

# Embedded value report 2013

Zurich Insurance Group Half Year 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 CFO Forum in October 2009 to provide an economic view of the value of the life business to shareholders in order to support financial management and strategic decision making. This report provides an overview of the movement in the MCEV during the six months to June 30, 2013 and New Business Value added from new sales during the same period, including further splits into constituent parts and geographical regions.

#### Contents

Eml	bedded value report – executive summary	3
1.	Analysis of embedded value earnings	4
2.	Free surplus	6
3.	Analysis of free surplus generation	7
4.	New business	8
5.	Expected contribution and transfer to shareholders' net assets	12
6.	Operating, economic and other non-operating variances	13
7.	Dividends and capital movements and other adjustments	16
8.	Value of business in-force	17
9.	Reconciliation of IFRS shareholders' equity to embedded value	18
10.	Sensitivities	19
11.	Non-Core Business - life businesses	20
12.	Group MCEV	21
13.	Embedded value methodology	22
14.	Embedded value assumptions	23
App	pendix: Embedded value tables	24
Stat	tement by Directors	28
Auc	ditor's report on embedded value	29

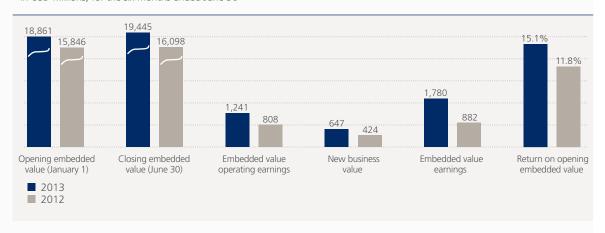
This report describes the development of the embedded value of the Zurich Insurance Group (the Group) for the six months ended June 30, 2013.

The majority of this report, Sections 1 to 10, relates to Global Life, but summary information relating to the life business in the Non-Core Businesses is given in Section 11 and to the total Group MCEV in Section 12.

## Embedded value report – executive summary

#### Key results

in USD millions, for the six months ended June 30



#### Embedded value key results

in USD millions, for the six months ended June 30	2013¹	20121,2	Change
Opening embedded value	18,861	15,846	3,016
Closing embedded value	19,445	16,098	3,347
Embedded value operating earnings	1,241	808	433
of which new business value <sup>3</sup>	647	424	224
Embedded value earnings	1,780	882	898
Return on opening embedded value <sup>4</sup>	15.1%	11.8%	3.3%

- <sup>1</sup> As of December 31, 2012 Zurich Santander businesses were included in embedded value. See Annual Report 2012 for details.
- New business for 2012 does not include contributions from Zurich Santander.
  All metrics in the calculations are net of non-controlling interests except new business.
- 4 Returns for the six months ended in June 30 are annualized by doubling expected movements such as expected return and new business but experience variances are assumed to be zero for the rest of the year.

Embedded value operating earnings were USD 1,241 million and represented a strong return of 12 percent on the opening embedded value. The earnings included USD 373 million of expected emergence of value from in-force business, USD 647 million of new business value and USD 221 million of operating variances.

New business value of USD 647 million increased by USD 224 million compared with the same period of 2012. New business value for the acquired businesses of Zurich Santander was USD 140 million, which was not included in the new business result of prior year. Excluding the contribution of these businesses new business value increased by 21 percent on a local currency basis compared with the same period of 2012. This increase was driven by generally improved volumes globally and improved profitability in some European markets.

Embedded value earnings were USD 1,780 million, a return on embedded value of 15 percent. This increase was the result of strong operating earnings and favorable economic variances.

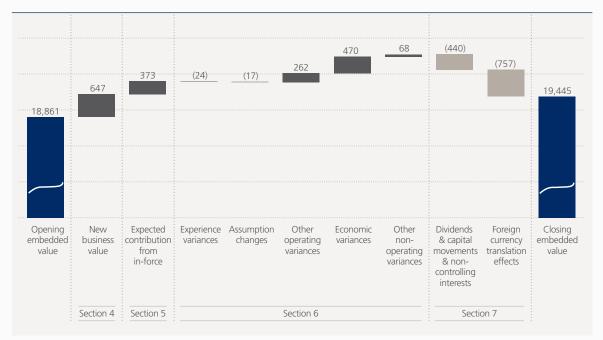
# Embedded value report continued

# 1. Analysis of embedded value earnings

The graph and table below show how the embedded value has moved from USD 18,861 million to USD 19,445 million over the first six months of 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 six months ended June 30, 2013



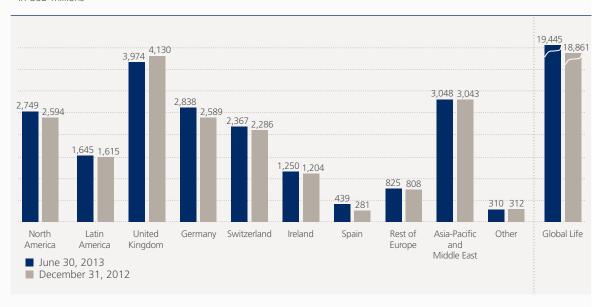
Analysis of embedded value earnings

in USD millions,			2012			
for the six months ended June 30, 2013 and June 30, 2012			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 & capital movements start of period	(55)	(197)	(252)	(87)	(339)	(534)
New business value <sup>1</sup>	434	(820)	(386)	1,033	647	424
New business value net of non-controlling interests	341	(705)	(364)	911	547	401
Expected contribution at reference rate	9	30	40	41	81	149
Expected contribution in excess of reference rate	20	15	35	257	293	355
Transfer to shareholders' net assets	(238)	896	657	(657)	-	_
Operating experience variances	12	30	43	(67)	(24)	(114)
Operating assumption changes	15	191	206	(223)	(17)	25
Other operating variances	(2)	26	24	238	262	(31)
Operating earnings	251	369	620	622	1,241	808
Economic variances	54	146	200	270	470	86
Other non-operating variances	42	4	46	22	68	(13)
Embedded value earnings	347	519	866	914	1,780	882
Non-controlling interests	(93)	115	22	(123)	(101)	(22)
Foreign currency translation effects	(222)	(78)	(300)	(457)	(757)	(73)
Closing embedded value	5,199	2,639	7,838	11,607	19,445	16,098

 $<sup>^{\</sup>rm 1}$  All metrics in the calculations are net of non-controlling interests except new business.

#### Embedded value by geographical region

in USD millions



In **North America**, embedded value increased by USD 155 million. Positive contributions came from new business and economic variances offset by dividends.

Embedded value increased in **Latin America** by USD 31 million with a strong new business value offset by capital movements and exchange rate impacts.

In the **UK**, embedded value decreased by USD 156 million, mainly driven by the pound weakening partially offset by new business value.

In **Germany**, embedded value increased by USD 249 million mainly driven by modeling changes.

Embedded value in **Switzerland** increased by USD 81 million as a result of positive economic and other operating variances that were partially offset by dividend payments.

In Ireland, stable new business value was the main contributor to the increase in embedded value of USD 46 million.

In **Spain**, embedded value increased by USD 158 million as a result of continued strong new business performance and positive economic variances.

In the **Rest of Europe**, embedded value increased by USD 17 million, mainly from positive economic variances in Italy offset by dividend payments.

In Asia-Pacific and Middle East, embedded value increased by USD 5 million.

In **Other**, the embedded value decreased by USD 3 million.

# Embedded value report continued

#### 2. Free surplus

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

# Shareholders' net

in USD millions, as of June 30, 2013 and		2012			
December 31, 2012	Shareholders'		Required capital		
	net assets	Required capital	(% SM) <sup>1</sup>	Free surplus	Free surplus
North America	411	636	291.6%	(226)	(53)
Latin America	1,041	513	109.9%	528	593
of which:					
Zurich Santander	577	269	117.5%	308	360
Europe	5,061	3,177	128.5%	1,884	1,288
United Kingdom	1,507	941	133.0%	566	(3)
Germany	1,906	794	125.8%	1,113	1,167
Switzerland	355	226	100.0%	129	13
Ireland	444	389	149.1%	55	36
Spain	260	324	125.0%	(64)	(83)
Rest of Europe	589	503	129.7%	86	159
Asia-Pacific and Middle East	1,292	826	132.2%	467	400
Other	33	47	101.6%	(14)	53
Global Life	7,838	5,199	135.8%	2,639	2,280

<sup>&</sup>lt;sup>1</sup> SM is the local minimum solvency margin.

In **North America**, free surplus reduced mainly from dividend payments to the Group of USD 68 million and increased required capital.

In **Latin America**, free surplus decreased by USD 64 million due to new business strain exceeding transfer of profit from the in-force business.

In the **UK**, free surplus increased by USD 569 million mainly due to a change in the treatment of internal reinsurance.

In **Germany** transfer of profits from the in-force business was more than offset by adverse development of assets held outside of the main life insurance entities and in total free surplus reduced by USD 55 million.

In **Switzerland**, transfer of profits from the in-force business and improved economic conditions increased free surplus USD 257 million, which was offset by dividend payments.

In **Ireland**, free surplus increased by USD 19 million mainly as a result of a capital injection.

In **Spain**, free surplus increased mainly due to positive economic variance.

In **Rest of Europe**, free surplus decreased by USD 73 million. The main drivers were positive economic variance of USD 111 million offset by dividends of USD 178 million.

In **Asia-Pacific and Middle East**, free surplus increased by USD 67 million, mainly due to capital injections into the region.

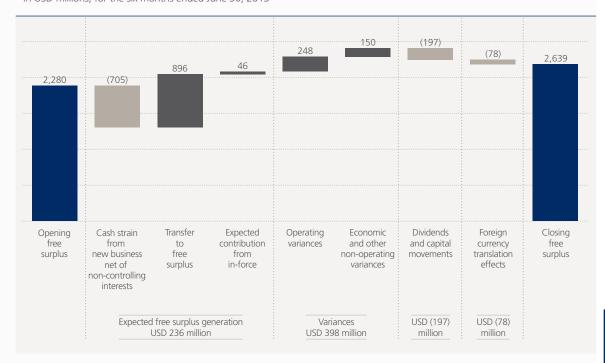
In Other, free surplus decreased by USD 67 million due to central costs and a dividend payment made to the Group.

### 3. Analysis of free surplus generation

The graph below shows how the free surplus value has moved from USD 2,280 million to USD 2,639 million over the first six months of 2013.

#### Free surplus development

in USD millions, for the six months ended June 30, 2013



**Expected free surplus generation** includes cash strain from new business net of non-controlling interests, transfer of profits to free surplus and expected contribution. This was USD 236 million for the first six months of 2013. The cash strain on new business of USD 705 million results from the combination of initial cash consumption of USD 364 million and the related increase in required capital of USD 341 million. The transfer of profits to shareholders' net assets increased free surplus by USD 896 million and was driven by expected profits of USD 657 million and the release of required capital of USD 238 million. Expected contribution was USD 46 million relating to the expected return on free surplus.

**Variances** in relation to operating and economic assumptions increased free surplus by USD 398 million. Variances represent the difference between actual experience during the period and that implied by the assumption on the emergence of free surplus, and actual market development over the period.

**Dividends and capital movements** amounted to USD 197 million and was mainly driven by dividends paid to the Group.

Foreign currency translation effects reduced the U.S. dollar free surplus by USD 78 million.

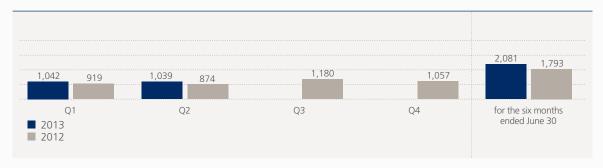
# Embedded value report continued

### 4. New business

#### Global Life

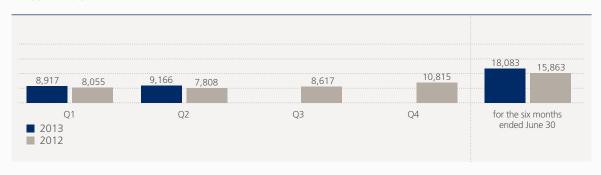
#### Annual premium equivalent (APE)

in USD millions



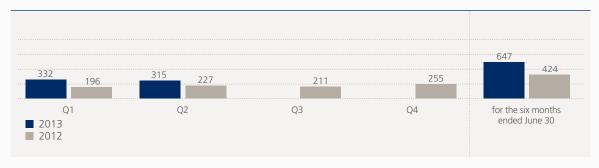
#### Present value of new business premiums (PVNBP)

in USD millions



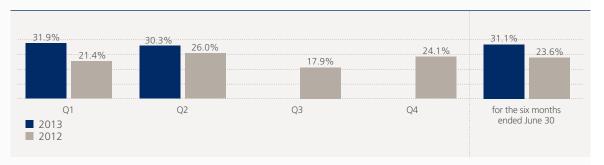
#### New business value

in USD millions



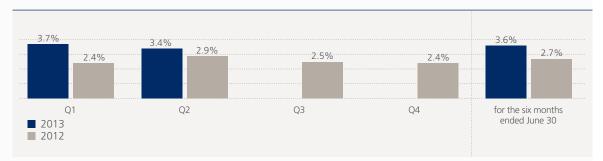
#### New business margin (%APE)

in percent



#### New business margin (%PVNBP)

in percent



New business
by quarter

in USD millions			2013					2012		
	Q1	Q2	Q3	Q4	Q2 YTD	Q1	Q2	Q3	Q4	Q2 YTD
Annual premium equivalent										
(APE) <sup>1</sup>	1,042	1,039	-	-	2,081	919	874	1,180	1,057	1,793
Annual premiums	684	706	-	-	1,390	582	529	906	661	1,111
Single premiums	3,583	3,330	_	_	6,913	3,371	3,451	2,741	3,964	6,822
Present value of new business										
premiums (PVNBP) <sup>2</sup>	8,917	9,166	-	-	18,083	8,055	7,808	8,617	10,815	15,863
Average annual premium multiplier	7.8	8.3	_	-	8.0	8.1	8.2	6.5	10.4	8.1
New business value	332	315	-	-	647	196	227	211	255	424
New business margin (% of APE)	31.9%	30.3%	-	_	31.1%	21.4%	26.0%	17.9%	24.1%	23.6%
New business margin										
(% of PVNBP)	3.7%	3.4%	-	_	3.6%	2.4%	2.9%	2.5%	2.4%	2.7%

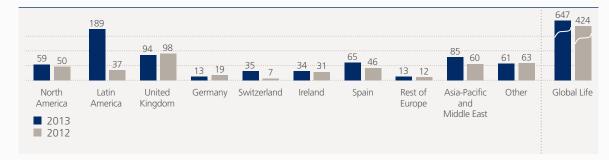
APE is measured as new annual premiums plus 10 percent of new single premiums.
 PVNBP is measured as new single premiums plus the present value of new annual premiums.

# Embedded value report continued

#### Geographical region

#### New business value by geographical region

in USD millions, for the six months ended June 30



New business by geographical region

in USD millions, for the six months								New busin	ess margin	
ended June 30	AF	E	PVI	PVNBP		New business value		APE	% of PVNBP	
	2013	2012¹	2013	2012¹	2013	20121	2013	2012¹	2013	2012¹
North America	81	62	700	611	59	50	72.5%	81.0%	8.4%	8.2%
Latin America	582	154	3,039	714	189	37	32.4%	23.9%	6.2%	5.1%
of which:										
Zurich Santander	404	_	2,187	_	140	_	34.7%	_	6.4%	_
Europe	1,045	1,260	11,464	12,167	254	214	24.3%	17.0%	2.2%	1.8%
United Kingdom	389	596	5,367	5,851	94	98	24.2%	16.5%	1.8%	1.7%
Germany	167	224	1,294	2,129	13	19	8.0%	8.3%	1.0%	0.9%
Switzerland	147	120	1,802	1,450	35	7	23.7%	6.2%	1.9%	0.5%
Ireland	198	163	1,703	1,373	34	31	17.1%	19.2%	2.0%	2.3%
Spain	65	79	667	730	65	46	100.3%	57.8%	9.7%	6.3%
Rest of Europe	80	78	630	634	13	12	16.5%	15.8%	2.1%	1.9%
Asia-Pacific and Middle East	271	241	1,759	1,597	85	60	31.3%	24.9%	4.8%	3.8%
Other	102	76	1,121	774	61	63	60.0%	83.0%	5.4%	8.1%
Global Life	2,081	1,793	18,083	15,863	647	424	31.1%	23.6%	3.6%	2.7%

<sup>&</sup>lt;sup>1</sup> New business for 2012 does not include contributions from Zurich Santander.

**North America** increased APE by USD 20 million or 32 percent. The main driver was increased sales of individual and corporate protection business. Change in the mix of business resulted in reduced margins. New business value increased by USD 9 million or 18 percent.

**Zurich Santander** delivered a strong APE of USD 404 million. Higher sales of protection business were the result of an incentive campaign in Brazil. With strong margins, Zurich Santander delivered new business value of USD 140 million.

**Zurich Latin America** reported an increase in APE of USD 24 million or 20 percent on a local currency basis. The main driver was an increase in sales of individual protection in Mexico. Margins increased, in particular in Brazil due to lower commission rates. New business value increased by USD 11 million or 37 percent on a local currency basis.

Overall in **Europe**, APE decreased by USD 214 million or by 17 percent on a local currency basis. The main reductions were in the UK and Germany. Margins increased in the UK, Switzerland and Spain. New business value increased by USD 40 million or 19 percent on a local currency basis.

In the **UK**, APE decreased by USD 207 million or 33 percent on a local currency basis as a result of reduced sales of corporate savings business and reduced sales of individual savings business following the implementation of the retail distribution review. Several factors increased margins including lower corporation tax rates and improved profitability from corporate business. Overall new business value decreased by USD 4 million or 2 percent on a local currency basis.

11

In **Germany**, APE decreased by USD 57 million or 26 percent on a local currency basis. This was mainly driven by lower sales of savings business. New business value reduced by USD 5 million or 29 percent on a local currency basis.

In **Switzerland**, APE increased by USD 26 million or 23 percent on a local currency basis. Part of the increased APE was the result of a change in the method for recognizing premiums in group pension business, which reduced margins without impacting new business value. Individual life profitability increased due to re-pricing and a change to the mix of business. New business value increased by USD 27 million or 368 percent on a local currency basis.

In **Ireland**, APE increased by USD 35 million or 20 percent on a local currency basis. The effect on new business value from the increased volume was partially offset by reduced margins on domestic Irish business. In total, new business value increased by USD 3 million or 7 percent on a local currency basis.

APE in **Spain** decreased mainly due to lower sales of savings products. New business value increased by USD 19 million or 39 percent on a local currency basis as a consequence of higher profitability on protection business.

In **Rest of Europe**, APE increased by USD 2 million or 2 percent on a local currency basis. Margins were stable and new business value increased by USD 1 million or an increase of 6 percent on a local currency basis.

For **Asia-Pacific and Middle East**, APE increased by USD 30 million or 14 percent on a local currency basis. The increase arose from the first time inclusion of Zurich Insurance Malaysia Berhad (ZIMB) in new business reporting and from a positive contribution from new local life insurance businesses in Singapore, Indonesia and Taiwan. These businesses have higher margins. New business value increased by USD 25 million or 43 percent on a local currency basis.

In **Other**, APE increased by USD 26 million or 34 percent on a local currency basis. New business value decreased by USD 2 million or 3 percent on a local currency basis due to a reduction in margins on this business.

# Embedded value report continued

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

#### **Expected contribution at reference rate**

The expected contribution at reference rate is the projected change in the embedded value over the year using risk-free investment returns applicable at the start of the year. Expected return at risk-free rates was USD 81 million.

#### Expected contribution in excess of reference rate

The expected contribution in excess of reference rate is the additional value expected to be created if "real world" expected investment returns were to emerge. Expected return in excess of the risk-free reference rate was USD 293 million.

#### Transfer to shareholders' net assets

The expected transfer to shareholders' net assets shows the profits expected to emerge during the period in respect of business that was in-force at the start of the year. The net effect on embedded value is zero, as the reduction in the value of business in-force is offset by an increase in shareholders' net assets.

13

# 6. Operating, economic and other non-operating variances

Operating, economic and other non-operating variances

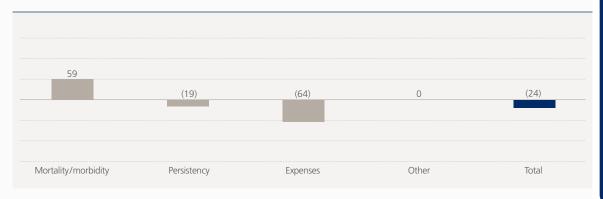
in USD millions, for the six months ended	Onevetica	Onevetina	Other		Other
June 30, 2013	Operating	Operating			
Julie 30, 2013	experience	assumption	operating	Economic	non-operating
	variances	changes	variances	variances	variances
North America	(10)	_	(2)	79	18
Latin America	22	(13)	(3)	33	(12)
of which:					
Zurich Santander	4	(6)	(8)	45	(9)
Europe	(6)	5	265	446	(31)
United Kingdom	(5)	2	(4)	(59)	4
Germany	(2)	2	228	24	(34)
Switzerland	(3)	_	59	164	(1)
Ireland	7	_	(12)	13	_
Spain	_	_	1	124	2
Rest of Europe	(3)	_	(6)	180	(2)
Asia-Pacific and Middle East	(13)	(6)	11	(83)	90
Other	(17)	(3)	(10)	(5)	2
Global Life	(24)	(17)	262	470	68

#### **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 six months ended June 30, 2013



- **Mortality and morbidity** experience increased embedded value by USD 59 million. The main positive experience variance was USD 50 million in Chile from the disability and survival business.
- **Persistency** experience decreased embedded value by USD 19 million. Experience across Latin America reduced embedded value by USD 12 million.
- **Expense** experience reduced embedded value by USD 64 million. The main drivers of this were USD 30 million in Latin America and USD 21 million in Asia-Pacific and Middle East as a result of costs exceeding long-term expense assumptions for start-up business in the regions.
- Other operating experience variances were minor.

## 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 six months ended June 30, 2013



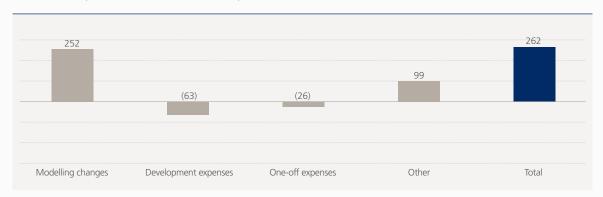
- There were no assumption changes for **mortality and morbidity**, **persistency** or **expenses** as assumption updates are only carried out during the third quarter.
- Other assumption changes decreased embedded value by USD 17 million.

#### 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 six months ended June 30, 2013



- Modeling changes increased embedded value by USD 252 million. In Germany, modelling changes related to risk reduced the cost of residual non-hedgeable risk and increased embedded value by USD 146 million. In Switzerland, enhancements to the valuation models, in particular the disability model, increased value by USD 75 million.
- **Development expenses** reduced embedded value by USD 63 million. This was predominantly made up of USD 25 million to fund developments in the UK and expansion of operations in Asia-Pacific and Middle East.
- One-off expenses reduced embedded value by USD 26 million, mainly driven by efficiency improvements and other projects in the UK and Switzerland.
- Other operating variances had a positive impact on embedded value of USD 99 million. The main contribution came from Germany where profits from companies outside of the main life insurance entity and other experience variances increased embedded value.

15

#### **Economic variances**

Economic variances arise from the differences between actual economic experience during the period and the expected experience implied by the economic assumptions at the start of the period. Economic variances also include the impact of changes in assumptions in respect of future economic experience at the end of the period. In total, economic variances increased embedded value by USD 470 million during the first six months of 2013.

In the first six months of 2013, risk free rates increased in each major currency and in particular for the US dollar and the pound sterling, while the liquidity premium spread remained more or less flat. Yields on sovereign debt were volatile across Europe, but spreads have marginally reduced during the period. 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 in the period as well as other significant one-off items.

Impact on embedded value of other non-operating variances was USD 68 million, which was mainly driven by favorable second order exchange rate impacts in business units transacting business in currencies other than their own.

# Embedded value report continued

### 7. Dividends and capital movements and other adjustments

#### **Dividends and capital movements**

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

# Dividends and capital movements

in USD millions, for the six months ended June 30, 2013	Total
North America	(68)
Latin America	(46)
of which:	
Zurich Santander	(60)
Europe	(293)
United Kingdom	53
Germany	9
Switzerland	(157)
Ireland	13
Spain	(32)
Rest of Europe	(178)
Asia-Pacific and Middle East	93
Other	(26)
Global Life	(339)

Changes in value for Global Life arising from dividend and capital 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 12, except as noted below.

North America paid a dividend of USD 68 million to the Group.

In **Latin America** the total capital movements were USD 46 million.

In **Europe** the total capital movements were USD 293 million. The main contributions to this were a dividend payment in Switzerland of USD 161 million and dividend payments from Rest of Europe of USD 178 million. In the UK the main drivers of capital movements of USD 53 million were a change in the treatment of an internal reinsurance treaty which increased embedded value by USD 111 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 87 million, with equal impact on Group MCEV.

In **Asia Pacific and Middle East** capital injections amounted to USD 93 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 period which are translated at average exchange rates during the period to end-of-period exchange rates. The strengthening of the U.S. dollar against other currencies reduced the U.S. dollar embedded value by USD 757 million.

#### 8. Value of business in-force

#### Components of value of business in-force

#### Components of value of business in-force

in USD millions, as of June 30, 2013 and December 31, 2012					2012	
					Value of	Value of
					business	business
	CE <sup>1</sup>	FC <sup>2</sup>	TVFOG <sup>3</sup>	CRNHR <sup>4</sup>	in-force	in-force
North America	2,855	(91)	(200)	(226)	2,338	2,120
Latin America	693	(39)	(6)	(43)	604	534
of which:						
Zurich Santander	277	(15)	(3)	(9)	250	205
Europe	8,274	(420)	(796)	(426)	6,632	6,724
United Kingdom	2,674	(60)	(30)	(117)	2,467	3,119
Germany	1,742	(291)	(409)	(110)	932	658
Switzerland	2,283	(14)	(136)	(121)	2,012	2,002
Ireland	881	(15)	(23)	(37)	806	781
Spain	214	(14)	(1)	(20)	178	31
Rest of Europe	482	(27)	(197)	(21)	236	134
Asia-Pacific and Middle East	1,960	(77)	(13)	(113)	1,756	1,766
Other	295	(5)	_	(13)	276	215
Global Life	14,077	(634)	(1,016)	(821)	11,607	11,359

- CE is the certainty equivalent value of business in-force.
  FC is the frictional cost.
  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) of the Group's Annual Report 2012 for further details).

#### 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, 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 June 30, 2013 and December 31, 2012	2013		2012	
	VIF	% of Total	VIF	% of Total
1 to 5 years	4,311	37%	3,929	35%
6 to 10 years	3,013	26%	2,891	25%
11 to 15 years	1,978	17%	2,111	19%
16 to 20 years	1,099	9%	1,193	11%
more than 20 years	1,206	10%	1,236	11%
Total	11,607	100%	11,359	100%

The VIF maturity profile shows that 37 percent of the VIF should emerge as free surplus over the next five years and 63 percent over the next ten years.

# Embedded value report continued

# 9. Reconciliation of IFRS shareholders' equity to embedded value

Reconciliation of Global Life IFRS shareholders' equity to embedded value

in USD billions, as of June 30, 2013	Total
IFRS shareholders' net assets	18.9
Less intangible assets	
Goodwill	(0.4)
DAC/DOC	(15.1)
Other intangibles & PVP	(4.1)
DFEF	5.9
Plus IAS 19 Liabilities <sup>1</sup>	1.0
Less non-controlling interests <sup>2</sup>	0.1
Other adjustments <sup>3</sup>	1.6
Embedded value shareholders' net assets	7.8
Value of business in force	11.6
Embedded value	19.4

Pension scheme liabilities are IFRS equity but are not deducted from the embedded value shareholders' net assets.
 Primarily the Spanish and Zurich Santander non-controlling interests.
 Other adjustments include tax differences, policyholders' share of intangibles, reserving differences and asset valuation differences.

in USD millions, as of June 30, 2013	Change in	Change in
	embedded	new business
	value	value
Embedded value <sup>1</sup>	19,445	647
Operating sensitivities		
10% increase in initial expenses	n/a	(4%)
10% decrease in maintenance expenses	3%	6%
10% increase in voluntary discontinuance rates	(4%)	(13%)
10% decrease in voluntary discontinuance rates	5%	14%
5% improvement in mortality and morbidity for assurances	2%	9%
5% improvement in mortality for annuities	(1%)	(1%)
Required capital set equal to minimum solvency capital	_	_
Economic sensitivities		
100 basis points increase in risk free yield curve	(2%)	(1%)
100 basis points decrease in risk free yield curve	1%	(4%)
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%)	(2%)
25% decrease in implied volatilities for risk free yields	1%	_
25% increase in implied volatilities for equities and properties	(1%)	_
25% decrease in implied volatilities for equities and properties	1%	_

<sup>&</sup>lt;sup>1</sup> Base for sensitivities excludes a liquidity premium. Changes in embedded value and new business value are calculated excluding a liquidity premium and using end of period assumptions. New business also includes deductions for non-controlling interests. These adjustments reduce the reported embedded value by USD 604 million and new business value by USD 100 million.

The key assumption changes represented by each of these sensitivities are given in Section 12 r) of the Group's Annual Report 2012.

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 the reduction in the value of other products, such as those where lower assumed investment returns reduce profitability.

# Embedded value report continued

#### 11. Non-Core Business - life businesses

The Group has written life business in Zurich American Life Insurance Company and in its Centre operations, which are not managed by Global Life and are included in Non-Core Business. The main life products that have been written by these businesses were:

- variable annuity contracts that provide annuitants with guarantees related to minimum death and income benefits;
- disability business; and
- bank owned life insurance business.

The Group has estimated the embedded value of the life business in Non-Core Business based on the same principles as for the Global Life covered business, including deductions for the time value of financial options and guarantees, frictional costs and the cost of residual non-hedgeable risk, but using more approximate models.

Estimated embedded value of life businesses in Non-Core Businesses

in USD billions, as of June 30, 2013 and December 31, 2012	2013	2012
Shareholders' net assets	0.5	0.7
Value of business in-force	0.1	0.1
Embedded value	0.6	0.8

### 12. 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 IFRS net asset value. Non-covered business includes the Non-Core Business managed outside of Global Life and all other Group businesses including General Insurance and Farmers.

~			M		-\ /
( -1	ורח	ır١	11/7	( 1	- 🗤

in USD billions, as of June 30, 2013	Covered	Non-covered	Total
	business MCEV	business	Group MCEV
Opening Group MCEV	18.9	16.5	35.4
Operating MCEV earnings <sup>1</sup>	1.2	1.3	2.5
Non-operating MCEV earnings	0.5	0.0	0.5
Total MCEV Earnings	1.8	1.3	3.1
Other movements in IFRS net equity <sup>2</sup>	(0.1)	(1.5)	(1.6)
Adjustments <sup>3</sup>	(1.1)	(2.3)	(3.4)
Closing Group MCEV	19.4	14.0	33.5

For non-covered business this is set equal to the Net Income After Tax (NIAT) over the period.
 For non-covered business this is set equal to non-controlling interests and the change in Other Comprehensive Income (OCI) and unrealised gains and losses excluding the foreign currency translation adjustment over the period.
 Adjustments include to dividends and other capital movements and foreign currency translation adjustments.

## Embedded value report continued

### 13. Embedded value methodology

The Group has applied the Market Consistent Embedded Value (MCEV) Principles and Guidance issued by the European Insurance CFO Forum in October 2009, for its Embedded Value (EV) report for the companies and businesses in its Global Life segment (the covered business). The EV report primarily relates to Global Life. Non-Core Business are shown in Section 11 and to the total Group MCEV in Section 12. 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 the 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 represents the shareholders' interests in the entities included in Global Life as set out in the Group's Consolidated IFRS financial statements. Embedded value excludes any value from future new business.

All amounts shown in U. S. dollar are rounded with the consequence that the rounded amounts may not add to the rounded total in all instances.

The unaudited EV report for the six months ended June 30, 2013 should be read in conjunction with the Group's Annual Report 2012. Any differences and amounts associated with the valuation date have been described and updated below.

For certain smaller companies in Global Life, no embedded value has been calculated but these companies have been included in the embedded value at their shareholders' net asset value, as calculated in accordance with the Group's IFRS accounting policies. The contribution from these companies to embedded value is approximately 2 percent.

In the UK there is a system of Pillar 1 and Pillar 2 required capital. As of June 30, 2013 the constraining regime is Pillar 1 capital. The required capital modelled for MCEV is based on the Group's target Pillar 1 required capital.

#### Cost of residual non-hedgeable risk (CRNHR)

CRNHR allows for diversification across risk types and across geographical segments. This approach complies with all areas of the MCEV principles except guidance 9.7 which does not allow for diversification benefits between covered and non-covered business. The EV report does allow for diversification between covered and non-covered business, which is consistent with the management view of the business and increases embedded value by an estimated USD 469 million to embedded value.

#### **Employee pension schemes**

Actuarial gains and losses arising from defined benefit pension and other defined benefit post-retirement plans are not recognized in full in the period in which they occur. If adjustments for such gains and losses had been made the embedded value at the valuation date would have been lower by USD 982 million.

A more complete description of the methodology applying these principles is set out in the embedded value methodology section of the Annual Report 2012.

### 14. 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 actively reviewed. 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.

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 new business, future economic (and operating) assumptions are based on conditions at the start of each quarter.

Further commentary on these assumptions is available in the Annual Report 2012. Details of the economic assumptions for the major economies in which Global Life carries out business can be downloaded in a spreadsheet from the Investor Relations section at www.zurich.com.

# **Appendix**

Embedded value results Global Life, by region

in USD millions, for the six months ended June 30	North Ame	erica	Latin Ame	rica	
	2013	2012	2013	2012	
Embedded value information:					
Opening embedded value	2,594	2,780	1,615	683	
Dividends and capital movements start of period	(68)	(109)	(46)	(5)	
New business value	59	50	189	37	
Expected contribution	78	86	35	20	
Operating experience variances	(10)	19	22	(38)	
Operating assumption changes	_	15	(13)	2	
Other operating variances	(2)	(195)	(3)	(32)	
Operating earnings	126	(25)	230	(12)	
Economic variances	79	33	33	(34)	
Other non-operating variances	18	6	(12)	1	
Embedded value earnings	223	15	251	(45)	
Non-controlling interests	_	_	(70)	(1)	
Foreign currency translation effects	_	-	(104)	10	
Closing embedded value	2,749	2,685	1,645	643	
New business information:					
Annual premiums	76	50	425	131	
Single premiums	49	112	1,570	234	
Annual premium equivalent (APE)	81	62	582	154	
Present value of new business premiums (PVNBP)	700	611	3,039	714	
New business value	59	50	189	37	
New business margin (% of APE)	72.5%	81.0%	32.4%	23.9%	
New business margin (% of PVNBP)	8.4%	8.2%	6.2%	5.1%	
Returns <sup>1</sup>					
Expected return	6.2%	6.5%	4.4%	5.9%	
Operating return	10.4%	4.2%	28.9%	6.6%	
Embedded value return	14.3%	5.6%	30.2%	1.8%	

<sup>1</sup> Returns are annualized by doubling of expected movements such as expected return and new business but experience variances are assumed to be zero for the the rest of the year. All metrics in the calculations are net of non-controlling interests except for new business as new business is reported gross of non-controlling interests.

of which Zurich S	antander	Europe		Asia-Pacific and N	Viiddle 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
(60)	-	(293)	(365)	93	(11)	(26)	(45)	(339)	(534)
140	_	254	214	85	60	61	63	647	424
17	_	207	347	48	50	6	1	373	504
4	_	(6)	(55)	(13)	(30)	(17)	(9)	(24)	(114)
(6)	_	5	20	(6)	(6)	(3)	(6)	(17)	25
(8)	_	265	142	11	4	(10)	51	262	(31)
146	-	725	669	124	77	36	99	1,241	808
45	_	446	45	(83)	45	(5)	(4)	470	86
(9)	_	(31)	(10)	90	(17)	2	6	68	(13)
182	-	1,141	705	132	106	34	101	1,780	882
(69)	_	(30)	(21)	_	-	_	_	(101)	(22)
(46)	_	(423)	(83)	(220)	4	(11)	(3)	(757)	(73)
827	_	11,693	9,936	3,048	2,564	310	270	19,445	16,098
277	_	596	679	238	202	55	49	1,390	1,111
1,277	_	4,496	5,809	333	398	465	270	6,913	6,822
404	-	1,045	1,260	271	241	102	76	2,081	1,793
2,187	_	11,464	12,167	1,759	1,597	1,121	774	18,083	15,863
140	-	254	214	85	60	61	63	647	424
34.7%	_	24.3%	17.0%	31.3%	24.9%	60.0%	83.0%	31.1%	23.6%
6.4%	_	2.2%	1.8%	4.8%	3.8%	5.4%	8.1%	3.6%	2.7%
4.4%	_	3.8%	7.4%	3.0%	4.1%	4.2%	1.0%	4.0%	6.6%
39.9%	_	10.8%	13.2%	8.2%	7.6%	36.0%	94.5%	12.2%	11.3%
44.7%	_	14.6%	13.6%	8.4%	8.8%	35.1%	95.9%	15.1%	11.8%

# Appendix continued

Embedded value results Europe

in USD millions, for the six months ended June 30					
	United King	gdom	German	ny	
	2013	2012	2013	2012	
Embedded value information:					
Opening embedded value	4,130	3,692	2,589	2,058	
Dividends and capital movements start of period	53	6	9	(1)	
New business value	94	98	13	19	
Expected contribution	32	79	47	113	
Operating experience variances	(5)	(28)	(2)	_	
Operating assumption changes	2	(42)	2	55	
Other operating variances	(4)	100	228	(65)	
Operating earnings	119	208	289	123	
Economic variances	(59)	(107)	24	115	
Other non-operating variances	4	10	(34)	_	
Embedded value earnings	65	111	279	237	
Non-controlling interests	_	_	_	(1)	
Foreign currency translation effects	(274)	36	(39)	(53)	
Closing embedded value	3,974	3,845	2,838	2,241	
New business information:					
Annual premiums	231	282	143	186	
Single premiums	1,577	3,143	242	383	
Annual premium equivalent (APE)	389	596	167	224	
Present value of new business premiums (PVNBP)	5,367	5,851	1,294	2,129	
New business value	94	98	13	19	
New business margin (% of APE)	24.2%	16.5%	8.0%	8.3%	
New business margin (% of PVNBP)	1.8%	1.7%	1.0%	0.9%	
Returns <sup>1</sup>					
Expected return	1.5%	4.3%	3.6%	11.0%	
Operating return	5.9%	10.4%	13.4%	12.4%	
Embedded value return	4.6%	7.8%	13.1%	18.0%	

<sup>&</sup>lt;sup>1</sup> Returns are annualized by doubling of expected movements such as expected return and new business but experience variances are assumed to be zero for the the rest of the year. All metrics in the calculations are net of non-controlling interests except for new business as new business is reported gross of non-controlling interests.

	Euro	оре							
Switzerla	nd	Ireland		Spain		Rest of Eu	rope	Europe to	otal
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
(157)	(355)	13	13	(32)	(19)	(178)	(8)	(293)	(365
35	7	34	31	65	46	13	12	254	214
61	91	9	10	34	32	24	21	207	347
(3)	_	7	(36)		8	(3)	1	(6)	(55
-	_		_		9		(1)	5	20
59	79	(12)	(10)	1	36	(6)	2	265	142
152	178	37	(5)	99	131	28	35	725	669
164	71	13	27	124	(152)	180	92	446	45
(1)	(22)	_	_	2	(1)	(2)	4	(31)	(10
315	226	51	22	226	(22)	206	131	1,141	705
_	_	_	_	(30)	(21)		_	(30)	(21
(76)	(22)	(17)	(27)	(5)	(2)	(11)	(14)	(423)	(83
2,367	1,974	1,250	1,163	439	99	825	614	11,693	9,936
76	72	57	57	35	33	53	50	596	679
701	483	1,408	1,060	292	463	276	278	4,496	5,809
147	120	198	163	65	79	80	78	1,045	1,260
1,802	1,450	1,703	1,373	667	730	630	634	11,464	12,167
35	7	34	31	65	46	13	12	254	214
23.7%	6.2%	17.1%	19.2%	100.3%	57.8%	16.5%	15.8%	24.3%	17.0%
1.9%	0.5%	2.0%	2.3%	9.7%	6.3%	2.1%	1.9%	2.2%	1.8%
5.7%	10.3%	1.5%	1.8%	27.5%	44.2%	7.5%	8.5%	3.8%	7.4%
11.6%	15.6%	6.6%	3.1%	79.7%	144.2%	10.4%	13.7%	10.8%	13.2%
19.3%	18.4%	7.7%	5.4%	130.4%	38.4%	38.6%	33.0%	14.6%	13.6%

# 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 13 and 14.

Zurich Insurance Group Half Year Report 2013 Embedded value report 29

# Auditor's report on embedded value

To the Board of Directors of Zurich Insurance Group Ltd

#### Independent assurance report

We have performed a limited assurance engagement on Zurich Insurance Group Ltd's Embedded Value Report ("EV Report") for the half year period ended June 30, 2013, which includes assessing whether the methodology as applied by Zurich Insurance Group Ltd is in accordance with the Market Consistent Embedded Value ("MCEV") Principles and Guidance issued by the European Insurance CFO Forum, the consistency of application, and the reasonableness of the assumptions used, as described on pages 22 and 23.

#### Board of Directors' responsibility

The Board of Directors is responsible for the preparation and presentation of the EV Report, including the applied methodology and the reasonableness of the assumptions used.

#### Auditor's responsibility

Our responsibility is to form an independent conclusion, based on our limited assurance procedures, on whether anything has come to our attention to indicate that the information contained in the EV Report for the half year period ended June 30, 2013 is not stated, in all material respects, in accordance with the MCEV Principles and Guidance. Our limited assurance engagement was carried out in accordance with International Standard on Assurance Engagements (ISAE 3000) 'Assurance engagements other than audits or reviews of historical financial information'. This standard requires that we comply with ethical requirements and plan and perform the engagement to obtain limited assurance on the EV Report.

In our engagement, we performed analytical procedures to assess whether the methodology as applied by Zurich Insurance Group Ltd is in accordance with the MCEV Principles and Guidance and the assumptions used are reasonable. In addition we performed procedures to assess the consistent application of the methodology. We did not carry out an audit or review of the EV Report or of the models or of the underlying data. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

#### Limited assurance conclusion

Based on our work described in this report, nothing has come to our attention which indicates that the methodology as applied by Zurich Insurance Group Ltd does not comply with the MCEV Principles and Guidance, has not been implemented consistently, and the assumptions determined by the Zurich Insurance Group Ltd, as described on pages 22 and 23, are not reasonable to derive the information included in the EV Report, in all material respects.

PricewaterhouseCoopers AG

Richard Burger Audit expert Stephen O'Hearn Global relationship partner

Zurich, August 14, 2013

Embedded value report

## 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.

It should be noted that past performance is not a guide to future performance. Please also note that interim results are not indicative of full year results.

Persons requiring advice should consult an independent advisor.

This communication does not constitute an offer or an invitation for the sale or purchase of securities in any jurisdiction.

THIS COMMUNICATION DOES NOT CONTAIN AN OFFER OF SECURITIES FOR SALE IN THE UNITED STATES; SECURITIES MAY NOT BE OFFERED OR SOLD IN THE UNITED STATES ABSENT REGISTRATION OR EXEMPTION FROM REGISTRATION, AND ANY PUBLIC OFFERING OF SECURITIES TO BE MADE IN THE UNITED STATES WILL BE MADE BY MEANS OF A PROSPECTUS THAT MAY BE OBTAINED FROM THE ISSUER AND THAT WILL CONTAIN DETAILED INFORMATION ABOUT THE COMPANY AND MANAGEMENT, AS WELL AS FINANCIAL STATEMENTS.