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State of the Reinsurance Market

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CAS Spring Meeting

The Breakers, Palm Beach, Florida

May 16, 2011



State of the Reinsurance Market

Agenda

- Capital Position of Reinsurers
- Rate Levels
 - Insurance by Line
 - Reinsurance Rate
- Recent Loss Activity
 - Property Events
 - Casualty Events
 - Projected 2011 Wind Season
- Japan Earthquake: What Affect will it have?
- Are there Catalysts for Change?
- What do we need to turn Casualty?

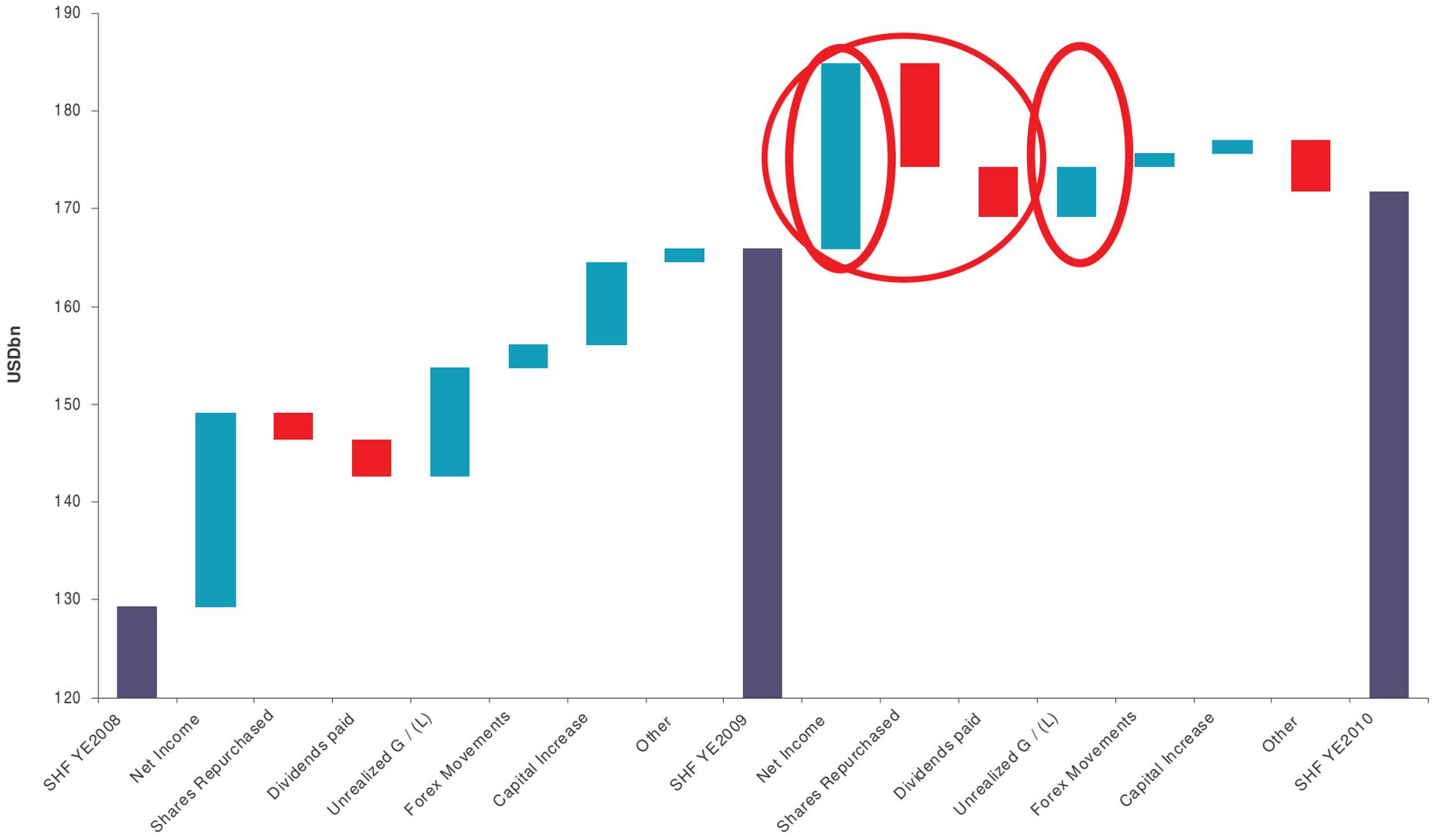
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Capital Position

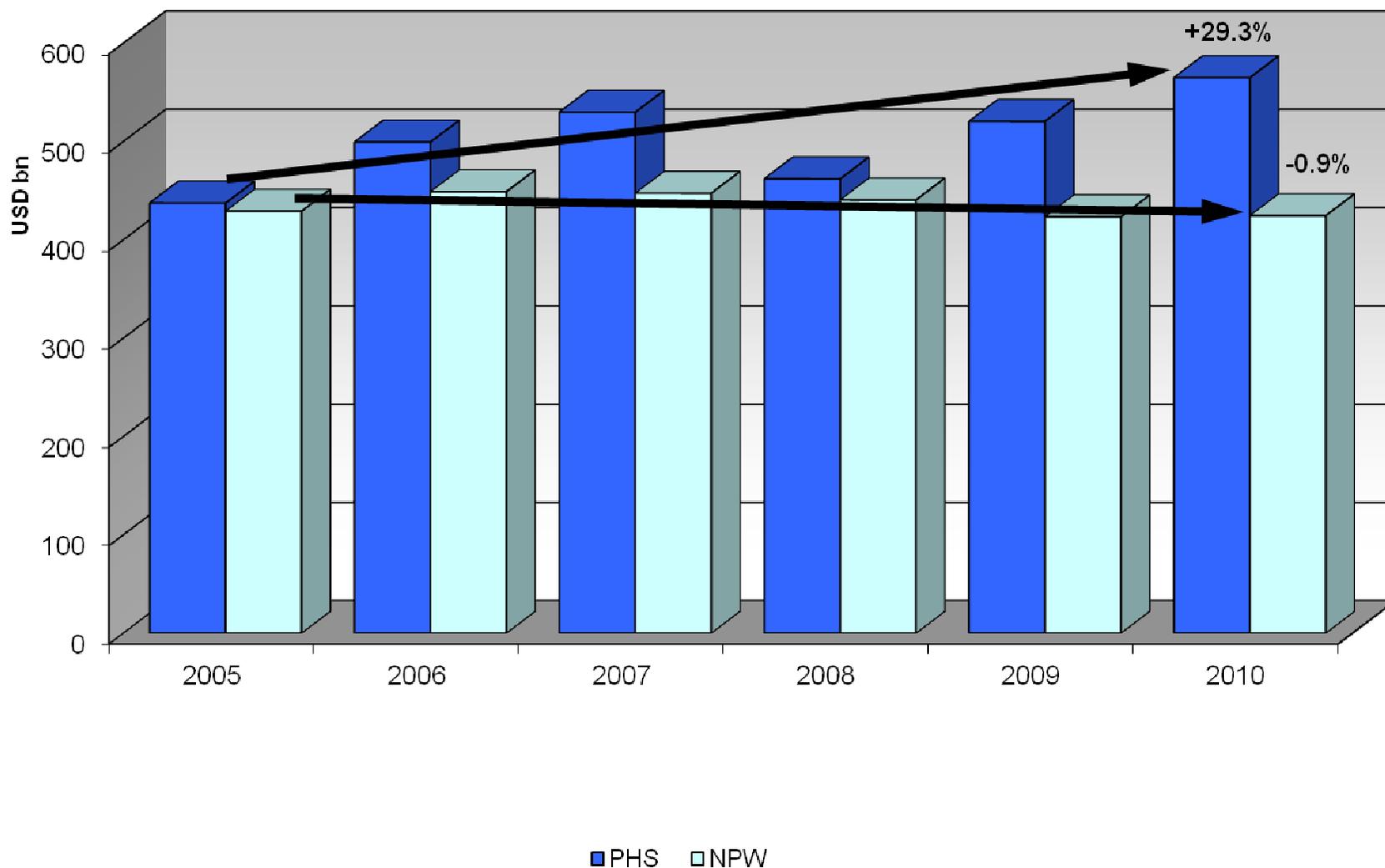
Evolution of Shareholders' Funds 2008 - 2010

Guy Carpenter Reinsurance Composite

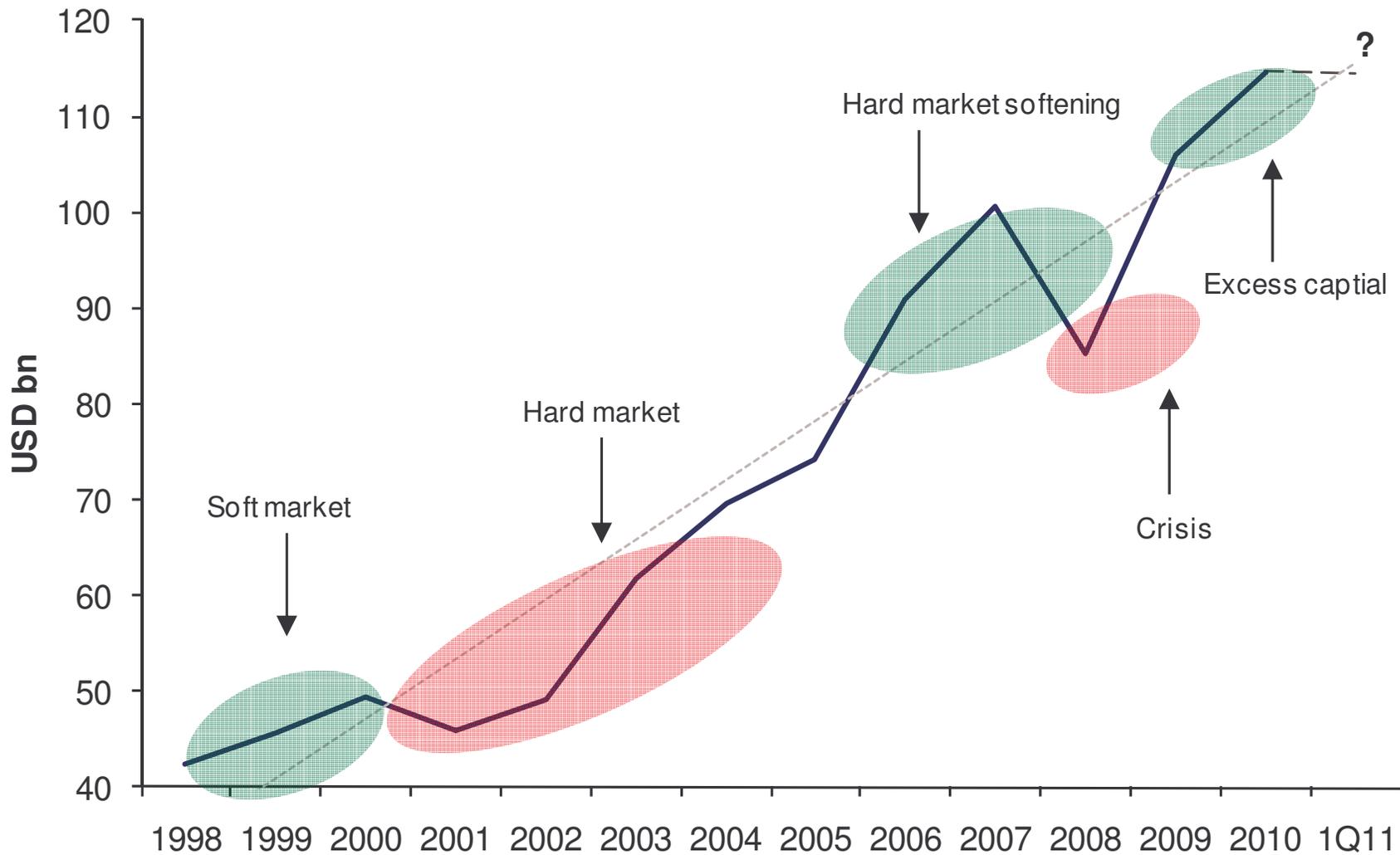


P&C industry aggregate – All lines combined

Change in PHS & NPW 2005 – 2010



Reinsurers' capital: What does Japan mean for the cycle?



Depending on the size of this loss, excess capital may start to disappear from the market

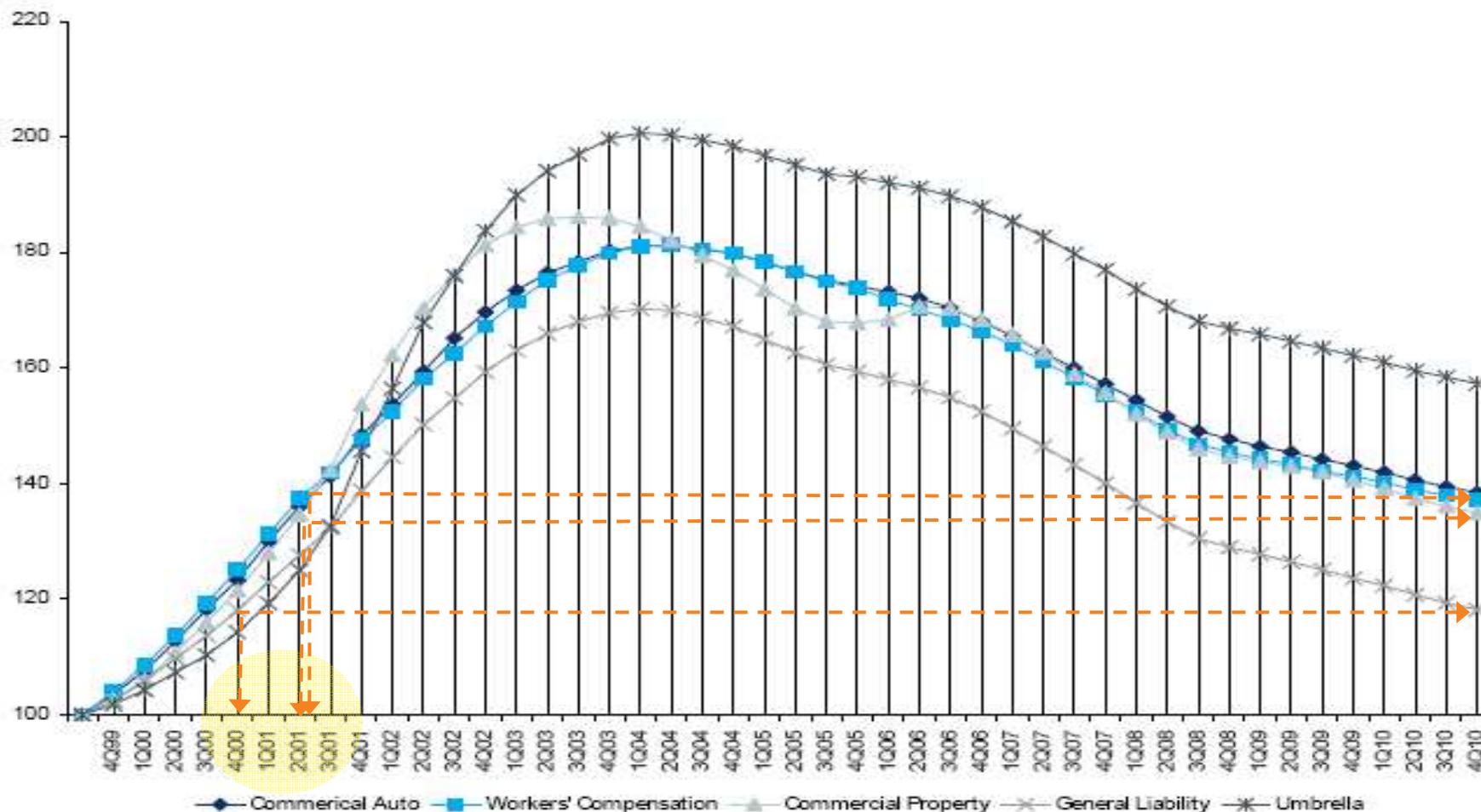
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Rate Levels

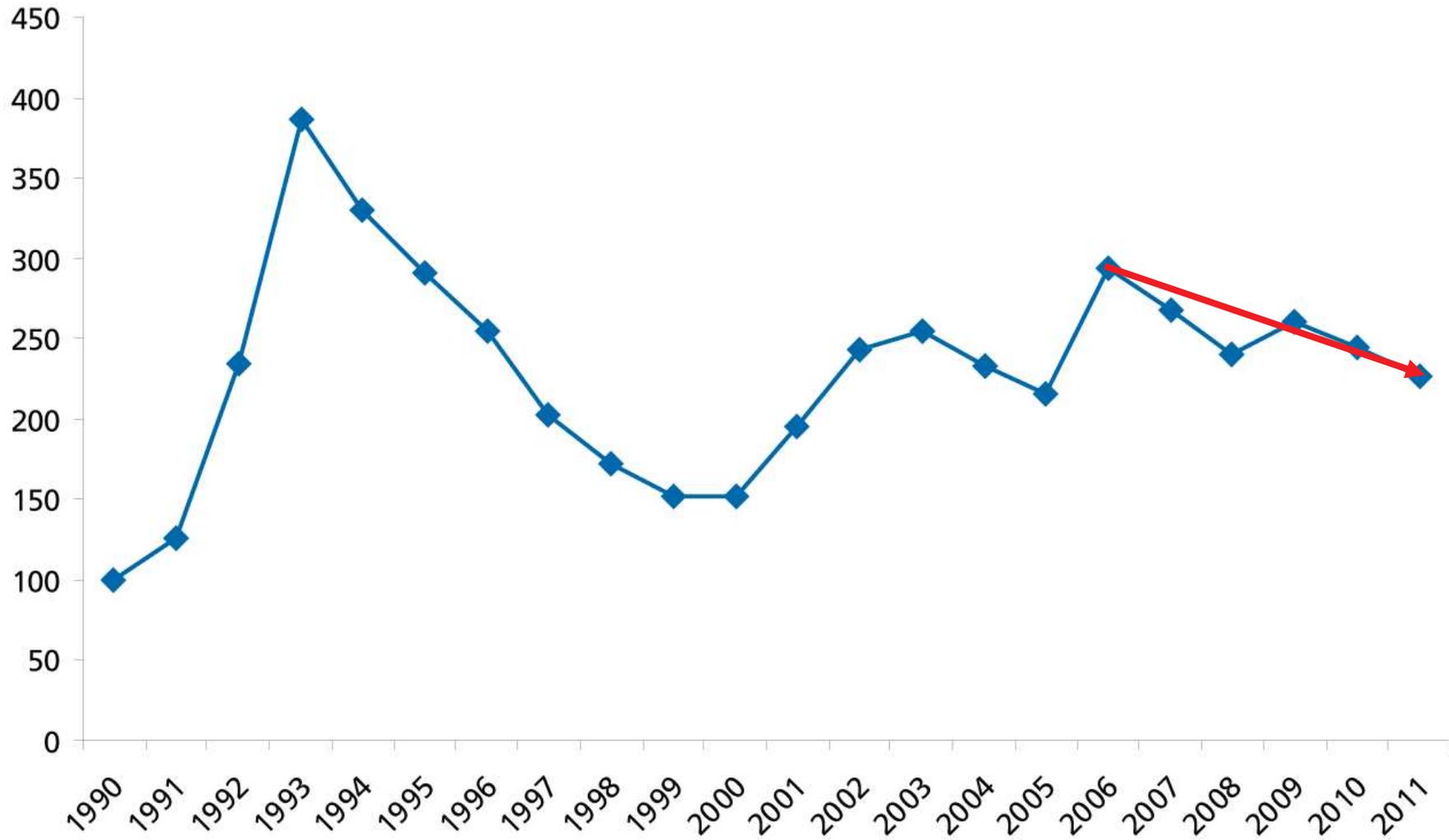
US commercial pricing drifting at 'soft market' levels of 2000 - 2001

Cumulative Quarterly Rate Increases by Line

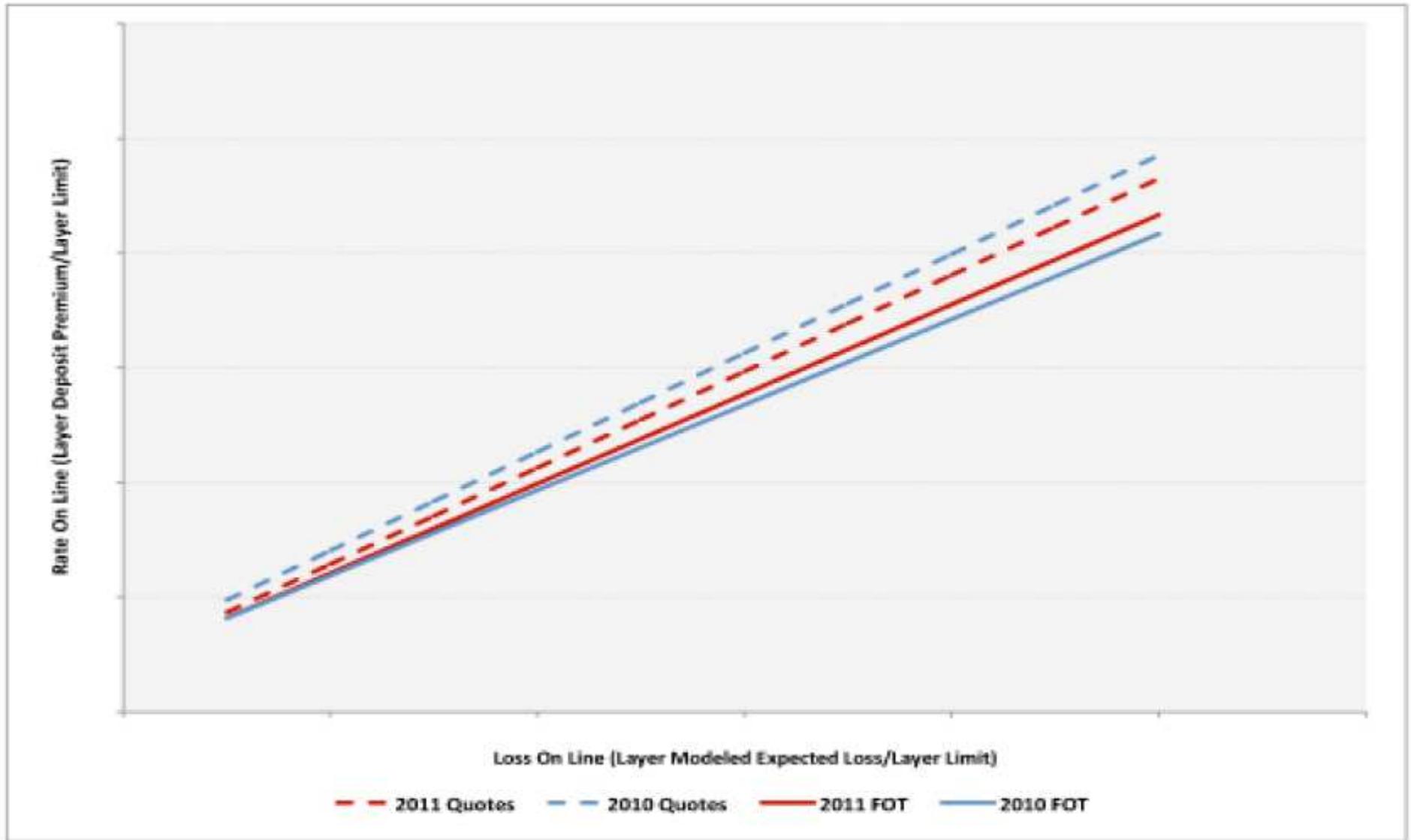


Source: The Council of Insurance Agents & Brokers. Chart prepared by Barclays Capital Equity Research.

Guy Carpenter Global Property Catastrophe RoL Index



April 1, 2011 Renewals Risk Adjusted Pricing Comparison

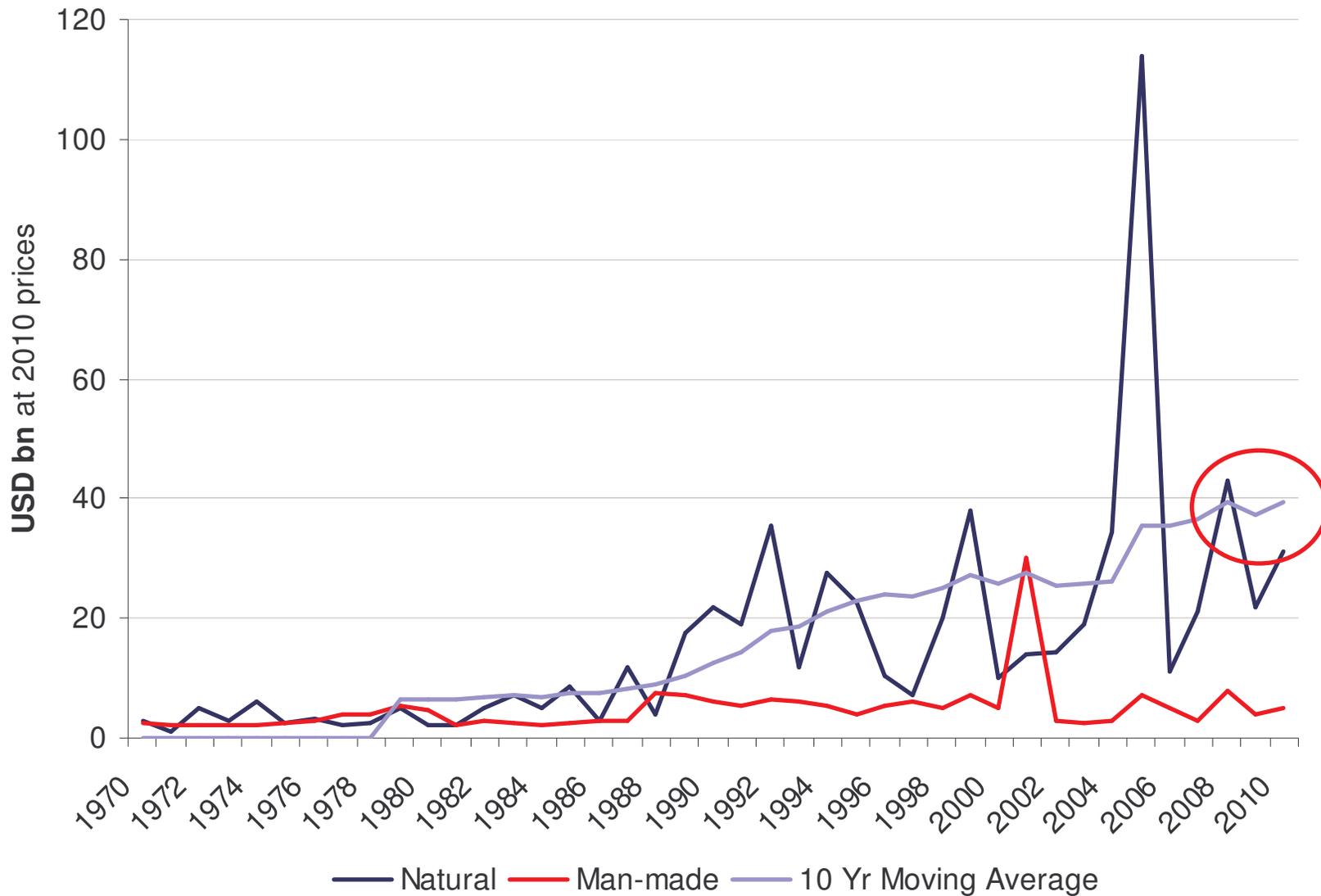


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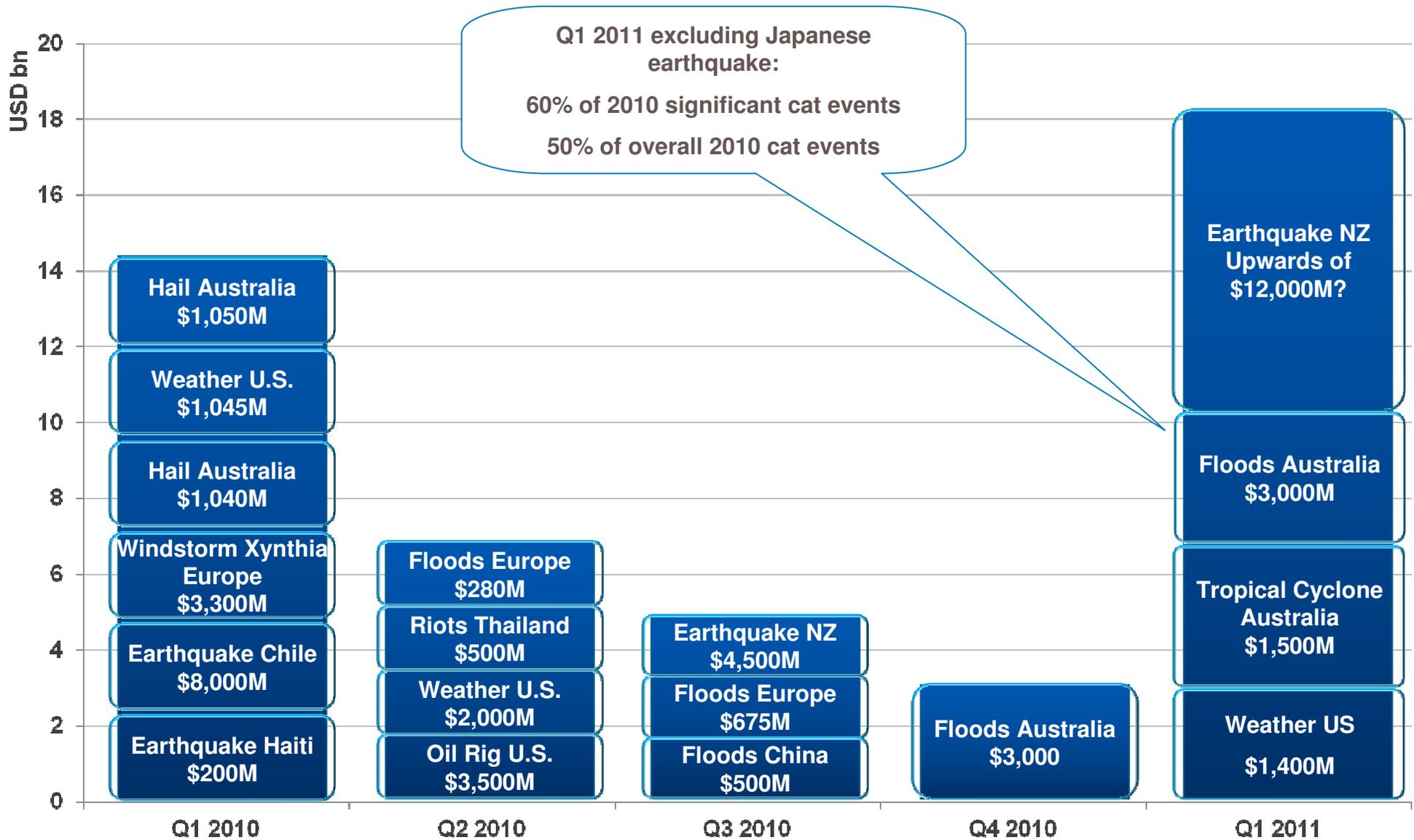


Recent Loss Activity

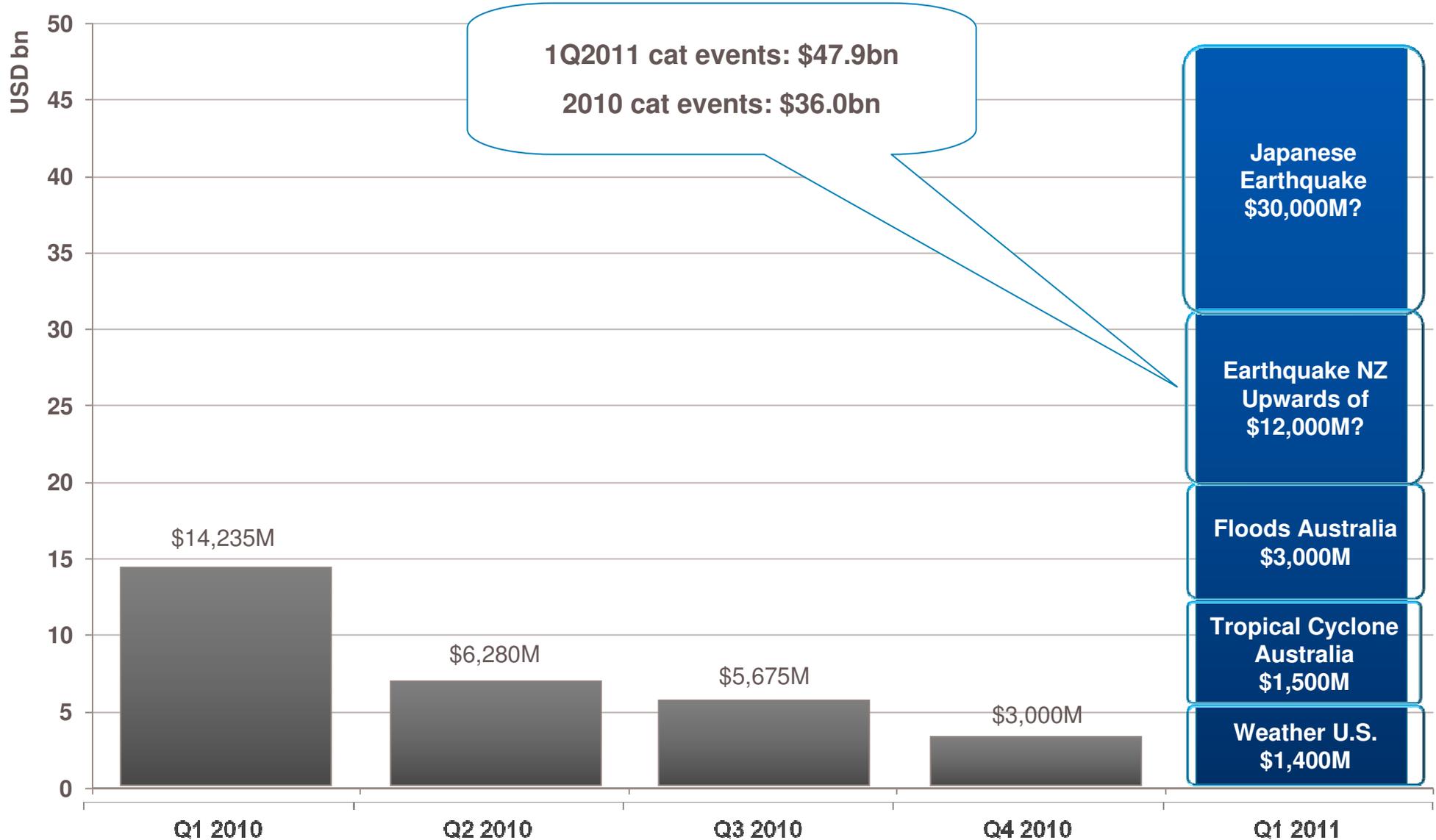
Global Catastrophes



Significant Catastrophic Events of 2010 – First Quarter 2011



Significant Catastrophic Events of 2010 – First Quarter 2011



Casualty Losses

- 2009 California and Australian Wildfire losses
 - Sempra Energy resulted in \$1B in insured liability losses
 - Subrogation from Homeowner property losses
 - Australian wildfire resulted in close to another \$1B
- 2010 was a bad year for large energy losses
 - Massey Energy/Tesoro Petroleum/PG&E/Enbridge
 - Deepwater Horizon
 - \$40B potential economic loss
 - Smaller insured loss due to limits purchased
 - Raised aggregation issues for insurers and reinsurers

2011 Initial Atlantic Hurricane Season Forecast

Colorado State University (CSU)

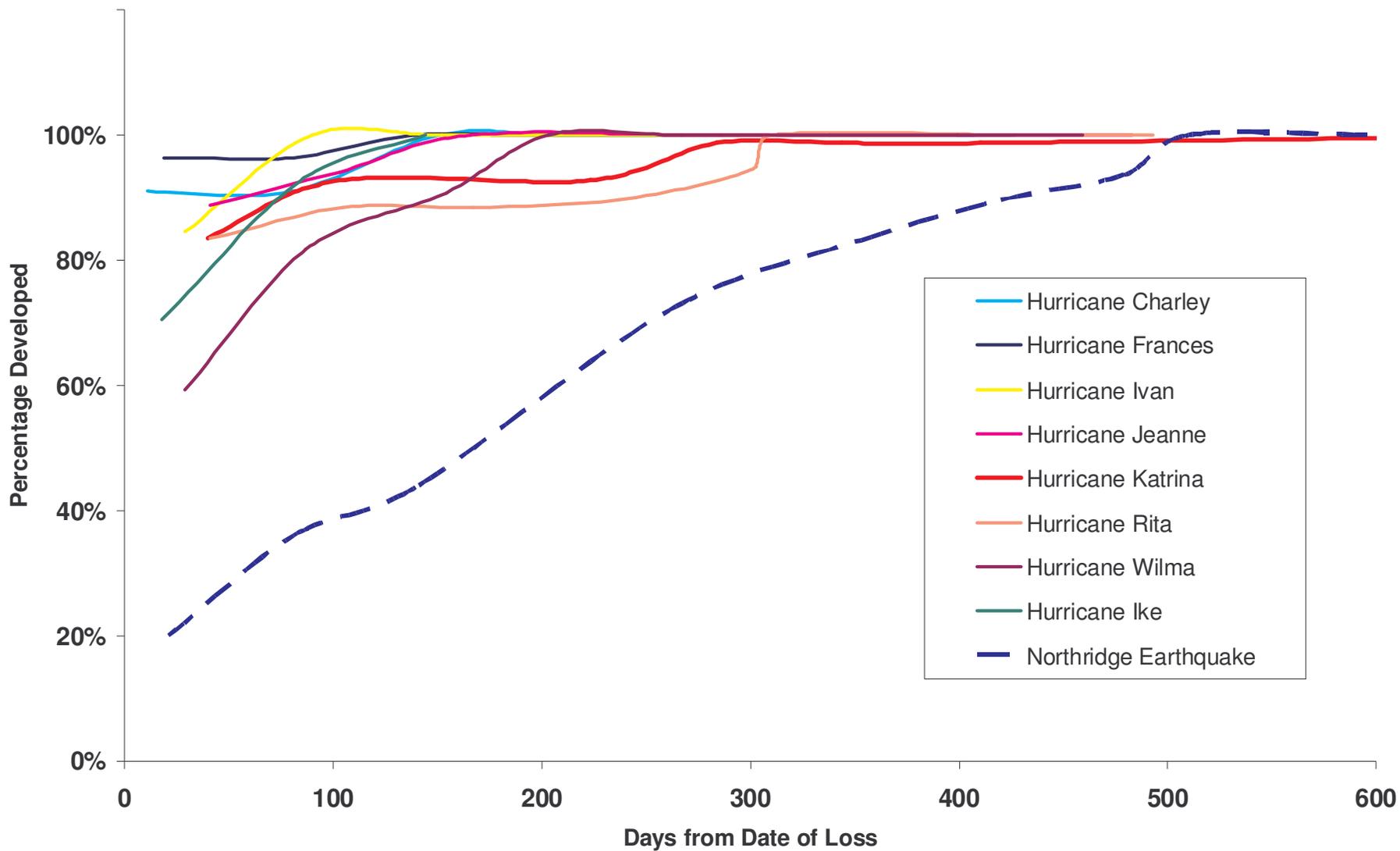
- 17 named storms
- 9 hurricanes
- 5 major hurricanes – Category 3 or greater

Tropical Storm Risk, Inc. (TSR)

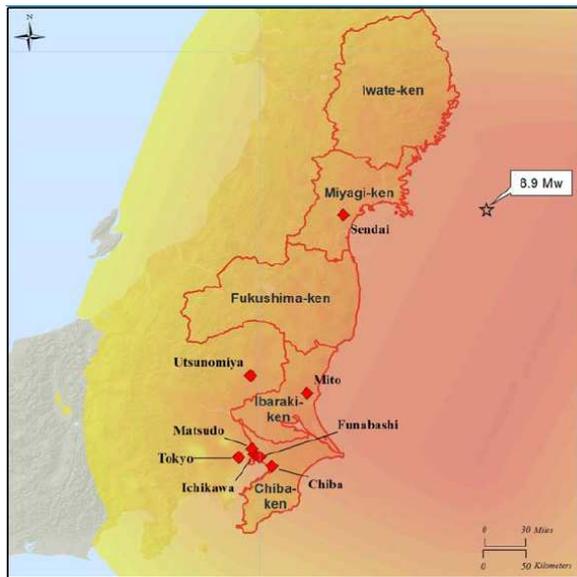
- 15.6 named storms
- 8.4 hurricanes
- 4 major hurricanes – Category 3 or greater

Average season: 10 to 11 named storms, 6 hurricanes, and 2 major hurricanes in the Atlantic, Caribbean, and Gulf of Mexico

Earthquakes are slow burners



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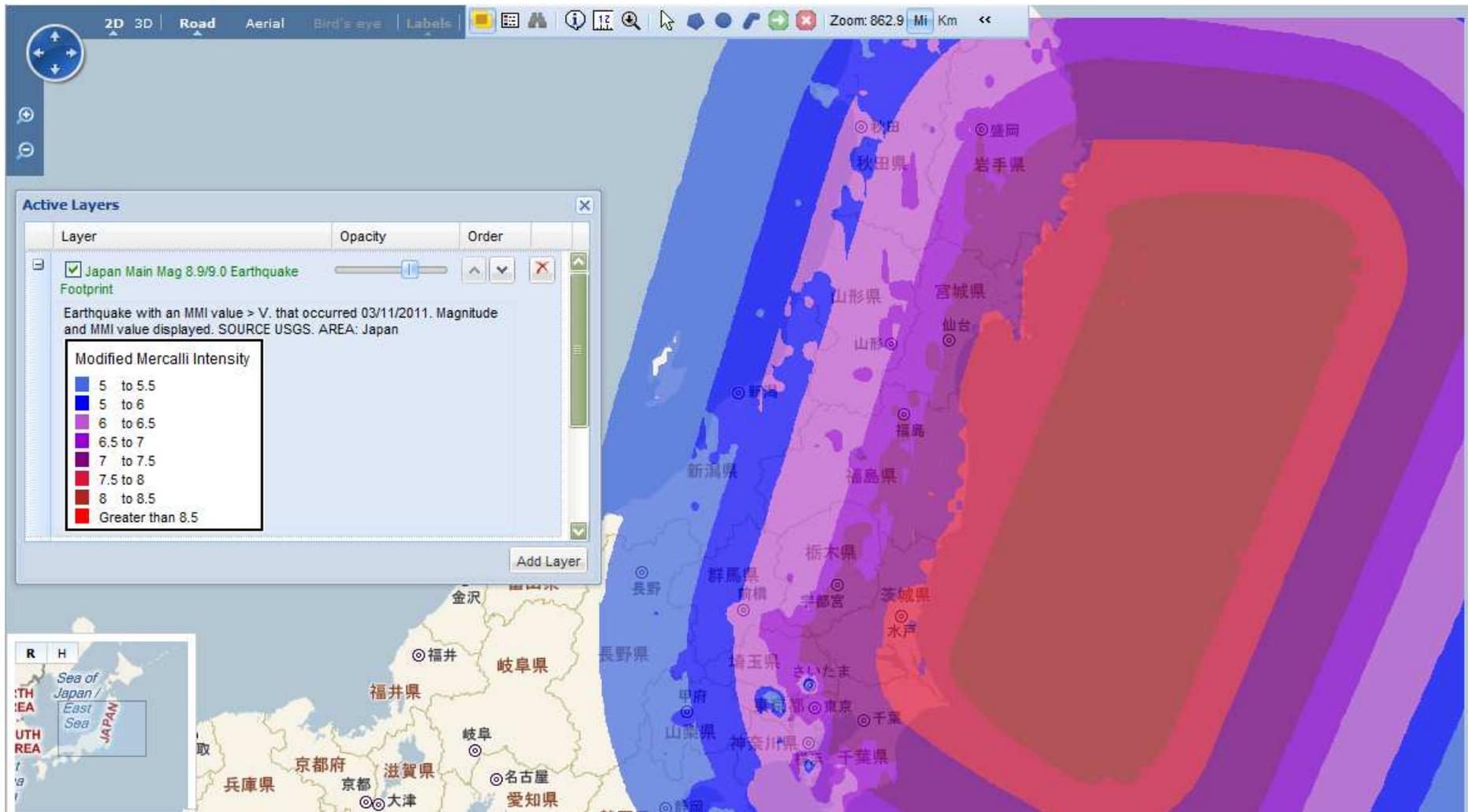


**Japanese Earthquake affect
on reinsurers**

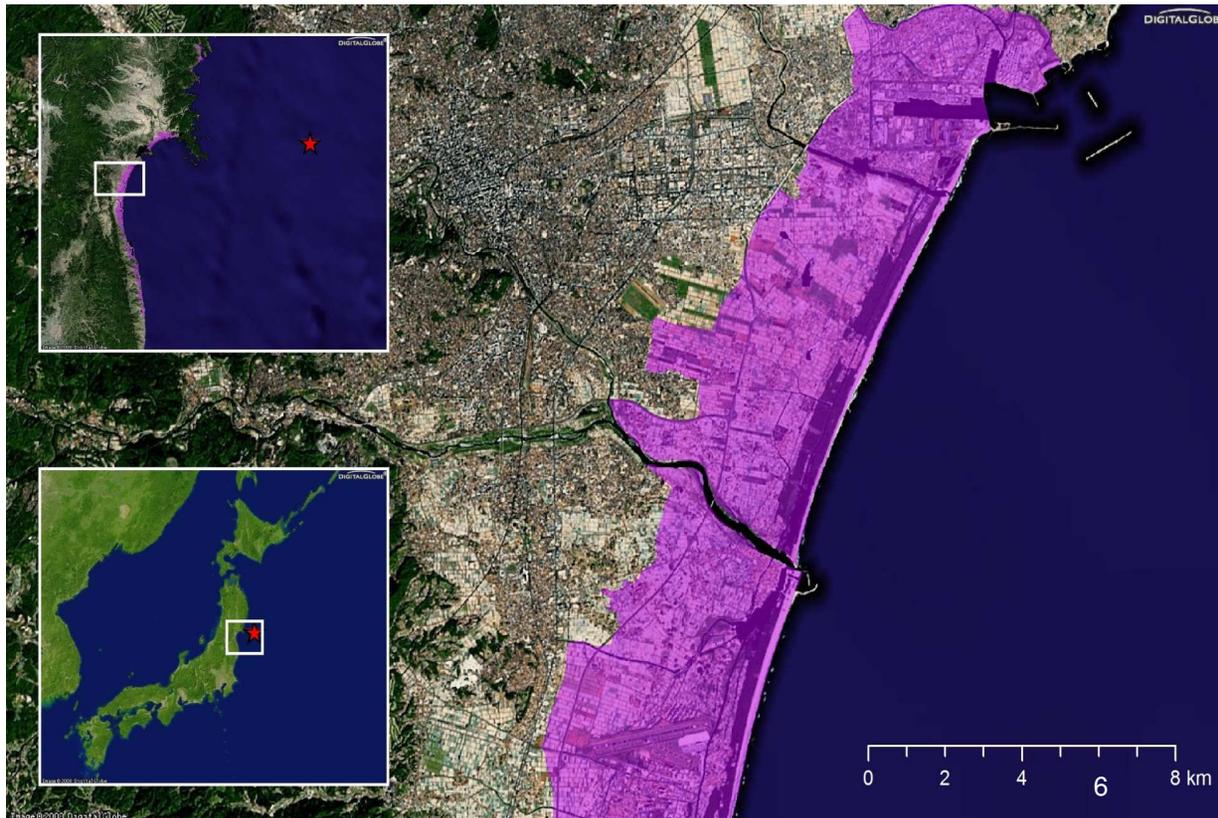
Great Tohoku Earthquake, Japan, 9.1M_w, 11th March 2011



A powerful earthquake occurred offshore the east coast of the Tohoku region on the Island of Honshu, Japan at 02:46 PM local time on Friday, March 11th. It has been reported as a magnitude 9.1 event occurring at location 38.322°N, 142.369°E. The 24.4km deep earthquake occurred around 80mi (130 km) east of Sendai and approximately 231 mi (373 km) northeast of Tokyo.



Tsunami inundation



Source: eCityRisk

- Most affected prefectures are: Miyagi and Fukushima; with additional damage in Ibaraki, Iwate and Hokkaido. In the Sendai region, the tsunami inundation extended inland 10 km from the coast.

Cities	Height (m)	Height (ft)
Soma	7.3	24.0
Oarai	4.2	13.8
Miyako	4.0	13.1
Kamaishi	4.1	13.5

Historical perspective

- Most expensive

Country	EQ	Year	Magnitude	Cost (USD)
USA	Northridge	1994	6.7	\$ 22.5 bn
NZ	Christchurch	2011	6.3	\$ 10.0 bn
Chile		2010	8.8	\$ 8.0 bn
NZ	Darfield	2010	7.1	\$ 5.0 bn
Japan	Kobe	1995	6.8	\$ 4.5 bn

Cost in 2010 USD

- Largest by magnitude

Territory	Year	Magnitude
Chile	1960	9.5
Alaska	1964	9.2
Sumatra	2004	9.1
Kamchatka	1952	9.0
Peru	1868	9.0
USA	1700	9.0
Japan	2011	8.9

Size does not necessarily correlate with insured loss. Location is more important.

Initial industry loss estimates from modelling vendors

▪ EQECAT

- March 16th: US\$12bn to US\$25bn
- Includes EQ shaking, ensuing tsunami and fires and losses to automobiles, marine, life and personal accident insurance

Coverage	\$Billions in USD
EQ Shake	8-15 (Estimated 25% ceded to JERP)
Auto	0-1
Marine	1-3
Life	2-3
Personal Accident	1-2

▪ AIR

- March 25th: US\$20bn to US\$30bn
 - The loss estimate includes payouts from the Japanese Earthquake Reinsurance Co (JER) and is net of government recoveries.
 - Includes EQ shaking and fire following, excludes tsunami, automobiles, marine, life and personal accident insurance

▪ RMS

- 11th April: US\$18bn to US\$26bn
 - Includes shake, fire, tsunami, marine, aviation and auto

Large variation between AIR and EQECAT ranges

Context: Japan cat XoL as a percentage of global total

Worldwide reinsurance market – traditional cat excess of loss

USD bn	Limit	Premium	RoL
United States	75.00	7.90	10.5%
Canada	12.50	0.48	3.8%
Latin America	20.00	2.50	6.3%
Europe - wind	40.00	2.50	6.3%
Europe - quake	28.00	1.00	3.6%
Japan	30.00	1.20	4.0%
Rest of Asia	10.00	0.50	5.0%
Australia / NZ	15.00	0.60	4.0%

Japan premium as a % of total

7.2%

Japan limit as a % of total

13.0%

Japan has a significant but not dominant share of worldwide cat market

Accumulation of 2010 - 2011 large losses pre-Tohuku quake

Trailing six months

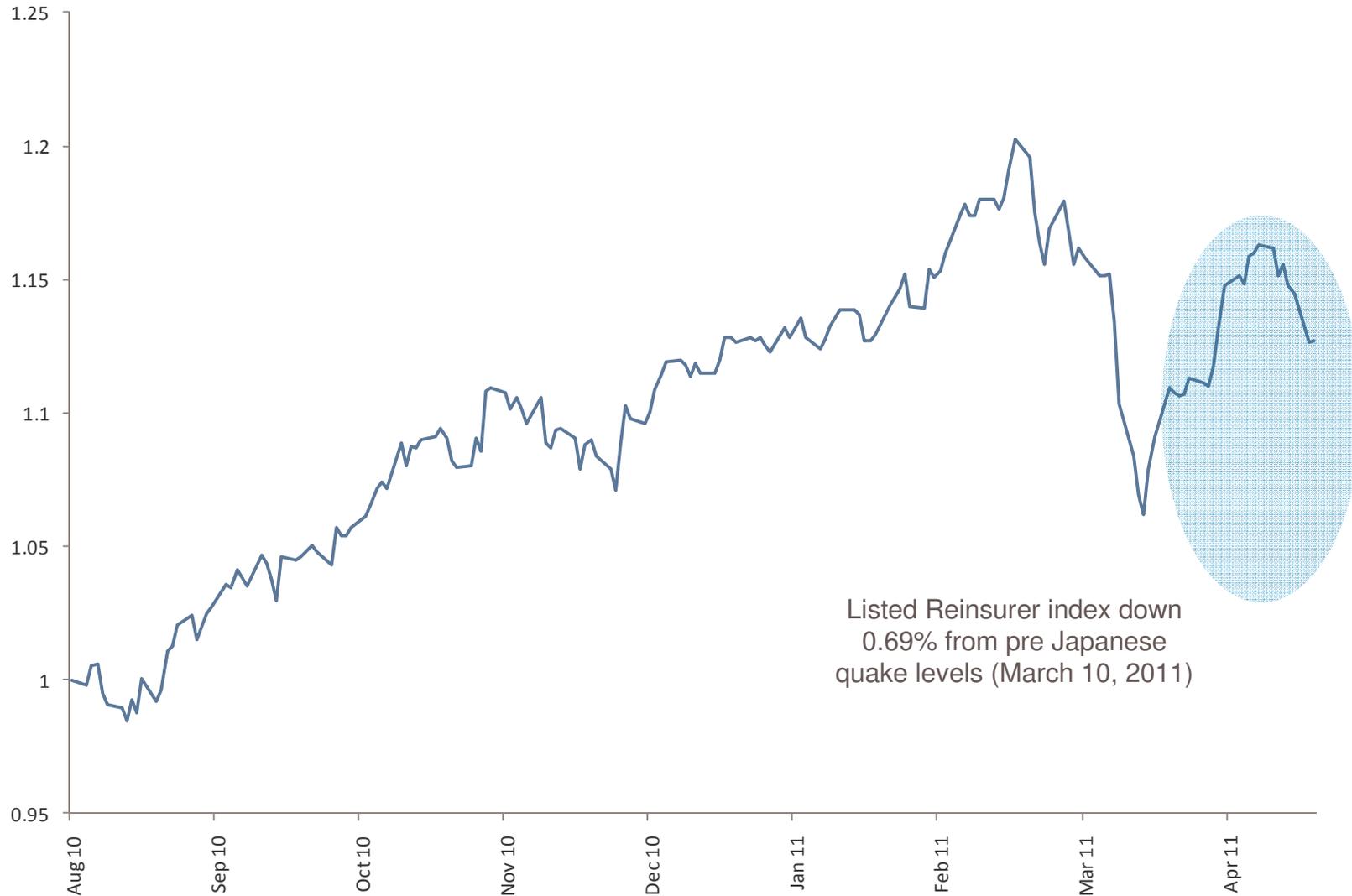
New Zealand – Canterbury:	up to \$2.6bn
2010 – 2011 Australia flooding:	up to \$6bn
Cyclone Yasi:	up to \$1.5bn
New Zealand – Christchurch:	up to \$12bn

Ca. \$20bn

- Guy Carpenter estimates ca. 90% of 2011 reinsurer natural catastrophe budgets were exhausted prior to the event.
- We estimate the sector's excess capital position was \$20bn on 1/1
- We estimate global dedicated reinsurance capital to be \$160 - \$180bn

Source: Guy Carpenter, New Zealand EQC, JP Morgan, AIR Worldwide, Insurance Council of Australia

Stock market reaction

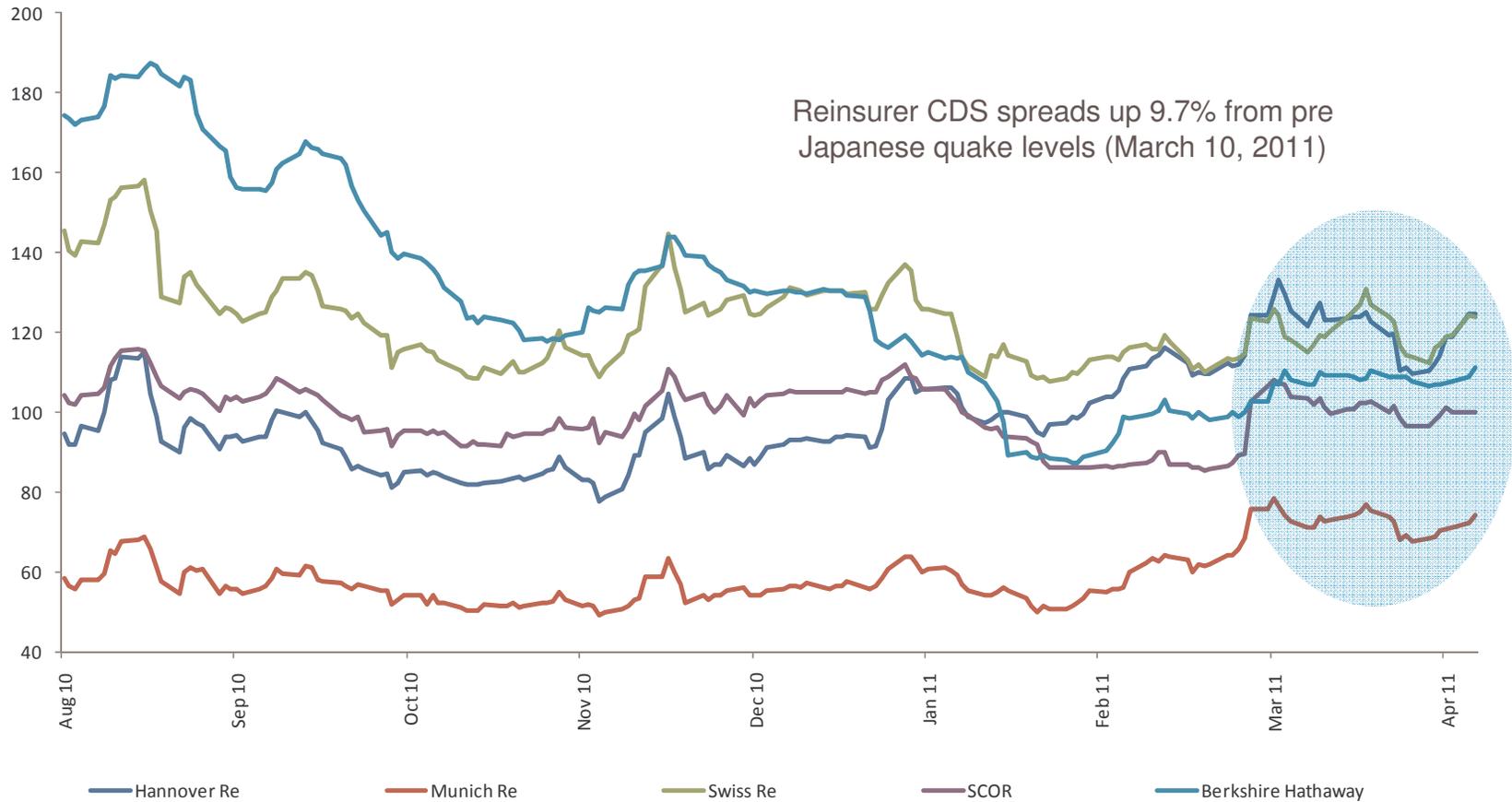


Listed Reinsurer index down
0.69% from pre Japanese
quake levels (March 10, 2011)

Chart shows average stock price of major reinsurers. Aug 2010 = 1.00
Source GC Research, Bloomberg

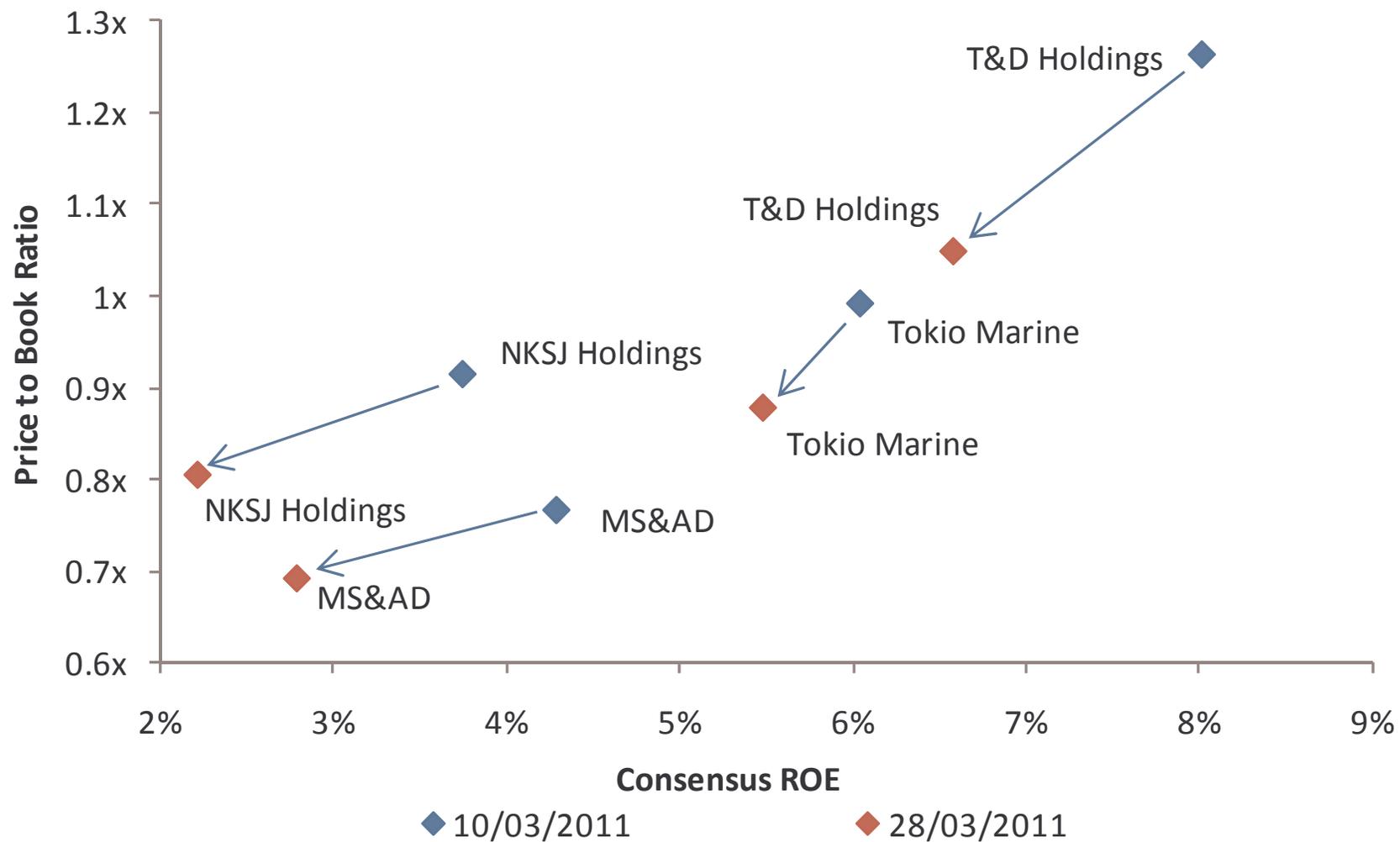
Stock market sentiment negative but improving

Bond market reaction (as measured by CDS spreads)

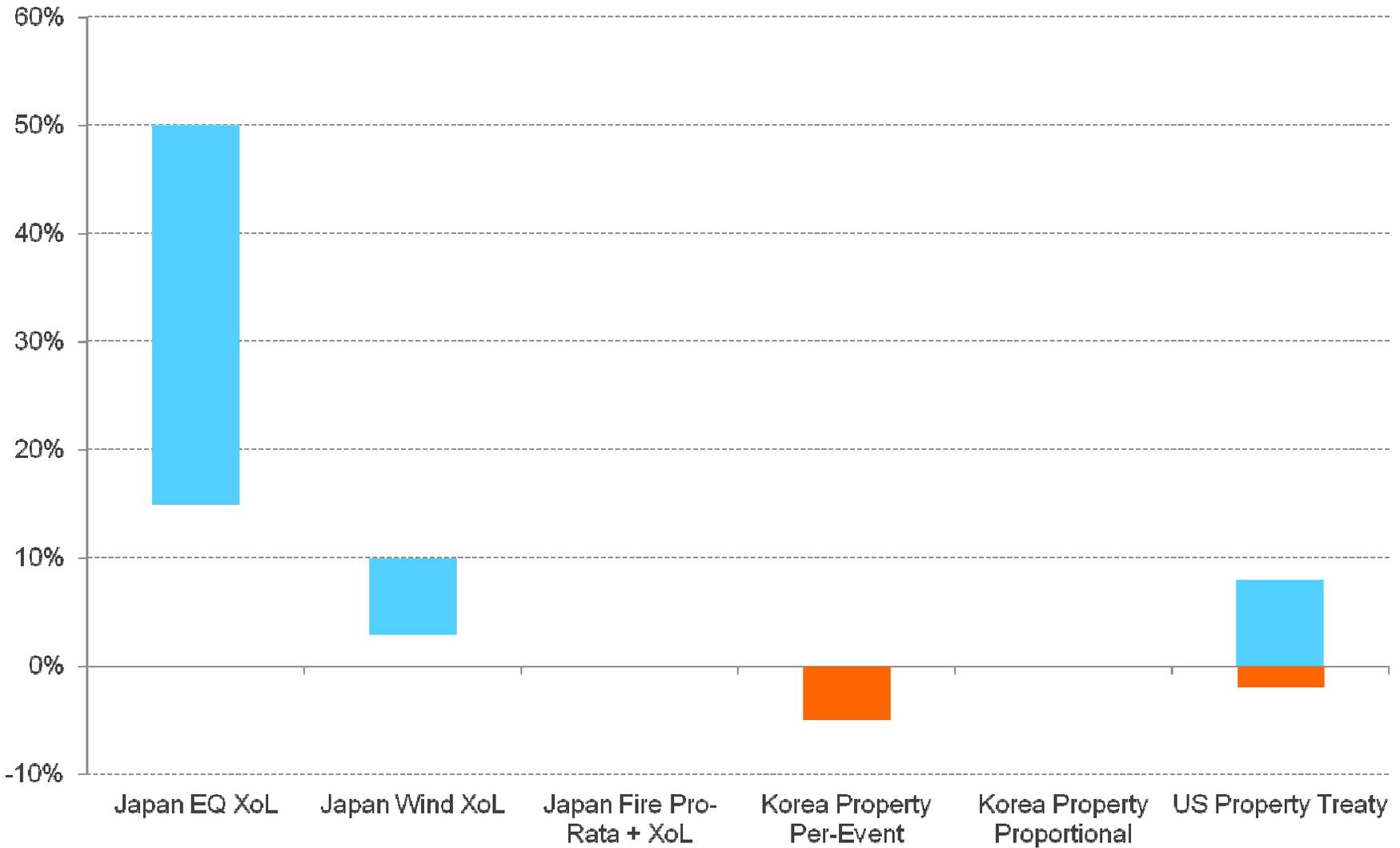


A marginal increase in CDS spreads for the major players

Japan primaries' valuations pre and post-event



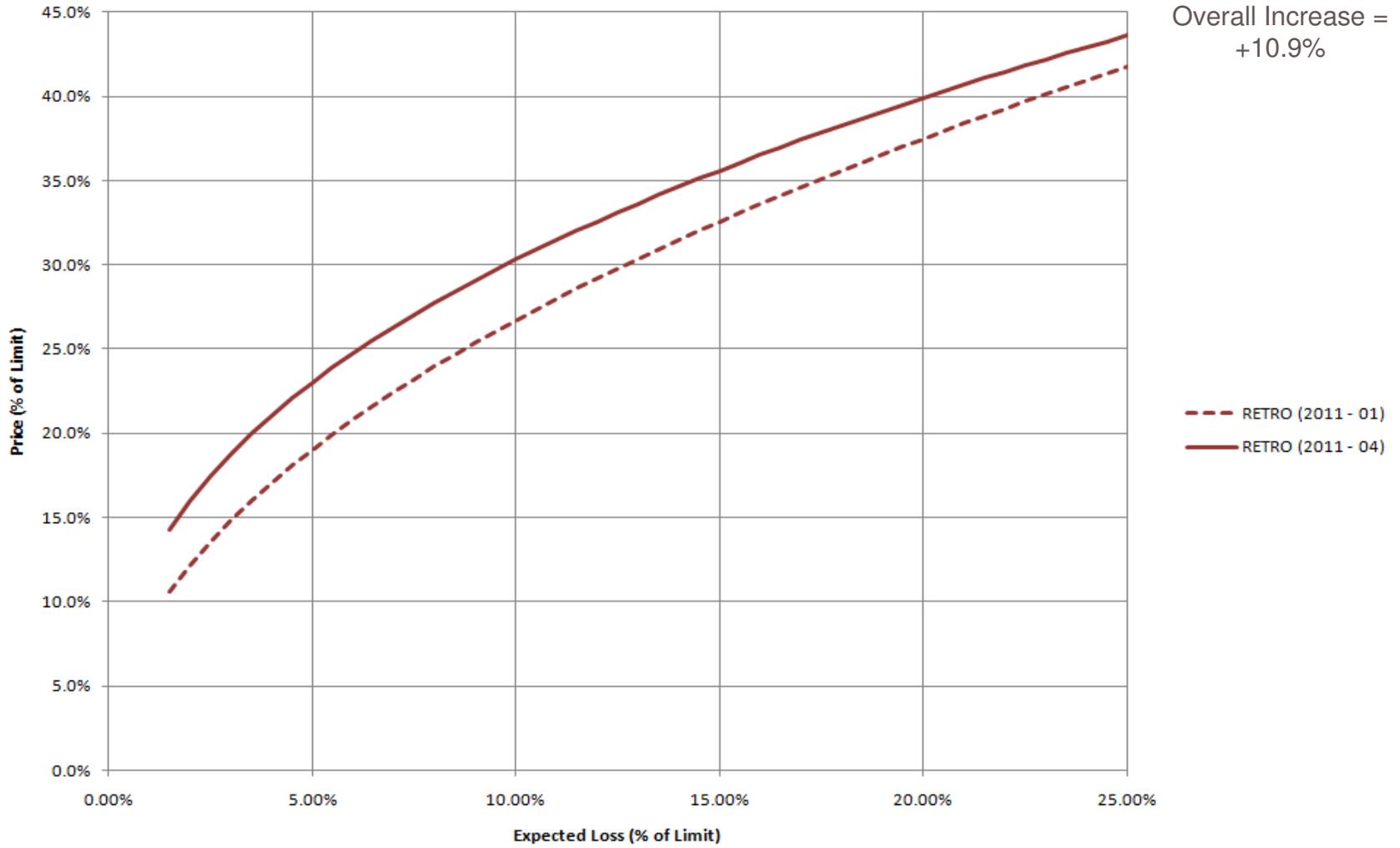
Rate-on-line changes at 1 April



Note: Few renewals in Australia / 'double digit' increases in NZ

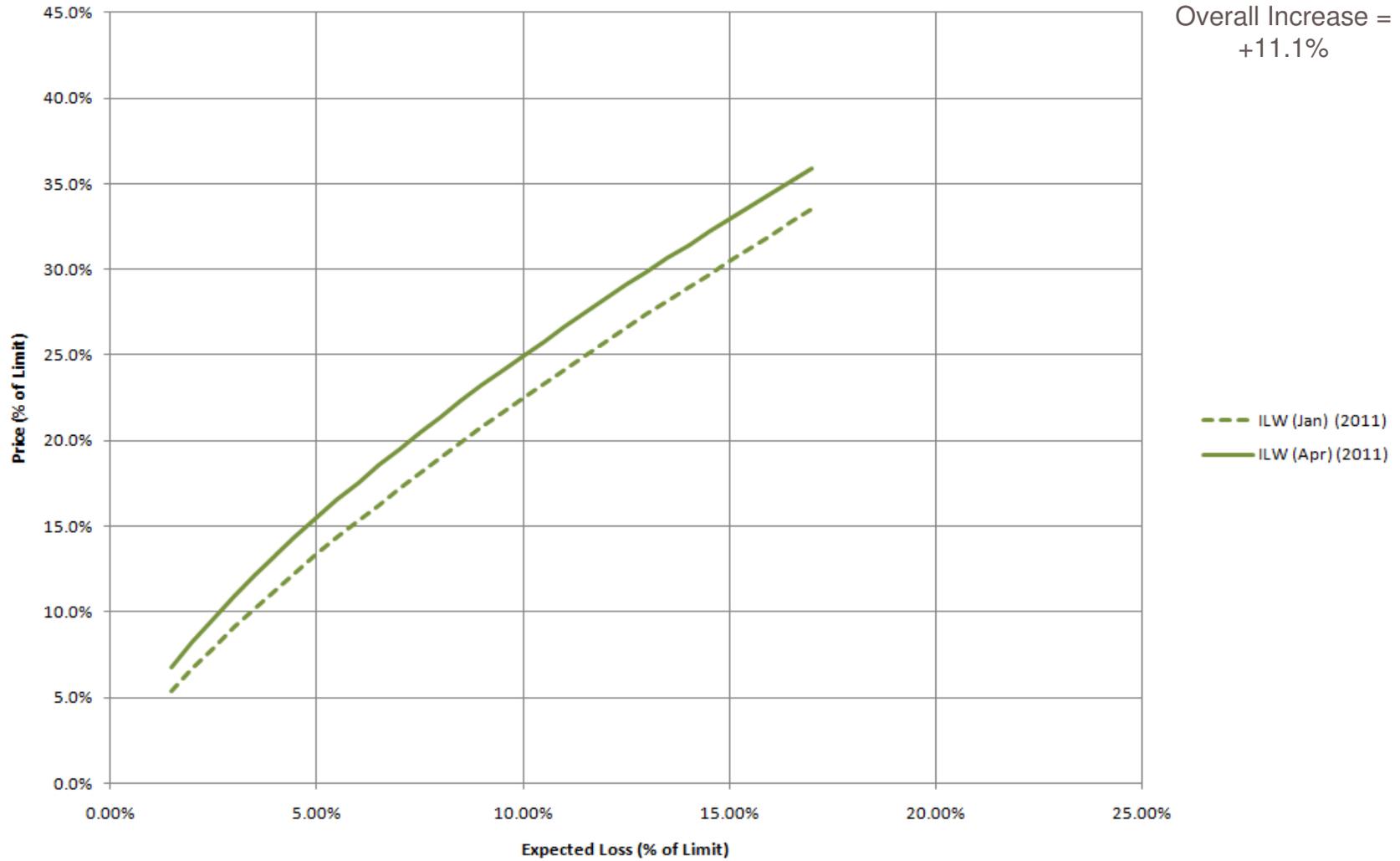
Retro Pricing Curves

1/1 vs 1/4



ILW Pricing Curves

1/1 vs 1/4



Property Loss Event affects on Casualty Lines

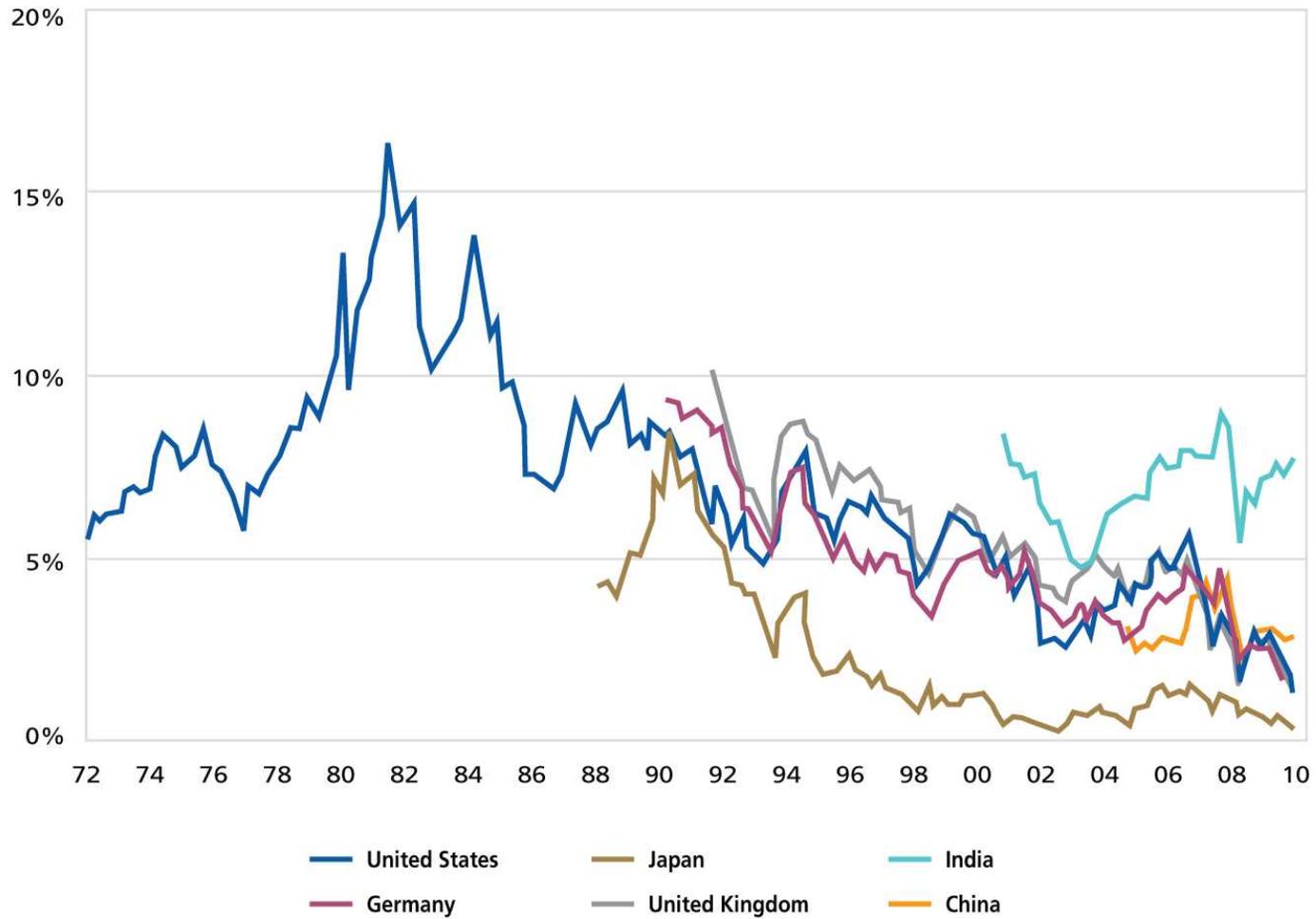
- Casualty rates have not hardened as a result of the recent Property Events
 - Casualty underwriting managers are using recent loss events to stabilize rates and push selectively on certain accounts
 - Energy rates hardening due to loss activity
 - Excess capital has been eroded, but not quite enough
 - If the next event comes soon and is large enough, it could push all lines into a hard market
- Many insurance Carriers assign separate profitability measures and capital to different lines of business
 - Property events and pricing of property is not necessarily tied to casualty lines
- Losses combined with lack of reserve redundancy, inflation risk, and low investment returns should eventually move casualty pricing

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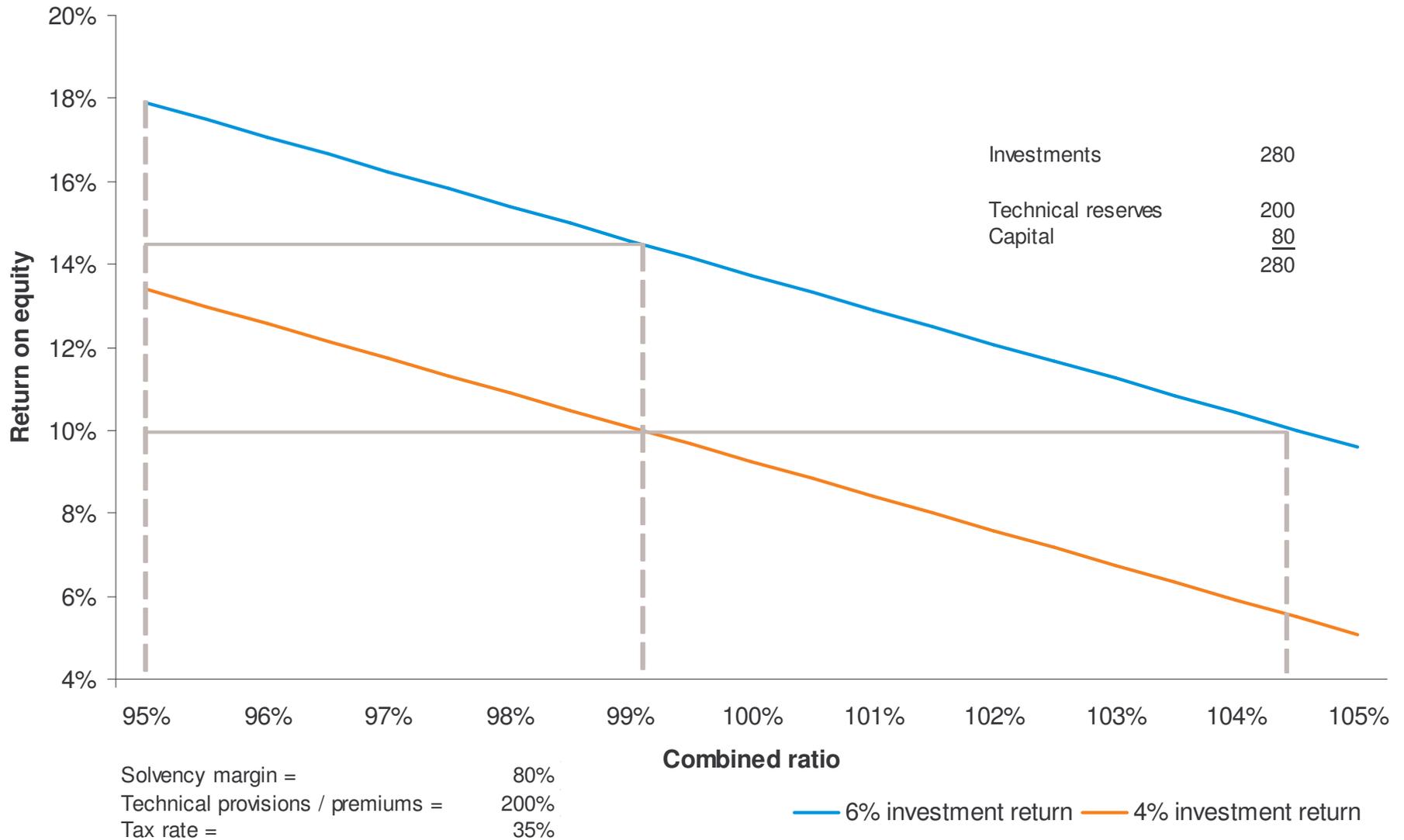


Catalysts for a Turn

Low investment yields

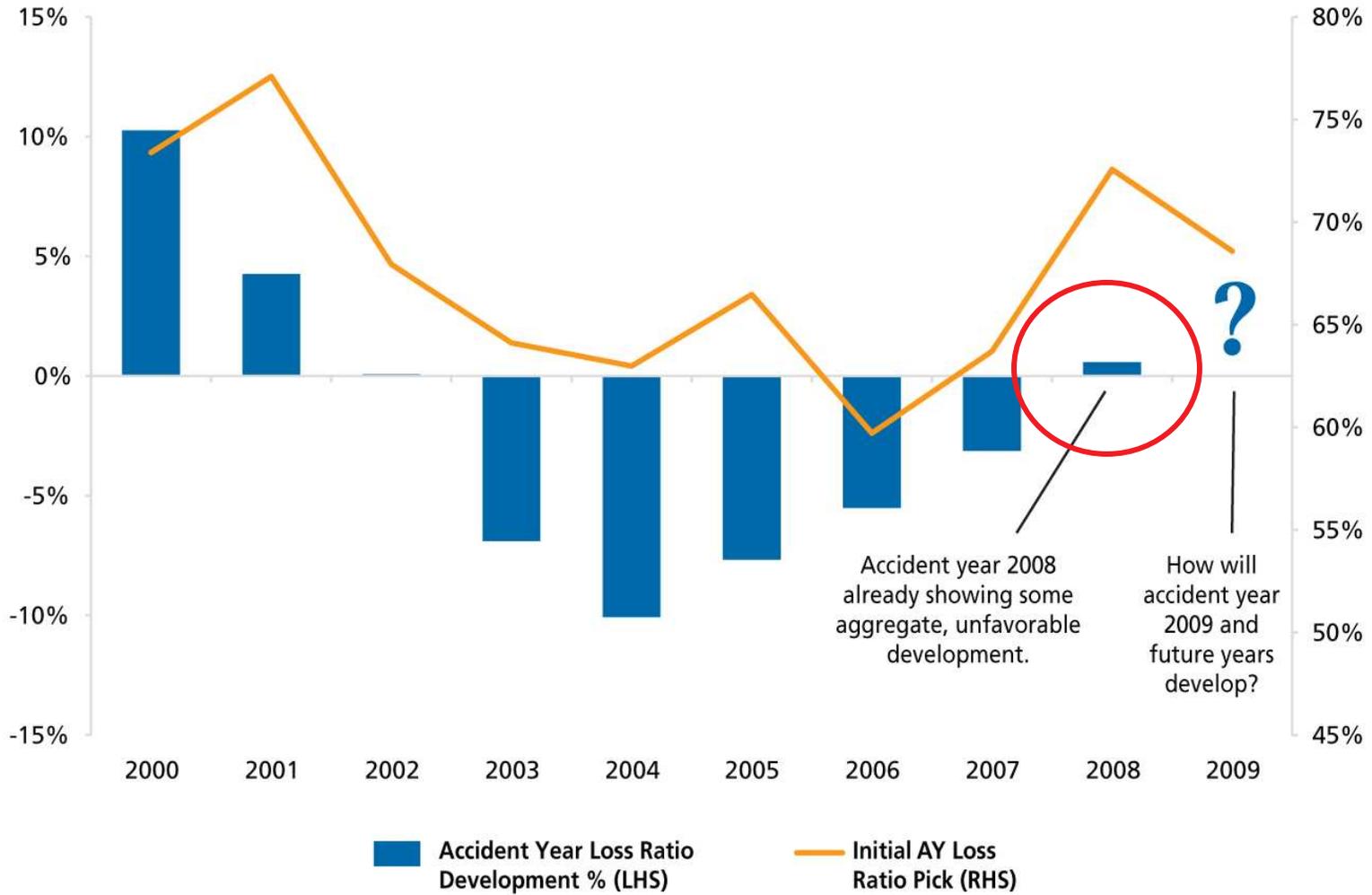


Carrier Earnings are Sensitive to Investments

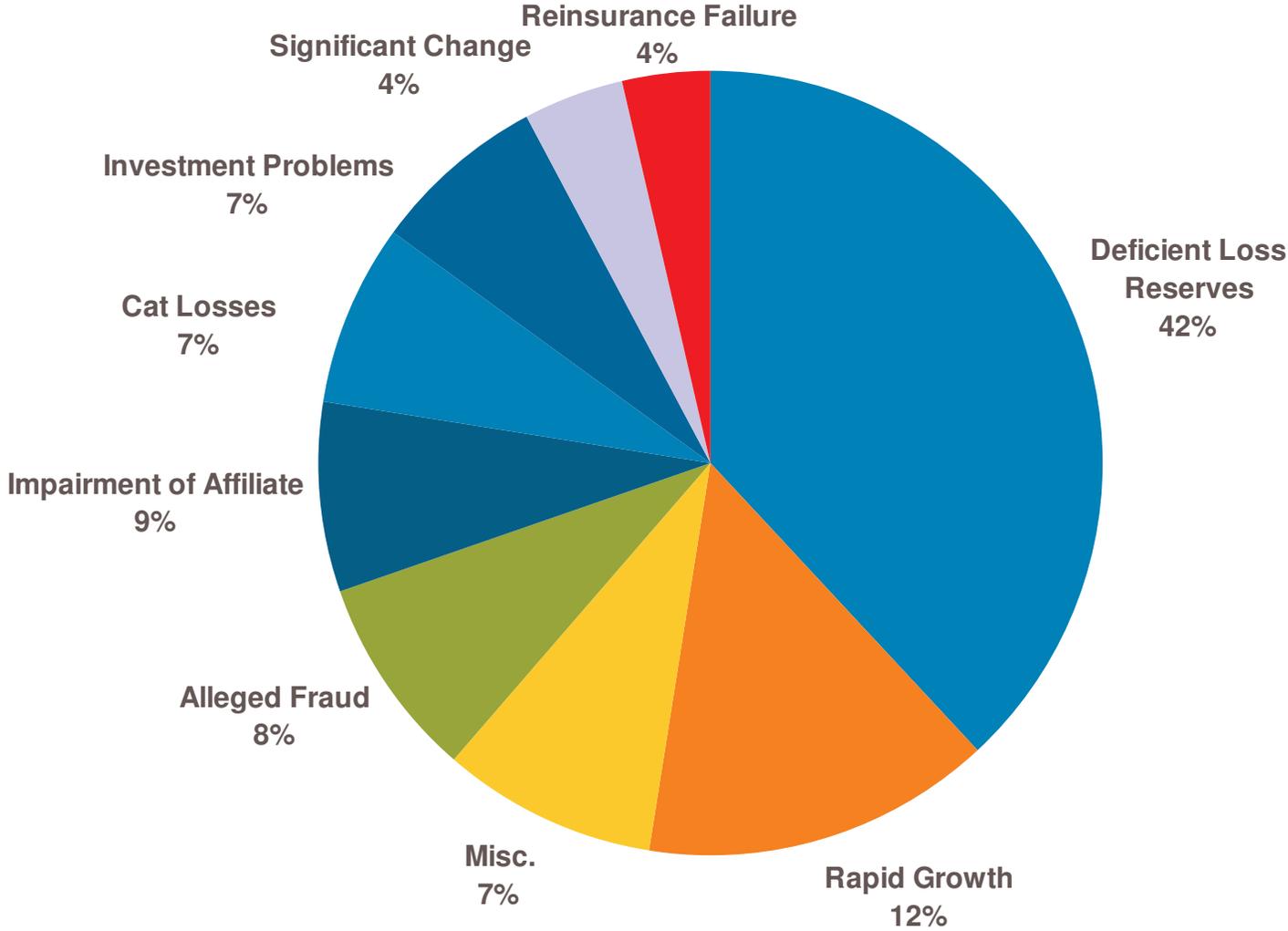


Sustainability of Reserve Releases

US Aggregate P&C Reserves

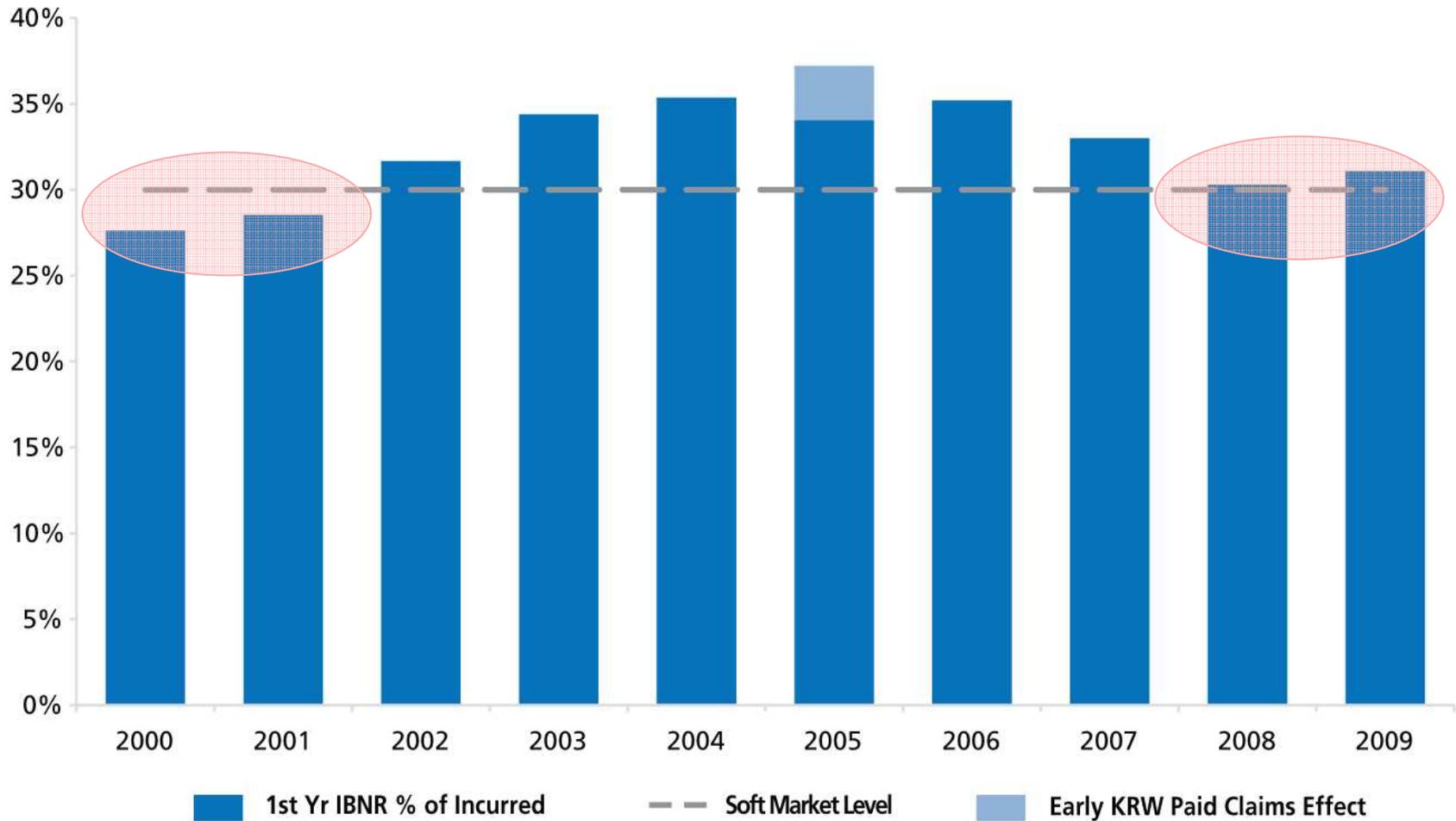


Primary Causes of U.S. P&C Insurer Impairments 1969 - 2009



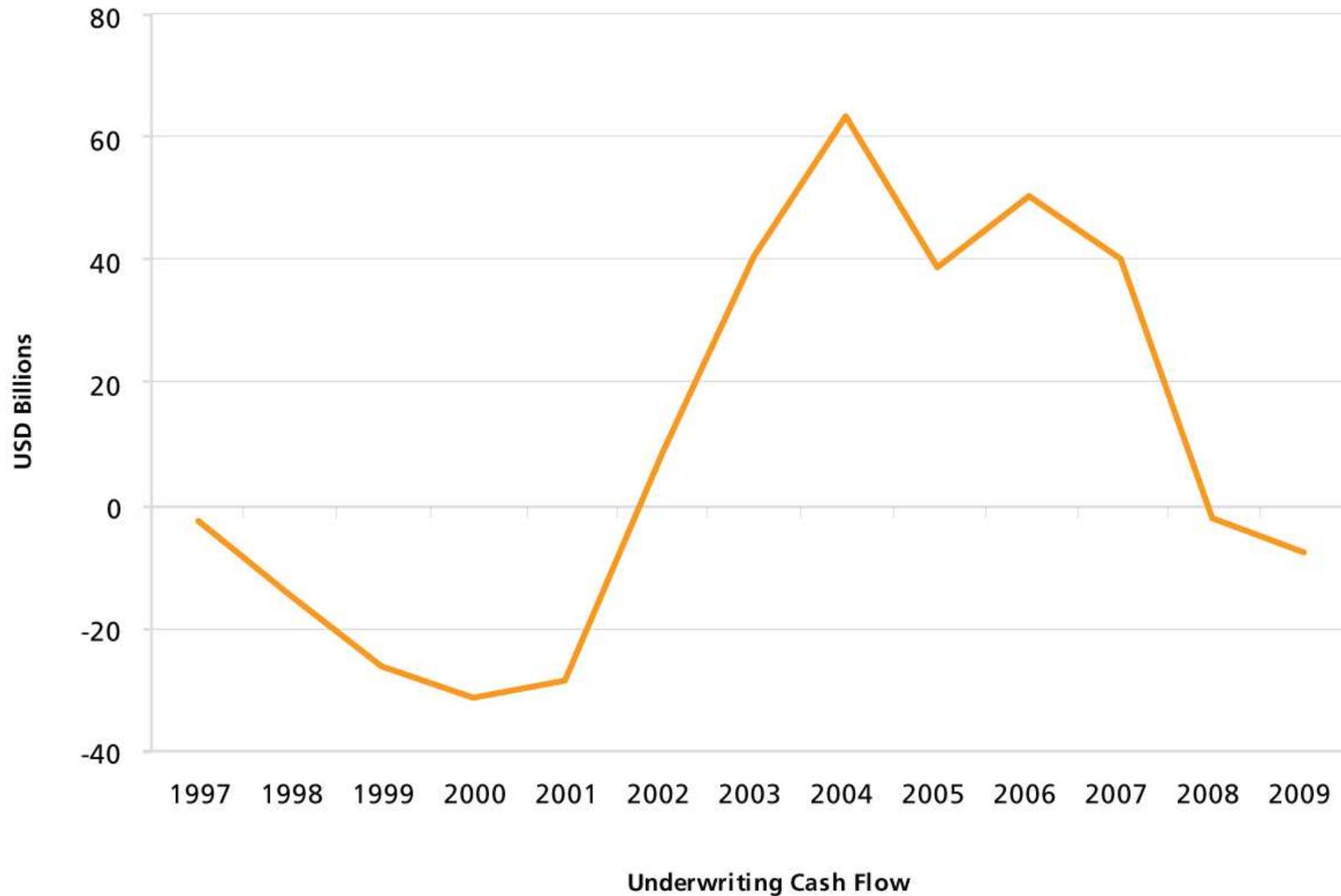
US P&C Aggregate First Year % IBNR

***Weaker pricing and weaker reserving trends – a painful combination**

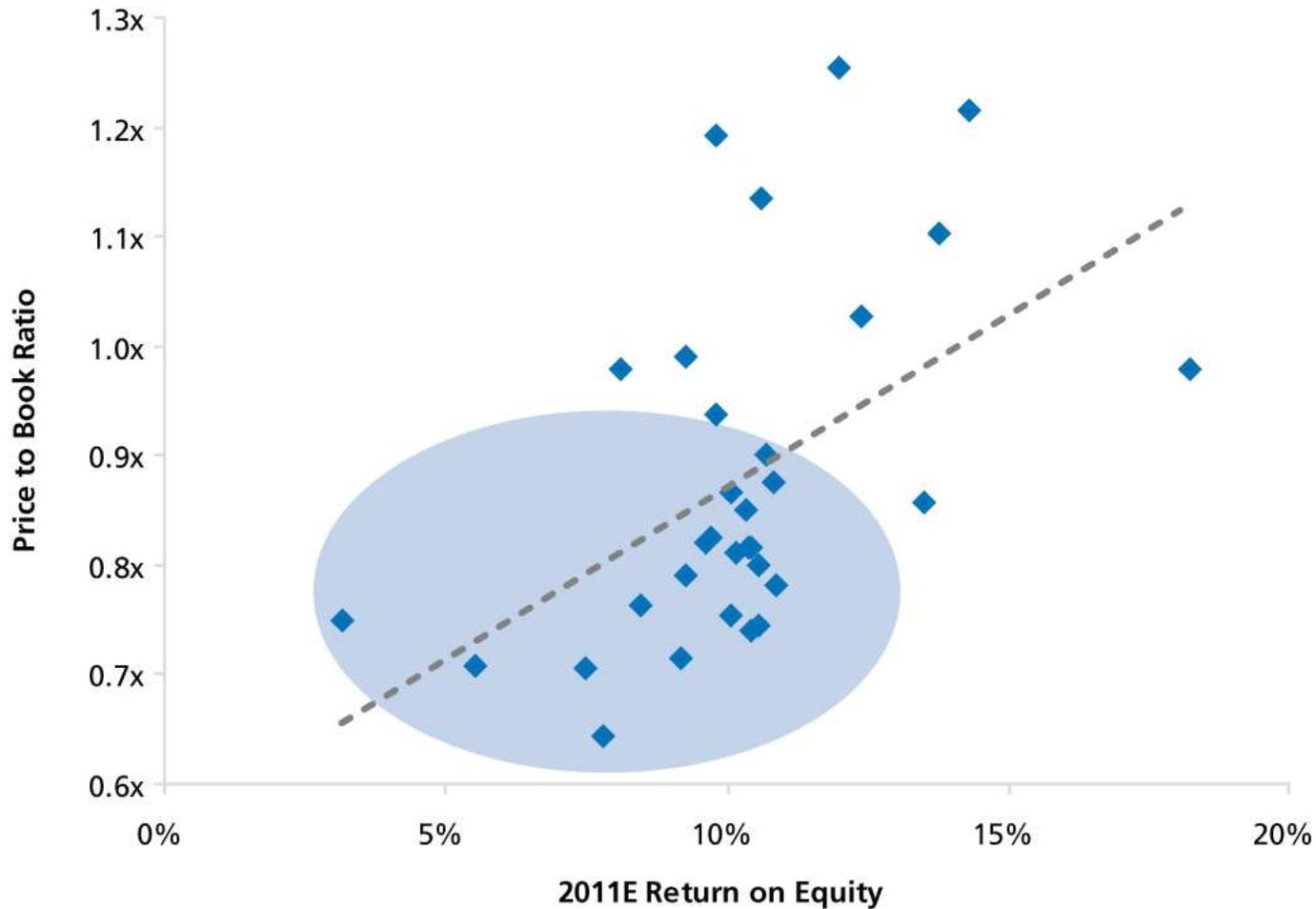


■ Weakening cashflow

US P&C sector aggregate underwriting cashflow



Earnings & RoE



Source: Bloomberg Data, Guy Carpenter

2011 Outlook – Returns under pressure

- **Bottom line pressures**

- Weak investment yields
- Reserve deterioration
- Inflation

+

- **Top line pressures**

- Lower premium volumes:
 - Recession overhang
 - Short-term price cutting
- Regulation – more capital per risk

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- **Pressure on returns:**

- Lower valuations
- Pressure to raise rates
- Consolidation



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