Reinsurance Market Report

Results for Year-End 2015

April 2016

Contents

Introduction and Key Findings 1

Summary 2
  Capital 2
  Return of Capital 3
  Return on Equity 3
  Underwriting and Expense Ratios 4
  Catastrophe Loss* 5

Capital 6
  Highlights for the INDEX 6
  Active Capital Management 7
  Summary and Outlook 9

Earnings 10
  Modest Cat Losses 11
  Significant Reserve Releases 12
  Modest Investment Returns 13
  Premium Volumes 15
  Combined Ratios 16
    Prior Year Loss Development 17
    Catastrophe Losses 19
    Accident Year Performance, ex Catastrophe 20

Appendices 23

Introduction and Key Findings

For the Willis Reinsurance Index* (INDEX):

- Shareholders' funds reduced by 4.0% to USD 329.7B.
- Aggregate net income for FY 2015 reduced to USD 30.3B (FY 2014: 38.0B).
- Majority of aggregate net income was returned through dividends of USD 17.8B.
- Share buybacks reduced to USD 5.5B (2014: USD 7.8B).
- Shareholders' funds were reduced by unrealised investment losses of USD 9.3B during 2015 which were not reported within net income.
- 2015 headline return on equity (RoE) of 9.3% for the INDEX, down from 11.3% in 2014.
- The reported combined ratio for the INDEX at FY 2015 was 91.4% (FY 2014: 90.6%).

For the SUBSET within the INDEX that breaks out the relevant disclosure:**

- Underlying RoE of 3.4% down from 5.8% for the SUBSET.
- The reported combined ratio for the SUBSET at FY 2015 was 89.3% (FY 2014: 88.5%).
- Over the past 9 years, the aggregate expense ratio for the SUBSET has risen by c.4 percentage points to 33.1% in FY 2015.

Alternative capital increased to USD 70B*** from USD 55B at FY 2014, although the boundaries between alternative and traditional reinsurance continue to blur.

**- INDEX relates to those companies listed within Appendix 1 of this report. Merger and acquisition activity in 2015 has resulted in the exclusion of a number of reinsurers from the INDEX. We have also observed some distortions occurring within our industry-wide performance indicators due to the lack of relevant financial disclosure for the groups involved in these deals.*
***- SUBSET is defined as those companies that make the relevant disclosure in relation to cat losses and prior year reserve releases. All constituents of the SUBSET are publicly listed groups that compose 59% of the aggregate capital INDEX and 82% of net premium.*
****- Capital Markets commentary provided by Willis Capital Markets & Advisory http://www.willis.com/client_solutions/services/wcma/*

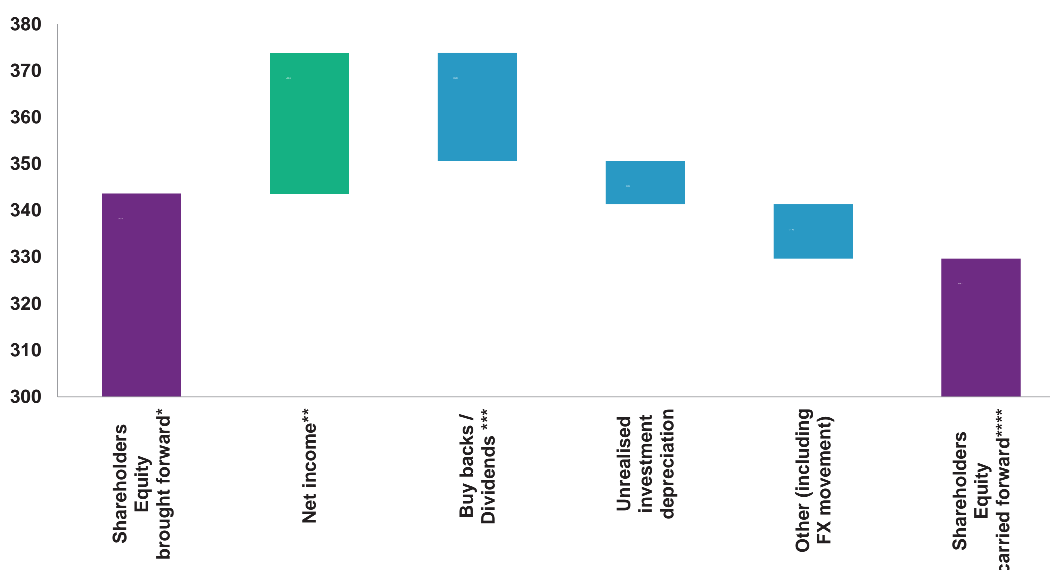
Summary

Capital

For the INDEX:

- Aggregate shareholders' funds totalled USD 329.7B per their latest reported accounts. This represents a 4.0% decrease since our 2014 year end summary, or broadly flat on an original reported currency basis.
- Aggregate net income for FY 2015 reduced to USD 30.3B (FY 2014: 38.0B).
- The focus on active capital management continues with the majority of aggregate profit being returned through dividends of USD 17.8B.
- Share buybacks reduced to USD 5.5B (2014: USD 7.8B).
- During 2015, shareholders' funds were reduced by unrealized investment losses of USD 9.3B which were not reported within net income.

Shareholders' funds of the INDEX decreased by USD 13.9B



* = As per latest financial statements issued by date of previous Willis Re report, generally as at year end Dec 31, 2014
** = Includes USD 5 B of after tax net realised gains
*** = Of this total, USD 17.8 B were dividends and USD 5.5 B were buybacks.
**** = As per latest financial statements issued by Mar 30, 2016 generally as at year end Dec 31, 2015

- In the chart above, included within 'other' is the capital that has left the INDEX through mergers and acquisitions, either through accounting adjustment or by net cash distributions to the target shareholders, where we are able to determine it.
- Lacklustre economic growth in Europe and the accommodative monetary policy of the European Central Bank contributed to the strengthening in the U.S. Dollar against the Euro; this has also been a significant component of 'other' in the chart above.
- Including other major regional and local reinsurers, and a pro-rated portion of capital within major groups whose reinsurance portfolio is <10% of their total premium, we derive an estimate of USD 357B of aggregate shareholders' equity for the traditional reinsurance market. If 100% of that capital within these major groups is included the figure is estimated at USD 553B. Including capital from alternative markets the figure of USD 357B increases by USD 70B to approximately USD 427B (with 100% capital, USD 623B).

Return of Capital

For the INDEX:

- USD 5.5B of capital returned through share buybacks in FY 2015, equivalent to 1.6% of their aggregate opening shareholders' equity (FY 2014, USD 7.8B, 2.5%).
- USD 17.8B returned through ordinary and special dividends, or 5.2% of aggregate opening shareholders' funds (FY 2014, USD 12.6B, 4%).
- In total, the USD 23.3B returned to shareholders' accounted for 77% of net income.
- Although there is much evidence of continued strict capital management, announcements of new buy back authorisations and special dividends are relatively few, as is often the case for results posted ahead of the June and July renewals and the Atlantic Hurricane season.

Return on Equity

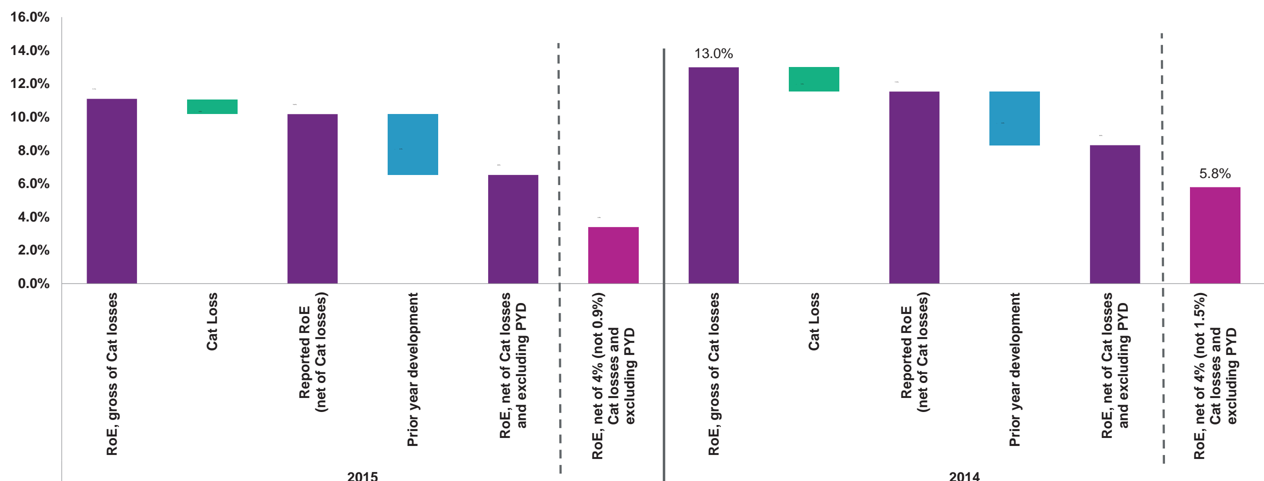
For the INDEX:

- The aggregate RoE at FY 2015 was 9.3% (FY 2014: 11.3%).
- Downward pressure continued on reported RoEs.

For the SUBSET:

- As the chart below shows, the reported RoE at FY 2015 was 10.2% (FY 2014: 11.5%).
- The reported RoE net of Natural Catastrophe loss and excluding prior year reserve releases has decreased by 1.8 percentage points in the aggregate to 6.5% at FY 2015 (FY 2014: 8.3%).
- If we normalise for a more typical catastrophe load (equivalent to a c. 4% impact on RoE) and exclude the benefit provided by reserve releases, the year on year fall in underlying profitability is more pronounced, yielding an underlying RoE of only 3.4% compared to 5.8% in FY 2014.
- We are also seeing some evidence of certain large reinsurers being better able to withstand current market pressures and continue to post solid results.

RoE analysis for the SUBSET



Underwriting and Expense Ratios

For the INDEX:

- The aggregate reported NWP (excluding National Indemnity Co for comparability purposes) for the latest reported year fell by 4.2% to USD 238B (FY 2014: USD 248B), although this is mainly caused by weakening in the Euro impacting U.S. Dollar reported results. On a constant rate of exchange basis we believe that NWP is broadly flat in U.S. Dollar terms.
- Whilst the global reinsurance market continues to soften, the majority of the constituents of the INDEX have developed their respective specialty insurance platforms.
- The reported combined ratio for the INDEX is 91.4% (FY 2014: 90.6%).

For the SUBSET:

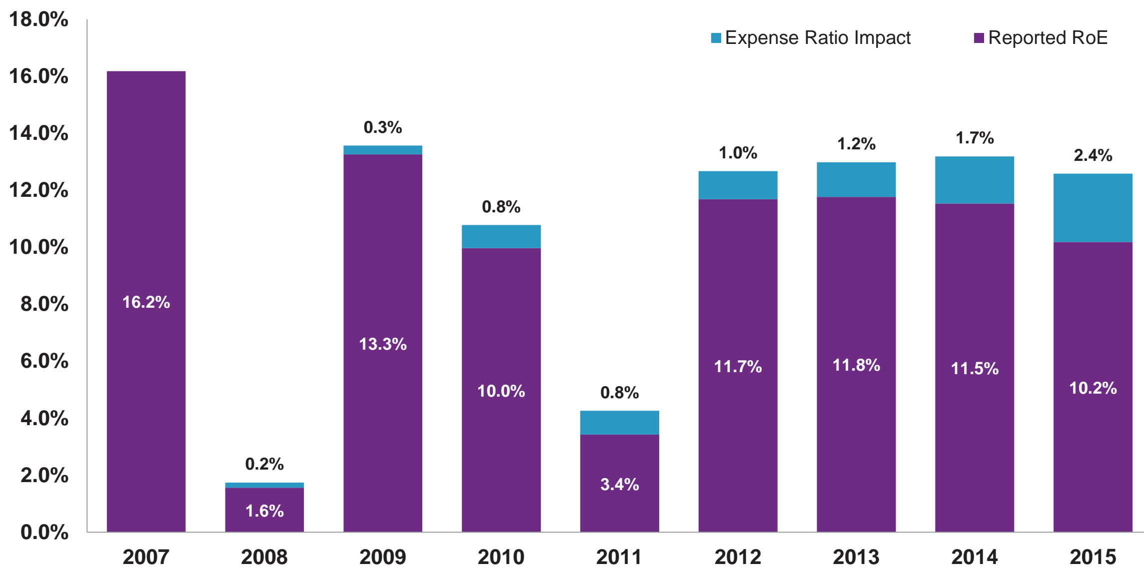
- As the table below shows, the reported combined ratio for the SUBSET was 89.3% (FY 2014: 88.5%).
- Excluding Natural Catastrophe losses and prior year reserve releases for FY 2015, the underlying combined ratio would be approximately 5.2 percentage points higher than the reported figure at 94.5% (FY 2014: 3.1 percentage points higher, 91.6%).
- Of this, a full percentage point relates to an increase in the expense ratio, the fastest annual increase within the past decade.

Combined Ratio analysis for the SUBSET

Weighted Average		
	FY 2015	FY 2014
Reported Combined Ratio	89.3%	88.5%
Favourable Development of Prior Years	6.7%	5.7%
Accident Year Combined Ratio	96.0%	94.2%
Catastrophe Loss	1.5%	2.6%
Ex-Cat Accident Year Combined Ratio	94.5%	91.6%

- Between 2007-15, the aggregate expense ratio across the SUBSET has risen by c.4 percentage points to 33.1% in FY 2015.
- This rise in the cost base has materially eroded the RoEs. As the chart on page 5 shows, if expenses had remained broadly at their 2007 level we estimate that the aggregate RoE for the SUBSET of 10.2% reported in 2015 would have been approximately 2.4 percentage points higher.

Impact of Expense Ratio Movement on RoE for the SUBSET (Base Year – 2007)



Source: SNL Financial and Willis Towers Watson Market Security

Catastrophe Loss*

- The global insured catastrophe losses continued to be modest at USD 37B (2014: USD 35B). This included Natural Catastrophe losses which were broadly unchanged at USD 28B in 2015. (*Swiss Re Sigma figures*).
- Catastrophe losses for the SUBSET fell by 43% to USD 1.8B. This equates to 1.5% of aggregate net earned premium (NEP) (2014: USD 3.2B, 2.6%) or approximately a 0.9 percentage point impact on the aggregate annualized RoE (FY 2014: 1.5 percentage points).

**- For the purposes of this report the term catastrophe loss reflects generally large single event claims as reported by the companies themselves. A catastrophe related loss may therefore not appear in our numbers as 'Cat Loss' unless it reaches a value that exceeds the company's own threshold for disclosure. On occasion we are unable to determine whether the large loss is 'Nat Cat' or 'Man-made Cat' or a large single risk loss. Where possible we have utilized 'Nat Cat' loss numbers where identifiable.*

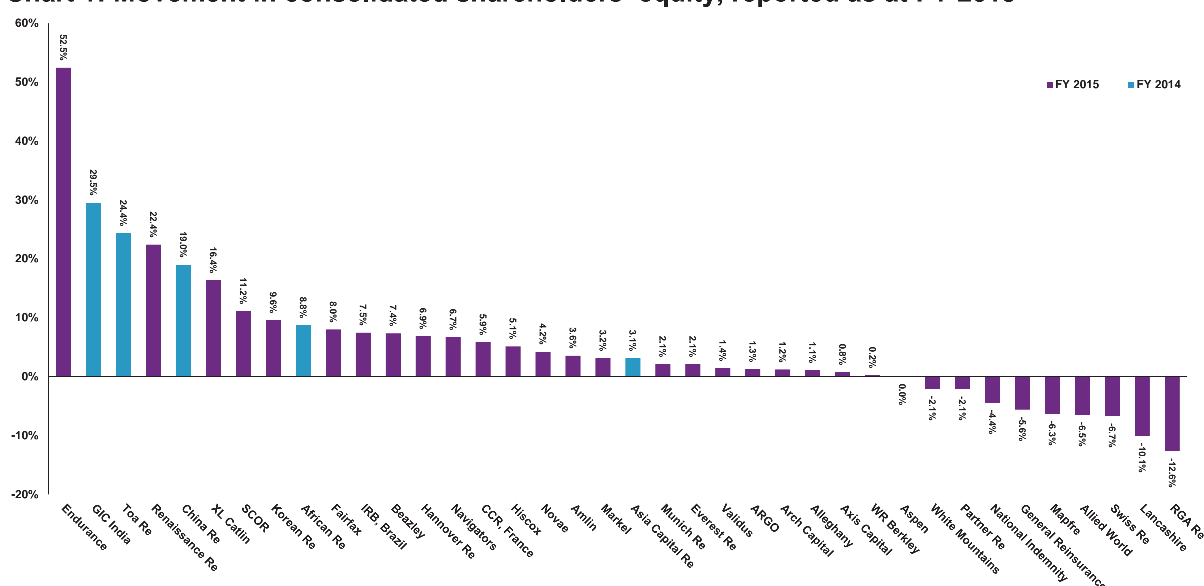
Capital

Highlights for the INDEX

- Largely due to continued capital management, shareholders' equity declined by 4.0% on an aggregate basis (based on year end U.S. Dollar rates), reversing the gain of 5% we observed in our year-end 2014 report.
- The INDEX aggregate Return on Equity has fallen by 2 percentage points to 9.3%.
- Capital management activity has slowed in the past year, with a distinct shift in how listed companies have managed excess capital; share buybacks have declined significantly.
- M&A activity has continued due to the increased scale and breadth of product offering required to remain relevant in the current market.

The INDEX reported an aggregate decrease in shareholders' equity of 4.0%. However as Chart 1 below shows there were significant differences by company.

Chart 1: Movement in consolidated shareholders' equity, reported as at FY 2015



Note: Includes the impact of consolidating acquired companies for Endurance (Montpelier Re), XL Capital (Catlin), Renaissance Re (Platinum) and Fairfax (Brit).

The fall in aggregate capital was largely driven by the appreciation of the U.S. Dollar against the Euro and the British Pound. For example, when assessing the movement in shareholders' equity for Hannover Re in U.S. Dollar terms, we observed a 4.0% fall instead of the 6.9% growth in reported currency (Euros). On a reported currency basis, exchange rate fluctuations had a large impact on Mapfre, Swiss Re and RGA Re's capital base. Each of these three groups holds substantial assets in currencies different from that used for reporting purposes.

As shown by Chart 1, the majority of the INDEX constituents reported growth in shareholders' equity (on a reported currency basis) despite the ongoing challenge of profitably deploying excess capital. The relative scarcity of major catastrophe losses and strong reserve redundancies continued to support underwriting profits and further bolster shareholders' equity. This was partly offset by the rise in U.S. interest rates which has led to some groups reporting notable realised and unrealised losses on investments.

In addition to the capital generated by reinsurers through earnings, third party capital continues to be attracted to sidecar and 'managed' capacity, giving traditional reinsurers access to considerable capital not held within their own balance sheet. The following have all meaningfully increased the size of their 'internal' retrocession sidecars in the past few months.

Reinsurer	Internal sidecar	Change in sidecar capital
Aspen	Silverton Re Ltd.	Increased from USD 85M to USD 125M
Everest Re	Mount Logan Re Ltd.	Increased by 25% to USD 860M, despite Everest Re reducing its own share by USD 50M
Hannover Re	K-cessions	Increased by USD 100M to USD 500M
Munich Re	Eden Re II Ltd.	Increased by USD 70M to USD360M
Alleghany	Pangaea Re Ltd.	Reported to have increased to USD 400M in 2016

Contrary to this trend, Renaissance Re recently halved the capacity of its internal sidecar, Upsilon, from USD 175M to USD 87.5M. Also, the three tranches issued by Swiss Re's Sector Re V Ltd. now total USD190.7m, which is much smaller than the USD 500M-plus which Sector Re issued a number of years ago.

Continued diversification by 'traditional' reinsurers has resulted in a further increase in capacity provided by 'market-facing' sidecars and managed ILS funds. This included significant growth in sidecar and managed fund capacity by Hiscox (Kiskadee Re), Validus Re (AlphaCat), and also by Markel which acquired CatCo in December 2015. The boundaries between alternative and traditional reinsurance continue to blur; for example, the underwriting activities of these three 'alternative' vehicles are not fully consolidated in the financial statements of the sponsoring 'traditional' reinsurers.

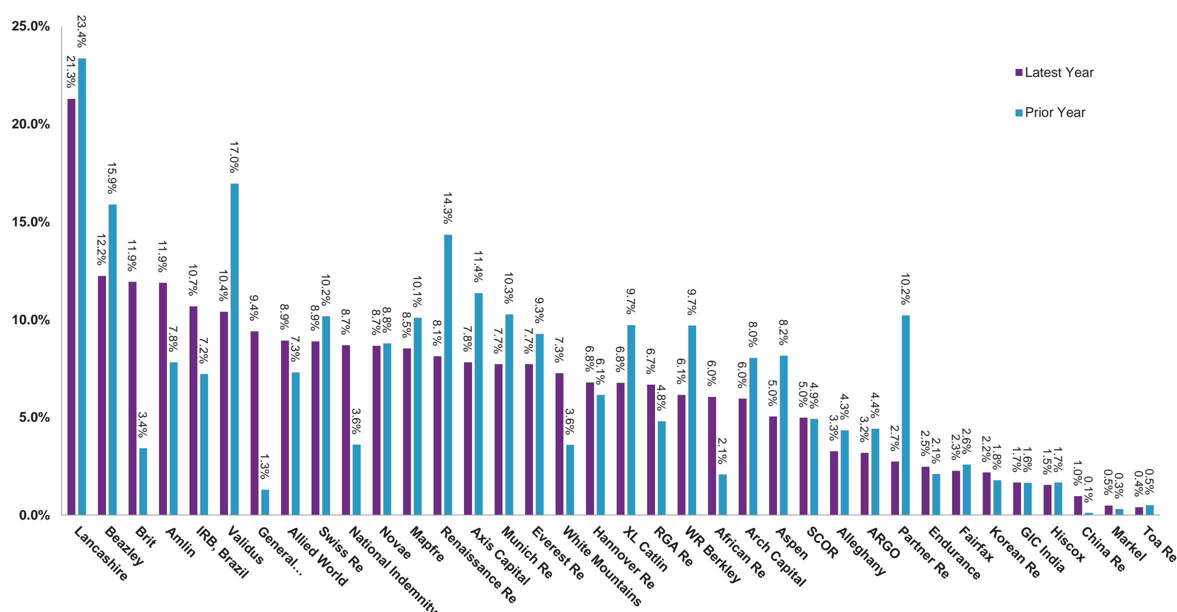
Against this trend of increasing managed capacity, Renaissance Re's active capital management of DaVinci Re returned a net USD 100M of capital in January 2016. This was based on its assessment that the risk premium had fallen below adequate levels.

Although modest compared to previous start-ups, the 2015 sidecar start-ups were relatively large; this is also the same for those pending for 2016. This included ABR Re which was formed with USD 800M in April 2015 (including USD 90M from ACE); Chubb ceded USD 115M to ABR Re during 2015. Also, XL Catlin is reportedly seeking to raise USD 600M of capital for Alloy Re while Enstar is seeking USD 700M to support its own USD 160M commitment for Aligned Re. 2015 also saw reports of other sidecars which as yet remain unconfirmed. This apparent delay has raised suspicions amongst a number of commentators that the 'Hedge Fund Re' model may be losing momentum.

Active Capital Management

There are signs within the INDEX that capital previously dedicated to reinsurance is being redeployed elsewhere due to a lack of attractive opportunities caused by ongoing competitive pressure. National Indemnity Co and General Reinsurance have significantly increased the dividend upstreamed to their parent company, Berkshire Hathaway, to USD 9.3B (USD 3.7B in 2014). Warren Buffet had already stated in his recent letters to Berkshire Hathaway shareholders that the prospects for the reinsurance industry would not be as good as over the past 30 years. Similarly, bleak market prospects warranted Lancashire to return 1.6x earnings to shareholders.

Chart 2: Capital returned through share buybacks and ordinary and special dividends, 2015 v 2014



The INDEX returned a total of USD 23.3B, however, excluding the substantial internal dividends paid by National Indemnity Co and General Reinsurance this would have been a return of 13.7B in 2015, or 6.5% of opening shareholders' equity. This represents a slowdown compared to 2014, when USD 16.7B was returned, or 8.1% of the opening capital base. The decrease may be partly driven by both the deterioration in underlying earnings as well as continued prudence in maintaining strong capitalisation through the current prolonged trough in the underlying cycle.

The reported profitability remains something of a double edged sword. On a risk adjusted basis, capitalisation of the global reinsurance segment remains at or near record highs. Opportunities to deploy excess capital are sparse and have to be carefully mined. Considering these headwinds, it is not immediately apparent why some management teams are not more aggressively managing down their capital levels. However this prudence may be explained in part by the perception of increased challenge of capital re-load. In the aftermath of the record 2005 hurricane season, reinsurers learned that it can be costly and sometimes not successful to tap markets for significant fresh capital from a position of relative weakness. Arguably, this re-load risk has likely increased due to the increased number of ways in which market participants are dedicating capital to reinsurance. As a result, the time taken to consummate a significant deal could now be a significant constraint. Moreover, if financial market volatility is the driver of a future need to replenish capital, the willingness and ability of investors to participate may be diminished.

Looking at how listed groups within the SUBSET have returned capital, we observed that share buybacks narrowed by 30% to USD 5.5B in full year 2015. In comparison, the decrease in dividend totals has been less pronounced, albeit still reducing 9% during the year to USD 8.2B (excluding the substantial internal dividends paid by National Indemnity Co and General Reinsurance). During the second half of 2015, a smaller number of groups have announced authorisations for new share repurchase programs compared to the prior period.

Table 1: Recent announcements of share repurchase programs

Company	Date	Action	Capacity outstanding as % of Shareholders' Equity, Dec 31, 2015
Allied World	May 1, 2014	Approved a new repurchase program for up to USD 500M. Buybacks were suspended in Q3 2014, but repurchases resumed late in Q4 2014 (USD 327M utilized).	4.9%
Everest Re	Nov 19, 2014	Approved an increase in the share repurchase authorization by a further 5 million shares (1 million utilized).	9.9%
Validus	Feb 3, 2015	Announced a USD 750M repurchase authorization (USD 493M utilized).	7.1%
Aspen	Feb 5, 2015	Announced a new repurchase authorisation of USD 500M (USD 84M utilized).	12.2%
SCOR	Apr 30, 2015	6,661,000 treasury shares held as at Dec 31, 2015 = 3.46% of outstanding	6.5%
Lancashire	Apr 30, 2015	Approved the renewal of the Repurchase Program authorising the repurchase of a maximum of 20 million shares, to expire no later than 2016 AGM (none utilized).	15.3%
WR Berkley	Jun 2, 2015	Increased its share repurchase authorization to 10 million shares (0.75 million utilized).	11.0%
XL Catlin	Aug 6, 2015	Announced a new USD 1B share buyback program (USD 297M utilized).	6.0%
Alleghany	Nov 2015	Board of Directors authorised the repurchase of an additional USD 400M in shares.	5.3%
Axis Capital	Dec 7, 2015	Announced a new USD 750M share repurchase program (USD 96M utilized).	11.1%
RGA Re	Jan 28, 2016	Announced a new share repurchase program of USD 400M.	6.5%
White Mountains	Feb 2016	Board of Directors authorised the repurchase of an additional 1 million shares.	18.6%
RenaissanceRe	Feb 19, 2016	Renewed its USD 500M share repurchase program.	10.6%
Endurance	Feb 25, 2016	Announced a new share repurchase program of up to 5 million shares.	6.6%
Munich Re	Mar 16, 2016	Announced a resolution to buy back an additional EUR 1B in shares by the 2017 AGM.	3.3%
Swiss Re	Mar 16, 2016	Announced proposal to return up to CHF 1B to shareholders in a share buy-back program.	3.0%

Note: A number of other reinsurers have significant authorisations with capacity still remaining including: Argo (USD 63M, 3.8%); Arch (USD 522M, 8.4%); Markel (USD 263M, 3.1%).

Summary and Outlook

Despite deterioration in underlying performance due to further rate weakening, reinsurers' capital positions have remained strong through 2015 due to the absence of large catastrophe losses and strong reserve releases. However, as RoEs are starting to breach minimum target thresholds, we have seen some key players withdrawing capacity from the market. Nevertheless, there is abundant capital in the alternative space as asset managers seek more insurance risk to diversify their investment portfolios and enhance returns.

The outlook remains challenging for the remainder of 2016 as markets continue to face significant over-capacity and competitive pricing conditions.

Earnings

For the INDEX:

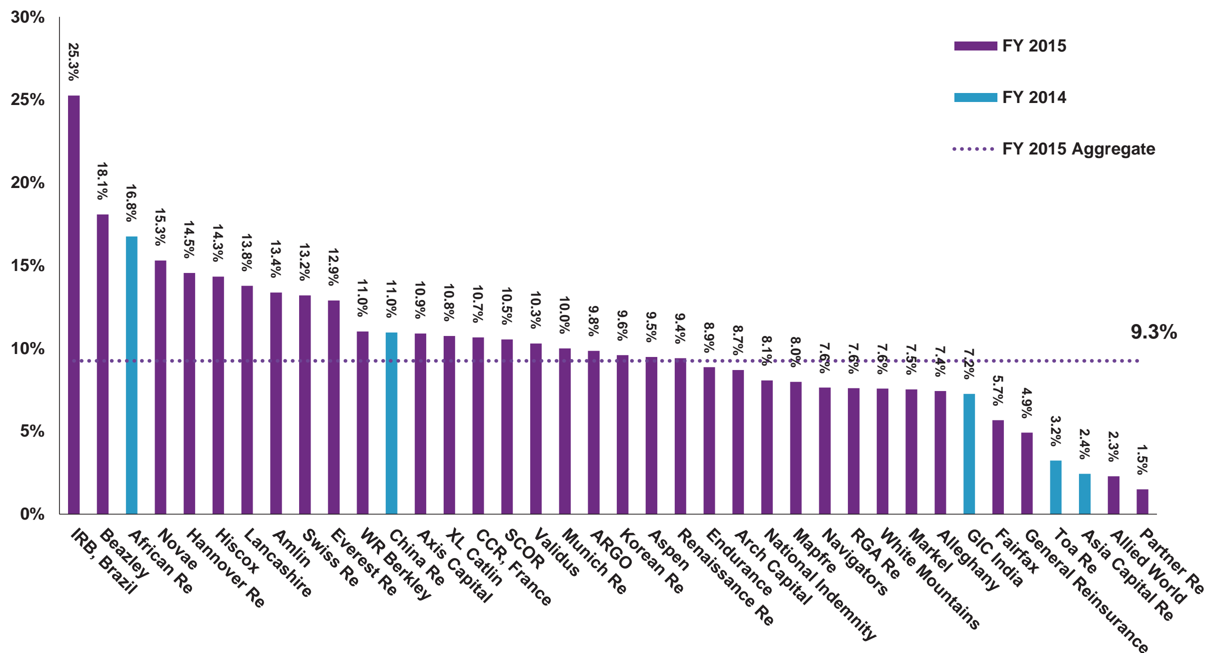
- Reported combined ratios for the INDEX have increased to 91.4% in 2015 (2014: 90.6%).
- Despite significant downward pressure on underlying profitability, the deterioration in reported combined ratios has been modest due to a further period of benign Natural Catastrophe losses and continued support from reserve releases.
- Portfolio investment yields remained low at 2.9%, broadly unchanged from 2.7% in 2014. Some reinsurers with shorter tail portfolios experienced increased yield.
- While reported Returns on Equity remain strong, the outlook remains difficult with many traditional reinsurers further paring back U.S. Catastrophe exposure and suffering risk adjusted rate declines on International Catastrophe business.
- In addition to weakening technical results, investment earnings also remain under pressure. Re-investment risk continues to be challenging as bonds issued prior to the financial crisis are replaced on maturity by lower yielding ones. Moreover, an uptick in investment market volatility gave substantial pause for thought on re-risking of investment portfolios.

For the SUBSET:

- Substantial continuing reserve releases of 6.7% of net earned premium, accelerating from the 5.7% reported for 2014. This was largely as a result of increased releases from three of the top 4 European reinsurers.
- Natural Catastrophe losses represented only 1.5% of NEP (FY 2014: 2.6%).

Chart 3 below shows that the aggregate RoE for the INDEX was 9.3% during FY 2015, significantly lower than the 11.3% observed for FY 2014.

Chart 3: FY 2015 net income as % of average shareholders' equity (RoE)



Earnings during 2015 have mainly been impacted by further rate softening across a number of international lines, most commonly property catastrophe, marine, energy and aviation. The European reinsurers were the exception, as they benefitted from low major loss expenses to post strong double-digit RoEs. The ability of certain European reinsurers to service multiple lines and provide extensive capacity to clients also enabled them to maintain broadly stable rates, terms and conditions.

Although the rate of price weakening has slowed, the pressure on U.S. Property Catastrophe has not relented. Rate deterioration also continued to spill over into the International Property Catastrophe markets during 2015. Certain reinsurers were better able to defend renewals from a position of strength and depth of relationship compared to a number of their smaller peers which have been under greater pressure to diversify and compete more aggressively on price. The full effect of these pressures is yet to fully manifest itself in results. Nevertheless, we expect that the continued need for scale and breadth of service offering will result in a more marked divergence in results in future periods with certain markets being better able to outperform smaller reinsurers. A number of reinsurers have been able to maintain presence and relevance through new or alternative platforms. This included sidecars or ILS funds on whose behalf they underwrite.

Along with alternative platforms, reinsurers have continued to pursue other defensive strategies which allow for better management of overall operating expenses. Despite this, expense ratios have continued to drift upwards in 2015, partly reflective of higher commissions demanded by cedants and the associated costs of building platforms to support specialty or primary business. Burgeoning regulatory and compliance demands and the cost of modelling add further headwinds to reinsurers' earnings.

A number of larger volume deals have also been completed. This included reinsurers offering bespoke quota share deals with primary companies or taking positions within their primary operations on large broker facilities.

Modest Cat Losses

While insured losses from man-made events increased by around USD 2B to approximately USD 9B in 2015, the insured burden from Natural Catastrophes was unchanged at approximately USD 28B (*Swiss Re Sigma figures*). This gives 2015 the lowest burden from Natural Catastrophes since 2009 and approximately half the USD 55-60B annual average over the previous 10 years. Unsurprisingly therefore, reinsurers are typically reporting Catastrophe losses well within their budgeted loads.

This further period of low catastrophe losses was due in no small part to a quiet North Atlantic windstorm season, attributable to a strong phase of El Niño, with no major hurricanes making U.S. landfall for the 10th successive year. Although storm related flood events caused considerable disruption, particularly in the Carolinas, Texas, Mexico and Central America, overall insured loss from these events was relatively low, albeit concentrated regionally. However, the strong El Niño phase did spark a significantly higher frequency of severe weather events in the North East Pacific, but few hurricanes in this region made landfall. Hurricane Patricia, one of the most intense windstorms ever recorded, did make landfall but fortunately did so in a very sparsely populated region of Mexico which received plenty of advance warning. Also, the fact that Hurricane Patricia narrowly missed areas of significant tourist activity highlights the somewhat fortuitous result of 2015.

Table 2: Major Losses 2015

(Insured loss estimate USD millions)

Large Man-Made Losses		
Date	**Description**	**Estimate**
31 Oct 2015	Disintegration of Metrojet Flight 9268 operated by Russian airline Kogalymavia	NA
13 Aug 2015	Fire at Unipetrol's Polymer Plant in Czech Republic	500
12 Aug 2015	Explosions at Port of Tianjin, China	2,500-3,500
2 Jun 2015	Failure of tendons tethering the Chevron/Statoil/Murebeni BigFoot oil platform	350-500
16 May 2015	Malfunction of Mexican communications satellite on a Proton-M rocket	390
9 May 2015	Crash of Airbus A400M on a test flight near Seville airport.	105
15 Jun 2015	Punch through damage to Troll Solution, a Harren & Partner semi-submersible drillingmaintenance rig in the GoM.	240
19 May 2015	Oil spill after onshore pipeline bursts, near Santa Barbara, California	190
10 Jan 2015	Explosion and fire at an oil refinery, Ohio	180

Natural Catastrophes		
Date	**Description**	**Estimate**
16-25 Feb 2015	Winter storms, North East U.S. and Canada	2,100
7-26 Dec 2014	Storms Desmond and Eva, U.K., Ireland Northern Europe	2,000
23-28 May 2015	Storms, Flooding, Southern U.S.	1,300
7-26 Dec 2015	Typhoon Goni, Philippines, Japan , China	1,200
7-10 Apr 2015	Thunderstorms, U.S.	1,200
30 Mar- 1 Apr 2015	Winter Storm Niklas; Niklas, Germany, Netherlands, Central Europe	1,000
6-13 May 2015	Storms, Texas and Midwest, U.S.	800
16 Sep 2015	Earthquake, Coquimbos Chile	700
20-24 Apr 2015	Tropoical Cyclone Marcia, Australia	700
21-25 Jun 2015	Storms, Midwest U.S.	700

All information is taken from public sources, including Sigma Natural catastrophes and man-made disasters in 2015; PCS, Insurance Insider, Allianz Global Corporate & Specialty, Global Claims Review 2015; Loss estimates as shown here should not be taken as confirmation by Willis Towers Watson of reported losses.

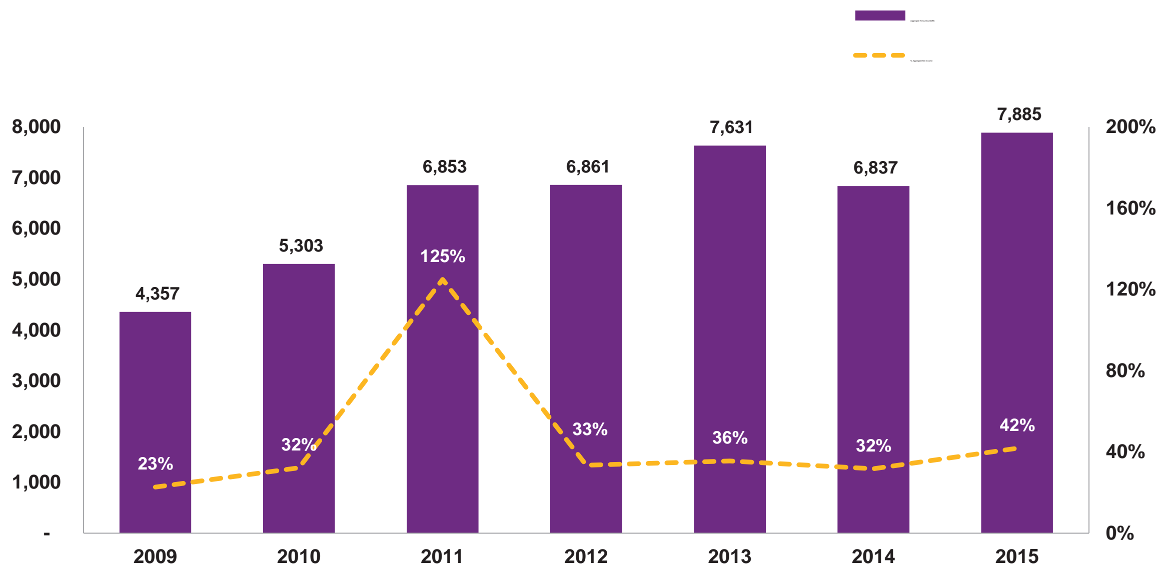
As can be seen from Table 2 above, weather losses were responsible for the majority of catastrophe loss in 2015; winter storms in northeastern U.S. and Canada in February represented the largest natural losses of the year. Later in the year, catastrophe losses were experienced in both northern Europe (especially UK flooding) and Southern USA (strong tornado outbreaks).

The largest insured loss burden from a single event in 2015 is expected to arise from the August 12 explosions at Tianjin. The final tally of insured loss and how it is borne by different insurers and reinsurers is subject to higher than usual uncertainty. A substantial amount of this loss is being reserved for by large primary insurers participating on local risks of multinational programs, particularly those of the motor manufacturers exporting cars into China.

Significant Reserve Releases

As underlying combined ratios have ticked upwards in recent reporting cycles, reinsurers have placed greater reliance on reserve releases to bolster RoEs. Chart 4 on page 13 shows how the SUBSET constituents have generated at least a third of their net income through favorable prior year development.

Chart 4: Reserve Release Development across the SUBSET



We estimate that the aggregate RoE for the SUBSET at full-year 2015 was improved by approximately 3.7 percentage points through contribution from releases from prior year reserves (FY 2014: 3.2 percentage points).

The ongoing question remains of how much longer widespread reserve releases of such magnitude can be sustained. Although pockets of strengthening are likely to become more apparent, we would expect certain larger reinsurers to be better positioned than their smaller counterparts to maintain reserve releases over the longer term, albeit at a reduced level. This is due to their greater ability to maintain rate adequacy and prudent reserve margins during the ongoing soft market.

Modest Investment Returns

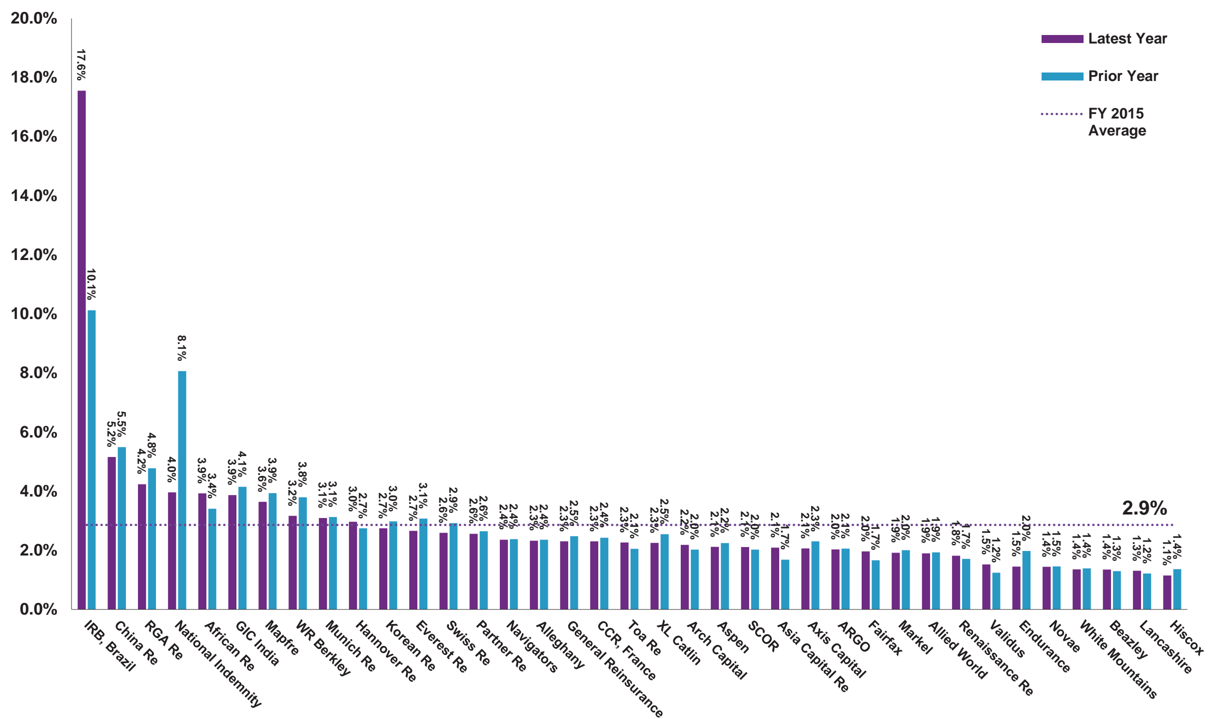
As Chart 5 on page 14 shows, average reported portfolio investment yields remained weak at 2.9% (2014: 2.7%). Many reinsurers, particularly those with slightly longer tails have again experienced a decline in investment yield. This is due in part to much reduced reinvestment rates available when replacing maturing bonds issued before the financial crisis which carried a much higher coupon. In addition, equity markets remained challenging in 2015, with notable deterioration and volatility in China and Europe.

Many had hoped that the Q2 2015 interest rate increase by the U.S. Federal Reserve would herald a normalisation of interest rates after years of record lows. These hopes diminished within a few months in the face of renewed economic fears, falling energy prices and volatility in investment markets. Indeed, key central banks have increased their stimulus packages resulting in further reduction in interest rates. Notably, central banks in Japan and Europe have now moved into negative interest rate territory (joining Denmark, Sweden and Switzerland). Overall, widespread improvement in rates remains elusive. Some low risk portfolios with shorter-tails did see an increase in yield, albeit by very modest amounts.

Reinsurers continue to face the dual challenge of ultra-low interest rates and intense pricing pressures placing a drag on underwriting results. Despite these pressures, the appetite of reinsurers for re-risking investment portfolios in pursuit of enhanced yield has been tempered by recent turbulence in equity, corporate credit and alternative investment markets, particular energy and commodity focused funds. Although disclosure is inconsistent across our portfolio we see little evidence of a widespread re-risking in investment portfolios in the past year. In 2012 and 2013, we did see increased investment risk positions taken by a number of (re)insurers. However, this was largely an incremental and measured re-risking, following a meaningful deleveraging during the financial crisis of 2007/8.

We note that unrealised movements in investment values are not generally reported in income statements; nevertheless these movements do directly affect reported capital. As at year-end 2015, several reinsurers reported significant unrealised losses on fixed income portfolios, mainly due to material deterioration in the second half of the year.

Chart 5: Investment yield for the INDEX (net investment income as % of cash and invested assets)



Note: Amlin full disclosure of net investment income was unavailable at time of reporting

Underwriting Performance

- Despite intense softness in the market, a number of players have managed to achieve some growth in written premium over 2015.
- Pressure continues to mount on underlying accident year combined ratios, in part due to a shift in portfolio mix away from property catastrophe business and into insurance and reinsurance lines with more stable but higher loss ratios and higher expense bases.

For the SUBSET:

- Excluding Natural Catastrophe losses and prior year reserve releases, the accident year combined ratio increased to 94.5% at FY 2015 compared to 91.6% for FY 2014.
- The expense ratio has increased from 32.1% to 33.1% during 2015.

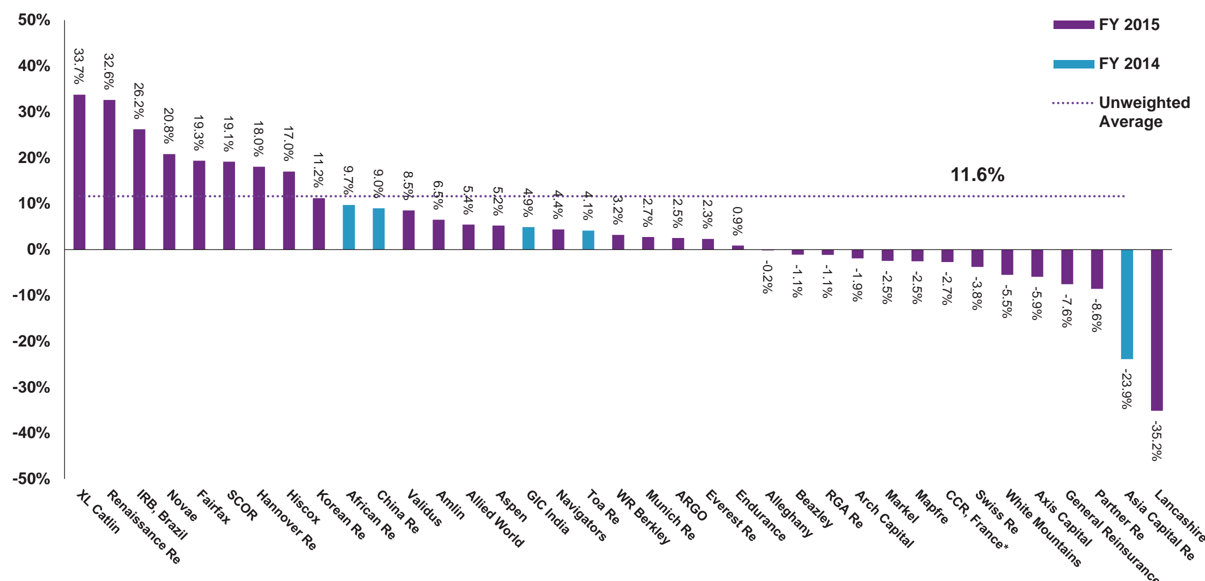
Premium Volumes

In 2015, the aggregate reported net written premium (NWP) decreased by approximately 4.2% for the constituents of the INDEX. We note that an accurate comparison of aggregate premiums written in 2015 is compromised by a material strengthening of the USD against the EUR.

Chart 6 (on page 16) shows that most of the INDEX reported an increase in reported NWP, largely as a result of:

- USD strengthening which materially impacted those that report in EUR (e.g. three quarters of SCOR's growth relates to FX movement, with the balance in its Specialty platforms and in its insurance solutions business; half of Hannover Re's increase relates to currency changes, with Specialty Re and Life Re a significant factor too);
- Portfolio rebalancing and development (e.g. Swiss Re wrote more Proportional and more U.S. Casualty business);
- Platform build-out and investment. Novae (U.S. Property Facilities and U.S. D&F) and Hiscox (Hiscox USA core professional liability insurance and small commercial products) reported double digit growth, largely through recent investment in underwriting platforms;
- Asian and Emerging markets. Chinese reinsurance volumes continued to grow, but the introduction of C-ROSS in 2016 will likely reduce cessions to offshore reinsurers. This is due to the higher associated capital requirements under C-ROSS for companies which cede to offshore rather than domestic reinsurers. This effect has so far been modest as several start-up onshore reinsurers are yet to commence underwriting. Also, the domestic insurers will benefit significantly from a reduced capital charge for Motor Insurance business, which will significantly reduce premium flows into global reinsurers that had previously participated on large Quota Share treaties, including the 'big four' Europeans;
- To the right of the graph are a number of markets that report in USD, particularly those with large European operations, whose reported revenues are affected by the weakening of the Euro through 2015.

Chart 6: Full-year 2015 movement in net written premium



Note: National Indemnity Co is not included within the results above, due to the lack of comparability of the current vs prior year numbers.
** Refers to movement in Gross Written Premium, not Net Written Premiums.*

A pattern has also emerged amongst certain larger reinsurers. Not only have they successfully marketed themselves across the entire books of many cedants (sometimes writing one line at below economic target in order to participate on a larger, portfolio basis) but also in writing very large, one-off deals and bespoke products for insurers more in need of capital or strategic solutions. This is proving a lucrative opportunity for certain reinsurers including Berkshire Hathaway, Hannover Re, Munich Re and Swiss Re.

Combined Ratios

Combined ratios remained robust despite the unrelenting challenge of rate weakening and meagre investment returns.

For the INDEX:

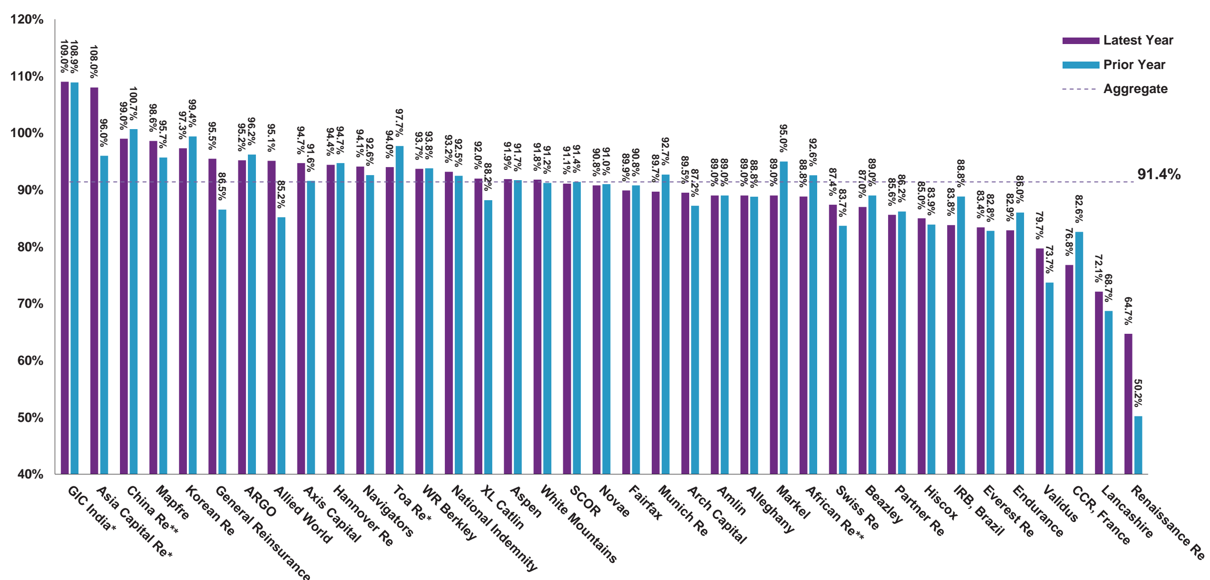
- The reported combined ratio has deteriorated to 91.4% (FY 2014: 90.6%).
- These solid results continue to rely on hefty reserve releases and a further period of benign catastrophe experience.

For the SUBSET:

- The combined ratio has deteriorated to 89.3% (FY 2014: 88.5%), due both to increasing loss ratios and increased expense ratios for at least the 8th consecutive year.
- Excluding Natural Catastrophe losses and the significant benefit provided by reserve releases the underlying combined ratio deteriorated to 94.5% (FY 2014: 91.6%). We believe that this more accurately reflects the earning through several periods of softening market conditions and increased incidence of large man-made losses.
- 2016 results are likely to remain challenged by the continued softening at the January renewal, most notably for International Catastrophe business. Profitability is also likely to be impacted by a shift in certain portfolios to Proportional, Casualty and Specialty business.
- We have also seen only isolated pockets of reserve strengthening for certain casualty classes.

Chart 7 below shows the reported combined ratio for the INDEX constituents in 2014 and 2015. The aggregate combined ratio of just 91.4% for 2015 is very solid at first glance. It is, however, worth analysing this number further to consider how a normal Catastrophe Loss load and elimination of reserve releases would have affected this reported ratio. Unfortunately, not all reinsurers disclose their expected catastrophe load, but clearly the combined ratio would have been much closer to 100% when normalised for these factors. Swiss Re discloses, for example, that its reported P&C Reinsurance combined ratio of 86.0% masks a 'normalised' combined ratio of 99.8% (after excluding reserve releases and allowing for its expected Natural Catastrophe burden). Similarly, Munich Re advises that its reported combined ratio of 89.7% would be normalised to 98.7%. Further, SCOR reports a 91.1% combined ratio, which equates to 95.9% on a normalised basis. For ease of reference, the 2015 budgets for Natural Catastrophe loss (as a percentage of NEP) were: Swiss Re 9.9%, Munich Re 12% (including man-made losses) and SCOR 7%.

Chart 7: Full Year reported combined ratios for the INDEX



Notes - Latest Reported year = Year Ended December 31, 2015 unless otherwise indicated. Combined ratios for Munich Re and Swiss Re are for P&C Re only.
** Latest reported = Year ended March 31, 2015*
*** Latest reported = Year ended December 31, 2014*

In the subsections below we discuss the key components of the combined ratio for the SUBSET:

i. Impact of prior year loss reserve development
ii. Catastrophe loss component
iii. Underlying accident year combined ratio (i.e. excluding the above two components).

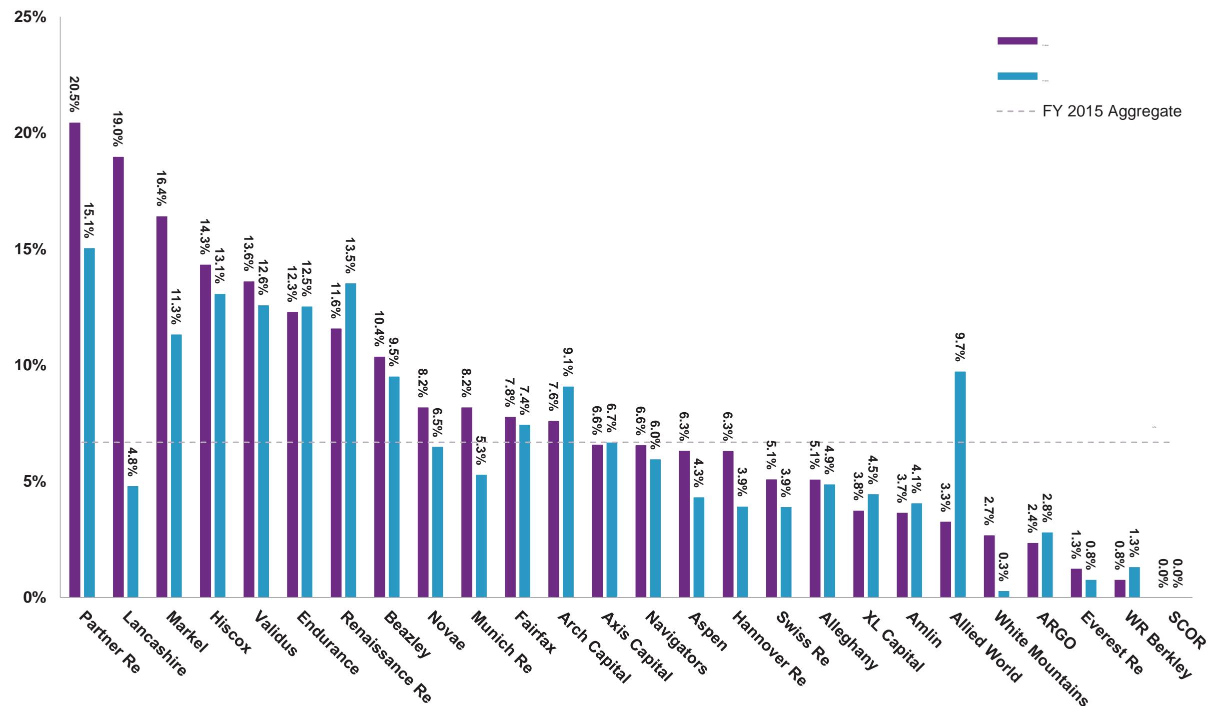
Prior Year Loss Development

In our half-year 2015 review, we flagged that the continuing ability of insurers and reinsurers to report substantial reserve releases will be under threat, particularly from years currently at an early stage of development. However, this does not yet appear to be borne out at an aggregate level for the SUBSET. Indeed, the benefit provided to the aggregate combined ratio by reserve releases increased from 5.7 percentage points in 2014 to 6.7 percentage points in 2015. Chart 4 on page 13 shows the evolution of this number since 2009, including our estimate of the contribution it provides to post-tax profit. Overall for the SUBSET, we estimate that reserve releases are generating around 42% of net income.

A closer study of results reveals patterns that are slightly more consistent with our expectations. A high level initial review of aggregate reserve development reported within the statutory filings of the U.S. P&C industry offers some indication that releases have decelerated for certain markets. We would note that the effect is not widespread and we see no evidence to suggest that reserves are inadequate.

The Chart below shows the effect of reserve releases on the SUBSET:

Chart 8: Prior year reserve development as % NEP



Note: Mapfre do not disclose prior year loss development, therefore is not included within the chart above; Munich Re and Swiss Re numbers above are in respect of P&C Re only; we have excluded National Indemnity Co and General Reinsurance within the above.

In 2015, the aggregate increase in reserve releases was largely due to an acceleration of releases by a small number of companies, most notably Munich Re and Hannover Re. Significant releases were also made by Markel, Swiss Re and Partner Re. In the case of Markel, its increased reserve release is driven by reinsurance purchased for its Asbestos and Environmental exposures during 2015, allowing it to maintain its reserving confidence level with a smaller required margin to cover volatility. PartnerRe's increased reserve release was largely driven by its Global Specialty segment which provided strong contributions from its Marine, Specialty Casualty, Energy, Aviation and Space lines of business as a result of strong actual-versus-expected loss experience. With the exception of motor, Swiss Re benefited from favourable reserve development for most classes as well as a one off commutation which supported Casualty reserve releases. For both Hannover Re and Munich Re, it is likely that confidence levels are at the high end of expectations for accounting purposes. Moreover, their German GAAP Equalisation Reserves are at a high level relative to the permitted maximum (determined by a formula which recognises underwriting volatility over a 15 year reference period). In 2017, the 2001 record catastrophe year will drop out of the calculation which should reduce the maximum permissible level of equalisation reserve that can be carried. Hannover Re and Munich Re have simply maintained their reserve confidence levels in 2015, retaining the possibility of future reserve releases to offset softening conditions. Overall, the increase in reserve releases was driven in large part by some specific issues which were somewhat unrelated to underlying experience.

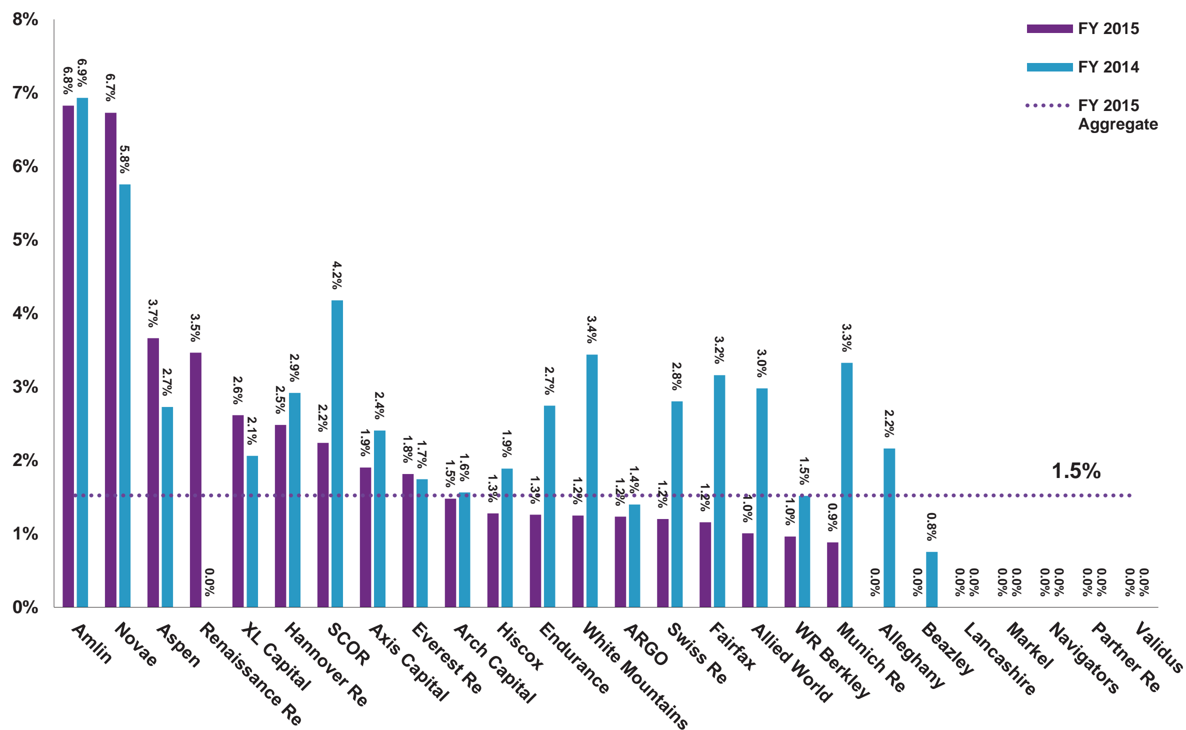
2015 again saw an increased number of pockets of adverse reserve developments, often on a company-specific or event-specific basis. We also note increasingly adverse developments and comments relating to Motor business in the USA as well as adverse development for Asbestos-exposed prior years.

Aggregate data for 2015 filed by U.S. insurers illustrates quite a marked trend in adverse development in U.S. Motor reserves. Each of the 2010-2014 accident years has developed adversely in each subsequent financial year. Additionally, adverse development was experienced for old year 'occurrence-based' Product and Other Liability accounts as well as for Private Passenger Auto business.

Catastrophe Losses

2015 continued the recent trend of below average large Natural Catastrophe losses. The approximate total estimated cost of global insured Natural Catastrophe losses in 2015 was broadly unchanged at approximately USD 28B. This was around half the historical average of approximately USD 55-60B experienced over the past 10 years. Chart 9 below, shows that the impact of Catastrophe losses on the combined ratio of the SUBSET was 1.5 % in 2015 (2014: 2.6%), well below the budgeted Natural Catastrophe load. Insurers and reinsurers alike are aware of the fortuitous nature of such low loss activity and appear to be mindful of a developing La Niña event in 2016.

Chart 9: Catastrophe loss component of combined ratio as % NEP



Note: Munich Re and Swiss Re are P/C Reinsurance segments only. Generally, the above data points represent Natural Catastrophe losses only, rather than large man-made losses, but some reinsurers' reports do not disclose the breakdown of each.

As Table 2 (page 12) shows, the contribution from man-made large losses was significant at USD 9B, up by USD 2B from 2014. The increased amount can be attributed to the explosions at the port of Tianjin in August. Large losses from this event have been reported by European insurers which include Zurich, Axa, Allianz, Swiss Re and Munich Re. However, there has been little loss disclosure from many of the domestic participants at this stage, other than from China Re, which leaves considerable uncertainty around the ultimate losses which will result from Tianjin. A number of

analysts have also questioned whether the recent increased frequency of medium sized man-made losses is reflective of a new normal. In November, Hannover Re announced that it was increasing its own budget for these losses going forward.

Accident Year Performance, ex Catastrophe

For the SUBSET, excluding Natural Catastrophe losses and significant reserve releases, the accident year combined ratio at FY 2015 was around 2.9 percentage points higher higher at 94.5% (see Chart 10 below). Only Markel, Beazley, Amlin, WR Berkley, Argo and Endurance showed an improvement, all by modest amounts.

In part, the increase is due to the greater burden of large man-made losses (see Table 2 on page 12). As noted above, results also faced the headwinds of increased expenses, softening pricing and a shift to lower margin portfolios with a lesser Catastrophe element. Renaissance Re for example reports a significantly higher combined ratio but this is heavily influenced by development costs associated with its Specialty account after its acquisition of Platinum Re.

Adjusting results for a normalised Natural Catastrophe load would clearly illustrate much more marginal underlying performance. Further adjusting on the assumption that prior year reserve releases continue, albeit at a slightly lower pace, the combined ratio would be much closer to 100%.

Chart 10: Ex Catastrophe accident year combined ratios for the SUBSET

	FY 2015	FY 2014
Partner Re	106.1%	101.3%
Markel	105.4%	106.3%
Navigators	100.7%	98.6%
Axis Capital	99.4%	95.9%
Hannover Re	98.2%	95.7%
Hiscox	98.1%	95.1%
Beazley	97.4%	97.8%
Allied World	97.4%	92.0%
Munich Re	97.0%	94.7%
Fairfax	96.5%	95.1%
ARGO	96.3%	97.6%
Arch Capital	95.6%	94.7%
Aspen	94.6%	93.3%
Alleghany	94.1%	91.5%
Endurance	93.9%	95.8%
WR Berkley	93.5%	93.6%
Validus	93.3%	86.3%
White Mountains	93.2%	88.1%
XL Catlin	93.1%	90.6%
Novae	92.3%	91.7%
Swiss Re	91.3%	84.8%
Lancashire	91.1%	73.5%
SCOR	88.9%	87.2%
Amlin	85.8%	86.1%
Everest Re	82.8%	81.8%
Renaissance Re	72.8%	63.7%

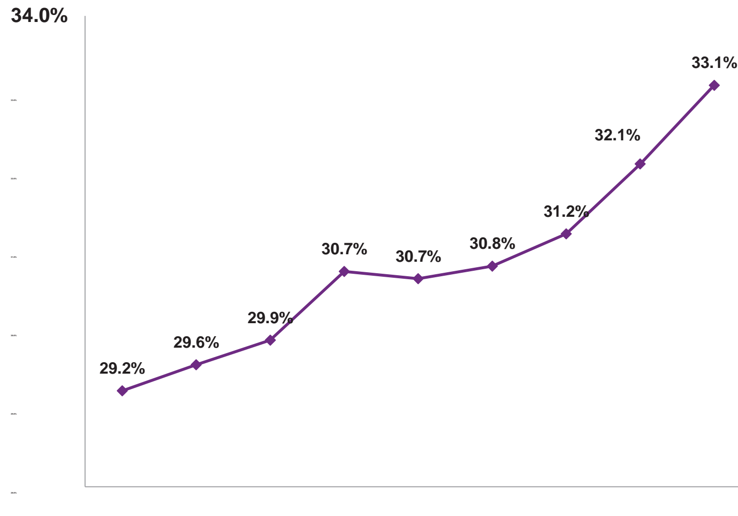
FY 2015 Aggregate: 94.5%

Note: Munich Re and Swiss Re are P/C Reinsurance segments only. Generally, the above data points represent Natural Catastrophe losses only, rather than large man-made losses, but some reinsurers' reports do not disclose the breakdown of each.

Expense Ratios for the SUBSET

From 2007-15, the aggregate expense ratio for the SUBSET has risen by c.4 percentage points to 33.1% in FY 2015.

Chart 11: Weighted Average Expense Ratio



Source: SNL Financial and Willis Towers Watson Market Security

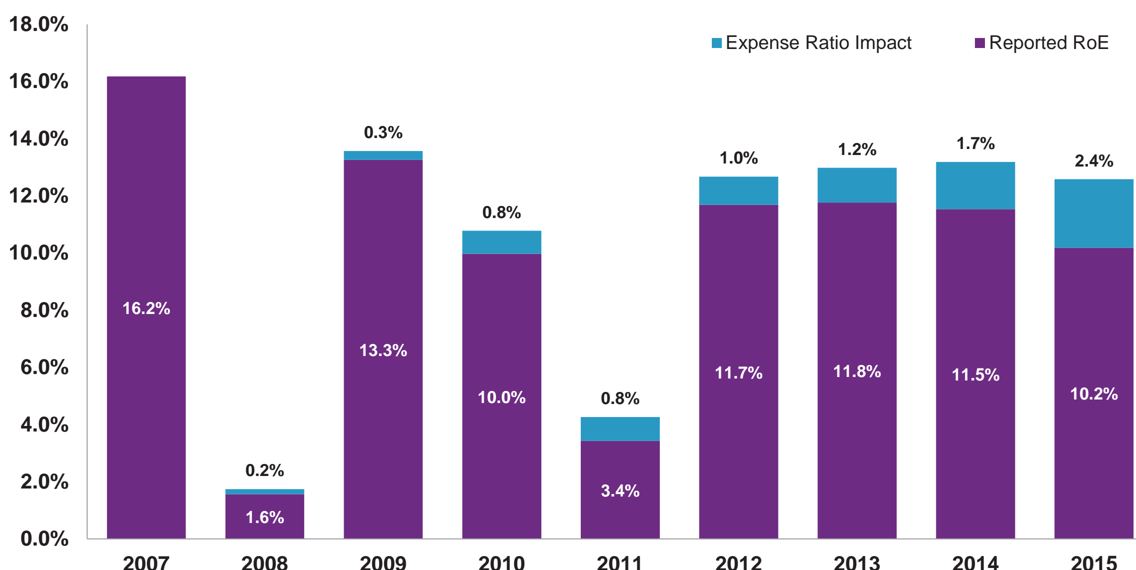
Whilst we have not conducted a by line analysis of expenses, a number of factors have contributed to this rise in expense ratios in recent years. This has included:

- Investment in new underwriting platforms, particularly for Specialty Insurance;
- Investment in expansion into new geographies as reinsurers continue to seek additional diversification;
- Higher ceding commissions demanded by cedants;
- Increased expenditure associated with strengthened regulatory and governance frameworks;
- Increased expenditure on hazard modelling.

Overall, expense ratios have been increasing due to this upward pressure on expenses as well as further reduction in reinsurer premiums (the denominator of the expense ratio). Demand for primary insurance remained stagnant due in part to the relative lack of economic growth in Western markets since 2007. In response, primary insurers with large capital bases continued to retain more of their own business as part of their efforts to achieve cost savings through reduced reinsurance expenditure. For reinsurers, the challenge of achieving profitable growth was further exacerbated by the unprecedented surge in alternative capacity.

As shown in Chart 12 on page 22, our review of expense ratios reveals that if each of the constituents of the SUBSET had been able to maintain an expense ratio at their respective 2007 levels, the aggregate RoE of 10.2% reported in 2015 would have been approximately 2.4 percentage points higher. This increase in expense ratios has provided a significant drag on combined ratios during 2007-15. Indeed, improvement in combined ratios during this period were achieved by only Hannover Re (4.6ppt) and Everest Re (1.1ppt).

Chart 12: Impact of Expense Ratio Movement on RoE (Base Year – 2007)



Source: SNL Financial and Willis Towers Watson Market Security

As can be seen above, most of the constituents of the SUBSET have seen an uptick in expense ratios over the past year. However, we would note that comparison across all of the SUBSET requires some caution given the significant differences in portfolio mix. A significantly increased 2015 expense ratio was reported by both Lancashire (7.6 ppt) and Swiss Re (4.3 ppt). The former attributed this increase to a one-off additional compensation expense, while the latter reports a 13% increase in underwriting acquisition costs in addition to a reduction in its reported net premiums.

Appendices

1. Full Year 2015 results summary for the Willis Reinsurance Index

WILLIS TOWERS WATSON - MARKET SECURITY GROUP

Group Consolidated Full Year 2015 Results Table

Consolidated Data (Millions)	Notes	Ccy	Shareholders' Equity				Net Written Premium				Net Income				% Sh Equity*		Combined Ratio			
			Dec-31 2015	Dec-31 2014	Dec-31 2013	Δ FY	FY 2015	FY 2014	FY 2013	Δ FY	FY 2015	FY 2014	FY 2013	Δ FY	FY 2015	FY 2014	FY 2015	FY 2014	FY 2013	Δ FY
African Re		USD		737	678			624	569			119	85			16.8%		88.8%	92.6%	
Alleghany		USD	7,555	7,473	6,924	1.1%	4,489	4,498	4,287	-0.2%	560	679	628	-17.5%	7.5%	9.4%	89.0%	88.8%	90.1%	+0.2%
Allied World		USD	3,533	3,778	3,520	-6.5%	2,448	2,322	2,120	5.4%	84	490	418	-82.9%	2.3%	13.4%	95.1%	85.2%	86.2%	+9.9%
Amlin		GBP	1,846	1,783	1,678	3.6%	2,445	2,296	2,126	6.5%	237	237	299	0.0%	13.0%	13.7%	89.0%	89.0%	86.0%	0.0%
Arch Capital		USD	6,205	6,130	5,647	1.2%	3,818	3,892	3,351	-1.9%	538	834	710	-35.6%	8.7%	14.2%	89.5%	87.2%	85.9%	+2.3%
ARGO		USD	1,668	1,647	1,563	1.3%	1,402	1,368	1,351	2.5%	163	183	143	-10.9%	9.8%	11.4%	95.2%	96.2%	97.5%	-1.0%
Asia Capital Re	(2)	USD		844	819			373	490			20	24			2.4%		108.0%	96.0%	
Aspen		USD	3,419	3,419	3,300	-0.0%	2,646	2,515	2,300	5.2%	323	356	329	-9.2%	9.5%	10.6%	91.9%	91.7%	92.6%	+0.2%
Axis Capital		USD	5,867	5,821	5,818	0.8%	3,675	3,907	3,928	-5.9%	642	811	727	-20.9%	11.0%	13.9%	94.7%	91.6%	91.0%	+3.1%
Beazley		USD	1,441	1,343	1,339	7.4%	1,713	1,733	1,677	-1.1%	249	218	264	14.3%	17.9%	16.2%	87.0%	89.0%	84.0%	-2.0%
CCR, France	(1)(4)	EUR	2,085	1,969	1,875	5.9%	1,287	1,323	1,256	-2.7%	216	193	210	11.9%	10.7%	10.0%	76.8%	82.6%	78.3%	-5.8%
China Re	(1)(6)	CNY		53,893	45,294			69,561	63,818			5,404	3,396			10.9%		99.0%	100.7%	
Endurance		USD	4,856	3,185	2,887	52.5%	1,950	1,934	2,049	0.9%	344	348	312	-1.2%	8.6%	11.5%	82.9%	86.0%	90.2%	-3.1%
Everest Re		USD	7,609	7,451	6,968	2.1%	5,378	5,257	5,005	2.3%	978	1,199	1,259	-18.5%	13.0%	16.6%	83.4%	82.8%	84.5%	+0.6%
Fairfax		USD	10,287	9,526	8,353	8.0%	7,521	6,302	6,036	19.3%	568	1,633	-573	-65.2%	5.7%	18.3%	89.9%	90.8%	92.7%	-0.9%
General Reinsurance**		USD	11,051	11,707	11,562	-5.6%	548	593	543	-7.6%	571	538	931	6.0%	5.0%	4.6%	95.5%	86.5%	75.9%	+8.9%
GIC India	(1)	INR		419,405	323,821			138,570	132,126			26,938	22,532			7.2%		109.0%	108.9%	
Hannover Re	(1)	EUR	8,068	7,551	5,888	6.9%	14,850	12,581	12,420	18.0%	1,151	986	895	16.7%	14.7%	14.7%	94.4%	94.7%	94.9%	-0.3%
Hiscox		GBP	1,528	1,453	1,409	5.1%	1,572	1,343	1,371	17.0%	210	216	238	-2.9%	14.1%	15.1%	85.0%	83.9%	83.0%	+1.1%
IRB, Brazil	(3)(6)	BRL	3,175	2,954	2,668	7.5%	2,457	1,946	1,508	26.2%	764	602	349	27.0%	24.9%	21.4%	83.8%	88.8%	89.2%	-5.0%
Korean Re	(1)(7)	KRWbn	2,015	1,839	1,451	9.6%	4,369	3,929	2,897	11.2%	186	116	129	60.1%	9.7%	7.1%	97.3%	99.4%	98.4%	-2.1%
Lancashire		USD	1,220	1,357	1,460	-10.1%	482	743	558	-35.2%	181	229	223	-21.0%	14.1%	16.3%	72.1%	68.7%	70.2%	+3.4%
Mapfre	(3)	EUR	8,574	9,153	7,834	-6.3%	17,988	18,458	18,002	-2.5%	709	845	791	-16.1%	8.0%	10.0%	98.6%	95.7%	96.1%	+2.9%
Markel		USD	7,834	7,595	6,674	3.2%	3,819	3,917	3,237	-2.5%	583	321	281	81.4%	7.6%	4.5%	89.0%	95.0%	97.0%	-6.0%
Munich Re	(1)(9)	EUR	30,668	30,033	25,983	2.1%	48,505	47,225	49,404	2.7%	3,107	3,153	3,313	-1.5%	10.2%	11.3%	89.7%	94.5%	94.5%	-4.8%
National Indemnity**		USD	89,829	93,998	97,226	-4.4%	18,457	26,655	5,650	-30.8%	7,271	12,007	8,391	-39.4%	0.08	12.6%	93.2%	92.5%	75.5%	+0.7%
Navigators		USD	1,096	1,027	902	6.7%	1,044	1,000	888	4.4%	81	95	63	-15.0%	7.6%	9.9%	94.1%	92.6%	94.8%	+1.5%
Novae		GBP	350	336	313	4.2%	638	528	497	20.8%	52	50	32	2.6%	15.0%	15.5%	90.8%	91.0%	90.3%	-0.2%
Partner Re		USD	6,901	7,049	6,710	-2.1%	5,230	5,720	5,397	-8.6%	104	1,055	664	-90.1%	1.5%	15.3%	85.6%	86.2%	85.3%	-0.6%
Renaissance Re		USD	4,732	3,866	3,904	22.4%	1,416	1,068	1,204	32.6%	431	533	691	-19.1%	10.0%	13.7%	64.7%	50.2%	43.8%	+14.5%
RGA Re	(1)(3)	USD	6,135	7,023	5,936	-12.6%	8,571	8,670	8,254	-1.1%	502	684	419	-26.6%	7.6%	10.6%				
SCOR		EUR	6,330	5,694	4,940	11.2%	12,077	10,138	9,130	19.1%	642	512	549	25.4%	0.11	9.6%	91.1%	91.4%	93.9%	-0.3%
Swiss Re	(10)	USD	33,517	35,930	32,952	-6.7%	30,442	31,640	30,478	-3.8%	4,597	3,500	4,444	31.3%	13.2%	10.2%	87.4%	85.4%	85.3%	+2.0%
Toa Re	(2)(6)	JPYbn		199	160			209	201			6	9			3.2%		94.0%	97.7%	-94.0%
Validus		USD	3,639	3,588	3,704	1.4%	2,229	2,054	2,029	8.5%	375	481	533	-22.1%	10.4%	13.2%	79.7%	73.7%	71.2%	+6.0%
White Mountains	(8)	USD	3,913	3,997	3,906	-2.1%	2,004	2,112	1,976	-5.1%	298	313	322	-4.8%	7.5%	7.9%	91.8%	91.2%	88.0%	+0.6%
WR Berkley		USD	4,600	4,590	4,336	0.2%	6,190	5,997	5,500	3.2%	504	649	500	-22.4%	11.0%	14.5%	93.7%	93.8%	95.1%	-0.1%
XL Catlin		USD	11,677	10,034	9,998	16.4%	7,951	5,945	6,199	33.7%	1,207	188	1,060	540.9%	11.1%	1.9%	92.0%	88.2%	92.5%	+3.8%
Aggregate***		USD	307,143	334,373	323,771	-8.1%	237,534	265,419	254,095	-10.5%	28,568	35,946	33,016	-20.5%	8.9%	10.9%	91.4%	90.6%	90.3%	+0.8%

Key Notes:

* *Full year Net Income as % of Average Shareholders Equity.*

** *General Reinsurance and National Indemnity: Numbers are sourced from unconsolidated financial statements*

*** *Aggregate = Total of numbers reported, converted to USD at exchange rates prevailing at end of reporting period.*

The following groups have been excluded from the Summary table and the Aggregate calculations, above:

> ***Platinum:*** *Renaissance Re completed the acquisition of Platinum on March 2, 2015;* ***Catlin:*** *XL Capital completed the acquisition of Catlin on May 1, 2015.*
>
> ***Brit:*** *Fairfax completed the acquisition of Brit on June 5, 2015;* ***HCC****: Tokio Marine completed the acquisition of HCC on October 27, 2015.*
>
> ***Montpelier Re****: Endurance completed the acquisition of Montpelier Re on July 31, 2015.*

(1) NWP includes both Life and Non-Life business.

(2) Asia Capital Re, GIC India, Toa Re: Each has a March 31 financial year end. Data for the year ended March 31, 2015 is included in the column headed Dec 31, 2014 (and similar for prior years).

(3) Figures for net premiums are Net Earned Premium, not Net Written Premiums.

(4) CCR: Figures for net premiums are Gross Written Premiums, not Net Written Premiums.

(5) GIC India: Shareholders Equity is subject to reserve adjustment by Willis Market Security, as opposed to stated figure reported by the company.

(6) Combined ratios are Willis Market Security Calculations.

(7) Korean Re: During 2013 the company changed year end from Apr 30 to Dec 31. The 9 month period to Dec 31, 2013 is included in our 2013 columns.

(8) White Mountains: NWP and Combined Ratios are Willis Market Security calculations based on Divisional reporting of OneBeacon, Sirius and HG Global/BAM.

(9) Munich Re: Combined Ratios are in respect of the P&C Reinsurance division only. Shareholders' Equity at Dec 31, 2013 and Dec 31, 2014 are as originally reported.

(10) Swiss Re: Combined Ratios are in respect of the P&C Reinsurance division only.

The information compiled in this report by Willis Towers Watson is compiled from third party sources we consider to be reliable

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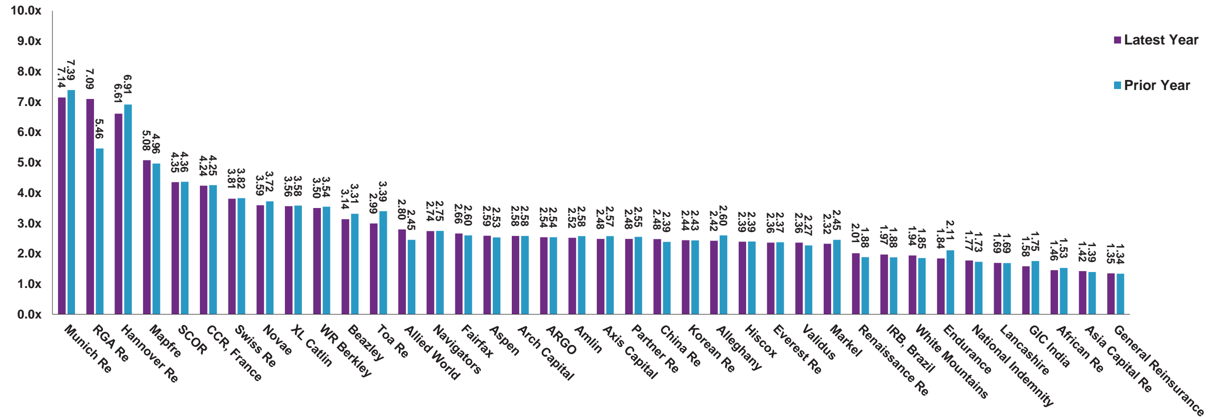
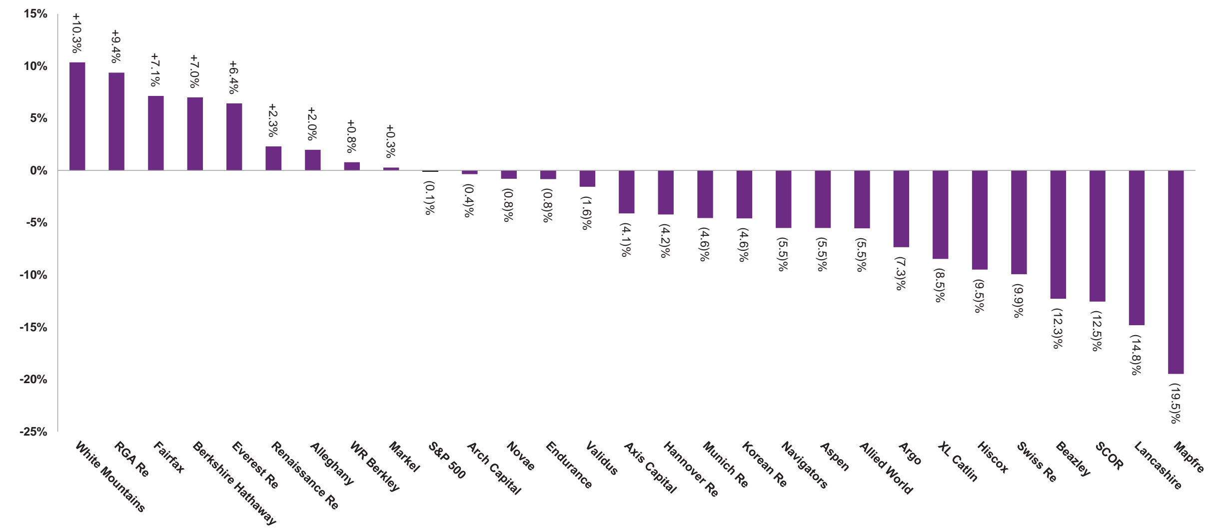
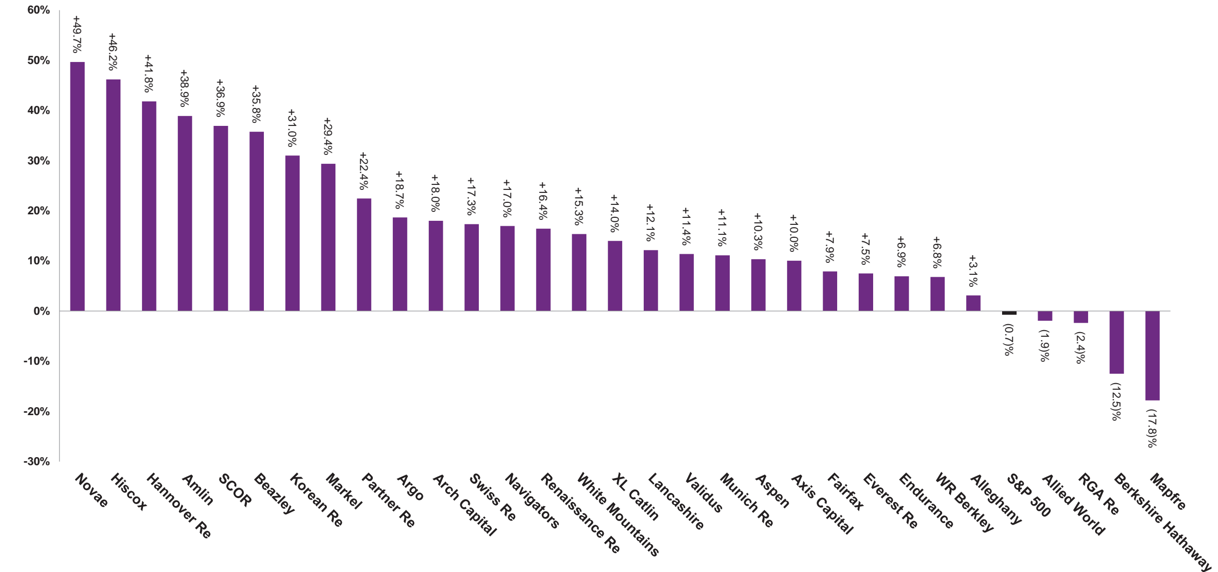
2. Investment leverage: cash & invested assets / shareholders equity



3a. Share price development - YTD 2016- Jan 1, 2016 to April 11, 2016



3b. Share price development - Jan 1, 2015 to Dec 31, 2015



The Reinsurance Market Report

The Willis Re Reinsurance Market Report is a half yearly publication providing an aggregate analysis of the size and performance of the global reinsurance market. The report is based on the Willis Reinsurance Index group of reinsurance companies from across the globe.

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