vary according to the investment simulation under consideration have been used, based on an assessment of likely policyholder behavior.

As of December 31, 2013 the valuation approach for some group savings schemes and group pension schemes was changed from the individual member approach to the scheme approach. Under the scheme approach, it is assumed members leaving the scheme will be replaced by members joining the scheme and hence the scheme population will remain on average stable over time; however, an assumption for the entire scheme lapsing is made. The scheme approach is considered appropriate when it is clear that the negotiation and pricing activity is carried out at a scheme level. This change increased the value of business in-force, and hence embedded value, as of December 31, 2013 by USD 42 million. For each scheme, measurements of future new business volumes and values will be consistent with the valuation approach used for the value of business in-force.

Expense assumptions

Management expenses have been analyzed between expenses related to acquisition of new business, the maintenance of business in-force and, where appropriate, development expenses and one-off expenses. Future expense assumptions allow for expected levels of maintenance expenses. Headquarters' expenses relating to covered business have been allocated to business units, or to Global Life's central unit which is in region Other, and are reflected in assumed future expenses.

The maintenance expense assumptions allow for the expected cost of providing future service benefits in respect of the Group staff pension schemes. An adjustment to embedded value is noted in section 12 n) for pension scheme liabilities and no allowance is made in the expense assumptions for any contributions as a result of past service benefits.

No allowance has been made for future productivity improvements in the expense assumptions.

Where service companies have been valued on a "look through" basis, the value of profits or losses arising from these services have been included in embedded value and new business value.

Zurich is liable for payments to be made to various distributors, each payment being dependent on preceding sales volumes or profits or other factors, in accordance with distribution agreements. As part of the economic valuation, for each such agreement, a liability is included in embedded value shareholders' net assets for the best estimate of the next potential payment attributable to the business issued to date.

In countries where significant development work is performed these are shown under "development expenses".

c) Dynamic decisions

To reflect more realistically the outcome of stochastic simulations, the assumptions for each simulation make allowance for the behavior of policyholders and management actions in response to the investment conditions modeled.

In many life businesses, policyholders can exercise an option against the life company in certain circumstances, such as to surrender a policy. This leads to an increase in the assumed lapse rates when interest rates rise (or a corresponding reduction when interest rates fall). This dynamic effect in relation to lapse rates has been allowed for in the stochastic models.

The stochastic models allow, where appropriate, for management actions to change investment strategy in response to market conditions.

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Financial information

Appendix

Embedded value results Global Life, by region

in USD millions, for the years ended December 31	North Am	nerica	Latin Ame	rica	
	2013	2012	2013	2012	
Embedded value information:					
Opening embedded value	2,594	2,780	1,615	683	
Dividends in the first six months of the year ¹	(68)	(109)	(24)	(5)	
Capital and other movements in the first six months of the year ¹	1		(20)		
New business value ²	117	109	368	99	
Expected contribution from in-force	159	171	42	31	
Operating experience variances	(13)	(24)	18	(20)	
Operating assumption changes	(265)	(113)	(19)	(14)	
Other operating variances	(51)	(221)	(48)	(22)	
Embedded value operating earnings ²	(53)	(79)	361	75	
Economic variances	57	99	(191)	(11)	
Other non-operating variances	26	30	(2)	(2)	
Embedded value earnings ²	30	50	168	62	
Dividends in the last six months of the year ¹	(68)	(127)	(182)	869	
Capital and other movements in the last six months of the year ¹	145		53		
New business value non-controlling interests	_	_	(133)	(2)	
Foreign currency translation effects	_	_	(161)	7	
Closing embedded value	2,634	2,594	1,315	1,615	
New business information:					
Annual premiums	154	110	855	704	
Single premiums	74	154	3,231	517	
Annual premium equivalent (APE)	162	125	1,178	755	
Present value of new business premiums (PVNBP)	1,406	1,227	6,158	2,458	
New business value	117	109	368	99	
New business margin (% of APE)	72.4%	87.1%	31.2%	13.2%	
New business margin (% of PVNBP)	8.3%	8.9%	6.0%	4.0%	

In 2012 dividends included capital and other movements.
 Embedded value operating earnings and embedded value earnings are gross of new business value non-controlling interests.

of which Zurich S	of which Zurich Santander		2	Asia-Pacific and N	Vliddle East	Other		Global L	ife
2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
820	_	11,298	9,701	3,043	2,465	312	217	18,861	15,846
(22)	_	(347)	(365)	_	(11)	(26)	(45)	(465)	(534)
(35)		43		93		(1)		116	
268	_	490	453	177	125	99	103	1,251	890
32	_	392	658	94	93	2	2	689	954
7	_	22	(124)	_	(50)	(8)	(2)	19	(220)
22	_	(95)	(102)	(226)	(4)	(50)	6	(655)	(226)
4	_	390	593	(225)	(16)	(515)	8	(449)	342
332	_	1,198	1,477	(178)	148	(472)	117	855	1,739
37	_	706	224	(28)	86	(6)	7	537	405
(5)	_	(121)	37	(54)	(62)	(2)	3	(153)	6
365	-	1,782	1,738	(261)	172	(480)	127	1,240	2,150
(146)	833	(77)	(59)	(15)	371	_	6	(342)	1,059
_		(7)		11		6		208	
(131)	_	(56)	(44)	(1)	_	_	_	(190)	(46)
(75)	(13)	408	326	(163)	46	(12)	7	71	387
776	820	13,044	11,298	2,707	3,043	(201)	312	19,499	18,861
561	_	1,398	1,374	483	403	90	86	2,981	2,677
2,603	_	9,782	11,642	466	608	824	605	14,378	13,527
821	_	2,376	2,538	530	464	173	147	4,418	4,030
4,381	_	27,751	26,998	3,368	3,058	1,903	1,554	40,586	35,296
268	-	490	453	177	125	99	103	1,251	890
32.6%	_	20.6%	17.9%	33.5%	26.9%	57.4%	70.1%	28.3%	22.1%
6.1%	_	1.8%	1.7%	5.3%	4.1%	5.2%	6.6%	3.1%	2.5%

Appendix continued

Embedded value results Europe

United Kir	ngdom	German	y	
2013	2012	2013	2012	
4,130	3,692	2,589	2,058	
_	6	(4)	(1)	
55		3		
167	195	43	37	
61	176	54	236	
(6)	(52)	2	2	
(83)	(29)	(47)	(28)	
(15)	197	357	286	
124	488	409	533	
(100)	(269)	38	(14)	
(91)	17	(40)	1	
(66)	236	408	521	
_	13	(77)	(34)	
_		_		
_	_	(1)	(1)	
74	183	128	47	
4,193	4,130	3,046	2,589	
652	583	307	382	
3,670	6,117	557	707	
1,019	1,194	363	453	
15,422	14,112	2,937	4,503	
167	195	43	37	
16.4%	16.4%	11.8%	8.2%	
1.1%	1.4%	1.5%	0.8%	
	2013 4,130 - 55 167 61 (6) (83) (15) 124 (100) (91) (66) 74 4,193 652 3,670 1,019 15,422 167 16.4%	4,130 3,692 - 6 55 167 195 61 176 (6) (52) (83) (29) (15) 197 124 488 (100) (269) (91) 17 (66) 236 - 13 - - 74 183 4,193 4,130 652 583 3,670 6,117 1,019 1,194 15,422 14,112 167 195 16.4% 16.4%	2013 2012 2013 4,130 3,692 2,589 - 6 (4) 55 3 167 195 43 61 176 54 (6) (52) 2 (83) (29) (47) (15) 197 357 124 488 409 (100) (269) 38 (91) 17 (40) (66) 236 408 - 13 (77) - - (1) 74 183 128 4,193 4,130 3,046 652 583 307 3,670 6,117 557 1,019 1,194 363 15,422 14,112 2,937 167 195 43 16.4% 11.8%	2013 2012 2013 2012 4,130 3,692 2,589 2,058 - 6 (4) (1) 55 3 167 195 43 37 61 176 54 236 (6) (52) 2 2 (83) (29) (47) (28) (15) 197 357 286 124 488 409 533 (100) (269) 38 (14) (91) 17 (40) 1 (66) 236 408 521 - 13 (77) (34) - - (1) (1) 74 183 128 47 4,193 4,130 3,046 2,589 652 583 307 382 3,670 6,117 557 707 1,019 1,194 363 453

¹ In 2012 dividends included capital and other movements. ² Embedded value operating earnings and embedded value earnings are gross of new business value non-controlling interests.

	Eur	оре								
Switzerland Ireland		and Ireland Spain				Rest of Eur	оре	Europe total		
2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	
2,286	2,126	1,204	1,156	281	164	808	506	11,298	9,701	
(163)	(355)		13	(27)	(19)	(153)	(8)	(347)	(365)	
4		13		(6)		(27)		43		
60	25	68	66	117	94	35	36	490	453	
139	166	19	22	66	17	52	40	392	658	
12	(5)	9	(51)	14	(18)	(9)	_	22	(124)	
103	(13)	(47)	(49)	(24)	2	2	14	(95)	(102)	
111	79	(68)	(26)	(5)	126	8	(70)	390	593	
426	253	(19)	(38)	169	222	88	19	1,198	1,477	
302	192	73	52	153	(18)	239	280	706	224	
8	24		_		(1)	2	(5)	(121)	37	
735	470	54	14	322	203	329	294	1,782	1,738	
_	(10)		_		(29)		_	(77)	(59)	
(2)				(4)				(7)		
_	_		_	(55)	(43)		_	(56)	(44)	
86	55	56	20	21	6	42	16	408	326	
2,946	2,286	1,328	1,204	533	281	999	808	13,044	11,298	
111	107	117	116	84	69	128	116	1,398	1,374	
1,141	1,127	3,037	2,388	703	803	675	501	9,782	11,642	
225	220	420	355	155	149	195	167	2,376	2,538	
2,651	2,544	3,637	3,033	1,410	1,335	1,694	1,471	27,751	26,998	
60	25	68	66	117	94	35	36	490	453	
26.7%	11.5%	16.1%	18.5%	75.4%	62.9%	17.9%	21.5%	20.6%	17.9%	
2.3%	1.0%	1.9%	2.2%	8.3%	7.0%	2.1%	2.4%	1.8%	1.7%	

Statement by Directors

Statement by Directors

This Embedded value report has been prepared in all material respects in accordance with the Market Consistent Embedded Value Principles and Guidance issued by the European Insurance CFO Forum in October 2009.

The methodology and assumptions underlying the report are described in sections 12 and 13.

Zurich Insurance Group Annual Report 2013 Embedded value report 37

Auditor's report on embedded value

To the Board of Directors of Zurich Insurance Group Ltd

We have audited the Embedded value report of Zurich Insurance Group Ltd ("the Company") included on pages 3 to 36 of the Annual Report 2013 for the year ended December 31, 2013. The embedded value information included in the Embedded value report has been prepared in accordance with the Market Consistent Embedded Value ("MCEV") Principles and Guidance issued by the European Insurance CFO Forum, as described on pages 22 to 27.

Board of Directors' Responsibility

The Board of Directors is responsible for the preparation of the Embedded value report in accordance with the MCEV Principles and Guidance, including consistency of the applied methodology and the assumptions used and for such internal controls as determined necessary to enable the preparation of the Embedded value report that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on whether the Embedded value report has been properly prepared in accordance with the MCEV Principles and Guidance. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Embedded value report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Embedded value report. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Embedded value report, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the entity's preparation of the Embedded value report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of the principles used and the reasonableness of significant estimates made, as well as evaluating the adequacy of the overall presentation of the Embedded value report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the Embedded value report of the Company for the year ended December 31, 2013 is prepared, in all material respects, in accordance with the MCEV Principles and Guidance.

Basis of preparation

Without modifying our opinion, we draw attention to sections 12 and 13 of the Embedded value report, which describe the basis of embedded value methodology and embedded value assumptions. The Embedded value report is prepared in compliance with the MCEV Principles and Guidance referred to above and as a result, may not be suitable for another purpose. This report does not extend to any financial statements of Zurich Insurance Group Ltd.

PricewaterhouseCoopers AG

Richard Burger Audit expert Stephen O'Hearn Global relationship partner

Zurich, February 12, 2014

Embedded value report continued

Disclaimer & Cautionary Statement

Certain statements in this document are forward-looking statements, including, but not limited to, statements that are predictions of or indicate future events, trends, plans or objectives of Zurich Insurance Group Ltd or the Zurich Insurance Group (the Group). Forward-looking statements include statements regarding the Group's targeted profit, return on equity targets, expenses, pricing conditions, dividend policy and underwriting and claims results, as well as statements regarding the Group's understanding of general economic, financial and insurance market conditions and expected developments. Undue reliance should not be placed on such statements because, by their nature, they are subject to known and unknown risks and uncertainties and can be affected by other factors that could cause actual results and plans and objectives of Zurich Insurance Group Ltd or the Group to differ materially from those expressed or implied in the forward-looking statements (or from past results). Factors such as (i) general economic conditions and competitive factors, particularly in key markets; (ii) the risk of a global economic downturn; (iii) performance of financial markets; (iv) levels of interest rates and currency exchange rates; (v) frequency, severity and development of insured claims events; (vi) mortality and morbidity experience; (vii) policy renewal and lapse rates; and (viii) changes in laws and regulations and in the policies of regulators may have a direct bearing on the results of operations of Zurich Insurance Group Ltd and its Group and on whether the targets will be achieved. Zurich Insurance Group Ltd undertakes no obligation to publicly update or revise any of these forward-looking statements, whether to reflect new information, future events or circumstances or otherwise.

All references to "Farmers Exchanges" mean Farmers Insurance Exchange, Fire Insurance Exchange, Truck Insurance Exchange and their subsidiaries and affiliates. The three Exchanges are California domiciled interinsurance exchanges owned by their policyholders with governance oversight by their Boards of Governors. Farmers Group, Inc. and its subsidiaries are appointed as the attorneys-in-fact for the Farmers Exchanges and in that capacity provide certain non-claims administrative and management services to the Farmers Exchanges. Neither Farmers Group, Inc., nor its parent companies, Zurich Insurance Company Ltd and Zurich Insurance Group Ltd, have any ownership interest in the Farmers Exchanges. Financial information about the Farmers Exchanges is proprietary to the Farmers Exchanges, but is provided to support an understanding of the performance of Farmers Group, Inc. and Farmers Reinsurance Company.

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