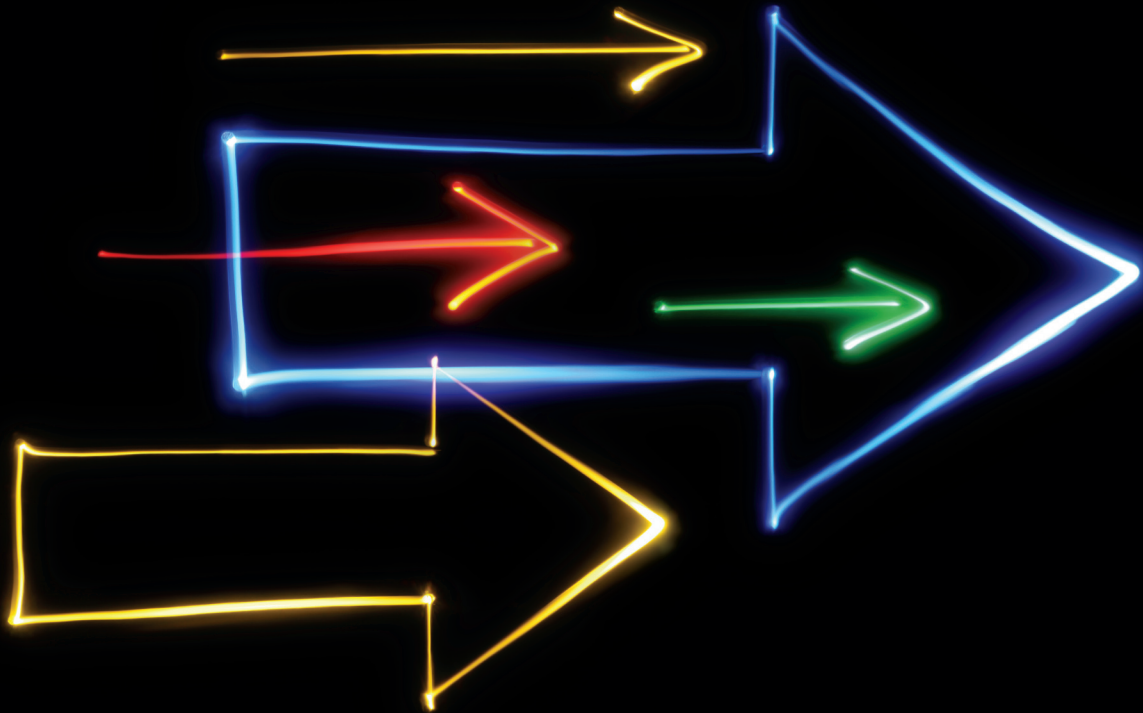


MANAGING EXTREMES

Willis Re

# 1ST VIEW

1 January 2011



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## 1st View

This thrice yearly publication delivers the very first view on current market conditions to our readers. In addition to real-time Event Reports, our clients receive our daily news brief, *Willis Re Rise 'n shinE*, periodic newsletters, white papers and other reports.

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# Keep calm and carry on

As the 2010 underwriting year draws to a close, the reinsurance market is breathing a collective sigh of relief. The full year results are turning out to be much better than initially feared after a very poor 1st quarter. Although the reinsurance market's underwriting results are down compared to the exceptional 2009, taken together with further recoveries in investment returns and continuing strong reserve releases, the industry, as a whole, is currently overcapitalized.

Against this background, it is widely anticipated that many reinsurers will seek to implement more aggressive capital management strategies in the 1st quarter 2011 through share repurchases, dividend payments and other similar techniques. While Merger and Acquisition activity appears to be increasing, the number of completed deals remains modest due to significant execution hurdles.

The global outlook for 2011 is challenging. Strong premium growth in emerging markets is insufficient to offset continuing sluggish premium growth in the mature markets. Despite predictions, the pricing gap in most classes between reinsurance and primary business shows no signs of narrowing. As a result, primary carriers are purchasing less, particularly in casualty lines, and reinsurers are seeing reducing premium volumes.

The price reductions at 1 January 2011 are in line with expectation, and although they are subject to much variation by class and territory (detailed later in this report), they averaged from -5% to -10%. We see no discernible impact on pricing from greatly reduced investment returns, even though new cash can only be invested at half the returns available a few years ago.

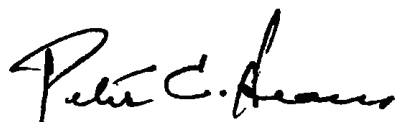
Many commentators had hoped that the forthcoming changes in insurance regulation in non-U.S. markets would bring new opportunities for reinsurers, but we have seen only limited evidence of this at 1 January. We are unlikely to see more significant change until the 1 January 2012 renewal season in the final run up to Solvency II implementation.

In addition to looming regulatory changes, updated catastrophe models showing dramatic changes in modeled loss outputs are presenting an increasingly common challenge. In particular, the forthcoming RMS Version 11.0 release for U.S. Hurricane, revised to take into account inland losses, is resulting in substantial increases. The greatest changes – for Texas and Mid-Atlantic exposures – undoubtedly have helped reinsurers maintain pricing levels in these areas despite great client pressure for reductions following a second loss-free year.

In the Marine and Energy market, the Deepwater Horizon loss has made an impact, though the ultimate loss to the global reinsurance market remains unclear. Unlike most other classes, pricing for Marine has been flat, although marine accounts which include energy exposures or pure energy accounts are seeing significant rises.

As anticipated, the catastrophe bond market has rebounded in terms of aggregate capacity issued and number of deals executed. As investor demand and understanding increase, the cost gap between catastrophe bonds and traditional reinsurance has narrowed.

The global reinsurance industry faces tough prospects for 2011. Thin investment returns and declining back year releases provide little cover for declining underwriting returns. Consequently, some reinsurers' managers are lowering their guideline returns for 2011. In such an environment, any shock to reinsurers' capital base, either through underwriting losses or other capital events, is likely to result in a sharper reaction from reinsurers than primary companies will find easy to bear.



Peter C. Hearn  
Chief Executive Officer, Willis Re  
1 January 2011

# Casualty – territory and comments

## Australia

- Medical malpractice rate movements are in line with exposure growth
- General casualty renewal saw modest rate decreases

## Europe – General / Employers' / Professional Liability

- Reinsurance market harder than expected prior to renewal season
- Rate reductions were still achievable
- Some attempts by reinsurers to re-underwrite long standing market practices such as the structuring of Master Covers and the way they are protected under treaties
- Continued focus on EU Environmental Directive and Financial Institutions
- European clients not taking advantage of newer London market reinsurance capacity
- Impact of lower investment return being used by reinsurers to argue for rate increases

## Europe – Motor

- Reinsurance market harder than expected prior to renewal season
- Original market competitive in many territories
- Rate reductions, though, are still achievable under pressure
- Reinsurers remain concerned about bodily injury inflation in major territories
- Some proposals to change the index used in Index Clauses (particularly Germany) but not supported by rest of market
- European clients not taking advantage of newer London market reinsurance capacity

## France – General / Employers' / Professional Liability

- General Third Party Liability and Professional Indemnity pricing stable even with lower investment income
- Medical Malpractice price increasing slightly, despite increased capacity
- Pricing for Construction stable. Capacity increases for the high value projects

## Germany – General / Employers' / Professional Liability

- Low interest rates are an issue
- On the back of good results, slight softening in mainstream areas

## Germany – Motor

- After years of decline, expectation for an increase in original estimated premium incomes
- Low interest rates an issue
- As original premiums increase, trend to stable reinsurance rates

## Italy – General / Professional Liability

- Focus on a more disciplined approach, with particularly selective underwriting of Medical Malpractice; some new companies are entering the market on Medical Malpractice due to attractive terms
- On pro rata Medical Malpractice, reinsurers are preferring to support direct companies with strong underwriting expertise and claims management efficiency; new interest from selected players
- For XL programs, slight tension due to increase of bodily injury claims on the basis of new indemnification tables

## Italy – Motor

- Market is concerned about new indemnification table for bodily injury losses; original tariffs increasing by 10%/15% year on year, bringing current 2011 expected combined ratio below 100%
- XL program structures basically unchanged; uncertainty about indemnifications and impact of V Directive creating a wide range of pricing
- Existing pro rata treaties generated substantial losses to reinsurers in the last 2 to 3 years and hardening of terms has been seen

## Nordic Countries – General / Professional Liability

- Despite passive pre-renewal messages from reinsurers, the reinsurance market was probably harder than expected
- In general a flat renewal
- Newer capacity in the London market yet to be fully utilized, existing reinsurer relationships remain strong

## United Kingdom – Motor

- Layers in excess of £5 million are the main area of concern for reinsurers primarily due to increase in bodily injury claims and issues related to periodical payment orders (PPOs)
- The attachment point of a program has a significant bearing on the overall rate movement

## United States – General / Professional Liability

- Primary market pricing continues to decline driven by capacity and favorable reported results
- Reinsurance market capacity for all Professional Liability remains stable, with few new entrants and existing markets remaining committed to well managed clients
- Plentiful capacity remains available for Errors and Omissions Lines, more limited capacity available for writers of Public Company Directors & Officers Liability
- Ceding companies showing increased appetite to retain risk, predominantly with quota share buyers increasing retention
- Pro rata pricing, terms and conditions remain stable for well managed Clients
- Greater interest in risk excess and systemic clash structures

## Global – General / Employers' Liability

- General and Employers Liability are renewing either unchanged or with small concessions from reinsurers
- Occasionally large programs with very strong track records have seen larger reductions
- Reinsurer awareness of systemic exposures is increasing
- The Reinsurer appetite for General Liability remains strong

## Global – Professional Indemnity

- Plentiful supply of capacity for writers of both Global Professional Liability and Global Management Liability
- Reinsurers expressing some concern over final impact of recession-related claims in major territories, especially for Financial Institutions' Professional Liability Lines
- Reinsurers continuing to support well-managed companies that are perceived to be managing the cycle, with stable pricing and capacity
- Buyers' appetite / ability to retain additional risk somewhat tempered by challenging primary market conditions
- Increased focus by both cedants and reinsurers on the impact of sector / event risk, e.g., U.K. mortgage fraud, Madoff-related litigation
- Reinsurers are recognizing "trading balances," on individual programs and are rewarding established clients who have positive balances with consistent pricing methodology and only moderate price increases

## Rates

Casualty rates				
TERRITORY	Pro rata commission	XL – No loss emergence % change	XL – with loss emergence % change	
Australia	N/A	0% to -10%	0% to +5%	
Europe – General / Employers' / Professional Liability	0%	0% to -10%	0% to -5%	
France	0%	0% to +5%	+10 to +15%	
Germany – Motor	0%	0%	0%	
Germany – General / Employers' / Professional Liability	0%	0% to -5%	N/A	
Italy – General / Employers' / Professional Liability	0%	-5%	+5%	
Italy – Motor	-5%	0%	+10%	
Nordic Countries	0%	0% to -7.5%	0% to -5%	
South Africa – General / Employers' / Professional Liability	0%	+5%	+10% to +15%	
Spain – Motor	N/A	-5%	N/A	
United Kingdom – Motor	0%	0% to -5%	+10% to +15%	
United States – General / Employers' / Professional Liability	0% to +2%	0% to -9%	0% to +5%	

## Specialties – line of business & comments

### Aerospace – Global

- Aviation XL pricing subject to circa -5% to -10% reduction on programs unaffected by losses and stable exposure profiles
- Proportional treaty market resisting pressures from clients for higher deductions
- Underlying market affected by abnormal amount of Hull-related loss activity
- Dulles Jet Centre loss largest General Aviation loss to affect that market and mainstream core General programs at circa USD 240M, at present.
- Upswing in U.S. General Aviation risk excess pricing anticipated in 2011
- Aviation industry loss warranty pricing 0% to -5%
- Overall proportional capacity for XL programs is at a level which is surplus to demand

### Engineering – Global

- Mid-size Construction losses have not had a material impact on reinsurance pricing
- Proportional treaty terms have seen selective increases in both treaty capacity and ceding commission
- New technically-resourced capacity is entering the Engineering and Construction reinsurance market
- Reinsurers looking to maintain their support of global clients
- Reinsurers fear of losing renewable income overriding “pricing concerns”
- 2010 Willis Engineering Rating Index (WERI) forecasting no sign of improvement in underlying rating levels for 2011



## Healthcare – United States

- Frequency of loss levels remain historically low and severity trend still manageable
- While due to lower aggregate losses, prices have been continually falling for the last few years, 2010 witnessed a slowing or flattening of these decreases
- Loss reserve releases continue to ensure that calendar year results remain, on the whole, profitable
- It is highly likely that reserve releases will continue into 2011 and beyond, thus further suppressing rate increases
- Perhaps the biggest challenge for Medical Professional Liability practitioners and insurers alike is trying to understand and predict the final shape of the healthcare reforms and to prepare their businesses for them

## Marine

- Traditional placement of Marine and Energy combined covers as compared to pure Marine covers is resulting in two totally different approaches
- Marine-only covers still benefitting from excess capacity, and with no sign of movement in original Hull and Cargo rates leading to a further widening in reinsurance and primary rating levels, buyers have managed to hold reinsurance rates flat
- Number of small losses on Marine and Cargo accounts during 2010 have largely fallen into buyers' net retentions with insufficient impact to reinsurance programs to move rates
- Following the Deepwater Horizon loss, the Offshore Energy market is seeing large primary rate increases which are feeding through to unchanged pro rata commissions and large increases in XL rates even of loss-free programs
- Capacity for Offshore Energy very tight on a global basis, not just in the Gulf of Mexico as in previous years
- No sign of any new reinsurance capacity entering the market or any significant changes to terms and conditions on cover
- Buyers have kept their retentions largely unchanged, with a few exceptions on Energy-related accounts where reinsurers have been able to force some retention increases
- Sudden Oil Spill Consortium of Munich Re, Willis Re, Aon Benfield and Guy Carpenter has been developed in response to the issues arising from the Deepwater Horizon loss

## Medical Excess – United States

- Healthcare reform has increased demand for higher limits of cover with the removal of insurance maximums and caps
- Higher limits without maximums and caps in turn have sparked a new supply of capacity providing unlimited excess protection
- The advent of 3 or 4 new markets in this sector has increased competition
- Renewal rates barely keeping track with Medical inflationary trends

## Non-Marine – Retrocession

- Catastrophe Retro has proved difficult again due to the disconnect between clients' expectations and what markets are charging; continuing trend towards combined territorial covers rather than the pillared approach
- Catastrophe on direct and facultative buyers tending to retain more / buy less as original exposures are reducing due to rate inadequacy leading to buyers reducing their overall portfolios
- Risk retro still a relatively small market, but it has increased slowly due to the fact that generally natural perils are still excluded; pricing is becoming more competitive
- Coverage of natural catastrophe on direct and facultative risk portfolios difficult
- Pro rata retro treaties remain mainly consistent in terms and conditions

## Personal Accident / Life Catastrophe – United States

- Multiple new entrants into the Accident / Life catastrophe market during 2010
- No catastrophe events of any magnitude to report
- Rates under significant pressure as a result of excess capacity

## Political Risk – Global

- Majority of buyers increasing their risk and country limits
- Buyers looking to tap into the increased capacity, by purchasing more pro rata, rather than XL programs for this year to manage their fixed costs more effectively
- Increased reinsurance capacity available from both existing and new reinsurers, but leading capacity still relatively limited
- With notable redundancy in clients' original loss reserves / advices from 2007 and 2008 years of account, clients' expectations were for reductions in overall reinsurance spends – with improved terms in respect of commissions & profit commission provisions on proportional protections
- Reinsurers are acknowledging improvements although they believe increased terms are slightly premature, but as newer and cheaper capacity is now available, limited improvements in terms are being secured from incumbent reinsurers

## Surety – United States

- Industry loss ratios remain near all-time lows, despite weakened construction market fundamentals and broad economic malaise
- A decline in exposures coupled with continued solid underwriting performance contributed to further market softening
- In addition to the overall softening, the market demonstrated a willingness to support broader coverage terms
- Overall market capacity remains stable and adequate to meet market demand with new market capacity continuing to explore expansion into the class

## Trade Credit – Global

- Several new markets entering for 2011, so capacity increased
- Many programs over-subscribed
- Still a shortage of potential leading / quoting reinsurers
- 2010/2011 underwriting years likely to produce record margins for reinsurers
- Still no large claims; XLs mostly clean for many years

## Rates

Specialty rates					
TERRITORY	Pro rata commission	Risk loss free % change	Risk loss hit % change	Catastrophe loss free % change	Catastrophe loss hit % change
Aerospace – Global	0% to +2%	-5% to -10%	0%	0% to -5%	N/A
Engineering – Global	+0.5% to +2%	-10% to -15%	0% to +5%	-10% to -15%	N/A
Marine	0%	0%	0% to +20%	0%	0% to 20%
Marine including Energy	0%	+20%	+30% to +50%	+20%	+30% to +50%
Medical Excess – U.S.	N/A	0% to +15%	+15% to +30%	N/A	N/A
Non-Marine Retro	0%	-5% to -10%	0% to +5%	-2.5% to -5%	0% to +5%
Personal Accident / Life Catastrophe – U.S.	N/A	-5% to -15%	N/A	N/A	N/A
Trade Credit – Global	+2% to +5%	-10% to -20%	N/A	N/A	N/A



# Property – territory and comments

## International

- There have been significant overall catastrophe claims activity for International (excluding U.S.) Property portfolios, particularly from Chile, New Zealand, Haiti, Northern Europe and Australia
- Pricing adjustment per territory or program dependent on level of local loss activity
- Wider overall pricing for International Property business not affected by local / regional loss activity
- Continued plentiful capacity for all territories with excess capital deployed and new reinsurance and retrocession capacity being set up
- Risk-adjusted pricing is largely -5% to -10% with more significant reductions for smaller programs in non-peak territories

## Asia

- Risk-adjusted reductions comfortably in the double-digit zone on XLs, but with minimal payback on loss-hit programs / treaties. Pace of reduction appeared to quicken as season progressed; Tier 1 reinsurers at the forefront of competitive pricing
- Capacity supply substantially greater than demand but exposure growth (China and others) is narrowing the gap; anticipate gradual move towards equilibrium as the cycle asserts itself
- Notable arrival of the first Bermudians in Singapore alongside the growing Lloyd's presence (22 syndicates); Singapore market inwards international income grew 33% in 2010
- Gradual introduction of risk-based capital regimes throughout the region (at varying pace) expected to shift focus on benefits of reinsurance from profit and loss protection and capacity-generation to capital and balance sheet implications
- Exponential increase in analytics demand (catastrophe and financial modeling) observable throughout the region

## Australia

- Market flat on risk-adjusted basis, excluding loss affected layers
- There is an ongoing review of other perils within modeling (e.g., bushfire and hail)
- A strong appetite remains for Australian programs, especially from Singapore-based reinsurance markets
- Christchurch (Darfield) Earthquake continues to increase in expected loss cost (approximately NZD 5B+) and will affect 2011 renewals

## China

- Primary companies in China continue to pursue their growth strategy and some are facing capital pressure resulting in strong demand for reinsurance. Capacity plentiful as reinsurers drawn to growth in premium volume and diversification benefit of the China market
- Pro rata treaties comfortably placed at unchanged commission levels as 2009 and 2010 results have substantially improved over earlier years
- Many primary insurers sought to increase their maximum treaty retention and/or number of lines as a means of increasing their capacity
- Capacity remained plentiful on risk and catastrophe XL on Chinese Property and Engineering business leading to risk-adjusted rate reductions

## Philippines

- Disproportionately (high) increase in natural perils aggregates versus income
- Market agreement on implementation of tariff rates for natural perils should lead to a better level of rate adequacy going forward

## Caribbean

- Hurricane Tomas losses in Eastern Caribbean largely restricted to St. Lucia; pricing outside of that market not affected
- Pro rata commissions edged up on back of good results
- Catastrophe capacity plentiful despite potential clash with U.S.

## Europe

- Multi-territory peak zone catastrophe XL prices down 5% to 7.5% risk-adjusted despite worst International catastrophe losses for a generation
- Abundant capacity available with most programs completed earlier this year with no major market issues
- Much lower modeled results from AIR v12 for residential portfolios and cross country correlations have not been taken into account

## Central & Eastern Europe

- No shortage of capacity offered in Central & Eastern Europe
- Since Central & Eastern Europe still considered as a diversifying territory, it remains attractive to the markets
- 2010 year saw an extreme frequency of medium-size catastrophe losses
- Upward pressure on capacity purchasing due to Solvency II future requirements
- The capacity of the regional Property Risk XLs increased; less facultative purchased

## France

- Property catastrophe price reduction risk-adjusted from 5% to 8%
- Entry of additional players with significant capacity
- Per Risk: very much linked to the individual companies results; important appetite for this type of cover this year

## Germany

- Few changes as many programs renewed with unaltered structures
- Buyers will await results of QIS5 studies and are likely to review their programs for 2012
- An organized softening of the reinsurance rates with more than sufficient catastrophe capacity available
- Reinsurers seem to be prepared to accept increases in exposures in selected areas
- Trend for reduction of proportional treaties

## Italy

- Companies are moving from standalone fire and motor own damage covers to combined Property covers against background of Solvency II; key focus on aggregate covers for excess of frequency to stabilize performance
- Plenty of catastrophe capacity available and strong competition
- Exposures for biggest programs substantially increased
- Reinsurance budget is an issue and retentions increased
- Buyers nonetheless sought to protect net retentions through sub-layers and/or aggregate covers
- Risk is still very competitive, but less appealing to reinsurers than catastrophe, especially for London and Bermuda markets

## Nordic Countries

- Losses from an unprecedented Scandinavian winter and heavy rain in August affected insurers' balance sheets, but less so their reinsurance programs
- Loss-free catastrophe business enjoyed moderate risk-adjusted price reductions
- Small increases in catastrophe capacity, continuing discussions with reinsurers regarding the non-correlation of Scandinavia
- Some improvements in wordings (Hours Clause, Terrorism, Costs)
- Increasing capacity for risk excess of loss and consequential price softening
- Capacity tighter for proportional treaties and reinsurers more resilient to requests for improved commissions

## Turkey

- Pro rata placements renewed smoothly; new capacity available
- Risk-adjusted rate reduction achieved on catastrophe XLs but growing signs of concern particularly in London market over pricing for second tier catastrophe territories following Chile and New Zealand earthquake losses

## United Kingdom

- Prices continue to soften
- Capacity remains plentiful and there were several new entrants particularly in the Lloyd's market
- Retentions and limits purchased were broadly stable. There was some increased appetite for the purchase of aggregate XL covers

## Latin America

- Overall, there is a growing amount of capacity available for Latin American excess of loss business as reinsurers attempt to obtain more non-correlated business at acceptable modeled margins
- Despite the Chile loss, capacity has far outstripped demand which has held price increases to modest levels
- Primary level competition is partly fuelled by competitive facultative rates and the ability of multinational groups to buy catastrophe cover at wholesale prices with regional discounts
- Proportional placements without event limits are becoming more difficult to achieve

## Colombia

- Generally pricing is flat or slightly down where loss free
- The November rains and floods have hit the bottom end of selected programs
- Increasing appetite for some stand-alone Terrorism programs

## Venezuela

- Pricing at 1 January flat to small increases due to competitive pricing in 2010 and to some recent small-scale flood losses in November / December
- Capacity for Venezuelan catastrophe XL business outstrips demand due to the 100% devaluation of the Venezuelan Bolivar in 2010

## Middle East

- Capacity still coming into an already oversaturated market
- Despite the lack of sizeable retentions, still no clear commitment from reinsurers to have them increased
- Expansion of regional groups likely to lead to increased Mergers and Acquisitions in the area
- Lack of awareness of the potential catastrophe exposure in the region still of major concern to the reinsurers

## Algeria

- Pricing reduction on a risk-adjusted basis for XLs, but underlying growth helped to maintain premium volume
- Major structural change in market with Compagnie Centrale de Réassurance's compulsory cession increasing to 50%

## Morocco

- On pro rata business, renewal has been as expiry regarding terms and conditions
- On XLs there were risk-adjusted decreases of -5% to -10%

## South Africa

- Flat catastrophe pricing if little movement in aggregates
- Small movement upwards on risk XLs based on upward profile movement

## United States – Nationwide

- Plenty of reinsurer capacity at the right price for large nationwide programs, while demand is mostly flat to slightly down
- Some markets attempting to incorporate RMS anticipated model changes into pricing
- London generally more flexible than Bermuda due to lower reliance on models

## United States – Regional

- Regional carriers buying more limit in anticipation of model changes
- Reinsurers quoted high but willing to agree to firm order terms at lower rates compared to nationwide accounts
- Some reinsurers are willing to decline business if they expect a significant increase in modeled losses and do not get the associated increase in pricing

## Rates

Property rates						
TERRITORY	Pro rata commission	Risk loss free % change	Risk loss hit % change	Catastrophe loss free % change	Catastrophe loss hit % change	
Australia	0% (Australia) to -10% (for NZ-affected business)	0%	+10% to +20%	0%	+10% to +20%	
Caribbean	+1%	-5%	variable	-5%	+7%	
China	0%	-5% to -15%	N/A	-5% to -15%	-5% to -15%	
Colombia	0%	0%	+10% to +50%	0%	+3% to +5%	
Europe	N/A	-5% to -7.5%	N/A	-5% to -7.5%	N/A	
France	N/A	-5% to -10%	0%	-5% to -8%	0% to -2.5%	
Germany	0%	0% to -5%	0% to +5%	0% to -5%	-2.5% to +5%	
Indonesia	0%	N/A	+5%	-5%	N/A	
Italy	0%	-5%	0%	-15%	-10%	
Middle East	+2%	-10%	-5%	-15%	0%	
Nordic Countries	0%	-5% to -10%	-5% to +10%	-5% to -10%	variable	
Philippines	N/A	-20%	0%	-25%	N/A	
South Africa	0% to +2%	0%	+10% to +20%	0%	+5% to +10%	
Spain	0%	-7.5%	0%	-5%	0%	
Taiwan	N/A	-5% to -10%	0% to +30%	-15% to -25%	-10% to -15%	
Turkey	0%	N/A	N/A	-5% to -15%	N/A	
U.K.	+1% to +2%	-7.5% to -10%	N/A	-5% to -7.5%	N/A	
U.S. – Nationwide	N/A	0% to -5%	0%	-5% to -10%	0%	
U.S. – Regional Wind	0%	0% to -5%	0% to +5%	-5% to -15%	0% to +10%	
Venezuela	0%	0% to +10%	+10% to +55%	0% to +3%	+3% to +8%	

# Property catastrophe pricing trends

## Australia

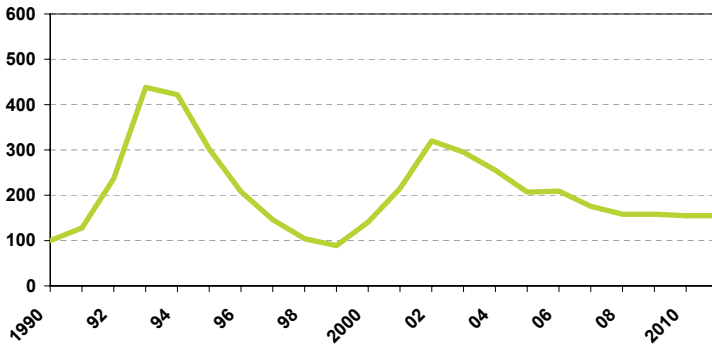


Australia

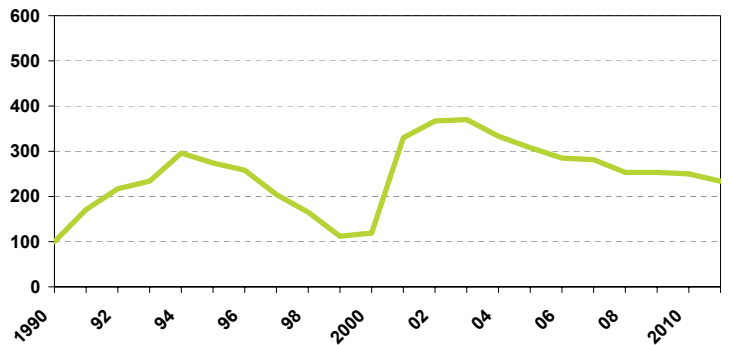
## Caribbean



## Colombia

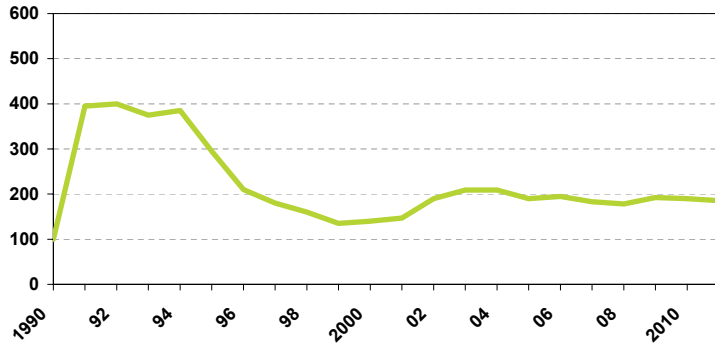


## France



The charts on this page display Estimated Year-to-Year Property Catastrophe Rate Movement.

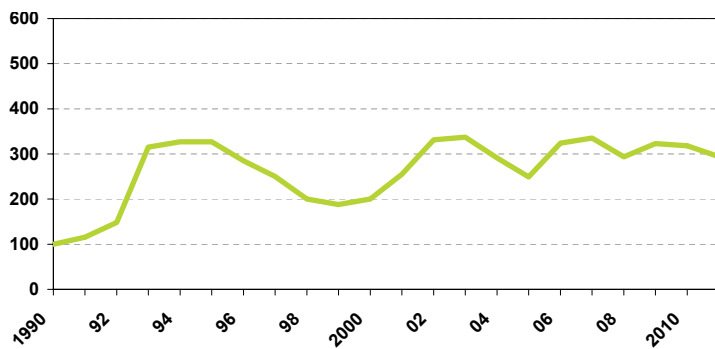
### Germany



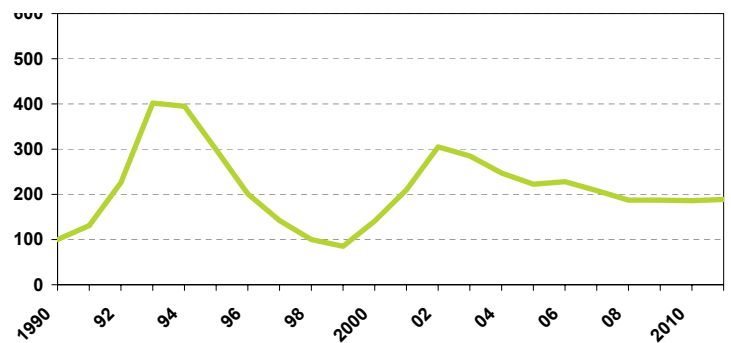
### United Kingdom



### United States – nationwide



### Venezuela



# Capital Markets – territory & comments

- Third and fourth quarter 2010 saw a dramatic increase in new deals coming to market. Investors thrilled with an extensive variety of new transactions offering a wide range of perils, triggers and in some cases relatively high expected loss costs.
- Many new issues upsized during the placement process due to higher than anticipated demand.
- 2010 has seen USD 4.8B of new bond capacity issued compared to USD 3.4B in 2009 and USD 2.7B in 2008. At year end, outstanding natural catastrophe bond amounts total USD 12.2B roughly in line with the 2009 figure of USD 12.3B.
- In the face of strong investor demand, pricing margins have narrowed to a point where the product is competitive in pure pricing terms as compared to traditional reinsurance, not only for U.S. hurricane risk but increasingly for other perils as well. These price drops have occurred, notwithstanding the recent and pending catastrophe model changes that affect catastrophe bond pricing more rapidly than traditional reinsurance renewals.

# U.S. Workers' Compensation – territory & comments

- On the primary side, 2010 experienced industry-wide decreases in payroll for the first time in memory. Policyholders overestimated their payrolls when their policies inceptioned in late 2008 to early 2009, resulting in return premium once these policies expired and audits were completed. The negative audit premiums resulted in reduced 2010 cash flow which was further impacted by continuing reduced payroll expectations for the 2010/2011 renewals. This combination of negative audits and reduced 2010 expectations significantly impacted cash flow. Negative audit premiums have significantly diminished in the fourth quarter of 2010.
- On the reinsurance side, pricing on working layers has stabilized. Select reinsurers have taken a more conservative approach, but overall, the market remains relatively unchanged through the January 2011 renewal season.
- The catastrophe reinsurance market remains soft. 2011 represents the beginning of a ninth consecutive year of softening terms. The 2010/2011 pricing for catastrophe capacity was impacted twice. First, exposure is down industrywide due to the declining payrolls. Reinsurers readily recognized the exposure reduction in their pricing. Second, the competitive market conditions have resulted further price reductions.

## Rates

U.S. Workers' Compensation rates				
TERRITORY	Pro rata commission	XL – no loss emergence % change	XL – with loss emergence % change	
United States	0%	0% working layers -5% catastrophe layers	+5% working layers 0% catastrophe layers	



## Global and local reinsurance

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HOLBORN PERSPECTIVES

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LOOKING CLOSER AT...

# **The 2011 Reinsurance Market: Managing Exposures and Expenses**

January 1, 2011

**HOLBORN®**

# The 2011 Reinsurance Market

## Overview

In 2010, **reinsurance industry premium volume fell**. Reinsurers posted profits and capital grew, with stable or moderate increases to loss ratios, and increasing expense ratios on lower volumes. Results show:

- Improved earnings since mid-year for most reinsurers,
- Rising equity markets, partly offset by lower prices on longer-term debt,
- Moderate strengthening of the U.S. dollar, and
- Continuing declines in leverage at most reinsurers.

**Prices have consistently softened throughout 2010. Capacity is at record levels.** While reinsurers are maintaining technical discipline, most ceding companies were able to renew with improved terms. The currently depressed levels of employment and economic activity are producing flat or declining exposure bases. **Market premium volumes continue to shrink, due to both reduced exposures and increased levels of price competition among insurers.** We forecast these market trends will continue into 2011 and perhaps 2012. But some **signs of stress are already apparent.**

- Despite avoiding a U.S. hurricane landfall in this active season, **reinsurers had significantly worse than average large loss experience** in 2010 with both foreign earthquake and U.S. inland losses well above average, and many wrote direct insurance lines on the Deepwater Horizon loss. Depressed values and “soft market” policy terms also increase reinsurers’ catastrophe exposures, and both will continue into at least 2012.
- **Reinsurers’ reserves weakened by a least \$10 billion during the year.** In addition to reserve savings on prior years, the Chile and New Zealand earthquake losses have not yet been booked to their ultimate values by all reinsurers, and many have not recognized their liability exposure to the Deepwater Horizon spill.
- In the medium-term, we expect an increase in U.S. inflation rates that will raise the cost of future losses, for both property and casualty, and increase casualty loss reserves, especially on WC and umbrella business.
- In the short-term, the EU’s response to banking and structural deficit problems may raise the risks of EU deflation, U.S. inflation and falling bond values, any of which could raise the price of U.S. reinsurance protection.

Our analysis follows at the links shown below:

Section A. Current U.S. Market Conditions

1. *Property Catastrophe*
2. *Clash, WC and Life Catastrophe*
3. *Policy - Exposed Contracts*
4. *Terrorism Coverage*

Section B. 2010 Market Losses

1. *Recent Loss Experience*
2. *2011 Catastrophe Outlook*

Section C. Worldwide Reinsurance Industry Results

Section D. For More Information

## **A. Current U.S. Market Conditions**

Since the housing market and related credit disarray began in 2008, the U.S. and other developed economies fell rapidly, and have just begun a small degree of rebound. But the insurance and reinsurance markets have fallen further and faster than the general economy.

Much of the economic rebound has involved government, healthcare, education and financial services. Key manufacturing and transportation areas, including new home construction, building materials, durable household goods, automobiles and parts, trucking, shipping, and energy production in the Gulf Coast region are still in a steep slowdown. While both white-collar and blue-collar trades contribute to GNP, blue-collar trades fabricate, move, deliver or install actual products. They cause more accidents than office exposures, so these businesses spend more of their revenue on insurance. In simple terms, if employment is flat because 1,000 bankers and programmers are re-hired at the same time as contractors and auto dealers lay off 1,000 employees, the insurance market will shrink, especially in Commercial Lines.

Agriculture has been a bright spot in the blue-collar sector, largely due to rising commodity prices as well as ethanol programs, and have shown stable premiums. In Personal Lines, some companies that use predictive modeling have identified attractive “growth pockets,” and personal property rates are rising in some areas in response to losses.

Throughout the insurance and reinsurance system, depressed real estate prices put further pressure on insurance to value and insurers’ revenue. This poses an extra challenge to the health of the market. When a building valued at \$1 million is resold for \$500,000 and then insured for that amount, the value of partial losses is not reduced. Losses can out-pace premiums.

Reinsurers believe that some ceding companies are “doing the right thing,” resulting in improved contract balances and lower exposures to reinsurers, but also lower SPIs. Reinsurers, like primary companies, are struggling to keep their good accounts and maintain their volume, and thus have to reward good experience. But they also seek to preserve some balance between the premiums they accept and the limits they provide. For accounts with lower SPI bases, this translates into a desire for rate increases, even for preferred clients. The most common renewal situation in the market this year is flat to moderately lower ROL’s, in tandem with moderately higher rates. Working contracts are not as dependent on reinsurers’ capital, and track more closely with exposure and experience levels.

In this challenging market, terms and conditions are also important. As a general observation, original insurance policies have been liberalizing faster than treaty reinsurance terms. Insurers are pressured to provide broader coverage within standard commercial forms, including more coverage of Flood, Earthquake, Cyber and Pollution exposures. We have also seen increasing use of multi-location or multi-coverage Basket protection. This results in higher potential exposure on total losses, and more exposure to higher reinsurance layers, as well.

Early in 2009, reinsurers’ capacity (the supply of reinsurance) was down in peak zones, and many Property renewals approached the market with losses. Contracts with rate increases significantly out-numbered those with decreases. By mid-year 2009 and 2010 these trends were more than offset by several factors:

- Stable earnings for many reinsurers, despite the large February, 2010 Chile loss.
- Diversified reinsurers offered more Catastrophe capacity than they had in the past, especially for national accounts and for their working layer clients.
- The Swiss franc and British pound strengthened overall against the dollar, raising risk appetites. Although Lloyd’s sets its business-plan exchange rates annually, so this does not have as immediate an impact as at other markets, and the pound later gave back part of the gains.

January 1, 2011 renewals showed increased capacity for most classes, with reinsurers balancing their account retention goals with underwriting discipline. Renewals were again ordered relatively late in the year, but were generally completed promptly.

Falling business production and rising expense ratios are concerns for both insurers and reinsurers. To manage excess capital, we expect more reinsurers to buy back shares, merge or do both during 2011. They continue to seek diversifying business away from the industry’s peak exposures in the U.S., Europe and Japan, but find pricing in other countries to be less attractive, despite the recent losses.

## I. Property Catastrophe

Catastrophe contract premiums generally decreased by single digits at January 1, 2010, and a bit more for programs requiring broad market support that paid larger increases the year before. Most loss-free programs were down by 5% to 10% in rate on line at January 1, 2011.

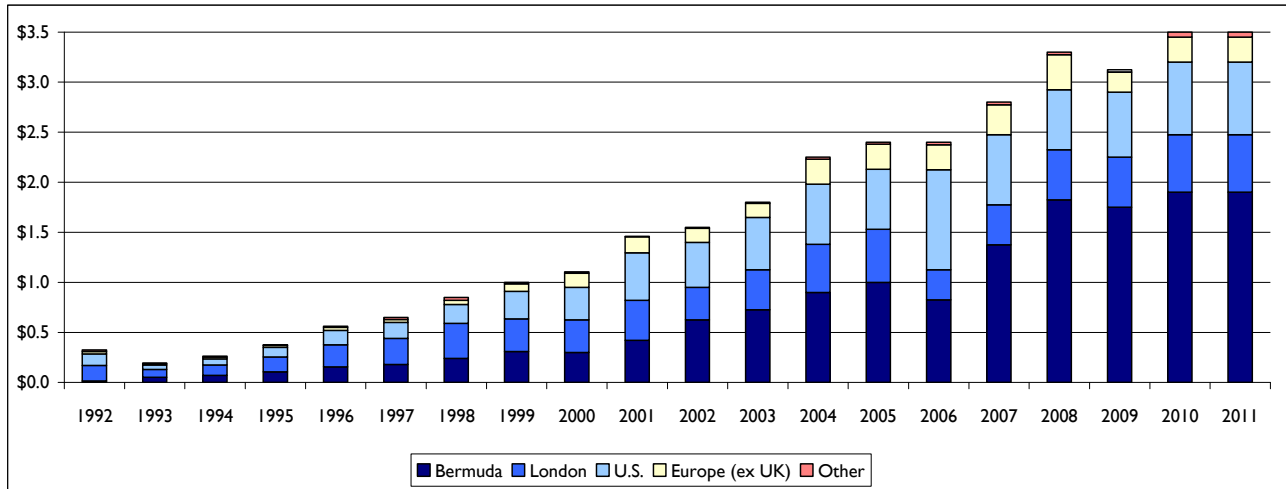
### Property catastrophe rate-on-line changes

	Coastal Exposed		Non-Coastal	
	with Recent Loss	without Loss	with Recent Loss	without Loss
January, 2006	+25% to 100%	+10% to +25%	+20% to +50%	+5% to +15%
April – July, 2006	+60% to 300%	+30% to 100%	Few placements	Few placements
January, 2007	+15% to +40%	0% to +20%	+10% to 25%	-10% to 10%
April – July, 2007	-10% to 0%	-20% to -10%	Few placements	Few placements
January, 2008	-20% to -10%	-20% to -10%	-15% to -5%	-15% to +5%
April – July, 2008	-15% to -5%	-20% to -10%	Few placements	Few placements
January, 2009	+15% to +50%	+5% to +20%	+10% to +40%	0% to +10%
April – July, 2009	+15% to +40%	+10% to +20%	Few placements	Few placements
January, 2010	-5% to 0%	-15% to -5%	+5% to +15%	-10% to -5%
April – July, 2010	-15% to -5%	-10% to -5%	Few placements	Few placements
January, 2011	Few placements	-10% to -5%	-5% to +10%	-10% to -5%

Note: Measured in dollar amounts for programs with comparable exposure levels.

Capacity placed on some of the largest individual programs in 2010 and 2011 increased slightly from 2008 and 2009 levels. Some mid-size programs increased significantly. Several U.S. insurers now buy over \$3 billion in placed limit, and found ample capacity.

## Property catastrophe capacity



Note: Size of largest U.S. placement in \$Billions, based on maximum amount exposed in any zone by a single ceding company program, including aggregate excess contracts. Excludes Cat bond capacity and side cars; includes National Indemnity. Market regions are shown by underwriting office, not domicile.

## Coastal and national accounts

Some national programs placed substantially more limit at mid-year 2010. Reinsurers had more capital and had adjusted their business plans, increasing capacity.

Surplus lines companies generally shrank their exposure in coastal areas, as this business migrated to the admitted market at lower pricing. This eased their need for capacity.

## Florida

Florida-exposed companies, at least out-of-state companies, have recently bought larger programs from the market to supplement the FHCF's reduced bonding capacity. The domestic companies are highly concentrated and have difficulty buying enough protection out of their direct writings. Florida remains the largest commitment of reinsurers' capacity in the world, at about \$80 billion in 2010.

Citizen's Insurance writes 40% of the Florida personal wind market (as either Homeowners or Wind-only policies) and over 60% in the more-exposed southern counties. Neither Citizen's nor the FHCF has protection placed in the private reinsurance market.

## Gulf

Hurricane Ike caused losses further inland than the cat models expected. Losses in the Ohio Valley and Northeast from Ike were aggravated by an inland weather system that merged with the storm's remnants roughly 500 miles from the Gulf. But there was a still a surprising degree of damage in north and central Texas. This experience is now being reflected in the models as higher losses on inland locations in version 12 of AIR (released this year) and version 11.0 of RMS (due in February). In addition, the RMS update reflects building code and construction differences between the Gulf and



Atlantic coastlines. Reinsurers are citing these changes as support for higher prices on Gulf exposed renewals.

### **Other U.S. zones**

Capacity is relatively tighter in the Northeast for wind exposure and in Southern California for shake exposure. The Northeast will face higher hurricane model estimate in RMS 11.0. In California, however, reinsurers are reflecting lower earthquake model results in RMS 9.0 and made more aggregate limit available. Many reinsurers deployed increased capital levels and some ceding companies were able to increase their placements.

Outside of those few peak concentration zones, Catastrophe prices have softened significantly through 2010 as reinsurers have competed for this diversifying business. Some insurers increased lines offered on some Aggregate and “sideways” Cat programs, although not all reinsurers will support Aggregates.

### **Energy and aviation**

These two classes have seen losses recently. Ike (in 2008) was a significant loss to the Gulf oil production regions. The 2009 Western Atlas rig fire in the Indian Ocean and the Deepwater Horizon explosion and spill last year were the largest single-platform losses since 1998. The recent Qantas A380 engine failure and several crashes have kept the Aviation market’s loss ratio well over 100% in both 2009 and 2010. Prices for both lines have increased notably.

### **Involuntary markets**

State residual markets absorbed significant amounts of coastal risk from 2004 through 2007, in certain cases increasing market shares from the low single digits into the teens. Unpredictable buying habits related to these facilities have given some reinsurers pause. There was incremental demand for reinsurance and interest in alternative forms of capital from some residual market plans (Massachusetts, Rhode Island, New York, North Carolina and South Carolina all placed more), as most of these facilities continue to grow, although at lower rates as the voluntary markets softened.

TWIA in Texas sustained nearly a total loss from Hurricane Ike and exhausted its funding, but no longer buys reinsurance. Since then, Texas opted to fund losses up to \$2.5 billion with post-event bonds. It is unclear how losses above this level will be funded. The California Earthquake Authority also has a large market share, weighted toward the most exposed counties, and they maintain a large reinsurance placement. A.M. Best now tracks insurers’ involuntary exposures to peak zone events.

### **Collateralized reinsurance**

Fund managers and “alternative asset” investors have invested directly in insurance risk by providing fully-funded limits, largely in peak zones and for retrocessions. Most of these funds lost capital (and investors) during the financial crisis. In 2010, many hedge fund investors have focused on what they view as opportunistic positions in European government bonds and bank debt, with higher interest spreads. These investors have not been as supportive of insurance risk as in the past. But several

multi-strategy funds remain interested in insurance risk and can move quickly if opportunities meet their return requirements, as reflected in the increased placement of some Cat bonds in 2010.

### **Retrocessions and ILWs**

The retrocessional market has begun to stabilize after the departure of Berkshire Hathaway and the downsizing of hedge fund participants. But at current prices, there is still limited supply.

Many reinsurers have sought to place new or increased retrocessions, as quota shares of their excess of loss portfolios. Some are finding support for these retrocessions from primary insurers, who are either willing to provide reciprocity to a major trading partner, or are seeking diversification.

ILW placements outside of the U.S. often attach at \$5 billion, or even lower, and many were triggered by the Chile earthquake. Some second-event contracts were triggered in New Zealand.

## **2. Clash, WC and Life Catastrophe**

Overall market capacity for some peak zones decreased during early 2009, but rebounded throughout 2010 and is now at record levels. Costs for lower layers continued to fall as reinsurance prices were impacted by lower subject premium or levels of underlying exposures. Higher layer ROLs are consistent with market minimums, which have been falling moderately. Capacity for California increased significantly, as reinsurers give credit for lower model estimates and reduced property coverage demands. There is an increased appetite to place per person covers and higher MAOLs in catastrophe covers. Many cedants now view \$5Mn as inadequate protection.

<b>Clash, WC and Life Catastrophe</b>	
January, 2006	-5% to +5%
April – July, 2006	-10% to 0%
January, 2007	-10% to 0%
April – July, 2007	-15% to -10%
January, 2008	-15% to -10%
April – July, 2008	-20% to -10%
January, 2009	-3% to +5%
April – July, 2009	-5% to +3%
January, 2010	-15% to -5%
April – July, 2010	-15% to -5%
January, 2011	-15% to 5%

*Note: Measured in dollars amounts or ROLs.*

*Comparable programs at renewal.*

## **3. Policy - Exposed Contracts**

Most working and other policy-exposed contracts renewed with stable or higher rates. With lower subject bases, most renewals were at lower premium amounts. These classes of business do not

depend on capital as much as catastrophe covers. Rates on renewals were largely driven by accounts' own recent experience, often with lower ceded deposit premiums, due to reduced subject premiums.

	<b>Working</b>	<b>High Excess With Recent Losses</b>	<b>High Excess With No Loss</b>
January, 2006	0% to +10%	+15% to +25%	0% to +15%
April – July, 2006	0% to +30%	+25% to +50%	+5% to +15%
January, 2007	0% to +40%	+10% to +25%	-10% to 0%
April – July, 2007	10% to -5%	0% to +10%	10% to 0%
January, 2008	-10% to -2.5%	0% to +10%	10% to 0%
April – July, 2008	-5% to +5%	-0% to +10%	-10% to 0%
January, 2009	-5% to +10%	+25% to +50%	0% to +10%
April – July, 2009	-5% to +10%	+25% to +50%	0% to +10%
January, 2010	-5% to 0%	0% to +15%	-10% to +5%
April – July, 2010	-5% to 0%	0 to +15%	-10% to -5%
January, 2011	-5% to +10%	+5% to +20%	-10% to -5%

*Note: Measured as rates on subject income, not dollar amounts*

### **Property per risk**

Since 2008, reinsurers have seen a marked run of losses to large risks (often fires) worldwide and to many U.S. middle market accounts. This drove rate increases in some cases. The higher U.S. frequency may be related to housekeeping and maintenance issues in this depressed economy. We have not yet seen an uptick in arson. The increased frequency reverses a favorable trend that had helped the industry's profitability, despite falling direct prices. Insurance to value is also a current challenge, due to falling real estate prices and insured values not tracking true replacement costs.

### **Casualty, including umbrella**

A number of new players (such as AWAC, Aspen, Catlin and Tokio Millennium) have entered the on-shore casualty market since 2007, increasing market capacity.

Reinsurers expressed concerns about much lower short-term interest rates, continued soft pricing in the primary market and decreasing reserve adequacy. Longer-term, they expect that deficits and the weaker dollar may cause higher levels of general inflation, and healthcare reform may raise medical costs covered by WC and Liability coverages. Some reinsurers also asserted that increased capital requirements and general economic risks justify rate increases. Buyers generally did not accept this logic for working layers, causing extended negotiations on some renewals.

## **4. Terrorism Coverage**

Reinsurers write their terrorism exposures without retrocessions or TRIA protection (and often competing for capacity with affiliates' direct operations). So, their capacity is limited. Some market trends are:

- Ceding companies often have similar occurrence retentions on terrorism and natural catastrophes, so retention levels for terrorism have also tended to increase. TRIA retentions have fallen due to lower subject premium incomes, easing some carrier's limit needs.
- Significant capacity is available (over \$1 billion per ceding company, less in "Tier I" cities). This is ample for most regional carriers, but not for nationwide accounts with multi-billion dollar TRIA retentions. Some commercial nationals buy no terror protection beyond TRIA. Regional carriers tend to have broader coverage in underlying programs and also purchase higher Cat and Clash limits for terror.
- NBCR coverage is more constrained at \$500 million (less for key cities) and it remains expensive. It is more common in regional account and Life/PA placements.
- Companies exposed in the Northeast, and especially in Metropolitan New York, find capacity tight for both Windstorm and Terrorism and often choose to limit their terrorism protection, in order to maximize windstorm coverage.

## **B. 2010 Market Losses**

### **I. Recent Loss Experience**

Catastrophe losses in 2010 will settle near long-term average levels for direct insurers, but with a higher than average cost to reinsurers. This is the result of several conflicting factors. First, the Atlantic hurricane season was very active, near record levels. However, with twelve hurricane-force storms, it is remarkable that the U.S. did not experience hurricane-force winds from any of them. Hurricane season losses were far below long-term averages, worldwide.

Outside of the U.S., there were three strong earthquakes in populated areas, two of them in developed countries. We believe that the ultimate losses remain significantly underreported. In Chile, the Cat models estimated losses near \$8 billion, however, these estimates exclude life, workers' compensation, marine and aviation and loss adjustment expenses. Moreover, the models are not designed to cover related tsunami and looting losses. We expect an ultimate loss of \$10 billion to \$14 billion including these other elements, and continuing development in reinsurers' reported estimates. We agree with market estimates that this loss will be 80% to 90% borne by reinsurers.

The New Zealand earthquake loss has also continued to show development. There is a national earthquake program for residential losses that is similar to the U.S. Federal Flood program. It has a per location limit, with many homeowners purchasing excess coverage above the national program. Continuing reports in the market cite larger claims than expected, particularly on residential properties, and that many losses are now reaching these excess, privately-insured layers. We estimate a total loss, including LAE and the Federal program, of \$4.5 billion to \$6 billion (U.S. dollars). Of that, \$1 billion will be retained by the national program. There will also be significant retained losses by the indigenous programs. Roughly half of this loss will be reinsured.

We also note recent loss development on Hurricanes Wilma (2005) and Ike (2008). Florida law provides a five-year window to file claims, and many losses were newly reported in 2010. We now estimate Wilma to be \$16 billion in total U.S. loss and LAE, and well over \$18 billion considering earlier landfalls in the Caribbean and Mexico. Ike is over \$20 billion.

The higher than expected Cat losses on non-U.S. occurrences, and some large non-hurricane losses in the U.S. likely relate to the overall economic circumstances. Depressed building value prices makes insurance to value a challenge. However, depressed sale prices do not translate into equivalently lower replacement costs on partial losses. We believe that this is going to be a worldwide challenge until real-estate prices improve, and even then for some time afterwards.

Holborn tracked the following thirty events in 2010. The Chile earthquake is an unusually large loss to reinsurers. It is the largest-ever non-U.S. insured loss event, and one of the ten largest reinsured losses.

## U.S. reinsured events and major foreign losses

Event	Dates	Description	Reported Deaths	Direct Loss	Reinsured Loss
Haiti Earthquake	Jan. 12	Magnitude 7.0 near Port au Prince	235,000	\$1 Bn	Minimal
Northeast Blizzards	Feb. 5-6, 9-10, 25-26	Three separate storms in Mid-Atlantic region	>40	\$5 Bn	>\$500 Mn
Chile Earthquake	Feb. 27	Magnitude 8.8 near Concepcion and tsunami	Approx. 500	\$10 Bn - \$14 Bn	\$9 Bn to \$11 Bn
Windstorm Xynthia	Feb. 27	Winter storm, largely in France	62	\$3.5 Bn	>\$1 Bn
Australia Hail	March 6-7, 21-22	Storms near Perth and Melbourne (2 Events)	None	\$2.5 Bn	>\$1 Bn
Northeast Storms	March 13-15	Flood and freeze in NY area and New England	12	\$1.25 Bn	\$250 Bn
Thai Riots	Apr. 9-22	Occupation of Parliament, arson, looting	25	\$1 Bn	>\$100 Mn
Iceland Volcano	Apr. 15-26	Ash cloud caused loss on Travel covers	None	\$1 Bn	Minimal
Deepwater Horizon	Apr. 20 - July 15	Explosion, sinking and well leak	11	\$3.5 Bn	Direct
Polish Floods	May 18-22	Largely on the Vistula river, but also affecting other basins in several central European nations	37	>\$1 Bn	Approx. \$250 Mn
Nashville Floods	May 1-2	1,000 year flood in Tennessee River basin	31	>\$1.5 Bn	>\$250 Mn
Upper Midwest Tornadoes and Hail	June 17-20, 21-24 July 17-18, 20-23	Four occurrences. Notable losses in Wadena, Minn. and Calgary, Alberta	15	\$2.5 Bn	\$500 Mn
Hurricane Alex	June 25 - July 2	Category 2 landfall in Belize, TS in NE Mexico	33	<\$500 Mn	Minimal
Hurricane Earl	Aug 25 - Sept 5	Bypassed North Carolina and Mass., TS landfall in Nova Scotia	6	<\$250 Mn	Minimal
NZ Earthquake	Sept. 4	Magnitude 7.1, Canterbury, NZ	Few	\$4.5 Bn to \$6 Bn	\$2.5 Bn to \$3.5 Bn
Northeast Storms	Set 15	Tornado in Queens, NY	2	\$1 Bn	<\$100 Mn
Hurricane Karl	Sept. 14 - 18	Category 3 landfall in Yucatan, TS in Veracruz, Mexico	22	<\$500 Mn	Minimal
Typhoon Fanapi	Sept. 19 - 21	Category 3 landfall in Taiwan, Cat 1 in Fujian, China, bypassed Hong Kong	75	<\$1 Bn	<\$250 Mn
Arizona Hailstorm	Oct 4-5	Significant damage in Phoenix	0	\$600 Mn	<\$250 Mn
Typhoon Megi	Oct. 18-22	Category 3 landfall in Luzon, the Philippines, TS in Fujian, China	50	>\$1 Bn	<\$500 Mn
Indonesia Tsunami	Oct. 25	Magnitude 7.7 earthquake off of Sumatra	>500	Minimal	None
Tornado Outbreak	Oct 25-28	Record low pressure spawned 56 tornadoes in six states	2	\$1 Bn	<\$250 Mn
Hurricane Richard	Oct. 21 - 26	Category 2 landfall in Belize	2	<\$250 Mn	Minimal
Hurricane Tomas	Oct. 29 - Nov. 7	Category 2 across several islands	41	<\$250 Mn	Minimal
Midwest Blizzard	Dec. 12-14	Record snowfalls in Minn. and around Great Lakes	14	>\$1 Bn	Some
<b>30 - Event Total</b>			<b>&gt;237,000</b>	<b>\$43 Bn - \$48 Bn</b>	<b>&gt;\$16 Bn</b>

Notes: Estimates include WC, Life and energy classes, and loss adjustment expenses. Deepwater includes Liability except D&O.

\* Aviation and Energy participations by reinsurers on these individual risks are largely through their Direct and Fac books, not treaty coverages. The reinsurance market total includes reinsurers' participation in these losses.

## Atlantic hurricane season

2010 was a very active year with 19 named storms and five "major" hurricanes (of Category 3 or higher). Both of these levels are well above historical averages of eleven named storms and two major hurricanes. Hurricanes Danielle, Earl, Igor and Julia in the Atlantic reached Category 4. In the Gulf, Hurricane Karl reached Category 3. Fortunately, these storms' paths did not hit large insured values. Only Hurricanes Alex and Karl caused meaningful damage, with three landfalls in Mexico. We estimate less than \$1.75 billion in market insured losses and LAE and 250 to 275 deaths.

Storm	Dates	Category (highest)	Winds (max. mph)	Pressure (min. mbar)	Landfalls	Deaths (direct)
Hurricane Alex	6/25 - 7/2	2	110	946	Belize, TS / NE Mexico, Cat 2	33
TS Bonnie	7/22 - 7/24	TS	40	1007	Bahamas, TS / Florida Keys, TS	1
TS Colin	8/2 - 8/8	TS	60	1005		1
<b>Hurricane Danielle</b>	<b>8/21 - 8/31</b>	<b>4</b>	<b>135</b>	<b>942</b>		<b>2 (2 U.S.)</b>
<b>Hurricane Earl</b>	<b>8/25 - 9/5</b>	<b>4</b>	<b>145</b>	<b>928</b>	<b>Nova Scotia, TS</b>	<b>6 (4 U.S.)</b>
TS Fiona	8/30 - 9/4	TS	60	998		0
TS Gaston	9/1 - 9/2	TS	40	1005		0
TS Hermine	9/6 - 9/8	TS	70	989	TX/Mexico border, TS	6
<b>Hurricane Igor</b>	<b>9/8 - 9/21</b>	<b>4</b>	<b>155</b>	<b>925</b>		<b>4 (1 U.S.)</b>
<b>Hurricane Julia</b>	<b>9/12 - 9/20</b>	<b>4</b>	<b>140</b>	<b>948</b>		<b>0</b>
<b>Hurricane Karl</b>	<b>9/14 - 9/18</b>	<b>3</b>	<b>120</b>	<b>956</b>	<b>Yucatan, TS / Veracruz MX, Cat 3</b>	<b>22</b>
Hurricane Lisa	9/21 - 9/26	1	85	982		0
TS Matthew	9/23 - 9/26	TS	60	998	Nicaragua, TS	126
TS Nicole	9/28 - 9/29	TS	40	995		13
Hurricane Otto	10/6 - 10/10	1	85	976		0
Hurricane Paula	10/11 - 10/15	2	100	981		1
Hurricane Richard	10/21 - 10/26	2	100	978	Belize, Cat 1	2
Hurricane Shary	10/29 - 10/30	1	75	989		0
Hurricane Tomas	10/29 - 11/7	2	100	982		41
<b>Total - 19 Storms</b>	<b>6/25 - 11/7</b>	<b>Four Cat 4s</b>	<b>155</b>	<b>925</b>	<b>10 (2 U.S.)</b>	<b>250-275 (7 U.S.)</b>

Major hurricanes shown in bold

The U.S. experienced only tropical storm winds this season, on Hurricane Alex (making landfall south of Texas, but with some in-state losses), Tropical Storm Bonnie in Florida, Hurricane Earl (in the Outer Banks and New England islands as the storm passed offshore) and Tropical Storm Hermine (again on the Texas-Mexico border). It is very unusual for a year with 12 hurricanes to avoid U.S. hurricane-force landfalls. More typically, one quarter of hurricanes in the Atlantic and Caribbean reach U.S. shores at that strength.

This year's high activity is related to the continuing La Niña conditions in the Pacific Ocean, which inhibits wind shear in Atlantic weather patterns. Water temperatures were well above seasonal averages early in the season, but were closer to expected levels by the time that most of the strong storms occurred in late August and September. The Bermuda High varied in location, but was generally far enough easterly to allow storms to turn north before reaching the U.S. mainland.



## 2. 2011 Catastrophe Outlook

The weather patterns that resulted in an active 2010 hurricane season seem likely to continue at least partway into 2011. The early forecast from Colorado State is for another active year, and we see no reason now why it should not be above average. An active 2011 season would be likely to result in one or more hurricane-force landfalls in the U.S., with significant insured losses.

Business written in 2009 through 2011 reflects lower building values, and thus tends to have depressed insured values. In addition, coverage terms have been softening, with increased use of blanket limits, and more liberal coverage for flood and earthquake on middle market commercial business. There is more exposure per dollar of premium or TIV than would have been the case earlier. Even if the market and economy recover quickly, some of the business to be earned in 2012 has already been written, and we expect worse than average loss experience to continue.

## C. Worldwide Reinsurance Industry Results

The worldwide reinsurance industry is:

- **Moderately profitable** overall (a 9% compound ROE since year-end 2000)
- **Volatile** (calendar year ROE's ranging between -9% and +20%)
- **Shrinking** (the 2011 market will be smaller than 2003's)
- **Well-capitalized** (leverage ratios down over 40% since 2001, even after the recent financial market declines)

Adjusting reported data for foreign affiliates and exchange rates, Holborn estimates 2010 results of:

- **Net earned premiums** – \$170 billion - \$180 billion (down approximately 7%)
- **Combined ratio** – 88% - 90% (up at least two points)
- **Net income** – \$20 billion to \$26 billion (down, but still far above the long-term average levels)
- **Return on equity** – 10% to 12% (also down, but still strong)
- **Year-end capital** – \$215 billion to \$225 billion (GAAP basis except for RAA members)
- **Assets** – up, but only by 3% to 5%

Large industry events in 2010 added about 8 to 10 points to reinsurers' all lines loss ratios, about 3 to 5 points more than normal.

Based on current levels in currency markets and investments, Holborn estimates that the 2011 global reinsurance market results will show:

- Lower underwriting profits, if any, driven by late reporting on 2010 Cat losses, expense pressure, continuing rate decreases, broadening of coverage in primary policies and insurance-to-value concerns.
- Lower premium volumes, as rate increases, if any, will not outpace the continuing declines in subject premiums.
- Reduced financial flexibility with falling or negative cashflow, unrealized capital losses on long-term bond portfolios, and share prices that make mergers or new issues unattractive.

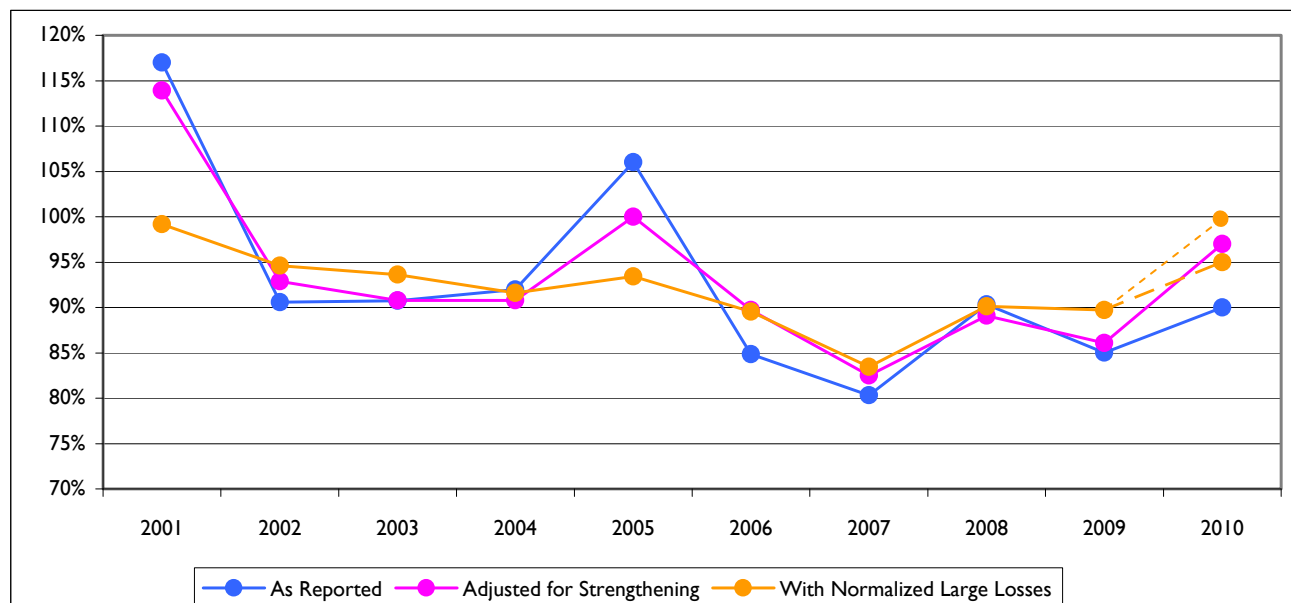
### Worldwide industry results

	Gross Premiums Written	Net Premiums Earned	Net Underwriting Gain	Combined Ratio	Net Income/ Loss	Capital Funds	Return on Equity
2001	\$125,655	\$97,047	(\$17,328)	117.9%	(\$7,148)	\$74,422	-9.2%
2002	156,393	125,691	6,117	95.1%	4,169	80,271	5.6%
2003	203,412	173,934	14,349	91.8%	11,314	126,905	14.1%
2004	203,781	181,778	12,582	93.1%	14,151	145,110	11.2%
2005	185,906	164,895	(7,726)	104.7%	2,265	152,013	1.6%
2006	196,633	168,101	27,203	83.8%	30,765	195,383	20.2%
2007	207,110	180,877	29,852	83.5%	32,772	206,726	16.8%
2008	194,399	169,907	18,005	89.4%	5,522	170,894	2.7%
2009	\$213,307	\$187,131	\$26,037	86.1%	\$26,771	\$212,724	15.7%
2010 Est.	\$200,000 - \$205,000	\$170,000 - \$180,000	\$17,250 - \$22,250	88% - 90%	\$20,000 - \$25,000	\$215,000 - \$225,000	10% - 12%
2001-2009	\$1,686,596	\$1,449,363	\$109,090		\$120,580	\$1,364,449	
9-Year Average	\$187,400	\$161,040	\$12,121	93.9%	\$13,398	\$151,605	8.4%

Notes: \$Millions. Gross premiums include retrocessions.

We also review underwriting results adjusting for reserve strengthening and large losses, based on a 35-year history of worldwide insured events and a 10-year history of reinsured events that cost more than one-half percent of U.S. gross written premiums. We believe that amount represents the level where one or more events in a year would notably affect reinsurers' results.

## Reinsurance industry combined ratios



Notes: Trade basis, calendar year. Details in Appendix I

On a normalized basis, with large losses smoothed at average levels and without reserve strengthening, results are much less volatile. Reinsurers' booked results in 2010 will be roughly five points better than our normalized ratios, due to five to seven points of reserve weakening, partly offset by large loss experience that is three to five points worse than average.

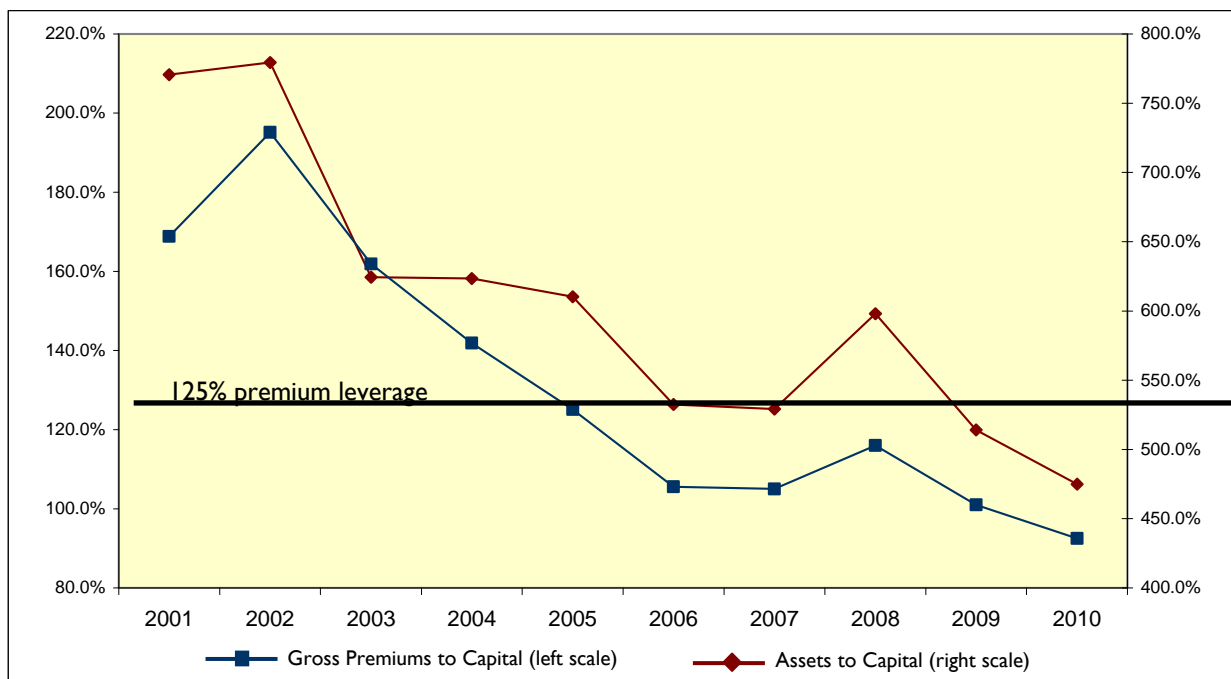
## Growth in premiums and capital

	Gross Premiums Written	Premium Growth Rate	Adjusted For Exchange Rates	Capital Funds	Premium Leverage Ratio	Asset Leverage Ratio
2001	\$125,655			\$74,422	168.8%	7.71x
2002	156,393	24.3%	17.5%	80,271	194.8%	7.81x
2003	203,412	29.8%	18.8%	126,905	160.3%	6.30x
2004	203,781	0.1%	-3.9%	145,110	140.4%	6.30x
2005	185,901	-8.8%	-1.8%	150,762	123.3%	6.19x
2006	195,961	5.4%	-2.3%	193,915	101.1%	5.50x
2007	206,423	5.3%	3.2%	204,750	100.8%	5.48x
2008	193,563	-6.2%	-3.0%	169,008	114.5%	6.25x
2009	212,381	9.7%	5.0%	210,613	100.8%	5.14x
2010 Est.	\$200,000 to \$205,000	-3% to -6%	-5% to -7%	\$215,000 to \$225,000	90% to 95%	4.5x to 5x
<b>2001-2009</b>	<b>\$1,683,470</b>			<b>\$1,355,757</b>		
<b>9-Year Average</b>	<b>\$187,052</b>	<b>7.5%</b>	<b>4.2%</b>	<b>\$150,640</b>	<b>133.9%</b>	<b>6.08x</b>

Note: \$Millions.

**Market leverage ratios**  
**Gross premiums to capital**

**Assets to capital**



At a market average premium-to-capital ratio above 125% (shown as a black line in the previous graph), we believe that some reinsurers would need to reduce capacity. Several analysts have noted that reduction in reinsurance market capital of over \$50 billion would be required for this to happen, representing multiple Katrina-sized events in a short period.

**Industry capital rebounded in 2009 and 2010**

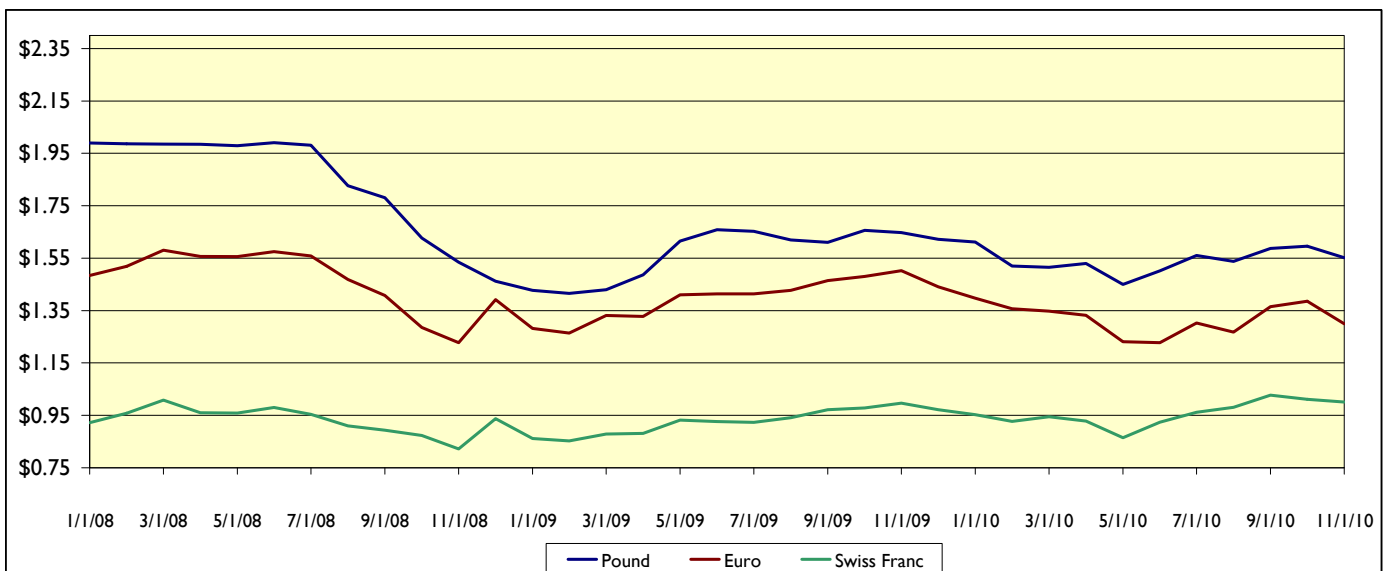
	Net Income/Loss	Increases from Exchange Rates	Reductions from Restructuring and Mergers	Mark to Market Losses (After-tax)	Net Capital Increases	Changes in Capital Funds
2001	(\$7,148)	(\$1,810)	\$0	\$0	\$5,472	(\$3,485)
2002	4,169	6,875	(6,800)	0	1,605	5,849
2003	11,314	6,253	7,100	0	21,967	46,634
2004	14,151	4,734	0	0	(681)	18,204
2005	2,264	(8,688)	0	0	12,077	5,652
2006	30,604	8,045	(5,000)	0	9,505	43,153
2007	32,611	6,804	0	0	(28,581)	10,834
2008	5,527	(8,039)	(1,500)	(35,000)	3,270	(35,742)
2009	26,506	4,483	0	12,000	(1,000)	41,606
2010 Est.	\$20,000 to \$25,000	(\$5,000 to \$10,000)	(500)	2,500	(5,000)	\$5,000 to \$15,000
<b>2001 – 2009</b>	<b>\$119,997</b>	<b>\$18,657</b>	<b>(\$6,200)</b>	<b>(\$20,500)</b>	<b>\$18,635</b>	<b>\$132,705</b>
<b>9-Year Average</b>	<b>\$13,333</b>	<b>\$2,073</b>	<b>(\$690)</b>	<b>(\$2,050)</b>	<b>\$1,864</b>	<b>\$14,745</b>

Notes: \$Mns. Restructurings involve: Munich-Allianz, Hannover-DHI, Converium-SCOR, Swiss-ERC, XL-SCA, Partner-Paris and Validus-IPC. Negative amount shown as capital increases in 2007 is largely stock repurchases. Net capital increases are calculated to balance to total change, and include miscellaneous items, with dividends and buy-backs shown as decreases.

While that run of events is unlikely, we expect to see U.S. reinsurance prices to begin to increase in 2012 or 2013 due to combinations of:

- Capital gradually leaving the market through dividends, buybacks and mergers,
- Some European reinsurers (perhaps including some at Lloyd's) will be constrained by Solvency II capital rules in 2013,
- Expense ratio pressures,
- Higher "attritional" catastrophe loss experience and higher model estimates for U.S. hurricane,
- An eventual rebound in business activity, increasing demand for coverage,
- Inflation, which impacts excess reinsurers more than primary companies, or
- Depressed bond values.

**Foreign currencies fell sharply against the U.S. dollar in late 2008, rebounded during 2009, and fell again late in 2010.**



A stronger dollar tends to reduce industry capital levels, when measured in U.S. dollars.

## 2011 forecasts

Holborn forecasts the market will continue to show moderate, if any, growth and falling leverage ratios.

	Gross Premiums Written	Combined Ratio	Net Income	Net New Capital	Change in Capital	Year-end Capital	Gross Leverage Ratio
<b>2011 Forecasts</b>	\$170,000 to \$185,000	95% to 100%	\$10,000 to \$20,000	(\$10,000) to (\$5,000)	\$5,000 to \$15,000	\$220,000 to \$240,000	75% - 85%
<b>2010 Estimates</b>	\$200,000 to \$205,000	88% to 90%	\$20,000 to \$25,000	(\$2,000)	\$5,000 to \$15,000	\$215,000 to \$225,000	90% - 95%
<b>2009 Actual</b>	\$212,381	85.0%	\$26,506	(\$1,000)	\$42,605	\$210,613	100.8%
<b>2001–2009 Averages</b>	\$187,052	92.4%	\$13,333	\$1,864	\$15,132	\$150,640	124.2%

Note: \$Mns.

The 2011 estimates assume large loss experience at historical levels and more mergers and stock buy-back programs among major reinsurers. Mergers are increasingly likely and tend to reduce capital. The estimates also assume that the equity and currency markets remain near 2010 levels.

## D. For More Information

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Holborn prepares the latest information on these issues in a variety of easy-to-use formats. We provide updates on recent and potential catastrophe events for several regions through an e-mail service. We also offer clients a monthly summary of reinsurer financial news and rating information. Holborn's Eye-in-the-Sky(SM) data management tool provides individually-tailored, real-time alerts on events that expose clients' accumulations.

### About Holborn

Holborn is the largest independent reinsurance brokerage firm in the U.S., offering advanced analytic tools, global market access and responsive account services to clients. The company was formed in 1920, making us one of the most experienced reinsurance brokers in the world. We are owned exclusively by our employees. This contributes to Holborn's stable client base and noteworthy ability to attract and retain talent.

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## ***Appendices***

1. Normalized Results
2. Reinsurers Included in Study
3. Significant Market Losses: 1975-2010
4. Major Reinsured Losses Since 2001

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## I. Normalized Results

### Results excluding reserve changes and worldwide industry losses over 0.5% of U.S. GWP (direct)

	Net Income/ Loss	Casualty Reserve Strengthening	Property Reserve Strengthening	Estimated Cat Losses	Tax Effect	Adjusted Net Income/ Loss
2001	(7,148)	\$3,853	(\$3,000)	\$23,000	(\$6,114)	\$10,591
2002	\$4,169	\$2,750	\$3,000	\$1,500	(\$1,851)	\$9,568
2003	\$11,314	\$1,722	\$0	\$2,250	(\$839)	\$14,447
2004	\$14,151	\$3,970	(\$2,000)	\$8,250	(\$2,066)	\$22,304
2005	\$2,264	\$7,805	(\$10,000)	\$28,500	(\$4,951)	\$23,618
2006	\$30,604	(\$9,686)	\$8,000	\$0	\$304	\$29,222
2007	\$32,611	\$1,699	\$4,000	\$2,250	(\$1,651)	\$38,910
2008	\$5,527	\$358	(\$2,000)	\$8,000	(\$1,322)	\$10,563
2009	\$26,506	(\$2,900)	\$2,000	\$750	\$31	\$26,387
2010 Est.	\$20,000 to \$25,000	(\$5,000)	(\$5,000)	\$16,000 to \$18,000	(\$2,500 to \$3,500)	\$20,000 to \$25,000
<b>2001-2009</b>	<b>\$119,997</b>	<b>\$9,571</b>	<b>\$0</b>	<b>\$74,500</b>	<b>(\$18,457)</b>	<b>\$185,611</b>

Notes: \$Mns. No tax-effect on unconsolidated Bermuda companies or Lloyd's syndicates. Reserve strengthening reflects disclosed amounts for U.S. casualty excess business, and Holborn estimates of property losses that emerge in the year following major events.

### Results excluding reserve changes and with large losses at 25-year average level relative to U.S. GWP

	Adjusted Net Income		Normalized Combined Ratio	Normalized Return
	No Strengthening and No Large Losses	But Average Large Losses		
2001	\$10,591	\$6,326	100.7%	8.1%
2002	\$9,568	\$4,645	99.8%	6.2%
2003	\$14,447	\$8,722	95.3%	10.9%
2004	\$22,304	\$16,317	91.9%	12.9%
2005	\$23,618	\$17,372	88.8%	12.0%
2006	\$29,222	\$22,804	95.8%	15.1%
2007	\$38,910	\$32,684	86.9%	16.9%
2008	\$10,563	\$4,519	90.4%	2.2%
2009	\$26,387	\$20,431	89.7%	12.1%
2010 Est.	\$20,000 to \$25,000	\$15,000 to \$20,000	93% to 95%	7% to 9%
<b>2001-2009</b>	<b>\$185,609</b>	<b>\$133,821</b>	<b>92.3%</b>	<b>10.6%</b>

Note: \$Mns.



## *2. Reinsurers Included in Study*

We combined the published experience of the RAA members, Lloyd's, Bermuda public companies and the major European reinsurer groups. We exclude reinsurance departments of insurer groups, such as Liberty Mutual, MAPFRE and Generali, and also Berkshire Hathaway's National Indemnity Co., as we consider it to be principally an investment vehicle and not a reinsurer. However, for consistency, we include insurers such as Lloyd's, ACE, AWAC and XL that are influential lead markets but may not write most of their volume as reinsurance. We also exclude specialist Life reinsurance and mortgage guarantee companies. Equitas and companies now in runoff are excluded from the years after they stopped underwriting. The companies in the study and the years each one is included are:

ACE (2000 – 2010)

Alterra (2010)/ Harborpoint (2005-2009)/ Max Re (2003-2009)

American Agricultural Insurance Company (2000 – 2010)

Amlin (Bermuda) Ltd. (2007-2010)

Arch (2003 – 2010)

Argo Reinsurance Ltd. (2007-2010) / PXR Reinsurance Company (2000 – 2006)

Ariel/Rosemont (2007 – 2010)

Aspen (2003 – 2010)

AWAC (2003 – 2010)

AXIS (2003 – 2010)

Berkley Insurance Company (2000 – 2010)

Catlin (Bermuda) (2003-2010)

CNA Re (2000 – 2002)

Converium (2000 – 2006)

EMC Reinsurance Company (2000 – 2010)

Endurance Specialty (2003 – 2009)

Everest Reinsurance Company (2000 – 2010)

Farmers Mutual Hail Insurance Company of Iowa (2000 – 2010)

Flagstone Reinsurance (2006-2010)

GE Insurance Solutions (2004 – 2005) / Employers Reinsurance Corporation (2000 – 2003)

General Re Group (2000 – 2010)

Gerling Global Group (2000 – 2002)

Glacier Re (2006-2009)

Hannover Re (2000 – 2010)

Hartford Re Company (2000 – 2002)

Hiscox Insurance Ltd. (Bermuda) (2006-2010)

Lancashire (2006-2010)

Lloyds (2000 – 2010, Market total GAAP results, eliminating syndicates consolidated into other reinsurers' results.)

Mapfre U.S. Re (2003 – 2005)

Montpelier (2003-2010)

MS Frontier Ltd. (Bermuda) (2007-2010)

Munich Re (2000 – 2010)  
Odyssey Re Corp. / Odyssey America Re Corp (2000 – 2010)  
Omega (Bermuda) (2006-2010)  
Overseas Partners U.S. Reinsurance Company (2000 – 2002)  
Partner Re (2001 – 2010)/ Paris Re (2006 – 2009) / AXA Re (2004 – 2006) / Axa Corporate Solutions Reinsurance Co. (2000 – 2003)  
Platinum Re (2002 – 2009) / St. Paul Re (2000 – 2001)  
PMA Capital Insurance Company (2000 – 2003)  
QBE Reinsurance Corporation (2000 – 2010)  
Renaissance Re (2000 – 2009)  
SCOR (2000 – 2010)  
Swiss Re (2000 – 2010)  
Toa Reinsurance Company of America (2000 – 2010)  
Tokio Millennium (Bermuda) (2003-2010)  
Transatlantic/Putnam Reinsurance Cos. (2000 – 2010)  
Trenwick America Reinsurance Corporation (2000 – 2005)  
Validus/IPC Re, Ltd. (2000 – 2009)  
White Mountain Re (2007-2010) / Folksam Reinsurance Company (2000 – 2007)  
XL Ltd. (2000 – 2010)

*Notes: Berkshire Hathaway's National Indemnity and Equitas units are excluded. Berkshire's General Re unit and the Faraday Syndicate at Lloyd's are included. Bermuda "Sidecars" do not report comparable figures and are not included.*

### 3. Major Worldwide Losses 1975 to 2010 (Events over 0.5% of U.S. GWP)

Year	Loss	Reported Fatalities	Worldwide Direct Insured Losses	% of U.S. Industry GWP
1977	Tenerife crash	583	\$500 Mn	0.5%
1978	U.S. Blizzard	approx. 100	\$800 Mn	0.8%
1979	Hurricane Frederic	12	\$2 Bn	2.0%
1980	Mt. St. Helens explosion	57	\$2 Bn	2.0%
1980	MGM Grand Fire	85	\$750 Mn	0.8%
1983	Australia Wildfires	75	\$600 Mn	0.6%
1983	Hurricane Alicia	21	\$1.5 Bn	1.5%
1985	Mexico City Earthquake	10,153	\$4 Bn	2.6%
1987	UK Winterstorm (B7J)	23	\$5 Bn	2.4%
1988	Piper Alpha Rig Explosion	167	\$2.5 Bn	1.0%
1988	Hurricane Gilbert	341	\$6 Bn	2.8%
1989	Exxon Valdez Oil Spill	0	\$4.5 Bn	1.6%
1989	Hurricane Hugo	56	\$7.5 Bn	3.4%
1989	Loma Prieta Earthquake	63	\$7.5 Bn	3.4%
1989	Phillips Petroleum Explosion	23	\$1.5 Bn	0.7%
1990	UK Winter Storm Daria (Burns' Day)	95	\$7 Bn	3.0%
1990	UK Winter Storm Vivian	64	\$5 Bn	2.1%
1991	Typhoon Mireille, Japan	52	\$5 Bn	2.1%
<b>1992</b>	<b>Hurricane Andrew</b>	<b>26</b>	<b>\$15.5 Bn</b>	<b>6.3%</b>
1992	Hurricane Iniki	6	\$1.5 Bn	0.6%
1993	Mississippi Flood	50	\$3 Bn	1.2%
<b>1994</b>	<b>Northridge Earthquake</b>	<b>72</b>	<b>\$17.5 Bn</b>	<b>6.5%</b>
1995	Kobe Earthquake	6,434	\$5 Bn	1.8%
1995	Texas Hail (Cat 38)	13	\$4 Bn	1.4%
1995	Hurricane Opal	70	\$3 Bn	1.1%
1996	Hurricane Fran	26	\$3.5 Bn	1.2%
1998	Hurricane Georges	604	\$4 Bn	1.3%
1999	Izmit, Turkey Earthquake	17,217	\$4 Bn	1.3%
1999	Hurricane Floyd	57	\$5 Bn	1.6%
1999	Typhoon Bart	26	\$4 Bn	1.3%
1999	European Winter Storm Lothar	50	\$9 Bn	2.9%
1999	European Winter Storm Martin	30	\$6 Bn	2.0%
<b>2001</b>	<b>September 11th Attacks</b>	<b>3,017</b>	<b>\$41 Bn</b>	<b>11.3%</b>
2001	Hurricane Allison	41	\$3.5 Bn	1.0%
2002	Czech Floods	84	\$4 Bn	1.0%
2003	St. Louis Tornadoes	45	\$3.5 Bn	0.8%
2003	California Wild Fires	15	\$3.5 Bn	0.8%
<b>2004</b>	<b>Hurricane Charley</b>	<b>35</b>	<b>\$12.5 Bn</b>	<b>2.6%</b>
2004	Hurricane Frances	49	\$7 Bn	1.5%
2004	Typhoon Songda	45	\$3.5 Bn	0.7%
<b>2004</b>	<b>Hurricane Ivan</b>	<b>123</b>	<b>\$13 Bn</b>	<b>2.6%</b>
2004	Hurricane Jeanne	3,035	\$5 Bn	1.1%
2005	Indian Ocean Tsunami	230,000	\$5 Bn	1.0%
<b>2005</b>	<b>Hurricane Katrina</b>	<b>1,836</b>	<b>\$65 Bn</b>	<b>13.3%</b>
2005	Hurricane Rita	34	\$9 Bn	1.8%
<b>2005</b>	<b>Hurricane Wilma</b>	<b>35</b>	<b>\$18.5 Bn</b>	<b>3.7%</b>
2007	California Wild Fires	14	\$3 Bn	0.8%
2007	European Winter Storm Kyrill	44	\$6 Bn	1.2%
2007	UK Floods	13	\$7 Bn	1.4%
2008	Hurricane Gustav	112	\$7 Bn	1.2% - 1.7%
<b>2008</b>	<b>Hurricane Ike</b>	<b>103</b>	<b>&gt;\$20 Bn</b>	<b>&gt;4.1%</b>
2009	Winter Storm Klaus	16	\$3.5 Bn	0.6% - 0.8%
<b>2010</b>	<b>Chile Earthquake</b>	<b>500</b>	<b>\$10 Bn to \$14 Bn</b>	<b>1.4% - 0.3%</b>
2010	European Windstorm Xythia	62	\$3.5 Bn	0.5%
2010	Deepwater Horizon	11	\$3.5 Bn	0.5%
2010	NZ Earthquake	Few	\$4.5 Bn to \$6.0 Bn	0.6% to 6.0%
<b>1975 - 2010 Totals</b>		<b>56 Events</b>	<b>&gt;275,000</b>	<b>\$400 Bn to \$425 Bn</b>
<b>46-Year Averages</b>		<b>1.22 per year</b>	<b>&gt; 6,000</b>	<b>\$9 Bn to \$10 Bn</b>
				<b>4.5% - 5.0%</b>

Source: Holborn estimates of worldwide market loss, all coverages, including LAE; Based on PCS, III, Sigma and market reports. Actual loss amounts, not adjusted for inflation. Foreign currencies converted at historic rates.  
Events shown in bold are over 2.5% of GWP.

## 4. Major Reinsured Losses Since 2001

Year	Loss	Worldwide Direct Insured Losses	Reinsured Losses	% of Reinsurance Industry GWP
<b>2001</b>	<b>September 11th Attacks</b>	<b>\$41 Bn</b>	<b>\$20 Bn – \$25 Bn</b>	<b>15% - 20%</b>
2001	Hurricane Allison	\$3.5 Bn	\$1 Bn – \$2 Bn	0.8% - 1.6%
2002	Czech Floods	\$4 Bn	\$1 Bn – \$2 Bn	0.6% - 1.3%
2003	St. Louis Tornadoes	\$3.5 Bn	\$1 Bn – \$2 Bn	0.5% - 1.0%
2003	California Wild Fires	\$3.5 Bn	< \$1 Bn	< 0.5%
<b>2004</b>	<b>Hurricane Charley</b>	<b>\$12.5 Bn</b>	<b>\$1.5 Bn – \$2.5 Bn</b>	<b>0.75% - 1.25%</b>
2004	Hurricane Frances	\$7 Bn	\$1 Bn – \$2 Bn	0.5% - 1.0%
2004	Typhoon Songda	\$3.5 Bn	\$1 Bn – \$1.5 Bn	0.5% - 0.75%
<b>2004</b>	<b>Hurricane Ivan</b>	<b>\$11.5 Bn</b>	<b>\$1.5 Bn – \$2.5 Bn</b>	<b>0.75% - 1.25%</b>
2004	Hurricane Jeanne	\$5 Bn	\$1 Bn – \$2 Bn	0.5% - 1.0%
2005	Indian Ocean Tsunami	\$5 Bn	< \$1 Bn	0.6% - 1.1%
<b>2005</b>	<b>Hurricane Katrina</b>	<b>\$65 Bn</b>	<b>\$20 Bn – \$24 Bn</b>	<b>10.7% - 14.6%</b>
<b>2005</b>	<b>Hurricane Rita</b>	<b>\$9 Bn</b>	<b>\$2 Bn – \$3 Bn</b>	<b>1.1% - 1.6%</b>
<b>2005</b>	<b>Hurricane Wilma</b>	<b>\$18.5 Bn*</b>	<b>\$3 Bn – \$4 Bn</b>	<b>1.6% - 2.2%</b>
2007	California Wild Fires	\$3 Bn	< \$1 Bn	< 0.5%
2007	European Winter Storm Kyrill	\$6 Bn	\$1 Bn – \$1.5 Bn	0.5% - 0.7%
2007	UK Floods	\$7 Bn	\$1 Bn – \$1.5 Bn	0.5% - 1.7%
2008	Hurricane Gustav	\$7 Bn	\$1 Bn – \$2 Bn	0.5% - 1.0%
<b>2008</b>	<b>Hurricane Ike</b>	<b>&gt;\$20 Bn</b>	<b>\$6 Bn - \$7 Bn</b>	<b>3.1% - 3.6%</b>
2009	Winter Storm Klaus	\$3.5 Bn	< \$1 Bn	< 0.5%
<b>2010</b>	<b>Chile Earthquake</b>	<b>\$10 Bn to \$14 Bn</b>	<b>\$9 Bn - \$12 Bn</b>	<b>4.5% to 6.0%</b>
2010	European Windstorm Xythia	\$3.5 Bn	>\$1 Bn	>0.6%
2010	Deepwater Horizon	\$3.5 Bn	>\$2 Bn	>1.0%
2010	NZ Earthquake	\$4.5 Bn to \$6.0 Bn	\$2.5 Bn - \$3.5 Bn	1.2% - 1.7%
<b>2001 – 2010 Totals</b>	<b>24 Events</b>	<b>\$250 Bn - \$275 Bn</b>	<b>\$80 Bn - \$100 Bn</b>	
<b>10-Year Averages</b>	<b>2.40 per year</b>	<b>\$25 Bn - \$28 Bn</b>	<b>\$8 Bn - \$10 Bn</b>	<b>4% - 5%</b>

Source: Holborn estimates of worldwide market loss, all coverages, including LAE; based on PCS, III, Sigma and market reports. Actual loss amounts, not adjusted for inflation; foreign currencies converted at historic rates: Events listed are over 0.5% of U.S. GWP in direct losses.

\*U.S. loss and expenses: \$16 Bn.

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September 15, 2011

## Global Reinsurance

### Monte Carlo meetings point to 2012 pricing improvement

**Our meetings at the annual Reinsurance Rendezvous in Monte Carlo point to higher property prices at Jan 1 renewals:** Most management teams expect 5-15% price improvements in property cat lines while casualty lines are bottoming with flat renewal expectations. Other key conference themes included rising loss estimates for 1H11 events, Eurozone investment exposures, reinvestment strategies amidst persistently low yields and capital deployment plans (organic growth/buybacks/divs/M&A).

**Pricing: We believe property cat pricing should rise throughout 2012 including 5-15% at Jan 1 renewals, leading to higher earnings/ROEs:** Sensitivity analysis reveals earnings upside leverage when pricing power is rising. An additional +500bps pricing power in Property and +250bps in other lines drives ~200bps incremental ROE improvement among our global reinsurers.

**Excess capital:** We see limited excess capital in Global Reinsurance once 2011 catastrophe losses, the new RMS model and potential European investment concerns are considered. This compares to our Nov 2010 reinsurance excess capital estimate of \$30-40bn, and is a key driver behind our bullish view on property pricing power in 2012.

**P&C investment portfolios:** P&C portfolios are well equipped to navigate the current environment; in fact, book values for most P&C's have actually risen in 3Q11. However, low yields remain a drag on EPS/ROE and Eurozone exposures are a bigger concern for European reinsurers than US/Bermuda peers.

**Market implied ROEs too bearish:** Global Reinsurance valuations have now dropped below financial crisis lows. According to our "What's in the Price" analyzer, reinsurance stocks discount ROEs in perpetuity below their cost of capital, cross-cycle averages, and our 2012-13 estimates.

**Our favorite names include: Hannover Re, Munich Re in Europe and RNR, AXS in the US:** Each has the balance sheet strength to take advantage of an improving P&C marketplace yet trades near all-time valuation lows.

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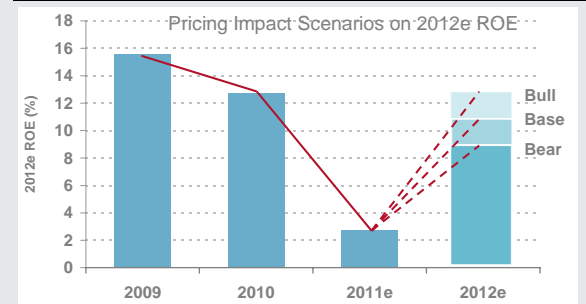
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### Pricing power leads to higher 2012 ROE



Source: Company Data, Morgan Stanley Research, Global Reinsurers include Munich Re, Swiss Re, Hannover Re, ACGL, AXS, PRE, RE, RNR, TRH, and XL. Base case reflects our current estimates. Bull case is estimated on 5% additional pricing improvement in Property and +2.5% in Casualty and Specialty. Bear case is estimated on -5% worse pricing than expected in Property and -2.5% in Casualty and Specialty.

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## Monte Carlo Key Takeaways

We met with 12 key players in reinsurance at the Monte Carlo Reinsurance Rendezvous this week. These included Alterra Capital Holdings, Munich Re, Montpelier Re, Renaissance Re, Lloyds of London, Guy Carpenter, Everest Re, Hannover Re, Scor, Axis Capital, Flagstone Re and Swiss Re. There were five key takeaways from our meetings.

### #1 Pricing – Confirming upward momentum

The consensus view at Monte Carlo was that there was upward pressure on reinsurance rates driven by large losses in 1H11 and the lower yield environment. Property lines have been rising since the 1Q11 catastrophes (Japan, New Zealand, Australia) and are expected to continue through 2012 as new catastrophe models from RMS lead to rising “average” loss expectations in the US and Europe and act as a further constraint on industry capital.

The average January renewal expectation is for rates to rise 5-15% in property cat and 0-5% in property non-catastrophe. Casualty trends remain muted, but many pointed to a bottoming process in place and flat 2012 pricing expectations as low yields and the 50% cumulative pricing declines since 2005 have erased the majority of margin from the segment. Specialty lines are seen broadly as increasing slightly, though the few remaining pockets of continued pricing weakness cited were Professional lines and Aviation.

### #2 Losses – Low 3Q reinsurance losses but Japan/NZ estimates may be rising

The consensus reinsurance view is that 3Q losses so far are running below catastrophe budget expectations with US Hurricane Irene the only large material event to date. Some noted the first \$10bn of cat losses are typically contained within primary retention limits and with Irene loss estimates of \$3-8b the majority of the loss will be borne by primary insurers.

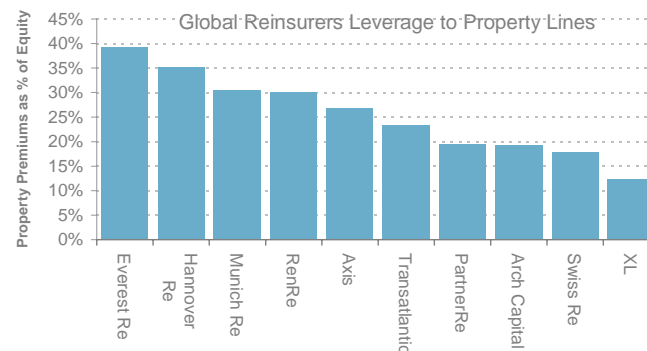
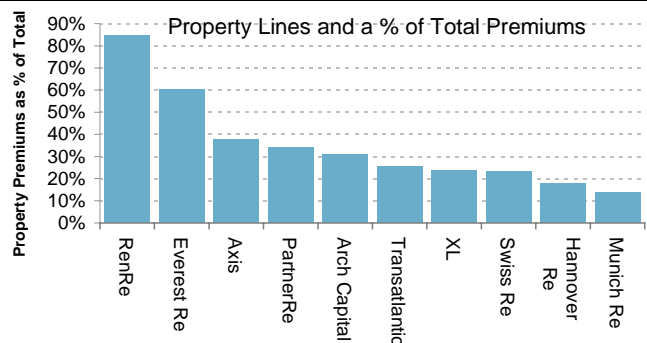
3Q11 has seen rising loss estimates from Japan and New Zealand. Primary cedants and many reinsurance management teams now believe there would be an upward bias to 1H11 loss estimates in 3Q results.

Exposure is likely to vary by company depending on the original conservatism and retro programs, but we conservatively believe a portion of any EPS “upside” for lower cat losses may be partially eroded by extra reserves set aside for 1H11 events for some reinsurers.

We do note a well known trend of rising quake estimates so this is not a surprise and is well contained within EPS estimates as opposed to being a capital event for the industry.

Exhibit 1

### Property Lines: Who Is Most Exposed?



Source: Company data, Morgan Stanley Research. Leverage = NEP / shareholders' equity plus minority interests.

### #3 Investment exposures – Manageable risks in the challenging capital markets

With reinsurance investment portfolios facing their toughest macro investment environment since 2008 considerable time was spent on the investment portfolios. All companies were comfortable regarding investment exposures given the vast majority of investments are contained with short-duration highly conservative portfolios and limited equity market sensitivity.

The larger European reinsurers are more leveraged than their Bermuda peers and have more exposure to the Eurozone investments. Each is comfortable with GIIPS and Financials exposures in the current environment and has actively limited exposures, in some cases giving up yield with hedging programs.

Despite the heightened concern around the investment portfolios we note (and management directionally confirmed) that 3Q book values were set to rise given the rally in the safest parts of the fixed income markets where the majority of portfolios are positioned (See Debate 3 in this report and our Sept 7<sup>th</sup> *P&C Portfolio Crosscurrents in a Difficult Macro Environment*).

Reinsurers were less encouraged about the fall-off in portfolio re-investment rates as global yields continue to drop to multi-decade lows. Insurance relies heavily on investment income to drive return from the premium “float” before losses are paid and this model is under pressure in the persistent low yield environment. Many management teams see this pressure point as a key driver behind the need for higher casualty pricing power but with casualty pricing flat all we see is ongoing pressure on EPS/ROE from this fundamental headwind.

#### **#4 Capital Deployment – Buybacks more likely at current valuations beyond hurricane season**

All forms of capital deployment were discussed at Monte Carlo including organic growth, buybacks, dividends and M&A. However, the increasing appetite for buybacks given current valuation was noticeable and is competing with underwriting given its high marginal ROE in a limited excess capital world.

Many buyback plans went on hold during record 1H cat losses but several Bermudian insurers see buybacks as much more likely in 4Q if current low hurricane losses continue. While organic underwriting growth is always preferred, many management teams point out that the low ROEs in much of the casualty marketplace are less impactful at driving shareholder value than buybacks at 70-85% of book value.

European reinsurers seemed less interested in buybacks preferring to stress and maintain dividend yields at well above market levels (5%+) to facilitate higher shareholder returns.

#### **#5 Regulatory changes unlikely to have much impact on reinsurance**

Overall, the industry at Monte Carlo seems fairly relaxed about changes to insurance regulation in Europe and Bermuda.

The companies who are domiciled in either Switzerland or Europe have gone a long way towards implementing regulator approved economic models, while Bermudians might have this work ahead of them as their regulator seeks equivalency.

There is little concern that increased regulation may negatively impact the industry or change business models as rating agency, not regulatory, capital requirements are likely to remain the binding constraint on most companies.

The industry continues to believe that Solvency 2 may bring in solvency related business due to its impact on primary insurers, but this may be limited by a watering down of the rules or gradual implementation of the regime, allowing more time for primaries to raise capital organically.

The higher regulatory bureaucratic burden is raising barriers to entry in Bermuda. There is a perception that the minimum asset size of a Bermudian start-up has risen due to tougher regulatory requirements and the increasing difficulty of getting a credit rating as a start-up. The rising barrier for traditional reinsurance capital therefore points to collateralized vehicles as a preferred method of capital transfer into the reinsurance markets following the next large claims event.



## Debate 1: How much pricing power in 2012?

### How much pricing power in 2012?

**Market's view:** Investors are increasingly of the view that pricing is headed higher, but not many quantify the impact on P&C results.

**Our view:** We believe property cat pricing should rise throughout 2012 including 5-15% at Jan 1 renewals. An additional +500bps pricing power in Property and +250bps in other lines drives ~200bps incremental ROE improvement among our global reinsurers.

The record catastrophe losses in 2011 have helped turn global property pricing power on a positive trajectory. As first published in our March 31<sup>st</sup> piece, "Global Reinsurance: Property Re Prices Moving Higher", the sizeable 1Q catastrophe losses from the Japan and New Zealand earthquakes and Australian floods effected a meaningful change in the pricing trend for property reinsurance. The record 2Q US tornado losses accelerated this positive trend at the important mid-year 2011 renewals.

We now expect property cat pricing to rise throughout 2012 including 5-15% at the January 2012 renewals. Our Monte Carlo meetings confirmed the positive trajectory in property pricing power due to numerous losses already cited and the widening adoption of the new RMS 11 model, which raises capital requirements in the US and Europe. January renewal discussions begin every year in Monte Carlo and our research reveals early cat pricing expectations of 5-15%.

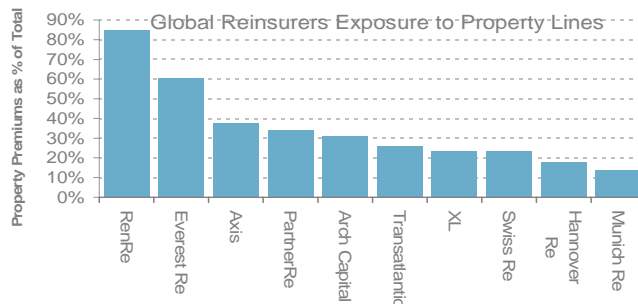
Many of our favorite stocks have sizeable exposure to the improving property pricing fundamentals. It is important to note that the P&C cycle remains in a period of transition as the "P" or property lines are experiencing rising rates while the "C" or casualty lines are bouncing along the bottom, not yet rising. We continue to prefer short tail property lines over casualty at this point in the cycle. Global Reinsurance Overweights Axis, Hannover, Munich and Renaissance each have meaningful exposure to the improving property segment fundamentals.

**Sensitivity analysis reveals considerable earnings upside when pricing power is rising.** We believe Wall Street underestimates the power of pricing in the P&C business model given the dislocated valuations in the group. We have done a sensitivity analysis across our global reinsurers, and an additional +500bps pricing power in Property and +250bps in other lines drives ~200bps incremental ROE improvement among our global reinsurers. Those with more exposure to

property see higher growth but all global reinsurers benefit from improving pricing power.

Exhibit 2

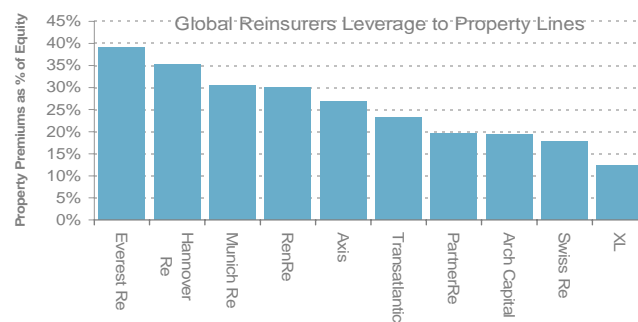
### Global Reinsurers Exposure to Property Lines



Source: Company data, Morgan Stanley Research

Exhibit 3

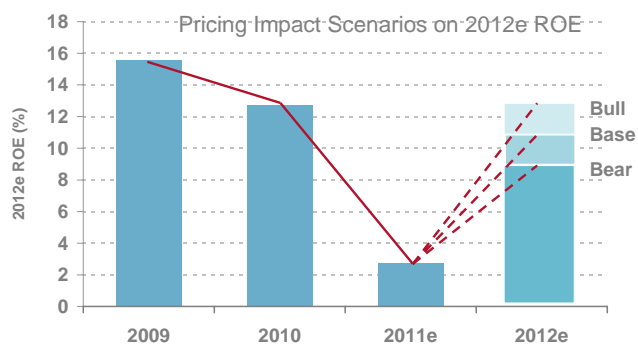
### Global Reinsurers Book Leverage to Property Lines



Source: Company data, Morgan Stanley Research. Leverage = NEP / shareholders' equity plus minority interests.

Exhibit 4

### Pricing Power Leads to Higher 2012 ROE



Source: Company data, Morgan Stanley Research estimates; Global Reinsurers include Munich Re, Swiss Re, Hannover Re, ACGL, AXS, PRE, RE, RNR, TRH, and XL. Base case reflects our current estimates. Bull case is estimated on 5% additional pricing improvement in Property and +2.5% in Casualty and Specialty. Bear case is estimated on -5% worse pricing than expected in Property and -2.5% in Casualty and Specialty.



## Debate 2: How much excess capital remains in Global Reinsurance?

### How much excess capital remains in Global Reinsurance?

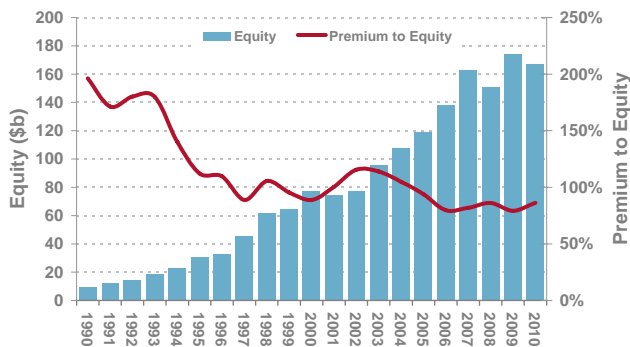
**Market's view:** Global reinsurance excess levels have declined but excess remains and keeps a lid on future pricing increases.

**Our view:** We believe limited excess capital remains in Global Reinsurance once 2011 catastrophe losses, the new RMS model and potential European investment concerns are considered.

**In 4Q10 we estimated global reinsurance excess capital levels of \$30-40 bn.** In our November 2010 initiation of coverage of global reinsurance, we estimated \$30–40 billion of excess capital in the global reinsurance marketplace. With so much excess capacity in the marketplace it was hard back then to envision a world of rising pricing power in 2011.

Exhibit 5

### Top 10 Reinsurers Premium to Equity



Source: Company data, Morgan Stanley Research; Top 10 reinsurers include Munich Re, Swiss Re, Hannover Re, Lloyd's, Berkshire Hathaway, SCOR, RGA, Transatlantic, Everest Re, and PartnerRe. Lloyd's reinsurance data since 2000; Berkshire Hathaway data for Insurance segment ex. GEICO.

**2011 catastrophes losses have eliminated the bulk of our 4Q10 estimated reinsurance excess capital.** We estimate the reinsurance share of 2011 losses from Japan, New Zealand, Australia and US events points to \$35bn of reinsurance losses. While profits have added to capital levels since our 4Q estimate there is little doubt these \$35bn have materially reduced our \$30-40b excess capital estimate.

**Additional pressures on capital beyond catastrophe losses: RMS 11 model adoption and investment portfolio concerns.** Some observers have pointed to RMS 11 being the equivalent of a \$20bn+ hurricane loss as it effectively caused average loss estimates to grow 20-30% in US zones. All else

being equal, carriers would need to raise rates by a similar amount to hold ROE constant. Many companies have openly cited the desire to pull back from peak zone PML exposures due to RMS 11, which is direct confirmation of shrinking supply in key peak segments. In addition, the low yield environment and concerns around Europe/US sovereign credit exposures are causing observers to become more concerned about the investment portfolio, which is another key component to P&C capital levels.

Exhibit 6

### Excess Capital Eliminated by 2011 Catastrophes

\$billion	Industry Losses	Reins. Share	Reins. Losses	A-T Impact	Excess Capital
YE10 Estimates					30 - 40
2011 Catastrophes:					25% tax rate
Australia Floods & Cyclone Yasi	5	80%	4.0	3.0	
New Zealand Earthquake	15	80%	12.0	9.0	
Japan Earthquake & Tsunami	30	55%	16.5	12.4	
New Zealand Aftershock	3	80%	2.4	1.8	
U.S. Tornadoes	16	60%	9.6	7.2	
Hurricane Irene	5	60%	3.0	2.3	
Subtotal	74		47.5	35.6	-35.0
Post 2011 Catastrophes					Limited

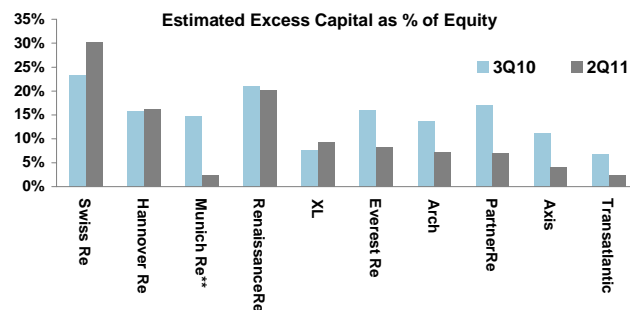
Source: AIR, EQECAT, Company data, Morgan Stanley Research

**Excess capital levels for our companies under coverage have also dropped versus 4Q10; organic growth to compete with buybacks/dividends for capital deployment.**

As part of last year's Global Reinsurance launch we provided individual company excess capital figures. Updating our analysis for 1H11 results, catastrophes, RMS 11 and factoring in ongoing investment concerns points to lower levels of excess than 4Q10. Back then we expected buybacks and dividends to drive returns late in the P&C cycle but given an improving P&C underwriting environment we believe organic growth now is an important consideration for capital deployment. Buybacks and dividends continue to be attractive drivers of shareholder returns from current valuation levels.

Exhibit 7

### Excess Capital\* Estimates



Source: Company data, MS estimates. \*Estimated S&P excess over target rating. \*\*Munich Re appears low on this measure but in our discussions with S&P, Munich Re's capital level is not currently putting downward pressure on its rating and internal capital is much stronger.

## Debate 3: Are P&C investment portfolios able to withstand these volatile capital markets?

### Are P&C investment portfolios able to withstand these volatile capital markets?

**Market's view:** Investors are increasingly concerned about various asset classes especially Euro-zone exposures and also the low yield impact on the P&C business model.

**Our view:** P&C portfolios are well-equipped to navigate the current environment; in fact, Book Values for most P&C's have actually risen in 3Q11 though low yields remain a drag on EPS/ROE. Euro-zone exposures are a bigger concern for European reinsurers than US/Bermuda peers.

**Reinsurers are now navigating the most challenging investment climate since the 2008 financial crisis.** The sell-off in equities, persistent low yields and Eurozone/US sovereign exposures are among the 3Q11 concerns. Reinsurer portfolios appear well equipped to navigate the environment although there is a gap between the US / London market names and the large European reinsurers.

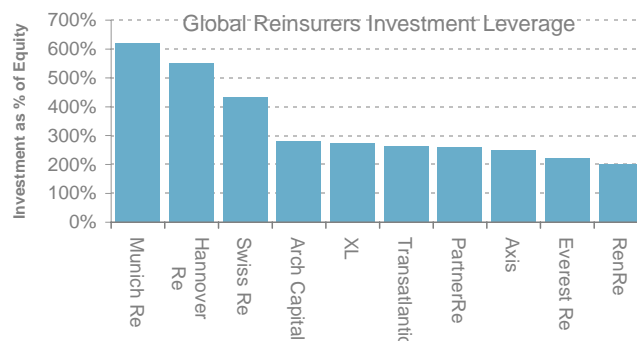
**US and Bermudian names have low asset duration (~3y) and leverage (2-4x)**, which means they are relatively less sensitive to falling yields and deterioration in asset quality.

**The larger European reinsurers have longer asset duration (4-7y)**, due to higher casualty and life reinsurance exposures, and higher asset leverage (4-6x). This makes them relatively more vulnerable to asset side shocks, although they are still less levered and have lower duration than primary life names (see our publication *Fat Tail Friday: Change in Insurer Asset Sensitivity since 2007*, Sept 9, 2011).

**The reinsurers we cover have relatively high asset quality**, with average fixed income ratings AA and limited exposure to equities and structured credit. The European reinsurers in particular do have material exposures to European financials and GIIPS sovereigns, although this differs by company.

Exhibit 8

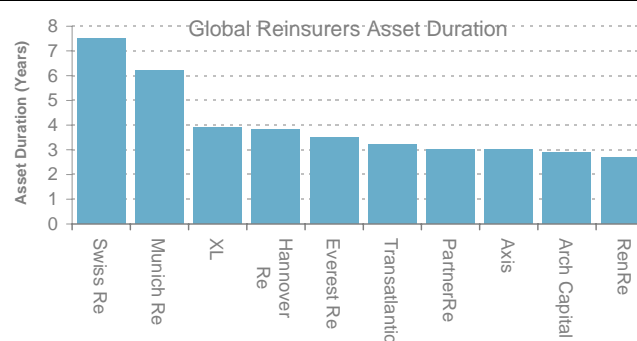
### European Reinsurers Investment Leverage Higher



Source: Company data, Morgan Stanley Research

Exhibit 9

### Asset Duration of Reinsurers – the Europeans Have the Longest Asset Duration



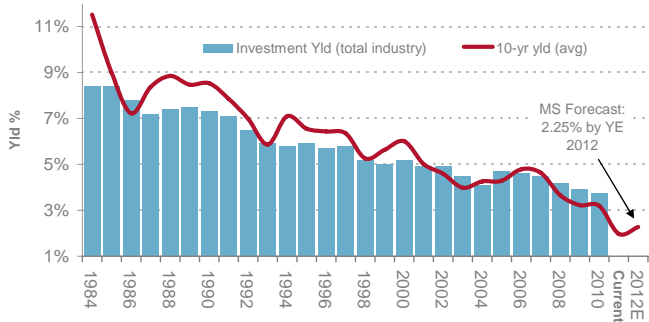
Source: Company data, Morgan Stanley Research

Low investment returns lead to lower EPS. The recent ~100bp drop in 10 year US Treasury yields and "lower for longer" Fed guidance reduces the reinvestment rate assumptions in our models and pressures 2012 and 2013 EPS. In addition, the sharp sell-off in equity markets and related capital markets volatility also may pressure 3Q returns in alternative asset classes (i.e. hedge fund, private equity, etc.) for those with exposure. (see our Sept 7 note *P&C Portfolio Crosscurrents in a Difficult Macro Environment*).

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Global Reinsurance

Exhibit 10

## P&C Total Industry Investment Yield vs. 10-Year U.S. Treasury Yield

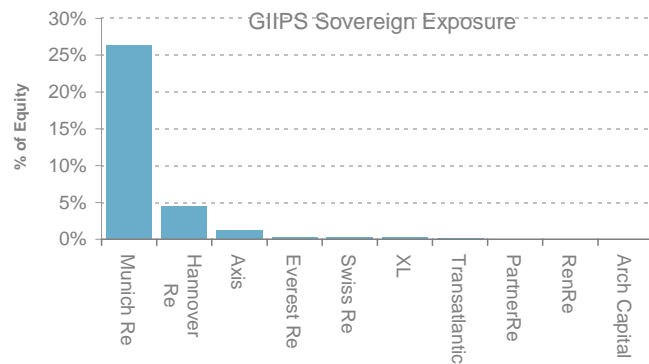


Source: Company data, Morgan Stanley Research, A.M. Best Aggregates & Averages

**European investment “hot spots” more worrisome for European based reinsurers.** We analyzed investment exposure to the 2 parts of the European marketplace that appear most troublesome: (1) GIIPS sovereign (Greece, Italy, Ireland, Portugal and Spain) and (2) European financials. We believe impairment risk is more elevated in these European “hot spots” and merits stress based scenario analysis.

Exhibit 11

## European Reinsurers Have Higher Exposure to GIIPS sovereigns



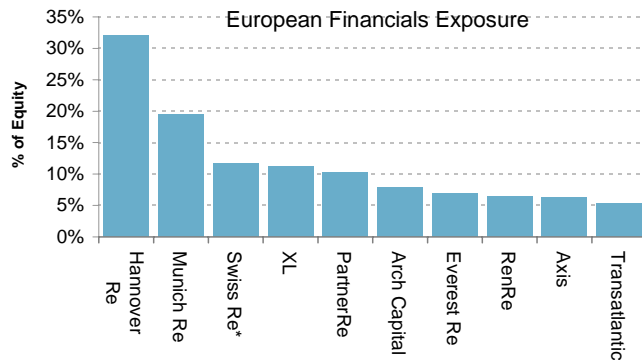
Source: Morgan Stanley Research, Company data, Investor Day Presentations, SNL. Leverage is net asset exposure (of tax and PH participation) / shareholders' equity + minorities. All figures at 1H11.

**Munich Re has relatively high exposure to GIIPS sovereigns,** yet this is offset by a number of factors. First, half of the exposure is in participating funds, which means

policyholder buffers are able to absorb potential losses. Secondly, the rest of the portfolio is relatively highly rated (74% of investments AA or above).

Exhibit 12

## European Reinsurers Have Higher Exposure to European Financials

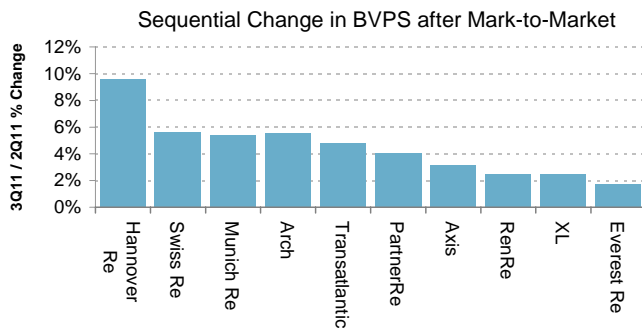


Source: Company data, Morgan Stanley Research. Leverage is net asset exposure (including tax and PH participation) / shareholders' equity + minorities. All figures at 1H11. \*Swiss Re's high level of excess capital helps make its leverage lower than European peers.

**A silver lining? 3Q book values to rise 2%-9%.** P&C investment portfolios have appreciated in the summer months even as P/B valuation shrinks to all-time lows. Marking our portfolios to market reveals book values rising 2%-9% versus 2Q11. Hannover Re stands out as it has higher asset leverage than Bermudans and less leverage to equities than European peers.

Exhibit 13

## Estimated 3Q11 BVPS Change after MTM



Source: Company data, Morgan Stanley Research

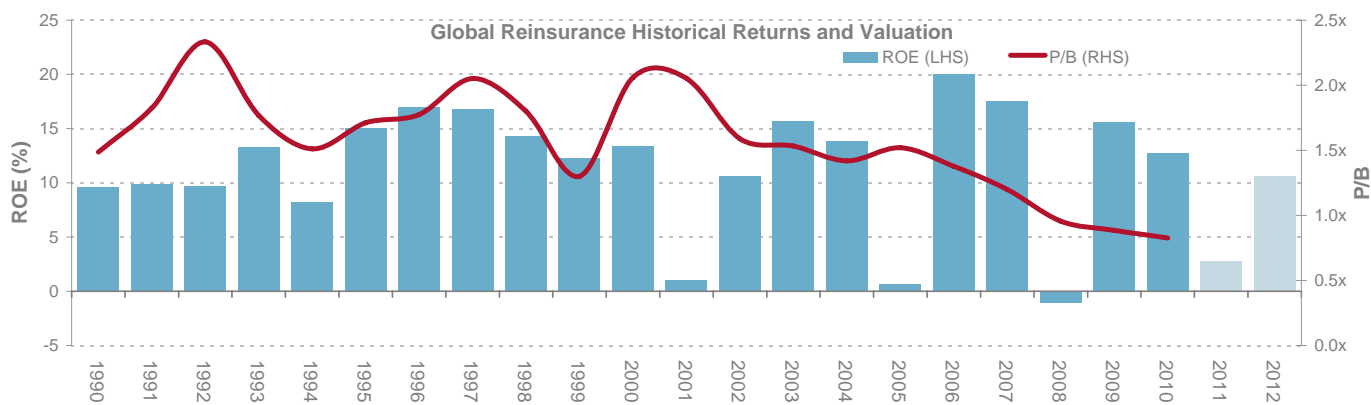
## Valuation Back to All-Time Lows

**Global reinsurance valuations are at historical lows reflecting extreme investor pessimism.** Reinsurance stocks as a group trade below book value with individual companies trading at 60-110% of book. We do not see large balance sheet holes that might justify this dislocated valuation. The only reasonable explanation to us is the severe deterioration in ROE for the industry may be seen as a permanent condition in which global reinsurers sustainably earn below their cost of capital justifying a the discounted valuation.

**Current prices discount long-term ROEs well below long-term cross-cycle average, our estimates, and companies' cost of capital.** We use Morgan Stanley's "What's in the Price" tool to determine ROE expectations in the marketplace. Current share prices assume a permanent destruction of value by global reinsurance companies, which stands in contrast to history and our forward expectations. Said differently, if investors subscribe to our 2012+ outlook there is considerable upside in our favorite ideas.

Exhibit 14

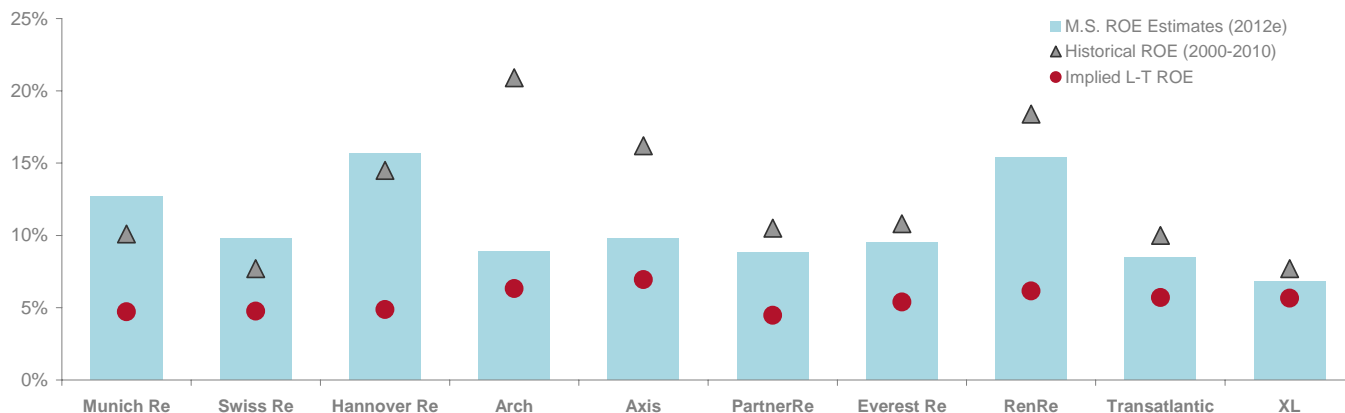
### Global Reinsurance Valuations at Historic Lows



Source: FactSet, Morgan Stanley Research, Global Reinsurers include Munich Re, Swiss Re, Hannover Re, ACGL, AXS, PRE, RE, RNR, TRH, XL, equal-weighted average. 2011-12 figures are Morgan Stanley estimates

Exhibit 15

### What's in the Price?



Source: FactSet, Company data, Morgan Stanley Research estimates

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## Company Risk-Reward Snapshots

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<b>Company</b>	<b>Ticker</b>	<b>Rating</b>	<b>Curr.</b>	<b>Market Cap</b>	<b>Price</b>
Hannover Re	HNR1-DE	O	€	3,650	30.85
RenaissanceRe	RNR	O	\$	3,457	66.70
Munich Re	MUV2-DE	O	€	14,243	82.76
Axis Capital	AXS	O	\$	3,548	27.39
Everest Re	RE	E	\$	4,298	78.86
PartnerRe	PRE	E	\$	3,812	56.55
Swiss Re	RUKN-CH	E	CHF	13,995	38.65
TransAtlantic	TRH	E	\$	3,072	49.25
XL Group	XL	E	\$	5,808	19.49

Source: Morgan Stanley Research

## Risk-Reward Snapshot: Hannover Re (HNRGn.DE, OW, PT €47)

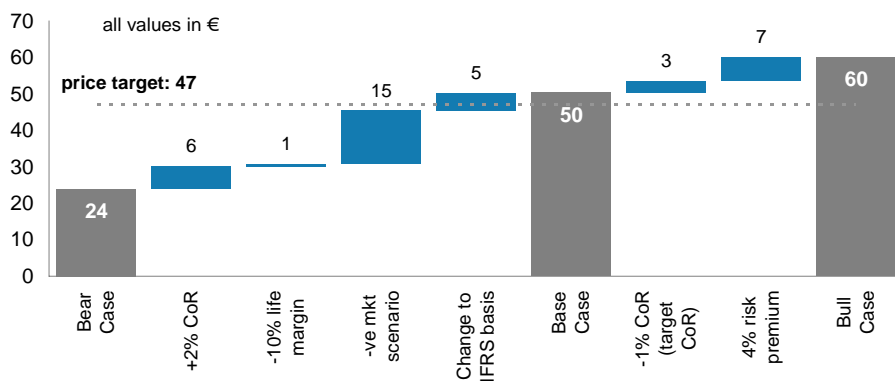
### Historical low P/BV multiple suggests upward skew



Source: FactSet, Morgan Stanley Research

<b>Price Target €47</b>		<b>Based on 20% bear, 60% base case, 20% bull case which is the standard approach we apply across the insurance sector.</b>
<b>Bull Case</b>	1.5x P/TBV 11e	<b>More normal cost of equity:</b> Assuming less market volatility and repaired corporate bond market is translated into lower risk premium of 4% vs 5% in base case. 1ppt lower combined ratio.
<b>Base Case</b>	1.2x P/TBV 11e	<b>Relative stability in underlying earnings, and normal equity market behaviour:</b> We assume a cross-cycle combined ratio of 98% and a cost of equity of 11.35%
<b>Bear Case</b>	0.6x P/TBV 11e	<b>Negative asset scenario, lower life margins, +200bps to CoR and IFRS model:</b> Assuming an accentuated bear case –ve asset scenario, life margins compress by a tenth and cross-cycle combined ratio increases 2ppt. Assume market ignores EV and switches to IFRS equity valuation

### Bear to Bull: Hann Re financial valuation driven by underwriting perf



Source: FactSet (historical price data), Morgan Stanley Research estimates

### Why Overweight?

- **The market continues to view Hannover Re's capital position too negatively.** We believe that it will be able to maintain its retro protection program at the same levels in 2012, and even if it could not, the impact on earnings is relatively minor.
- **Very inexpensive multiples.** (0.7x P/BV 11e with 15% RoE 12e vs. 1.1x P/BV for the sector with a similar mean RoE, so a 40% discount).
- **Defensive earnings vs. sector.** Hannover Re is <4% geared to GIIPS sovereigns, has no listed equities exposure and 91% of its fixed income investments are rated A or better. Low yields would limit near-term EPS growth, but in the near term margins look likely to expand from normalised cat losses and price improvements.
- **Capital sufficient for all but most extreme scenario.** While Munich Re and Swiss Re have stronger capital, we think Hannover Re would be able to absorb a 1-in-100 year US wind loss in addition to normal losses and a 100bps rise in investment yields without losing its ability to selectively grow in a hard market.

• **Where could we be wrong?** A substantial spike in reserving deficiencies would erode capital, potentially limiting growth. Several very large losses would favour larger reinsurers which are considered stronger on capital by the market and some ratings agencies. A severe corporate bond spread scenario also would impact Hannover Re's equity more than large Reinsurer peers.

### Potential Catalysts

- 3Q11 results on 9 Nov – we expect Hannover Re to continue to beat consensus estimates.

## Hannover Re SOTP valuation

Exhibit 2

### Hannover Re sum-of-the-parts

(€mn unless otherwise stated)	2011E	'12 EVE	'12 Return	Sus. ROC	Comment (vs. 2012E)	SOTP	per share (€)	Capital Multiple
Non-life reinsurance	3,821	538	14.1%	11.9%	98% Sust. COR; 8.2x PE	4,419	36.6	1.16
Life reinsurance	2,686	266	9.9%	10.6%	1.0x EV	2,762	22.9	1.03
Other	1,519	21	1.4%	1.4%	1.0x BV	1,519	12.6	1.00
<b>TrEV plus Debt</b>	<b>8,026</b>	<b>826</b>	<b>10.3%</b>	<b>9.5%</b>	<b>1.18x Capital; 10.5x EVE</b>	<b>8,700</b>	<b>72.1</b>	<b>1.08</b>
Debt	(2,057)	1	-0.1%	-0.1%	1.0x face	(2,057)	(17.1)	1.00
<b>MCEV</b>	<b>5,969</b>	<b>827</b>	<b>13.9%</b>	<b>12.8%</b>	<b>1.26x Capital; 8.0x EVE</b>	<b>6,643</b>	<b>55.1</b>	<b>1.11</b>
					PV to 2011 year-end	5,952	49.4	
					2011 Dividends	121	1.0	
					<b>2011 year-end SOTP</b>	<b>6,073</b>	<b>50.4</b>	<b>1.02</b>

Source: Morgan Stanley Research estimates

Our valuation methodology is based on a sum-of-the-parts approach with capital multiples reflecting our views about the sustainability of returns by business line. We then weight our bear/base/bull scenarios by what we consider their relative likelihood to come up with our final price target.

The only change we make to our methodology is that we lower sustainable investment returns due to falling yields. Non-life sustainable RoI falls to 3.1% from 3.3%.

#### Base case: €50.4 (1.2x 2011e TBV)

- **Non-life at 8x P/E**, on the basis of a 99% cross-cycle CoR.
- **Life reinsurance at 1x 2011e EV**: Life reinsurance is valued higher for Hannover Re than peers, but this is justified by its higher historical and prospective growth rates (7-10% NEP growth target p.a. with 6% EBIT margin target).
- **Non-allocated capital at 1.0x face value**, and debt also removed at 1x face value.

#### Bear case: €23.8 (0.6x 2011e TBV)

In our bear case we assume that combined ratios deteriorate 200bps in non-life reinsurance due to weak pricing, life margins compress 10% due to weak yields, and a negative market scenario causes investment losses.

#### Bull case €60 (1.5x 2011e TBV)

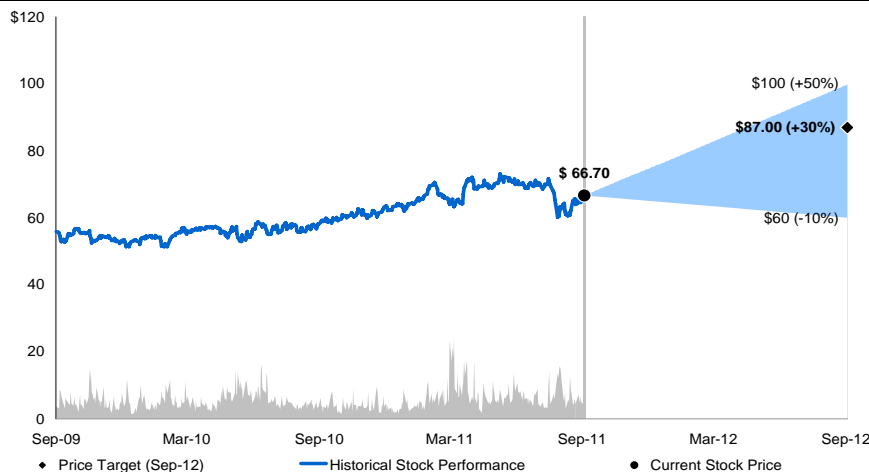
Our bull case assumes the P&C combined ratios falls by 1ppt across the cycle and markets return to some normality, with the equity risk premium coming down from 5% to 4%.

#### Risks to valuation

Hannover Re is exposed to claims event risk, including man-made and natural catastrophes across the globe. As a large holder of investments, asset market shocks or changes in interest rates can impact the market value of holdings, potentially reducing IFRS equity. A sudden shift in claims inflation, potentially due to an environmental or legal trend, could cause reserves to prove inadequate.

## Risk-Reward Snapshot: RenaissanceRe (RNR, \$67, Overweight, PT \$87)

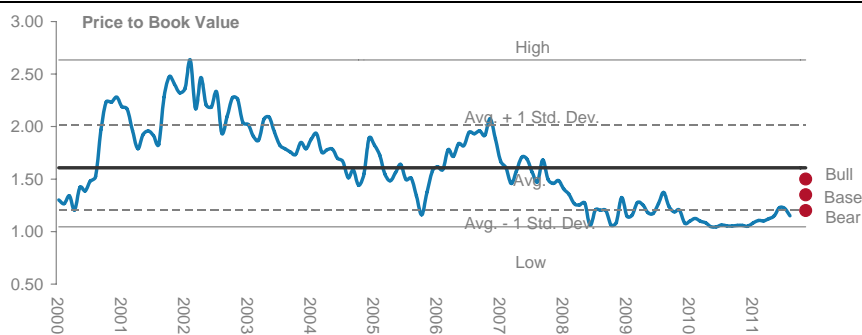
### Upside optionality for long-term investors



Source: FactSet, Morgan Stanley Research

<b>Price Target \$87</b>		Derived from the base case scenario. Our price target is based on 1.35x BV, a discount to RNR's historical average P/B of 1.6x, reflecting below cross-cycle ROE in a soft market.
<b>Bull Case \$100</b>	1.5x 2Q12e Bull Case BV	<b>Higher BVPS growth in absence of major catastrophes.</b> P&C hard market returns leading to multiple expansion close to historical averages. 20%+ ROE driven by benign catastrophe losses, continued favorable reserve development, higher investment income and continuing share repurchases
<b>Base Case \$87</b>	1.35x 2Q12e Base Case BV	<b>Delivering on plan.</b> Catastrophe losses close to historical averages (3/5/10 year). Improving top-line growth on better property re pricing/demand, declining investment returns, lower reserve releases, continued share repo. ROE of 15%.
<b>Bear Case \$60</b>	1.2x 2Q12e Bear Case BV	<b>Outsized losses in both underwriting and investments within next 4 quarters.</b> BV drops by 23% due to a large catastrophe event (~20% impact) and investment portfolio losses roughly those experienced during the financial crisis (~3% impact).

### RNR historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Overweight?

#### Pure play in improving property reinsurance marketplace.

- RenRe is the market leader in short-tail property catastrophe market where we see pricing and demand improving following the worst 1H catastrophes in industry history.
- RNR segment growth driven by catastrophe loss cost CAGR of >6%

#### Strong balance sheet.

- We estimate \$600 million in excess capital, or 20% of equity to facilitate an acceleration in organic growth in an improving marketplace.
- AA- ratings and S&P Enterprise Risk Management rating of "Excellent," among highest in global reinsurance.

#### Higher EPS than consensus.

Our 2012-2013e EPS estimates are 15-20% higher than consensus on higher top-line and better underwriting returns.

#### Attractive valuation...

- RNR trades near all-time lows at 1.1x book value.
- Share price discounts 6.2% ROE in perpetuity vs. cross-cycle avg. of 24% and our 2012-13 estimates of ~15%.

#### ...and upside optionality.

• LT investors pick up "free" options, including higher yields (2013+) and certainty of RNR participation in next up-cycle given \$3+ billion of available capacity.

#### Key EPS Drivers

- Underwriting income/losses.
- Investment income/yields.
- Share repurchase.

#### Risks

- EPS more exposed to downside volatility from catastrophes.
- M&A given less success and lower returns outside core property reinsurance markets.



## Risk-Reward Snapshot: Munich Re (MUVGn.DE, OW, PT €143)

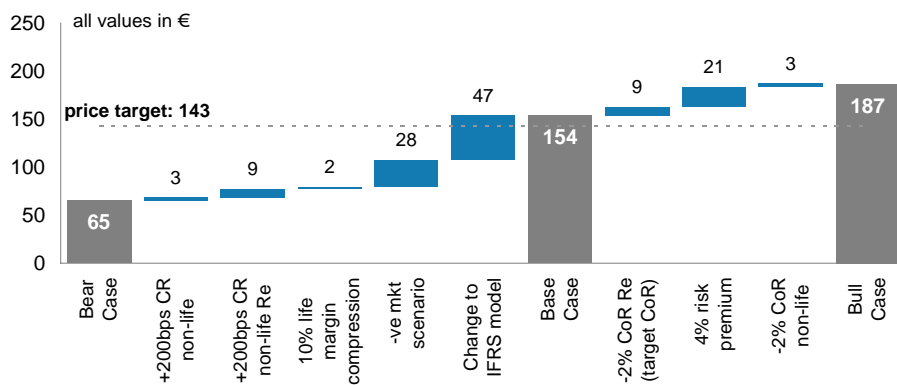
### A defensive stock with large potential upside



Source: FactSet, Morgan Stanley Research

Price Target €143		Weighted 20% to bear case, 60% base case, 20% bull case, which is the standard we apply across the insurance sector.
<b>Bull Case</b>	2x 11e TBV €187	<b>More normal cost of equity.</b> Assuming lower market volatility translates into a lower risk premium of 4% vs. 5% in our base case. 2% lower combined ratio.
<b>Base Case</b>	1.6x TBV €154	<b>Relative stability in underlying earnings, with normal equity market behaviour.</b> We assume a cross-cycle reinsurance combined ratio of 97% (reinsurance) and 99% (primary).
<b>Bear Case</b>	0.7x 11e TBV €65	<b>Negative asset scenario, higher combined ratio and IFRS model.</b> Assuming standard bear case negative asset scenario, life margins compress by 10% and cross-cycle combined ratio increases 2ppts. Assume market ignores EV and switches to IFRS equity valuation.

### Bear to Bull: Munich Re's valuation is robust



Source: FactSet (historical share price data), Morgan Stanley Research estimates

### Why Overweight?

- **Hardening rates not in price.** We note that guided net income was €2.4bn at the start of the year and, despite improving market conditions, consensus has a similar number for 2012. We think hardening rates and growth are not in the price, and expect the stock will re-rate as estimates rise.
- **GIIPS exposures manageable.** At 2Q11 Munich Re had ~€10bn GIIPS exposure (50% Italy, 20% Spain, 15% Ireland). Half of this is in with-profits funds where policyholders can absorb the bulk of the losses. All of it is fully mark-to-market in book value. We estimate a 30% *further* haircut would only reduce book value by ~6%, due to policyholder absorption.
- **Defensive stock.** Munich Re's stable business model, strong capital and conservative management make it relatively robust in difficult markets.
- **Dividend safer than people think.** The equalization reserves under German GAAP have preserved distributable capital, and we think it would take another unusually large loss to threaten the dividend.

### Where could we be wrong?

- **Falling bund yields.** Munich Re's P/BV is 80% correlated to German bunds over the past 20 years so a sustained fall in yields is unhelpful.
- **Policyholder absorption has limits.** Although there are levers to pull, such as realising gains or using free RfB to buffer impairments, a high enough level of losses hits shareholder capital due to policyholder guarantees.

### Potential Catalysts

- **Tends to outperform in 4Q** – notably after active hurricane seasons.
- **3Q11 results 8 Nov 2011.**

## Munich Re SOTP valuation

Exhibit 3

### Munich Re: Sum of the parts, bull-bear-base probabilities 20/20/60%. Base case valuation €154

Eur mn unless otherwise stated	2011e	'12 EVE	'12 Return	Sus. ROC	Comment (vs. 2011E)	SOTP	per share (€)	Cap. Mult
Non-life	2,522	306	12.1%	10.2%	99% Sust. COR; 8.6x PE	2,646	14.7	1.05
Life & Health primary	4,098	314	7.7%	7.7%	0.8x EV	3,242	18.1	0.79
Non-life reinsurance	12,202	2,034	16.7%	14.9%	97% Sust. COR; 9.3x PE	18,993	105.8	1.56
Life reinsurance & Health	9,002	777	8.6%	9.1%	0.9x EV	8,469	47.2	0.94
Other (incl. consolidation adj)	678	113	16.7%	16.7%	6.0x PE	678	3.8	1.00
<b>EEV plus Debt</b>	<b>28,502</b>	<b>3,544</b>	<b>12.4%</b>	<b>11.4%</b>	<b>1.19x Capital; 9.6x EVE</b>	<b>34,027</b>	<b>189.5</b>	<b>1.19</b>
Debt	(4,847)	(325)	6.7%	6.7%	1.0x face	(4,847)	(27.0)	1.00
<b>MCEV</b>	<b>23,655</b>	<b>3,219</b>	<b>13.6%</b>	<b>12.4%</b>	<b>1.23x Capital; 9.1x EVE</b>	<b>29,180</b>	<b>162.5</b>	<b>1.23</b>
					PV to 2011 year-end	26,583	147	
					2011 Dividend	1,122	6.2	
					<b>2011 year-end SOTP</b>	<b>27,706</b>	<b>153.6</b>	<b>1.17</b>

Source: Morgan Stanley Research estimates

Our valuation methodology is based on a sum-of-the-parts approach with capital multiples reflecting our views about the sustainability of returns by business line.

We then weight our bear/base/bull scenarios by what we consider their relative likelihood to arrive at our final price target.

We reduce slightly our yield assumptions based on the market movements since we last published. We also add into our bear case scenario the potential of -5% movement in the value of the sovereign bond portfolio, which marginally reduces the price target.

Note that we do not assume future buybacks in our valuation which creates an upside bias to our valuation.

#### Base case: €154 (1.6x 2011e P/TBV)

- **Primary non-life at 9x P/E**, on the basis of a 99% cross-cycle CoR. We note actual combined ratios are much lower in primary non-life, but that 'other expenses' in this segment are typically higher than 'other income', and we reflect these costs in our sustainable CoR.
- **Primary life at 0.8x 2011e EV**: This business represents 11% of our valuation, and falling yields are a downside risk.
- **Non-life reinsurance at 9.3x 2012e earnings**: We assume a 97% cross-cycle CoR, which may improve if elements of a hard market emerge in the near future.
- **Life reinsurance at 0.9x 2011e EV**: We have reduced our valuation for life reinsurance significantly to reflect the impact of low yields on profitability in this segment.

- **Debt and non-allocated capital removed at 1.0x face.**

#### Bear case: €65 (0.7x 2011e P/TBV)

In our bear case we assume that combined ratios deteriorate 200bps in both non-life primary and reinsurance due to weak pricing, life margins compress 10% due to weak yields, and a negative market scenario causes investment losses. We also switch to an 'IFRS' model valuation instead of our EV model, which takes off €46.5 per share.

#### Bull case €187 (2x 2011e P/TBV)

Our bull case assumes the P&C combined ratio falls by 2 ppts across the cycle and markets return to some normality, with the equity risk premium coming down from 5% to 4%.

#### Risks to valuation

Munich Re is exposed to claims event risk, including man-made and natural catastrophes across the globe. As a large holder of investments, asset market shocks or changes in interest rates can impact the market value of holdings, potentially reducing IFRS equity. In particular, Munich Re has above average exposure to periphery sovereigns and a deterioration of the macro environment could threaten near-term earnings. A sudden shift in claims inflation, potentially due to an environmental or legal trend, could cause reserves to prove inadequate. A sustained low yield environment would significantly pressure the primary life business, in particular, where policyholders often have guaranteed returns.

## Risk-Reward Snapshot: Arch Capital (ACGL, \$33, Equal-weight, PT NA)

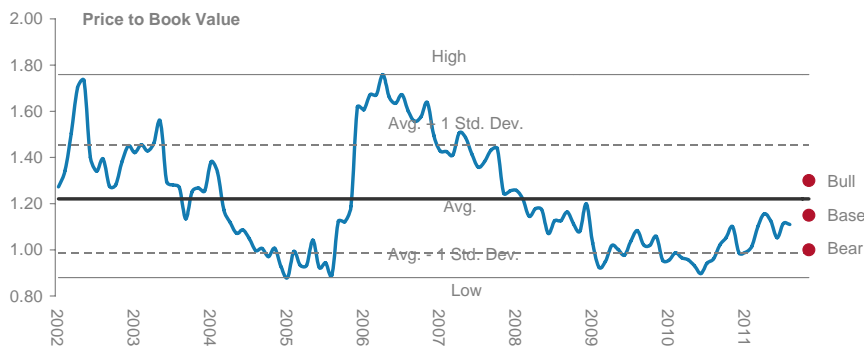
### 75% exposure to competitive US specialty markets



Source: FactSet, Morgan Stanley Research

<b>Fair Value \$39</b>		Derived from base case scenario. The fair value is based on 1.15x BV, a discount to ACGL's historical average P/B of 1.3x, reflecting below cross-cycle ROE in a soft market.
<b>Bull Case \$45</b>	1.3x 2Q12e Bull Case BV	<b>Better fundamentals.</b> P&C cycle turns and ACGL takes share. EPS growth/ROE expansion occurs as P&C cycle turn accelerates top-line growth, margins improve and higher yields driver higher investment income. ACGL continues to aggressively manage capital through share buybacks.
<b>Base Case \$39</b>	1.15x 2Q12e Base Case BV	<b>Delivering on plan.</b> Continued fundamental execution in underwriting and investment income combined with "in line" catastrophe losses and reserve releases. Despite soft market conditions ACGL aggressively redeploys capital to shareholders and is able to grow BVPS 15%. ROE of 10%.
<b>Bear Case \$29</b>	1.0x "trough" 2Q12e BV	<b>Outsized losses in both underwriting and investments within next 4 quarters.</b> BV drops by 15% due to a 1-in-100 catastrophe event (10% impact) and investment portfolio losses roughly 50% of those experienced during the financial crisis (5% impact).

### ACGL historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Equal-weight?

**Diversified underwriting platform offers global exposure across faster growing segments of P&C.**

- Gives flexibility to deploy capital to most attractive segments
- Provides portfolio diversification

**Favorable capital deployment.**

- Strong under-levered balance sheet with \$300m excess capital
- We expect ACGL to return ~11% via buybacks in 2011-12

**Attractive valuation.**

- ACGL near 100% of book value and near all-time lows
- ACGL share price discounts 6% ROE in perpetuity vs. cross-cycle average of 21%+ and our 2012 estimate of 9%
- LT investors pick up "free" call options, including higher yields (2013+) and a potential turn in P&C pricing (2012+).

**Concerns**

- 75% exposed to US specialty markets which are among most competitive business lines in P&C marketplace.
- No dividend

**Key EPS Drivers**

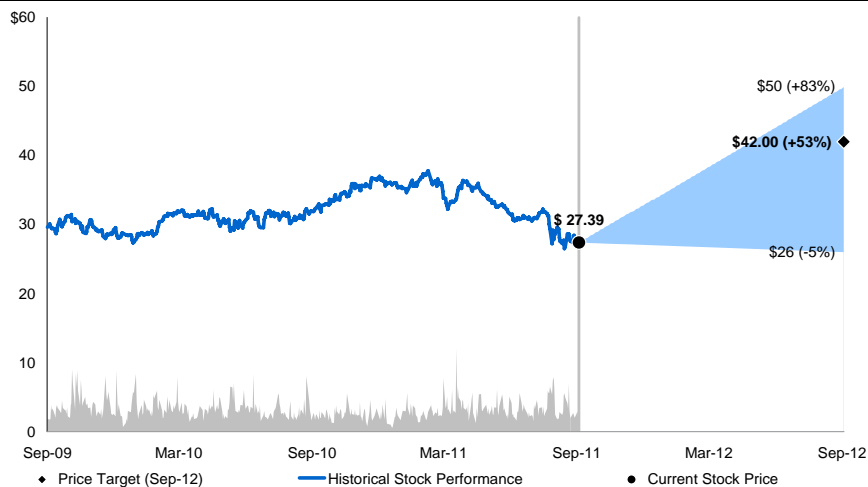
- Investment income/yields
- Underwriting income/losses
- Capital deployment

**Risks**

- Downside risks include "Concerns" above and losses from underwriting (catastrophes, reserves) and investments.
- Upside risks include better EPS.

## Risk-Reward Snapshot: Axis Capital (AXS, \$27, Overweight, Price Target \$42)

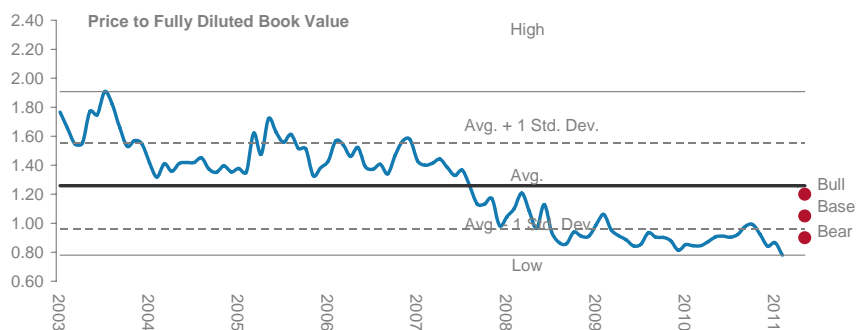
### Valuation provides significant downside protection



Source: FactSet, Morgan Stanley Research

<b>Price Target \$42</b>		Derived from our base case scenario. Our price target is based on 1.05x BV, a discount to AXS' historical average P/B of 1.3x, reflecting below cross-cycle ROE in a soft market.
<b>Bull Case \$50</b>	1.2x 2Q12e Bull Case FDBV	<b>Better fundamentals, valuation back to normal.</b> Lower losses and continued reserve releases drive higher EPS. AXS is able to outperform peers through opportunistic underwriting selection and global growth opportunities. ROE to 15%.
<b>Base Case \$42</b>	1.05x 2Q12e Base Case FDBV	<b>Delivering on plan.</b> Continued fundamental execution in underwriting and investment income combined with "in-line" catastrophe losses and continued reserve releases. Valuation remains at a discount to historical average. ROE of 10%.
<b>Bear Case \$26</b>	0.9x "trough" 2Q12e FDBV	<b>Outsized losses in both underwriting and investments within next 4 quarters.</b> BV drops by 29% due to a 1-in-100 catastrophe event (17% impact) and investment portfolio losses ~50% of those experienced during the financial crisis (8% impact).

### AXS historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Overweight?

#### Superior underwriting platform is globally diversified across the faster growing segments of P&C

- Best-in-class underwriting. Since inception, AXS's average underwriting profit margin has been 900bps better than peers and 1800bps better than the P&C industry.

#### Well positioned to capitalize on rising global property pricing

- AXS sees higher property cat pricing globally and mounting signs of broader P&C cycle improvement. AXS diversified underwriting platform and strong balance sheet enable it to be a key beneficiary.

#### Strong balance sheet and favorable capital deployment.

- We see \$200m of excess capital or 4% of equity.

#### Longer growth runway.

- At "only" \$3b in premiums, AXS's entrepreneurial management has a bigger impact on results. A&H could add 10%+ to AXS premiums in the next 3–5 years.

#### Valuation provides significant downside protection.

- AXS is trading at ~80% of book value and near all-time lows.
- Share price discounts 7% ROE in perpetuity vs. cross-cycle avg. of 17.1% and our 2012–13 estimates of 10%
- 'Free' call options.
- LT investors pick up "free" options including higher yields (2013+) and a turn in P&C pricing (2012+).

#### Key EPS Drivers

- Investment income/yields
- Underwriting income/losses
- Capital deployment

#### Risks

- Reserves/Political risk exposures, catastrophe losses, investment losses.
- CEO critical to AXS's success.

## Risk-Reward Snapshot: Everest Re (RE, \$79, Equal-weight, PT NA)

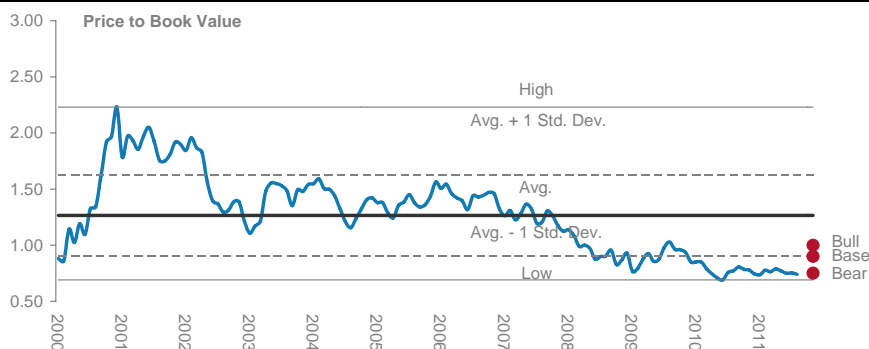
### Significant excess capital but reserve history a concern



Source: FactSet, Morgan Stanley Research

<b>Fair Value \$111</b>		Derived from the base case scenario. Fair value is based on 0.9x BV, a discount to RE's historical average P/B of 1.3x, reflecting below cross-cycle ROE in a soft market.
<b>Bull Case \$129</b>	1.0x 2Q12e Bull Case BV	<b>Better fundamentals, P&amp;C cycle turn.</b> Higher EPS due to better underwriting results, favorable reserve development and greater share buybacks. Valuation approaching parity as ROE reaches 12%
<b>Base Case \$111</b>	0.9x 2Q12e Base Case BV	<b>10% ROE and modest multiple expansion.</b> Property re pricing improves, reserves remain adequate, valuation of 0.9x book as 10% ROE not much higher than cost of capital.
<b>Bear Case \$70</b>	0.75x 2Q12e Bear Case BV	<b>Outsized losses in both underwriting and investments within next 4 quarters.</b> BV drops by 23% on a large catastrophe event (10% impact) and investment portfolio losses roughly 75% those experienced during the financial crisis (13% impact).

### RE historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Equal-weight?

**RE's diversified platform in global reinsurance has delivered excellent performance under CEO Taranto....**

- Average BVPS growth of 14% and ROE of 10% since 2000.

**Balance sheet has significant excess capital...**

- We estimate RE has ~\$500m, or 8% of equity, in excess capital, allowing RE to drive faster organic growth in an improving global property reinsurance marketplace. Buybacks an option in a softening environment.

**...but reserve history and disclosure a concern.**

- Reserve additions 8 of last 10 years.
- Lack of global reserve triangles lags some peers.
- S&P Enterprise Risk Management score is strong but lags global peers.

**Global reinsurance pricing improving.**

- RE has ~50% exposure to global property re market, the segment where we see fundamentals improving on the heels of 2<sup>nd</sup> largest P&C cat losses in history (1Q11).

**Valuation near all-time lows.**

- 70% of book value vs. 130% average. Share price discounts 5% ROE in perpetuity vs. cross-cycle avg. of 10%. 'Free' call options from next up-cycle and/or higher yields.

### Key EPS Drivers

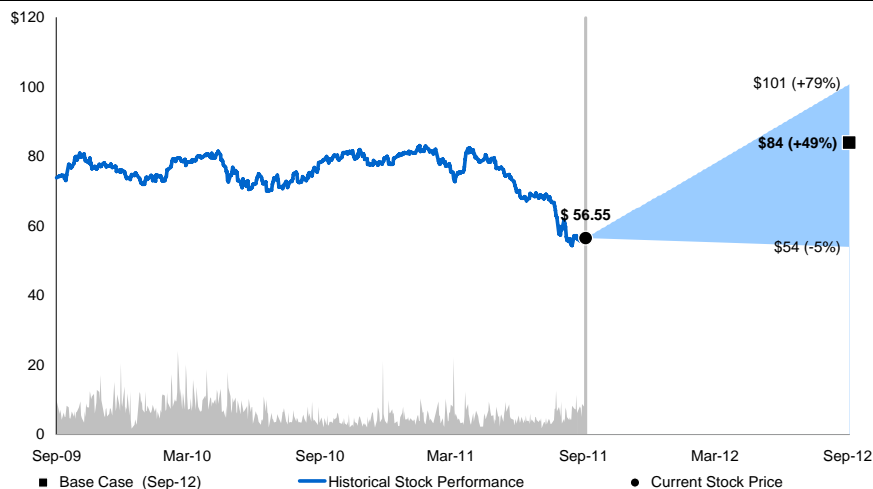
- Underwriting income/losses.
- Investment income/yields.
- Share repurchase.

### Risks

- Downside risks: CEO succession plan, underwriting losses (catastrophes, reserves), investment losses.
- Upside risks: better EPS, more normal valuation levels.

## Risk-Reward Snapshot: PartnerRe (PRE, \$57, Equal-weight, PT NA)

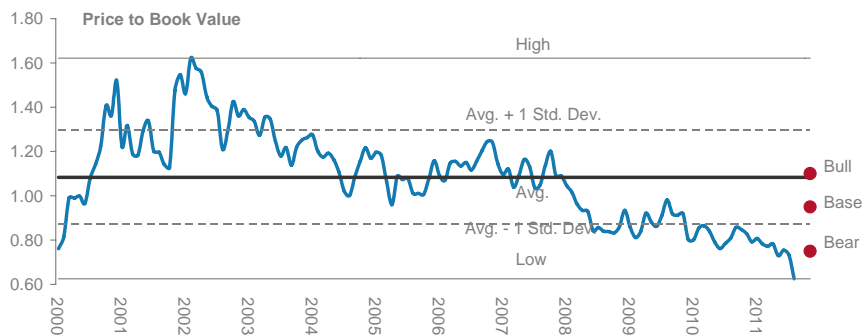
### Inexpensive stock with positive risk-return skew



Source: FactSet, Morgan Stanley Research

<b>Fair Value \$84</b>		Derived from the base case scenario. Fair value is based on 0.95x BV, a discount to PRE's historical average P/B of 1.1x, reflecting below cross-cycle ROE in a soft market.
<b>Bull Case \$101</b>	1.10x 2Q12e Bull Case BV	<b>Faster BVPS growth and better results as Reinsurance cycle turns.</b> Higher EPS due to better underwriting results, favorable reserve development and higher buybacks. Reinsurance pricing power returns to all lines causing multiple expansion. Valuation approaching 10-yr average levels as double-digit ROE goals realized
<b>Base Case \$84</b>	0.95x 2Q12e Base Case BV	<b>Delivering on plan.</b> Property cat pricing improvement and stabilizing outlook on other reinsurance lines leads to better underwriting results in 2012+; Investment income drag continues; ROE of 9%.
<b>Bear Case \$54</b>	0.75x 2Q12e Bear Case BV	<b>Outsized losses in both underwriting and investments within next 4 quarters.</b> BV drops by 20% on a large catastrophe event (-15% impact) and investment portfolio losses (-5% impact).

### PRE historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Equal-weight?

**Solid platform but recent performance issues following Paris Re acquisition keep us on sidelines.**

**Diversified reinsurance platform with a leading market position:**

- No. 4 in market behind heavyweights Munich, Swiss, and Berkshire.

**Conservative management targeting double-digit returns over long term:**

- 10-year BVPS growth of 10% with average ROE of 11%.

**PRE risk management best-in-class:**

- Highest ratings.
- S&P ERM score at highest level.
- Risk management and downside protection central to firm culture.

**Benefits from rising global property reinsurance pricing:**

- With ~30% of premiums from global property reinsurance, PRE is exposed to rising property reinsurance rates.
- Our actuarial analysis identifies ~\$800m of excess reserves.

**Attractive valuation provides downside protection:**

- 65% of book value vs. 110% average.
- Share price discounts 5% ROE in perpetuity vs. cross-cycle average of 11%.
- 'Free' call options from next up-cycle and/or higher yields.

### Key EPS Drivers

- Underwriting income/losses.
- Investment income/yields.
- Share repurchase.

### Risks

- Downside risks: Paris Re integration, unexpected losses from underwriting and/or investments
- Upside risks: better EPS, more normal valuation levels.



## Risk-Reward Snapshot: Swiss Re (RUKN.VX, EW, PT SFr 52.8)

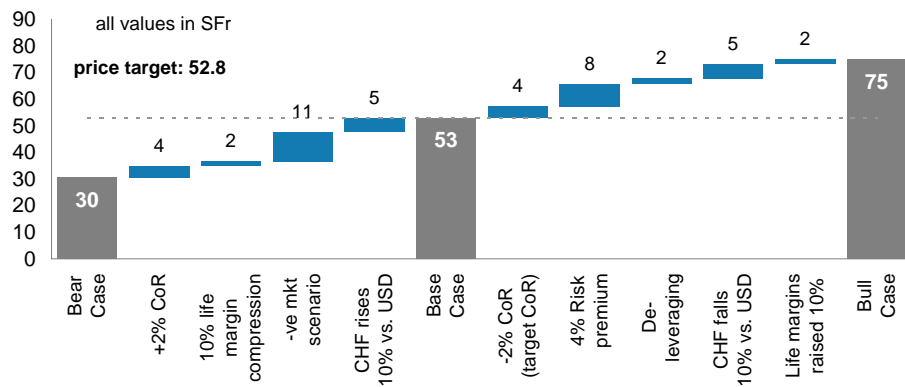
### Solid upside but less than European peers in our view



Source: FactSet (historical share price data), Morgan Stanley Research

<b>Price Target SFr 52.8</b>		<b>Based on 20% bear, 60% base case, 20% bull case which is standard across our coverage universe.</b>
<b>Bull Case SFr 75</b>	1.4x 11e BV	<b>More normal cost of equity.</b> We assume Swiss Re achieves its target asset allocation, along with lower market volatility and lower risk premium of 4% vs. 5% in base case. 1% lower combined ratio.
<b>Base Case SFr 53</b>	1x 11e BV	<b>Relative stability in underlying earnings.</b> We assume a cross-cycle combined ratio of 94%, in line with Swiss Re's target, and that re-risking preserves investment income in a low yield environment.
<b>Bear Case SFr 30</b>	0.6x 11e BV	<b>Negative asset scenario.</b> Life margins compress by 10%, and cross-cycle combined ratio increases 2ppts. CHF rises 10% vs. the USD.

### Capital risks low and valuation likely to pull towards peers



\* Negative asset scenario: -10% in ABS (excl. agency RMBS), -10% corporate bonds, -25% equities, -15% real estate  
Source: Morgan Stanley Research estimates

### Why Equal-weight?

- **Targets hard to achieve.** If Swiss Re achieves its EPS growth target we think the stock will re-rate, but we do not accept that this is inevitable. The assumptions for the targets include higher yields and improved pricing for non-life reinsurance; conditions that may not eventuate and would assist all reinsurers if they do.

- **Hedging program may hurt yield.** We think Swiss Re either has a relatively large exposure to corporate bonds relative to Munich Re, or if it is hedging this exposure, then it is likely to earn lower yields. It is unclear what protection it has in place exactly. However, it does have low GIIPS exposure compared to peers.

- **Would turn more positive upon further very large losses.** Swiss Re's excess capital position will be a key strength in a scenario where the industry experiences further very large losses for the rest of the year. We assume 'normal' large losses in our base case scenario.

- **Admin Re getting more active.** Admin Re is a leader in its back-book consolidation, but it has been constrained by the lack of profitable growth in the low yield environment. The recent fall in yields does not help its ability to do more deals.

- **Where could we be wrong?** Swiss Re is increasing attractive as a defensive stock, given low GIIPS exposure and a large proportion of profits from underwriting results.

### Potential Catalysts

- Swiss Re reports 3Q11 results on 3 Nov 2011.
- S&P has Swiss Re on positive watch, and may upgrade it to AA- in 2H11.

## Swiss Re SOTP valuation

Exhibit 4

**Swiss Re: Base case sum of the parts (in \$). Our price target of SFr 52.8 is derived from probability weighting our base, bull and bear cases\***

US\$m unless otherwise stated	2010	2011E	'12 EVE	'12 ROC	Sus. ROC	Comment (vs. 2011e)	SOTP	per share (\$)	Cap. Mult.	
Non-life reinsurance	9,486	9,878	1,943	19.7%	18.7%	94% Sust. COR; 9.2x PE	17,869	47.7	1.81	
Asset Management	4,188	4,336	757	17.5%	17.5%	1.76x Capital; 9.7x EVE	7,358	19.7	1.70	
Swiss Re Life Re	9,225	9,306	602	6.5%	6.1%	0.6x BV	5,521	14.7	0.59	
Other	7,694	2,619	(602)	-23.0%	-23.0%	2.7x 11 PE	(1,597)	-4.3	-0.61	
<b>Tangible book plus Debt</b>	<b>30,593</b>	<b>26,139</b>	<b>2,700</b>	<b>10.3%</b>	<b>9.8%</b>	<b>0.95x Capital; 10.8x EVE</b>	<b>29,151</b>	<b>77.9</b>	<b>1.12</b>	
Debt	(6,379)	(3,494)	(236)	6.8%	6.8%	1.0x face	(3,494)	(9.3)	1.00	
<b>US GAAP tangible equity</b>	<b>24,214</b>	<b>22,645</b>	<b>2,464</b>	<b>10.9%</b>	<b>10.3%</b>	<b>1.13x Capital; 10.4x EVE</b>	<b>25,657</b>	<b>68.5</b>	<b>1.13</b>	
Upside from QS buyback							2,146			
<b>US GAAP tangible equity</b>		<b>22,645</b>					<b>Sum-of-the-parts</b>	<b>27,803</b>	<b>74.2</b>	<b>1.23</b>
							PV to 2011 year-end	25,079	66.6	
							2010 Dividends	942	2.8	
							<b>2011 year-end SOTP</b>	<b>26,021</b>	<b>69.1</b>	<b>1.15</b>

Source: Morgan Stanley Research estimates. \*Note, this is in USD, the reporting currency, while our price target and bull-bear-base are converted into SFr.

Our valuation methodology is based on a sum-of-the-parts approach with capital multiples reflecting our views about the sustainability of returns by business line. We then weight our bear/base/bull scenarios by what we consider their relative likelihood to come up with our final price target.

We have made no changes to our methodology since we last published, except for a slight reduction in yield assumptions which has no impact on the price target due to the gains in unrealised gains from the last quarter. Swiss Re has relatively low yield earnings compared to Munich Re and Hannover Re.

### Base case: SFr 53 (1x 2011e BV)

- **Non-life at 9.2x P/E**, on the basis of a 94% cross-cycle CoR. A lower investment yield is allocated to non-life reinsurance compared with our last model.
- **Life reinsurance at 0.6x 2011e BV**: Our valuation for the life re business has risen due to higher yields and better prospects going forward, but still experiencing a relatively low RoC of ~6%.
- **Asset management at 10x earnings**, consistent with a 1.9x capital multiple for a business that yields 19.2% sustainable RoC (up from 17.4% in our previous valuation).
- **Non-allocated capital removed at 1.0x face value** minus the group average P/E multiplied by the earnings in this

segment. This results in a significant subtraction from the final value, which in turn reflects the high interest costs Swiss Re faces from operational debt.

### Bear case: SFr 30.5 (0.6x 2011e BV)

In our bear case we assume that combined ratios deteriorate 200bps in non-life reinsurance due to weak pricing, life margins compress 10% due to weak yields, and a negative market scenario causes investment losses.

### Bull case: SFr 74.9 (1.4 x 2011e BV)

Our bull case assumes the P&C combined ratios falls by 2 ppts across the cycle and markets return to some normality, with the equity risk premium coming down from 5% to 4%. We assume that Swiss Re reduces operational debt by US\$5bn, re-risks its assets to higher yields and life margins recover by 10%.

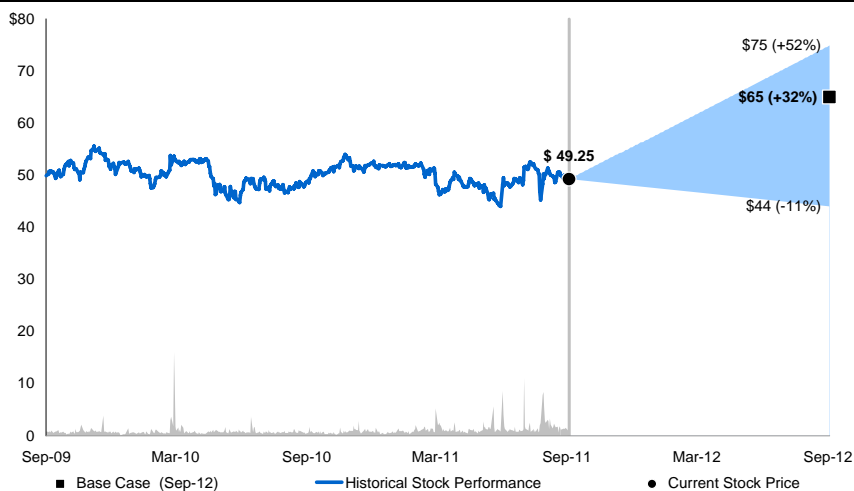
### Risks to valuation

Swiss Re is exposed to claims event risk, including man-made and natural catastrophes across the globe. As a large holder of investments, asset market shocks or changes in interest rates can impact the market value of holdings, potentially reducing IFRS equity. A sudden shift in claims inflation, potentially due to an environmental or legal trend, could cause reserves to prove inadequate. Changes in CHF relative to USD affects the share price as the company reports in USD.



## Risk-Reward Snapshot: Transatlantic Hldgs (TRH, \$49, Equal-weight, PT NA)

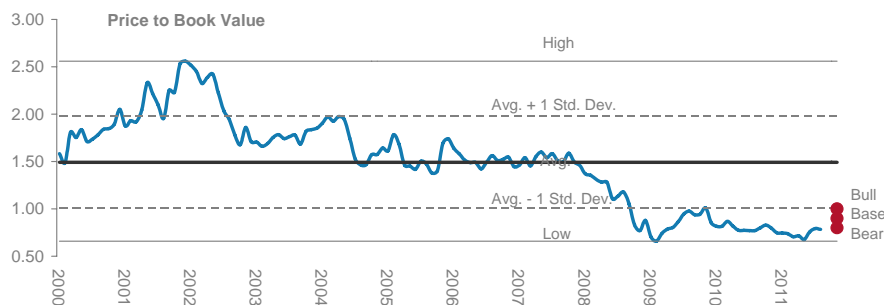
### Ongoing acquisition discussions to drive near-term stock performance



Source: FactSet, Morgan Stanley Research

<b>Fair Value \$65</b>		Derived from the base case scenario. Fair value is based on 0.90x BV, a discount to TRH's historical average P/B of 1.6x, reflecting below cross-cycle ROE in a soft market.
<b>Bull Case \$75</b>	1.00x 2Q12e Bull Case BV	<b>Faster BVPS growth and reserve concerns subside.</b> P&C cycle turn, higher EPS due to better underwriting results, favorable reserve development and greater share buybacks. Valuation improves meaningfully but remains below historical averages due to lower ROEs from less investment income.
<b>Base Case \$65</b>	0.90x 2Q12e Base Case BV	<b>High single-digit ROE and modest multiple expansion.</b> P&C cycle improvement and better EPS leads to multiple expansion and book value growth. Low ROE and concerns about excess capital constrain upside. High single digit ROE.
<b>Bear Case \$44</b>	0.8x 2Q12e Bear Case BV	<b>Outsized losses in both underwriting and investments in next 4 quarters; merger talks provide valuation floor.</b> BV drops by 24% on a large catastrophe event (10% impact) and investment portfolio losses ~75% those experienced during financial crisis (14% impact). Ongoing merger talks provide support.

### TRH historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Equal-weight?

#### Merger talks the key to stock performance since June 12.

- Following the June 12 Allied World merger announcement TRH stock rose ~10%. It jumped another ~6% on a competing proposal from Validus in early July. Berkshire Hathaway made a \$52 cash offer on August 5. TRH Board is recommending the AWH offer which is to be voted on Sep. 20.

#### TRH share pricing implies a higher offer is possible.

- Based on today's closing share prices the AWH and VR bids are very close as VR's offer is 2% above AWH (\$47.59 vs \$46.65). Given TRH shares closed at \$49.25 investors clearly expect a higher offer or BRK's \$52 offer to be formalized.

#### We see room for a better offer to emerge.

The math is quite compelling with current TRH offers at ~75% or less of book value. A return to TRH's own book value implies a 30%+ return (25 divided by 75) and the EPS accretion is equally large for an off-shore acquiring entity as TRH remains one of the only Top 10 reinsurers still domiciled in a high-tax jurisdiction.

#### Key EPS Drivers

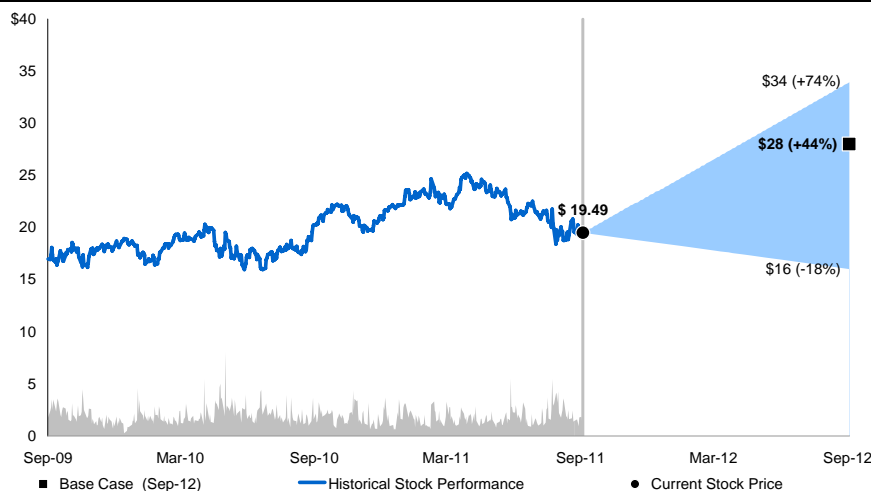
- Underwriting income/losses.
- Investment income/yields.
- Share repurchase.

#### Risks

- Downside risks: underwriting losses (catastrophes, reserves), investment losses, merger does not materialize.
- Upside risks: better EPS, industry up-cycle, more normal valuation levels, higher offer for TRH.

## Risk-Reward Snapshot: XL Capital (XL, \$19, Equal-weight, PT NA)

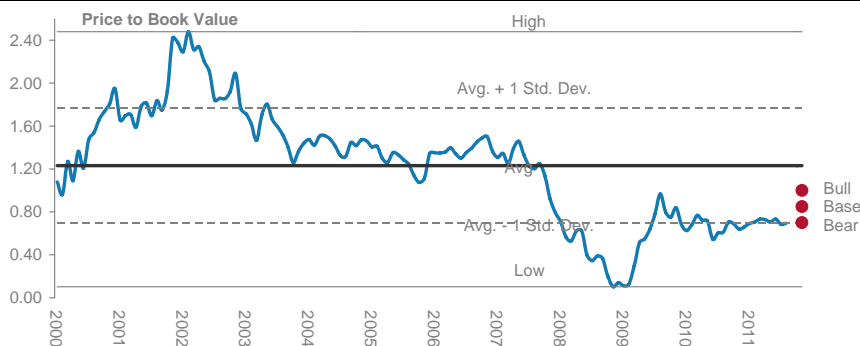
### ROE trajectory key to performance



Source: FactSet, Morgan Stanley Research

<b>Fair Value \$28</b>		Derived from base case scenario. The fair value is based on 0.85x BV, a discount to XL's historical average P/B of 1.3x, but above its historical low 0.1x during the financial crisis.
<b>Bull Case \$34</b>	1.0x 2Q12e Bull Case BV	<b>Double digit ROE pulls valuation closer to peers.</b> Lingering concerns surrounding XL franchise quickly abate. Strong underwriting, improving investment income and aggressive capital management pull ROE to double-digit levels. Valuation pulls closer to peers at book value.
<b>Base Case \$28</b>	0.85x 2Q12e Base Case BV	<b>Turnaround on track.</b> Continued improvement in underwriting and investment income stabilization. Accretive capital management moderate help to ROE trajectory. Valuation discount vs. peers lingers as ROE of 7-8%.
<b>Bear Case \$16</b>	0.7x "trough" BV	<b>A 'double dip' in the market and outsized catastrophe losses.</b> BV drops by 27% due to a 1-in-100 catastrophe event (15% impact) and investment portfolio losses equal to 25% of those experienced during the financial crisis (12% impact), due to de-risking actions already taken. ROE below cost of capital.

### XL historical valuation and bear to bull case scenarios



Source: Company data, FactSet, Morgan Stanley Research

### Why Equal-weight?

**We like the trajectory, platform, and valuation...**

- New management has moved decisively in the past couple years to stabilize XL. Since taking the reins in April 2008, CEO McGavick has ring-fenced SCA exposure, shored up the balance sheet with an equity/preferred capital raise, exited the life business, reduced capital heavy lines such as large catastrophe, de-risked the investment portfolio, stabilized ratings, delivered consistent profitability and begun to return capital via buybacks.

**...but believe ROE trajectory the key to performance.**

- As the valuation gap to peers closes we no longer see XL shares as a "special situation" and believe future XL share success in 2011+ to be more tied to the ROE potential and trajectory. We have a hard time seeing ROE greater than 8% on the current path which partially justifies the discounted valuation and compares to what was once a "double-digit" goal.
- XL share price discounts 6% ROE in perpetuity vs. our 2012 estimate of 7%
- We see \$900m of excess capital or 9% of equity.

### Key EPS Drivers

- Investment income/yields
- Underwriting income/losses

### Risks

- Investment losses and underwriting losses from catastrophes and/or reserve charge

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	Count	% of Total	Count	% of Total IBC	% of Rating Category
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<b>Underweight/Sell</b>	<b>374</b>	<b>14%</b>	<b>93</b>	<b>10%</b>	<b>25%</b>
<b>Total</b>	<b>2,759</b>		<b>963</b>		

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Global Reinsurance

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## Industry Coverage: Insurance - Property & Casualty

Company (Ticker)	Rating (as of)	Price* (09/14/2011)
<b>Gregory W Locraft</b>		
ACE Limited (ACE.N)	O (07/06/2010)	\$61.32
Allstate Corporation (ALL.N)	E (07/06/2010)	\$24.9
American Int'l Grp (AIG.N)	E (06/09/2011)	\$24.49
Arch Capital Group Ltd. (ACGL.O)	E (07/06/2010)	\$33.26
Axis Capital Holdings (AXS.N)	O (07/06/2010)	\$27.39
Everest Re Group, Ltd. (RE.N)	E (11/30/2010)	\$78.86
PartnerRe Ltd. (PRE.N)	E (11/30/2010)	\$56.55
RenaissanceRe Holdings Ltd. (RNR.N)	O (11/30/2010)	\$66.7
The Chubb Corporation (CB.N)	O (07/06/2010)	\$59.66
The Progressive Corporation (PGR.N)	E (07/06/2010)	\$18.27
The Travelers Companies, Inc. (TRV.N)	O (07/06/2010)	\$48.94
Transatlantic Holdings (TRH.N)	E (11/30/2010)	\$49.25
W.R. Berkley Corp. (WRB.N)	U (07/06/2010)	\$29.86
XL Capital Ltd. (XL.N)	E (07/06/2010)	\$19.49

Stock Ratings are subject to change. Please see latest research for each company.  
\* Historical prices are not split adjusted.