

ACE LIMITED

GLOBAL LOSS TRIANGLES

SUPPLEMENT - 2013



insured.™

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This report is for informational purposes only. It should be read in conjunction with documents filed by ACE Limited with the Securities and Exchange Commission, including the most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q.

**Cautionary Statement Regarding Forward-Looking Statements:**

Any forward-looking statements made in this document reflect the Company's current views with respect to future events and financial performance and are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such statements involve risks and uncertainties, which may cause actual results to differ materially from those set forth in these statements.

For example, the Company's forward-looking statements related to potential changes in actuarial methods and reserves could be affected by the frequency of unpredictable catastrophic events, actual loss experience which differs from the Company's assumptions, uncertainties in the reserving or settlement process, new theories of liability, coverage issues, judicial, legislative, regulatory and other governmental developments, litigation tactics and developments, the amount and timing of reinsurance recoverable, credit developments among reinsurers, pricing and policy term trends and actual market conditions and developments, as well as management's response to these factors, and other factors identified in the Company's filings with the Securities and Exchange Commission, including the Company's Annual Report on Form 10-K for the year ended December 31, 2013, the Company's quarterly reports on Form 10-Q, and in the Company's earnings press releases, which are available on the Company's website.

Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the dates on which they are made. The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.



Table of Contents

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<b>I. Overview</b>	Page
— Executive Summary	2-3
— Reconciliation of Global Loss Triangles with GAAP December 31, 2013 Reserve Balances	4
— GLT Reserves as % of GAAP Reserves – Historical Perspective	5
— Reconciliation to Previous Release	6
— Reconciliation to Previous Release – Details by Segment	7-15
— Reserve Evaluation Considerations	16
<b>II. Insurance North American</b>	
— Highlights – Insurance North American	17-18
— Workers' Compensation	19
— General Liability	20
— Other Casualty	21
— Non-Casualty	22
<b>III. Insurance Overseas General</b>	
— Highlights – Insurance Overseas General Segment	23-24
— Casualty	25
— Non-Casualty	26
— Personal Accident	27
<b>IV. Global Reinsurance (Global Re)</b>	
— Highlights – Global Re Segment	28
— Property	29
— Non-Property	30
<b>V. Selected Excerpts from ACE's 2013 Form 10-K, Pages 38-44</b>	31-37
<b>VI. Glossary</b>	38

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Executive Summary

This document forms the supplement to ACE's release of its Global Loss Triangles (GLT) as of December 31, 2013. The purpose of this disclosure is to provide readers with the opportunity to use their own judgment with respect to the adequacy of our Property & Casualty (P&C) reserves and also to provide greater insight into ACE's overall reserve balance and business in general. As discussed later in this document, our reserving approach is a comprehensive ground-up process using data at a detailed level that reflects the specific type and coverage of the diverse products written by our various operations. The aggregated data presented in this release is therefore a consolidation of the numerous individual loss reserve triangles that are analyzed by our actuarial staff. It is therefore difficult to prepare an aggregate disclosure that captures all of these aspects.

We advise that the inappropriate use of the aggregated data presented in this release may produce misleading results. However, we believe that with the requisite care and attention to analysis, the disclosure can be used by the reader to provide insight about ACE's loss reserves.

To assist readers with their analysis, we have provided guidance where possible in the document on key assumptions that should be considered when performing an analysis. Please see Pages 16, 17-18, 23-24, and 28.

In compiling this year's release we have followed essentially the same format as released last year but we have also made some modest changes to the data. These changes reflect actions from foreign exchange adjustments and continued enhancements to the compilation process.

The GLT supplement is comprised of the following information:

- For direct business — accident year (AY) triangles of a) net paid loss plus paid allocated loss adjustment expenses (ALAE) and b) net reported loss plus paid ALAE (i.e., excluding Incurred But Not Reported reserves (IBNR)) for the ten calendar years ending December 31, 2013.
- For reinsurance business — treaty year (TY) triangles of a) net paid loss plus paid ALAE and b) net reported loss plus paid ALAE (i.e., excluding IBNR) for the ten calendar years ending December 31, 2013.
- Net earned premium for each of the ten accident/treaty years ending December 31, 2013.

The triangle data are provided in line groupings included in four of ACE's five SEC reporting segments. The remaining segment is Life business. Life business reserves are not typically subject to analysis using triangular actuarial methodologies. The data associated with Life business is therefore not considered within the scope of the GLT release. The Insurance North American P&C and Insurance North American Agriculture segments are combined and presented as Insurance North American in the remainder of this document, except in the "Selected Excerpts from ACE's 2013 Form 10-K, Pages 38-44" section. The reporting segments included are as follows:

- Insurance North American (excluding Financial Solutions business)
  - Workers' Compensation (WC)
  - General Liability (GL)
  - Other Casualty
  - Non-Casualty
- Insurance Overseas General Segment
  - Casualty
  - Non-Casualty
  - Personal Accident
- Global Reinsurance Segment
  - Property
  - Non-Property



Furthermore, the GLT supplement also contains the following:

- A reconciliation of the GLT reserve balances with ACE's published GAAP reserve balance ending December 31, 2013.
- A reconciliation of the current data to that contained in the previous release.
- A discussion of some factors to consider when analyzing loss reserve triangles.
- Commentary highlighting aspects of the GLT triangles and their interpretations.
- Relevant discussion from our 2013 Form 10-K addressing ACE's reserving process.



## ACE Limited 2013 Global Loss Triangles | Overview

### Reconciliation of GLT with GAAP December 31, 2013 Reserve Balances

The net reserves (Case plus IBNR) associated with the GLT can be reconciled back to ACE Limited's December 31, 2013 closing GAAP P&C net reserve balance as follows:

	(US\$ millions)
GAAP Net P&C Reserve Balance at December 31, 2013	\$ 26,831
Less: Financial Solutions <sup>1</sup>	1,504
Unallocated Loss Adjustment Expense (ULAE) <sup>2</sup>	790
Bad Debt	273
Other <sup>3</sup>	567
Plus: Recoveries from retroactive reinsurance contracts <sup>4</sup>	151
<b>GLT Net Reserve Balance at December 31, 2013</b>	<b>\$ 23,848</b>

The GLT Net Reserve Balance can be split as follows:	Case	IBNR	Reserves	% of GAAP Reserves
Accident Years 2004 through 2013	\$ 6,315	\$ 14,151	\$ 20,466	76%
Accident Years 2003 and prior	1,680	1,702	3,382	13%
	<b>\$ 7,995</b>	<b>\$ 15,853</b>	<b>\$ 23,848</b>	<b>89%</b>

The triangles are constructed to exclude the effects of shifting exchange rates. Loss and ALAE data denominated in foreign currencies are converted to U.S. dollars at December 31, 2013 exchange rates.

As indicated above, certain blocks of loss and ALAE reserves were excluded for the following reasons, found in Footnotes 1-4 below:

1. With respect to the Financial Solutions business, traditional actuarial methods such as loss development triangles are inappropriate for evaluating reserves. The book is made up of a relatively small number of large heterogeneous accounts, each account having its own unique terms. As a result, each account is reviewed and reserved for individually.
2. With respect to ULAE, traditional actuarial methods such as loss development triangles are inappropriate for evaluating reserves.
3. Includes other reserves for which loss development methods are not appropriate, or other items such as settlements and commutations. Also, includes reserves for the following acquisitions for which data are not included in the 2013 Global Loss Triangles: Jerneh Insurance Berhad (December 1, 2010), PT Asuransi Jaya Proteski (we acquired 80% on September 18, 2012 and our local partner acquired the remaining 20% on January 3, 2013), Fianzas Monterrey (April 1, 2013), and ABA Seguros (May 2, 2013).
4. The Global Loss Triangles are presented gross of retroactive reinsurance, which is consistent with the U.S. Statutory Schedule P treatment. In general, these treaties tend to distort the net loss history and prevent a useful analysis. ACE does not utilize this type of reinsurance with third parties in the normal course of business. The retroactive treaties we have on our books relate to acquisitions made by ACE, and the majority of the expected recoveries relate to accident years 1996 and prior. \$151 million relates to the ACE Westchester acquisition.



## ACE Limited 2013 Global Loss Triangles

### GLT Reserves as % of GAAP Reserves – Historical Perspective

*In US\$ millions*

The table below shows an historical perspective of the GLT reserves as a percent of the corresponding GAAP reserves for ACE's current and four prior GLT releases. The reserves on Lines 1 and 2a are taken from the "Reserve Reconciliation" sheets for each of the years. The percentages shown on Line 2b are the GLT reserve amounts divided by the GAAP reserve amounts.

The percentage of GLT reserves to GAAP reserves in 2013 is 89% for all years combined and 76% for the latest ten years. The latest ten years as shown in the 2013 GLT release are 2004-2013.

Reserve Type (\$millions)	Accident/Treaty Years	GLT Reserves as % of GAAP Reserves Data ending Dec. 31 of:				
		2013	2012	2011	2010	2009
1) GAAP Reserves	Total	\$ 26,831	\$ 26,547	\$ 25,875	\$ 25,242	\$ 25,038
2a) GLT Reserves	Latest 10 Yrs	\$ 20,466	\$ 20,494	\$ 20,083	\$ 19,422	\$ 18,936
	Prior Yrs	\$ 3,382	\$ 3,301	\$ 3,385	\$ 3,522	\$ 3,673
	All Yrs	\$ 23,848	\$ 23,795	\$ 23,468	\$ 22,944	\$ 22,609
2b) As % of GAAP Reserves	Latest 10 Yrs	76%	77%	78%	77%	76%
	Prior Yrs	13%	12%	13%	14%	15%
	All Yrs	89%	90%	91%	91%	90%



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Reconciliation to Previous Release

On the following pages we summarize the historical data changes by segment and accident/treaty year (2004-2012) at December 31, 2012 for paid loss, reported loss, and earned premium. The changes in paid losses and reported losses are the differences between the next to the last diagonal in the triangles from this release and the last diagonal in the corresponding triangles from last year's release. The impact associated with currency fluctuation is separated from other "miscellaneous" enhancements. Please see discussion below for more details.

As with prior releases of the GLTs, we reviewed the compilation process in detail, and have continued to identify opportunities to improve the quality and scope of the GLT. The 2013 GLT reflects some minor enhancements.

A discussion of the changes by reporting segment is included below.

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**Insurance North American**

A comparison of this year's GLT with the previous release shows paid losses decreased by less than 1%, reported losses decreased by less than 1%, and premiums decreased by less than 1% across accident years 2004-2012 combined.

- **Miscellaneous**  
Correction of net paid losses and reported losses across all accident years in one Insurance North American unit. Decreased paid losses and reported losses in Insurance North American Non-Casualty by \$14 million and \$28 million, respectively.
- **Currency**  
Effect of restating historical values at December 31, 2013 exchange rates.

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**Insurance Overseas General**

A comparison of this year's GLT with the previous release shows paid losses decreased by 4%, reported losses decreased by 4%, and premiums decreased by 4% across accident years 2004-2012 combined.

- **Miscellaneous**  
None.
- **Currency**  
Effect of restating historical values at December 31, 2013 exchange rates.

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**Global Re**

A comparison of this year's GLT with the previous release shows paid losses decreased by 1% and reported losses decreased by 1% over treaty years 2004-2012 combined. A comparison of the earned premium figures would show large increases as treaty years naturally advance towards being fully earned. Therefore we have not shown this comparison within the reconciliation schedules.

- **Miscellaneous**  
Elimination of \$15 million for commutations for treaty years 2004 to 2007 in both Global Re Non-Property paid losses and incurred losses.
- **Currency**  
Effect of restating historical values at December 31, 2013 exchange rates.

For future releases, we will continue to review the content and segmentation of the triangles to ensure that they remain a useful representation of our evolving business profile.





**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance North American Workers’ Compensation**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	225,834	0	73	225,907
2005	352,381	0	77	352,458
2006	381,703	0	57	381,760
2007	326,330	0	65	326,395
2008	278,182	0	67	278,249
2009	202,218	0	23	202,241
2010	221,068	0	0	221,068
2011	114,854	0	3	114,858
2012	32,941	0	1	32,942
<b>Total</b>	<b>2,135,510</b>	<b>0</b>	<b>367</b>	<b>2,135,876</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	295,686	0	74	295,760
2005	451,261	0	82	451,344
2006	489,896	0	76	489,972
2007	422,755	0	79	422,834
2008	394,750	0	87	394,837
2009	306,077	0	76	306,153
2010	330,932	0	63	330,995
2011	207,110	0	29	207,139
2012	80,147	0	8	80,155
<b>Total</b>	<b>2,978,614</b>	<b>0</b>	<b>574</b>	<b>2,979,188</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	916,472	0	145	916,617
2005	1,272,419	0	204	1,272,623
2006	1,340,937	0	239	1,341,177
2007	1,270,390	0	332	1,270,722
2008	1,079,479	0	330	1,079,810
2009	971,917	0	257	972,173
2010	1,017,265	0	71	1,017,337
2011	879,157	0	285	879,442
2012	795,229	0	1,645	796,874
<b>Total</b>	<b>9,543,266</b>	<b>0</b>	<b>3,508</b>	<b>9,546,774</b>



**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance North American General Liability**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	649,408	8	(1,851)	647,565
2005	942,118	6	(1,786)	940,339
2006	732,920	45	(2,119)	730,846
2007	1,000,082	16	(2,085)	998,013
2008	680,462	13	(1,795)	678,680
2009	464,314	12	(1,651)	462,675
2010	332,016	12	(660)	331,368
2011	216,214	38	(920)	215,333
2012	42,624	13	(600)	42,038
<b>Total</b>	<b>5,060,159</b>	<b>162</b>	<b>(13,465)</b>	<b>5,046,856</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	696,378	8	(1,823)	694,563
2005	1,013,749	7	(2,024)	1,011,731
2006	820,138	45	(2,236)	817,946
2007	1,118,516	16	(2,418)	1,116,114
2008	825,059	14	(3,060)	822,013
2009	604,155	12	(2,401)	601,765
2010	518,788	11	(1,466)	517,333
2011	339,516	37	(1,255)	338,298
2012	107,678	13	(940)	106,752
<b>Total</b>	<b>6,043,976</b>	<b>162</b>	<b>(17,623)</b>	<b>6,026,516</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	1,595,721	0	(7,347)	1,588,375
2005	2,061,020	0	(7,475)	2,053,545
2006	2,249,908	0	(8,365)	2,241,543
2007	2,225,329	0	(8,451)	2,216,878
2008	2,108,014	0	(7,894)	2,100,120
2009	2,075,749	0	(7,850)	2,067,899
2010	2,081,926	0	(7,362)	2,074,564
2011	1,927,926	0	(7,245)	1,920,680
2012	2,001,254	0	(6,519)	1,994,735
<b>Total</b>	<b>18,326,847</b>	<b>0</b>	<b>(68,510)</b>	<b>18,258,338</b>



**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance North American Other Casualty**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	379,231	0	(2,147)	377,084
2005	449,929	0	(1,537)	448,392
2006	408,628	0	(1,530)	407,097
2007	433,042	0	(2,639)	430,403
2008	677,497	0	(2,272)	675,224
2009	374,414	0	(1,605)	372,809
2010	487,994	0	(1,134)	486,860
2011	510,277	0	(895)	509,382
2012	230,386	0	(381)	230,005
<b>Total</b>	<b>3,951,398</b>	<b>0</b>	<b>(14,142)</b>	<b>3,937,257</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	384,913	0	(2,242)	382,671
2005	438,507	0	(1,602)	436,904
2006	421,743	0	(1,653)	420,089
2007	455,037	0	(2,822)	452,215
2008	711,802	0	(2,885)	708,918
2009	417,660	0	(2,701)	414,959
2010	550,082	0	(1,716)	548,365
2011	618,879	0	(1,488)	617,392
2012	392,175	0	(1,142)	391,033
<b>Total</b>	<b>4,390,799</b>	<b>0</b>	<b>(18,251)</b>	<b>4,372,547</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	614,480	0	(3,559)	610,921
2005	776,778	0	(3,334)	773,443
2006	844,435	0	(3,253)	841,183
2007	936,074	0	(3,501)	932,572
2008	994,800	0	(3,256)	991,545
2009	861,535	0	(2,986)	858,550
2010	857,898	0	(2,718)	855,180
2011	911,986	0	(2,689)	909,298
2012	987,492	0	(2,919)	984,573
<b>Total</b>	<b>7,785,478</b>	<b>0</b>	<b>(28,213)</b>	<b>7,757,266</b>



**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance North American Non-Casualty**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	881,439	(131)	(1,191)	880,117
2005	1,110,721	(16)	(1,785)	1,108,920
2006	818,672	72	(1,324)	817,420
2007	834,820	0	(2,052)	832,768
2008	1,882,572	1,519	(3,257)	1,880,833
2009	1,182,473	0	(5,066)	1,177,407
2010	1,218,771	(1,159)	(4,332)	1,213,280
2011	2,105,354	(4,269)	(5,494)	2,095,591
2012	1,933,320	(7,368)	(2,156)	1,923,796
<b>Total</b>	<b>11,968,142</b>	<b>(11,353)</b>	<b>(26,656)</b>	<b>11,930,132</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	877,786	(474)	(1,187)	876,124
2005	1,113,821	(16)	(1,786)	1,112,018
2006	830,377	72	(1,339)	829,109
2007	835,884	0	(2,088)	833,796
2008	1,895,018	17	(3,282)	1,891,752
2009	1,186,344	0	(5,144)	1,181,199
2010	1,234,565	(2,556)	(4,615)	1,227,394
2011	2,205,751	(9,261)	(6,004)	2,190,486
2012	2,249,024	(15,093)	(3,626)	2,230,306
<b>Total</b>	<b>12,428,569</b>	<b>(27,312)</b>	<b>(29,073)</b>	<b>12,372,184</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	1,948,875	0	(6,193)	1,942,682
2005	1,513,117	0	(5,764)	1,507,353
2006	1,530,688	0	(5,235)	1,525,453
2007	1,795,590	0	(5,956)	1,789,635
2008	2,364,706	0	(5,924)	2,358,782
2009	2,408,677	0	(6,652)	2,402,024
2010	2,264,252	0	(6,231)	2,258,022
2011	3,091,442	508	(6,059)	3,085,891
2012	3,091,274	638	(5,956)	3,085,956
<b>Total</b>	<b>20,008,620</b>	<b>1,146</b>	<b>(53,969)</b>	<b>19,955,799</b>



**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance Overseas General Casualty**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	667,477	0	(28,004)	639,472
2005	789,556	0	(33,446)	756,109
2006	774,644	0	(30,453)	744,191
2007	900,864	0	(36,974)	863,889
2008	873,639	0	(31,658)	841,981
2009	724,962	0	(38,828)	686,134
2010	617,912	0	(37,457)	580,455
2011	419,191	0	(28,047)	391,143
2012	214,616	0	(17,431)	197,186
<b>Total</b>	<b>5,982,860</b>	<b>0</b>	<b>(282,300)</b>	<b>5,700,561</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	680,851	0	(28,797)	652,054
2005	831,302	0	(36,047)	795,255
2006	835,743	0	(22,874)	812,869
2007	1,012,107	0	(47,451)	964,656
2008	1,056,534	0	(28,388)	1,028,146
2009	936,358	0	(43,525)	892,833
2010	798,121	0	(38,806)	759,315
2011	636,873	0	(33,697)	603,176
2012	474,863	0	(29,019)	445,844
<b>Total</b>	<b>7,262,752</b>	<b>0</b>	<b>(308,604)</b>	<b>6,954,148</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	1,888,497	0	(61,309)	1,827,187
2005	1,974,780	0	(63,035)	1,911,745
2006	1,996,166	0	(64,040)	1,932,126
2007	1,867,288	0	(64,322)	1,802,965
2008	1,924,919	0	(69,355)	1,855,564
2009	1,874,532	0	(73,587)	1,800,945
2010	1,914,602	0	(78,669)	1,835,932
2011	1,856,214	0	(69,998)	1,786,216
2012	1,873,329	0	(70,019)	1,803,310
<b>Total</b>	<b>17,170,325</b>	<b>0</b>	<b>(614,334)</b>	<b>16,555,991</b>



**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance Overseas General Non-Casualty**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	611,093	0	(15,055)	596,038
2005	731,293	0	(7,867)	723,426
2006	489,199	0	(9,849)	479,350
2007	587,790	0	(12,003)	575,787
2008	642,774	0	(8,102)	634,672
2009	553,216	0	(11,433)	541,783
2010	690,172	0	(14,870)	675,301
2011	807,516	0	(33,012)	774,503
2012	279,246	0	(13,004)	266,241
<b>Total</b>	<b>5,392,299</b>	<b>0</b>	<b>(125,196)</b>	<b>5,267,102</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	614,405	0	(15,584)	598,821
2005	744,214	0	(7,848)	736,366
2006	499,295	0	(10,002)	489,293
2007	605,129	0	(9,807)	595,322
2008	677,210	0	(9,533)	667,677
2009	580,212	0	(11,086)	569,127
2010	793,779	0	(18,005)	775,774
2011	1,048,397	0	(37,417)	1,010,980
2012	576,644	0	(18,198)	558,446
<b>Total</b>	<b>6,139,285</b>	<b>0</b>	<b>(137,479)</b>	<b>6,001,806</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	1,358,394	0	(32,952)	1,325,442
2005	1,279,187	0	(28,782)	1,250,406
2006	1,223,994	0	(26,191)	1,197,803
2007	1,211,671	0	(27,248)	1,184,422
2008	1,221,598	0	(34,293)	1,187,305
2009	1,214,672	0	(34,140)	1,180,532
2010	1,303,425	0	(38,357)	1,265,067
2011	1,416,299	0	(41,609)	1,374,690
2012	1,512,410	0	(50,693)	1,461,717
<b>Total</b>	<b>11,741,649</b>	<b>0</b>	<b>(314,265)</b>	<b>11,427,384</b>



**ACE Limited 2013 Global Loss Triangles**

**Reconciliation to Previous Release – Insurance Overseas General Personal Accident**

*In US\$ thousands*

**Cumulative Paid Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	474,657	0	(19,840)	454,816
2005	501,871	0	(22,623)	479,249
2006	560,985	0	(25,896)	535,090
2007	622,396	0	(28,101)	594,294
2008	691,460	0	(33,202)	658,258
2009	741,237	0	(34,304)	706,934
2010	740,892	0	(31,990)	708,902
2011	686,179	0	(29,681)	656,497
2012	401,258	0	(16,365)	384,893
<b>Total</b>	<b>5,420,936</b>	<b>0</b>	<b>(242,003)</b>	<b>5,178,932</b>

**Cumulative Reported Loss + Paid ALAE at December 31, 2012**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	477,497	0	(19,923)	457,573
2005	502,337	0	(22,692)	479,644
2006	565,314	0	(25,830)	539,485
2007	628,650	0	(28,178)	600,472
2008	702,180	0	(33,612)	668,567
2009	755,679	0	(34,591)	721,088
2010	771,611	0	(32,892)	738,718
2011	764,045	0	(31,193)	732,851
2012	539,673	0	(21,126)	518,547
<b>Total</b>	<b>5,706,985</b>	<b>0</b>	<b>(250,038)</b>	<b>5,456,947</b>

**Net Earned Premium**

Accident Year	Previous Release	Miscellaneous	Currency	Current Release
2004	1,432,435	0	(54,541)	1,377,894
2005	1,569,162	0	(60,354)	1,508,807
2006	1,774,703	0	(70,597)	1,704,106
2007	1,923,791	0	(76,507)	1,847,284
2008	2,009,115	0	(80,984)	1,928,131
2009	2,024,026	0	(83,040)	1,940,985
2010	2,060,748	0	(83,183)	1,977,565
2011	2,206,449	0	(97,222)	2,109,227
2012	2,258,042	0	(100,664)	2,157,379
<b>Total</b>	<b>17,258,471</b>	<b>0</b>	<b>(707,092)</b>	<b>16,551,379</b>



## ACE Limited 2013 Global Loss Triangles

### Reconciliation to Previous Release – Global Re Property

*In US\$ thousands*

#### Cumulative Paid Loss + Paid ALAE at December 31, 2012

Treaty Year	Previous Release	Miscellaneous	Currency	Current Release
2004	431,926	0	(11,967)	419,959
2005	588,026	0	9	588,036
2006	100,371	0	(410)	99,961
2007	109,984	0	(2,999)	106,985
2008	215,149	0	414	215,563
2009	103,811	0	(389)	103,422
2010	255,482	0	(16,368)	239,115
2011	78,850	0	(3,441)	75,409
2012	21,651	0	(1,236)	20,414
Total	1,905,251	0	(36,387)	1,868,864

#### Cumulative Reported Loss + Paid ALAE at December 31, 2012

Treaty Year	Previous Release	Miscellaneous	Currency	Current Release
2004	434,904	0	(12,107)	422,797
2005	593,989	0	2	593,991
2006	102,010	0	(454)	101,556
2007	114,613	0	(3,057)	111,556
2008	217,880	0	410	218,290
2009	110,010	0	(472)	109,538
2010	288,586	0	(19,622)	268,964
2011	138,661	0	(4,180)	134,481
2012	39,874	5,862	(178)	45,558
Total	2,040,528	5,862	(39,660)	2,006,730





## ACE Limited 2013 Global Loss Triangles

### Reconciliation to Previous Release – Global Re Non-Property

In US\$ thousands

#### Cumulative Paid Loss + Paid ALAE at December 31, 2012

Treaty Year	Previous Release	Miscellaneous	Currency	Current Release
2004	364,952	(4,090)	(985)	359,877
2005	407,627	(4,158)	(722)	402,747
2006	341,516	(3,765)	561	338,312
2007	257,951	(2,652)	(652)	254,646
2008	203,276	0	(424)	202,852
2009	163,413	0	(496)	162,917
2010	183,059	0	(444)	182,615
2011	95,857	0	(104)	95,753
2012	20,313	0	(7)	20,305
Total	2,037,963	(14,666)	(3,273)	2,020,024

#### Cumulative Reported Loss + Paid ALAE at December 31, 2012

Treaty Year	Previous Release	Miscellaneous	Currency	Current Release
2004	412,810	(4,090)	(919)	407,800
2005	461,818	(4,158)	(907)	456,753
2006	420,860	(3,765)	(1,250)	415,844
2007	334,936	(2,652)	(433)	331,850
2008	296,227	0	(207)	296,020
2009	265,714	0	(1,177)	264,538
2010	289,795	0	(739)	289,056
2011	193,213	0	(656)	192,557
2012	82,434	0	(234)	82,200
Total	2,757,807	(14,666)	(6,522)	2,736,619



We have actuarial staff in each of our operating segments who track insurance reserves and regularly evaluate the levels of loss reserves, taking into consideration factors that may impact the ultimate loss reserves. This is accomplished not only by employing a variety of actuarial methods, but also by applying judgment to help quantify the impact of these variables.

Considerable caution should be used when attempting to analyze reserve adequacy based on aggregated triangles. It is rare that the data is so consistent, homogeneous, and static that a valid analysis is possible without exercising substantial judgment. Results can be distorted by both industry-wide and company-specific factors. Below is a non-exhaustive list of possible pitfalls:

- Paid and reported chain ladder loss development methods can be particularly volatile at early evaluation points for more recent accident years, especially for longer-tailed lines. In those situations, the expected percentage of paid (reported) claims is low, and so small differences between actual and expected claims can produce large differences in projected ultimate losses. In such cases, we would recommend relying on an expected loss technique. One expected loss technique not addressed in Sholom Feldblum's paper (see below) is the Bornhuetter-Ferguson method <sup>(1)</sup>, which can be modified to incorporate information on changing premium rates in an analysis of reserve adequacy.
- Certain methods for judging reserve adequacy assume that expected loss ratios (ELRs) do not change over time. In fact, ELRs can change substantially from year to year due to many reasons (e.g., change in rates, change in mix of business, etc.). In recent years, a soft market has produced lower rates and some loosening of terms and conditions for some lines, which should result in higher ELRs. If these rate changes are not taken into consideration, indicated reserves will most likely be understated, or explained another way, any resulting indicated reserve redundancies/deficiencies may be misleading. While we consider ACE's actual rate change information to be proprietary, there are a number of public sources that can be used as a proxy to adjust loss ratios to a more appropriate level. These sources include, but are not limited to, the Council of Insurance Agents & Brokers (CIAB) Commercial P&C Market Survey, Lloyd's of London Premium Rating Index, and Towers Watson Directors & Officers Liability Survey.
- Changes in inflation rates distort any reserve analysis based on loss triangles. If expected future inflation is lower (higher) than historical inflation rates, needed reserves may be overstated (understated) as a result, and appropriate adjustments should be made. If inflation rates are stable over time, no adjustment may be required.
- Many other changes and distortions (e.g., change in reinsurance structure, large losses, change in settlement rates, change in mix of business (e.g., primary vs excess; or by state/country), change in volume, etc.) can skew the results of a reserve analysis based on aggregated triangles. These distortions are not always easily corrected for and the reasonableness of the final projection should consider the possible influence of these factors.
- Contained in the triangles there may be instances of modest negative case reserves (calculated by taking the difference between the reported and paid at a given development age for a particular accident year). This is typically due to timing differences associated primarily with ceded reinsurance. In our view, these negative case reserves will not significantly distort an analysis nor detract from the usefulness of the information provided.

There are a number of valid prospective tests of reserve adequacy that can be performed based on consolidated triangles. One excellent source of information on the various methods is *Completing and Using Schedule P* by Sholom Feldblum <sup>(2)</sup>. It is strongly recommended that anyone attempting to analyze reserves presented in loss triangles be familiar with the methods detailed in the section entitled "Loss Reserve Adequacy Testing – Prospective Valuation."

(1) Publicly available on the Casualty Actuarial Society's web site at the following address

<http://www.casact.org/pubs/proceed/proceed72/72181.pdf>

(2) Publicly available on the Casualty Actuarial Society's web site at the following address

<http://www.casact.org/pubs/forum/02fforum/02ff353.pdf>



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**Highlights**

***Insurance North American***

Insurance North American, the combination of the Insurance North American P&C and Insurance North American Agriculture segments, is comprised of business written by ACE USA, ACE Westchester, ACE Bermuda, ACE Commercial Risk Services, ACE Agriculture and ACE Private Risk Services. ACE USA is our U.S.-based retail operation writing primarily specialty commercial lines through national and regional brokers. Included in this unit are ACE Canada – a writer of commercial lines and accident & health (A&H) business throughout Canada, and ACE Financial Solutions (AFS) – a writer of large risk management transactions including loss portfolio transfers (LPTs). ACE Westchester is our U.S.-based wholesale operation writing specialty commercial lines produced by wholesale and excess & surplus (E&S) distribution channels. ACE Bermuda writes high excess property and liability coverage including products liability and directors and officers (D&O), principally with Side A/CODA coverage for U.S. exposures, and political risk. Included in this unit is ACE Financial Solutions International (FSI) – now in runoff, which was a writer of large structured transactions including LPTs.

ACE Commercial Risk Services is our U.S.-based operation targeting primarily small to middle market commercial lines risks through a variety of distribution channels including programs. ACE Agriculture is our U.S.-based farm, crop and commercial agriculture insurance operation which includes the Rain and Hail business and the Penn Millers business which, although acquired on November 30, 2011, includes the historical data for all accident years in the 2013 GLTs. ACE Private Risk Services is a writer of personal lines coverages with a target market of affluent and high net worth insureds. All of the Insurance North American operations, including Brandywine runoff, have been included in the loss triangles with the exception of AFS and FSI, where we have excluded these businesses since the accounting treatment of LPTs would distort the paid and incurred loss development patterns.

There are three important points with regards to the “Prior” line. First, the “Prior” line shown here is gross of retro-active reinsurance (the Westchester NICO treaty). Second, it would be incorrect to apply a single loss development factor to the “Prior” line, as it does not represent a single accident year but the total activity in accident years 2003 and prior. Third, all of Insurance North American’s Asbestos and Environmental exposure is contained in the “Prior” line of the General Liability and Other Casualty triangles. Development factors derived from loss triangles are inappropriate for analysis of this exposure.

***Insurance North American – Workers’ Compensation***

The U.S. Statutory Schedule P filings for workers’ compensation are net of two separate internal reinsurance transactions between the ACE American Pool and other ACE entities which distort the loss development shown in Schedule P. These transactions have been unwound in the loss triangles included in this supplement in order to provide a more complete representation of the U.S.-based WC business.

The WC line has experienced shifts in mix by business type during the ten year experience period included in the loss triangles. In 2004, approximately 65% of total net earned premium (NEP) was from high deductible products. In this year, we launched a small workers’ compensation initiative, offering only first dollar cost coverage in select states including California. As a result, the percentage of first dollar exposure business grew rapidly from 2004 to 2006, but then decreased in volume from 2007 onwards. The mix of premium with first dollar exposure, guaranteed cost and loss sensitive, is less than 25% of the NEP in 2013.

Throughout the experience period shown in the loss triangles, our WC exposure has been heavily concentrated in risk management business which includes high deductible policies, loss sensitive business (i.e. retro policies) and business fronted for captives. NEP for these risk management accounts have significant administrative expenses and unallocated loss expenses components. As a result, the loss and ALAE component of the NEP is much lower than primary or guaranteed cost policies making loss projection methods that rely on expected loss ratios based on industry experience (or prior year loss ratios) inappropriate.



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Highlights (cont.)

***Insurance North American – General Liability***

The triangles consist of primary general liability, excess liability, D&O, and professional liability exposures. The primary general liability and excess liability exposures represent the largest part of the exposures and are typically written in the U.S. on an occurrence form, while the D&O and professional liability exposures are written on a claims made form. ACE Bermuda writes excess liability on a “claims first reported” form, which means that coverage is triggered when news of a potential claim is received, potentially well in advance of a claim being filed. Bermuda typically writes at high attachment points, particularly on its excess liability book. The nature of ACE Bermuda excess liability claims, low frequency due to high attachments with large policy limits, creates a volatile reporting pattern. When claim activity does occur, it produces abnormal volatility in the loss triangles at later ages within an accident year due to the complex nature of the underlying claim. (An example of such activity occurred during the 2010 calendar year where development on two unrelated claims contributed to the high case incurred activity in the 2005 and 2007 accident years).

Finally, in ACE’s U.S. Statutory Schedule P, warranty business appears in Other Liability – Occurrence. The characteristics of warranty contracts are different from standard general liability exposures (i.e. claims are settled quickly, case reserves are generally not established, and premium earnings are deferred over the life of the contract rather than earning premium and recording IBNR reserves for future claims, which is consistent with industry practices). Therefore, we have removed data associated with warranty business from the triangles.

***Insurance North American – Other Casualty***

The triangles consist of the non-WC and non-GL casualty lines of business such as automobile liability, commercial multi-peril (CMP; includes both property and liability), homeowners, political risk, marine, and aviation. The paid and reported data are impacted by some catastrophe loss activity primarily on CMP exposures, homeowners exposures and to a lesser extent, marine exposures. The ultimate loss ratios for the 2004, 2005, 2008, 2011, and 2012 years will be impacted by natural catastrophes. This product line includes the majority of the business written by our Private Risk Services operation.

***Insurance North American – Non-Casualty***

This business represents first party product lines which are short-tailed in nature. The early years are predominantly lines such as property, inland marine, fidelity and surety. During this ten year period, our accident & health business grew substantially. In addition with the acquisition of the Rain & Hail business, the historical loss development experience of this business has been added to our triangles. This has dramatically increased the mixture of crop hail business within this triangle. In recent years, our crop hail business and our accident and health business make up about 65% of NEP, up from about 50% in the 2004 year. This product line is also impacted by natural catastrophes in the same years as outlined above in Other Casualty.



ACE Limited 2013 Global Loss Triangles | Insurance North American

Workers' Compensation

As of 12/31/13 In US\$ thousands

**Paid Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	170,778	309,270	463,594	626,886	741,621	836,985	962,665	1,083,738	1,203,702
2004	71,175	100,171	131,705	162,003	177,080	193,801	206,217	214,110	225,907	236,540
2005	61,218	151,369	216,072	253,702	291,804	312,147	331,361	352,458	368,834	
2006	74,157	171,161	232,659	286,670	330,594	358,327	381,760	397,861		
2007	67,619	147,369	213,363	252,771	288,426	326,395	342,977			
2008	65,097	140,602	190,400	232,941	278,249	307,093				
2009	49,919	121,932	166,729	202,241	239,335					
2010	63,311	156,469	221,068	274,858						
2011	45,668	114,858	170,336							
2012	32,942	78,279								
2013	30,836									

**Reported Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	1,314,646	1,430,502	1,460,062	1,600,318	1,733,297	1,838,666	1,888,020	1,979,961	2,036,536	2,088,543
2004	162,110	175,695	202,272	229,016	241,453	267,067	276,511	288,056	295,760	306,273
2005	139,518	263,848	320,722	363,529	396,974	408,468	425,711	451,344	457,409	
2006	172,329	302,222	362,539	415,374	440,753	462,954	489,972	503,145		
2007	159,309	272,066	337,139	364,715	393,853	422,834	432,821			
2008	155,308	262,588	315,437	361,799	394,837	412,054				
2009	135,703	228,609	270,761	306,153	339,097					
2010	154,879	258,924	330,995	378,124						
2011	115,658	207,139	259,726							
2012	80,155	138,515								
2013	83,519									

**Net Earned Premium**

Accident Year	NEP
2004	916,617
2005	1,272,623
2006	1,341,177
2007	1,270,722
2008	1,079,810
2009	972,173
2010	1,017,337
2011	879,442
2012	796,874
2013	847,322



**ACE Limited 2013 Global Loss Triangles | Insurance North American**

**General Liability**

*As of 12/31/13 In US\$ thousands*

**Paid Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	846,061	1,238,225	1,606,662	1,927,243	2,338,079	2,668,980	2,938,195	3,244,313	3,359,145
2004	67,641	175,942	274,137	370,349	439,276	516,651	581,094	624,944	647,565	669,060
2005	62,463	201,190	329,914	491,433	595,486	833,174	888,287	940,339	985,223	
2006	45,902	151,360	291,760	429,555	559,063	668,207	730,846	769,046		
2007	46,512	165,009	321,590	590,449	849,120	998,013	1,103,478			
2008	42,217	160,360	348,091	533,567	678,680	868,872				
2009	32,855	148,951	292,340	462,675	579,691					
2010	47,439	186,140	331,368	459,261						
2011	59,858	215,333	351,919							
2012	42,038	183,577								
2013	50,094									

**Reported Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	1,050,527	1,822,267	2,045,523	2,287,356	2,405,446	2,795,950	3,081,030	3,302,022	3,566,566	3,631,940
2004	175,833	233,181	325,763	449,596	532,251	617,753	660,577	677,870	694,563	698,966
2005	144,139	343,064	448,243	599,576	786,873	913,046	971,082	1,011,731	1,051,362	
2006	140,025	284,030	424,888	599,251	680,557	770,054	817,946	843,830		
2007	137,630	323,939	535,108	824,270	1,055,854	1,116,114	1,180,062			
2008	143,804	350,772	558,223	708,712	822,013	1,041,445				
2009	142,322	317,203	451,553	601,765	728,869					
2010	129,109	298,749	517,333	631,074						
2011	136,300	338,298	530,062							
2012	106,752	298,084								
2013	114,377									

**Net Earned Premium**

Accident Year	NEP
2004	1,588,375
2005	2,053,545
2006	2,241,543
2007	2,216,878
2008	2,100,120
2009	2,067,899
2010	2,074,564
2011	1,920,680
2012	1,994,735
2013	2,208,058



ACE Limited 2013 Global Loss Triangles | Insurance North American

Other Casualty

As of 12/31/13 In US\$ thousands

Paid Loss + Paid ALAE Triangle

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	225,792	509,681	703,007	814,247	906,238	1,016,260	1,129,404	1,245,358	1,334,901
2004	142,489	235,974	280,946	318,511	344,179	358,030	365,409	373,103	377,084	377,244
2005	141,891	249,225	314,638	370,416	411,519	440,166	443,732	448,392	448,329	
2006	117,946	238,824	304,754	355,528	386,779	400,426	407,097	411,057		
2007	114,442	244,024	324,192	372,939	397,750	430,403	445,374			
2008	225,285	470,156	569,266	638,059	675,224	697,227				
2009	122,077	280,631	343,426	372,809	395,978					
2010	221,776	409,333	486,860	530,719						
2011	286,073	509,382	607,867							
2012	230,005	443,586								
2013	174,607									

Reported Loss + Paid ALAE Triangle

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	293,215	439,401	808,275	947,173	1,046,822	1,126,182	1,337,894	1,408,045	1,456,422	1,536,011
2004	243,159	289,573	343,177	360,278	371,894	372,671	377,170	379,554	382,671	382,424
2005	338,774	359,531	391,681	411,421	430,259	442,491	437,083	436,904	447,288	
2006	253,094	336,725	372,257	392,939	407,689	414,667	420,089	420,908		
2007	247,010	347,438	391,815	425,393	430,366	452,215	457,542			
2008	410,921	611,223	650,964	686,943	708,918	719,094				
2009	254,052	368,242	405,196	414,959	423,659					
2010	372,592	493,798	548,365	578,542						
2011	453,254	617,392	665,773							
2012	391,033	532,338								
2013	269,421									

Net Earned Premium

Accident Year	NEP
2004	610,921
2005	773,443
2006	841,183
2007	932,572
2008	991,545
2009	858,550
2010	855,180
2011	909,298
2012	984,573
2013	1,063,958



**ACE Limited 2013 Global Loss Triangles | Insurance North American**

**Non-Casualty**

*As of 12/31/13 In US\$ thousands*

**Paid Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	76,032	109,731	111,729	174,624	180,577	189,648	229,639	301,381	325,037
2004	617,688	857,297	874,005	872,259	878,159	881,701	881,029	881,092	880,117	884,169
2005	613,183	871,991	1,006,127	1,047,407	1,070,402	1,079,154	1,087,106	1,108,920	1,103,801	
2006	545,607	767,523	812,581	823,577	830,683	817,258	817,420	818,390		
2007	615,685	785,985	813,419	824,284	830,768	832,768	834,262			
2008	924,338	1,804,239	1,844,279	1,875,058	1,880,833	1,877,856				
2009	773,491	1,113,847	1,159,931	1,177,407	1,180,653					
2010	872,224	1,170,555	1,213,280	1,219,197						
2011	1,604,797	2,095,591	2,160,417							
2012	1,923,796	2,431,056								
2013	1,394,918									

**Reported Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	171,387	165,351	209,908	229,730	215,136	213,171	200,391	222,106	315,123	334,055
2004	851,111	900,464	883,241	877,617	882,116	880,611	880,806	879,427	876,124	883,697
2005	889,775	1,001,348	1,047,090	1,068,697	1,078,101	1,080,856	1,088,214	1,112,018	1,103,568	
2006	753,323	804,118	833,201	830,895	833,457	829,144	829,109	830,196		
2007	843,483	825,511	827,203	829,034	832,170	833,796	834,405			
2008	1,606,364	1,875,088	1,874,922	1,886,121	1,891,752	1,886,434				
2009	1,165,279	1,181,309	1,176,436	1,181,199	1,184,551					
2010	1,086,998	1,212,812	1,227,394	1,227,046						
2011	2,065,592	2,190,486	2,198,914							
2012	2,230,306	2,522,834								
2013	1,906,931									

**Net Earned Premium**

Accident Year	NEP
2004	1,942,682
2005	1,507,353
2006	1,525,453
2007	1,789,635
2008	2,358,782
2009	2,402,024
2010	2,258,022
2011	3,085,891
2012	3,085,956
2013	3,051,823





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Highlights

***Insurance Overseas General Segment***

The Insurance Overseas General segment is comprised of business written by ACE International, ACE Global Markets (AGM), and Combined Insurance. The historical data for Overseas General includes the international Personal Accident business of Combined Insurance, which was acquired on April 1, 2008. Combined Insurance data is included for all accident years. The historical data for Overseas General includes the Rio Guayas Compania de Seguros y Reaseguros (Rio Guayas) business, which was acquired on December 28, 2011, and which consists mainly of international Personal Automobile and Personal Accident business. Rio Guayas data is included starting with accident year 2012. The data for the acquisitions listed in footnote 3 on page 4 is not included in the 2013 Global Loss Triangles.

ACE International operates in over 50 countries across Europe, Asia, Latin America, the Middle East, and Africa. Roughly 40% of ACE International's net earned premium (excluding Combined Insurance) is generated by European accounts. AGM operates within the London market and writes both U.S. and internationally exposed business, predominately short-tailed. In accordance with standard Lloyd's market practice, ACE analyzes its AGM business on a year-of-account basis rather than on an accident year basis. In order to provide data on an accident year basis, it was necessary to make a number of assumptions, which have remained consistent with prior GLT disclosures.

Overseas General premiums are split approximately 65% non-casualty/personal accident and 35% casualty.

We have compiled the triangles in original currency and then converted to US\$ at December 31, 2013 exchange rates for all historical data. This approach removes the impact of currency fluctuations from historical development trends.

***Insurance Overseas General – Casualty***

The Casualty Class is comprised of non-U.S. general liability, employers liability, and professional liability exposures as well as shorter-tailed casualty exposures such as automobile liability, marine, aviation, surety, and political risk. Exposures are located around the world, including Europe, Latin America, and Asia. There is some U.S. exposure in the Casualty Class from multinational accounts. Approximately 30% of the casualty premiums are general liability exposures (roughly split 75% primary and 25% excess). About 10% of the casualty premium is for D&O, while approximately 20% is for other professional liability exposures. Most of this business is primary and tends to be quicker developing than comparable exposures in the U.S.

Rates for general liability and professional liability were particularly strong in 2004 followed by a gradual weakening between 2005 and 2007 and leveling off toward the end of 2008. Overall, casualty rates remained largely flat from 2009 to 2013.

Approximately 40% of the casualty premium is shorter-tailed automobile, marine, aviation, and political risk exposures. Marine is mostly short-tailed cargo (both inland and ocean) and hull risks with some exposure to marine liability business. The aviation line includes a broad range of aviation risks from longer-tailed aviation products and airline/airport liability to shorter-tailed airline hull. Automobile liability included in this category is substantially personal lines business, with a large concentration in Japan and Southeast Asia, as well as smaller portions in Latin America. With the exception of aviation, these lines tend to have had less volatile rate changes and are shorter-tailed than general and professional liability lines.



**Highlights (cont.)**

***Insurance Overseas General – Non-Casualty***

The Non-Casualty Class is comprised of fire, construction, and energy exposures, as well as a growing personal lines book, which includes specialty exposures such as cell phones, laptops, and Japanese renter's insurance. With the exception of North American exposures for AGM, rates for these classes have generally declined from 2004 through 2008 and remained largely flat from 2009 through 2013. Rates on those lines within AGM increased in 2009, leveled off in 2010, increased again in 2011 and 2012, and leveled off again in 2013. Approximately 40% of the ACE International non-casualty book originates from Europe. In general, the property lines have relatively stable paid and reporting patterns although losses from Hurricanes Katrina, Rita, and Wilma in 2005 on the AGM portfolio of U.S. exposures will have some impact on the ultimate loss ratio. The same is true for the 2008 year where losses will be impacted by catastrophes, primarily Hurricane Ike, and the 2010 and 2011 years where losses will be impacted by major catastrophe events such as earthquakes in New Zealand, Chile, and Japan.

***Insurance Overseas General – Personal Accident***

The Personal Accident Class is comprised of low limit travel, credit, disability and accident accounts sold through various marketing channels. The Class has experienced significant growth since 2003 through increased solicitation and additional marketing efforts. As noted above, the Overseas General Personal Accident line includes the Combined Insurance Personal Accident data. Average rate levels for this business have been relatively stable since 2004 and should have little impact on expected loss ratios.



**ACE Limited 2013 Global Loss Triangles | Insurance Overseas General**

**Casualty**

*As of 12/31/13 In US\$ thousands*

**Paid Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	352,696	660,325	982,631	1,139,198	1,267,512	1,387,892	1,475,017	1,540,792	1,582,416
2004	156,721	345,585	435,758	504,904	550,216	591,105	613,230	631,786	639,472	642,125
2005	177,078	346,531	463,194	557,082	619,762	696,821	734,251	756,109	766,887	
2006	206,554	400,876	535,856	616,159	688,371	716,500	744,191	765,960		
2007	215,220	452,986	607,431	731,026	816,634	863,889	897,675			
2008	224,880	468,333	593,149	729,453	841,981	901,310				
2009	234,068	475,910	610,607	686,134	744,710					
2010	234,213	442,992	580,455	663,211						
2011	175,310	391,143	500,521							
2012	197,186	417,578								
2013	189,722									

**Reported Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	1,162,097	1,390,627	1,527,520	1,618,535	1,680,719	1,688,665	1,709,476	1,730,240	1,774,848	1,779,334
2004	343,904	552,790	608,338	628,709	647,364	650,576	650,044	651,936	652,054	649,311
2005	381,266	564,312	681,133	727,986	755,857	785,560	795,405	795,255	802,389	
2006	422,284	609,345	723,876	777,342	797,702	810,744	812,869	826,608		
2007	486,263	738,443	840,590	869,050	949,302	964,656	982,870			
2008	497,555	732,214	858,846	952,573	1,028,146	1,070,501				
2009	484,339	735,067	818,127	892,833	945,847					
2010	518,641	669,400	759,315	839,628						
2011	417,268	603,176	687,775							
2012	445,844	706,469								
2013	430,058									

**Net Earned Premium**

Accident Year	NEP
2004	1,827,187
2005	1,911,745
2006	1,932,126
2007	1,802,965
2008	1,855,564
2009	1,800,945
2010	1,835,932
2011	1,786,216
2012	1,803,310
2013	1,927,728



**ACE Limited 2013 Global Loss Triangles | Insurance Overseas General**

**Non-Casualty**

*As of 12/31/13 In US\$ thousands*

**Paid Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	124,367	218,215	255,374	277,848	290,694	295,692	299,109	303,573	323,213
2004	194,466	448,968	529,336	558,610	575,087	582,502	589,018	595,123	596,038	595,196
2005	199,273	491,893	625,886	688,524	713,032	717,845	718,824	723,426	727,230	
2006	158,188	359,577	436,683	461,008	472,157	480,463	479,350	484,669		
2007	188,531	425,630	524,114	555,789	567,921	575,787	579,188			
2008	212,731	477,605	562,038	615,299	634,672	637,694				
2009	186,625	415,703	491,436	541,783	550,043					
2010	250,752	543,076	675,301	721,165						
2011	377,042	774,503	906,926							
2012	266,241	553,833								
2013	282,299									

**Reported Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	339,650	343,057	362,984	346,023	350,572	347,330	343,382	343,767	335,988	345,935
2004	491,908	587,430	597,071	594,663	599,137	598,784	596,646	599,141	598,821	599,058
2005	575,055	726,003	731,691	738,194	740,987	738,167	733,182	736,366	732,930	
2006	387,798	491,647	504,363	500,217	495,495	494,196	489,293	491,984		
2007	478,904	606,303	603,496	601,095	596,598	595,322	591,268			
2008	565,269	668,698	669,537	671,031	667,677	659,156				
2009	476,662	583,147	566,235	569,127	568,287					
2010	559,749	749,735	775,774	769,816						
2011	766,053	1,010,980	1,001,527							
2012	558,446	699,873								
2013	583,118									

**Net Earned Premium**

Accident Year	NEP
2004	1,325,442
2005	1,250,406
2006	1,197,803
2007	1,184,422
2008	1,187,305
2009	1,180,532
2010	1,265,067
2011	1,374,690
2012	1,461,717
2013	1,646,465



**ACE Limited 2013 Global Loss Triangles | Insurance Overseas General**

**Personal Accident**

*As of 12/31/13 In US\$ thousands*

**Paid Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	118,618	179,435	220,183	253,786	269,158	281,223	291,100	296,456	299,819
2004	216,064	377,144	412,669	433,131	442,002	446,194	449,735	451,399	454,816	455,840
2005	233,317	407,292	449,086	463,609	470,337	474,891	477,832	479,249	480,260	
2006	276,476	461,586	505,919	523,884	529,013	532,704	535,090	536,083		
2007	306,709	521,509	566,160	584,825	591,304	594,294	597,271			
2008	341,486	581,574	637,498	651,001	658,258	663,711				
2009	375,535	633,280	688,864	706,934	716,859					
2010	386,750	655,513	708,902	728,709						
2011	389,219	656,497	715,456							
2012	384,893	636,730								
2013	381,785									

**Reported Loss + Paid ALAE Triangle**

Accident Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	197,823	264,976	294,325	308,388	311,370	315,525	317,111	319,550	321,630	320,998
2004	292,033	425,992	439,807	449,739	453,286	456,234	457,085	457,633	457,573	458,146
2005	313,539	454,703	472,229	473,897	476,852	477,834	479,474	479,644	480,422	
2006	358,232	513,256	527,596	534,560	537,995	538,515	539,485	540,192		
2007	397,235	579,524	592,089	598,456	599,751	600,472	602,477			
2008	445,312	639,603	660,529	663,902	668,567	672,873				
2009	493,433	696,180	714,523	721,088	726,578					
2010	510,315	722,342	738,718	749,756						
2011	527,799	732,851	757,585							
2012	518,547	725,302								
2013	520,440									

**Net Earned Premium**

Accident Year	NEP
2004	1,377,894
2005	1,508,807
2006	1,704,106
2007	1,847,284
2008	1,928,131
2009	1,940,985
2010	1,977,565
2011	2,109,227
2012	2,157,379
2013	2,222,517



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**Highlights**

***Global Re Segment***

The Global Re segment contains the business written by Tempest USA, Tempest Bermuda, Tempest International, and Tempest Canada, all of which is sourced through reinsurance brokers. Tempest USA writes a predominantly U.S. treaty reinsurance book. Tempest Bermuda was founded in 1993 and writes catastrophe reinsurance, primarily property coverages. Tempest International writes a worldwide portfolio of treaty reinsurance, emphasizing non-U.S. and non-Canadian risks, covering nearly all classes. Tempest Canada was formed in 2007 and writes predominately Canadian property and casualty business.

Unlike the rest of the triangles, the data for Global Re is presented on a treaty year basis, rather than on an accident year basis like the rest of the ACE Group. A feature of treaty year data is that individual treaties can incept at any time during a given treaty year. Therefore a full treaty year can typically take up to 36 months to fully earn, and possibly longer if the year contains multi-year contracts. Since reserves should only be established for the earned portion of each treaty year, care should be taken not to fully develop the more recent treaty years without excluding the unearned portion of that treaty year.

For the Global Re Property segment, we generally expect the earned premium at the end of the first development year to represent approximately 70-75% of the ultimate premium for the treaty year, and anticipate minimal development in earned premium after the second development year. For the Global Re Non-Property segment, we generally expect the earned premium at the end of the first and second development years to respectively represent 40-50% and 85-95% of ultimate premium. By the end of the third development year, ultimate premiums should be fully earned although the actual premium figures may move slightly after this point due to updated reporting from the cedants.

***Global Re Property***

This portfolio consists of property catastrophe, property proportional, and property per risk books. Although the mixture of business varies by year, property catastrophe represents approximately 70% of earned premium in the more recent years. U.S. exposure risks represent approximately 70% of the total Property premium. Of the non-catastrophe premium, approximately 50% of the premium is on proportional treaties increasing to close to 70% over the last four years.

***Global Re Non-Property***

This portfolio consists of a wide range of business which more recently includes the following lines and approximate percentages of the total portfolio: general casualty (20%), automobile (30%), professional liability (10%), medical malpractice (10%), workers' compensation (20%), marine and aviation. The mix of business has changed over time as the rate of growth and reduction varied by market conditions and line of business. For example, from 2002 to 2005, general casualty business comprised approximately 40% of the portfolio but in more recent years this line of business has reduced to less than 20% of the portfolio. Approximately 75% of the Non-Property business is written on U.S. exposed risks. This ratio has historically varied between 60% and 80%. Approximately 60% of the historical premium volume is on non-proportional business, although this percentage has been declining in recent years, and a small portion of the premium is coming from Facultative treaties (less than 5%).

Given the long-tail nature of the Global Re Non-Property lines of business, care must be taken when trying to produce meaningful analysis from limited historical information. Compounding this limitation is the fact that this portfolio grew rapidly in its first few years and has been shrinking in the more recent years due to the softening market.



ACE Limited 2013 Global Loss Triangles | Global Re

Property

As of 12/31/13 In US\$ thousands

**Paid Loss + Paid ALAE Triangle**

Treaty Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	50,057	64,305	69,627	73,936	78,881	81,194	80,247	78,799	73,872
2004	163,633	311,992	373,170	397,983	408,727	414,059	417,153	419,446	419,959	419,568
2005	89,622	404,918	516,764	555,779	568,456	575,712	585,143	588,036	587,380	
2006	12,840	56,815	84,485	95,335	98,959	99,583	99,961	100,404		
2007	11,773	60,976	90,703	99,838	103,951	106,985	108,368			
2008	53,293	139,711	177,132	205,157	215,563	216,945				
2009	24,329	75,362	95,369	103,422	107,440					
2010	32,567	186,327	239,115	263,078						
2011	6,363	75,409	103,301							
2012	20,414	94,619								
2013	22,122									

**Reported Loss + Paid ALAE Triangle**

Treaty Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	72,119	94,080	95,994	96,439	95,638	95,670	95,645	92,494	91,016	85,906
2004	243,629	379,103	415,689	420,119	421,551	422,991	423,057	422,219	422,797	422,146
2005	394,729	543,052	569,487	584,410	581,023	584,292	592,076	593,991	592,359	
2006	32,322	84,509	98,509	102,187	102,063	101,710	101,556	102,058		
2007	30,757	96,682	111,169	109,523	110,324	111,556	111,983			
2008	156,159	180,561	206,834	215,830	218,290	218,829				
2009	50,887	98,821	107,448	109,538	110,406					
2010	113,900	251,580	268,964	280,029						
2011	62,782	134,481	148,917							
2012	45,558	134,694								
2013	58,884									

**Net Earned Premium**

Treaty Year	NEP
2004	495,908
2005	573,528
2006	562,713
2007	475,988
2008	432,028
2009	474,947
2010	454,760
2011	427,722
2012	512,655
2013	338,995



ACE Limited 2013 Global Loss Triangles | Global Re

Non-Property

As of 12/31/13 In US\$ thousands

Paid Loss + Paid ALAE Triangle

Treaty Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	0	97,922	199,223	297,254	371,205	416,517	457,947	481,463	497,553	511,662
2004	10,243	56,239	103,240	163,759	233,169	286,912	324,066	344,174	359,877	369,057
2005	13,873	92,832	170,523	239,076	300,155	343,530	382,068	402,747	422,394	
2006	10,563	63,429	134,760	203,195	259,897	303,259	338,312	359,977		
2007	8,490	50,143	110,496	162,283	208,988	254,646	284,237			
2008	12,478	56,864	119,995	164,641	202,852	233,961				
2009	10,251	61,782	115,959	162,917	206,157					
2010	14,633	98,304	182,615	229,489						
2011	12,640	95,753	174,054							
2012	20,305	115,633								
2013	11,235									

Reported Loss + Paid ALAE Triangle

Treaty Year	Age in months									
	12	24	36	48	60	72	84	96	108	120
Prior	169,192	308,776	420,542	478,254	514,629	549,840	559,654	560,929	562,034	570,840
2004	36,236	139,446	254,974	313,990	361,278	383,687	398,503	399,782	407,800	408,245
2005	69,200	204,033	302,812	362,623	399,722	428,917	450,857	456,753	464,581	
2006	40,441	148,670	255,048	326,100	369,073	393,362	415,844	421,964		
2007	28,975	137,924	211,613	263,425	308,067	331,850	347,475			
2008	39,836	140,182	221,478	264,773	296,020	318,641				
2009	26,610	117,827	203,742	264,538	292,399					
2010	49,826	196,168	289,056	335,240						
2011	50,854	192,557	283,950							
2012	82,200	215,609								
2013	43,941									

Net Earned Premium

Treaty Year	NEP
2004	898,389
2005	878,205
2006	812,460
2007	626,983
2008	503,688
2009	610,746
2010	590,558
2011	553,627
2012	473,690
2013	181,437





### Unpaid losses and loss expenses

As an insurance and reinsurance company, we are required by applicable laws and regulations and GAAP to establish loss and loss expense reserves for the estimated unpaid portion of the ultimate liability for losses and loss expenses under the terms of our policies and agreements with our insured and reinsured customers. At December 31, 2013, our gross unpaid loss and loss expense reserves were \$37.4 billion and our net unpaid loss and loss expense reserves were \$26.8 billion. With the exception of certain structured settlements, for which the timing and amount of future claim payments are reliably determinable, and certain reserves for unsettled claims that are discounted in statutory filings, our loss reserves are not discounted for the time value of money. In connection with such structured settlements and certain reserves for unsettled claims, we carried net discounted reserves of \$106 million at December 31, 2013 and \$105 million at December 31, 2012.

The estimate of the liabilities includes provisions for claims that have been reported but are unpaid at the balance sheet date (case reserves) and for obligations on claims that have been incurred but not reported (IBNR) at the balance sheet date. IBNR may also include provisions to account for the possibility that reported claims may settle for amounts that differ from the established case reserves. Loss reserves also include an estimate of expenses associated with processing and settling unpaid claims (loss expenses).

The process of establishing loss reserves for property and casualty claims can be complex and is subject to considerable uncertainty as it requires the use of informed estimates and judgments based on circumstances underlying the insured loss known at the date of accrual. For example, the reserves established for high excess casualty claims, asbestos and environmental claims, claims from major catastrophic events or for our various product lines each require different assumptions and judgments to be made. Necessary judgments are based on numerous factors and may be revised as additional experience and other data become available and are reviewed, as new or improved methods are developed, or as laws change. Hence, ultimate loss payments may differ from the estimate of the ultimate liabilities made at the balance sheet date.

Changes to our previous estimates of prior period loss reserves impact the reported calendar year underwriting results, adversely if our estimates increase and favorably if our estimates decrease. The potential for variation in loss reserves is impacted by numerous factors, which we discuss below. In particular, these considerations differ markedly depending upon whether case or IBNR reserves are being established. Reserves for casualty lines are particularly uncertain given the lengthy reporting patterns and corresponding need for IBNR.

Case reserves for those claims reported by insureds or ceding companies to us prior to the balance sheet date, and where we have sufficient information, are determined by our claims personnel as appropriate based on the circumstances of the claim(s), standard claim handling practices, and professional judgment. Furthermore, for our assumed reinsurance operation, Global Reinsurance, an additional case reserve may be established above the amount notified by the ceding company if the notified case reserve is judged to be insufficient by Global Reinsurance's claims department.

In respect of IBNR reserves, and those claims that have been incurred but not reported prior to the balance sheet date, there is, by definition, limited actual information to form the case reserve estimate and reliance is placed upon historical loss experience and actuarial methods to project the ultimate loss obligations and the corresponding amount of IBNR. IBNR reserve estimates are generally calculated by first projecting the ultimate amount of losses for a product line and subtracting paid losses and case reserves for reported claims. The judgments involved in projecting the ultimate losses may pertain to the use and interpretation of various standard actuarial reserving methods that place reliance on the extrapolation of actual historical data, loss development patterns, and industry data as appropriate. The estimate of the required IBNR reserve also requires judgment by actuaries and management to reflect the impact of more contemporary and subjective factors, both qualitative and quantitative. Among



some of these factors that might be considered are changes in business mix or volume, changes in ceded reinsurance structures, changes in claims handling practices, reported and projected loss trends, inflation, the legal environment, and the terms and conditions of the contracts sold to our insured parties.

#### **Determining management's best estimate**

Our recorded reserves represent management's best estimate of the provision for unpaid claims as of the balance sheet date. Management's best estimate is developed after collaboration with actuarial, underwriting, claims, legal, and finance departments and culminates with the input of reserve committees. Each business unit reserve committee includes the participation of the relevant parties from actuarial, finance, claims, and unit senior management and has the responsibility for finalizing and approving the estimate to be used as management's best estimate. Reserves are further reviewed by ACE's Chief Actuary and senior management. The objective of such a process is to determine a single estimate that we believe represents a better estimate than any other. Such an estimate is viewed by management to be the best estimate of ultimate loss settlements.

This estimate is generally based on a combination of exposure and experience based actuarial methods (described below) and other considerations such as claims reviews, reinsurance recovery assumptions and/or input from other subject matter experts such as underwriting. Exposure-based methods are most commonly used on relatively immature origin years while experience-based methods provide a view based on the projection of loss experience that has emerged as of the valuation date. Greater reliance is placed upon experience-based methods as the pool of emerging loss experience grows and where it is deemed sufficiently credible and reliable as the basis for the estimate. In comparing the held reserve for any given origin year to the actuarial projections of loss experience, judgment is required as to the extent of credibility to be assigned to the underlying loss experience and the uncertainties associated with its statistical projection. Examples of factors that impact such judgments include, but are not limited to, the following:

- nature and complexity of underlying coverage provided and net limits of exposure provided;
- segmentation of data to provide sufficient homogeneity and credibility for loss projection methods;
- extent of internal historical loss data, and industry information where required;
- historical variability of actual loss emergence compared with expected loss emergence;
- extent of emerged loss experience relative to the remaining expected period of loss emergence;
- rate monitor information for new and renewal business;
- facts and circumstances of large claims;
- impact of applicable reinsurance recoveries; and
- nature and extent of underlying assumptions.

Management does not build in any specific provision for uncertainty.

We do not calculate ranges of loss reserve estimates for our individual loss reserve studies, given the lack of robust statistical approaches and the limited usefulness for such information in decision making. Determining such ranges is a complex and uncertain process, and such ranges generally do not capture the potential changes in external and internal circumstances between the balance sheet date and the final settlement date that may impact the ultimate value of loss. While we believe that our recorded reserves are reasonable and represent management's best estimate for each product line as of the current valuation date, future changes to our view of the ultimate liabilities are possible. A five percent change in our net loss reserves equates to \$1.3 billion and represents five percent of shareholders' equity at December 31, 2013. Historically our reserves, at times, have developed in excess of 10 percent of recorded amounts.



We have actuarial staff within each of our business units who analyze loss reserves and regularly project estimates of ultimate losses and the corresponding indications of the required IBNR reserve. Note that losses include loss expenses for the purposes of this discussion. We perform an actuarial reserve review for each product line at least once a year. At the conclusion of each review, we establish an actuarial central estimate. The process to select the actuarial central estimate, when more than one estimate is available, may differ across product lines. For example, an actuary may base the central estimate on loss projections developed using an incurred loss development approach instead of a paid loss development approach when reported losses are viewed to be a more credible indication of the ultimate loss compared with paid losses. The availability of estimates for different projection techniques will depend upon the product line, the underwriting circumstances, and the maturity of the loss emergence. For a well-established product line with sufficient volume and history and low volatility, the actuarial central estimate may be drawn from a weighting of paid and reported loss development and/or Bornhuetter-Ferguson methods (described below). However, for a new long-tail product line for which we have limited data and experience, a rapidly growing line, or an established line with volatile experience, the emerging loss experience may not have sufficient credibility to allow selection of loss development or Bornhuetter-Ferguson methods and reliance may be placed upon the expected loss ratio method (described below) until the experience matures and becomes credible.

Typically, for each product line, one or more standard actuarial reserving methods may be used to estimate ultimate losses and loss expenses, and from these estimates, a single actuarial central estimate is selected. Exceptions to the use of standard actuarial projection methods occur for individual claims of significance that require complex legal, claims, and actuarial analysis and judgment (for example, A&E account projections or high excess casualty/professional lines accounts in litigation) or for product lines where the nature of the claims experience and/or availability of the data prevent application of such standard methods. In addition, claims arising from certain catastrophic events require evaluations that do not utilize standard actuarial loss projection methods but are based upon our exposure at the time of the event and the circumstances of the catastrophe and its post-event impact.

In addition to the annual loss reserve studies performed for each product line, we review the emergence of actual losses relative to expectations for most product lines each quarter. If warranted from findings in loss emergence tests, we may alter the timing of our product line reserve studies. Finally, loss reserve studies are performed annually by external third-parties and the findings are used to test the reasonableness of our internal findings.

#### **Standard actuarial reserving methods**

Standard actuarial reserving methods include, but are not limited to, expected loss ratio, paid and reported loss development, and Bornhuetter-Ferguson methods. A general description of these methods is provided below. In the subsequent discussion on short- and long-tail business, reference is also made, where appropriate, to how consideration in method selection impacted 2013 results. In addition to these standard methods, depending upon the product line characteristics and available data we may use other recognized actuarial methods and approaches. To ensure that the projections of future loss emergence based on historical loss development patterns are representative of the underlying business, historical loss and premium data is required to be of sufficient homogeneity and credibility. For example, to improve data homogeneity, we may subdivide product line data further by similar risk attribute (e.g., geography, coverage such as property versus liability exposure, or elements of program structure such as attachments or limits), project ultimate losses for these homogeneous groups and then combine the results to provide the overall product line estimate. The premium and loss data are aggregated by origin year (e.g., the year in which the losses were incurred - "accident year" or "report year") and annual or quarterly development periods. Implicit in the standard actuarial methods that we generally utilize is the need for two fundamental assumptions: first, the pattern by which losses are expected to emerge over time for each origin year, and second the expected loss ratio for each origin year.



The expected loss ratio for any particular origin year is selected after consideration of a number of factors, including historical loss ratios adjusted for rate changes, premium and loss trends, industry benchmarks, the results of policy level loss modeling at the time of underwriting, and other more subjective considerations for the product line (e.g., terms and conditions) and external environment as noted above. The expected loss ratio for a given origin year is initially established at the start of the origin year as part of the planning process. This analysis is performed in conjunction with underwriters and management. The expected loss ratio method arrives at an ultimate loss estimate by multiplying the expected ultimate loss ratio by the corresponding premium base. This method is most commonly used as the basis for the actuarial central estimate for immature origin periods on product lines where the actual paid or reported loss experience is not yet deemed sufficiently credible to serve as the principal basis for the selection of ultimate losses. The expected loss ratio for a given origin year may be modified over time if the underlying assumptions such as the assessment of prior year loss ratios, loss trend, rate changes, actual claims, or other information differ from the original assumptions.

Our selected paid and reported development patterns provide a benchmark against which the actual emerging loss experience can be monitored. Where possible, development patterns are selected based on historical loss emergence by origin year with appropriate allowance for changes in business mix, claims handling process, or ceded reinsurance that are likely to lead to a discernible difference between the rate of historical and future loss emergence. For product lines where the historical data is viewed to have low statistical credibility, the selected development patterns also reflect relevant industry benchmarks and/or experience from similar product lines written elsewhere within ACE. This most commonly occurs for relatively new product lines that have limited historical data or for high severity/low frequency portfolios where our historical experience exhibits considerable volatility and/or lacks credibility. The paid and reported loss development methods convert the selected loss emergence pattern to a set of multiplicative factors which are then applied to actual paid or reported losses to arrive at an estimate of ultimate losses for each period. Due to their multiplicative nature, the paid and reported loss development methods will leverage differences between actual and expected loss emergence. These methods tend to be utilized for more mature origin periods and for those portfolios where the loss emergence has been relatively consistent over time.

The Bornhuetter-Ferguson method is essentially a combination of the expected loss ratio method and the loss development method, where the loss development method is given more weight as the origin year matures. This approach allows a logical transition between the expected loss ratio method which is generally utilized at earlier maturities and the loss development methods which are typically utilized at later maturities. We usually apply this method using reported loss data although paid data may be used.

The applicability of actuarial methods will also be impacted by the attachment point of the policy or contract with the insured or ceding company. In the case of low attachment points typical of primary insurance or working layer reinsurance, the experience tends to be more frequency driven. For these product types, standard actuarial methods are generally applicable in determining loss reserve levels given sufficient history and credible loss experience (although still subject to the same limitations and uncertainties described elsewhere in this section, for example, changing inflationary or legal environments). In the case of high attachment points typical of excess insurance or excess of loss reinsurance, the experience tends to be severity driven, as only a loss of significant size will enter the layer. For these product lines, it typically takes longer for loss experience to gain credibility, which adds uncertainty to the estimates derived from standard actuarial methods. For products such as our assumed reinsurance business, we typically supplement the standard actuarial methods with an analysis of each contract's terms, original pricing information, subsequent internal and external analyses of the ongoing contracts, market exposures and history, and qualitative input from claims managers. This approach is also used for structured or unique contracts.



### **Short-tail and long-tail business**

The time period between the date of loss occurrence and the final payment date of the ensuing claim(s) is referred to as the “claim-tail”. The following is a discussion of specific reserving considerations for both short-tail and long-tail product lines. In this section, we reference the nature of recent prior period development to give a high-level understanding of how these considerations translate through the reserving process into financial decisions. Refer to Note 7 to the Consolidated Financial Statements for additional information on prior period development.

### **Short-tail business**

Short-tail business generally describes product lines for which losses are typically known and paid shortly after the loss actually occurs. This would include, for example, most property, personal accident, aviation hull, and automobile physical damage policies that we write. There are some exceptions on certain product lines or events (e.g., major hurricanes or earthquakes) where the event has occurred, but the final settlement amount is highly uncertain and not known with certainty for a potentially lengthy period. Due to the short reporting and development pattern for these product lines, the uncertainty associated with our estimate of ultimate losses for any particular accident period diminishes relatively quickly as actual loss experience emerges. We typically assign credibility to methods that incorporate actual loss emergence, such as the paid and reported loss development and Bornhuetter-Ferguson methods, sooner than would be the case for long-tail lines at a similar stage of development for a given origin year. The reserving process for short-tail losses arising from catastrophic events typically involves an assessment by the claims department, in conjunction with underwriters and actuaries, of our exposure and estimated losses immediately following an event and then subsequent revisions of the estimated losses as our insureds provide updated actual loss information.

For the 2013 origin year, loss reserves for short-tail lines were typically established for the non-catastrophe exposures using a combination of the initial expected loss ratio method (see above) and loss development methods that incorporate actual loss emergence. As the year progressed, we also adjusted these reserves for non-catastrophe large loss activity that we considered to be greater or less than the assumptions used to establish the initial expected loss ratio. Catastrophe activity was relatively low in 2013 and accordingly the judgments and uncertainties used to establish reserves for incurred catastrophe events were correspondingly less complex. For our short-tail businesses taken as a whole, overall loss trend assumptions did not differ significantly relative to prior years.

In terms of prior accident years, the bulk of the changes made in the 2013 calendar year arose from origin years 2009 through 2012. Specifically, the Insurance – North American P&C, Insurance – North American Agriculture, Insurance – Overseas General, and Global Reinsurance segments experienced \$106 million, \$13 million, \$172 million, and \$31 million of favorable prior period development, respectively, primarily due to lower than anticipated loss emergence rather than any significant changes to underlying actuarial assumptions such as loss development patterns. In the Insurance – North American P&C, Insurance – Overseas General, and Global Reinsurance segments, these prior period movements were primarily the result of changes to the ultimate loss estimates for origin years 2009 through 2012. In the Insurance – North American Agriculture segment, the prior period movements were primarily the result of changes to the ultimate loss estimates for origin year 2011.



### **Long-tail business**

Long-tail business describes lines of business for which specific losses may not be known/reported for some period and for which claims can take significant time to settle/close. This includes most casualty lines such as general liability, D&O, and workers' compensation. There are various factors contributing to the uncertainty and volatility of long-tail business. Among these are:

- The nature and complexity of underlying coverage provided and net limits of exposure provided;
- Our historical loss data and experience is sometimes too immature and lacking in credibility to rely upon for reserving purposes. Where this is the case, in our reserve analysis we may utilize industry loss ratios or industry benchmark development patterns that we believe reflect the nature and coverage of the underwritten business and its future development, where available. For such product lines, actual loss experience may differ from industry loss statistics as well as loss experience for previous underwriting years;
- The considerable inherent uncertainty around loss trends, claims inflation (e.g., medical and judicial) and underlying economic conditions;
- The inherent uncertainty of the estimated duration of the paid and reported loss development patterns beyond the historical record requires that professional judgment be used in the determination of the length of the patterns based on the historical data and other information;
- The inherent uncertainty of assuming that historical paid and reported loss development patterns for older origin years will be representative of subsequent loss emergence on recent origin years. For example, changes over time in the processes and procedures for establishing case reserves can distort reported loss development patterns or changes in ceded reinsurance structures by origin year can alter the development of paid and reported losses;
- Loss reserve analyses typically require loss or other data be grouped by common characteristics in some manner. If data from two combined lines of business exhibit different characteristics, such as loss payment patterns, the credibility of the reserve estimate could be affected. Additionally, since casualty lines of business can have significant intricacies in the terms and conditions afforded to the insured, there is an inherent risk as to the homogeneity of the underlying data used in performing reserve analyses; and
- The applicability of the price change data used to estimate ultimate loss ratios for most recent origin years.

As can be seen from the above, various factors are considered when determining appropriate data, assumptions, and methods used to establish the loss reserve estimates for long-tail product lines. These factors may also vary by origin year for given product lines. The derivation of loss development patterns from data and the selection of a tail factor to project ultimate losses from actual loss emergence require considerable judgment, particularly with respect to the extent to which historical loss experience is relied upon to support changes in key reserving assumptions. Examples of the relationship between changes in historical loss experience and key reserving assumptions are provided below.

For those long-tail product lines that are less claim frequency and more claim severity oriented, such as professional lines and high excess casualty, we placed more reliance upon expert legal and claims review of the specific circumstances underlying reported cases rather than loss development patterns. Where appropriate, we then supplemented this with loss development and Bornhuetter-Ferguson approaches to provide for claims that have been reported but are too immature to develop individual claims estimates and also to provide for pure IBNR. The assumptions used for these lines of business are updated over time to reflect new claim and legal advice judged to be of significance.

For origin year 2013, loss reserves were typically established through the application of individual product line expected loss ratios, as discussed earlier. Our assumptions on loss trend and development patterns reflect reliance on our historical loss data provided the length and volume of history and homogeneity afford credibility. For those lines where our internal historical experience lacks credibility, we may place reliance upon the latest benchmark patterns (where available) from external industry bodies such as Insurance Services Office (ISO) or the National



Council on Compensation Insurance, Inc. (NCCI). In such cases, the assumptions used to project ultimate loss estimates will not fully reflect our own actual loss experience until our data is deemed sufficiently credible. We note that industry patterns are not always available to match the nature of the business being written; this issue is particularly problematic for non-U.S. exposed lines. Given the underlying volatility of the long-tail product lines and the lengthy period required for full paid and reported loss emergence, we typically assign little to no credibility to actual loss emergence that is lower than expected in the early development periods. Accordingly, we generally used the expected loss ratio method for the 2013 and immediately preceding origin years to establish reserves by product line. We monitor actual paid and reported loss emergence relative to expected loss emergence for most individual product lines.

As described earlier, the process to develop origin year 2013 reserves for our long-tail casualty business relies on key assumptions like expected rate change and loss trend. When estimating the ultimate loss levels for these prior origin years for the major long-tail lines in Insurance – North American P&C, Insurance – Overseas General, and Global Reinsurance no changes of significance were made to the loss development patterns, however, we have revised historical loss and exposure trend assumptions on more mature years to reflect emerged frequency and severity trends observed in both our internal data and available industry data. In general, this has resulted in lower historical loss trend assumptions for those years. While we have not assumed that these lower loss trends have continued on more recent years, we have reflected this information in the process to derive expected loss ratio assumptions from historical data adjusted to 2013 origin year levels.

For long-tail portfolios where actual loss emergence in calendar year 2013 was lower than expected for the more recent origin years, the deviation was not typically seen as sufficiently credible, particularly given the volatility and lengthy period for full loss emergence, to fully reflect in our booked ultimate loss selections or the actuarial assumptions underlying the reserve reviews. However, for certain product lines with early loss emergence on more recent origin years that was greater than expected, we did respond since we believe that such adverse emergence is generally significant relative to the loss emergence pattern assumptions (e.g., origin years 2011 and 2012 for casualty and financial lines in Insurance – Overseas General). Such judgments were made with due consideration to the factors impacting reserve uncertainty as discussed above.

For more mature origin years, typically 2009 and prior, we gave meaningful weight to indicated ultimates derived from methods that rely on the paid and reported loss development patterns based on our own historical experience where sufficient credibility was deemed to exist. As noted previously, this is consistent with our practice of allowing favorable loss emergence sufficient time to be reliably established before assigning it full credibility.

The prior period development in 2013 for long-tail lines of business comprised several main components. First, we experienced favorable prior period development on a number of product lines where actual loss emergence was lower than expected and/or increased weighting was given to experience-based methods as relevant origin years mature (typically 2009 and prior). In particular, this included retail D&O, medical risk operations, and umbrella and excess casualty product lines in Insurance – North American P&C (\$183 million favorable) principally in origin years 2007 and 2008, casualty and financial lines in Insurance – Overseas General for origin years 2009 and prior (\$198 million favorable), and origin years 2007 and prior for long-tail product lines in Global Reinsurance (\$71 million favorable). Second, we recorded adverse reserve actions in response to development on specific large claims. Third, we experienced adverse development from Insurance – North American P&C inactive product lines including Westchester and Brandywine run-off operations (\$193 million).



**Accident year (AY):** Relates to all losses occurring within a given twelve-month period, regardless of when the loss was reported or booked.

**Bornhuetter-Ferguson method:** Estimates unpaid (unreported) losses for a given accident/treaty year based on an expected ultimate and the percentage of losses currently unpaid (unreported).

**Chain Ladder method:** Estimates unpaid (unreported) losses for a given accident/treaty year by a) estimating ultimate losses derived by multiplying the paid (or reported) losses for the given year by the reciprocal of the percentage of losses currently paid (or reported) for that year and, in the case of treaty year data, also by the percentage of earned premium to ultimate premium, and then b) subtracting the paid (or reported) losses for the given year from the ultimate losses calculated in (a).

**Claims made basis:** An insurance form where the date the loss is reported to the insurer is deemed to be the date of the loss event, regardless of when the loss occurred.

**Expected Loss Ratio method:** Estimates unpaid (unreported) loss for a given accident/treaty year by a) estimating ultimate losses derived by multiplying the earned premiums by a selected loss ratio, and then b) subtracting the paid (or reported) losses for the given year from the ultimate losses calculated in (a). The selected loss ratio may be based on the ACE's own data and/or Industry data or a combination of both.

**Occurrence basis:** An insurance form where the date the loss occurred is deemed to be the date of the loss event, regardless of when the claim is reported to the insurer.

**Retroactive reinsurance:** An arrangement whereby a reinsurer assumes liability incurred as a result of past events (i.e., a loss portfolio transfer).

**Treaty year (TY):** Relates to all losses associated with policies that incepted within a given twelve-month period.

**Year-of-Account (YOA):** Terminology specific to Lloyd's business; the year to which an individual risk is allocated based on the calendar year in which it was first signed.