



State of the Reinsurance Market

Casualty Actuarial Society – Annual Meeting

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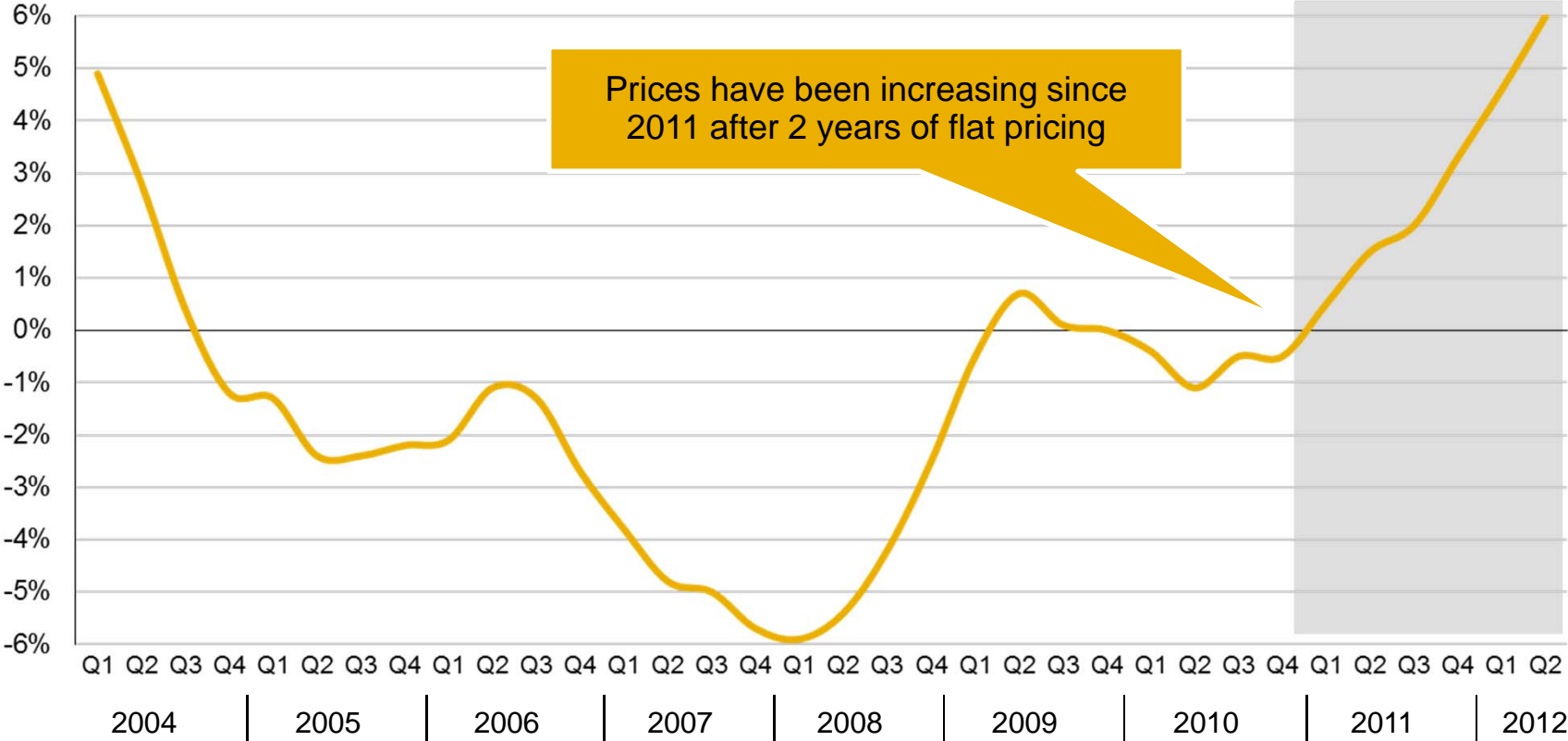
November 12-13, 2012

TOWERS WATSON 

U.S. Insurance Industry Overview

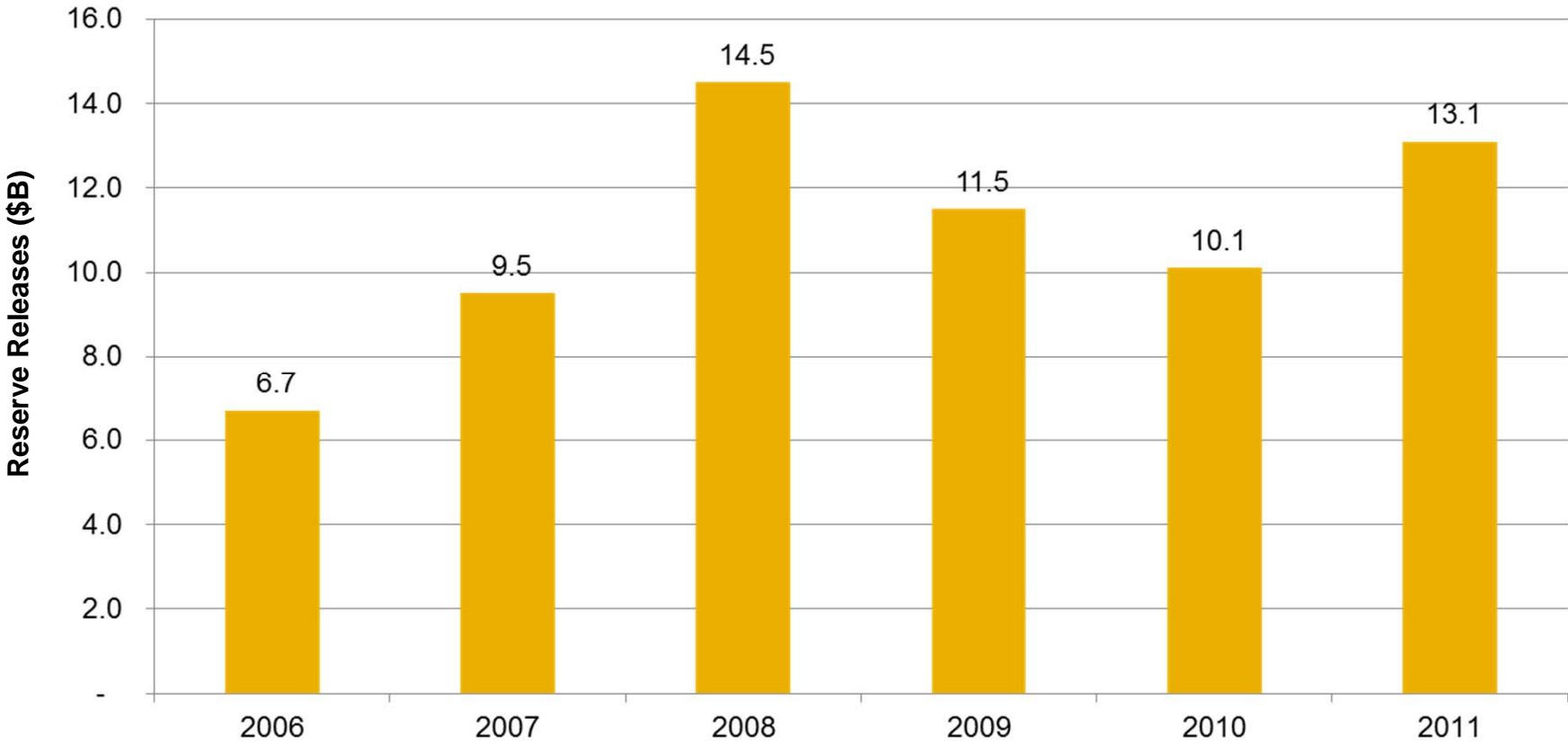
Since 2011, commercial lines pricing continues to exhibit positive rate movements, yet is just starting to reach the level of loss cost trends

YOY Price Level Change — All Commercial Lines Combined



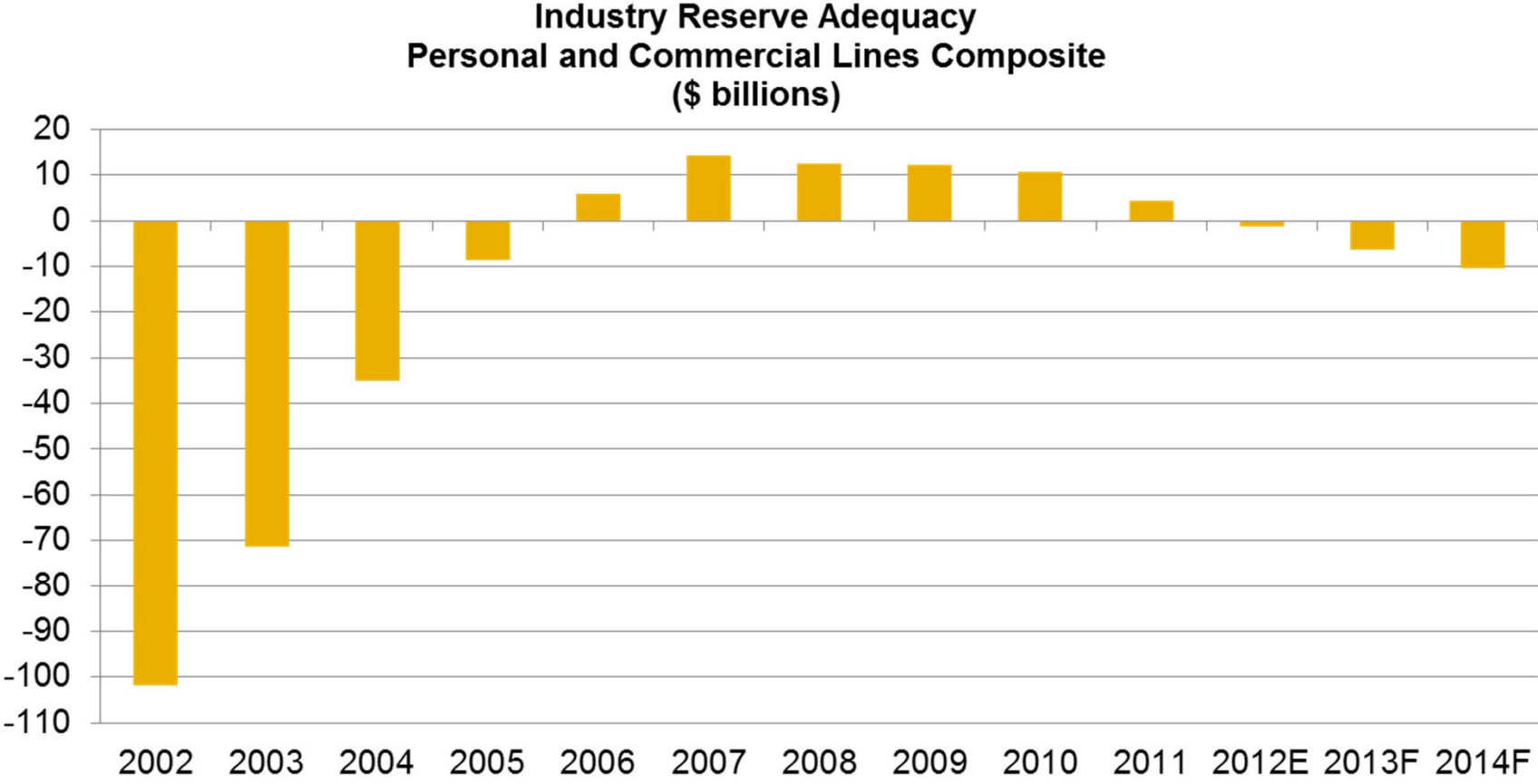
Note: Written premium basis.
 Source: Towers Watson Commercial Lines Insurance Pricing Survey.

Reserve releases have increased during the most recent years of the soft market...\$58.7 billion in past five years

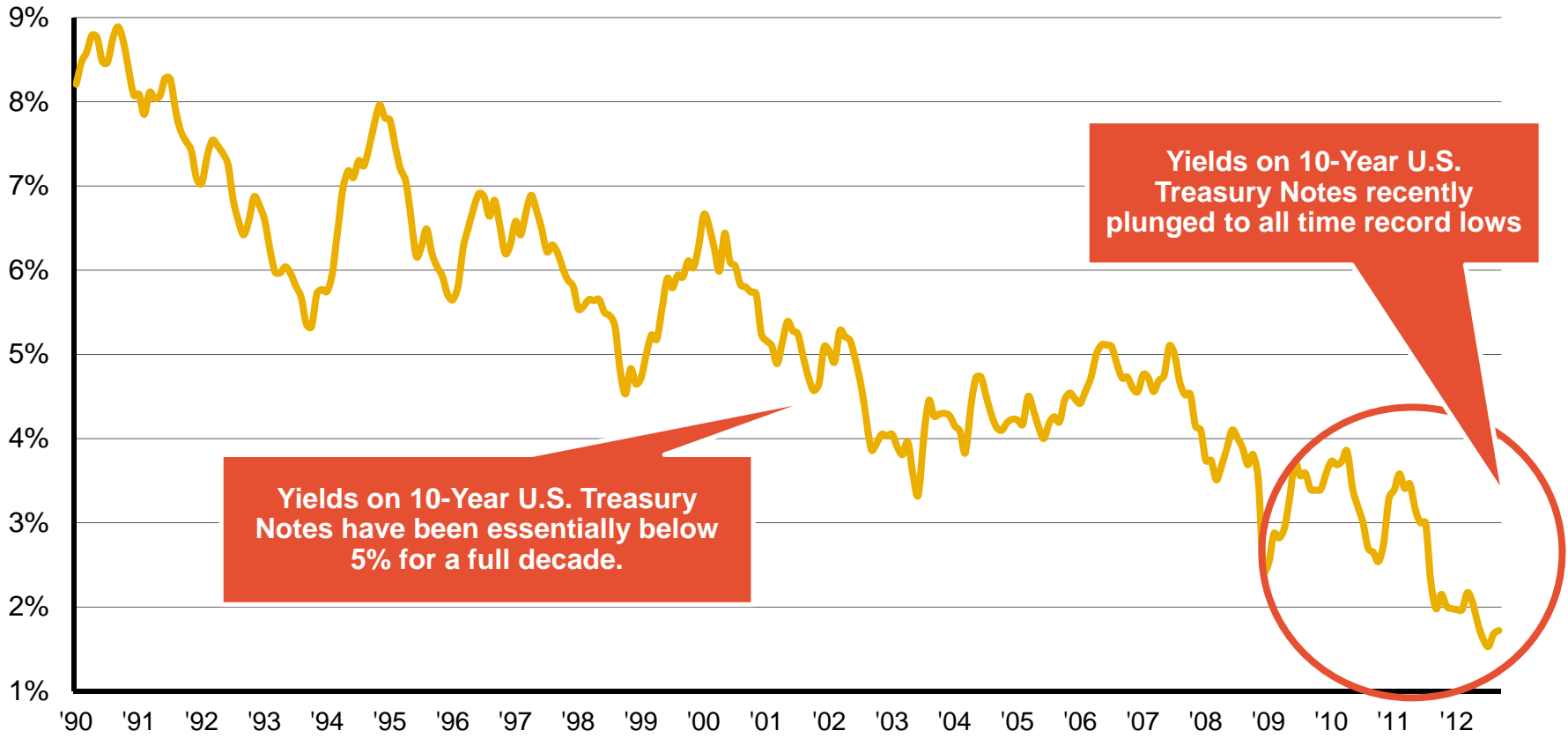


Source: SNL Financial (excluding Mortgage and Financial Guaranty lines)

We estimate that overall industry reserves became inadequate in 2012



U.S. 10-Year Treasury Note Yields: A Long Downward Trend, 1990–2012*



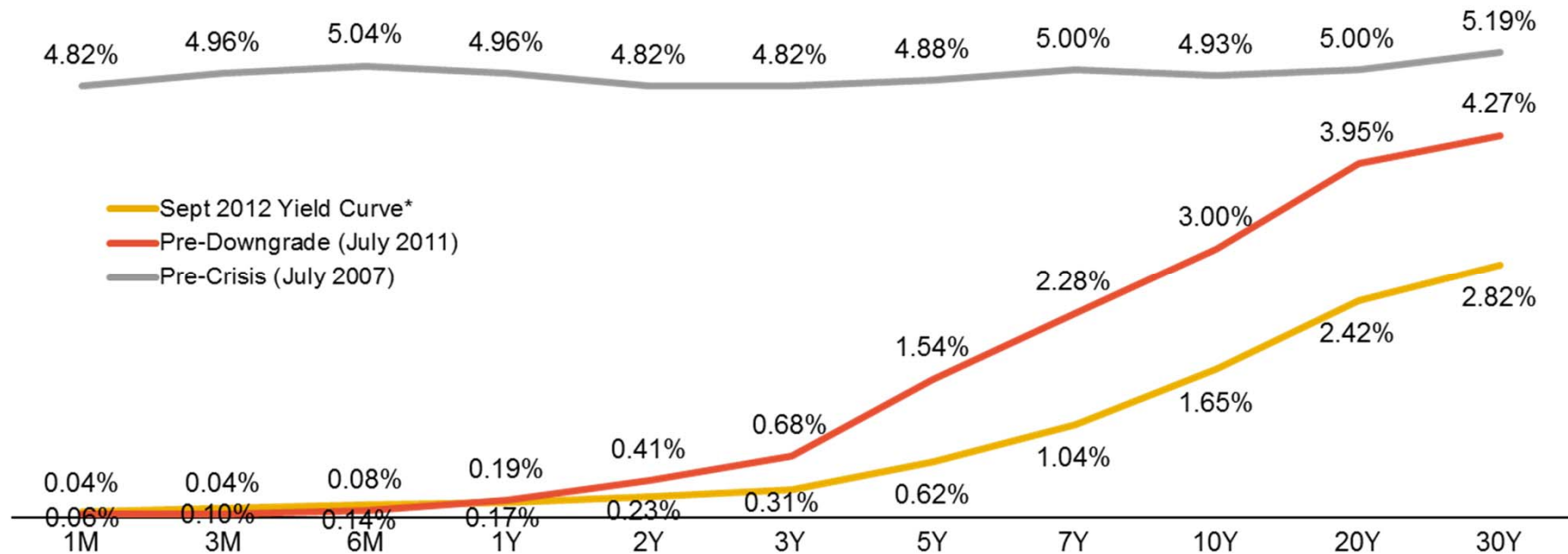
Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, through Sept. 2012.
Sources: Federal Reserve Bank, Insurance Information Institute.

Declining investment yields and lingering soft market are changing the way insurers think about investments

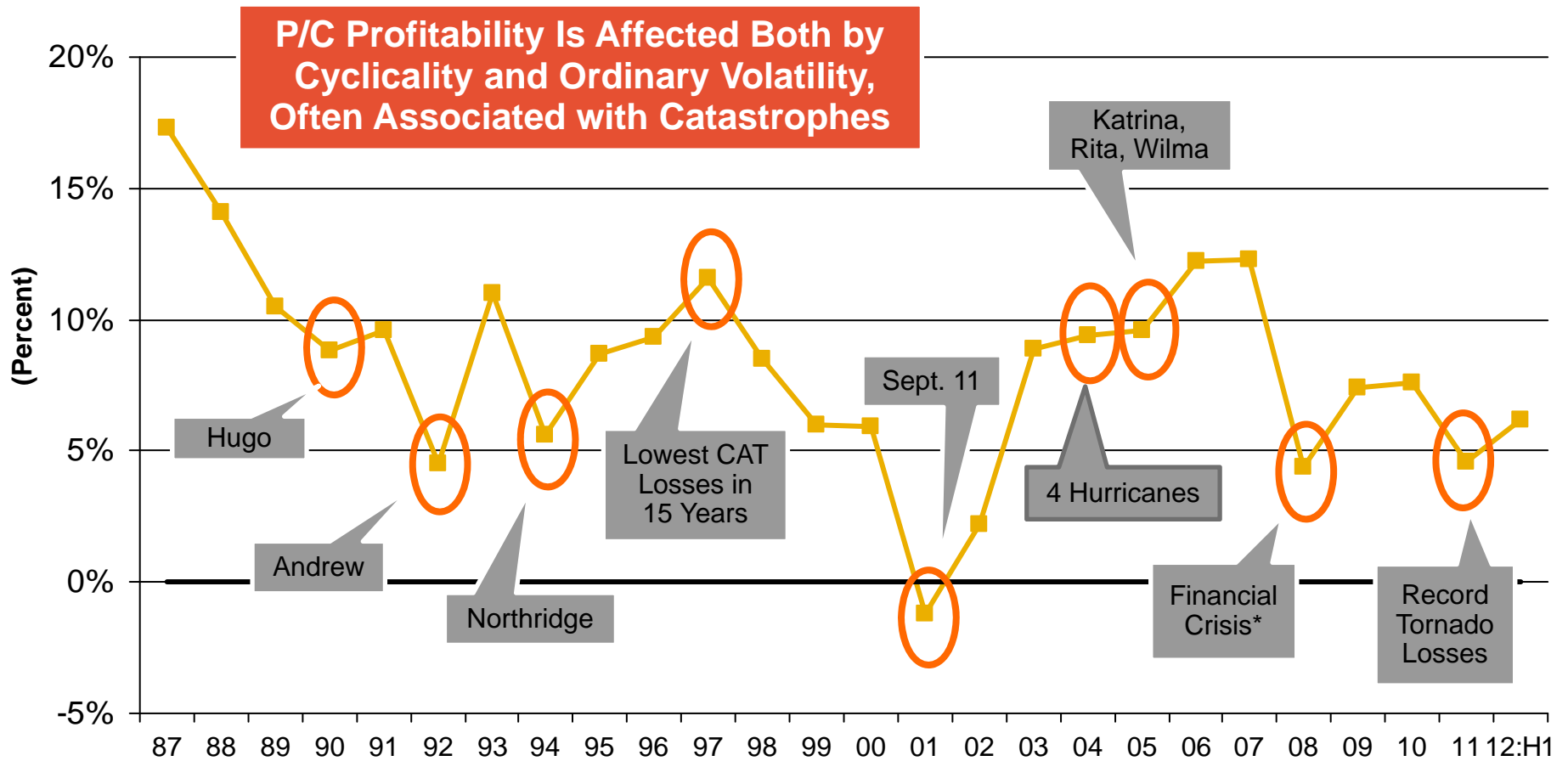
- Few bonds with purchase yields above 4.5% remain on balance sheets
- Insurers have to accept a lower level of income support from investments or change their asset allocation.

U.S. Treasury Yield Curve Trends



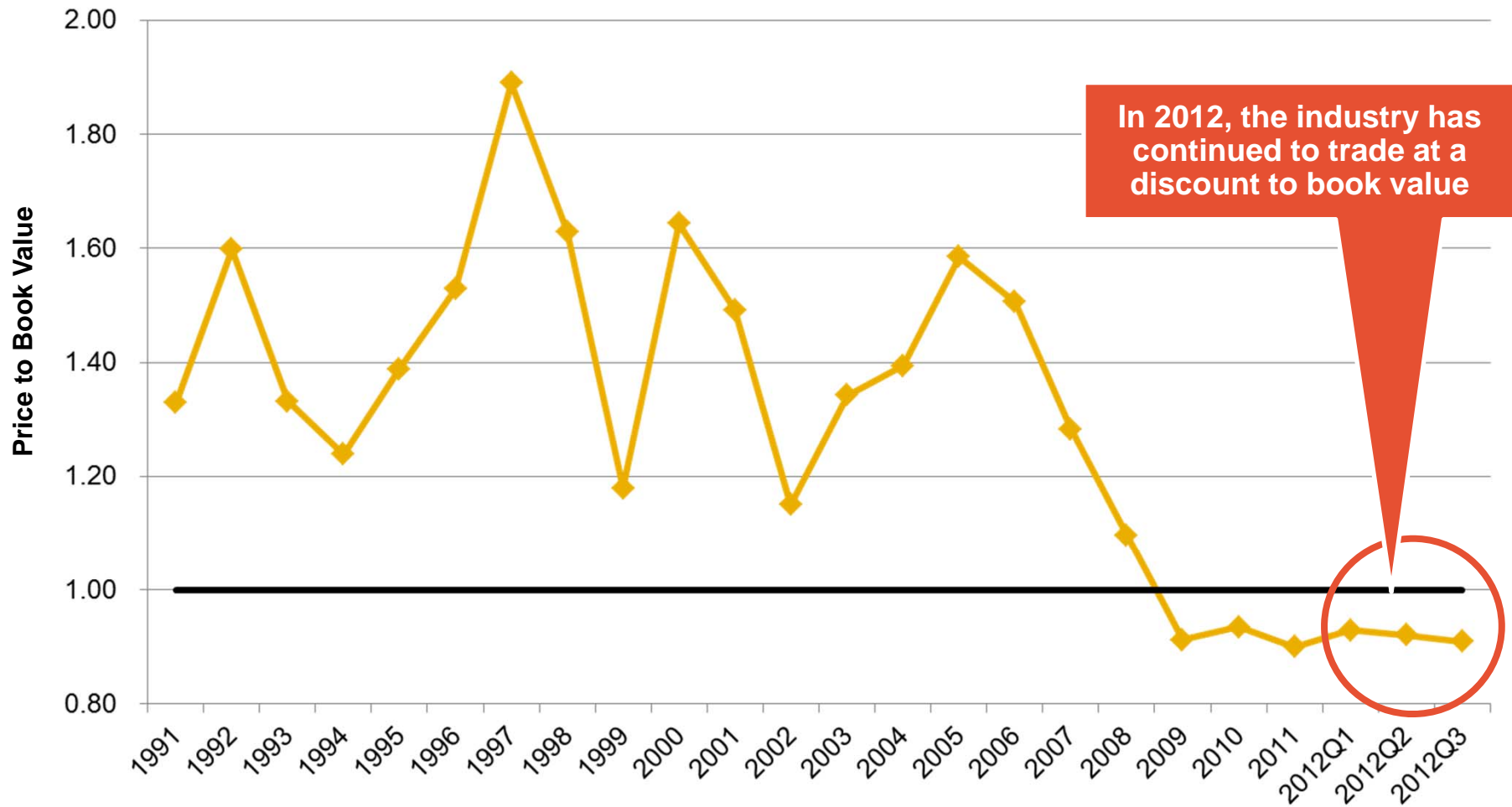
*July 5, 2012. Sources: Board of Governors of the United States Federal Reserve Bank, Insurance Info. Institute.

ROE: Property/Casualty Insurance Industry, 1987–2012:H1*



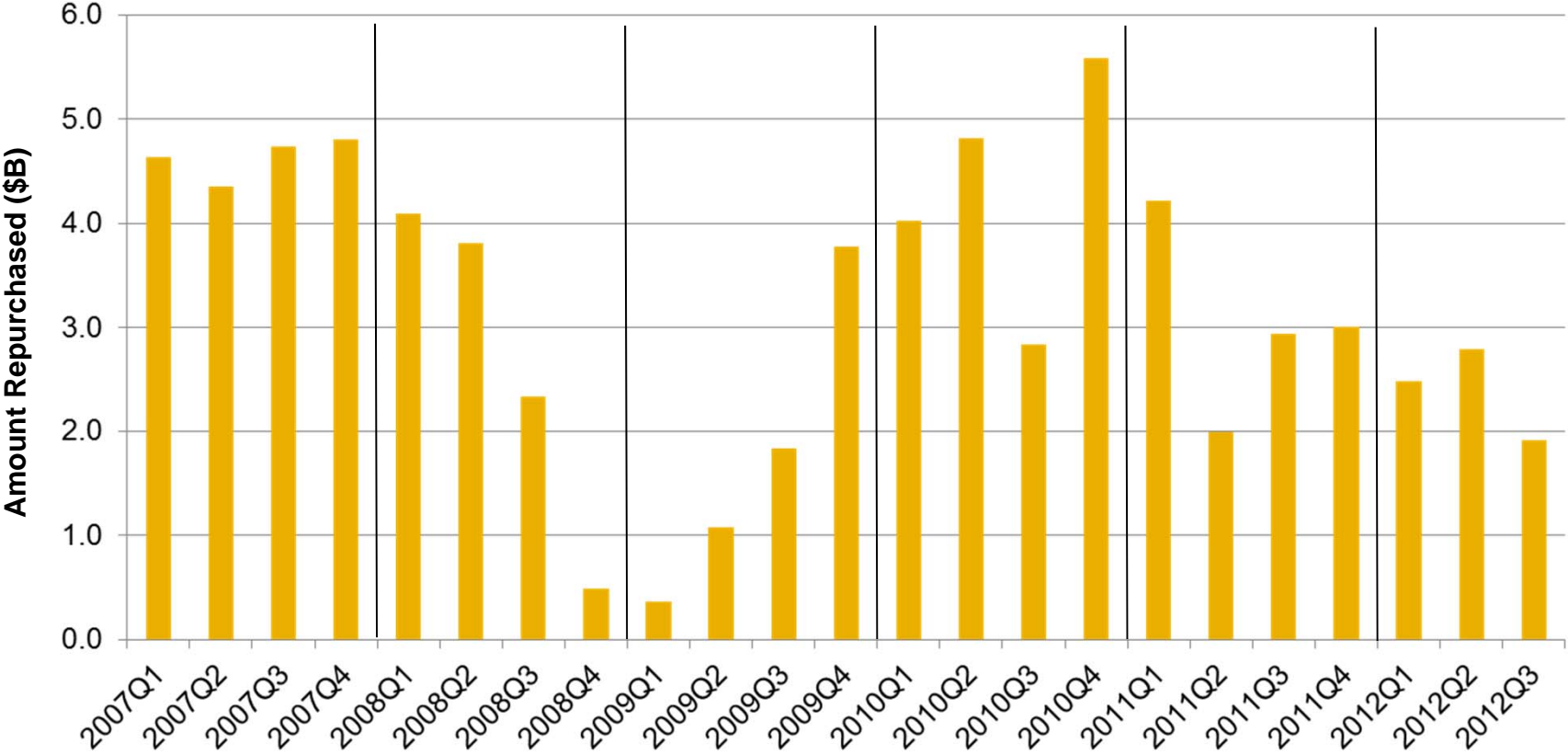
* Excludes Mortgage & Financial Guarantee in 2008 – 2012.
Sources: ISO; Insurance Information Institute.

Since 2009, market value has been below book value for the industry



*2nd Quarter 2012
Source: SNL Financial

Stock repurchases rebounded in 2009 and 2010 after the financial crisis but have declined again in 2011 and 2012 due to catastrophes



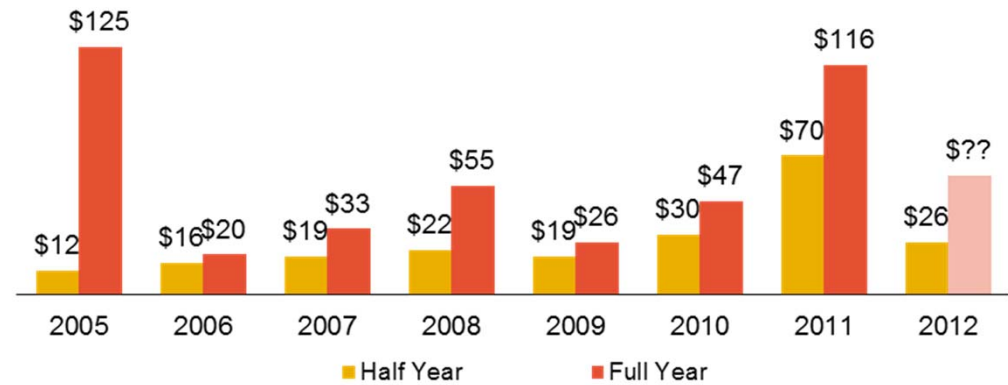
Source: SNL Financial

Catastrophe Overview

2011 was the second costliest year for insured cat losses: The 1st half of 2012 was normal but Hurricane Sandy will dominate 2nd half

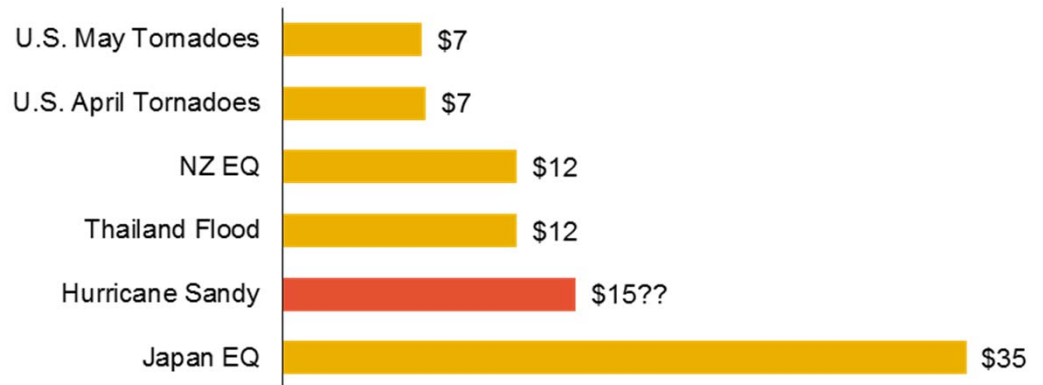
- 2011 catastrophe losses of \$116 billion far outpaced recent comparable periods
- 2012 catastrophe losses were dominated by US losses with 85% coming from North America tornadoes

Global Insured Cat Losses (\$ Billions)



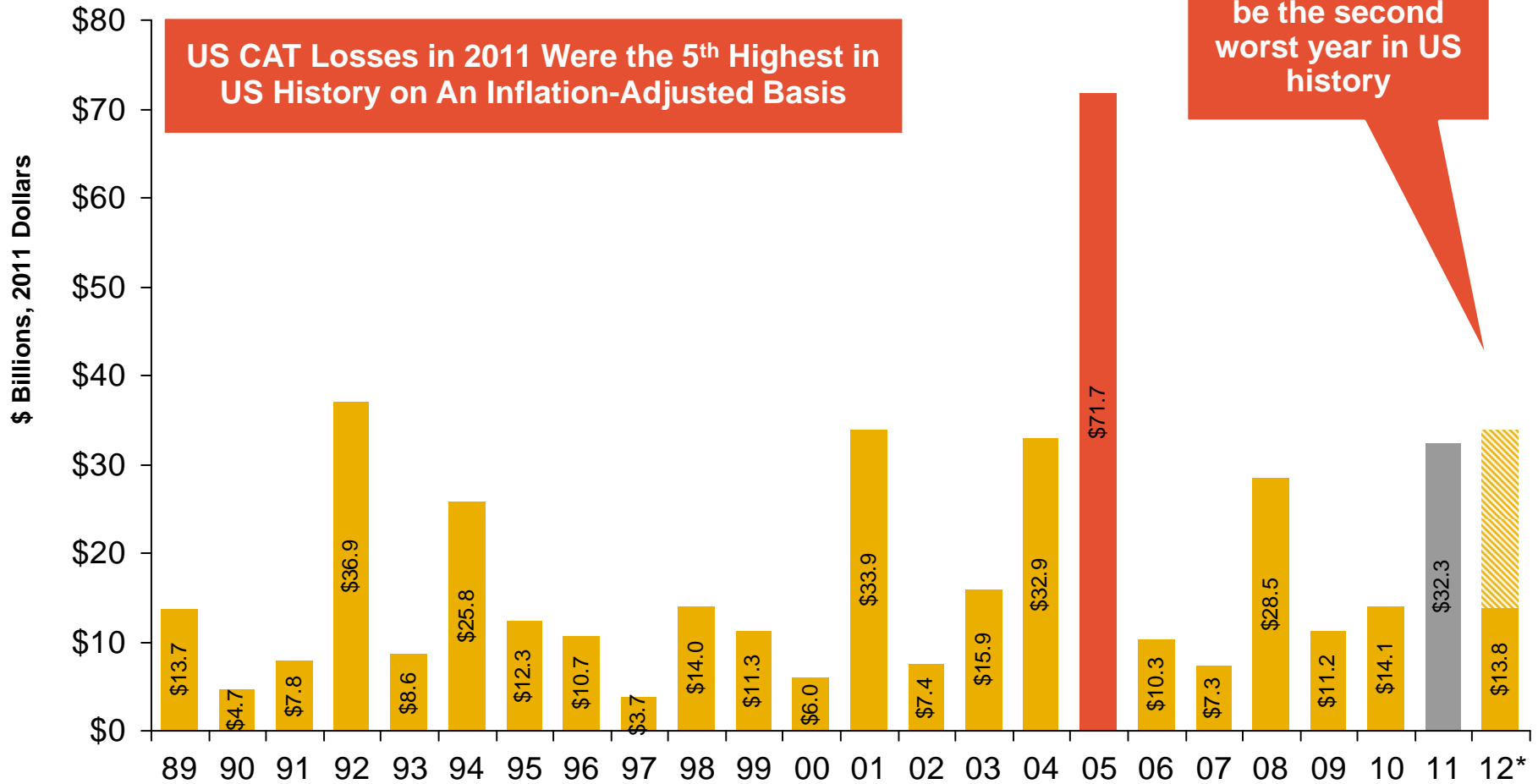
Six Costliest Disasters in 2011-2012 (\$ Billions)

- Six of the top 20 most costly global cats have occurred in the past 24 months
- Both U.S. and non-U.S. cat events affected reinsurers, the retro market and blanket property insurance covers



Sources: Swiss Re Sigma, PCS, Towers Watson.

US Insured Catastrophe Losses

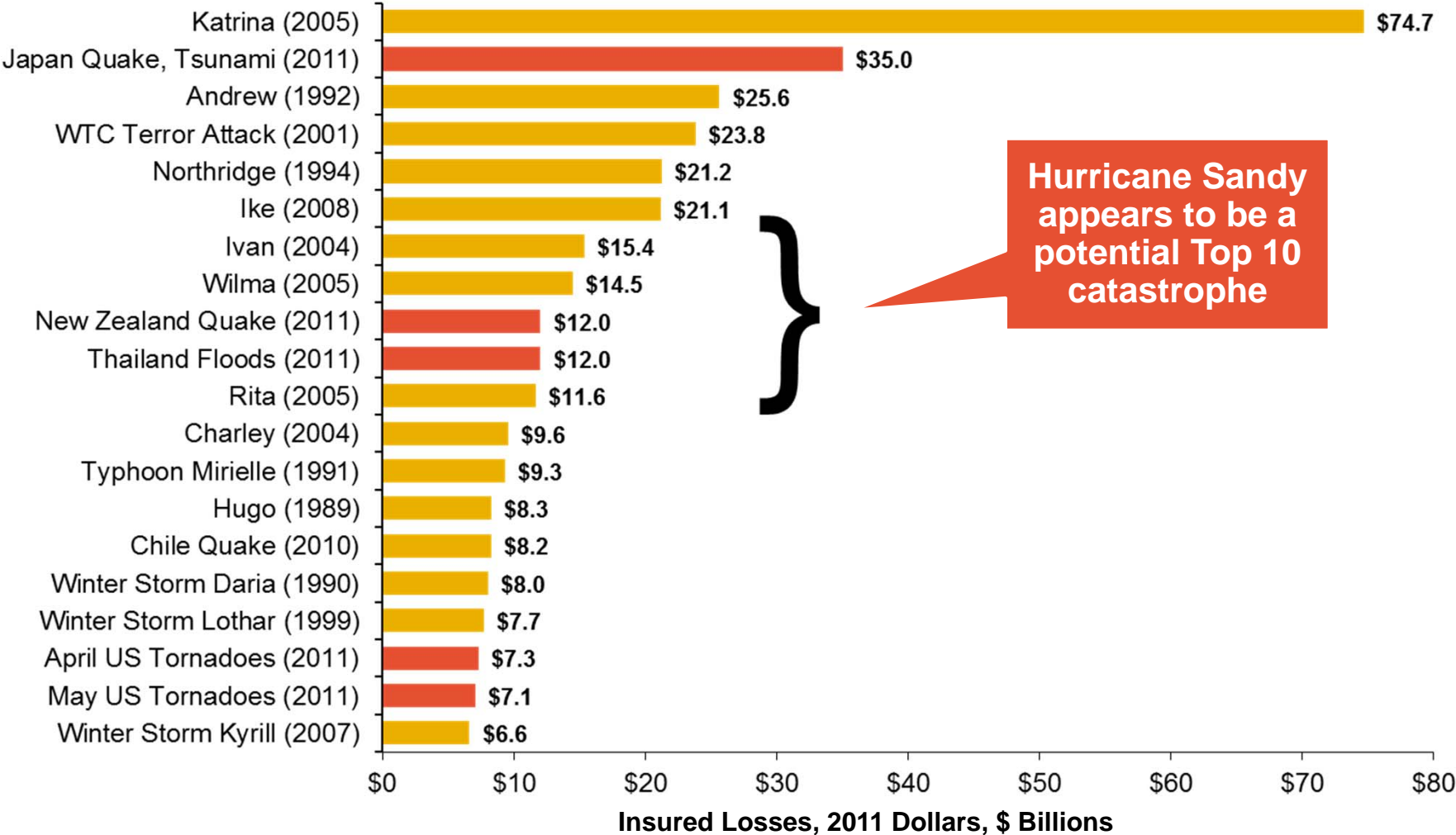


*PCS figure for H1 2012 (stated in 2012 dollars).

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)

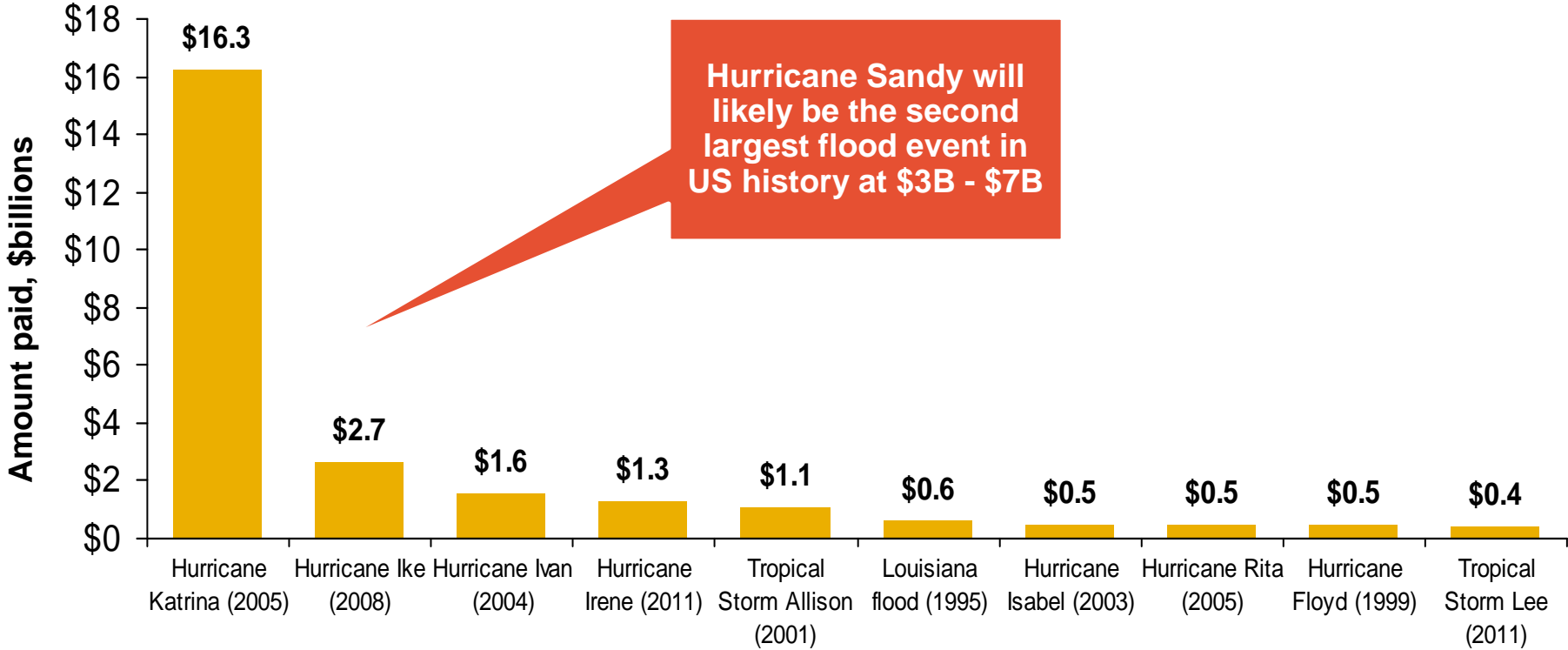
Sources: Property Claims Service/ISO; Insurance Information Institute.

Top 20 Most Costly World Insurance Losses, 1970-2011



Sources: Swiss Re *sigma*

The Ten Most Significant Flood Events, Ranked By National Flood Insurance Program Payouts (1)



(1) Includes events from 1978 to July 31, 2012. Defined by the National Flood Insurance Program as an event that produces at least 1,500 paid losses. Stated in dollars when occurred.

Source: U.S. Department of Homeland Security, Federal Emergency Management Agency, Insurance Information Institute

Global Catastrophe Loss Summary: 2011—Several Major Earthquakes

- 2011 Was the Highest Loss Year on Record for Losses Globally
- \$380 Billion in Economic Losses Globally (New Record)
 - New record, exceeding the previous record of \$270B in 2005
- \$105 Billion in Insured Losses Globally
 - 2011 losses were 2.5 times 2010 insured losses of \$42B
 - Second only to 2005 on an inflation adjusted basis (new record on an unadjusted basis)
 - Over 5 times the 30-year average of \$19B
- Significant concentration of losses in the Asia/Pacific region
 - 61% of global losses in 2011 versus 30 year average of 18%

US Catastrophe Loss Summary: First Half 2012

- \$13.8 Billion in Insured Losses in the US Arising from ~90 CAT Events
 - Represents 80%+ of global total
 - Mild winter helped keep first half losses down
 - T-storm (includes tornado, hail and wind damage) accounted for est. \$11.9B or 95% of first half insured losses and represent the 3rd most expensive spring storm season ever
- ~\$19.6 Billion in Economic Losses in the US
 - Down from approximately \$75B in 2011:H1
- Severe Droughts Impacted Central and Southwest Parts of US
 - Two major wildfires in Colorado in June caused record \$500 mill damage in the state
 - Largest wildfire in New Mexico history occurred in May
 - Insured crop losses could be high in 2012
- Mild Hurricane Season → until Hurricane Sandy
 - Season got off to an early start, but insured losses are not large by historical standards
 - Isaac likely in the lower end of the modeled loss range of \$600M to \$2B
 - Sandy is looking to be a \$10B to \$20B event

Source: Munich Re; PCS; Insurance Information Institute.

Hurricane (Superstorm) Sandy

Death toll: 168 (96 in the U.S., 54 in Haiti, 11 in Cuba)*

Damage estimates (insured): EQE: \$20B, AIR: \$15B, RMS: pending ; \$20B would place it 4th all time US Cat (supplanting Northridge quake)

Power outages: Peak of 8.5 million U.S. customers, 2nd most for a natural disaster behind the 1993 blizzard (10 million)

Maximum U.S. sustained winds: 69 mph at Westerly, RI

Peak U.S. wind gusts: 90 mph at Islip, NY and Tompkinsville, NJ

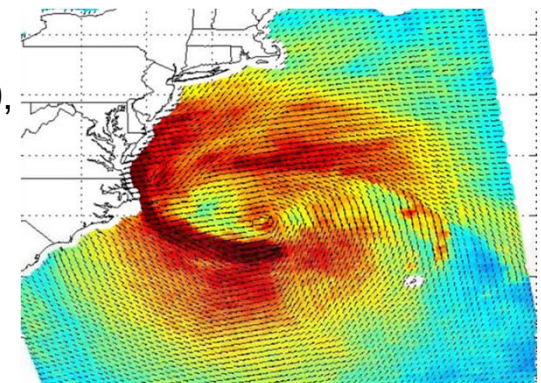
Maximum U.S. Storm Tide: 14.60', Bergen Point, NJ, 9:24 pm EDT October 29, 2012

Maximum snowfall: 36", Richwood, WV

Minimum pressure: 940 mb, Atlantic City, NJ at 7:24 pm EST, October 29, recorded in US history north of Hatteras, NC


Diameter of tropical storm-force winds at landfall: 945 miles

*as of 11/2 @ 12:00

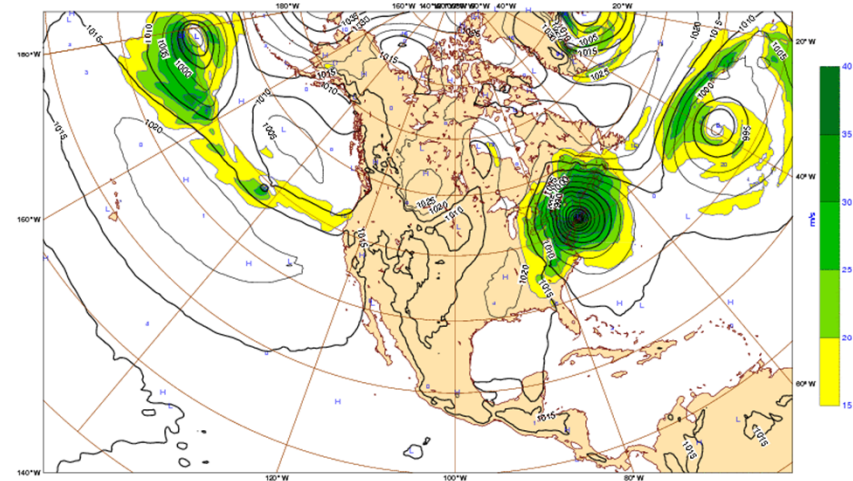


Satellite Surface winds (NASA)

A few items of note:

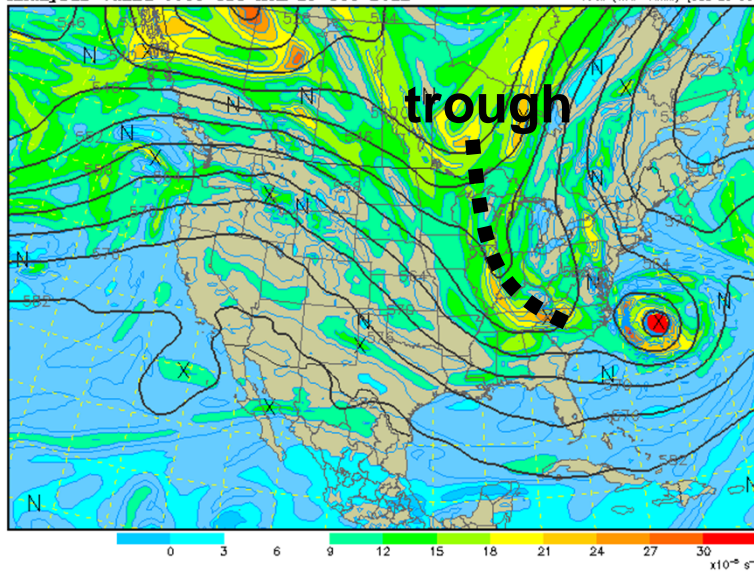
- ECMWF global weather forecasting model predicted track and pressure ($\pm 5\text{mb}$) 1 week in advance! 
- What made it a “superstorm”?
 - Sunday evening, separate trough and tropical system (left)
 - Monday morning: trough unites with mid-level low pressure from Sandy (right)

10/23 Tuesday morning 168-hour forecast



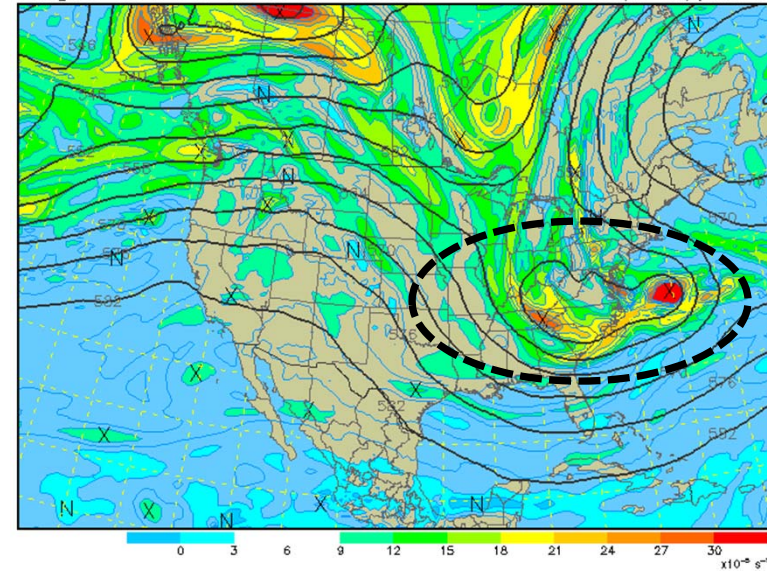
Analysis valid 0000 UTC Mon 29 Oct 2012

NAM (WRF-NMM) (00z 29 Oct)



Analysis valid 1200 UTC Mon 29 Oct 2012

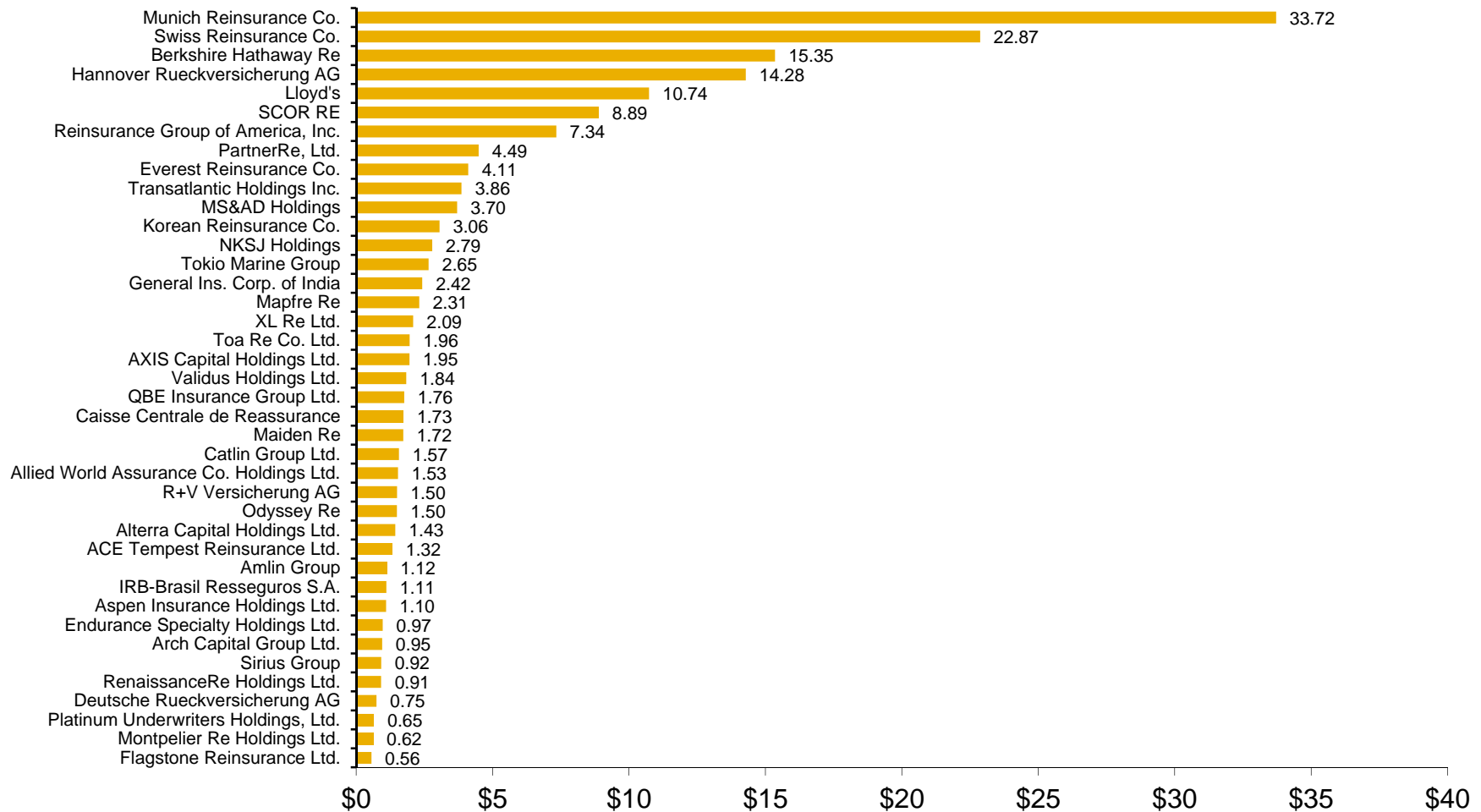
NAM (WRF-NMM) (12z 29 Oct)



Reinsurance Market Trends

S&P Top 40 Global Reinsurance Groups as of 2011

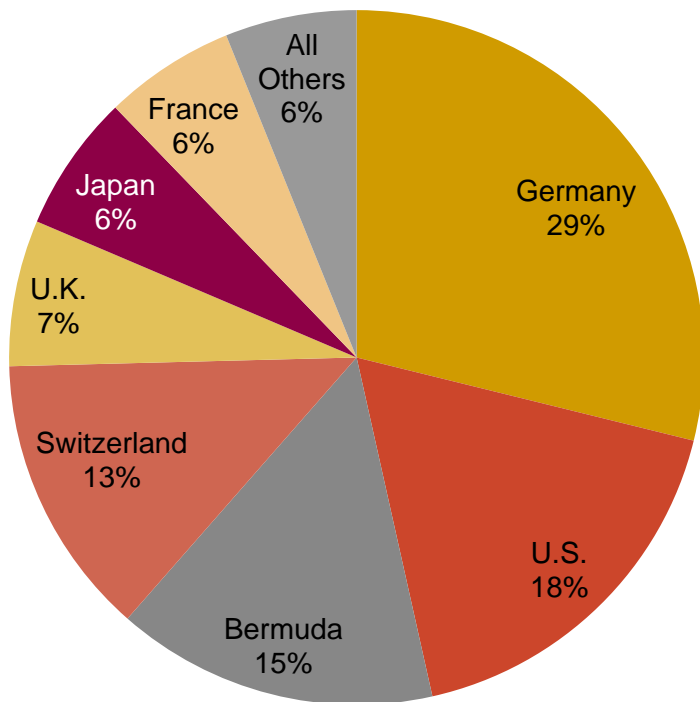
Net 2011 Reinsurance Premium Written (US\$ Billions)



Source: Standard & Poors

S&P Top 40 Global Reinsurance Groups as of 2011

Net Reinsurance Premium Written

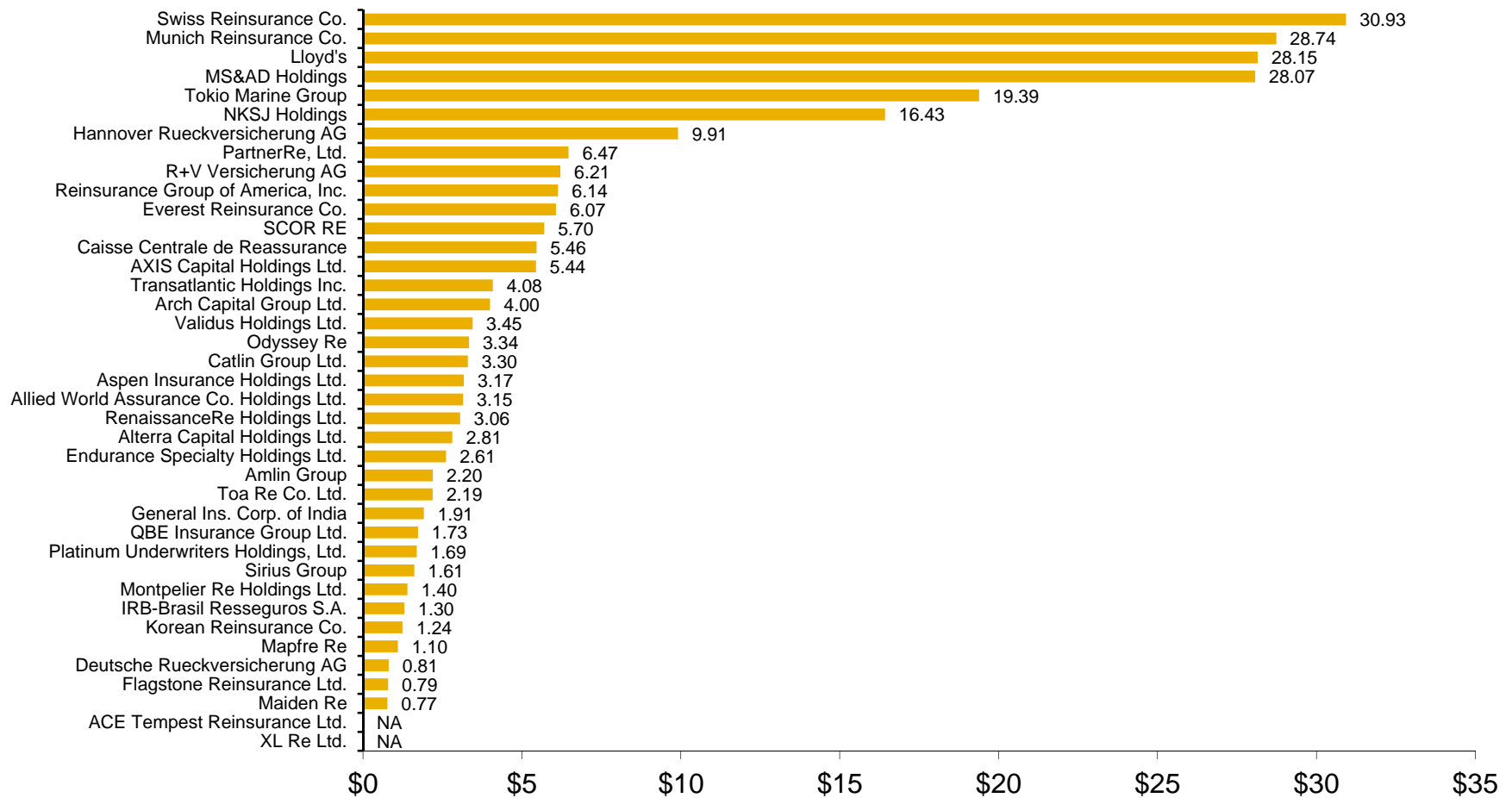


| Country | Net Premium (\$Mill) |
|-----------------|----------------------|
| Germany (4) | 50,239 |
| U.S. (6) | 30,716 |
| Bermuda (16) | 26,065 |
| Switzerland (1) | 22,868 |
| U.K. (2) | 11,860 |
| Japan (4) | 11,103 |
| France (2) | 10,624 |
| Korea (1) | 3,058 |
| India (1) | 2,422 |
| Spain (1) | 2,311 |
| Australia (1) | 1,758 |
| Brazil (1) | 1,108 |

Source: Standard & Poors

S&P Top 40 Global Reinsurance Groups as of 2011

Adjusted Policyholders' Funds in 2011 (US\$ Billions)

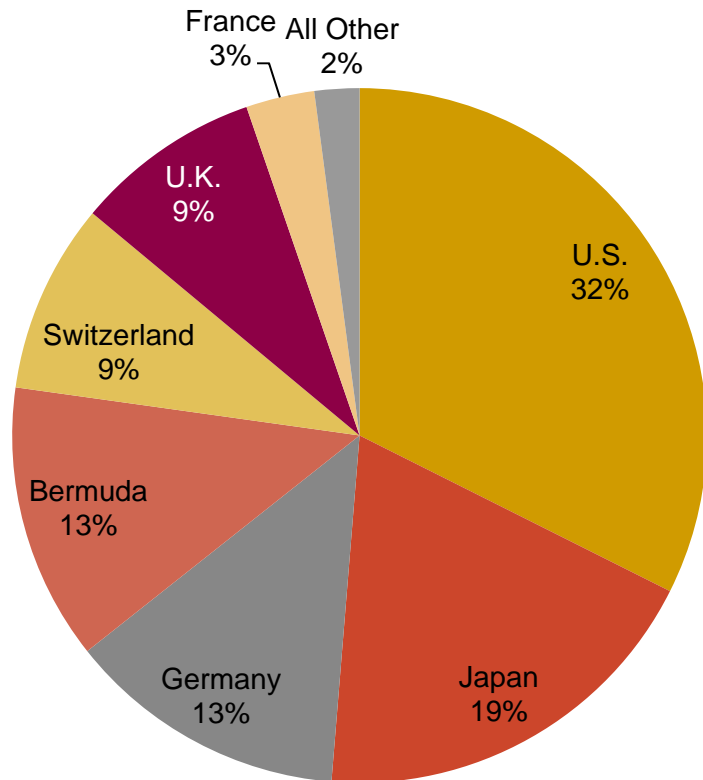


Note: Excludes Berkshire Hathaway Re with \$95 Billion

Source: Standard & Poors

S&P Top 40 Global Reinsurance Groups as of 2011

Adjusted Policyholder's Funds (\$Bill)

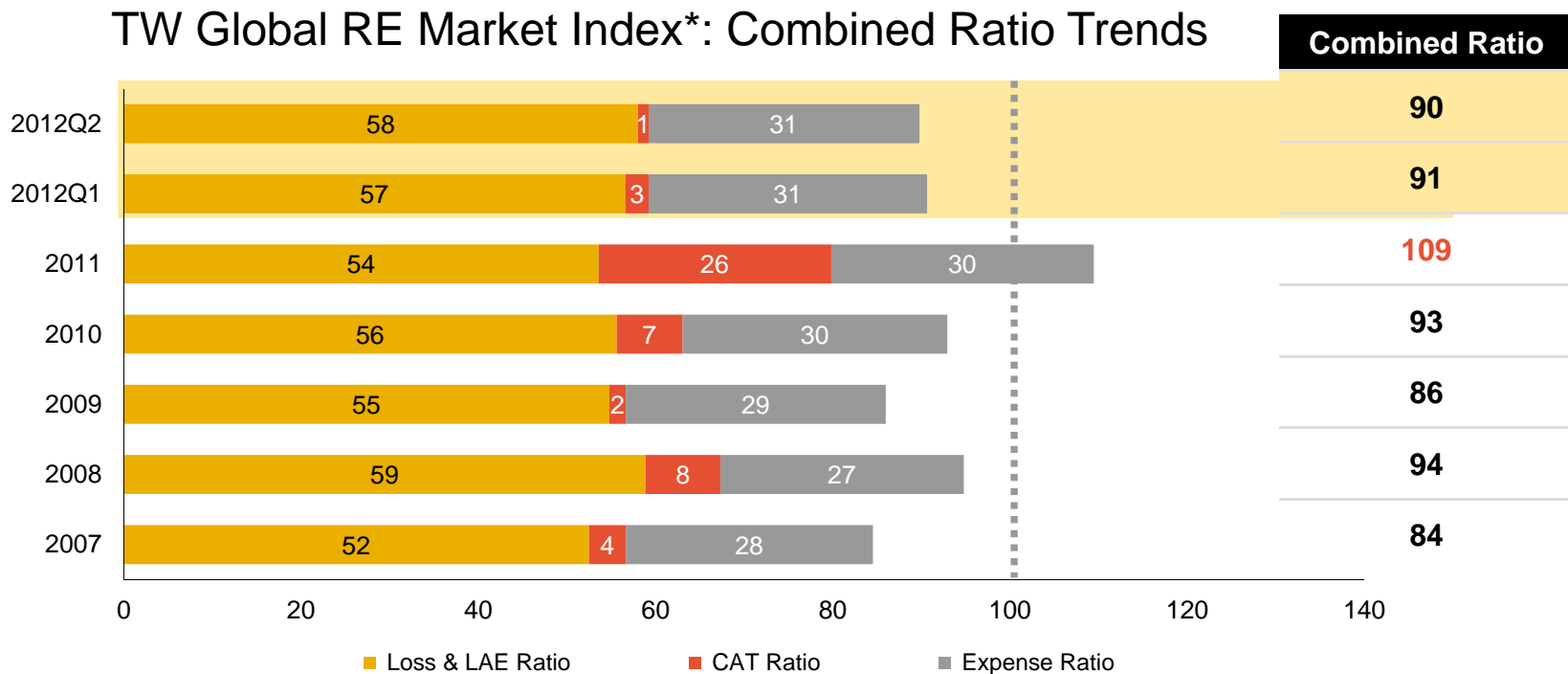


| Country | Policyholder Funds (\$Mill) |
|-------------|-----------------------------|
| U.S.* | 113,323 |
| Japan | 66,081 |
| Germany | 45,669 |
| Bermuda | 45,018 |
| Switzerland | 30,931 |
| U.K. | 30,349 |
| France | 11,160 |
| India | 1,913 |
| Australia | 1,730 |
| Brazil | 1,303 |
| Korea | 1,242 |
| Spain | 1,098 |

*\$95 billion of the U.S. Policyholder Funds are provided by Berkshire Hathaway. If this is removed, the U.S. would rank 6th behind the U.K.
 Source: Standard & Poors

2012 has been profitable for most reinsurers after 2011 produced record global cat losses that negatively affected underwriting performance

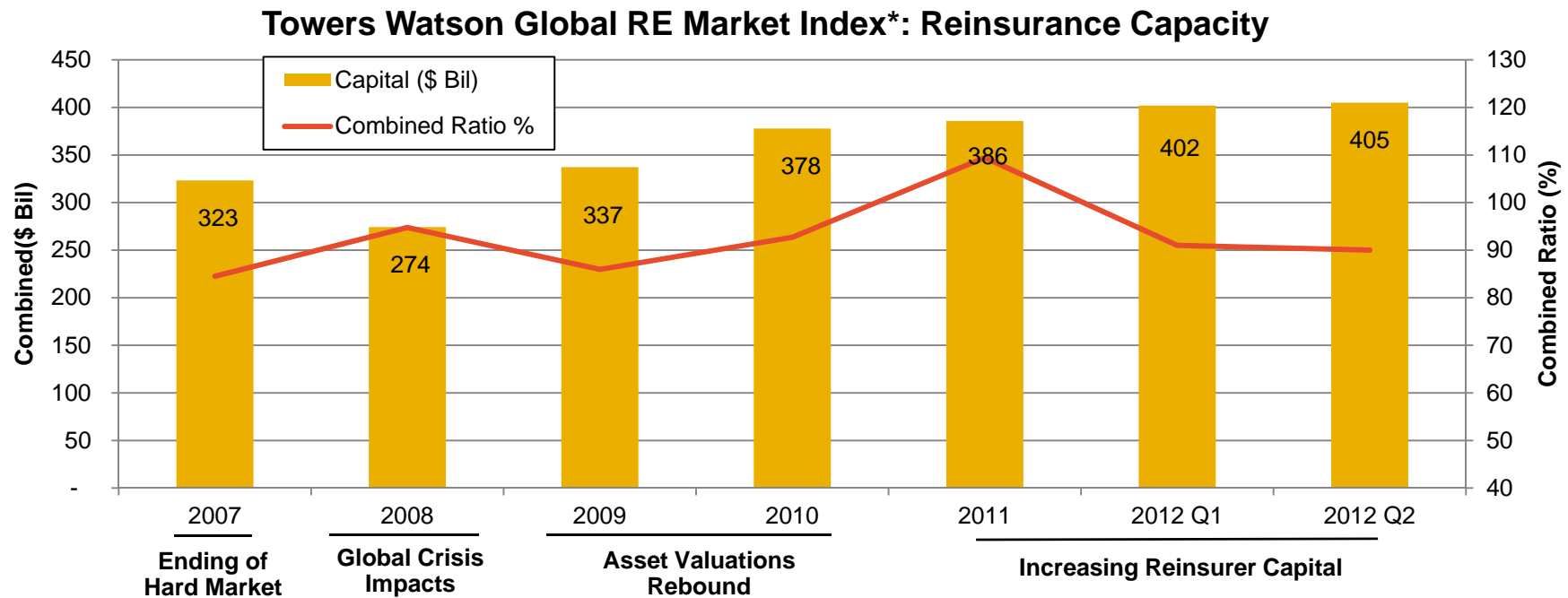
- Global reinsurers remain pressured by historic low returns on invested assets
- Cash flow levels have deteriorated
- Reserve redundancies are diminishing
- Share repurchase activity has dropped due to high cat losses



*Represents a TW proprietary list of leading global reinsurers. Sources: SNL Financial, Towers Watson.

Reinsurer's capital has stabilized and started to increase in 2012

- Reinsurance capital has slightly increased through the first half of 2012
- Reduced CAT event activity for the first half of 2012 has led to lower combined ratios and the strengthening of capital positions for reinsurers
- While capacity has increased, Reinsurers are ensuring capacity is being allocated to certain regions whereby exposures are easier to identify



Note: Capital levels represent total adjusted shareholders' funds. Excludes capital markets, catastrophe funds and internal reinsurance capacity.

*Represents a Towers Watson proprietary list of leading global reinsurers.

Sources: SNL Financial, Towers Watson .

Industry's view of total Reinsurance Capital

- Total reinsurance capital as of June 30, 2012 is approximately \$500 billion
- Comprised of both traditional reinsurance and reinsurance vehicles through the investment markets such as cat bonds and ILW's
- While capacity is up, reinsurers are not necessarily allocating 100% of capacity to the market
- Many reinsurers are holding capital on the sidelines if risk adjusted returns are not met on program deals
- Risk tolerances are being impacted particularly given that reserve redundancies are lessening
- Alternative capital via hedge funds, pension funds, etc. are influencing pricing
- Estimates are in the \$6 billion range in terms of capital, which may continue to increase assuming interest rates remain low and there is no to low cat activity globally

QUESTIONS