



Risk, Insurance and Interconnectedness in Today's Global Insurance Industry *Australia & US Markets*

May 8, 2013

Robert P. Hartwig, Ph.D., CPCU, President & Economist

Insurance Information Institute ♦ 110 William Street ♦ New York, NY 10038

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- **About the Insurance Information Institute**
- **A Global View of Risk: Australia, U.S. & the World**
 - ◆ **Economic Risk**
 - ◆ **Catastrophe/Environmental Risk**
 - ◆ **Geopolitical Risk**
 - ◆ **Technological Risk**
 - ◆ **Societal Risk**
- **Insurance: Global Risk Management Tool**
- **Insurers Never Ending Quests: Australia, US**
 - ◆ **Growth**
 - ◆ **Performance**
 - ◆ **Distribution/Disintermediation**
- **Q&A**



The Insurance Information Institute

**The Public Face of the Industry:
*Explaining What Insurance Is and How
It Works Since 1960***

What Does the Insurance Information Institute Do and Why?

■ Communications

- ◆ Communicate what the insurance industry does and how insurance works to all stakeholders

■ Information Dissemination

- ◆ Assemble and disseminate vast amounts of industry data and respond to thousands of data requests each year

■ Research & Analysis

- ◆ Produce original research on topics of critical and timely importance

■ Industry Advocacy (non-lobbying)

- ◆ Play a critical informational role in key legislative and public policy debates

Who Are Our Stakeholders/Consumers of Our Products and Services?

- **General Public (Consumers of Insurance)**
 - ◆ **Print, online, video, software (apps), partnerships**
- **Media (Traditional & “New”)**
- **Industry**
- **Regulators, State and Federal Lawmakers & Other Public Policymakers**
- **Investors**
- **Academia**

Television is a Principal Means by Which We Communicate to the Public



Bob Hartwig Discussing the Importance of Terrorism Insurance, Money on FOX



Bob Hartwig on CNN - Insurance Companies Respond After Sandy



Bob Hartwig, Terrorism Coverage and Boston Marathon, FOX



I.I.I. Congressional Testimony on the Future of the Terrorism Risk Insurance Program



TRIA at Ten Years:

The Future of the Terrorism Risk Insurance Program

House Financial Services Subcommittee on Insurance, Housing and Community Opportunity

Testimony of
Robert P. Hartwig, Ph.D., CPCU
President & Economist
Insurance Information Institute
New York, NY

September 11, 2012
Washington, DC



- **Issue:** Act expires 12/31/14. Insurers still generally regard large-scale terror attacks as fundamentally uninsurable
- **I.I.I. Input:** Testified at first hearing on the issue in DC (on 9/11/12) on trends in terrorist activity in the US and abroad, difficulties in underwriting terror risk; Noted that bin Laden may be dead but war on terror is far from over



Impact of Dodd-Frank's Insurance Regulations on Consumers, Job creators, a...

Key Media Metrics

- Conducted 120 television interviews in 2012.
- Received an additional 2,600 mentions in print publications, wire services and prominent blogs.
- Featured in more than 16,000 articles in Internet news publications.
- I.I.I.'s main web site receives about 2 million page views per year
- The I.I.I. is mentioned more than 100,000 times on any given day on the web

I.I.I.'s Web Site Is Extremely Popular



I.I.I. SPOTLIGHT

2012 - Year End Results

MAY 01, 2013 - Profitability in the property/casualty insurance industry rebounded sharply in 2012, despite \$35 billion in insured losses from catastrophes, the majority from superstorm Sandy. The improvement came from a growth in premiums and reduction in both catastrophe and noncatastrophe related loss and loss adjustment expenses. For more, see Dr. Robert Hartwig's full commentary.

[Full Story](#)

PRESENTATIONS

Sandy Recovery – Six Months Later
APRIL 24, 2013

IDENTITY THEFT AND CYBER SECURITY

- **Cyber Risks - The Growing Threat**
- **Identity Theft Insurance**
- **Facts & Statistics: Identity Theft and Cyber Security**

BOSTON BOMBINGS

- **White Paper: Terrorism Risk - A Continuing Threat**
- **Backgrounder: Terrorism Risk and Insurance**
- **Facts and Statistics: Man-made Disasters**

FACTS+STATISTICS



Motorcycle Crashes

Motorcyclists were about 30 times more likely than passenger car occupants to die in a crash (per vehicle mile traveled) in 2010, according to NHTSA.

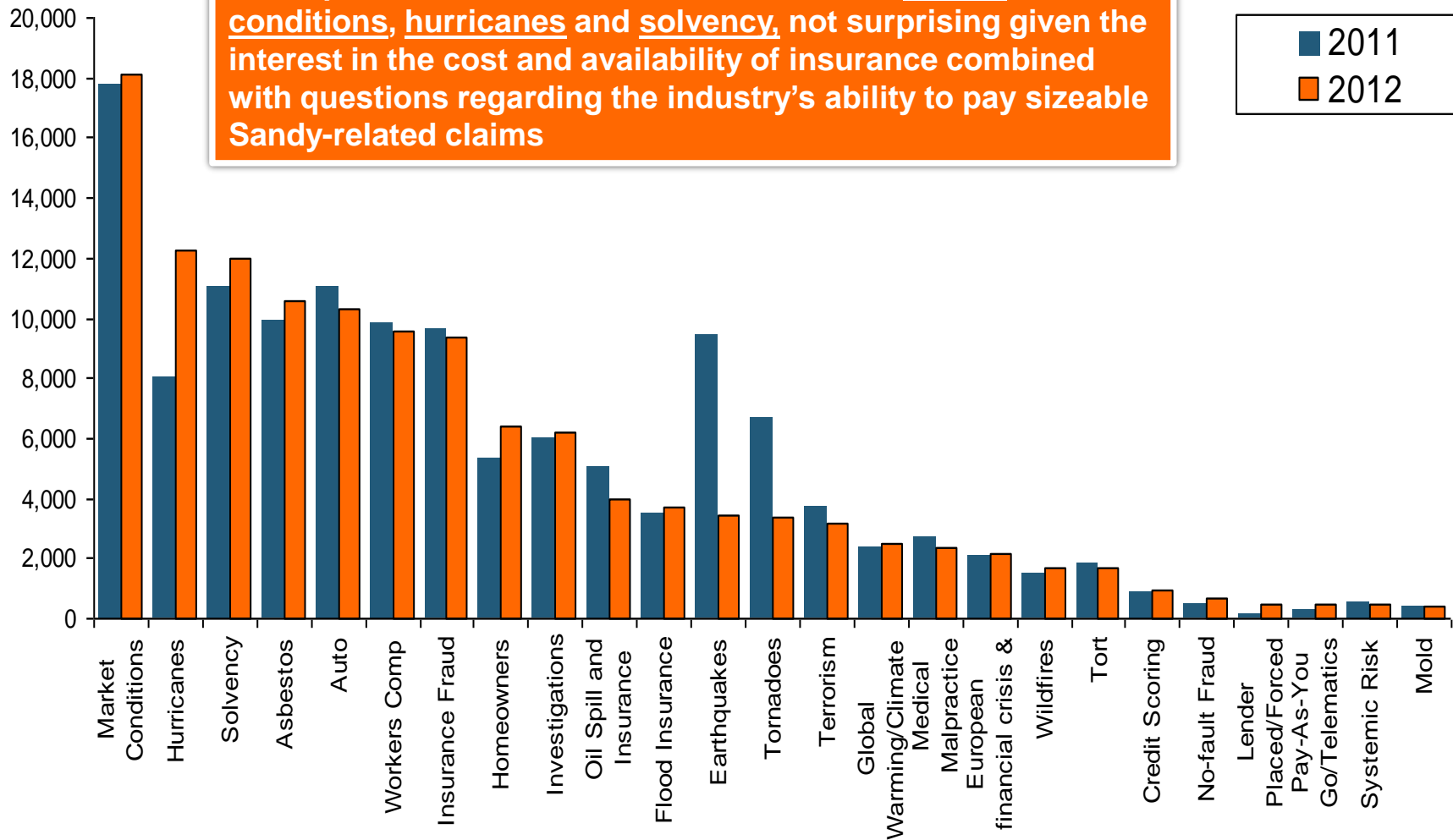
I.I.I. VIDEO



Prom Season

Year in Review - Top Issues, P/C, 2011 vs 2012 (1).I.I. Media Index, P/C, 2011 vs 2012 (1)

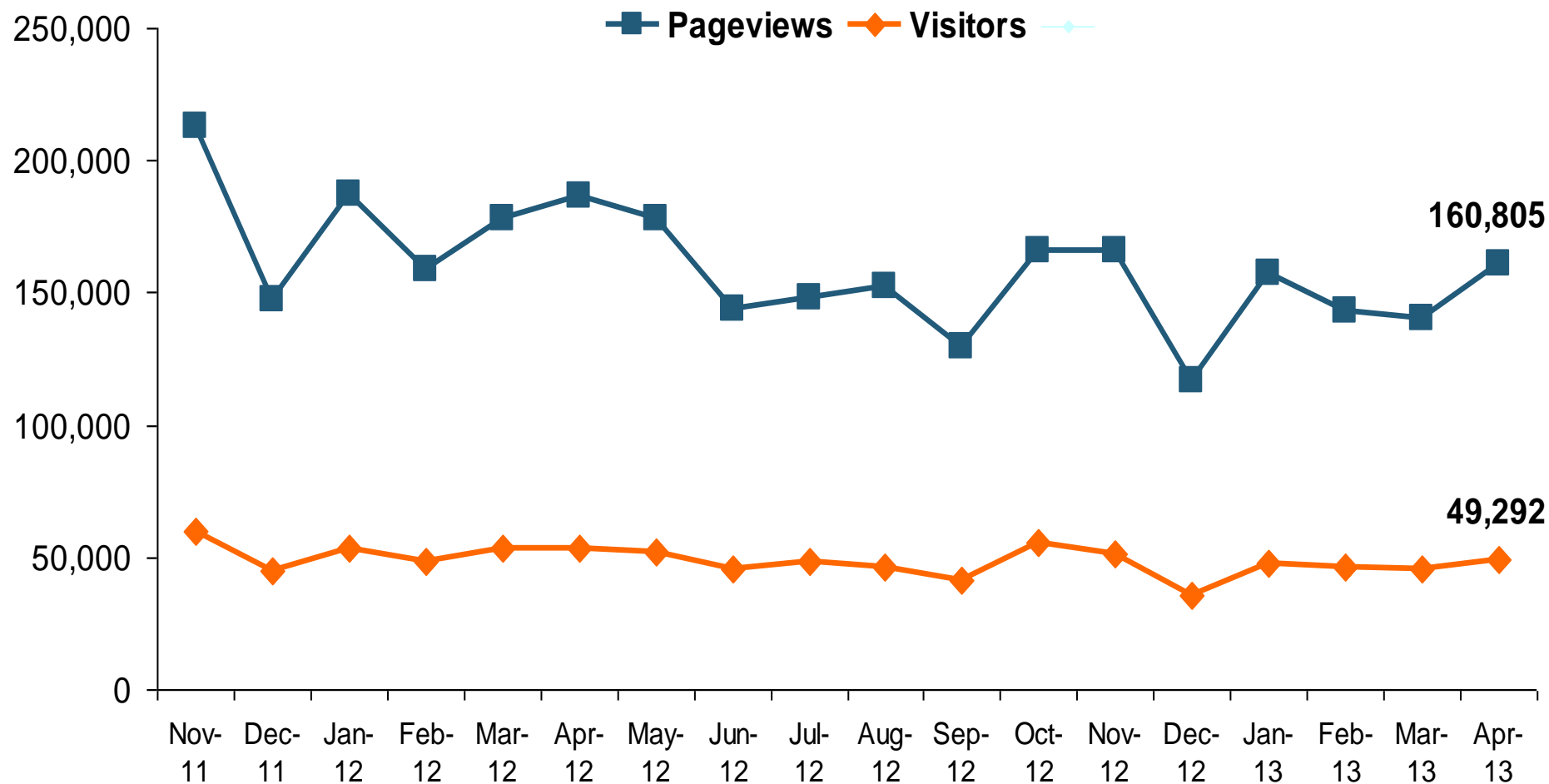
The top three issues in the news media were market conditions, hurricanes and solvency, not surprising given the interest in the cost and availability of insurance combined with questions regarding the industry's ability to pay sizeable Sandy-related claims



(1) Based on a search of Lexis/Nexis.

Total Pageviews and Visitors to iii.org

April 2013



I.I.I. Mobile Apps

We conceived our mobile outreach as a branded suite of apps to provide guidance to consumers in making decisions about their insurance and preparing for a disaster.



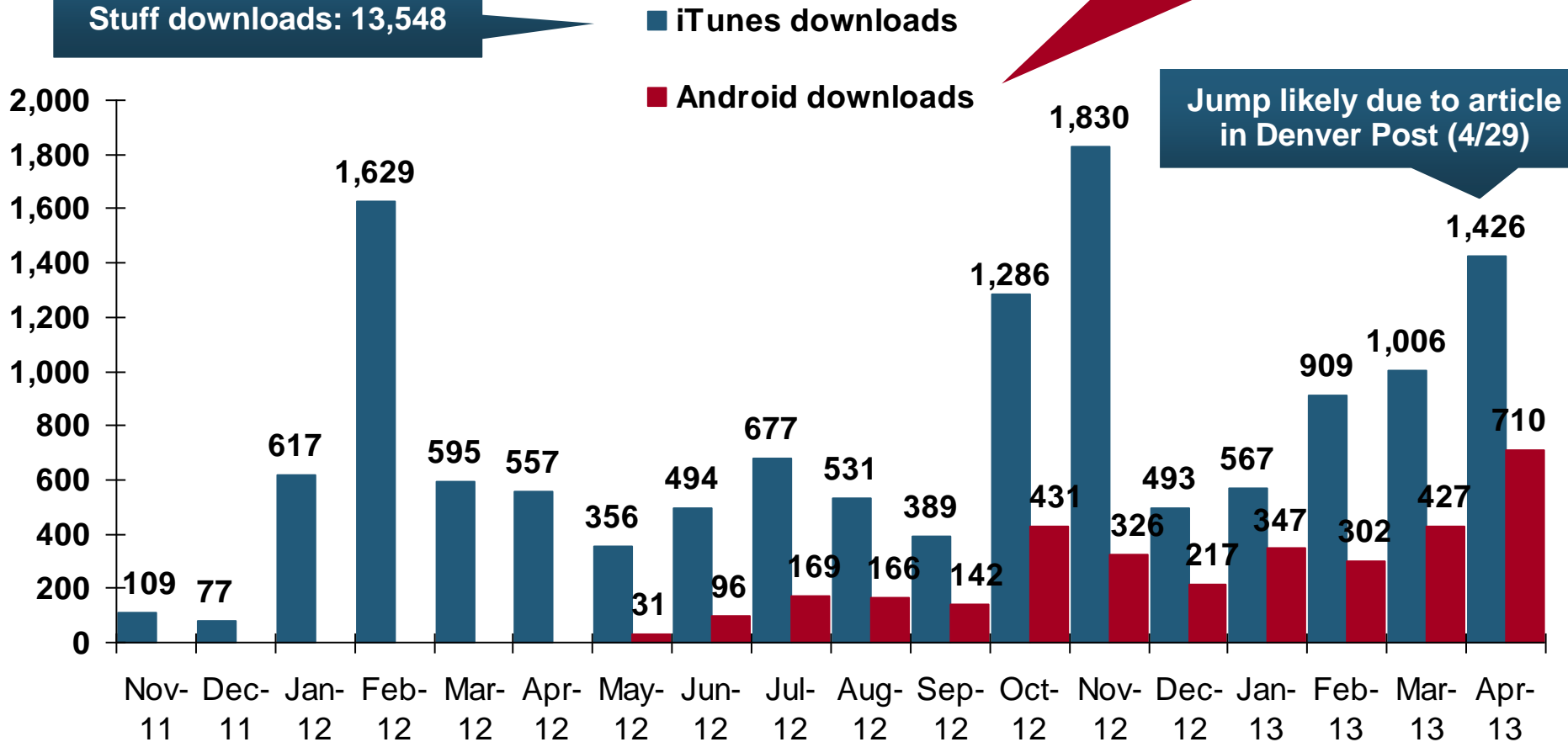
Know Your Stuff Home Inventory

April 2013

Number of Downloads

Overall iTunes Know Your Stuff downloads: 13,548

Overall Android Know Your Stuff downloads: 3,364



Social Media Stats



1,000+ likes



10,000 followers



600,000+ video views



128 users have us in their circle

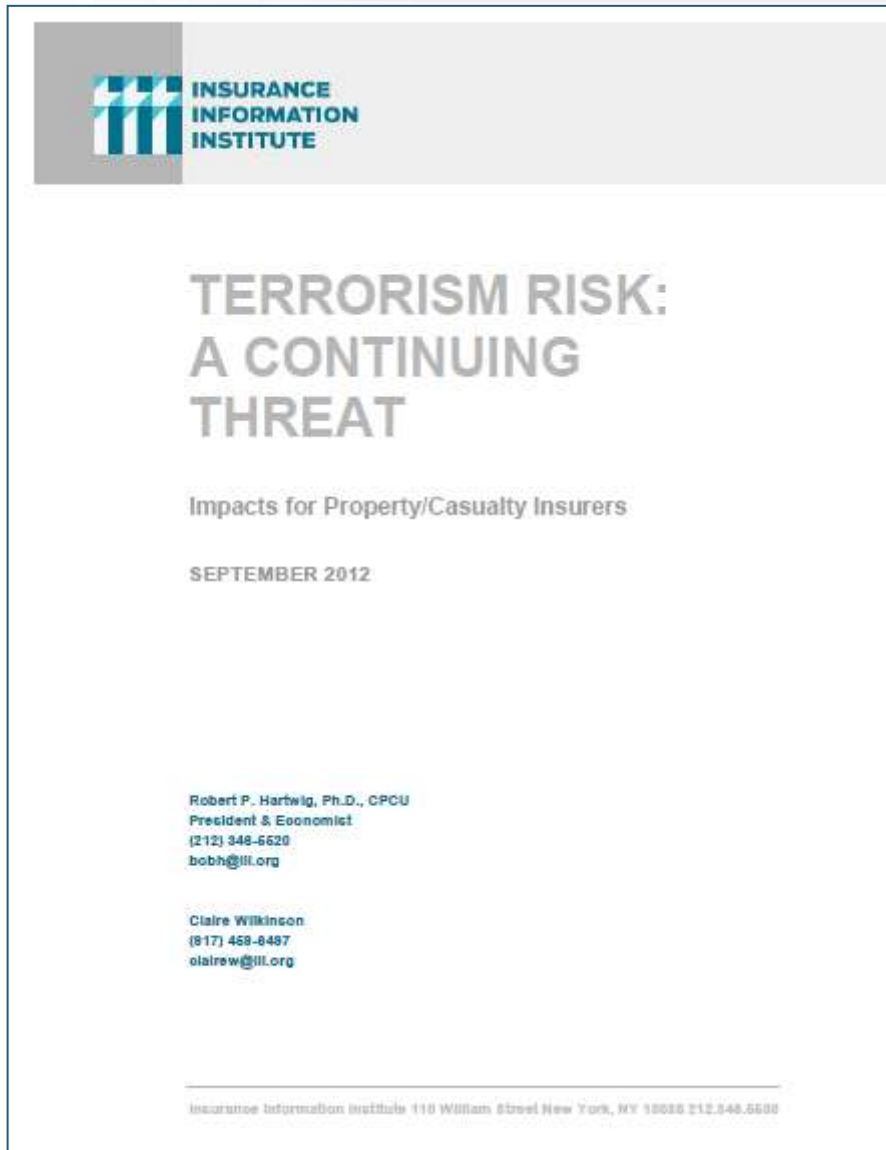


~250,000 visitors



**THE INSTITUTE'S EXPERTISE IS WIDE
RANGING AND ALWAYS EVOLVING**

**I.I.I. Is Involved in a Range of Important
Industry Issues Requiring a Wide Range of
Economic and Actuarial Expertise**



- I.I.I. periodic report provides readers, including those with little or no understanding of the issue, with a detailed understanding of the Terrorism Risk Insurance Program in the US.
- The report provides an update on recent terrorist threats in the US and internationally.
- **Recently expanded to include a discuss of cyber terrorism risk**
- Includes a FAQ section for issues of key interest
- I.I.I. will update and expand this report in the run-up to TRIPRA expiration at year-end 2014.
- First update scheduled for Q2 2013.

I.I.I.'s Global Perspective: Strong Demand for International Economic Expertise in an Age of Global Instability

I.I.I.'s membership is global, driving our global outlook...



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The Implications of the Maturing of China

Robert P. Hartwig, Ph.D., CPCU, President & Economist
Insurance Information Institute
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Is the Energy Sector Implicated in the Global Economic Crisis?

Robert P. Hartwig, Ph.D., CPCU, President & Economist
Insurance Information Institute
Tel: 212.346.5520



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The Global Economic Crisis and Marine Insurance: Risk and Reward

San Francisco Board of Marine Insurance
San Francisco, CA
Download at www.iii.org/presentations

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International Economic Outlook & the Middle East Region's Role in the World Economy

Insurance & Reinsurance Market Implications

Multaqa Qatar 2012
Doha, Qatar
13 March 2012

Download at www.iii.org/presentations

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...All insurers are impacted by the global economy

I.I.I. Expertise on Key Issues: Energy

Energy Insurance Trends & Challenges

Insurance Information Institute
October 2011

Cumulative Projected Investment in Global Energy Infrastructure, 2011-2035 (\$ Trill.)

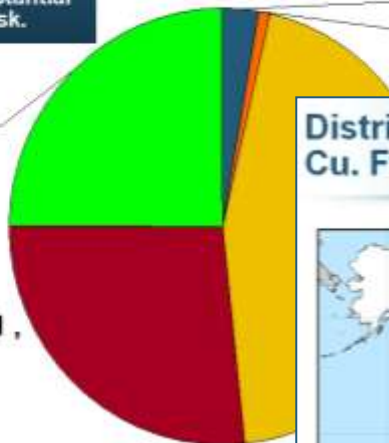
Projected energy infrastructure investment through 2035 total \$38 trillion; Implies substantial incurrence of risk.

Natural Gas, \$9.5, 25%

Oil, \$10.1, 27%

Coal, \$1.1, 3%

Biofuels, \$1.1, 3%

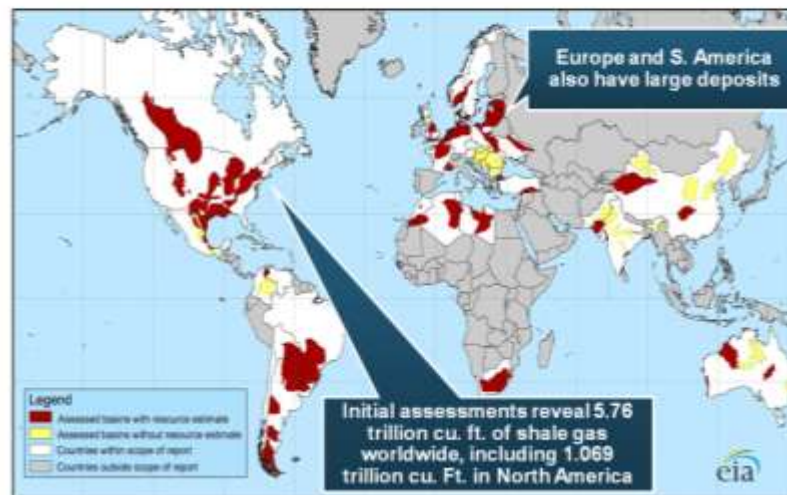


Energy sector in the U.S. is expanding rapidly, especially with “fracking” activity.

Great deal of media interest.

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Distribution of Major Shale Deposits: 5.76 Tr. Cu. Ft. in 48 Shale Basins in 32 Countries



...Sector will grow globally for decades

I.I.I. Publications: Just a Few Examples



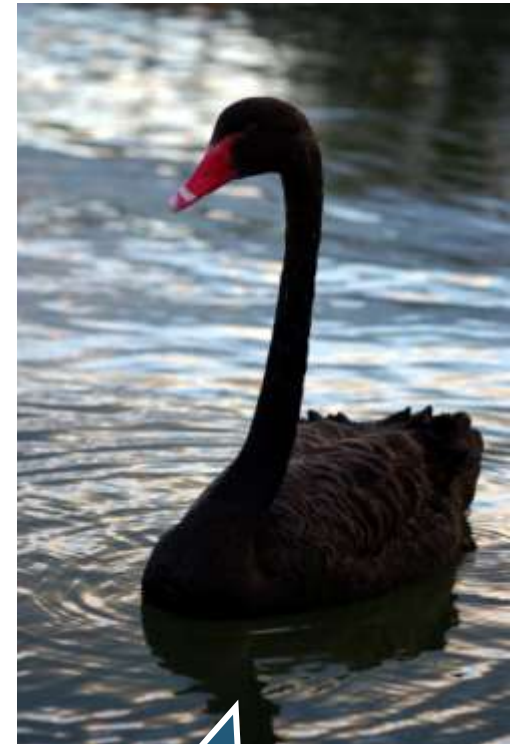
What in the World Is Going On: Australia, U.S. and Everywhere Else?

**Is the World Becoming a
Riskier, More Uncertain Place?**

***All Major Categories of Risk Influence
Economies and Insurance Industry
on a Global Scale***

Uncertainty, Risk and Fear Abound

- Never Ending Echoes of the Financial Crisis
- European Sovereign Debt & Eurozone Crises
- The “Fiscal Cliff”: US Debt and Budget Crisis
- Unintended Consequences of (Over)Regulation
- “Hard Landing” in China
- Housing Crisis
- Political Gridlock: US, Europe
- Political Upheaval in the Middle East
- Resurgent Terrorism Risk
- Diffusion of Weapons of Mass Destruction
- Cyber Attacks
- Record Natural Disaster Losses
- Climate Change
- Environmental Degradation
- Income Inequality
- *Insomnia???*



Are “Black Swans”
everywhere or
does it just seem
that way?

5 Major Categories for Global Risks, Uncertainties and Fears

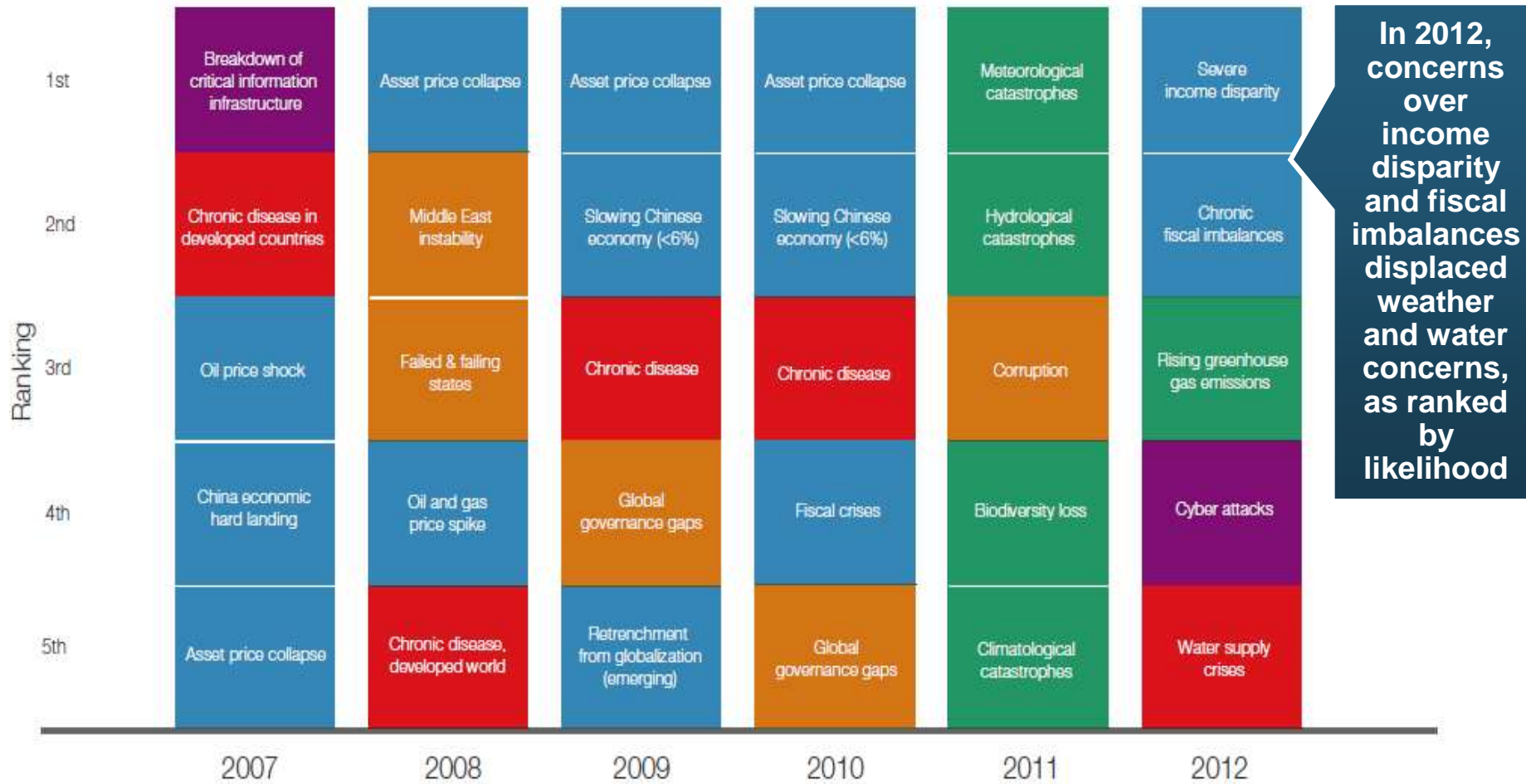
1. Economic Risks
2. Geopolitical Risks
3. Environmental Risks
4. Technological Risks
5. Societal Risks



While risks can be broadly categorized, none are mutually exclusive

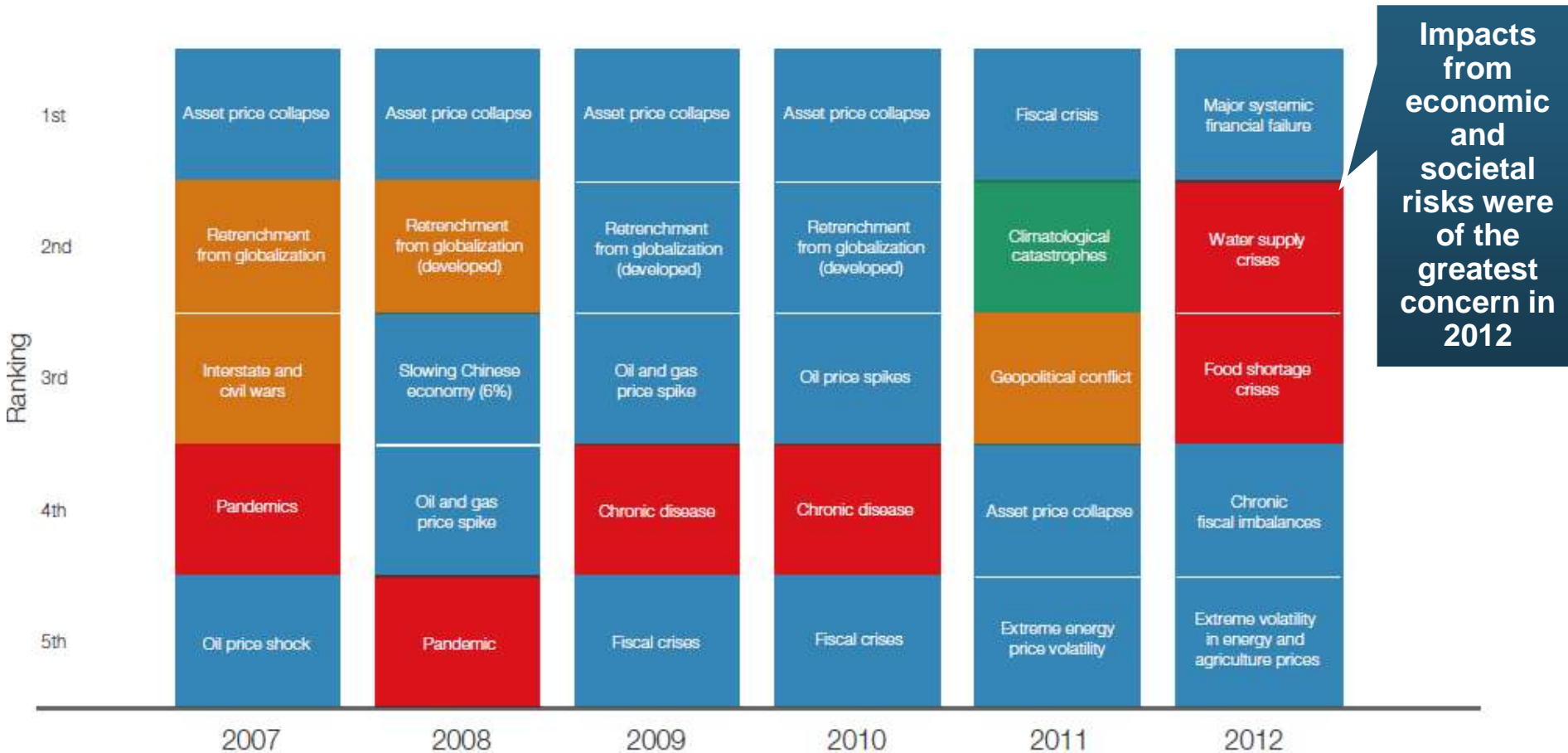


Top 5 Global Risks in Terms of *Likelihood*, 2007—2012: Insurance Can Help With Most



Concerns Shift Considerably Over Short Spans of Time. Shift in 2012 to Economic Risks and Away from Environmental Risks

Top 5 Global Risks in Terms of *Impact*, 2007—2012: Insurance Can Help With Most



Impacts from economic and societal risks were of the greatest concern in 2012

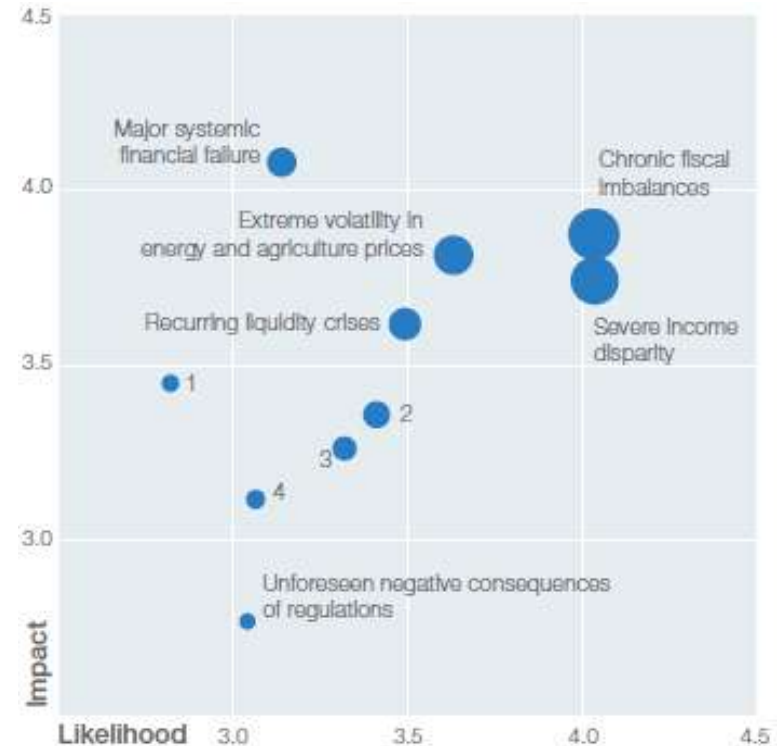
Concerns Over the Impacts of Economics Risks Remained High in 2012, but Societal Risks Displaced Environmental Risks

Economic Risk: Foremost on the Minds in “Advanced” Economies

■ Economic Risks

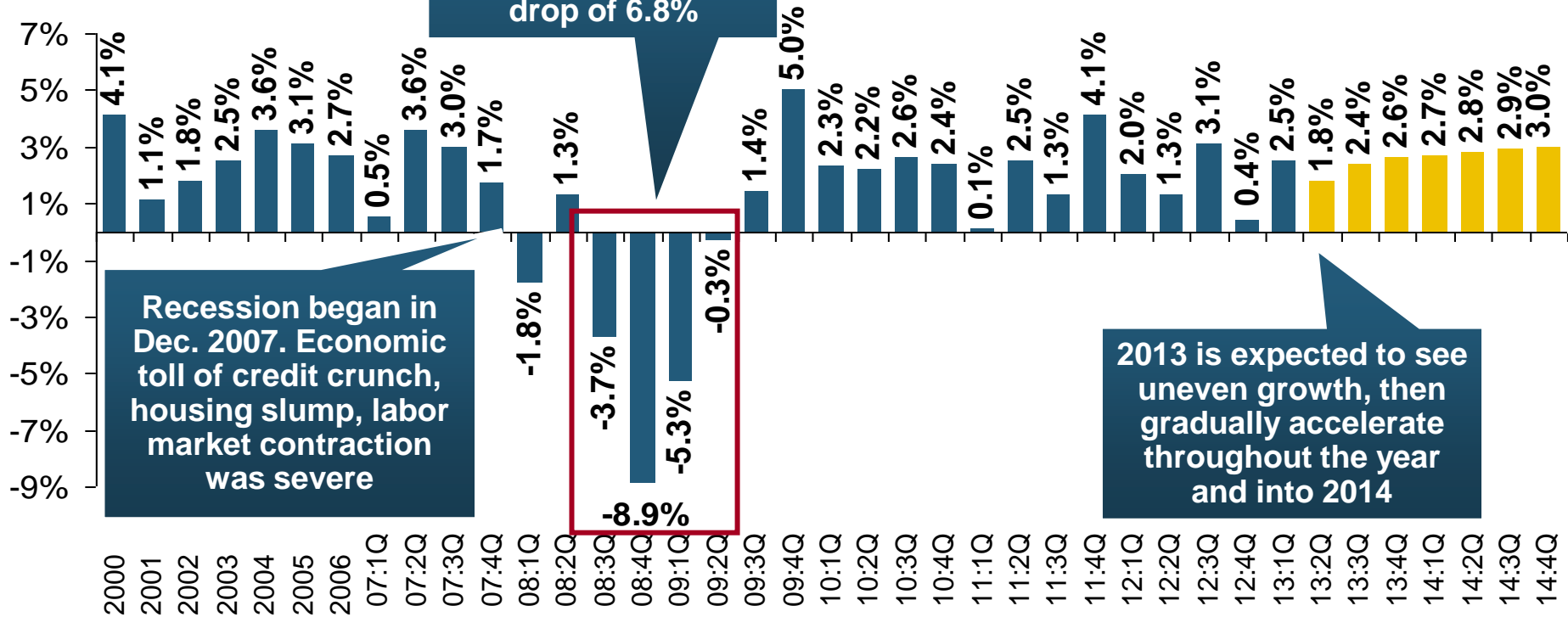
- ◆ Chronic fiscal imbalances
- ◆ Severe income disparity
- ◆ Extreme volatility in energy and food prices
- ◆ Recurring liquidity crises
- ◆ Major systemic failure
- ◆ Adverse unintended consequences of regulation
- ◆ Unmanageable in/deflation
- ◆ Chronic labor mkt. imbalances
- ◆ Hard landing of emerging economy

Economic Risk Landscape



US Real GDP Growth*

Real GDP Growth (%)



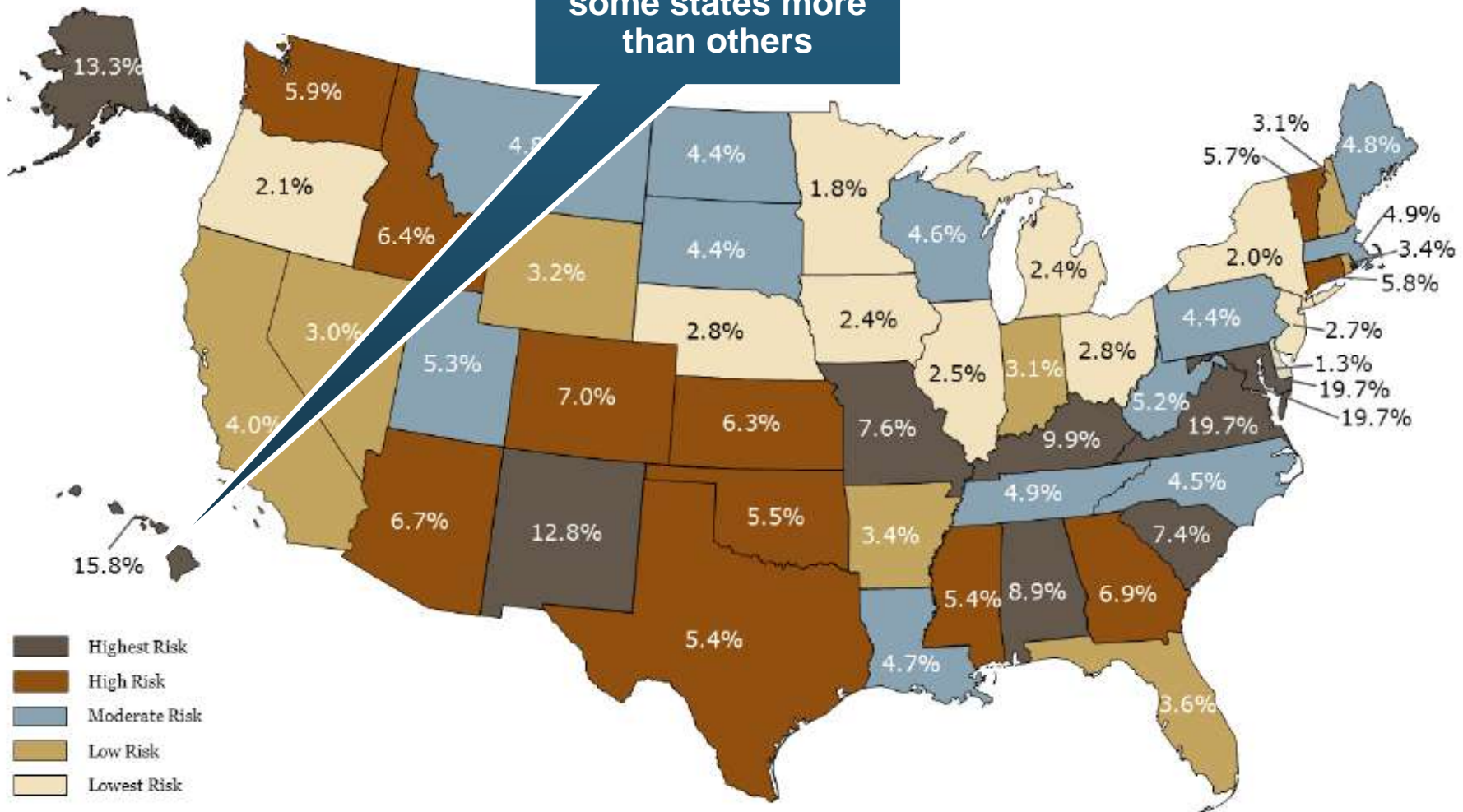
Demand for Insurance Continues To Be Impacted by Sluggish Economic Conditions, but the Benefits of Even Slow Growth Will Compound and Gradually Benefit the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 4/13; Insurance Information Institute.

Federal Spending as a Share of State GDP: Vulnerability to Sequestration Varies

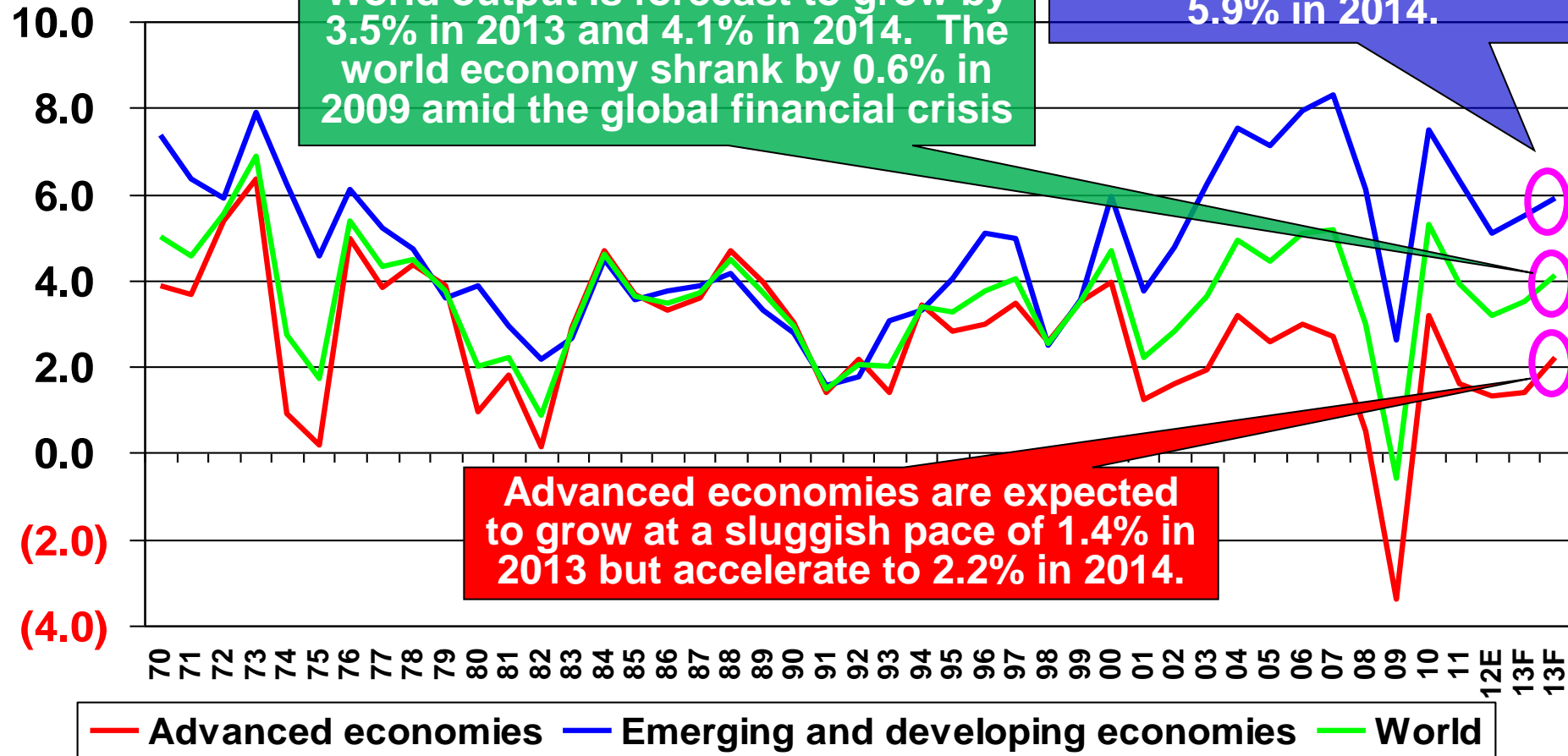
Austerity will hurt some states more than others



Sources: Pew Center on the States (2012) *Impact of the Fiscal Cliff on the States*; Wells Fargo; Insurance Information Institute.

GDP Growth: Advanced & Emerging Economies vs. World, 1970-2014F

GDP Growth (%)

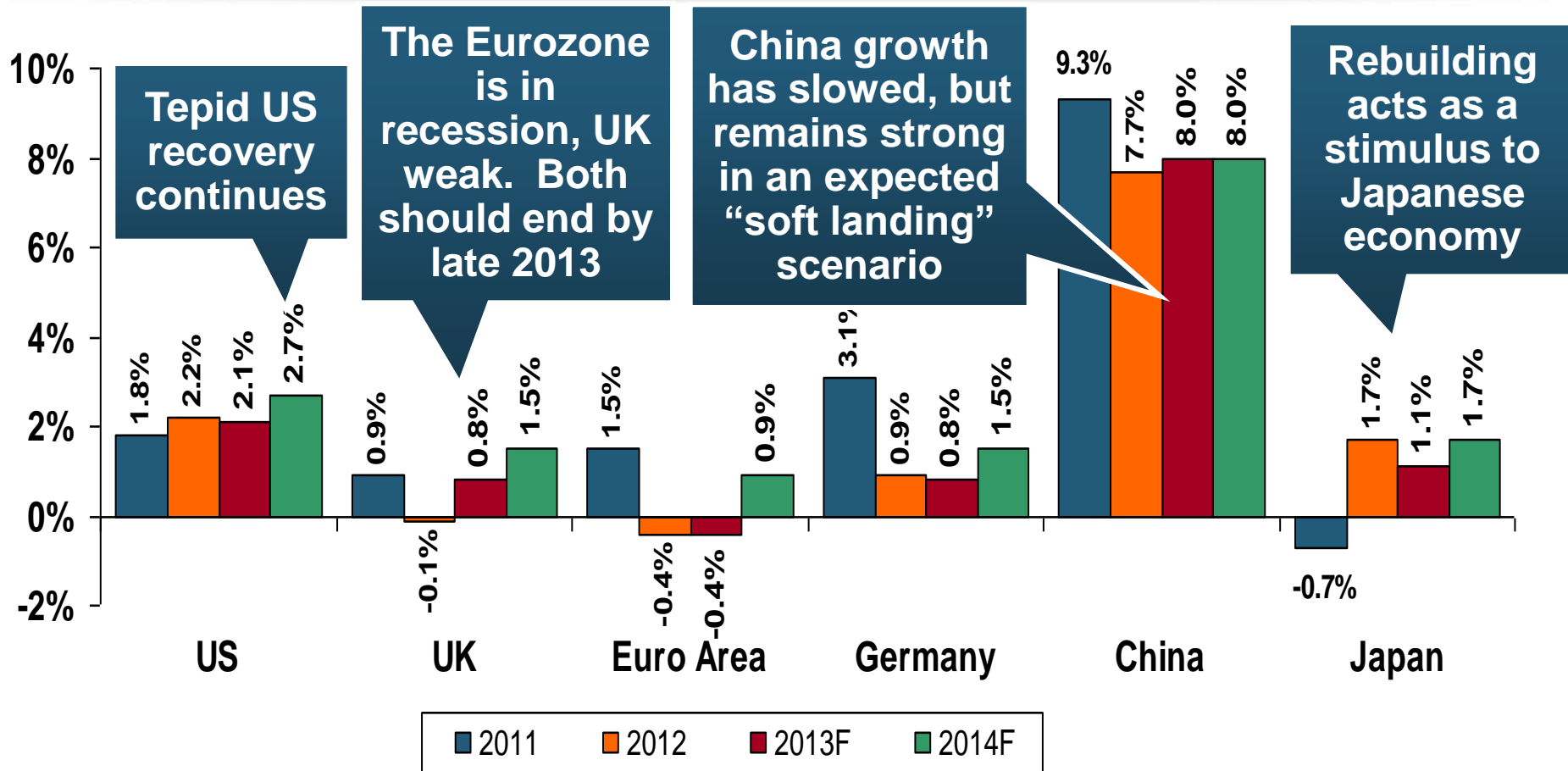


World output is forecast to grow by 3.5% in 2013 and 4.1% in 2014. The world economy shrank by 0.6% in 2009 amid the global financial crisis

Emerging economies (led by China) are expected to grow by 5.5% in 2013 and 5.9% in 2014.

Advanced economies are expected to grow at a sluggish pace of 1.4% in 2013 but accelerate to 2.2% in 2014.

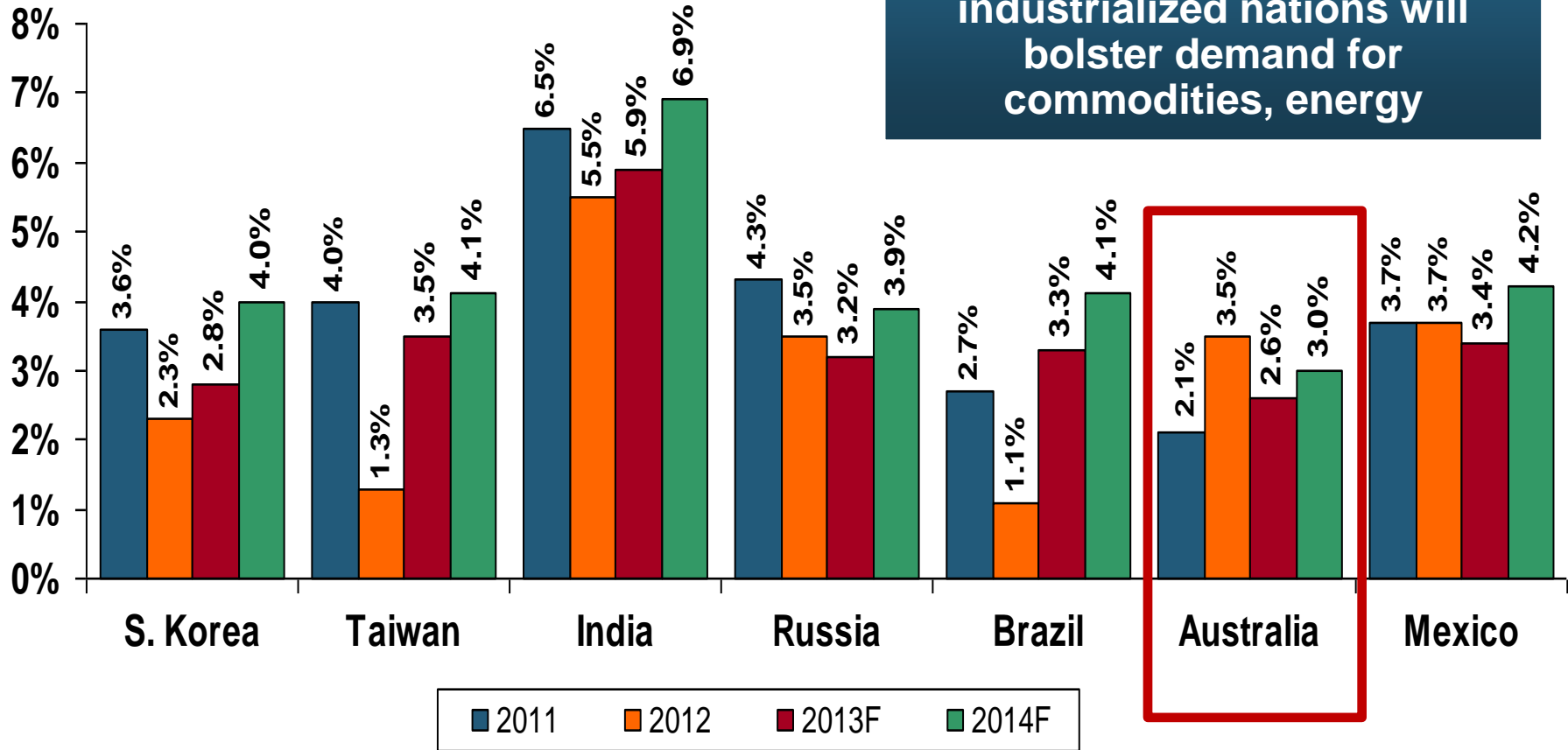
Real GDP Growth Forecasts: Major Economies: 2011 – 2014F



Growth Prospects Vary Widely by Region: Growth Returning in the US, Mild Recession in the Eurozone, A “Soft Landing” in China, Sluggish Growth in Japan and Modest Growth in America’s Largest Trading Partners—Canada and Mexico.

Real GDP Growth Forecasts: Selected Economies: 2011 – 2014F

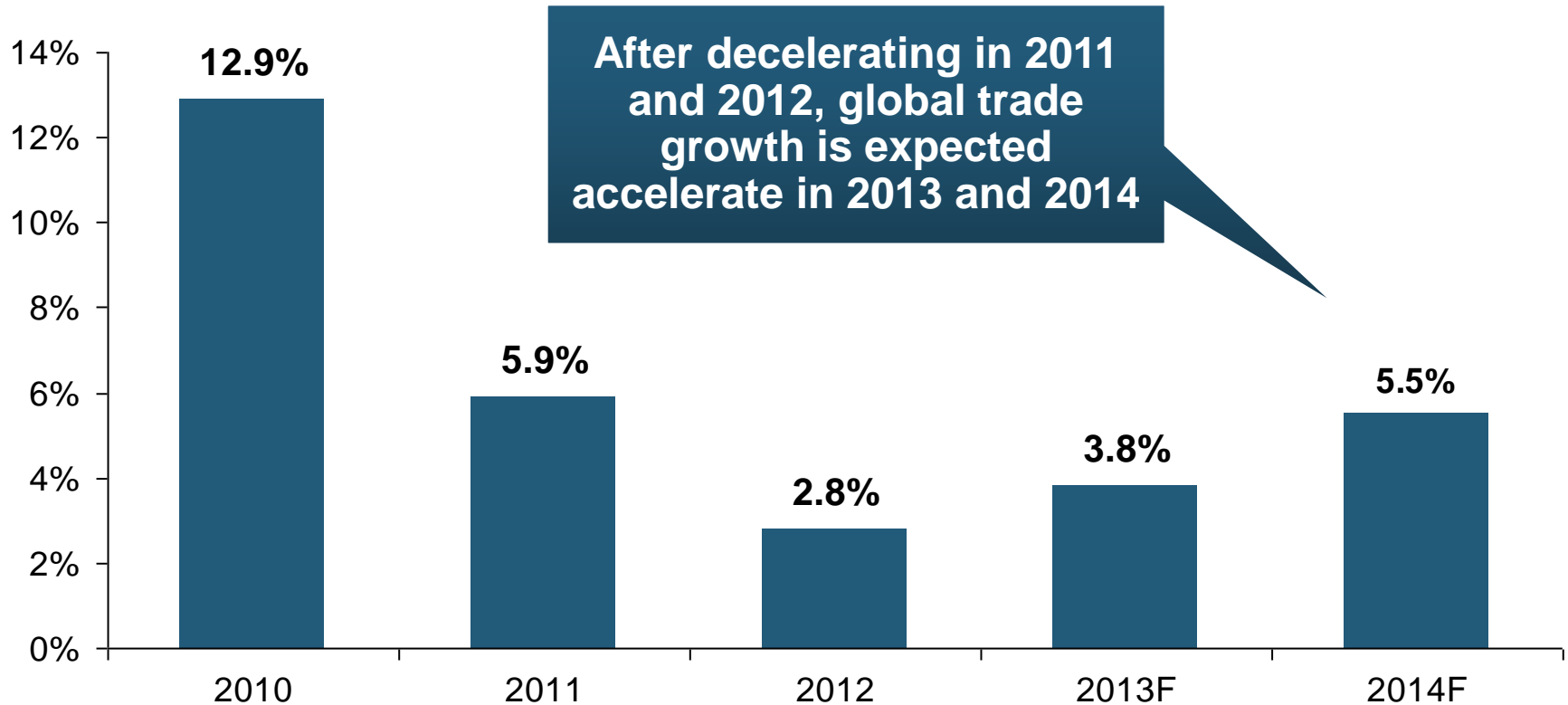
Strong economies in smaller industrialized nations will bolster demand for commodities, energy



Growth Outside the US, Europe and Japan is Relatively Strong

World Trade Volume: 2010—2014F

Percentage Change (%)



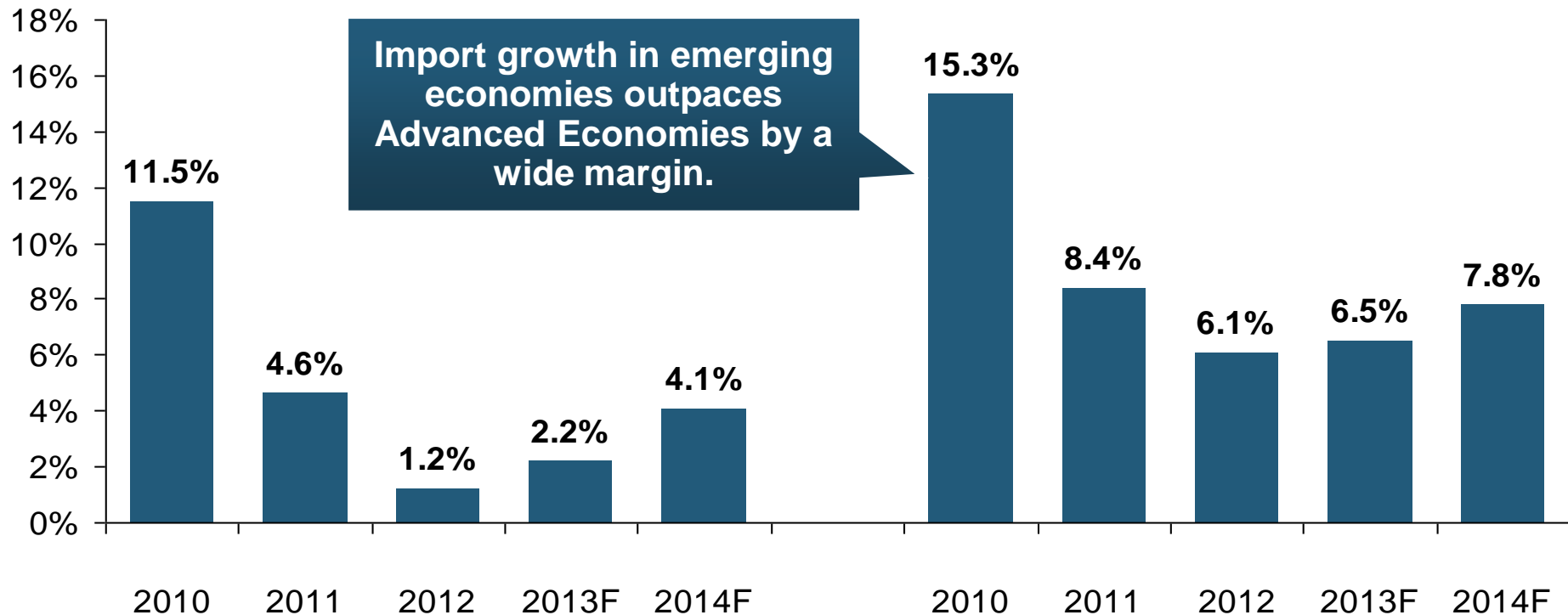
Growth in World Trade Volume (Imports + Exports) Has Slowed But Continues to Grow

World Trade Volume: IMPORTS 2010 – 2014F

Growth (%)

Advanced Economies

Emerging Economies

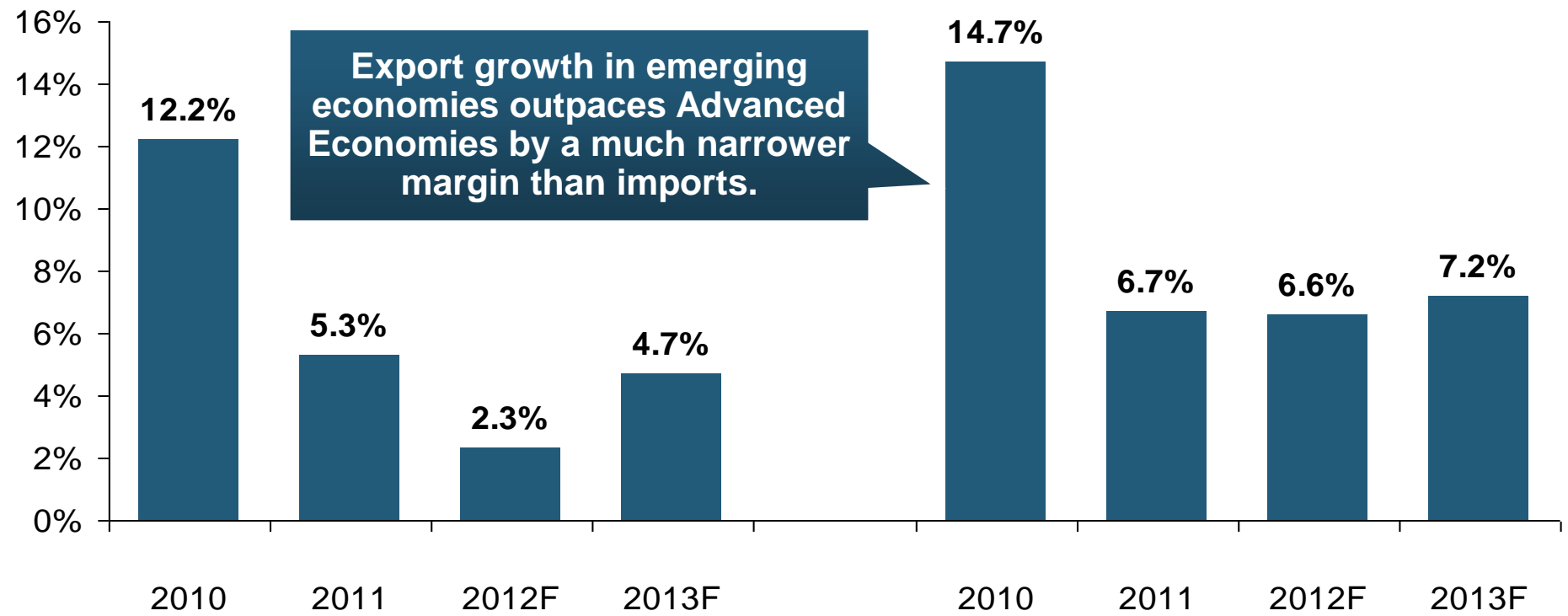


World Trade Volume: EXPORTS 2010 – 2013F

Growth (%)

Advanced Economies

Emerging Economies



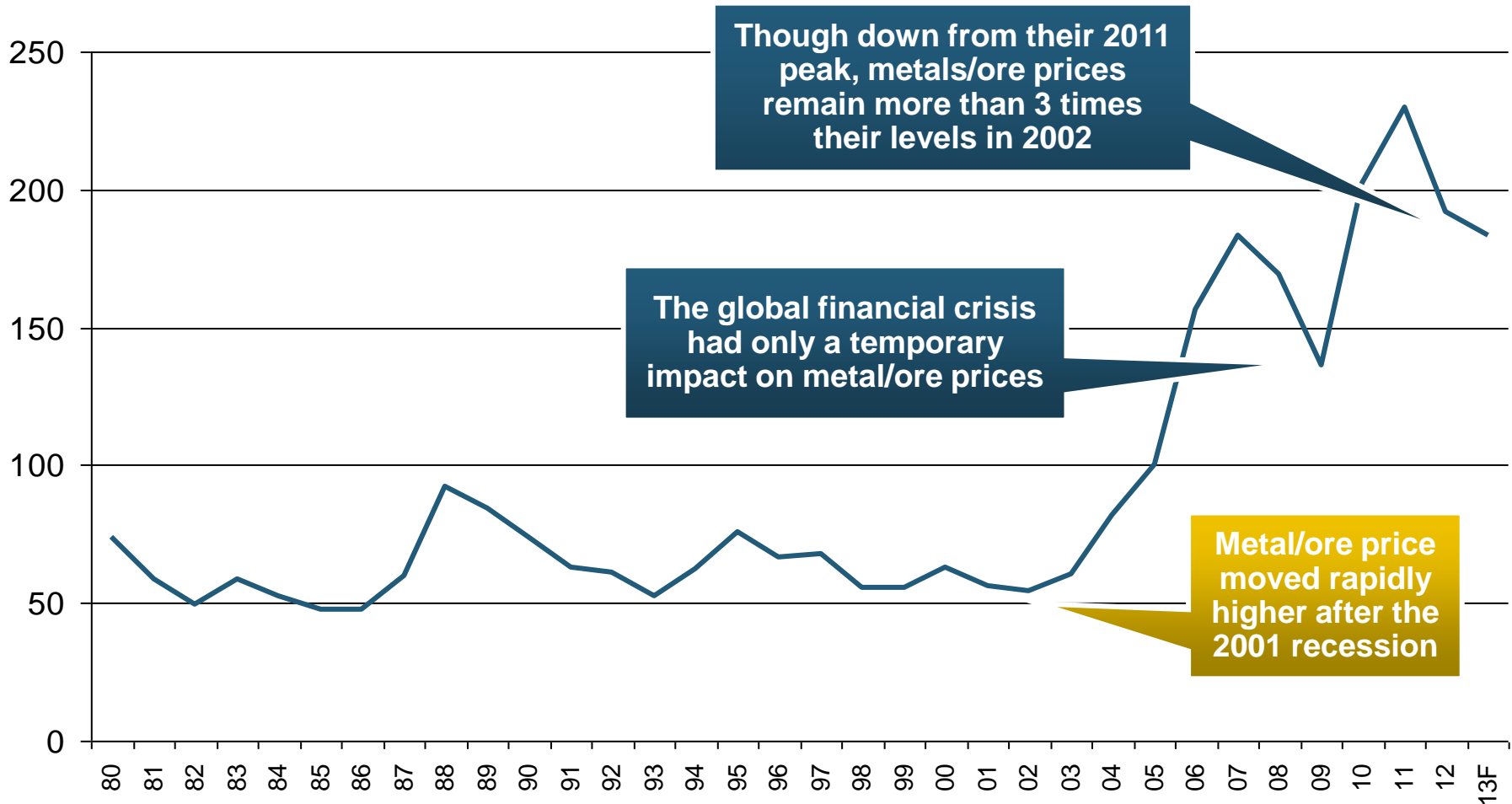


THE INSURANCE INDUSTRY CAN BENEFIT FROM AND ENERGY AND COMMODITIES BOOM, EVEN AMID SLOWDOWN

**Insurers in Australia and the U.S. Need to
Provide Insurance Solutions Associated
with a Rising Global Commodities Demand
and Surging Energy Demand**

Commodity Metals Global Price Index, 1980—2013F* (2005 =100)

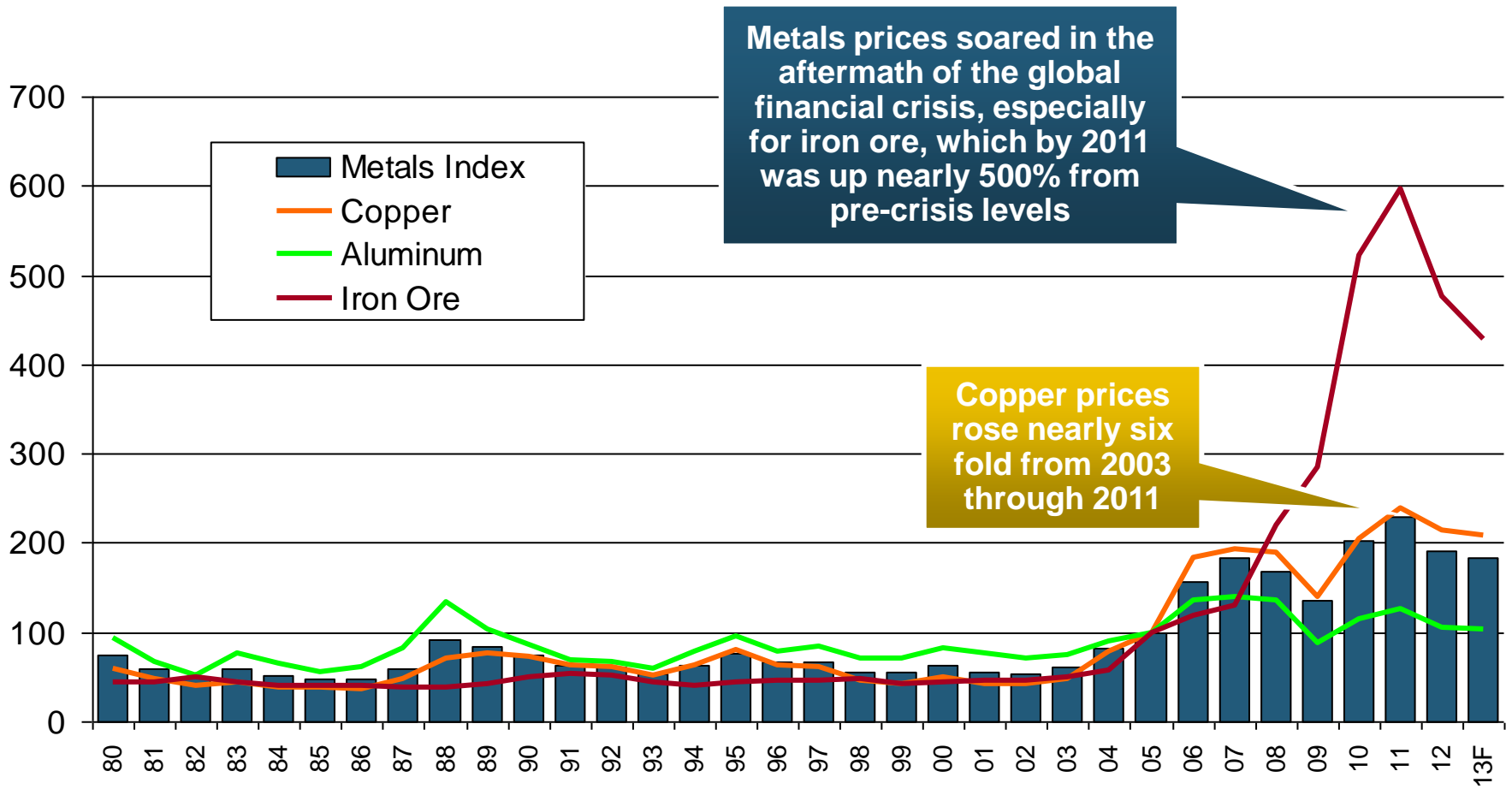
Index Value



* Includes: Copper, Aluminum, Iron Ore, Tin, Nickel, Zinc, Lead and Uranium.
Sources: International Monetary Fund; Insurance Information Institute.

Global Price Index: Copper, Aluminum & Iron Ore vs. Full Metals Index, 1980—2013F*

Index Value (2005 = 100)



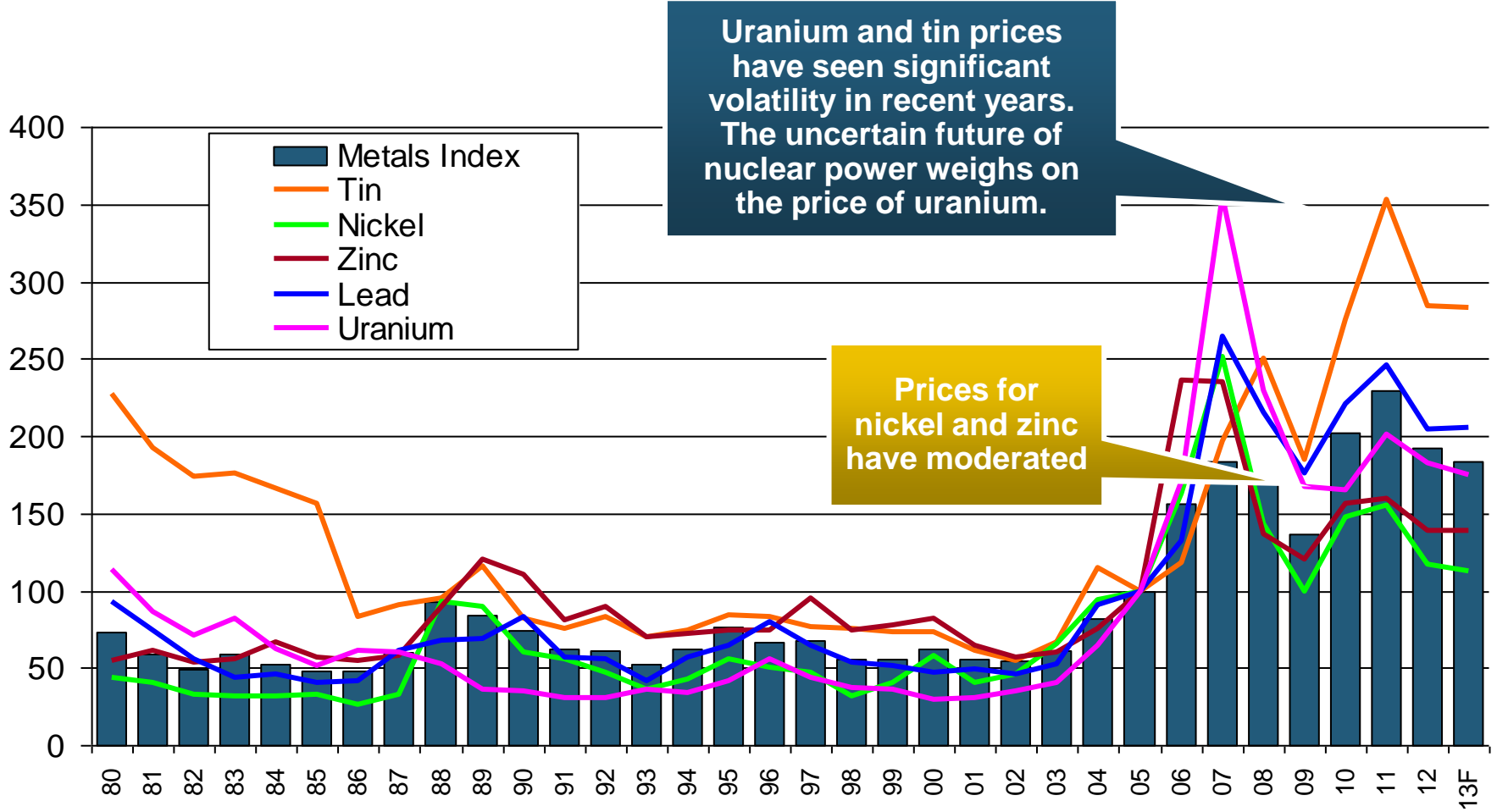
Metals prices soared in the aftermath of the global financial crisis, especially for iron ore, which by 2011 was up nearly 500% from pre-crisis levels

Copper prices rose nearly six fold from 2003 through 2011

* Full Metals Index Includes: Copper, Aluminum, Iron Ore, Tin, Nickel, Zinc, Lead and Uranium.
Sources: International Monetary Fund; Insurance Information Institute.

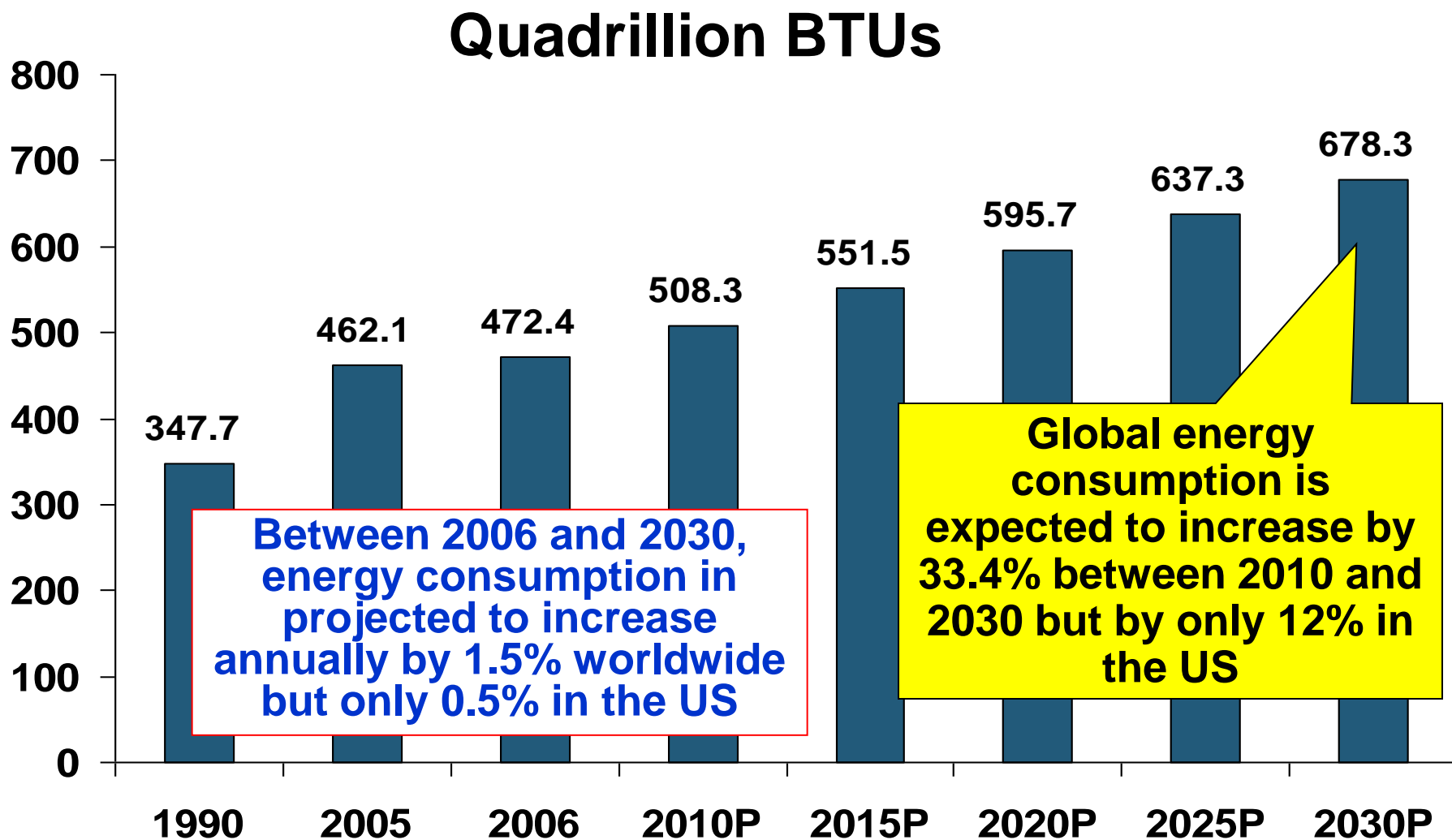
Global Price Index: Tin, Nickel, Zinc, Lead & Uranium vs. Full Metals Index, 1980—2013F*

Index Value (2005 = 100)

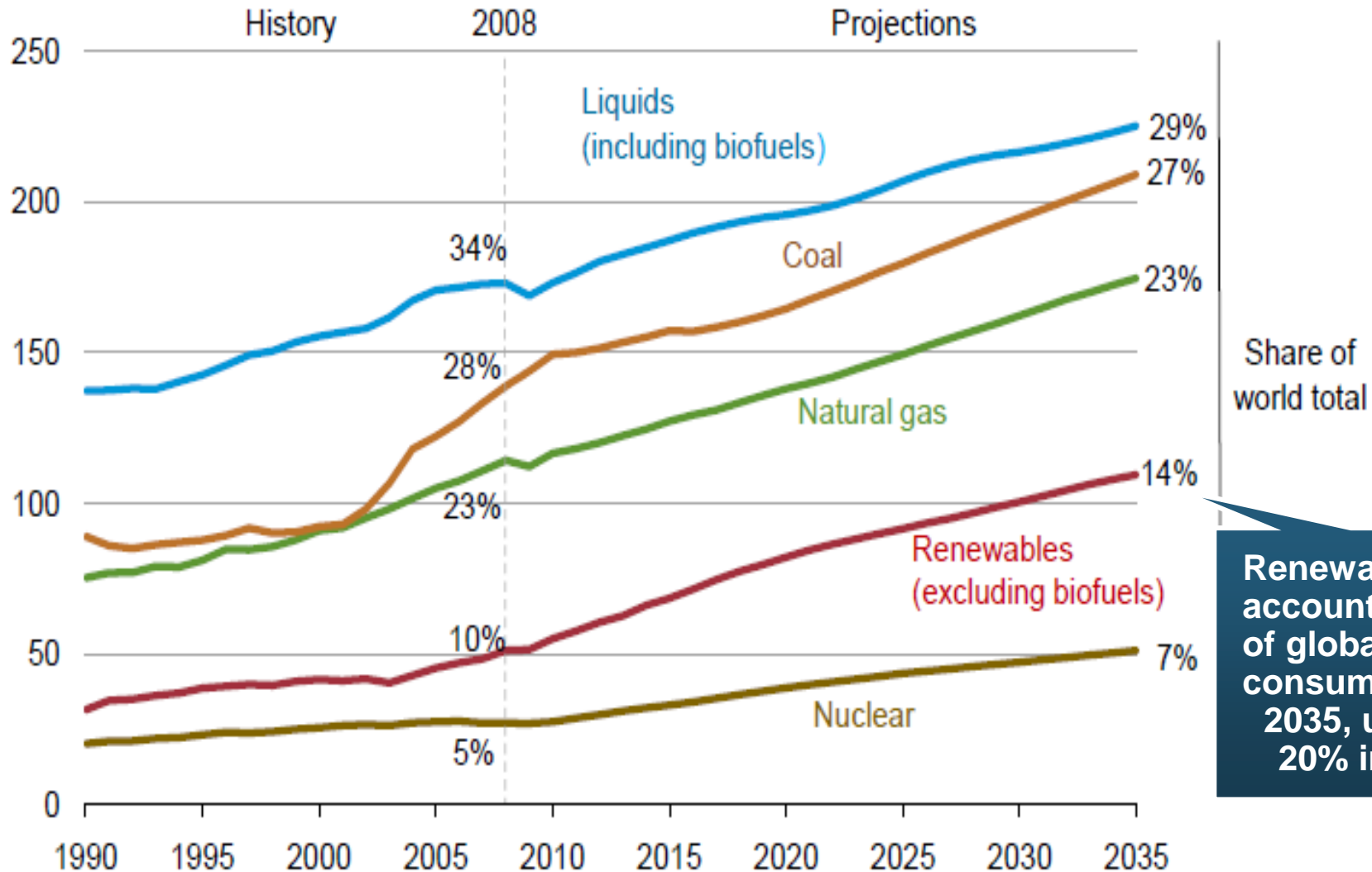


* Full Metals Index Includes: Copper, Aluminum, Iron Ore, Tin, Nickel, Zinc, Lead and Uranium.
Sources: International Monetary Fund; Insurance Information Institute.

World Primary Energy Consumption, 1990-2030P

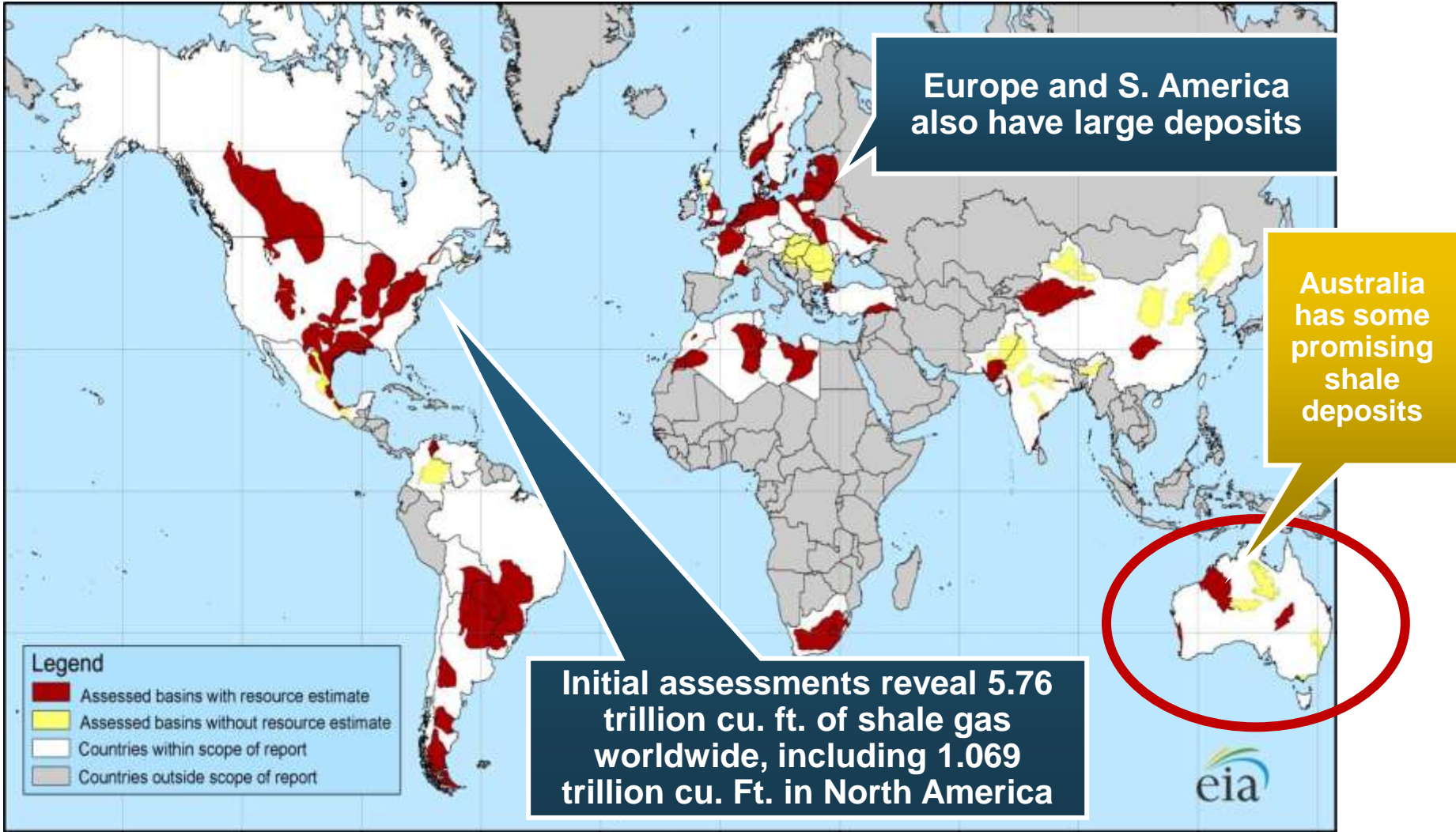


World Energy Consumption by Fuel, 1990—2035F



Renewables will account for 14% of global energy consumption by 2035, up from 20% in 2008

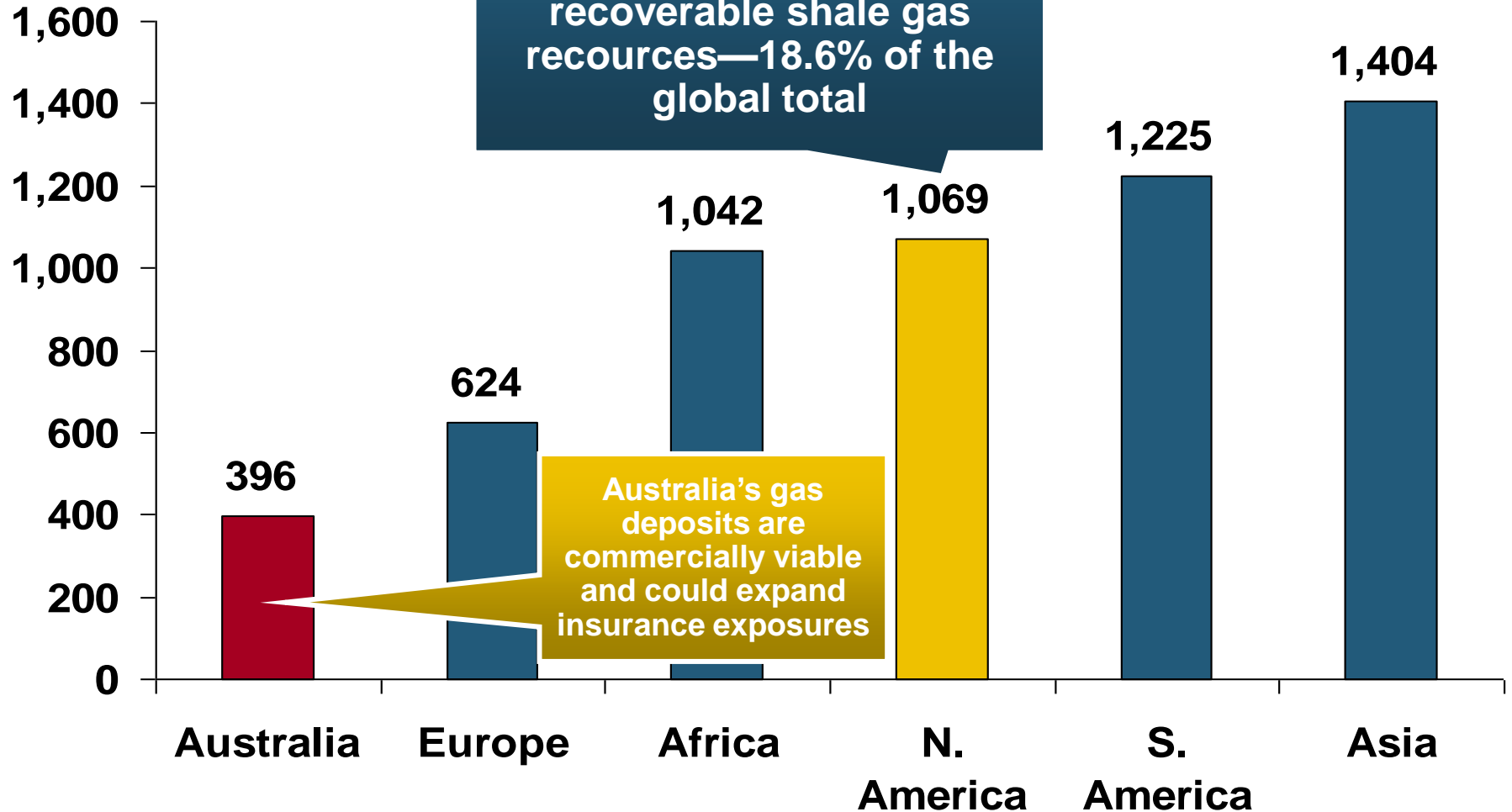
Distribution of Major Shale Deposits: 5.76 Tr. Cu. Ft. in 48 Shale Basins in 32 Countries



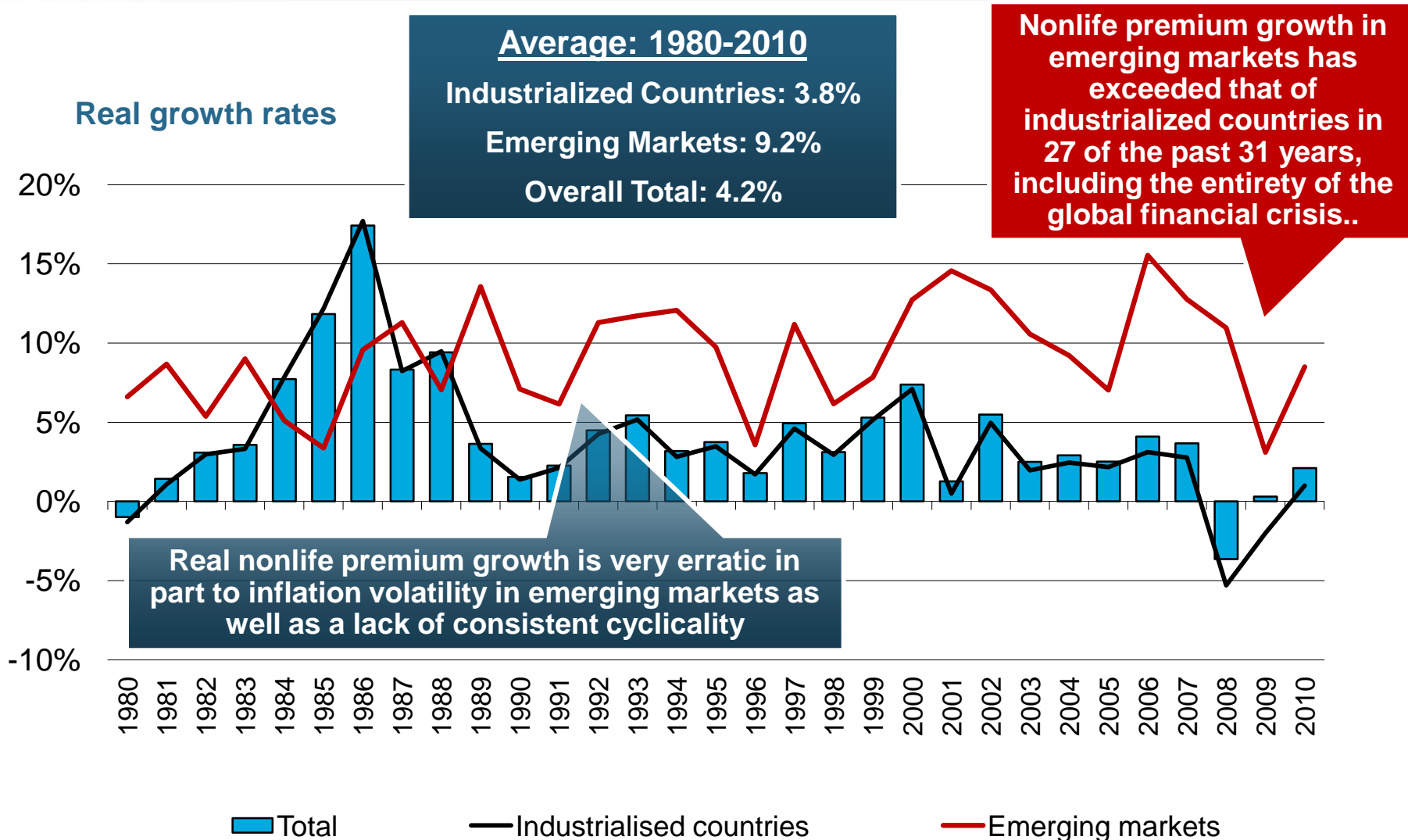
Source: US Energy Information Administration; Insurance Information Institute.

Technically Recoverable Shale Gas Deposits, by Region

Trillion Cubic Ft.tts

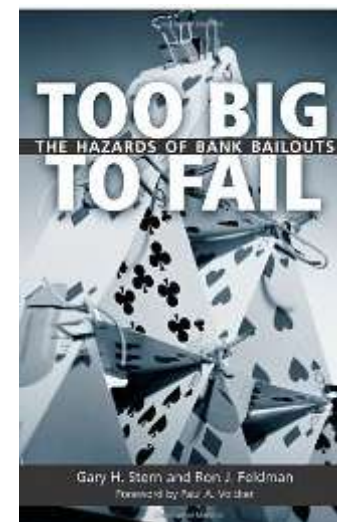


Global Real (Inflation Adjusted) Nonlife Premium Growth: 1980-2010



Regulatory Risk: Financial Sector in Consumed with Post-Crisis Concerns

- Capital Adequacy, Quality, Liquidity, Leverage, Prudential Oversight
- Dodd-Frank
- Basel III
- Solvency II
- ComFrame
- ORSA
- Systemic Importance
 - ◆ US
 - ◆ Global

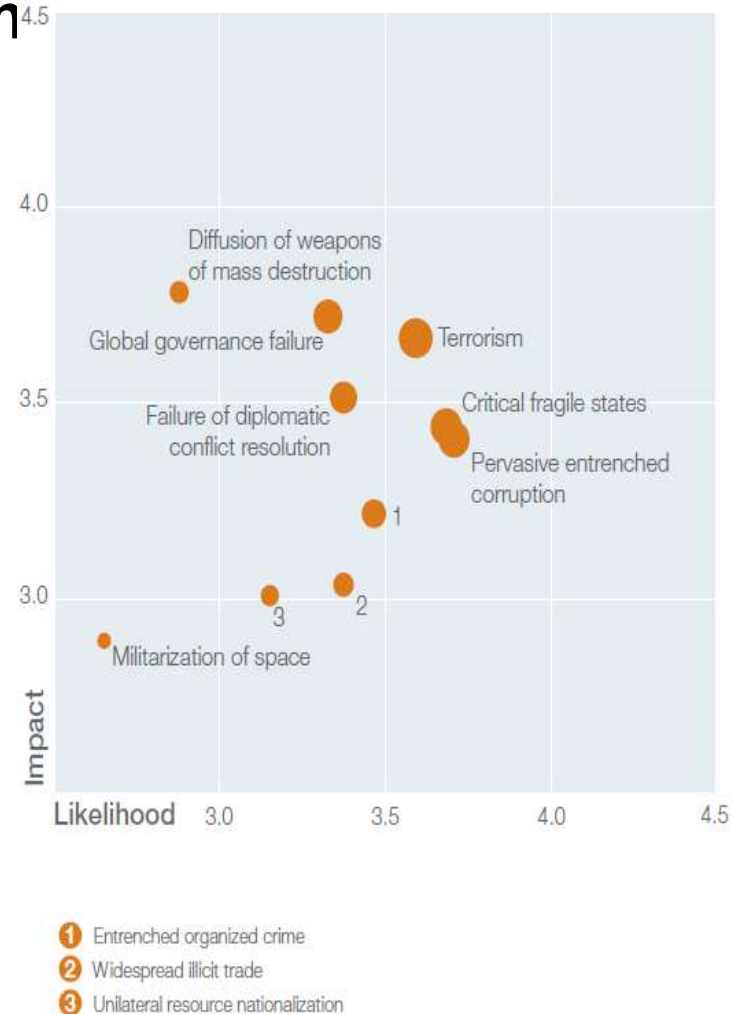


Geopolitical Risk: Foremost on the Minds in “Emerging” Economies

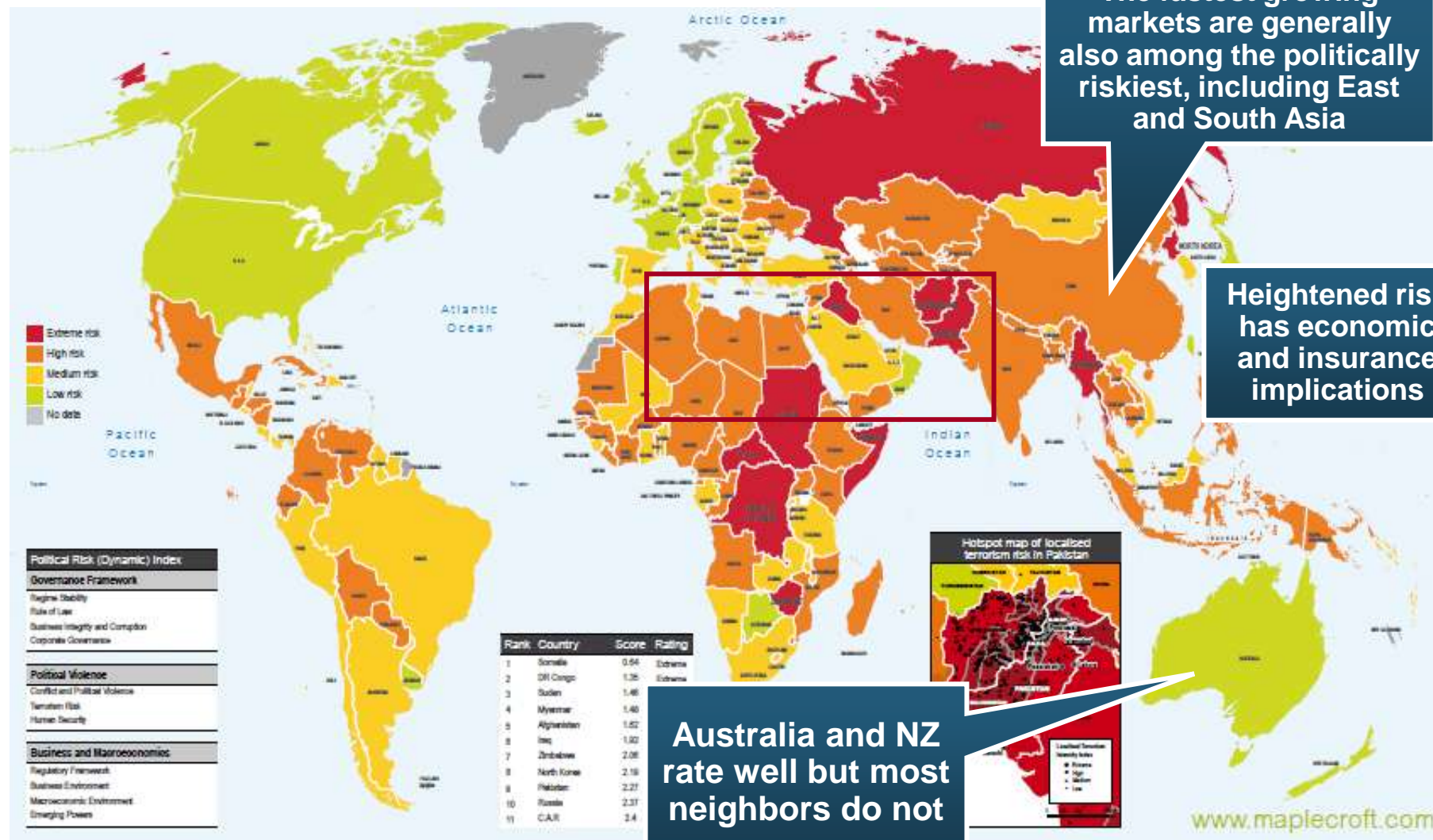
■ Geopolitical Risks

- ◆ Pervasive entrenched corruption
- ◆ Critical fragile states
- ◆ Terrorism
- ◆ Failure of diplomatic conflict resolution
- ◆ Global governance failure
- ◆ Entrenched organized crime
- ◆ Widespread illicit trade
- ◆ Diffusion of WMD
- ◆ Unilateral resource nationalization
- ◆ Militarization of space

Geopolitical Risk Landscape



Political Risk in 2011/12: Greatest Business Opportunities Are Often in Risky Nations

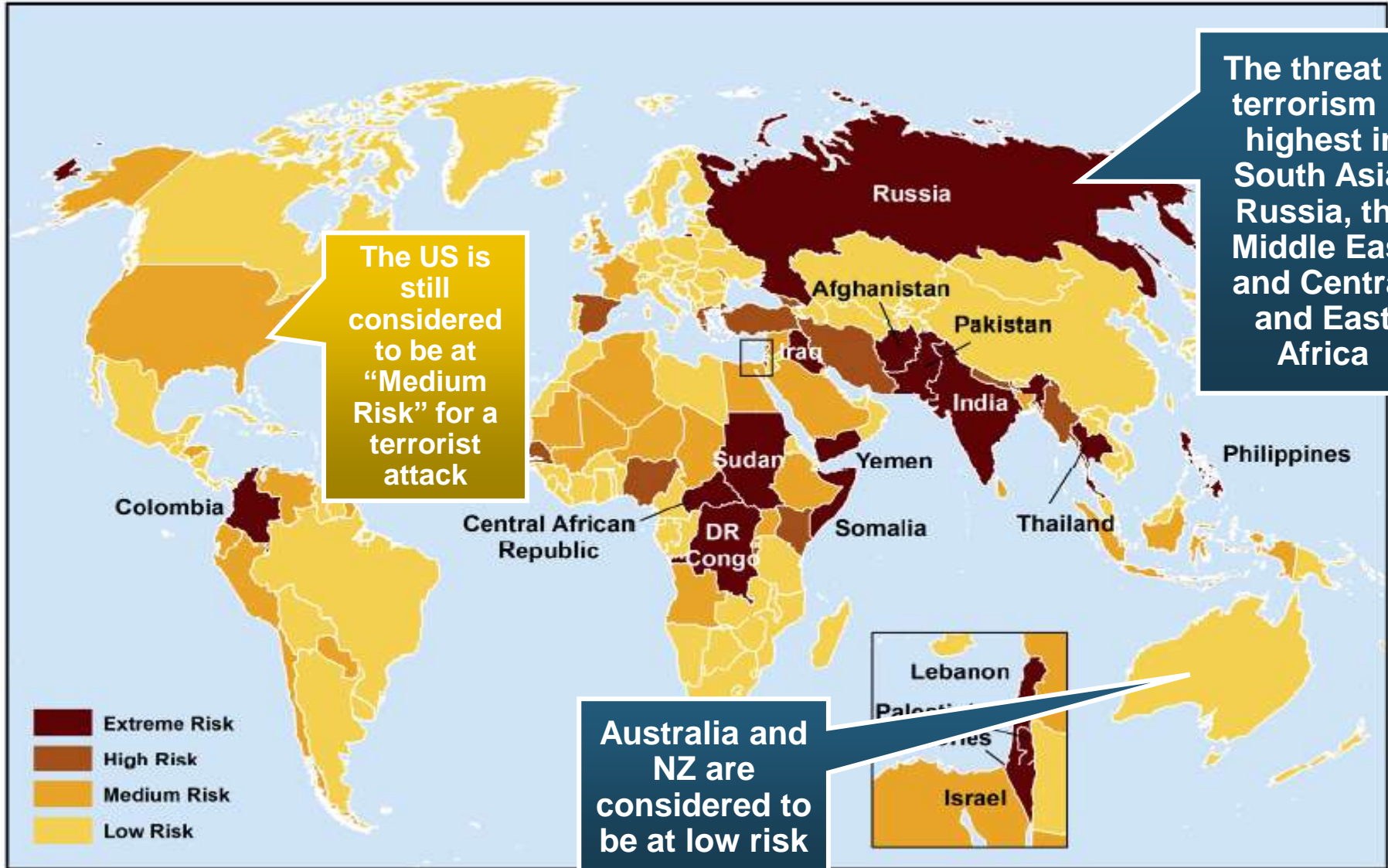


The fastest growing markets are generally also among the politically riskiest, including East and South Asia

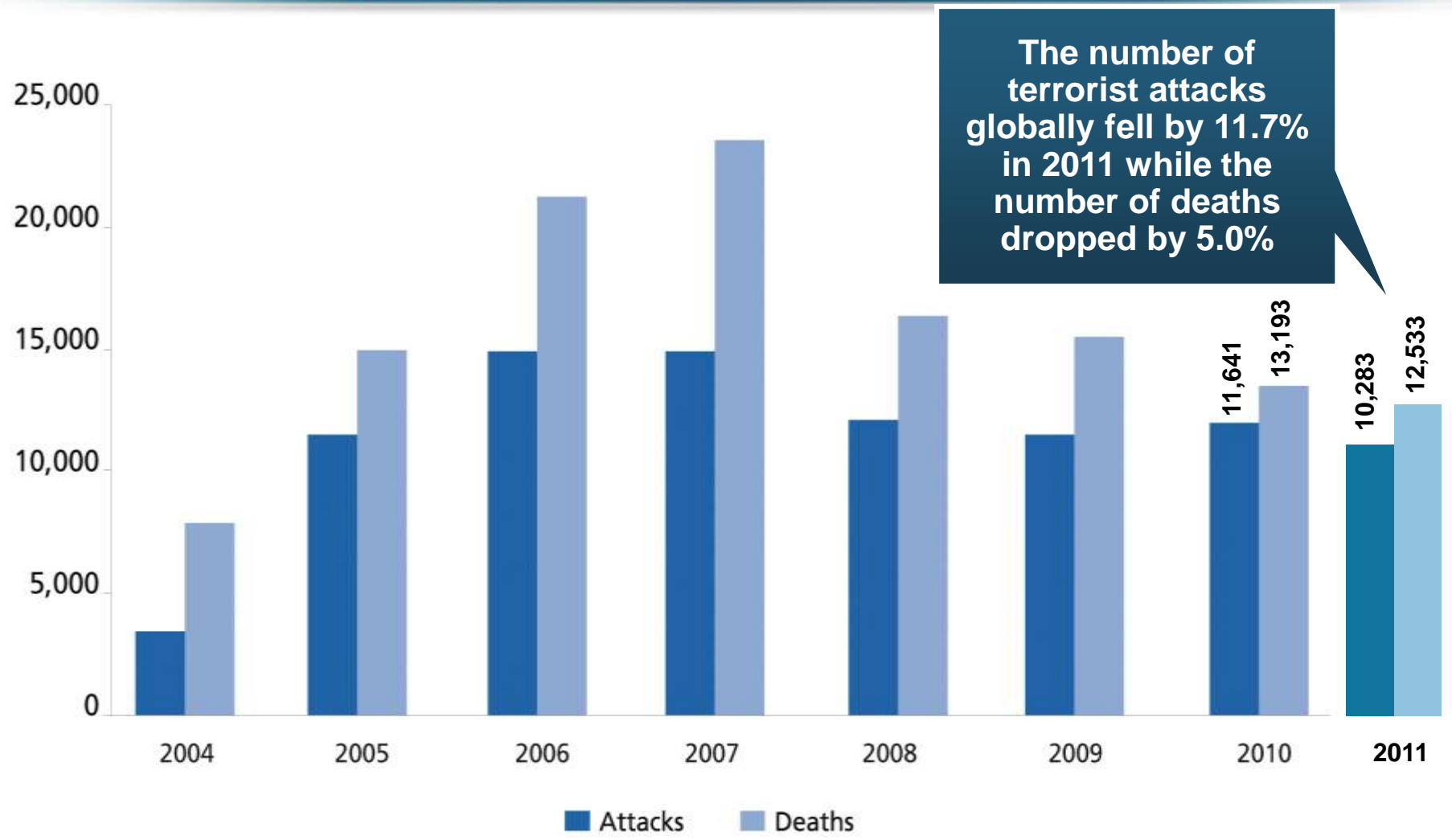
Heightened risk has economic and insurance implications

Australia and NZ rate well but most neighbors do not

Terrorist Risk Index



Global Terrorist Attacks and Deaths, 2004-2011



Sources: National Counterterrorism Center, 2011 Report on Terrorism; Guy Carpenter; Insurance Information Institute.

Frequent Reminders of Terrorist Threat: New and Old



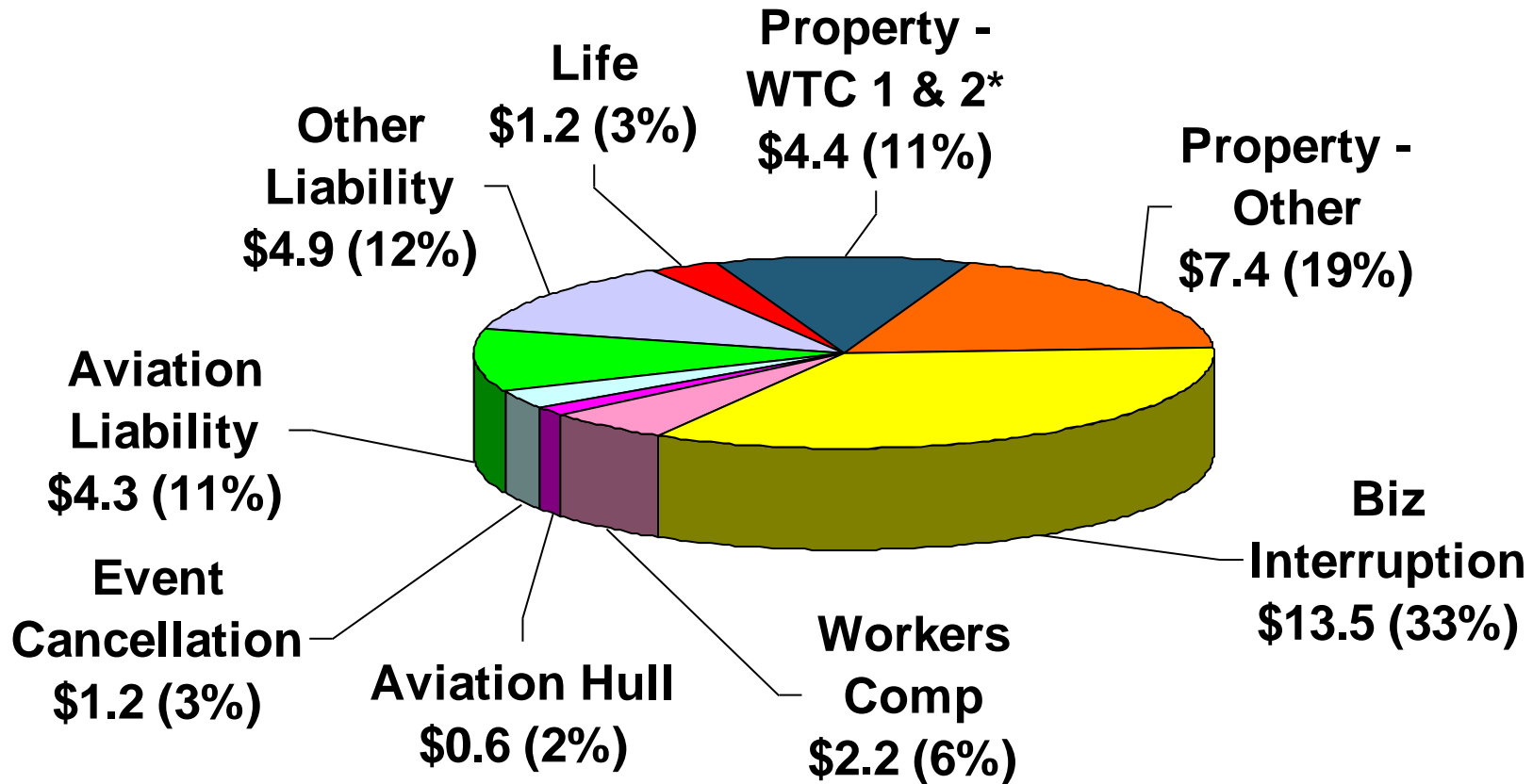
**Bombings at
the Boston
Marathon on
April 15, 2013**



**Freedom Tower
under construction.
Insurance money is
the primary source
of funds for
rebuilding the WTC
site**

Loss Distribution by Type of Insurance from Sept. 11 Terrorist Attack (\$ 2011)

(\$ Billions)



Total Insured Losses Estimate: \$40.0B**

*Loss total does not include March 2010 New York City settlement of up to \$657.5 million to compensate approximately 10,000 Ground Zero workers or any subsequent settlements.

**\$32.5 billion in 2001 dollars.

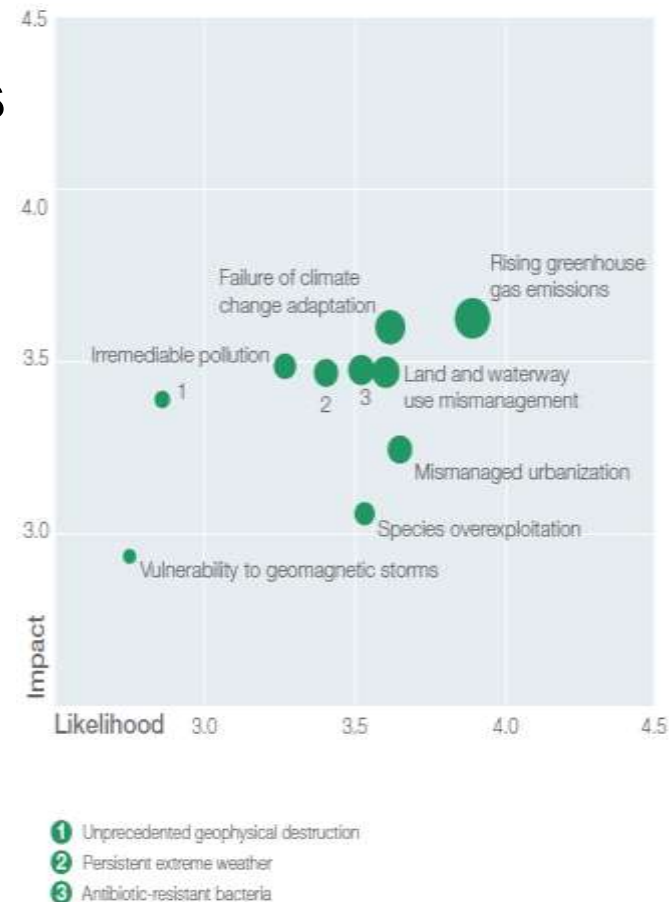
Source: Insurance Information Institute.

Environmental Risk: Vulnerability and Susceptibility Vary Across Globe

■ Environmental Risks

- ◆ Rising greenhouse gas emissions
- ◆ Failure of climate change adaptation
- ◆ Land/water use mismanagement
- ◆ Mismanaged urbanization
- ◆ Antibiotic-resistant bacteria
- ◆ Persistent extreme weather
- ◆ Species overexploitation
- ◆ Irremediable pollution
- ◆ Vulnerability to geomagnetic storms

Environmental Risk Landscape

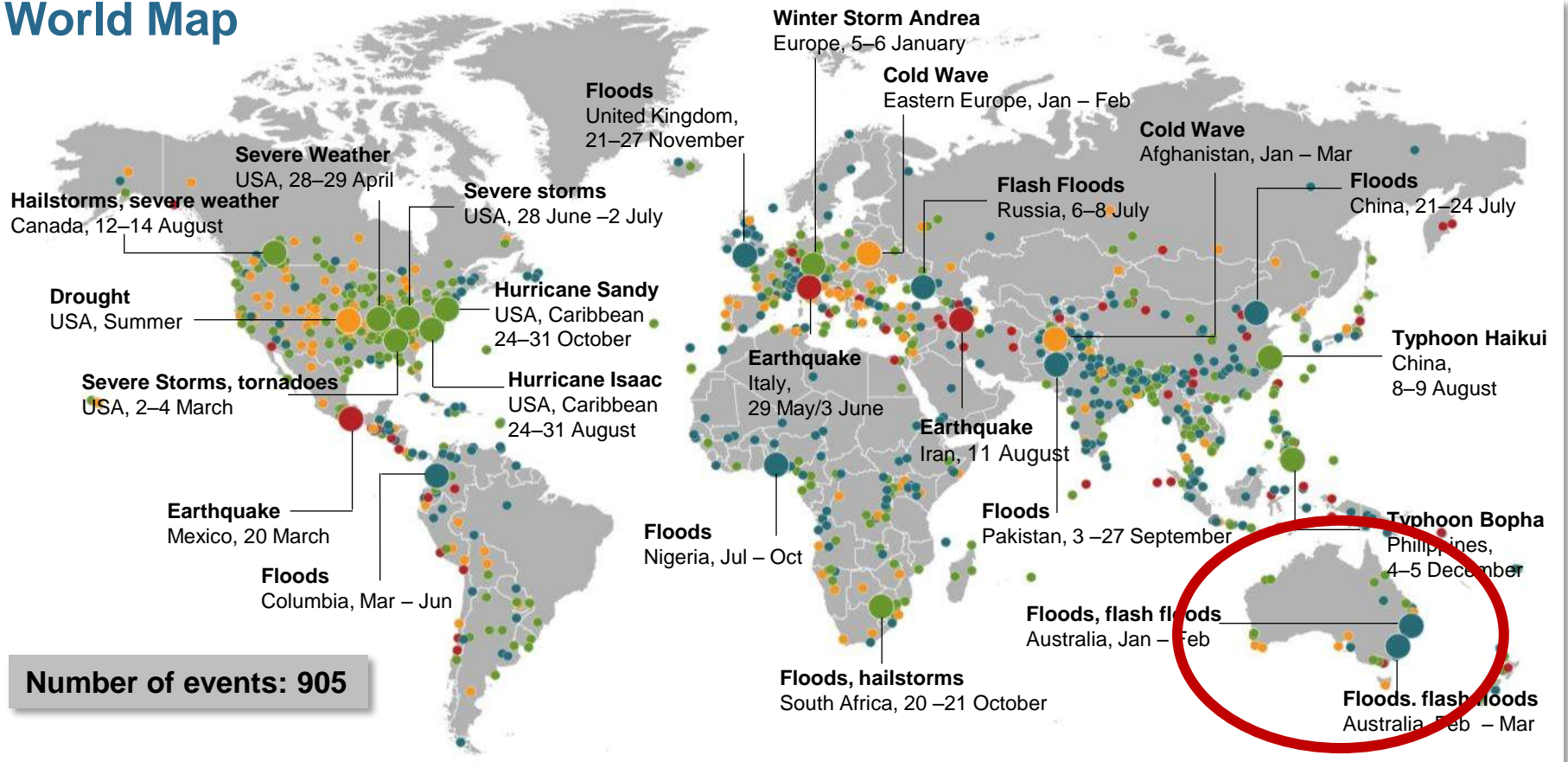


Catastrophe Risk: A Global Concern

**The U.S. and Australia Face Many of the
Same Catastrophe Risks**

Natural Loss Events: Full Year 2012

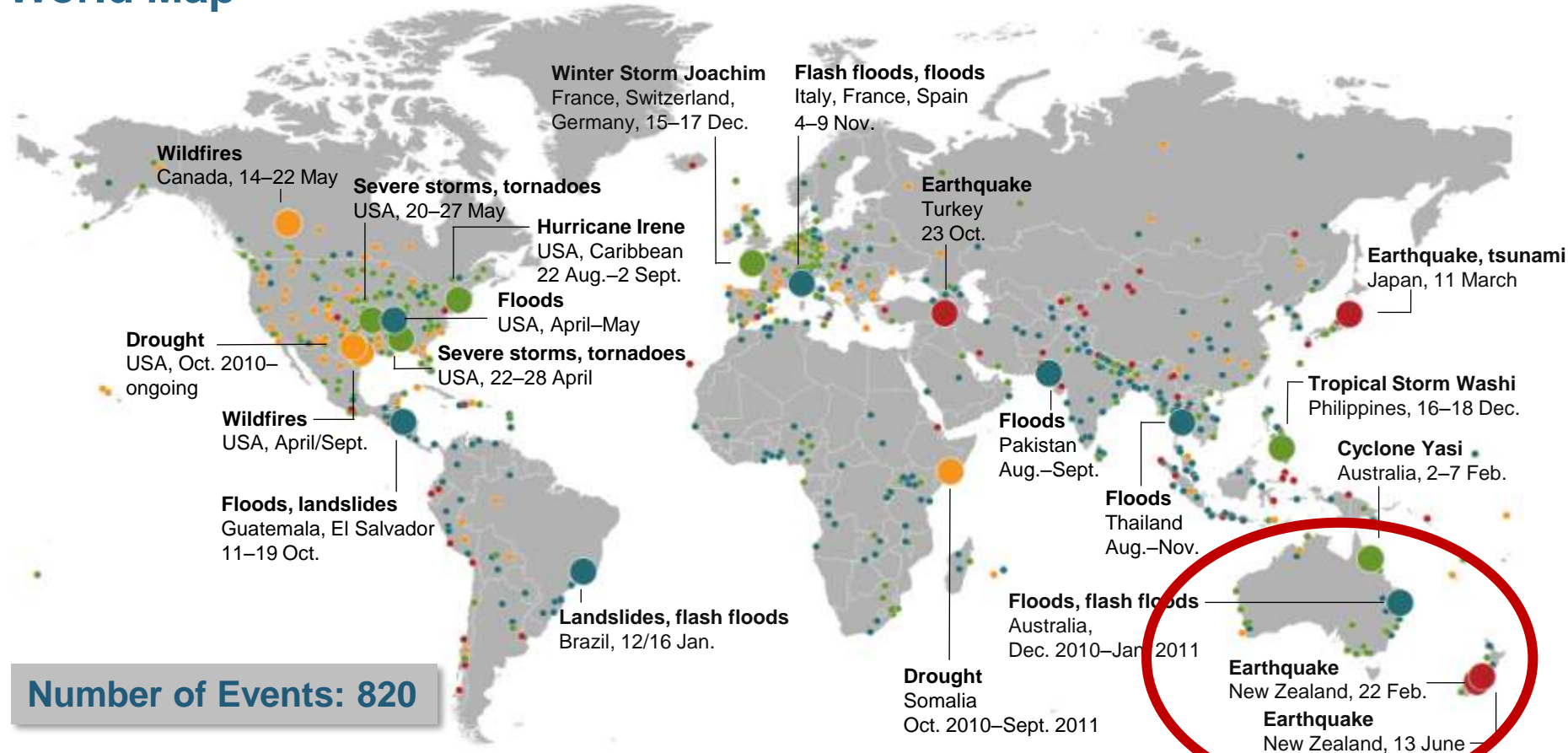
World Map



- Natural catastrophes
- Geophysical events (earthquake, tsunami, volcanic activity)
- Hydrological events (flood, mass movement)
- Selection of significant Natural catastrophes
- Meteorological events (storm)
- Climatological events (extreme temperature, drought, wildfire)

Natural Loss Events, 2011

World Map



Number of Events: 820

| | | |
|-----------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------|
| ○ Natural catastrophes | ● Geophysical events (earthquake, tsunami, volcanic activity) | ● Hydrological events (flood, mass movement) |
| ○ Selection of significant loss events (see table) | ● Meteorological events (storm) | ● Climatological events (extreme temperature, drought, wildfire) |

My One Trip to Australia: Disaster Strikes

DUST STORM EDITION




Gold Coast
The Bulletin

\$1.00 (includes GST if applicable) Thursday, September 24, 2009 www.goldcoast.com.au

16 megaton D-bomb

**That's roughly how much
dust blew in the day the
desert came to town**

16 megatons – 16 million tonnes – is the weight of 303 Harbour Bridges, 105 Queen Mary 2s, or enough to fill Skilled Park 11.5 times
Main picture: A couple takes a dusty stroll on the sand at Surfers Paradise at lunchtime yesterday • Picture: Brendan Radler



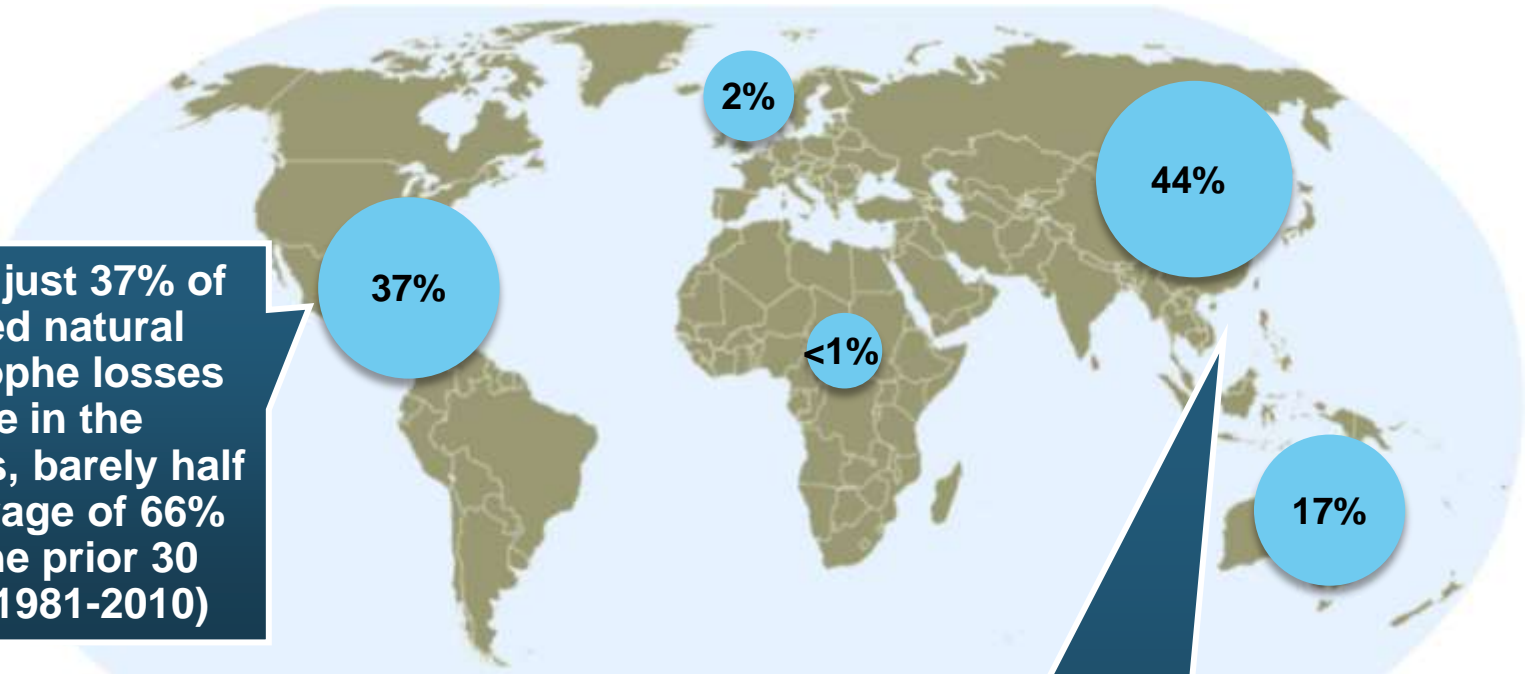
- More pics inside plus 140 online at goldcoast.com.au
- Roads and air chaos, blackouts, and lost at sea
- How to wash your car without scratching it

TEARS FOR DROWNED LIFESAVING STAR JACOB LOLLBACK Page 6

**Huge dust
storm
blankets
the Gold
Coast in
Sept. 2009**

Natural Catastrophes Worldwide 2011

Insured losses US\$ 105bn - Percentage distribution per continent



In 2011, just 37% of insured natural catastrophe losses were in the Americas, barely half the average of 66% over the prior 30 years (1981-2010)

In 2011, 61% of insured natural catastrophe losses were in the Asia/Pacific region, nearly 3.5 times the average of 13% over the prior 30 years (1981-2010)

| Continent | Insured losses US\$ m |
|-----------------------------------|-----------------------|
| America (North and South America) | 40,000 |
| Europe | 2,000 |
| Africa | Minor damages |
| Asia | 45,000 |
| Australia/Oceania | 18,000 |

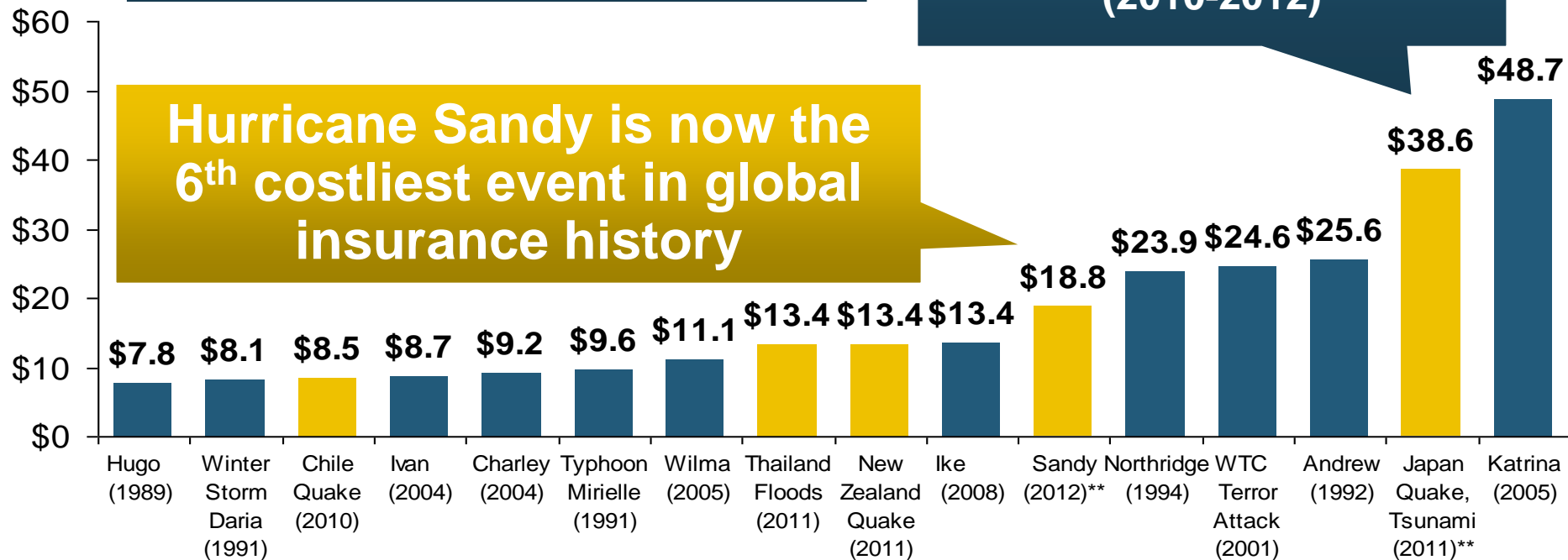
Top 16 Most Costly World Insurance Losses, 1970-2012*

(Insured Losses, 2012 Dollars, \$ Billions)

2012 insured CAT Losses totaled \$60B; Economic losses totaled \$140B, according to Swiss Re

5 of the top 14 most expensive catastrophes in world history have occurred within the past 3 years (2010-2012)

Hurricane Sandy is now the 6th costliest event in global insurance history



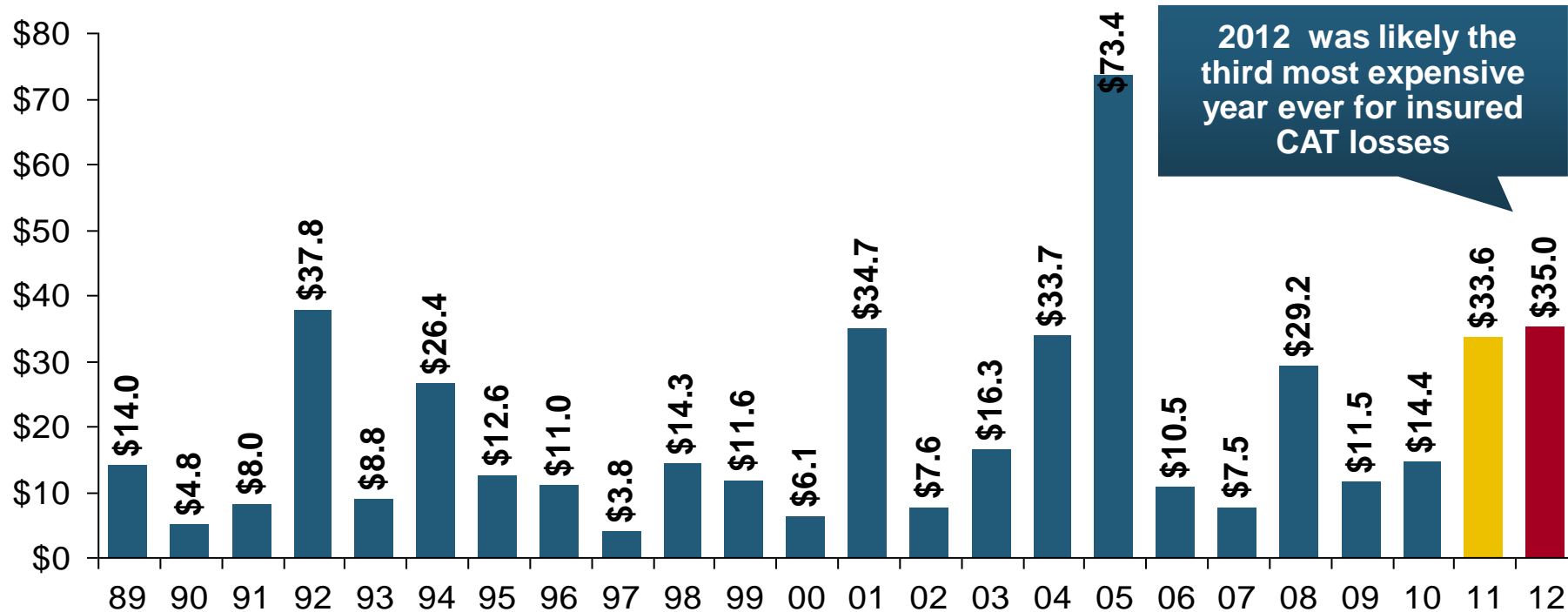
*Figures do not include federally insured flood losses.

**Estimate based on PCS value of \$18.75B as of 4/12/13.

Sources: Munich Re; Swiss Re; Insurance Information Institute research.

US Insured Catastrophe Losses

(\$ Billions, 2012 Dollars)



2012 was likely the third most expensive year ever for insured CAT losses

2012 Was the 3rd Highest Year on Record for Insured Losses in US History on An Inflation-Adjusted Basis. 2011 Losses Were the 6th Highest.

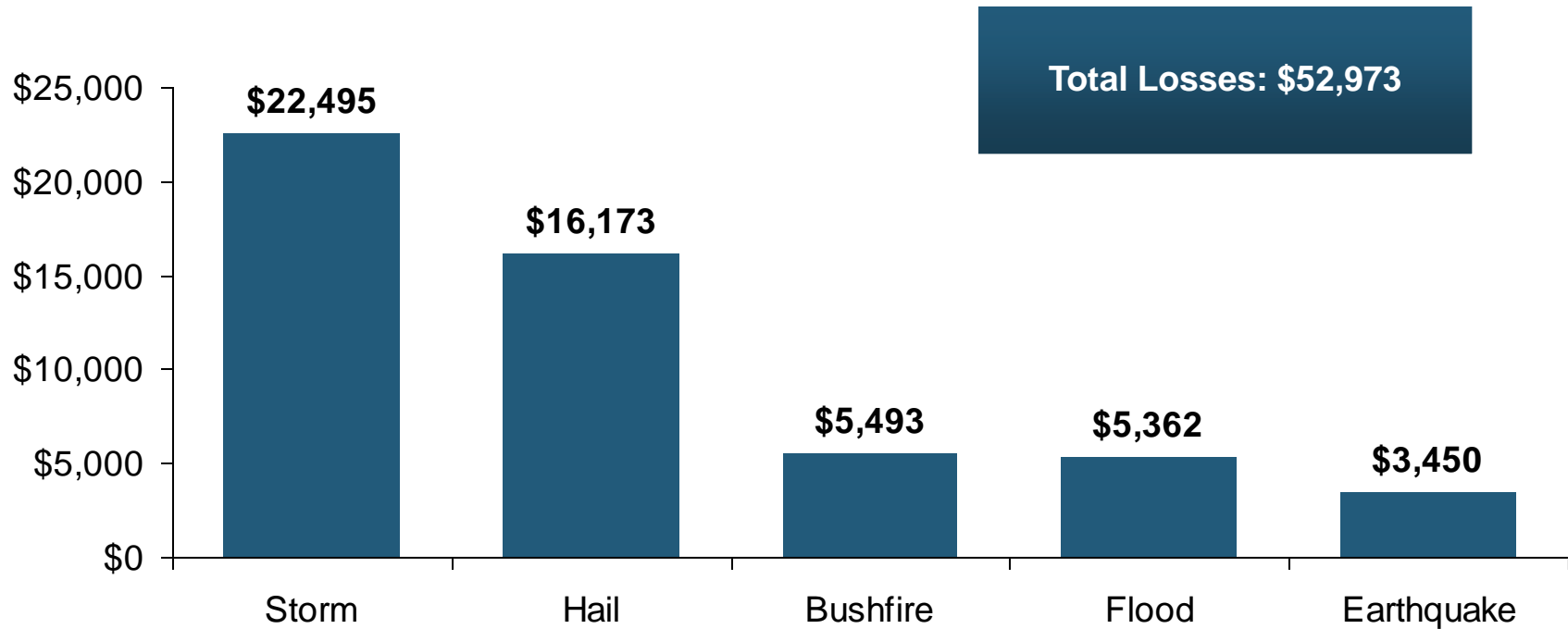
Record Tornado Losses Caused 2011 CAT Losses to Surge

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.

Most Costly Natural Disasters in Australia by Type, 1967-2011

\$ AUD millions

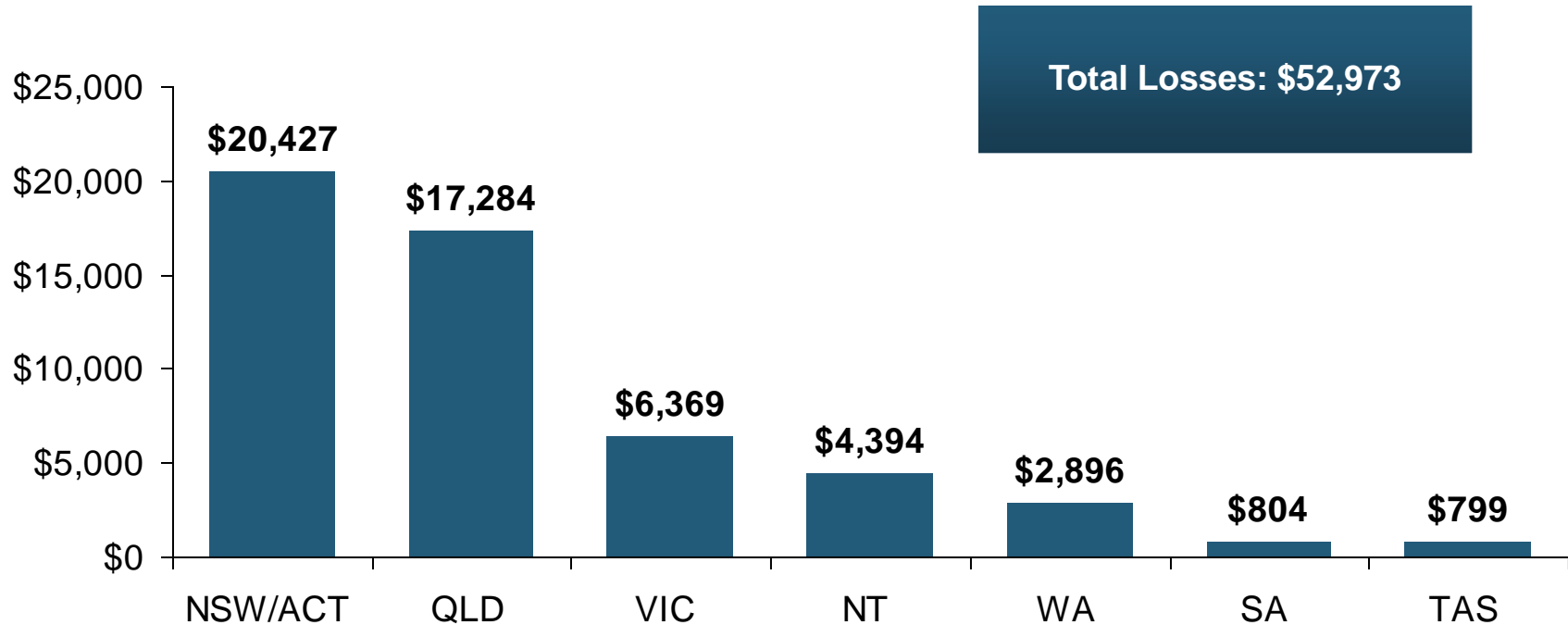


Note: Expressed in December 2011 Australian dollars.

Source: AXCO.

Insured Losses From Natural Disasters in Australia by State, 1967-2011

\$ AUD millions

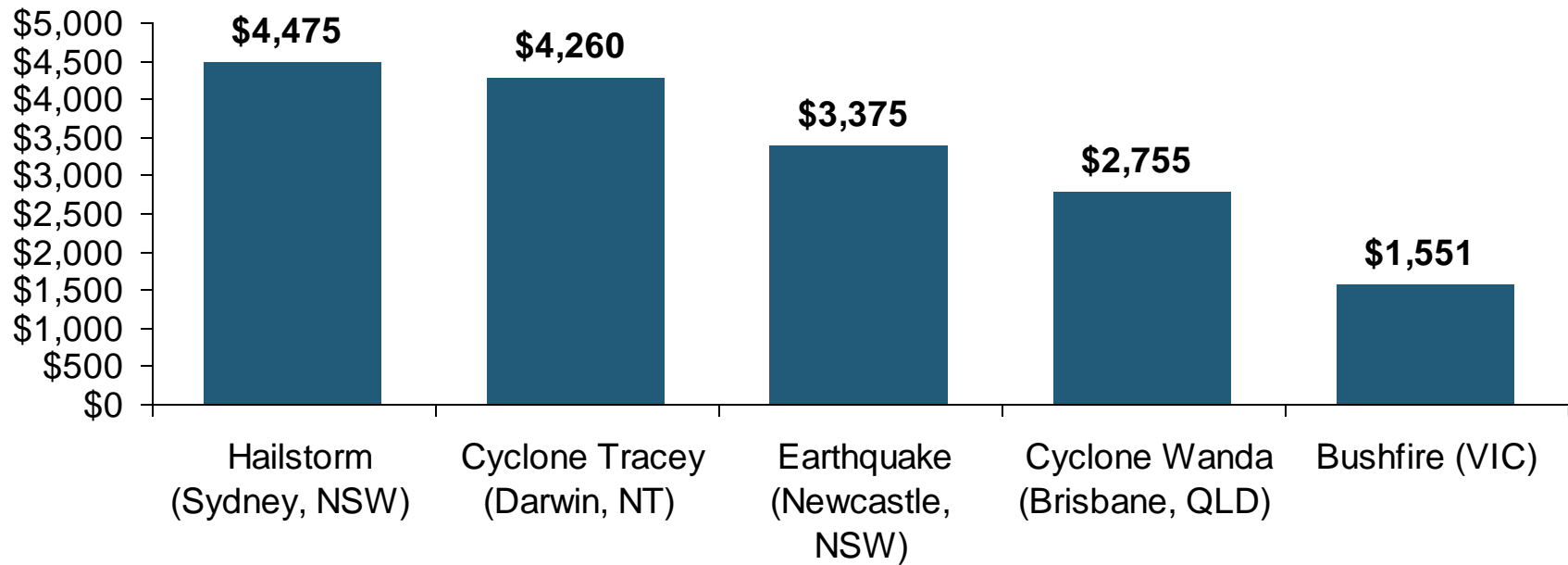


Note: Expressed in December 2011 Australian dollars.

Source: AXCO.

Top Five Natural Disasters in Australia by Insured Losses, 1967-2011

\$ USD millions



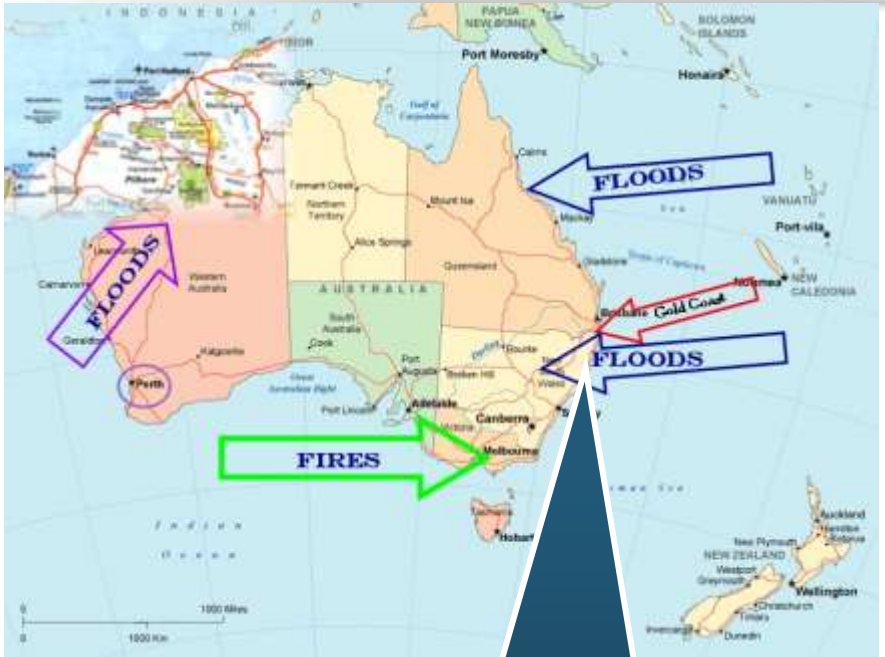
Note: Expressed in December 2011 U.S. dollars.

Source: AXCO.

Outlook for 2013 Hurricane Season: 75% Worse Than Average

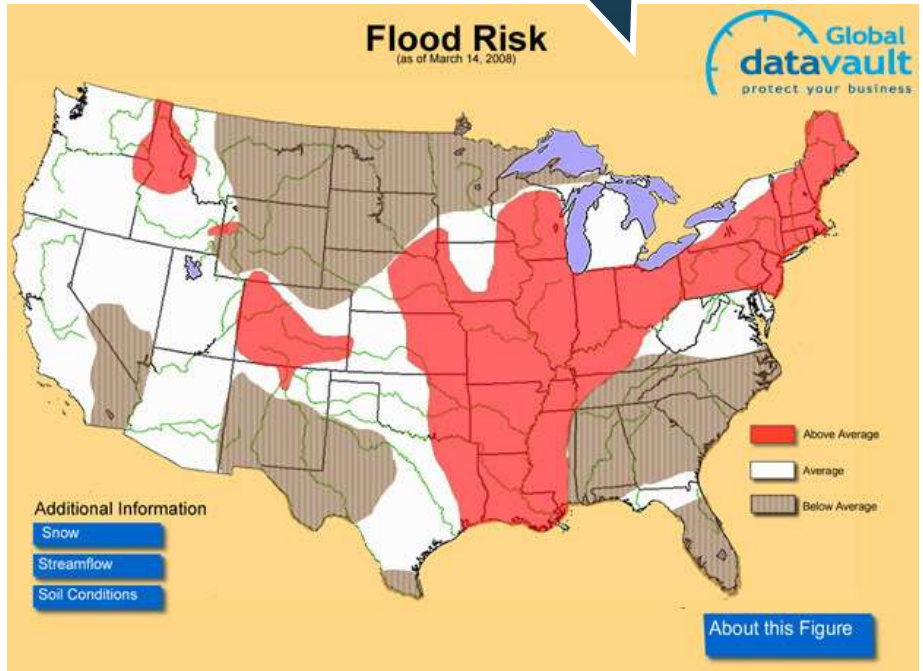
| Forecast Parameter | Median (1981-2010) | 2013F |
|-------------------------------|-----------------------|-------|
| Named Storms | 12.0 | 18 |
| Named Storm Days | 60.1 | 95 |
| Hurricanes | 6.5 | 9 |
| Hurricane Days | 21.3 | 40 |
| Major Hurricanes | 2.0 | 4 |
| Major Hurricane Days | 3.9 | 9 |
| Accumulated Cyclone Energy | 92.0 | 165 |
| Net Tropical Cyclone Activity | 103% | 175% |

Flood Risk in Australia: Another Shared Risk with the US



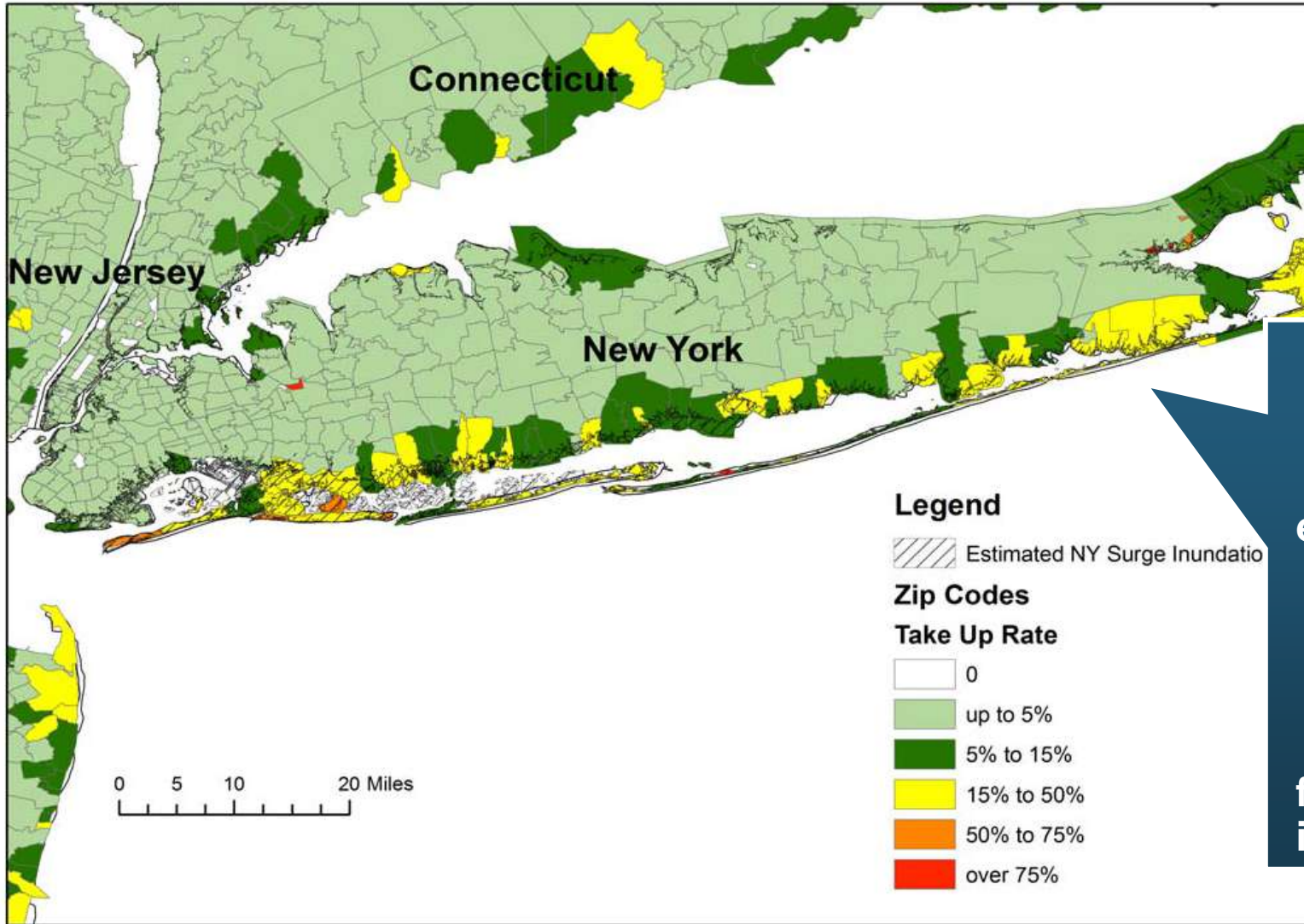
US flooding is most commonly associated with rivers, though coastal inundation from tropical events is not uncommon

Australia has been hit by severe floods in recent years in areas such as the Gold Coast



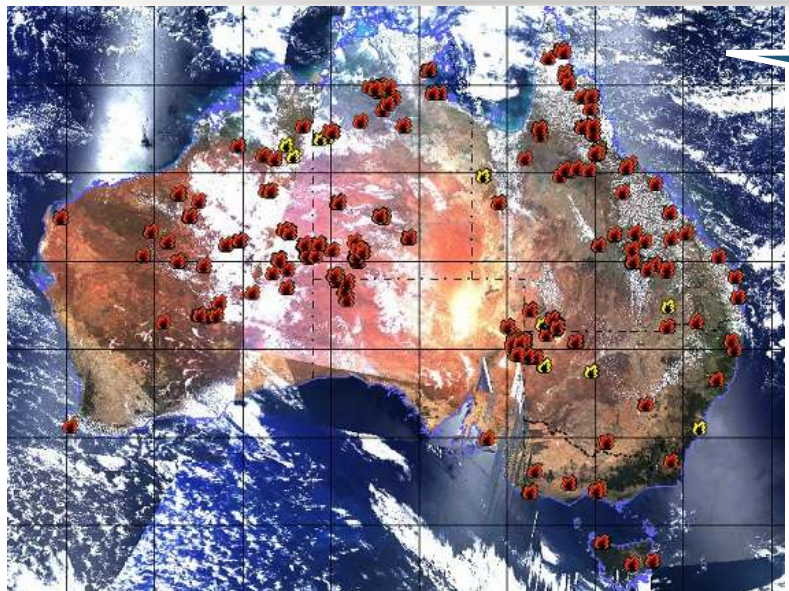
Source: Insurance Information Institute research.

Residential NFIP Flood Take-Up Rates in NY, CT (2010) & Sandy Storm Surge



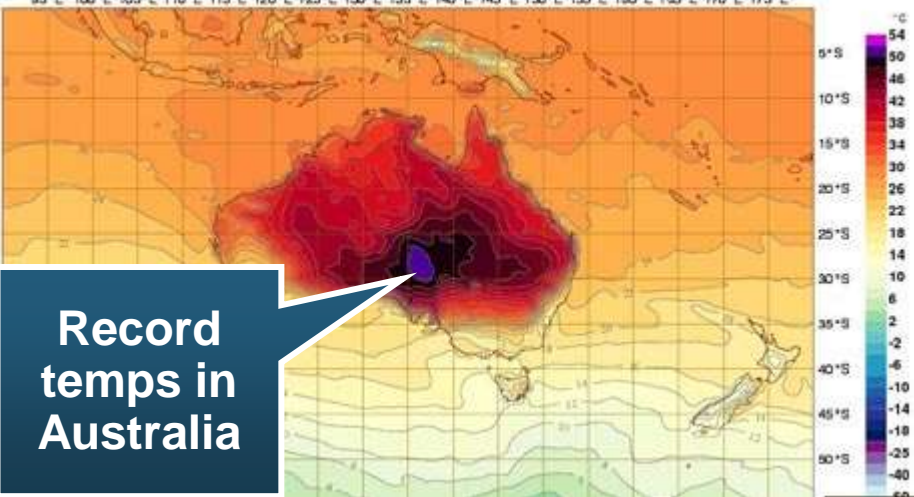
Flood coverage penetration rates were extremely low in many very vulnerable areas of NY and CT, with take-up rates far below 50% in many areas

Wildfire Risk: Australia and America—Heating Up & Drying Out?

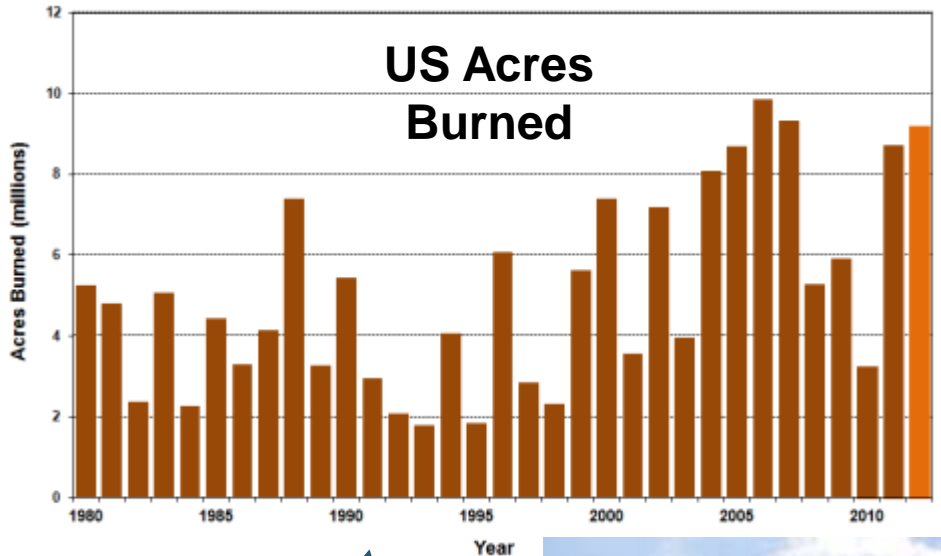


Australia has been hit by drought, extreme temperatures and wildfires

Screen Temperature Valid 06UTC Mon 14 Jan 2013 ACCESS-Global t+16Z



Record temps in Australia

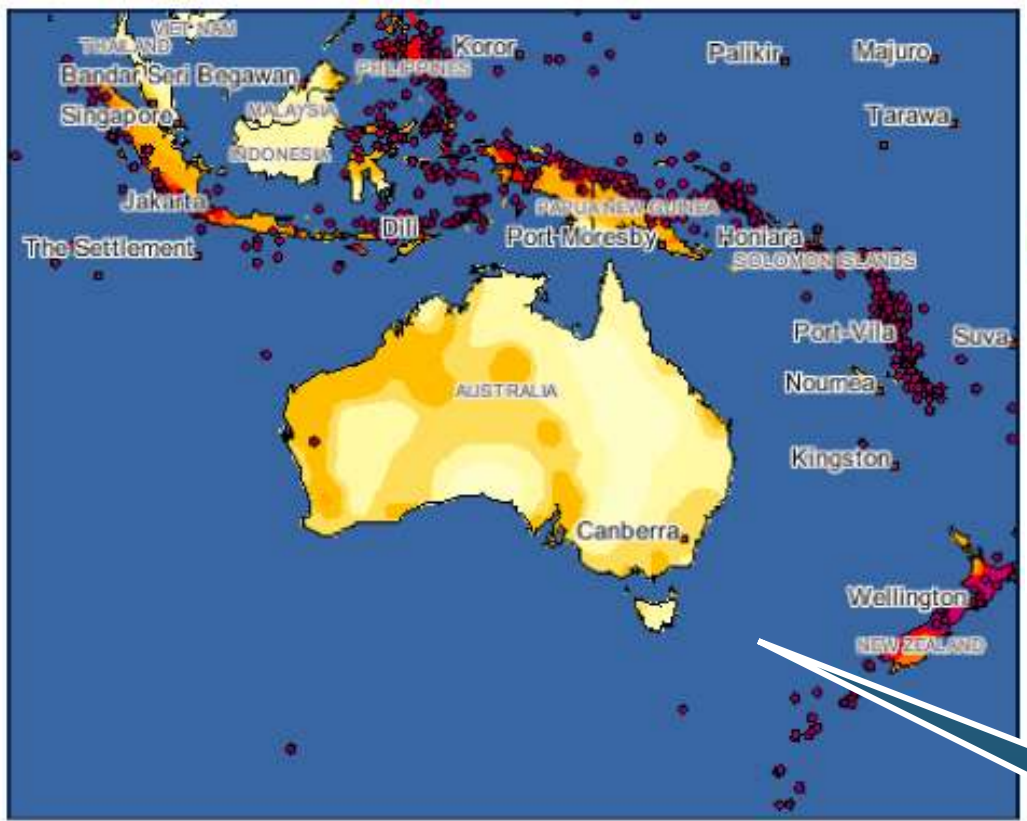


Acres burned remain high in the US



Source: Insurance Information Institute research.

Earthquake Risk in Australia: Living in a Dangerous Neighborhood



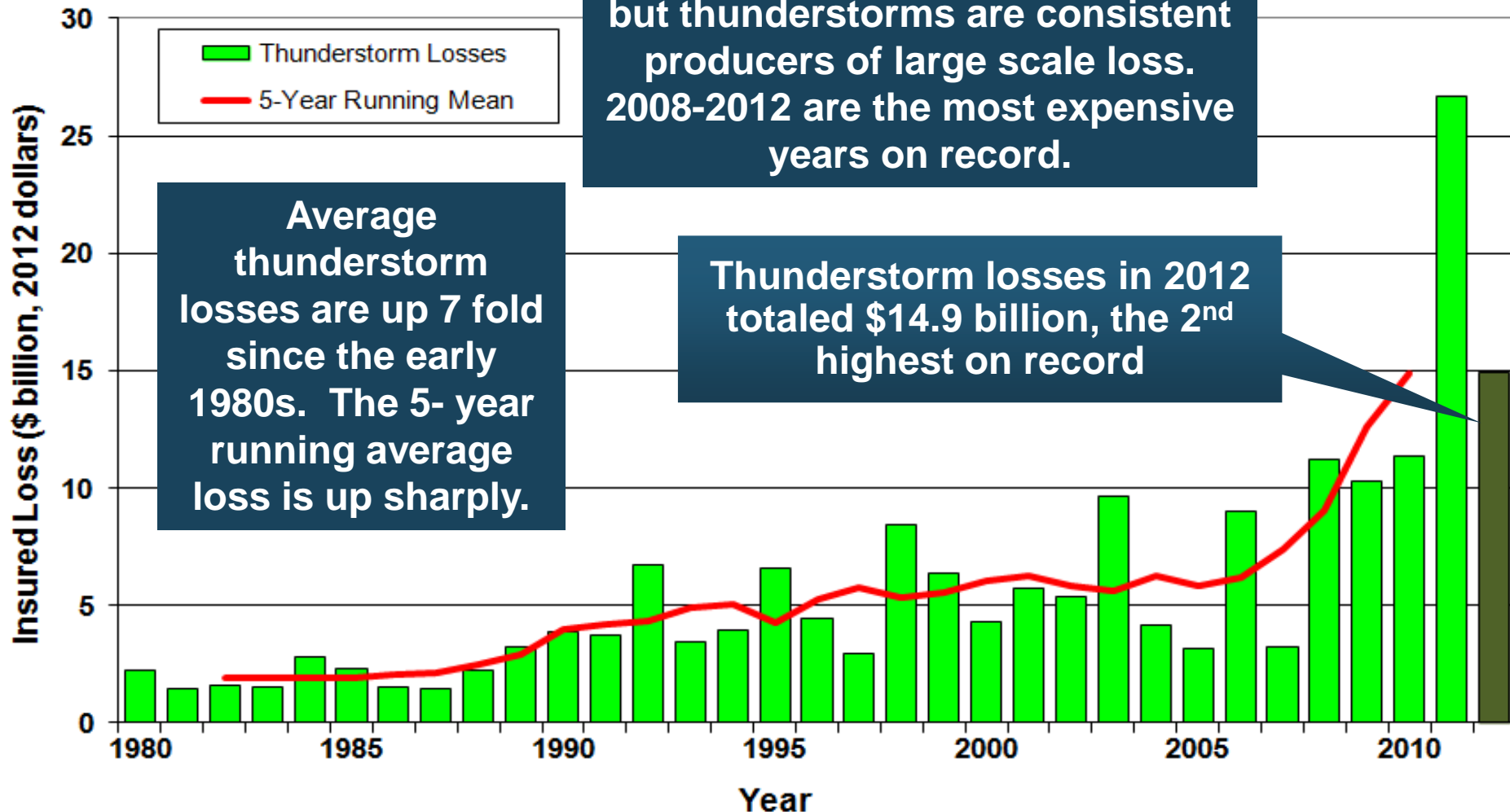
US earthquake risk is concentrated on the West Coast and AK, HI



Australia's earthquake risk is modest, especially relative to NZ and points north and east

Source: Axco from Swiss Re; US Geological Survey; Insurance Information Institute.

U.S. Thunderstorm Loss Trends, 1980 – 2012

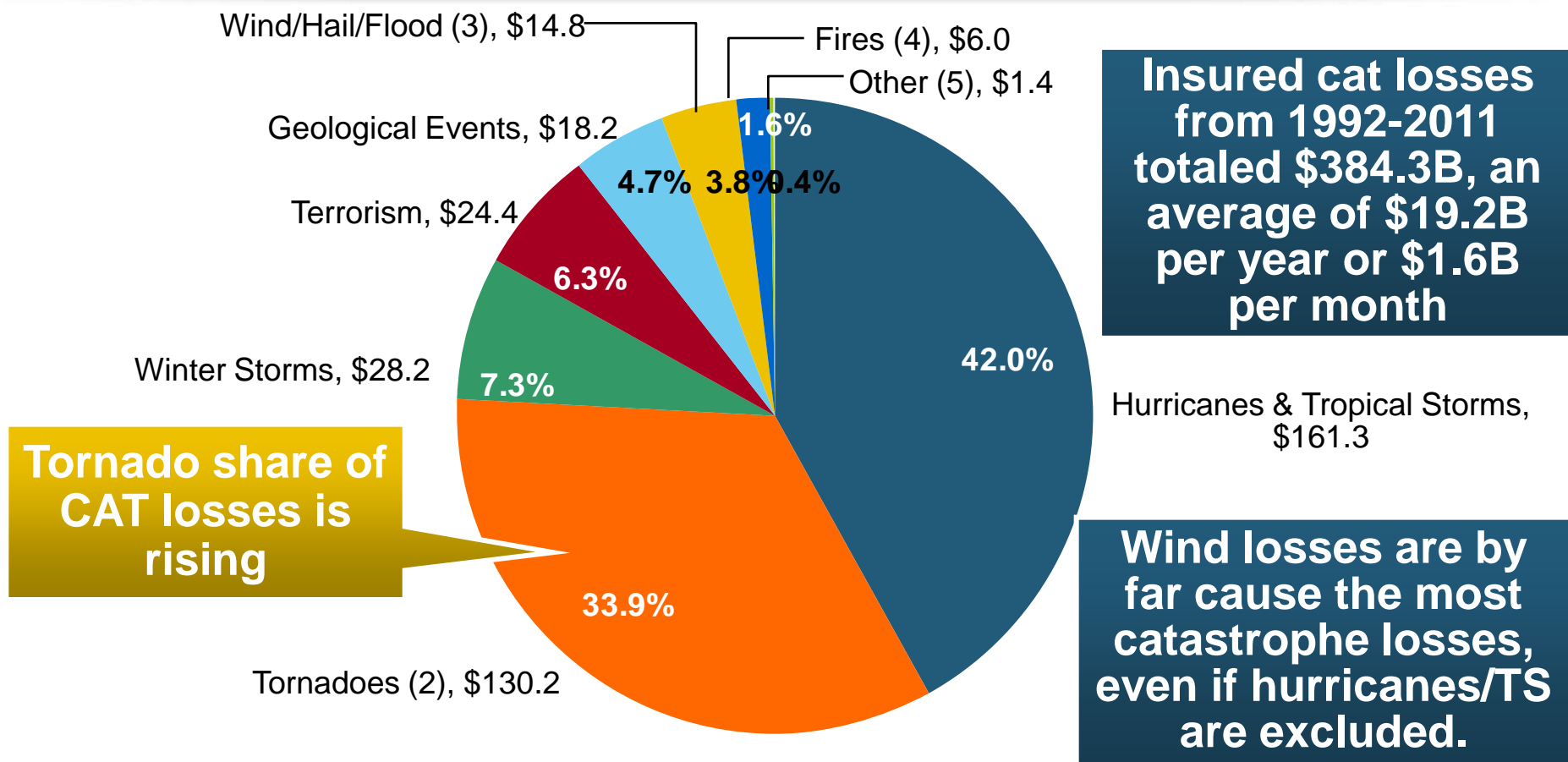


Hurricanes get all the headlines, but thunderstorms are consistent producers of large scale loss. 2008-2012 are the most expensive years on record.

Average thunderstorm losses are up 7 fold since the early 1980s. The 5- year running average loss is up sharply.

Thunderstorm losses in 2012 totaled \$14.9 billion, the 2nd highest on record

Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1992–2011¹



Insured cat losses from 1992-2011 totaled \$384.3B, an average of \$19.2B per year or \$1.6B per month

Tornado share of CAT losses is rising

Wind losses are by far cause the most catastrophe losses, even if hurricanes/TS are excluded.

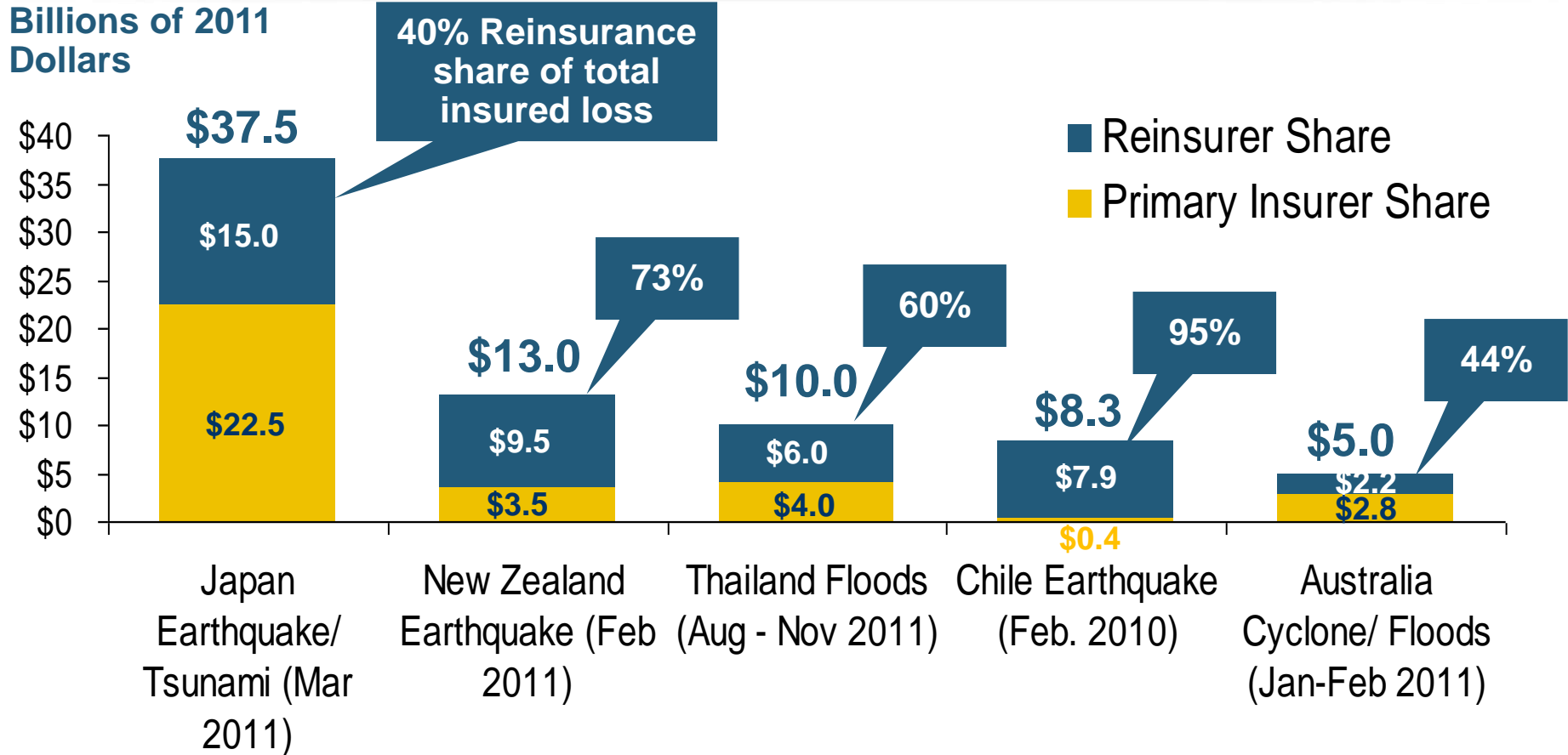
1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2009 dollars.
2. Excludes snow.
3. Does not include NFIP flood losses
4. Includes wildland fires
5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those covered by workers compensation.

Source: ISO's Property Claim Services Unit.

GLOBAL REINSURANCE MARKET IMPACTS

**Global Reinsurance Markets
Proved Resilient Despite
Record Catastrophe Losses
Worldwide**

Reinsurer Share of Recent Significant Market Losses



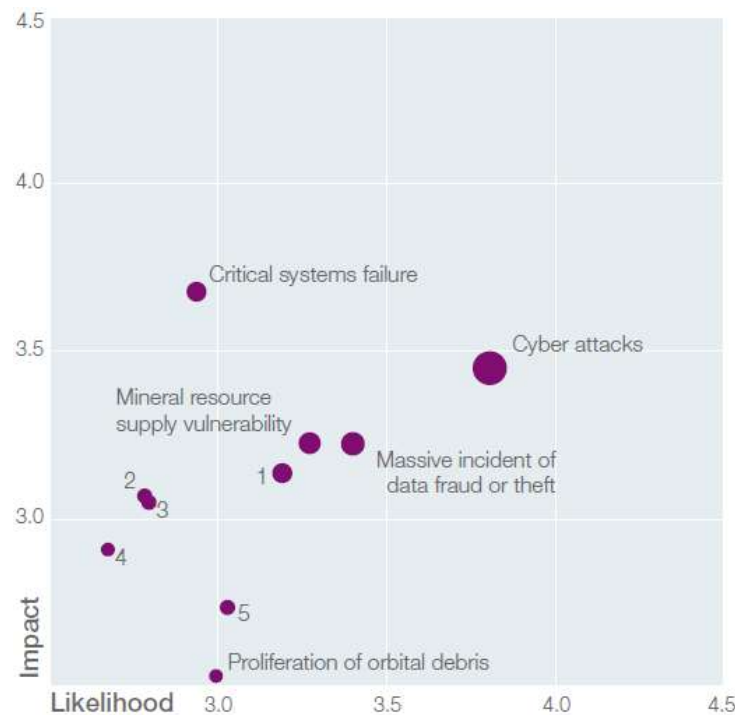
Reinsurers Paid a High Proportion of Insured Losses Arising from Major Catastrophic Events Around the World in Recent Years

Technological Risks: Vulnerability and Susceptibility Vary Across the Globe

■ Technological Risks

- ◆ Cyber attacks
- ◆ Massive data fraud/theft
- ◆ Mineral resource supply vulnerability
- ◆ Massive digital misinformation
- ◆ Unintended consequences of new life sciences technologies
- ◆ Unintended consequences of climate change mitigation
- ◆ Unintended consequences of nanotechnology

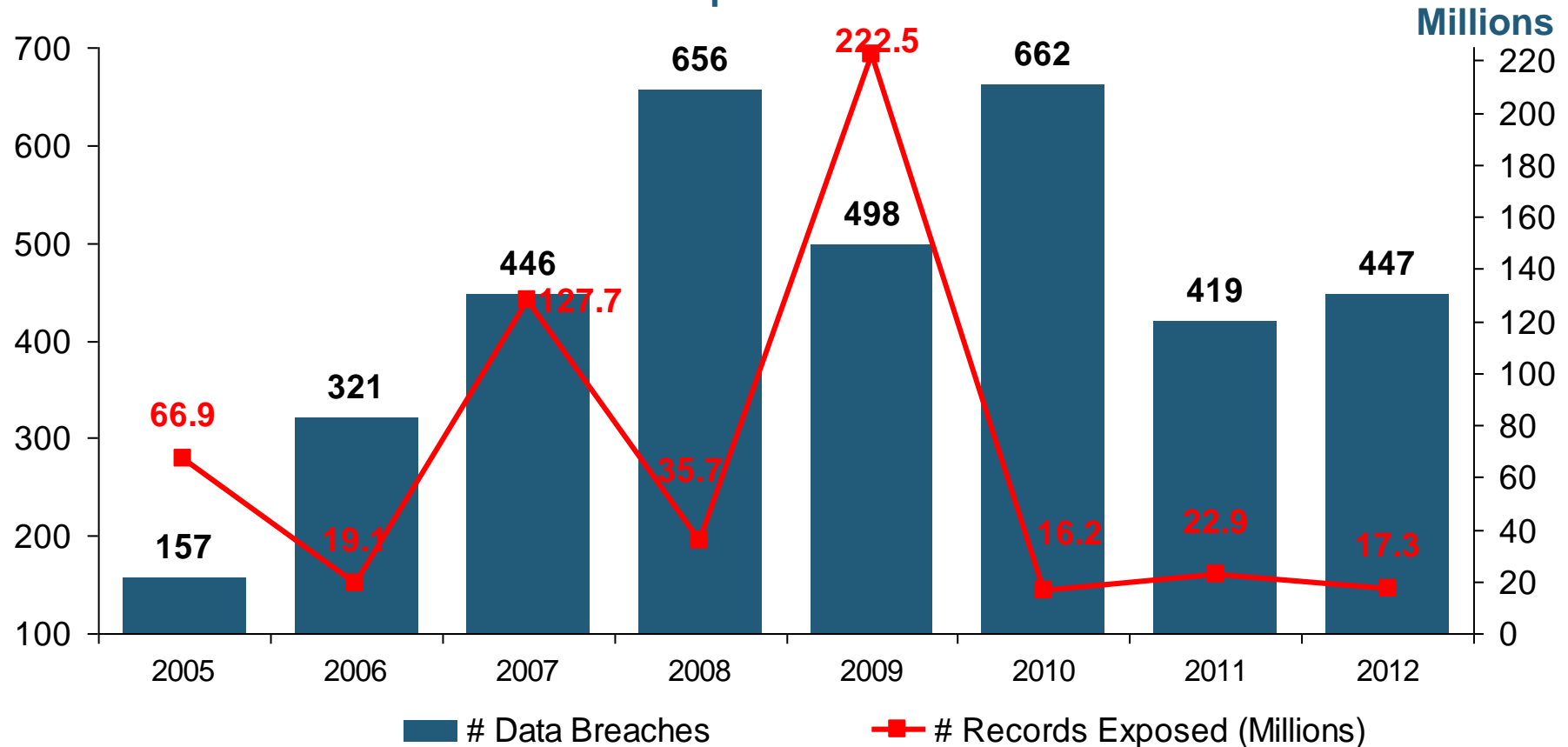
Technological Risk Landscape



- ① Massive digital misinformation
- ② Unintended consequences of new life science technologies
- ③ Unintended consequences of climate change mitigation
- ④ Unintended consequences of nanotechnology
- ⑤ Failure of intellectual property regime

U.S. Data Breaches 2005-2013, By Number of Breaches and Records Exposed

Data Breaches/Millions of Records Exposed



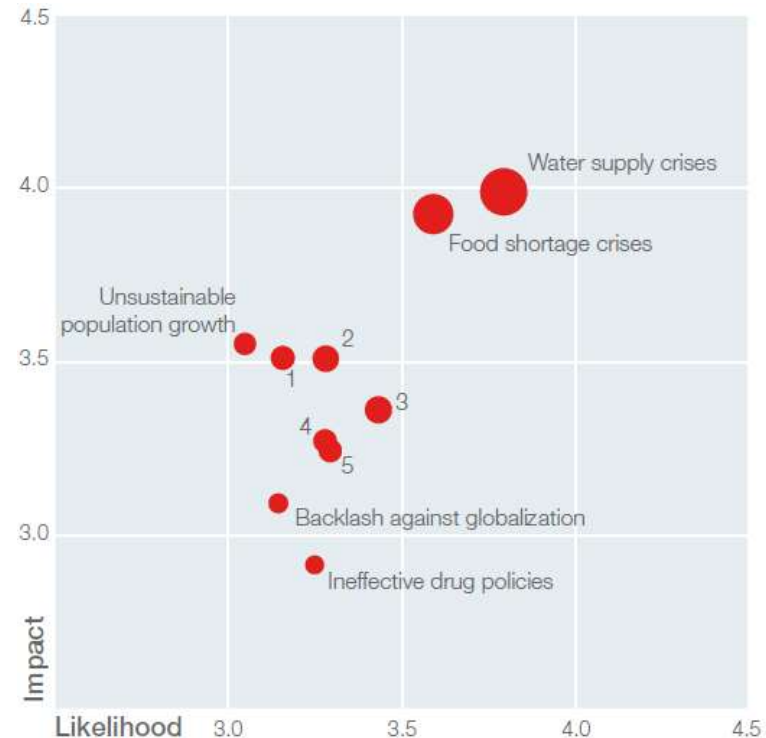
The total number of data breaches and number of records exposed fluctuates from year to year and over time.

Societal Risks: Vulnerability and Susceptibility Vary Across the Globe

■ Societal Risks

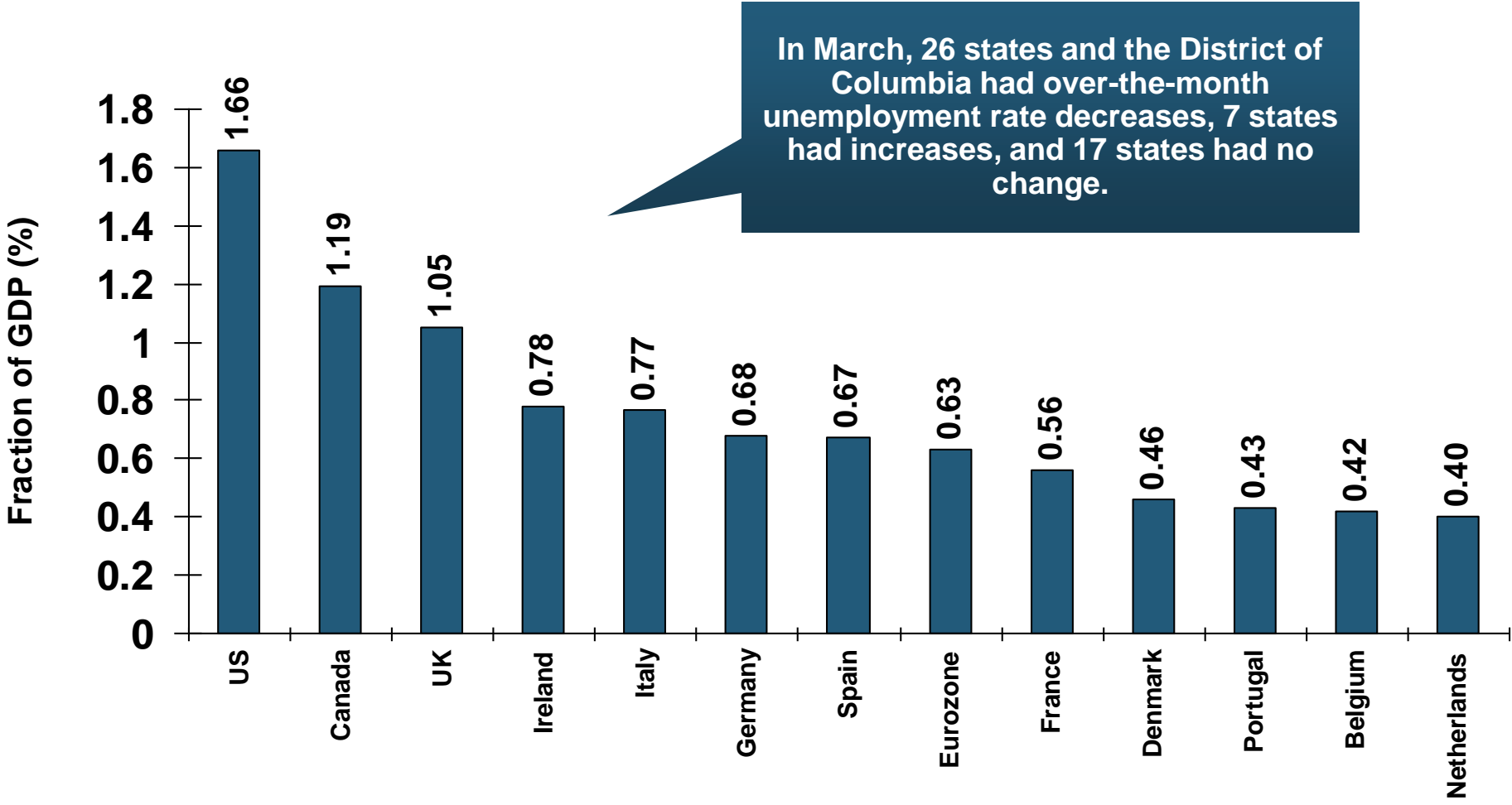
- ◆ Water supply crisis
- ◆ Food shortage crisis
- ◆ Rising religious fanaticism
- ◆ Vulnerability to pandemics
- ◆ Unmanaged migration
- ◆ Mismanagement of population aging
- ◆ Unsustainable population growth
- ◆ Backlash against globalization
- ◆ Ineffective drug policies

Societal Risk Landscape



- ① Vulnerability to pandemics
- ② Rising religious fanaticism
- ③ Mismanagement of population aging
- ④ Unmanaged migration
- ⑤ Rising rates of chronic disease

Liability Costs as a Fraction of GDP, 2011*



*Provisional figures for March 2013, seasonally adjusted.
Sources: US Chamber of Commerce; Insurance Information Institute.

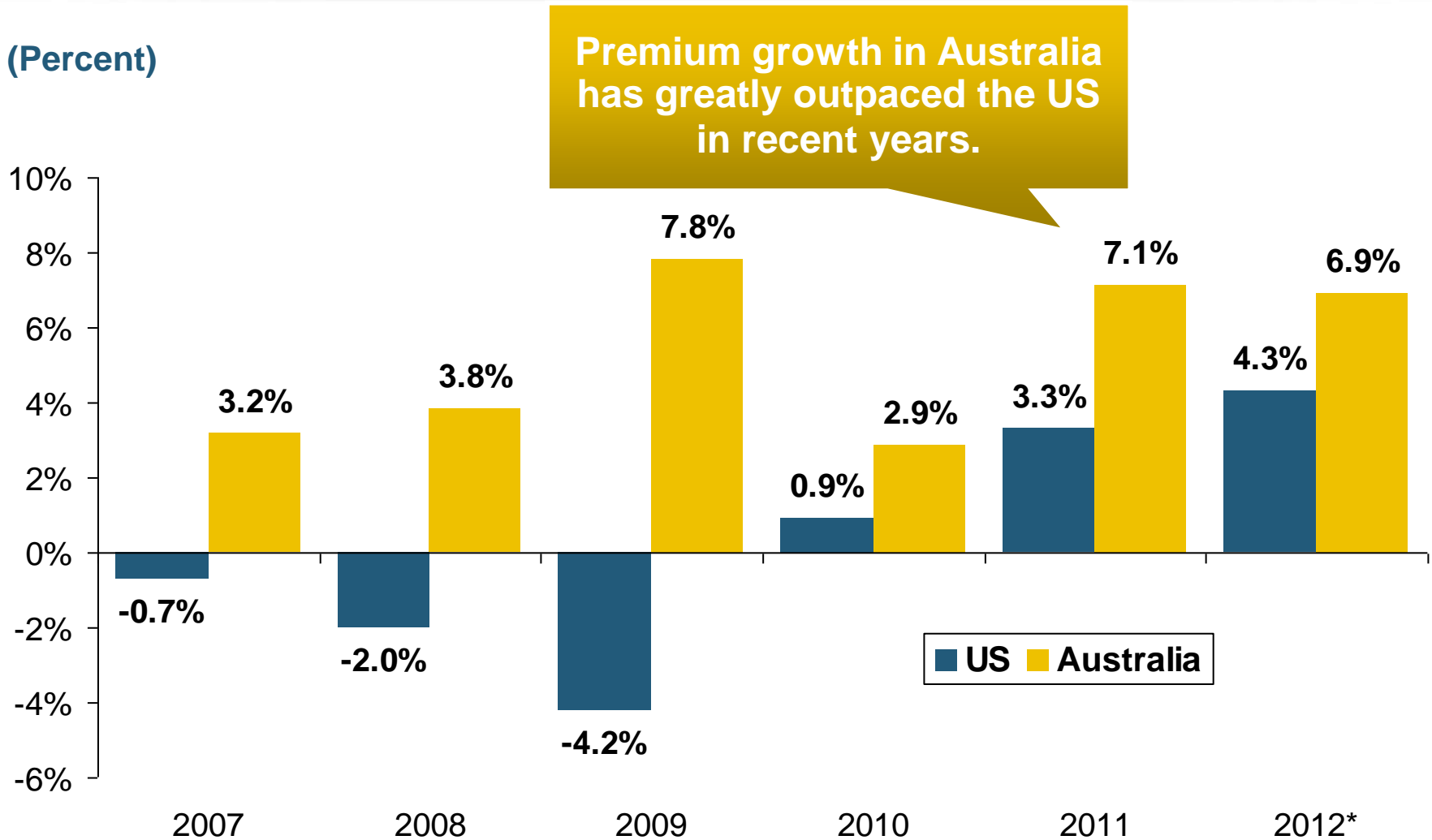


THE NEVER ENDING QUEST FOR GROWTH AND PERFORMANCE

**Insurers, Brokers Around the
World Share Many Concerns**

Growth: Always a Challenge— U.S. More So in Recent Years

(Percent)

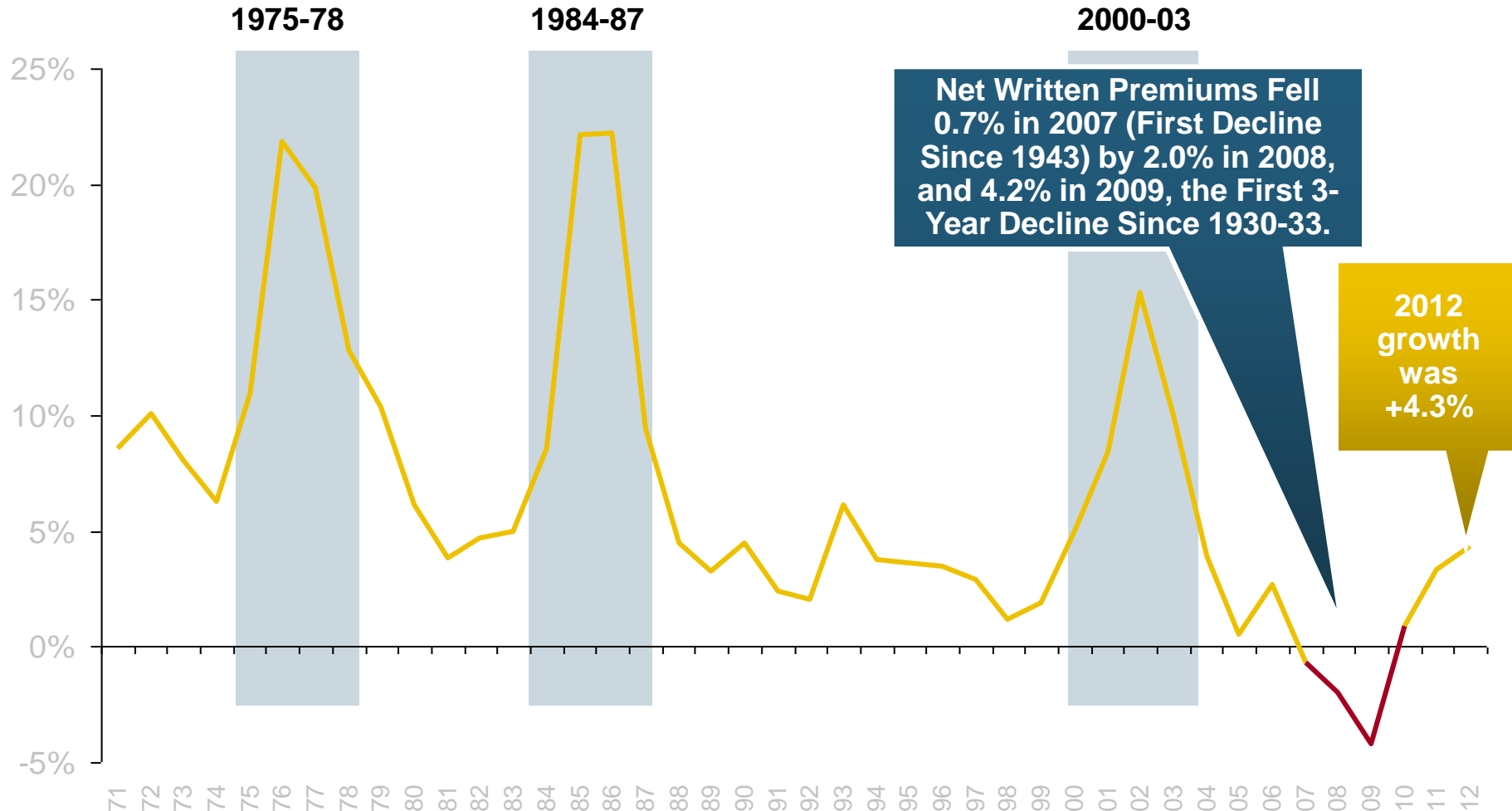


*2012 figure for Australia is through Q2 only.

Source: A.M. Best (U.S.); Australian Prudential Regulatory Authority; Insurance Information Institute.

Net Premium Growth: Annual Change, 1971—2012

(Percent)

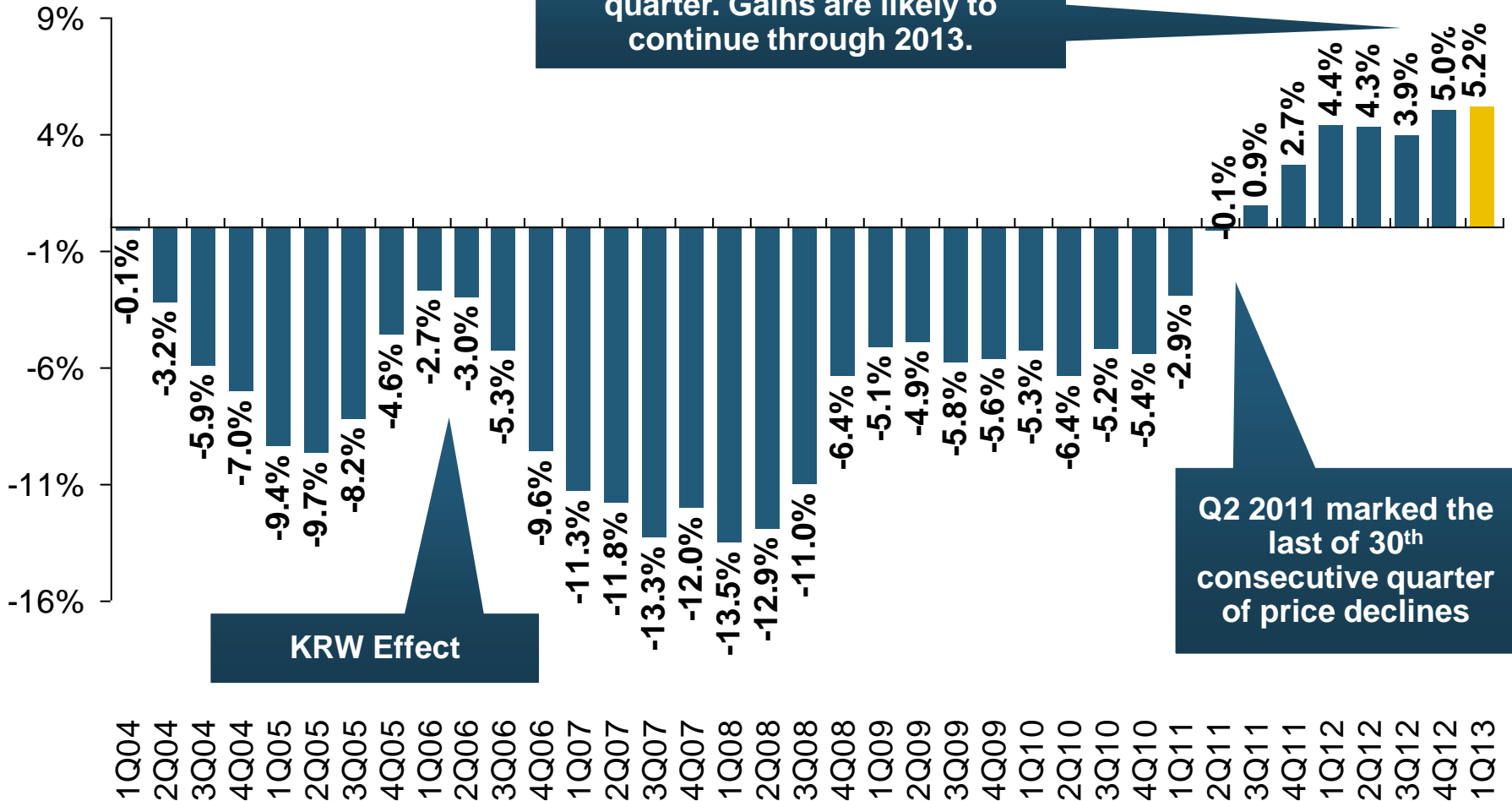


Shaded areas denote “hard market” periods

Sources: A.M. Best (historical and forecast), ISO, Insurance Information Institute.

Average Commercial Rate Change, All Lines, (1Q:2004–1Q:2013)

(Percent)



Pricing as of Q1:2013 was positive for the 8th consecutive quarter. Gains are likely to continue through 2013.

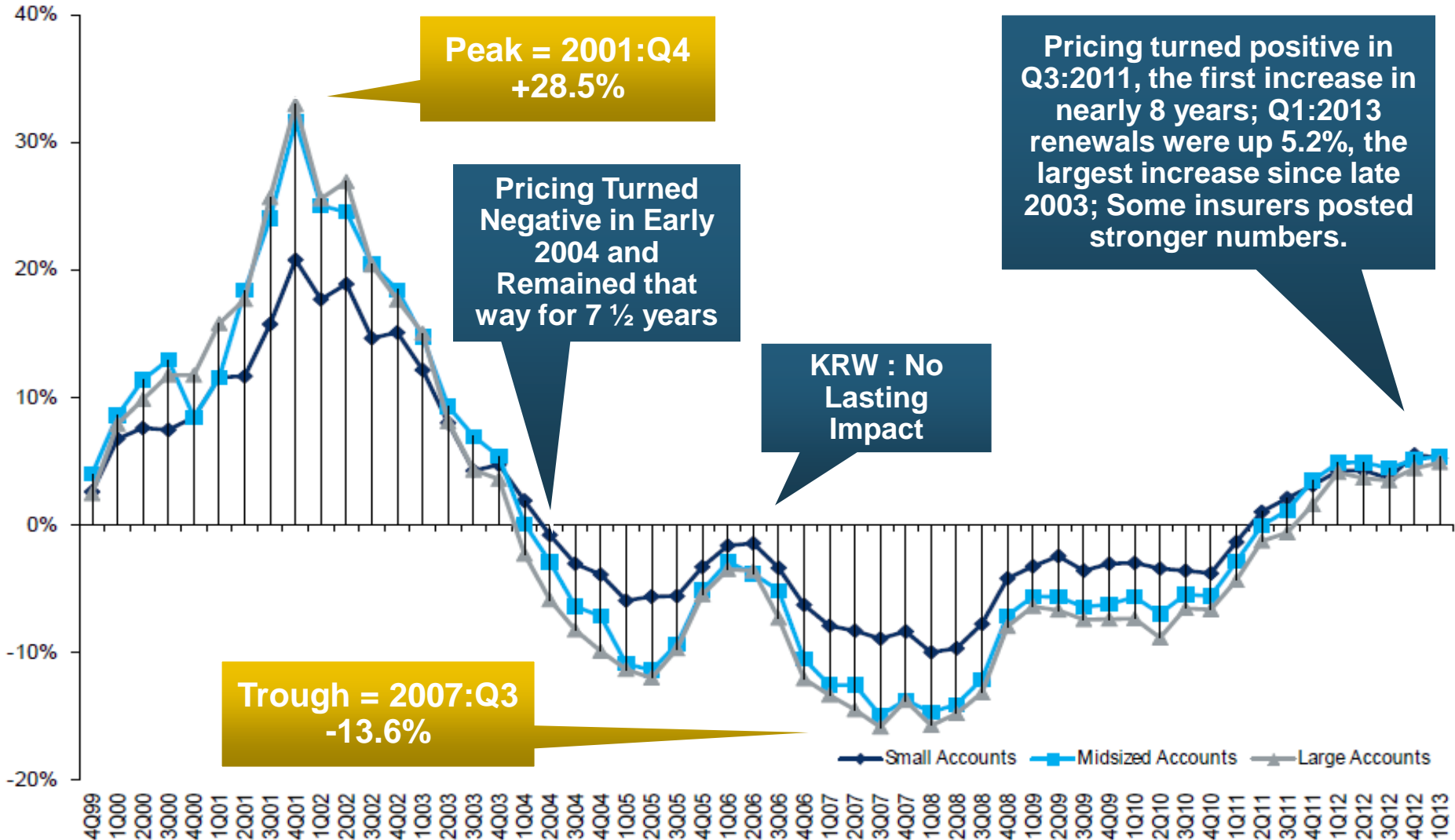
KRW Effect

Q2 2011 marked the last of 30th consecutive quarter of price declines

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
 Source: Council of Insurance Agents & Brokers; Insurance Information Institute

Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2013:Q1

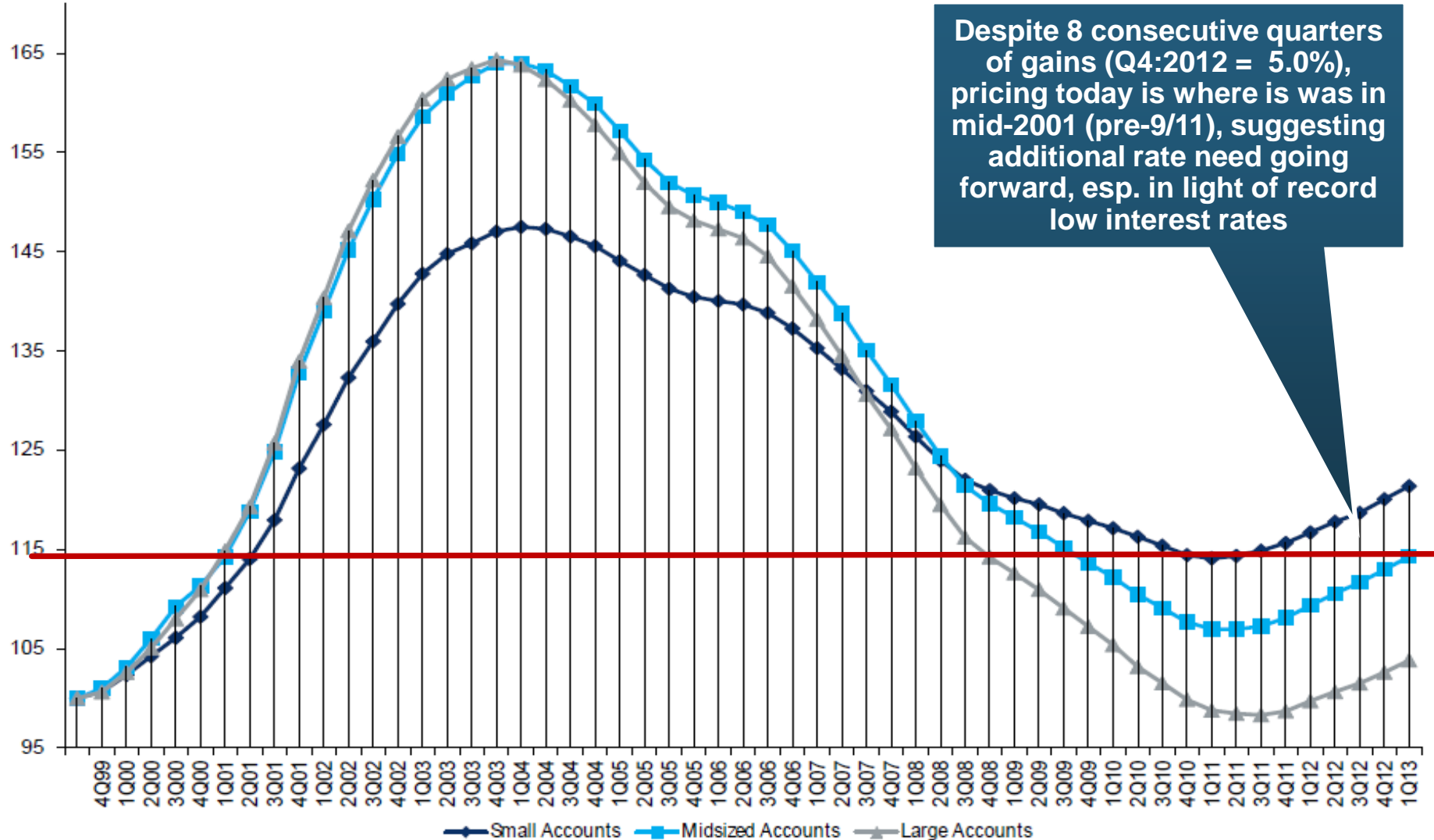
Percentage Change (%)



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
 Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Cumulative Qtrly. Commercial Rate Changes, by Account Size: 1999:Q4 to 2013:Q1

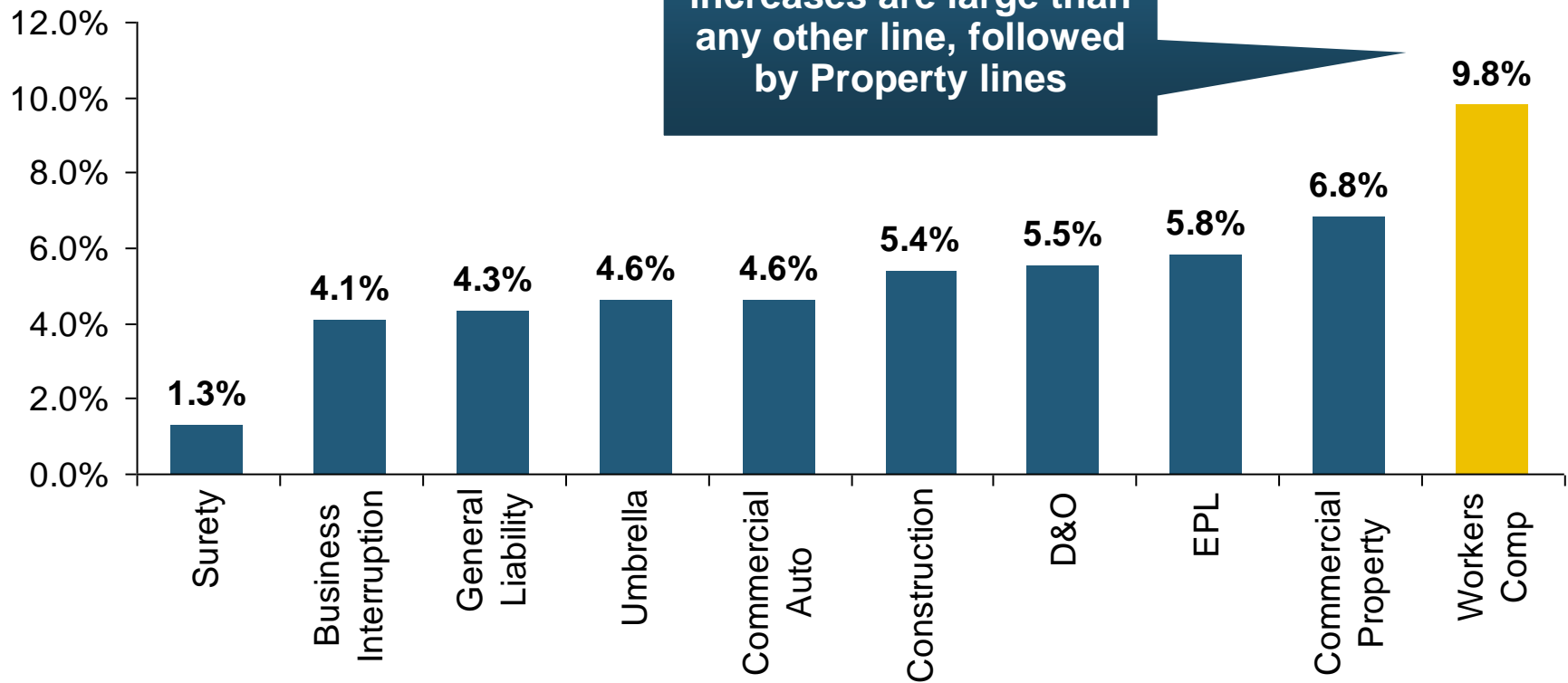
1999:Q4 = 100



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Change in Commercial Rate Renewals, by Line: 2013:Q1

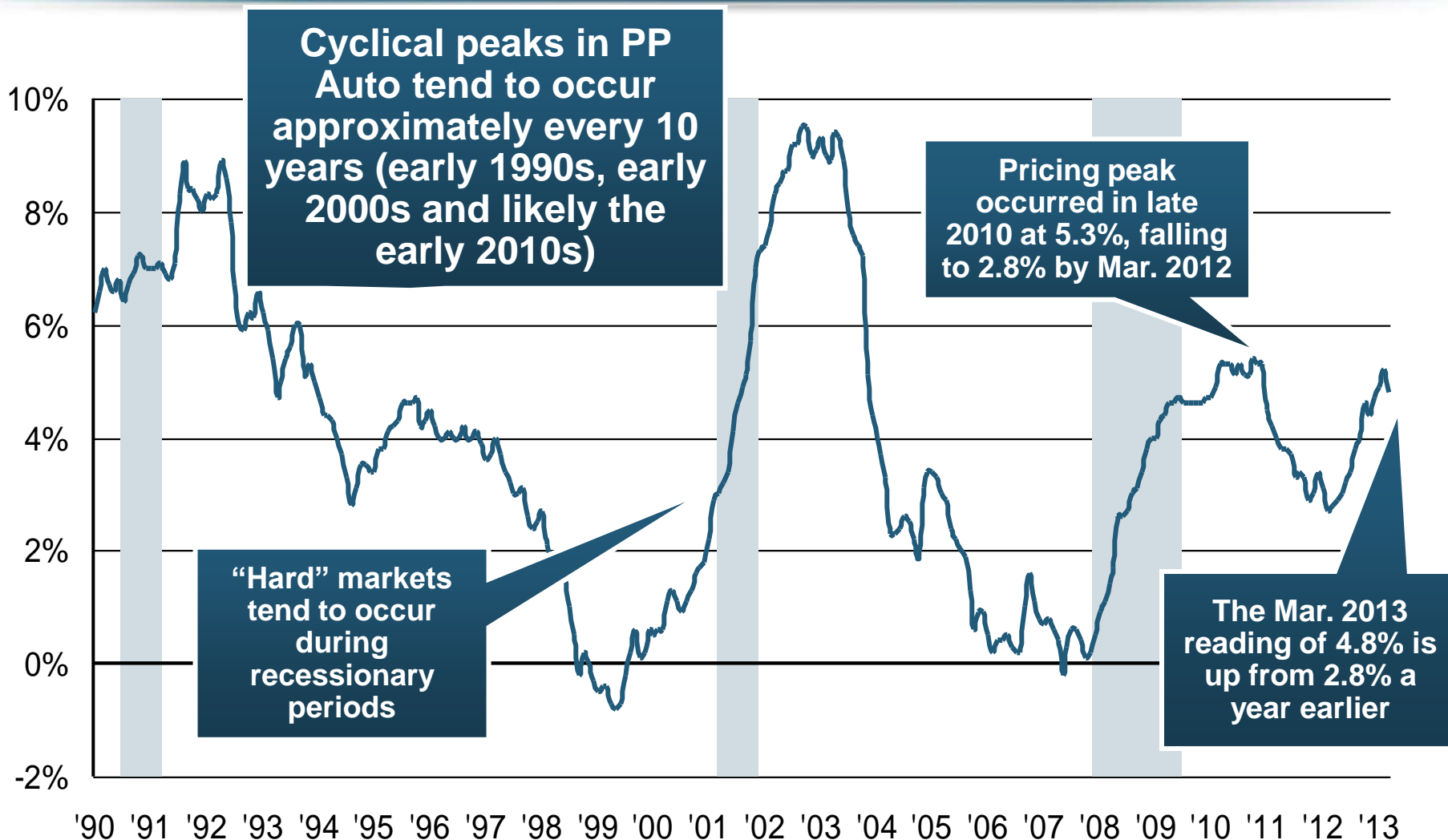
Percentage Change (%)



Major Commercial Lines Renewed Uniformly Upward in Q1:2013 for the 8th Consecutive Quarter; Property Lines & Workers Comp Leading the Way; Cat Losses and Low Interest Rates Provide Momentum Going Forward

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Insurance Information Institute.

Monthly Change* in Auto Insurance Prices, 1991–2013*



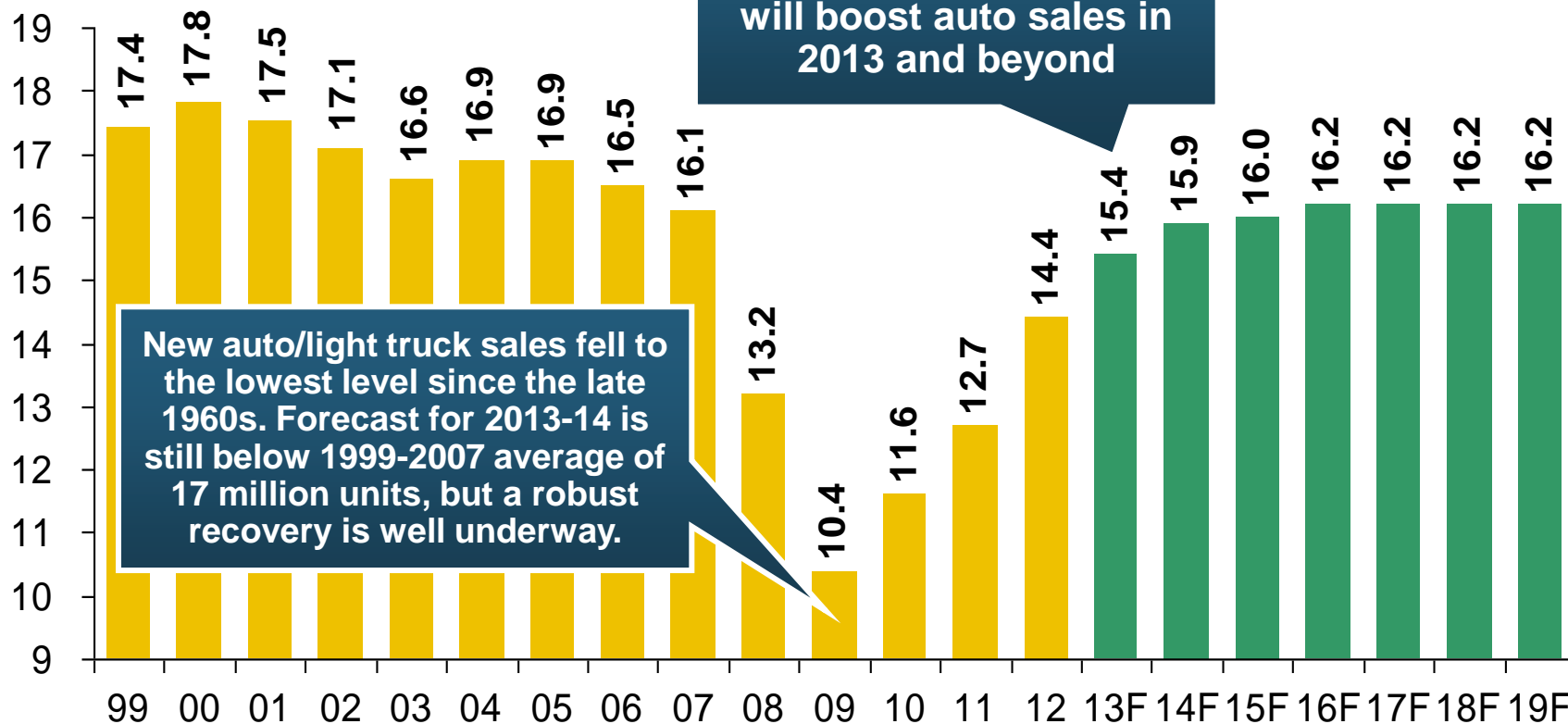
*Percentage change from same month in prior year; through Mar. 2013; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

Sources: US Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institutes.

Auto/Light Truck Sales, 1999-2019F

(Millions of Units)

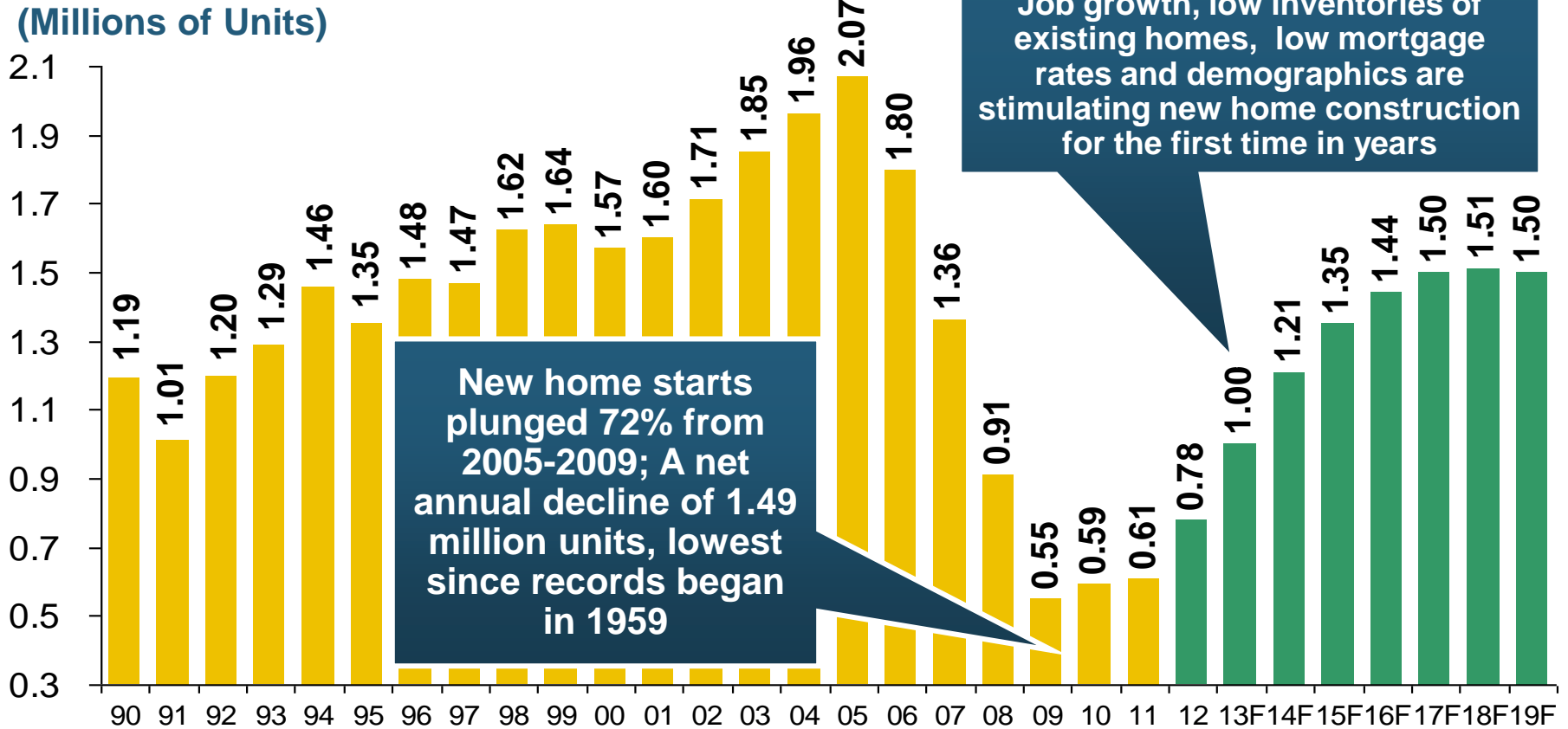


Job growth and improved credit market conditions will boost auto sales in 2013 and beyond

New auto/light truck sales fell to the lowest level since the late 1960s. Forecast for 2013-14 is still below 1999-2007 average of 17 million units, but a robust recovery is well underway.

Car/Light Truck Sales Will Continue to Recover from the 2009 Low Point, Bolstering the Auto Insurer Growth and the Manufacturing Sector.

New Private Housing Starts, 1990-2019F



Homeowners Insurers Are Starting to See Meaningful Exposure Growth for the First Time Since 2005. Commercial Insurers with Construction Risk Exposure, Surety, Workers Comp Also Benefit

Construction Employment, Jan. 2010—March 2013*

(Thousands)

Construction employment growth accelerated in the second half of 2012. Stronger growth in this key sector is possible in 2013.

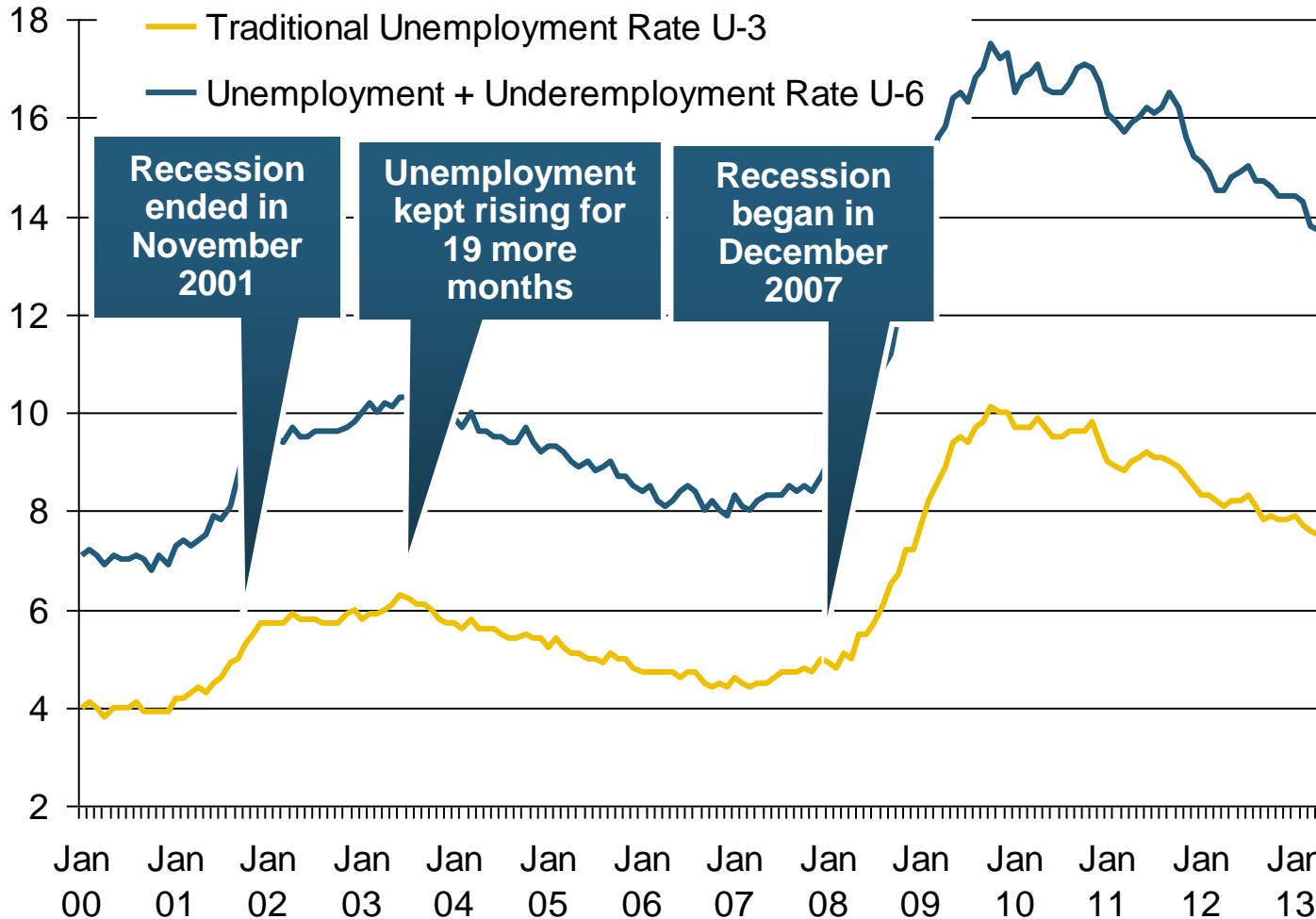


*Seasonally adjusted

Sources: US Bureau of Labor Statistics at <http://data.bls.gov>; Insurance Information Institute.

Unemployment and Underemployment Rates: Stubbornly High in 2012, But Falling

January 2000 through Apr. 2013, Seasonally Adjusted (%)



U-6 went from 8.0% in March 2007 to 17.5% in October 2009; Stood at 13.7% in Apr. 2013

Unemployment stood at 7.5% in Apr. 2013—lowest in 4 years.

Unemployment peaked at 10.1% in October 2009, highest monthly rate since 1983.

Peak rate in the last 30 years: 10.8% in November - December 1982

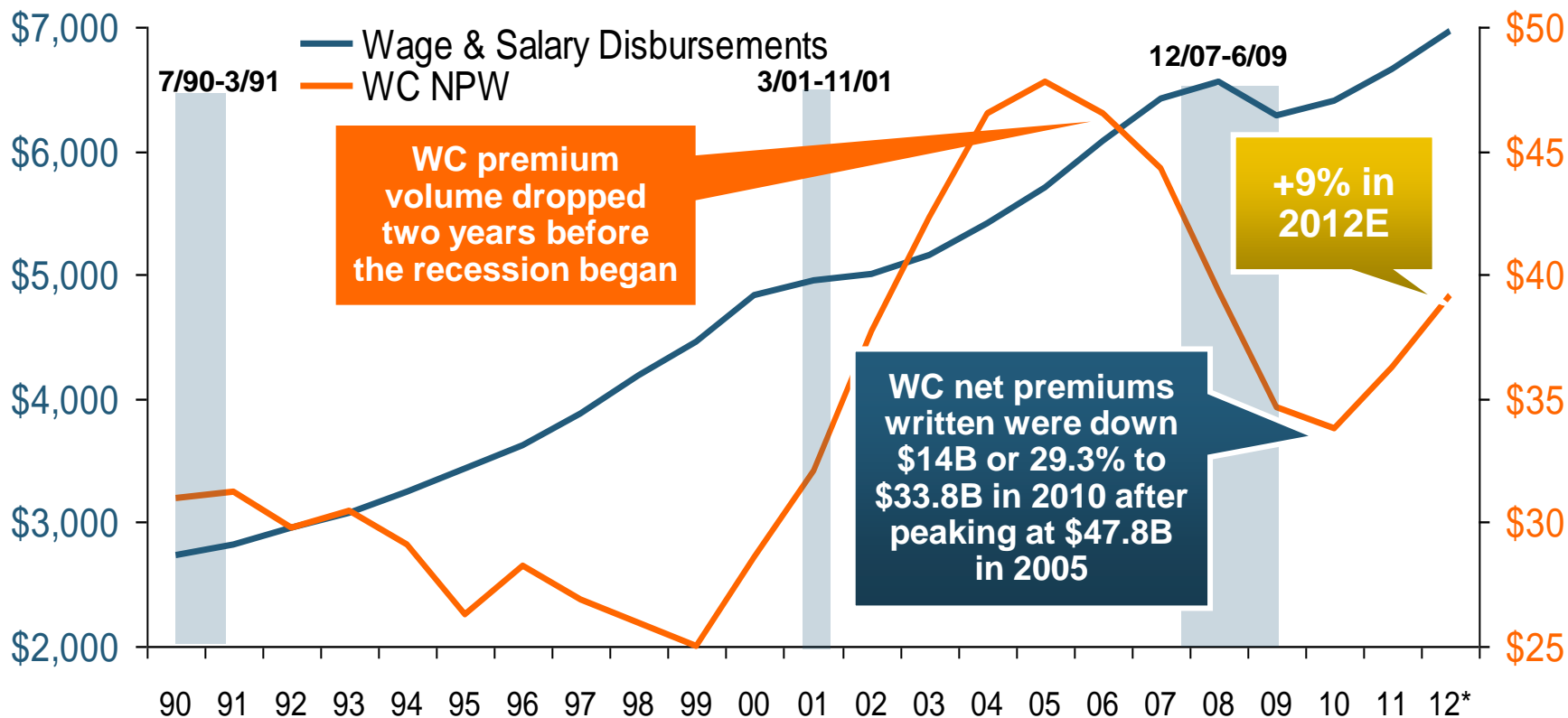
Stubbornly high unemployment and underemployment constrain overall economic growth, but the job market is now clearly improving

Source: US Bureau of Labor Statistics; Insurance Information Institute.

Payroll vs. Workers Comp Net Written Premiums, 1990-2012E

Payroll Base*
\$Billions

WC NWP
\$Billions



Continued Payroll Growth and Rate Increases Suggest WC NWP Will Grow Again in 2012; +7.9% Growth in 2011 Was the First Gain Since 2005

*Private employment; Shaded areas indicate recessions. WC premiums for 2012 are I.I.I. estimate based YTD 2012 actuals. Sources: NBER (recessions); Federal Reserve Bank of St. Louis at <http://research.stlouisfed.org/fred2/series/WASCUR> ; NCCI; I.I.I.

12 Industries for the Next 10 Years: Insurance Solutions Needed

Health Care

Health Sciences

Energy (Traditional)

Alternative Energy

Petrochemical

Agriculture

Natural Resources

Technology (incl. Biotechnology)

Light Manufacturing

Insourced Manufacturing

Export-Oriented Industries

Shipping (Rail, Marine, Trucking, Pipelines)



Many industries are poised for growth, though insurers' ability to capitalize on these industries varies widely

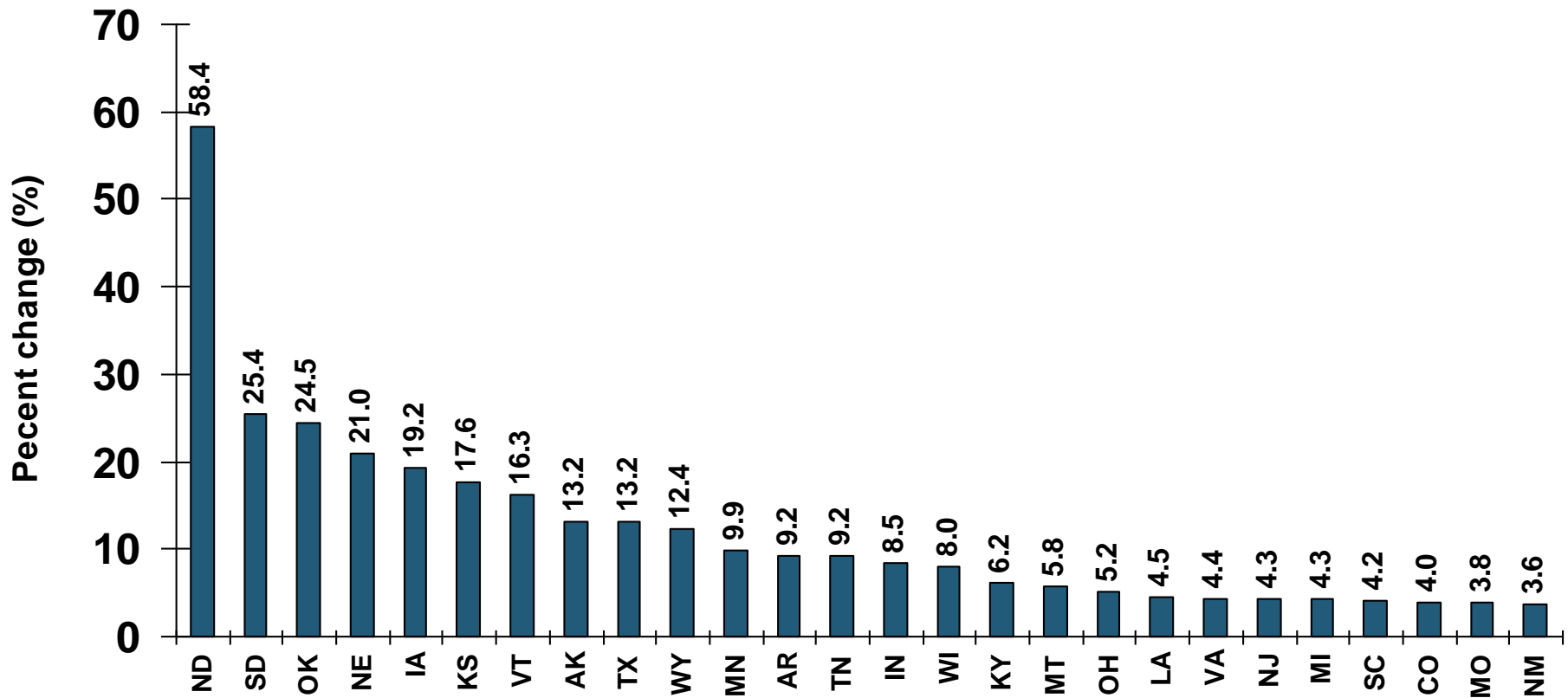


Growth Analysis by State and Business Segment

Premium Growth Rates Vary Tremendously by State

Direct Premiums Written: Total P/C Percent Change by State, 2007-2012*

Top 25 States

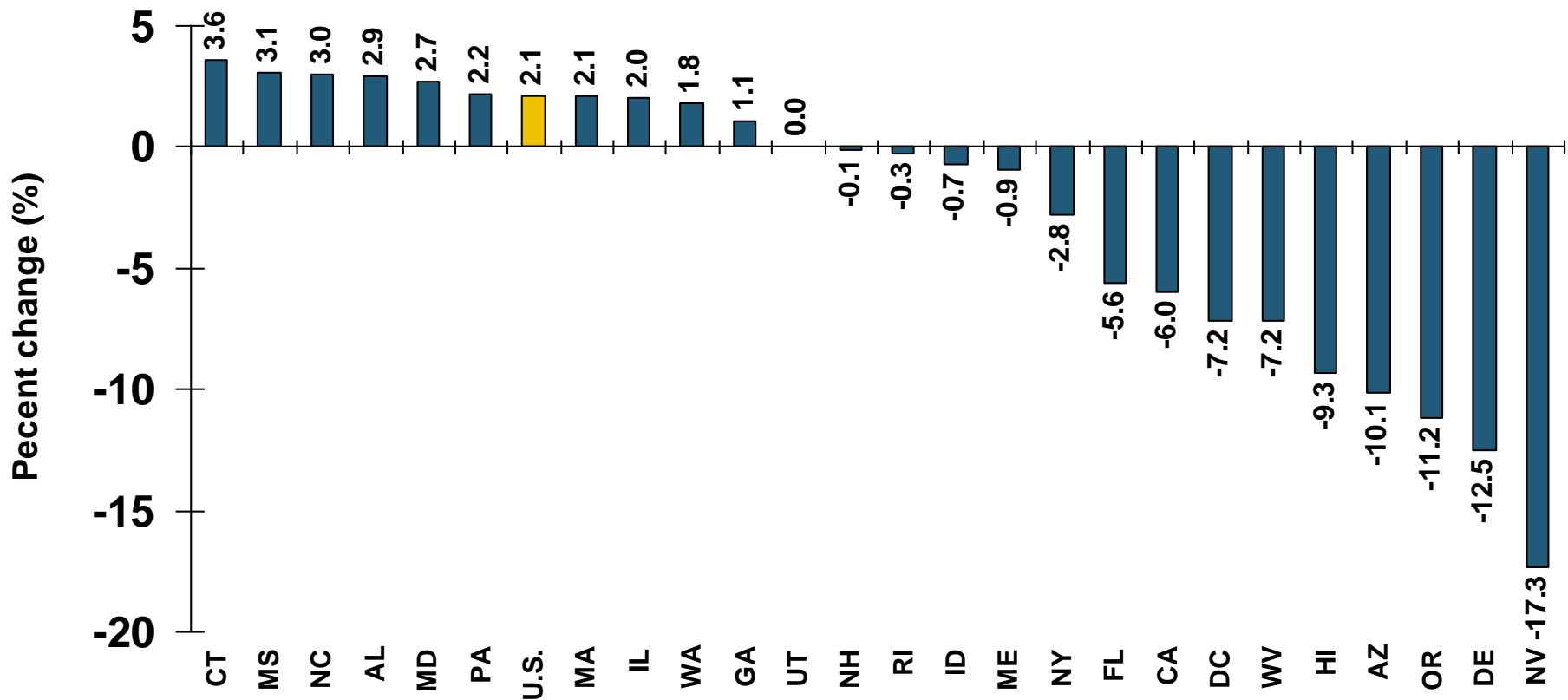


*Data are preliminary as of 5/1/13 and do not yet fully reflect the impact of state-run pools and plans.

Sources: SNL Financial LC.; Insurance Information Institute.

Direct Premiums Written: Total P/C Percent Change by State, 2007-2012*

Bottom 25 States



*Data are preliminary as of 5/1/13 and do not yet fully reflect the impact of state-run pools and plans.

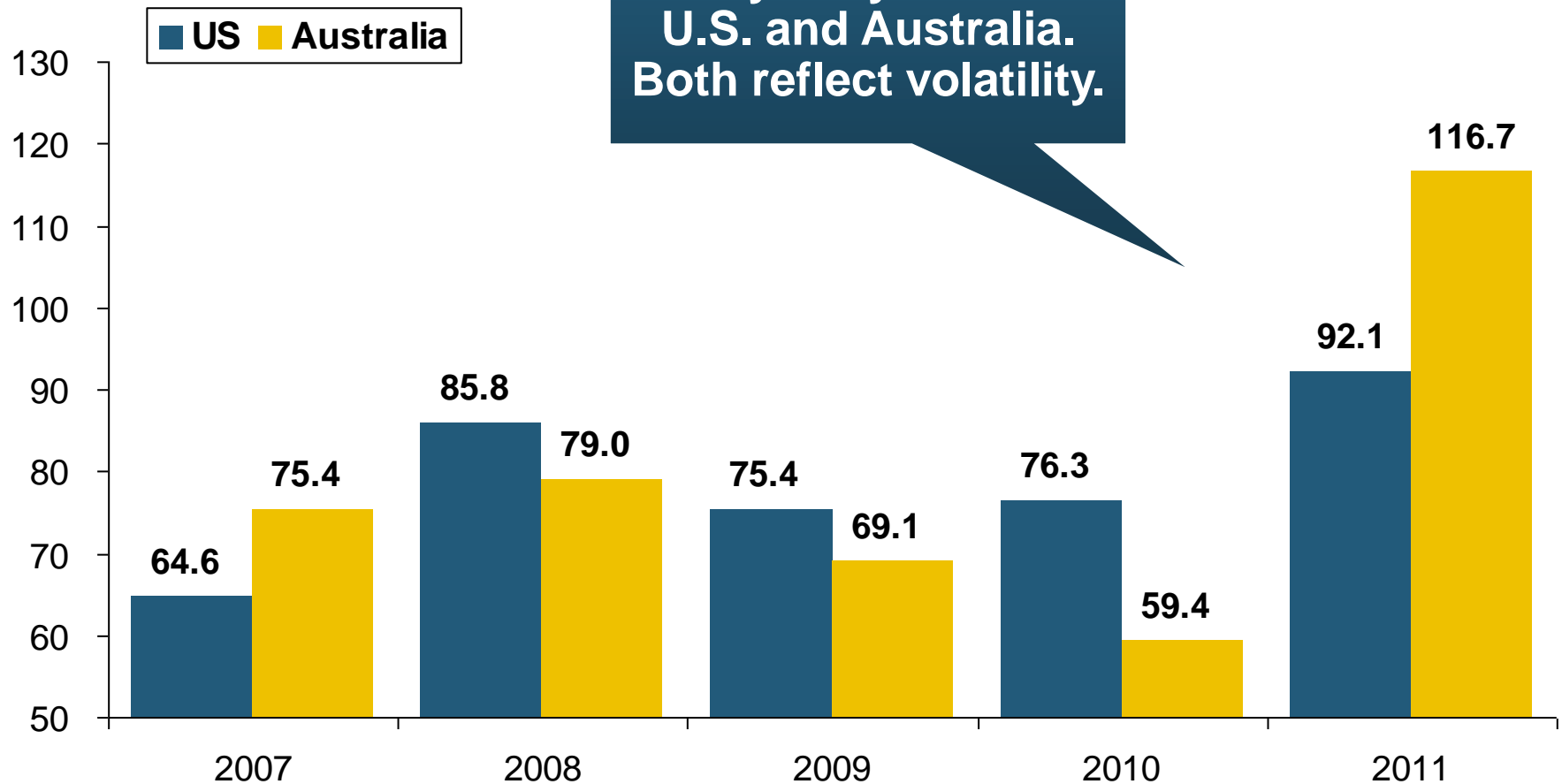
Sources: SNL Financial LC.; Insurance Information Institute.

**UNDERWRITING PERFORMANCE MUST
IMPROVE IN CURRENT LOW INTEREST
RATE ENVIRONMENT**

**Australia and U.S. Underwriting
Performance/Trends Are More Similar than
Might Be Expected**

Loss Ratios: Homeowners (U.S.) & Property (Australia)

(Percent)



*U.S., loss ratios include loss adjustment expense.

Source: A.M. Best (U.S.), Australian Prudential Regulation Authority; Insurance Information Institute

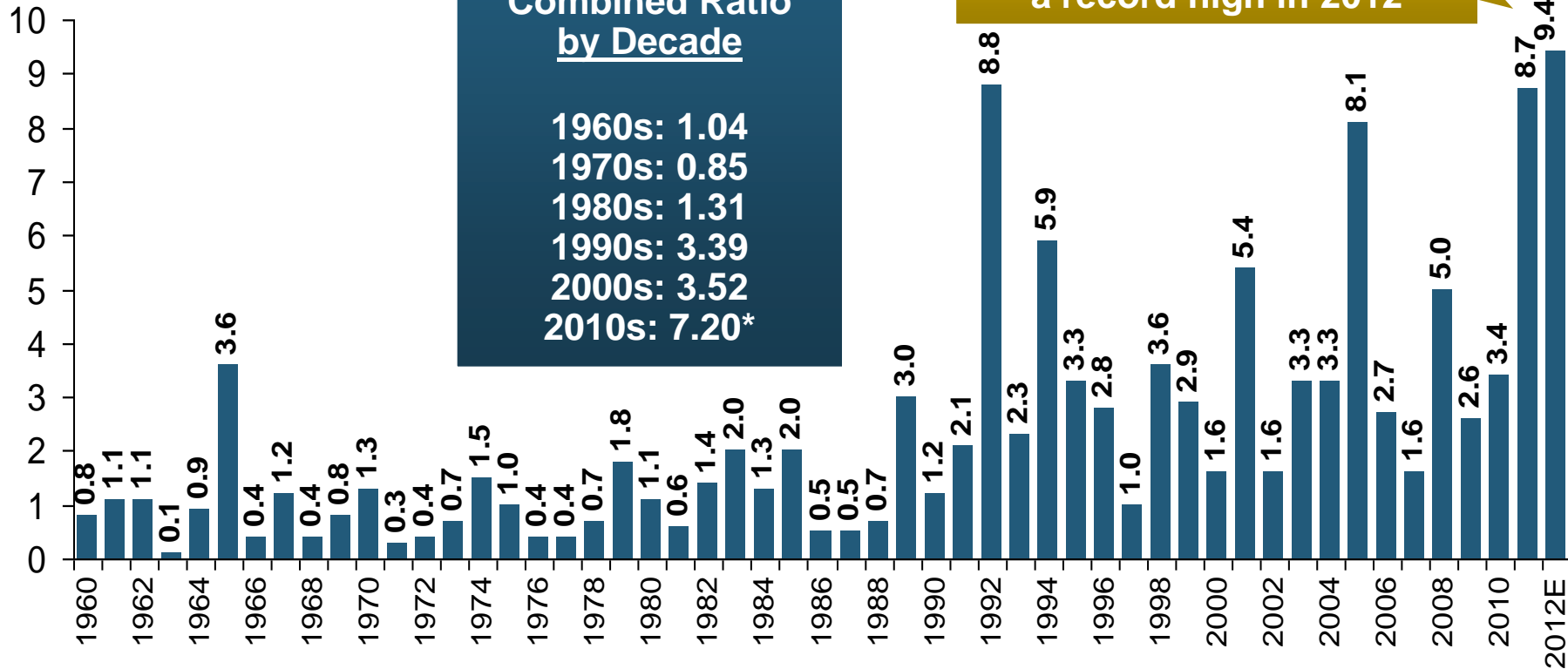
Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2012*

Combined Ratio Points

Avg. CAT Loss Component of the Combined Ratio by Decade

1960s: 1.04
 1970s: 0.85
 1980s: 1.31
 1990s: 3.39
 2000s: 3.52
 2010s: 7.20*

Catastrophe losses as a share of all losses reached a record high in 2012



The Catastrophe Loss Component of Private Insurer Losses Has Increased Sharply in Recent Decades

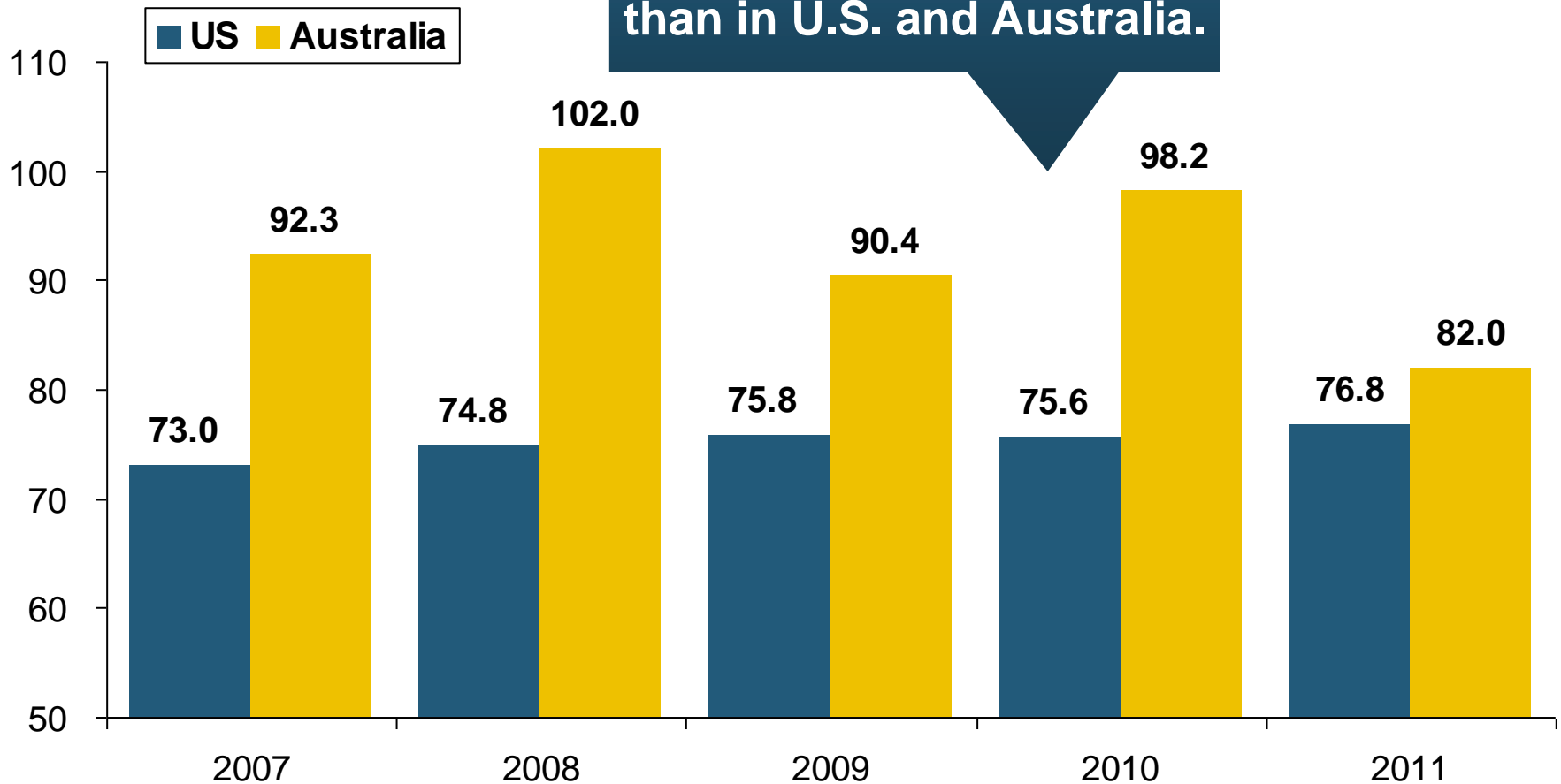
Notes: Private carrier losses only. Excludes loss adjustment expenses and reinsurance reinstatement premiums. Figures are adjusted for losses ultimately paid by foreign insurers and reinsurers.

Source: ISO (1960-2011); A.M. Best (2012E) Insurance Information Institute.

Loss Ratios: Motor/Auto

(Percent)

Loss ratios for motor insurance have been more stable in the U.S. than in U.S. and Australia.



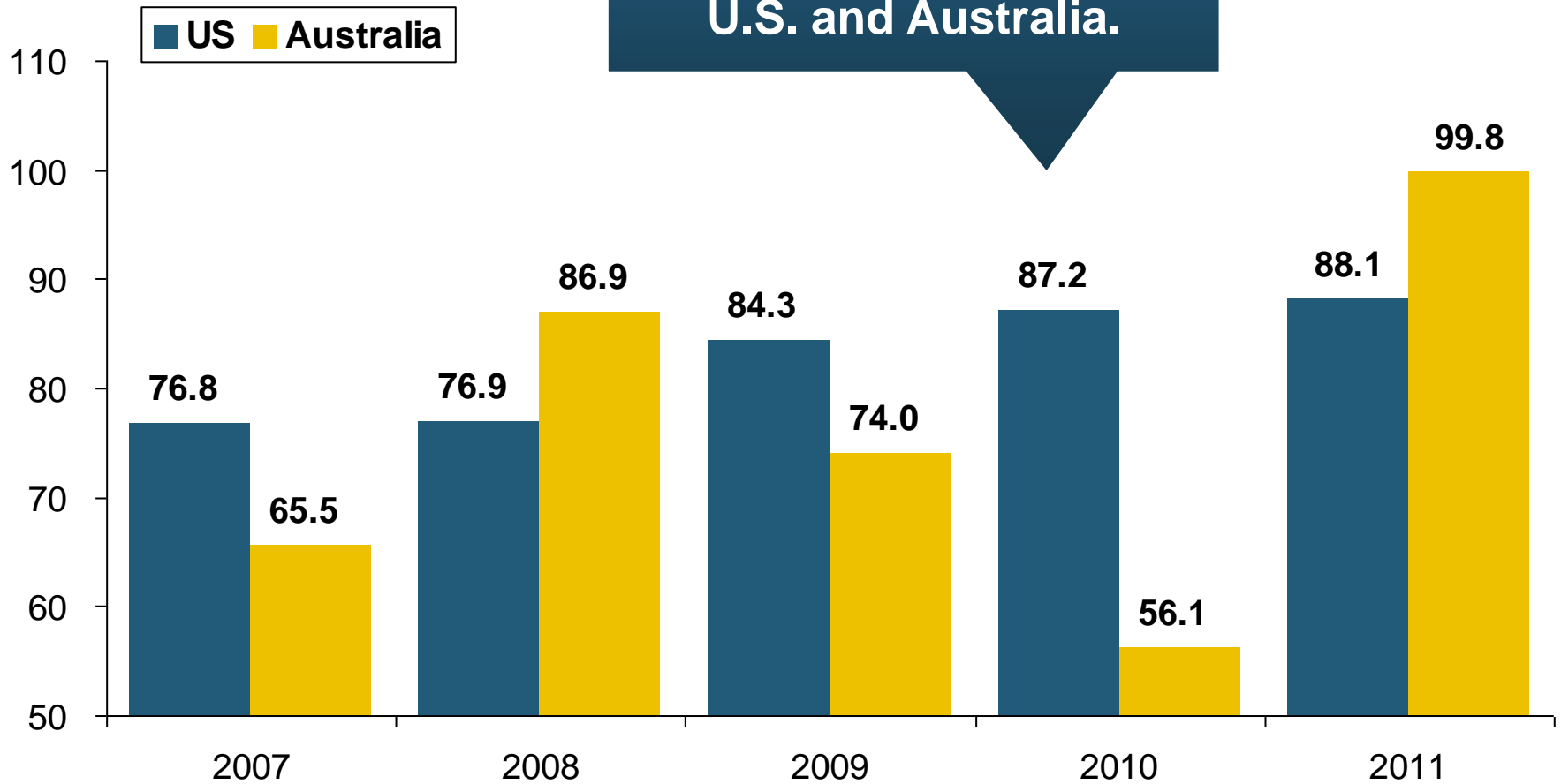
*U.S., loss ratios include loss adjustment expense.

Source: A.M. Best (U.S.), Australian Prudential Regulation Authority; Insurance Information Institute

Loss Ratios: Workers Compensation

(Percent)

Loss ratios for workers comp have generally deteriorated in both the U.S. and Australia.



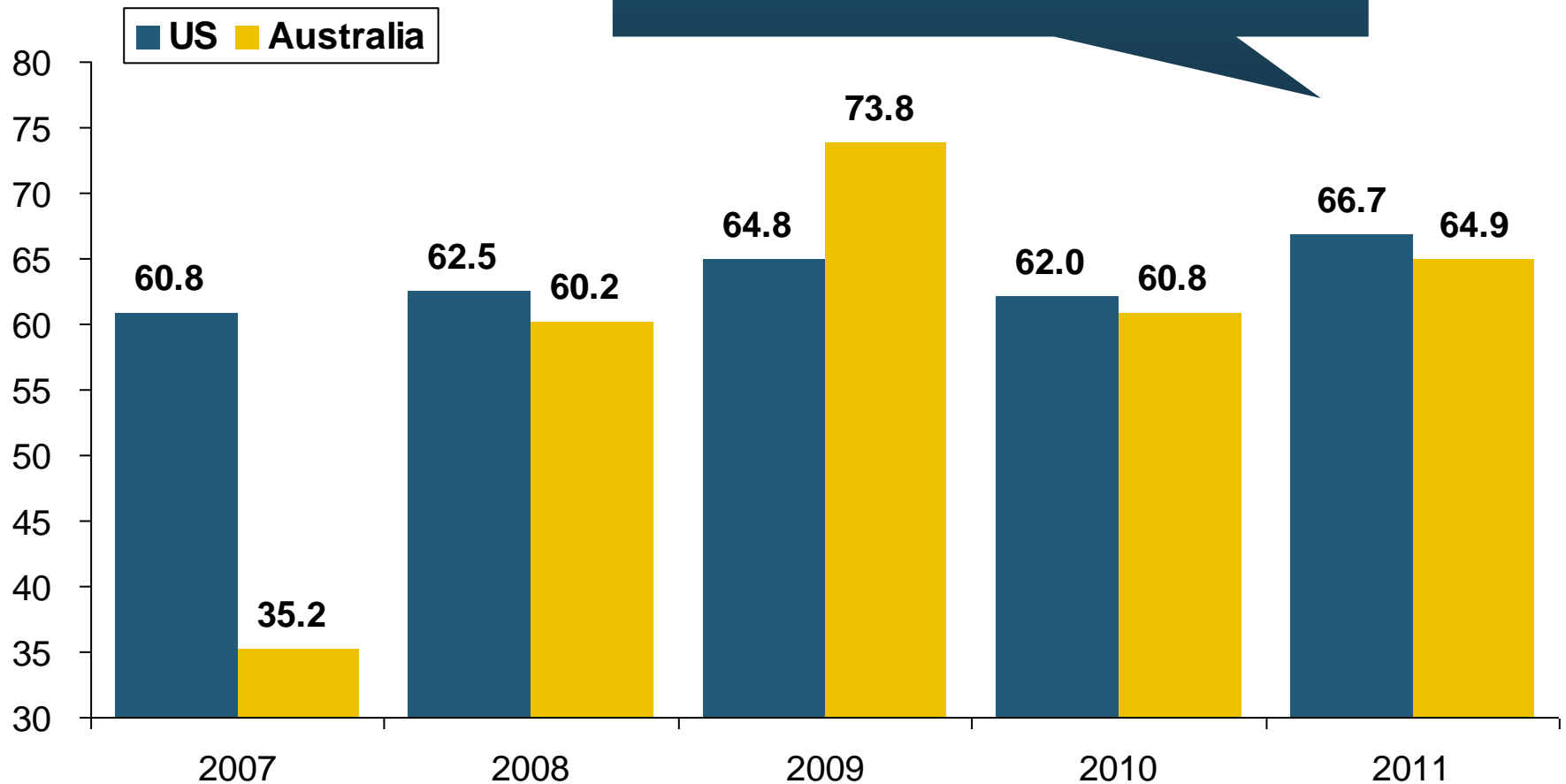
*U.S., loss ratios include loss adjustment expense.

Source: A.M. Best (U.S.), Australian Prudential Regulation Authority; Insurance Information Institute

Loss Ratios: Liability

In recent years, loss ratios for Liability coverage have been similar in the U.S. and Australia.

(Percent)



*U.S., loss ratios include loss adjustment expense.

Source: A.M. Best (U.S.), Australian Prudential Regulation Authority; Insurance Information Institute

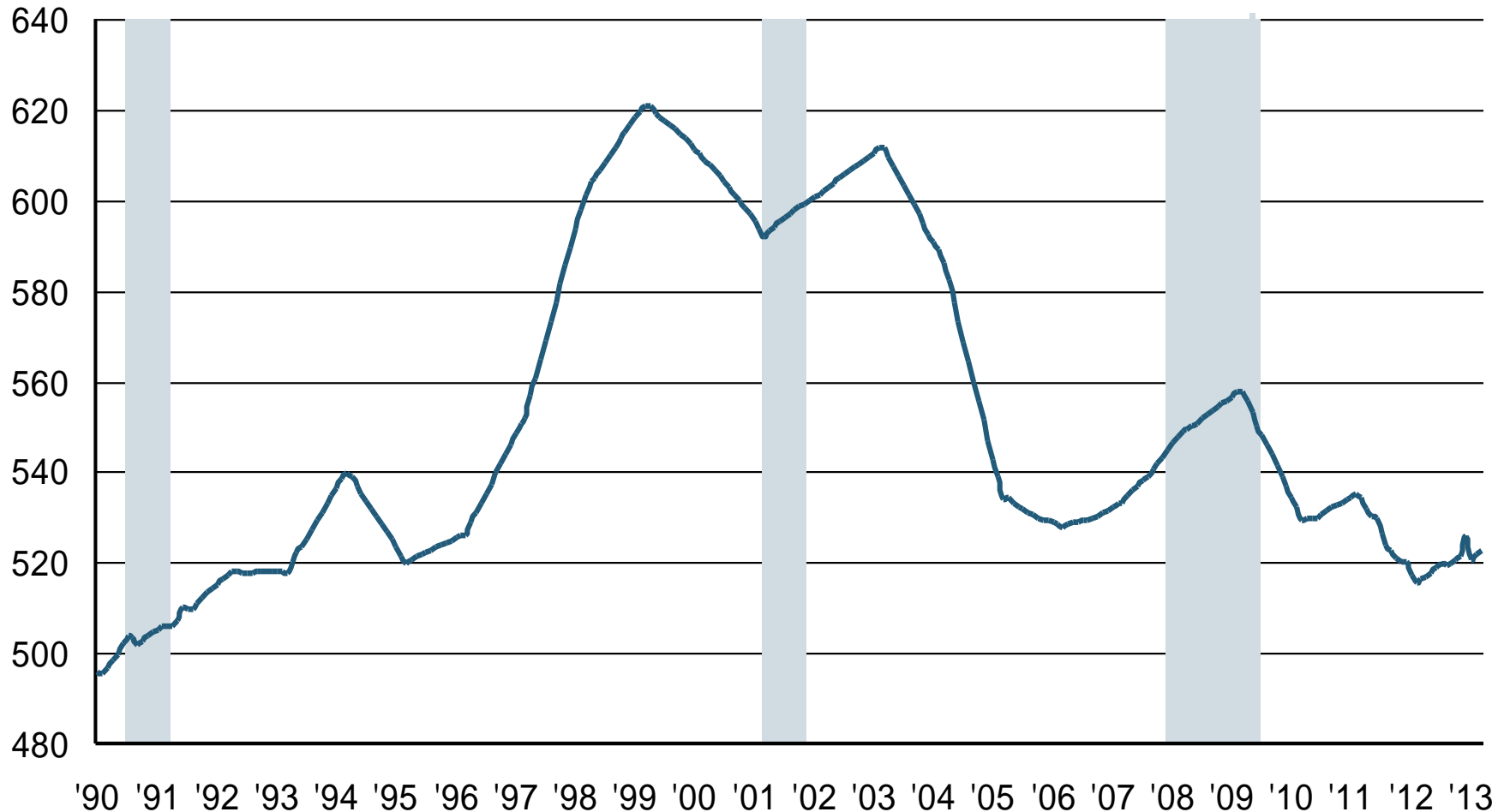


U.S. Insurance Industry Employment Trends

**Soft Market, Difficult Economy,
Outsourcing, Productivity
Enhancements and
Consolidation Contributed to
Industry's Job Losses**

U.S. Employment in the Direct P/C Insurance Industry: 1990–2013*

Thousands



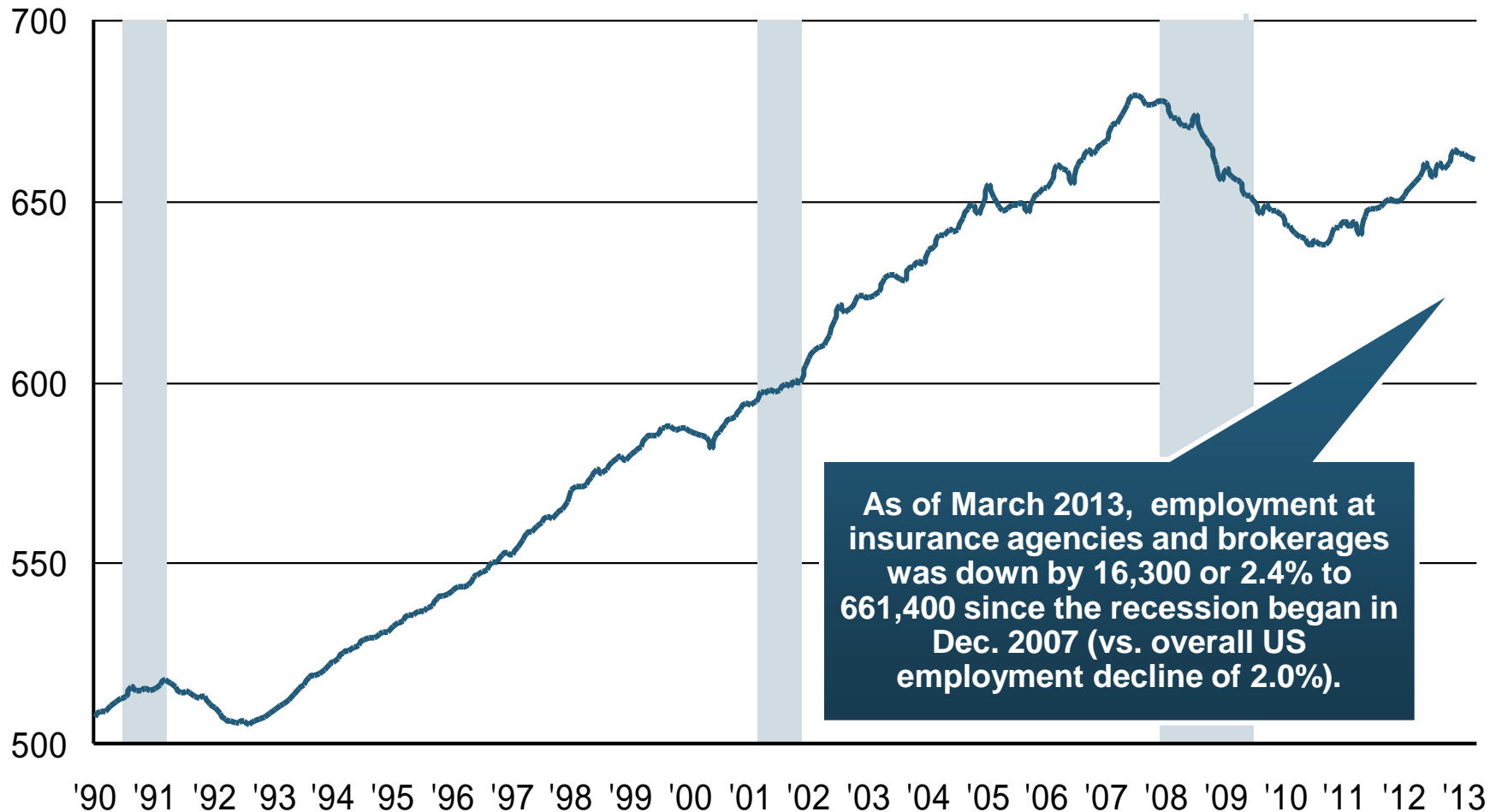
*As of March 2013; Seasonally adjusted; Does not including agents & brokers.

Note: Recessions indicated by gray shaded columns.

Sources: U.S. Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institute.

U.S. Employment in Insurance Agencies & Brokerages: 1990–2013*

Thousands



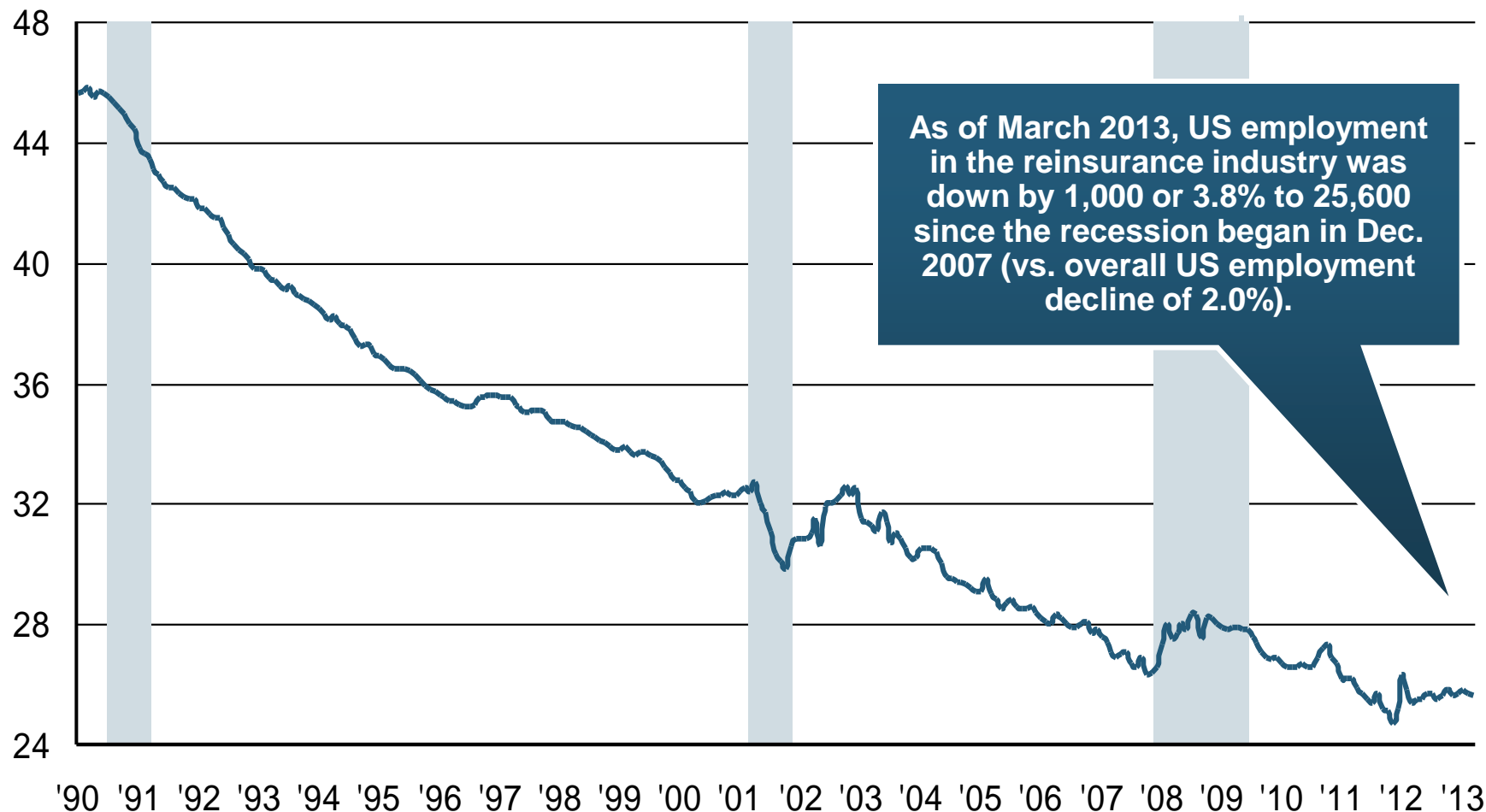
*As of March 2013; Seasonally adjusted. Includes all types of insurance.

Note: Recessions indicated by gray shaded columns.

Sources: U.S. Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institute.

U.S. Employment in the Reinsurance Industry: 1990–2013*

Thousands



*As of March 2013; Seasonally adjusted; Does not including agents & brokers.

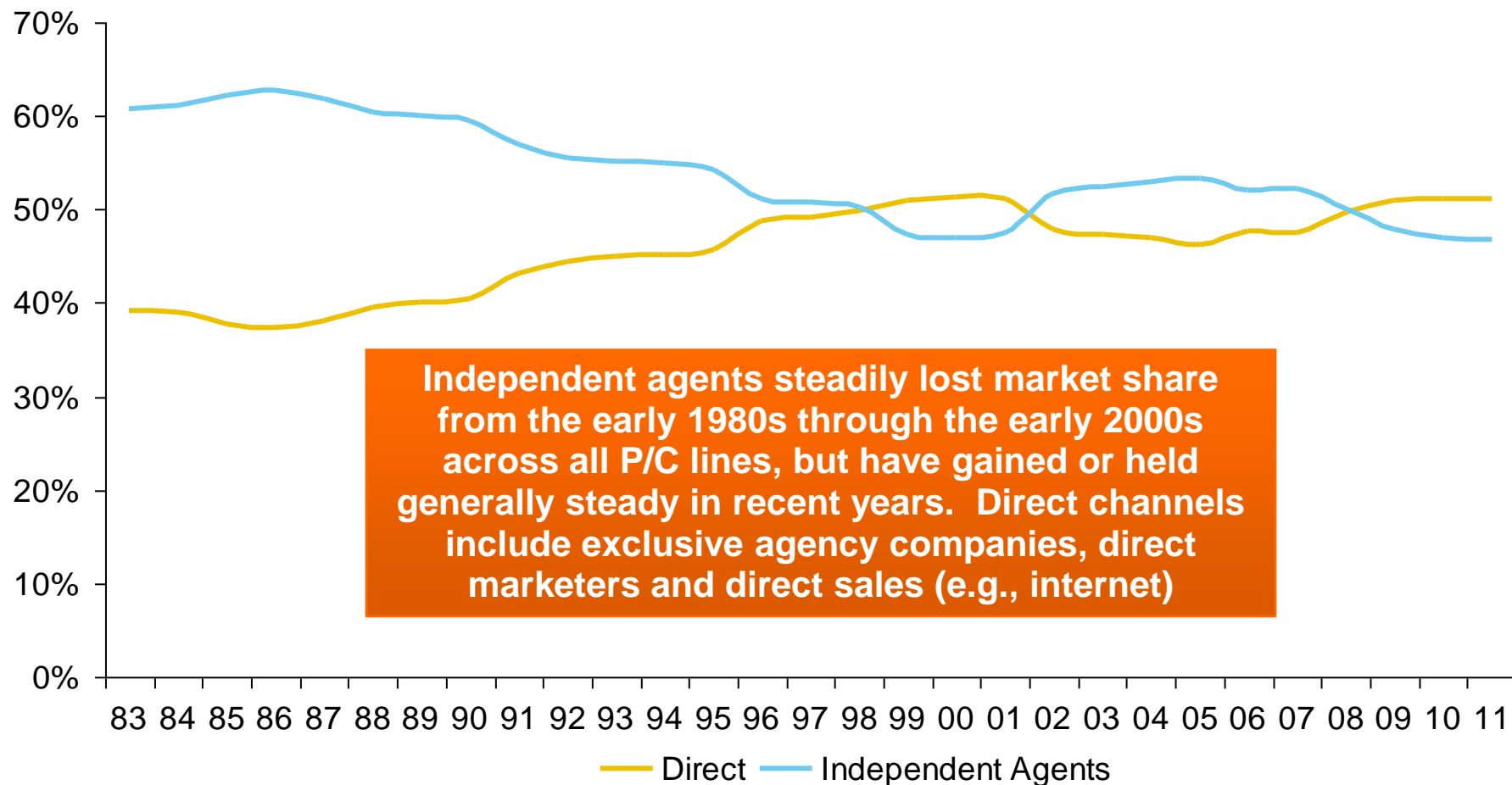
Note: Recessions indicated by gray shaded columns.

Sources: U.S. Bureau of Labor Statistics; National Bureau of Economic Research (recession dates); Insurance Information Institute.

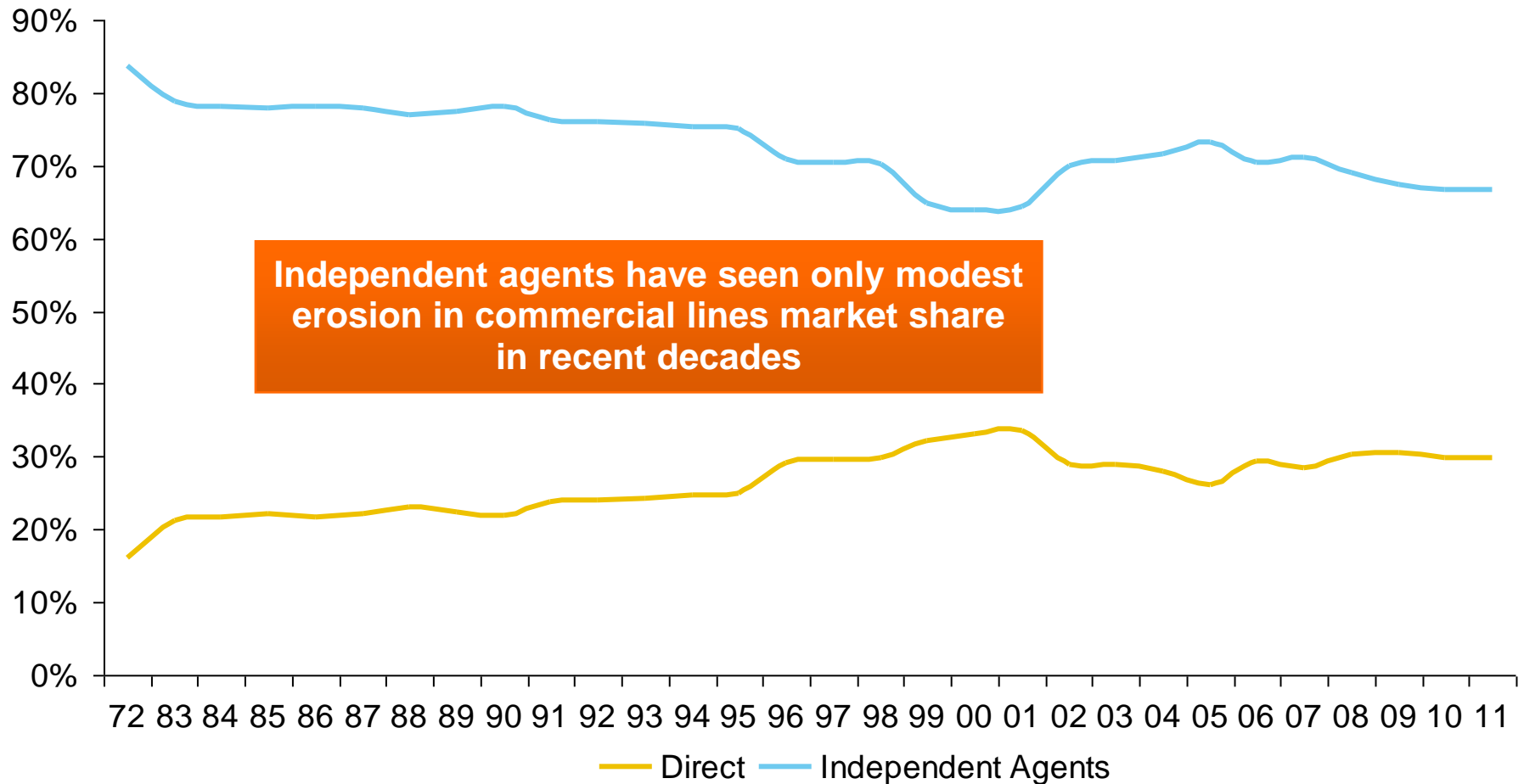
Distribution Trends

**Distribution by Channel Type
Continues to Evolve Around
the World**

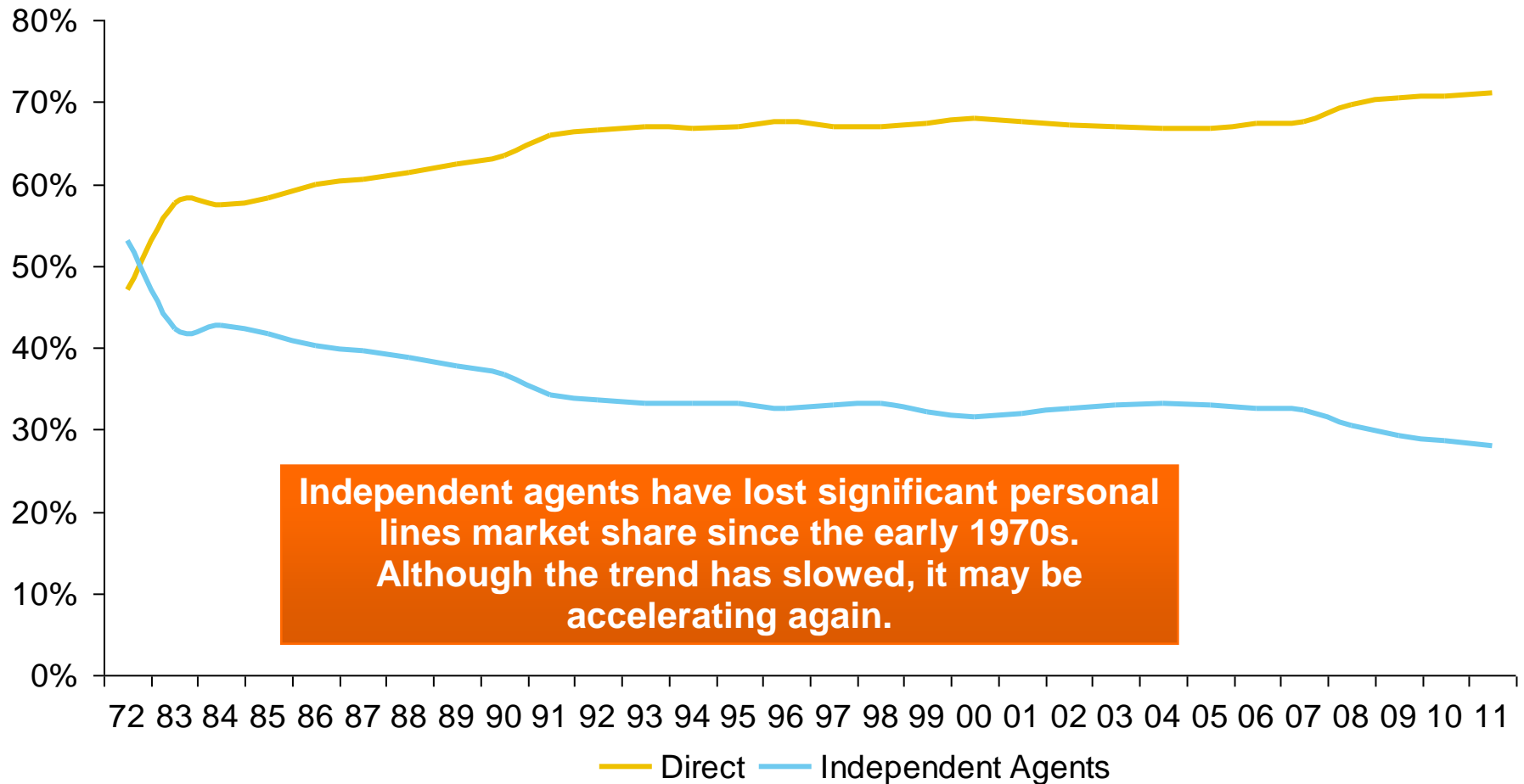
All P/C Lines Distribution Channels, Direct vs. Independent Agents



Commercial P/C Distribution Channels, Direct vs. Independent Agents



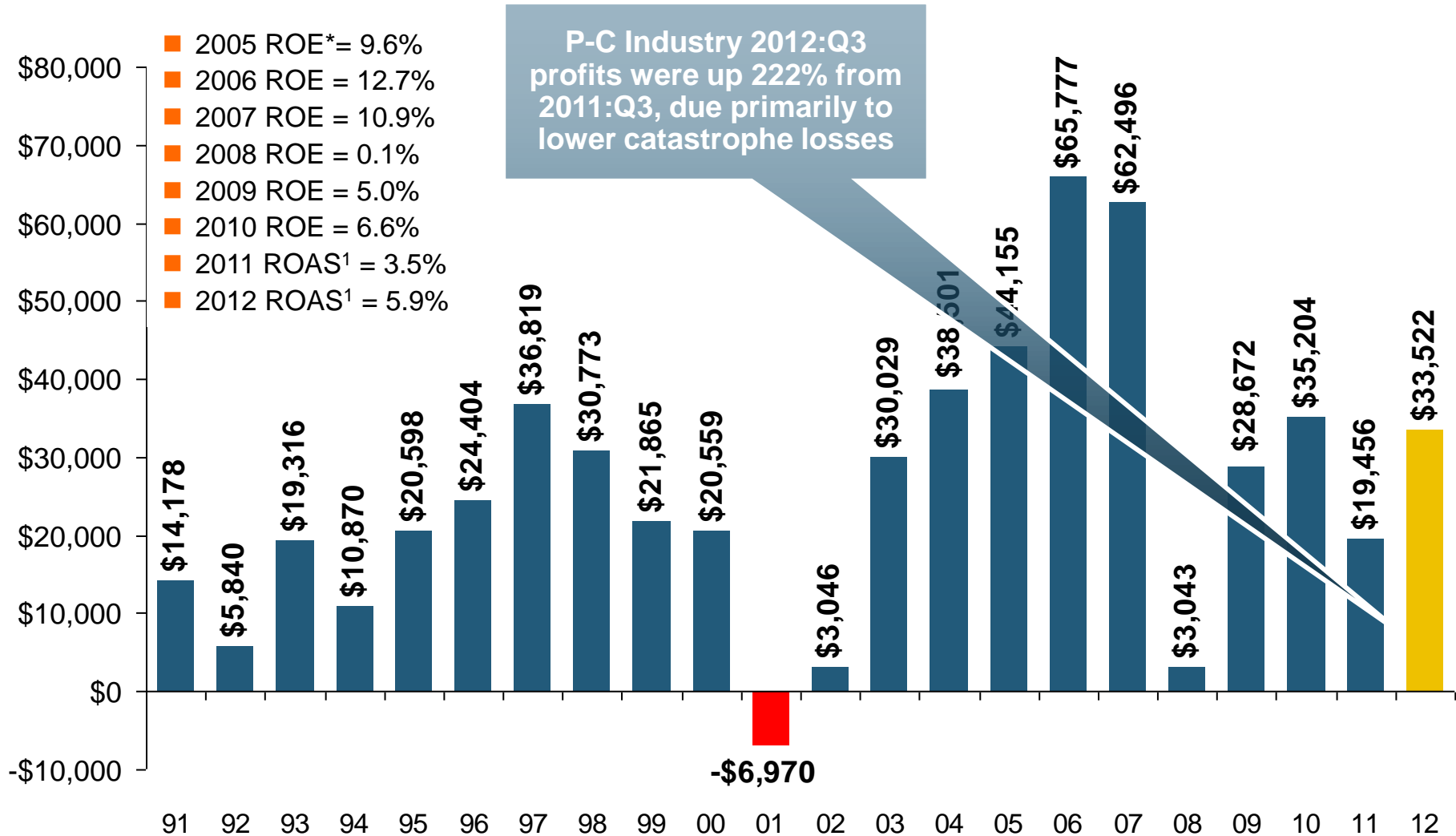
Personal Lines Distribution Channels, Direct vs. Independent Agents



P/C Insurance Industry Financial Overview

**Profit Recovery in 2012 After
High CAT Losses; Ultimate
Impact of Sandy Still Unclear**

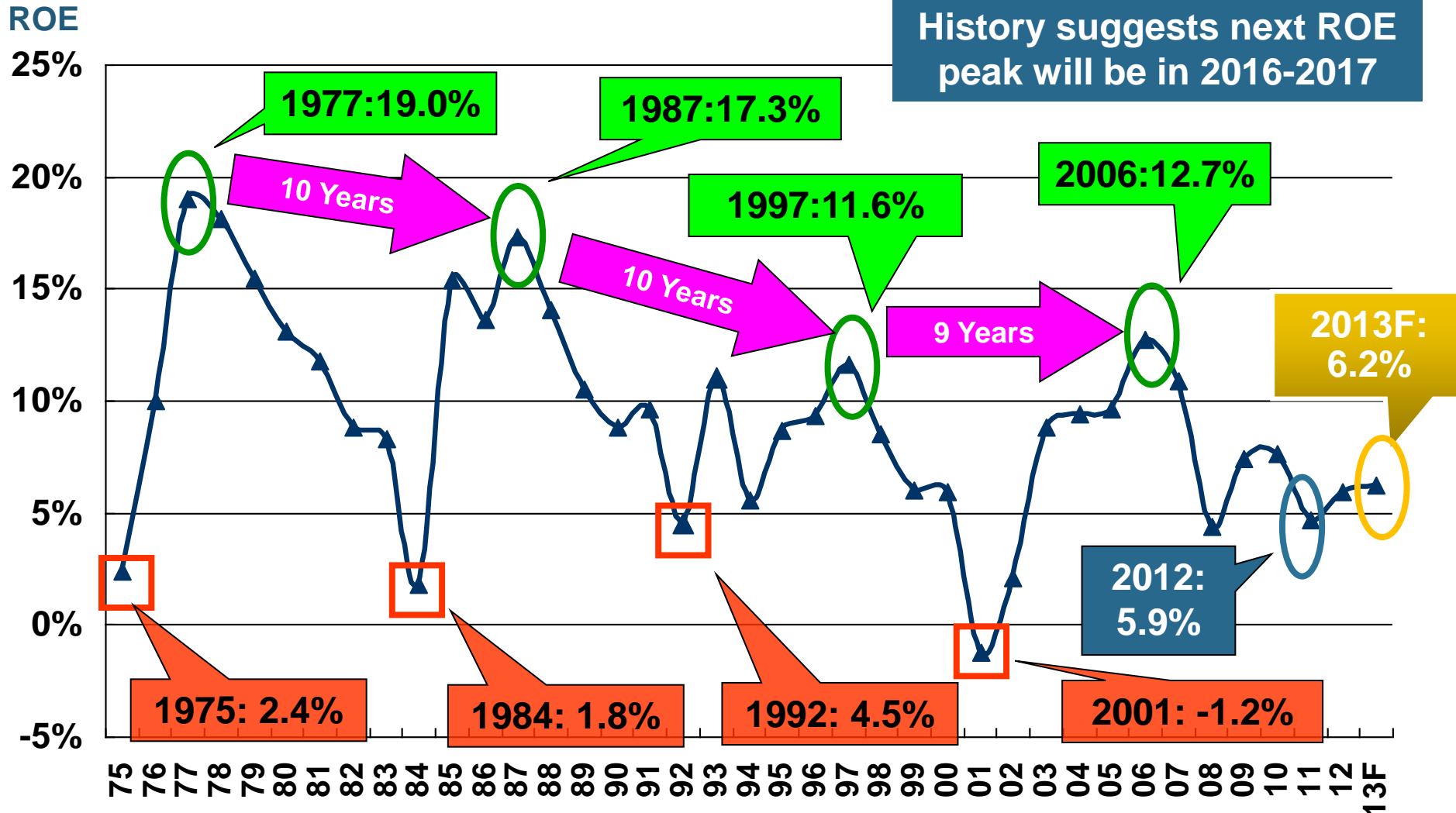
P/C Net Income After Taxes 1991–2012 (\$ Millions)



* ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009.

Sources: A.M. Best, ISO, Insurance Information Institute

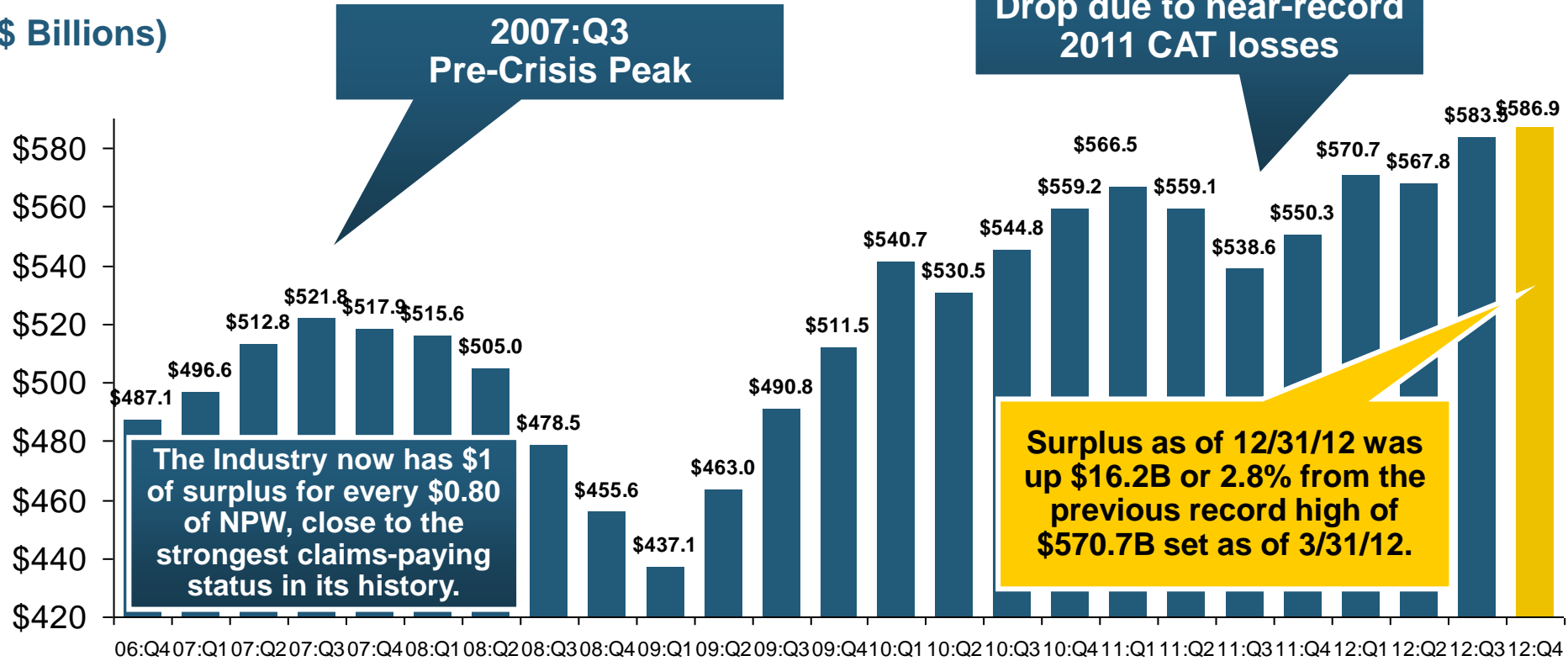
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2013F*



*Profitability = P/C insurer ROEs. 2011 figure is an estimate based on ROAS data. Note: Data for 2008-2013 exclude mortgage and financial guaranty insurers. 2012:Q3 ROAS = 6.2% including M&FG.
 Source: Insurance Information Institute; NAIC, ISO, A.M. Best.

Policyholder Surplus, 2006:Q4–2012:Q4

(\$ Billions)



*Includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business in early 2010.

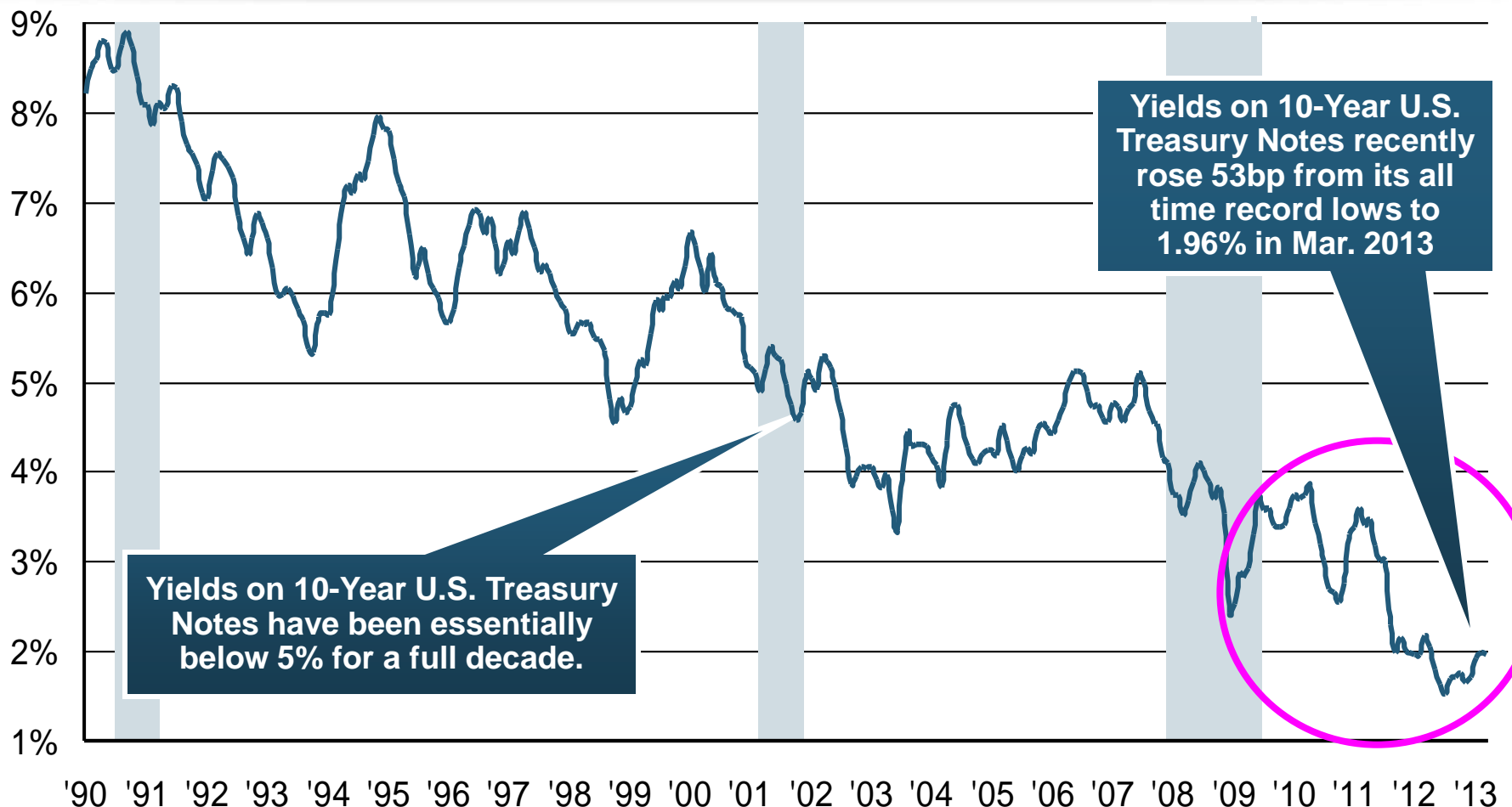
The P/C Insurance Industry Both Entered and Emerged from the 2012 Hurricane Season Very Strong Financially.

INVESTMENTS: THE NEW REALITY

**Investment Performance is a Key
Driver of Profitability**

***Depressed Yields Will Necessarily
Influence Underwriting & Pricing***

U.S. 10-Year Treasury Note Yields: A Long Downward Trend, 1990–2013*



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 Mar. 2013.

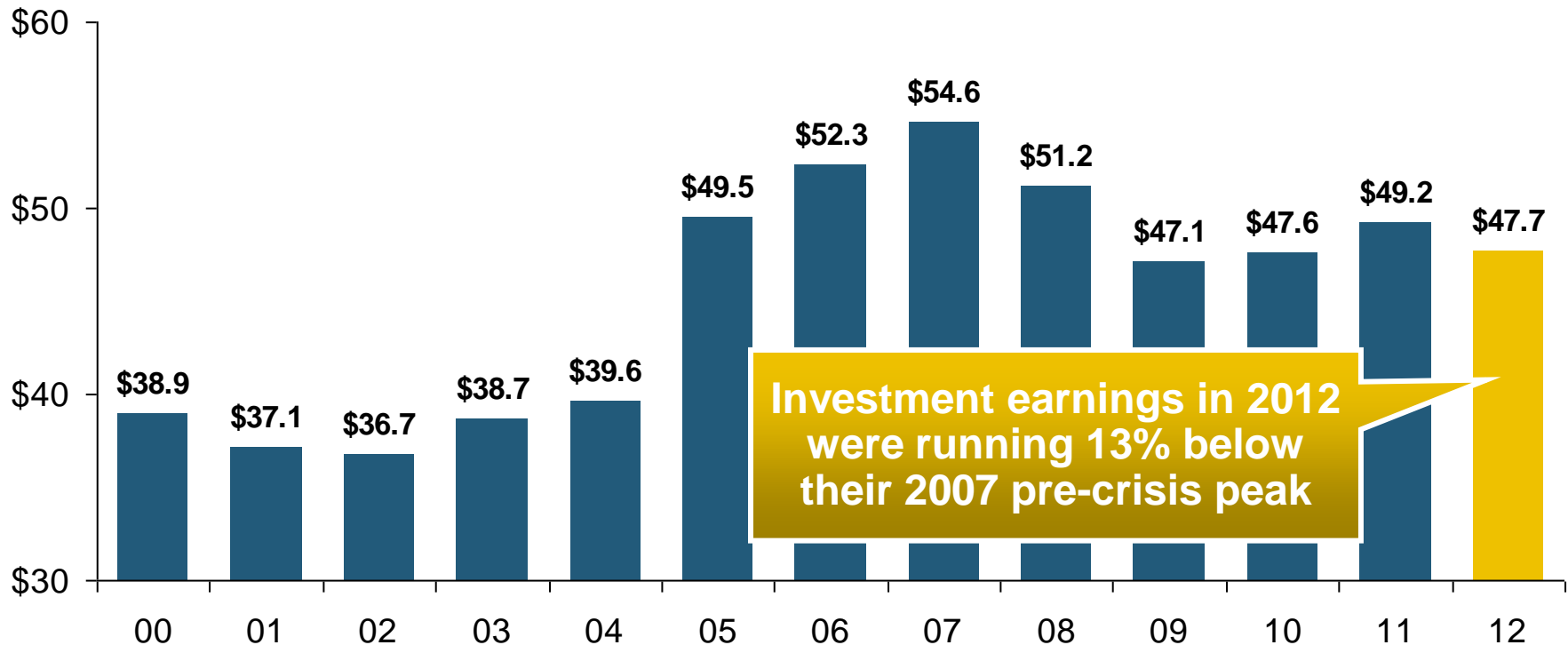
Note: Recessions indicated by gray shaded columns.

Sources: Federal Reserve Bank at <http://www.federalreserve.gov/releases/h15/data.htm>.

National Bureau of Economic Research (recession dates); Insurance Information Institutes.

Property/Casualty Insurance Industry Investment Income: 2000–2012¹

(\$ Billions)



Investment Income Fell in 2012 Due to Persistently Low Interest Rates, Putting Additional Pressure on (Re) Insurance Pricing

¹ Investment gains consist primarily of interest and stock dividends..
Sources: ISO; Insurance Information Institute.

Insurance Information Institute Online:

www.iii.org

*Thank you for your time
and your attention!*

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