

## **Overview & Outlook for the P/C Insurance Industry:** Trends, Challenges and Opportunities in 2013 and Beyond **Central States Actuarial Forum Omaha**, NE **September 26, 2013 Download at www.iii.org/presentations** Robert P. Hartwig, Ph.D., CPCU, President & Economist Insurance Information Institute 110 William Street New York, NY 10038

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## **Presentation Outline**



#### P/C Insurance Industry Financial Overview

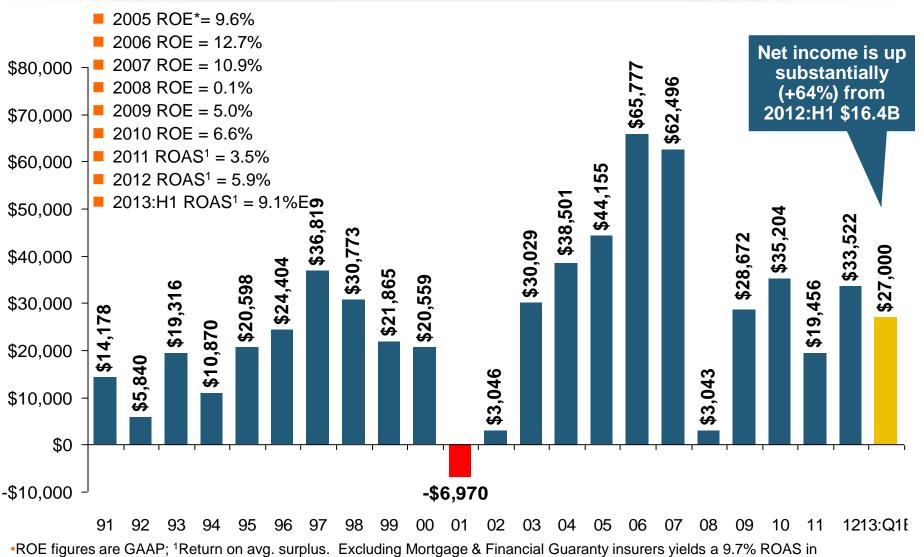
- Economic Factors Impacting Growth
  - Regional Analysis
  - By Line Impacts
- Catastrophe Loss Trends
- P/C Growth Analysis
  - Key Line Growth Trends
- Reinsurance and the Rise of Alternative Capital
- The New Investment Reality
  - The Challenge of Persistently Low Interest Rates
- P/C Performance Analysis
  - Combined Ratio Trends and Forecasts



# P/C Insurance Industry Financial Overview

# So Far, So Good: Profit Recovery in 2013 After High CAT Losses in 2011-12

#### P/C Net Income After Taxes 1991–2013:H1 (\$ Millions)



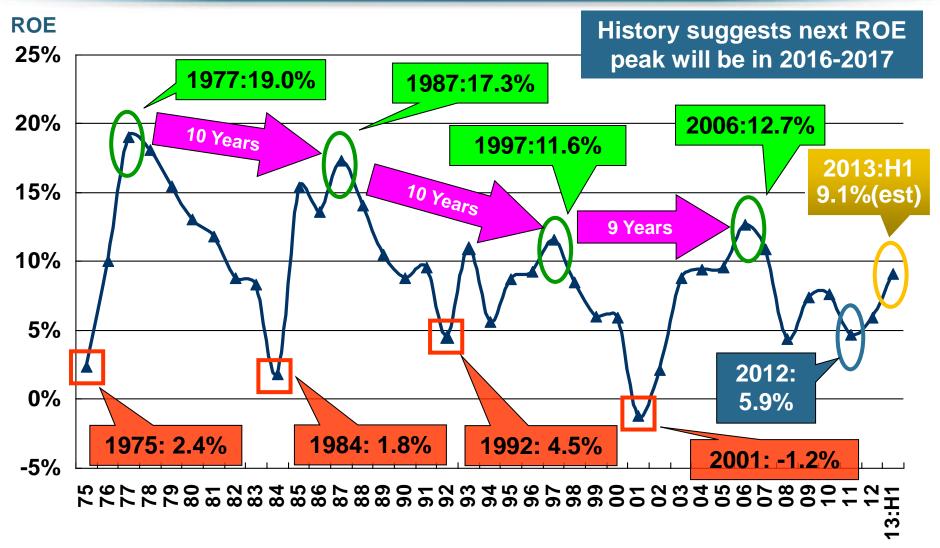
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2013:Q1, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009.

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

#### Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2013:H1\*

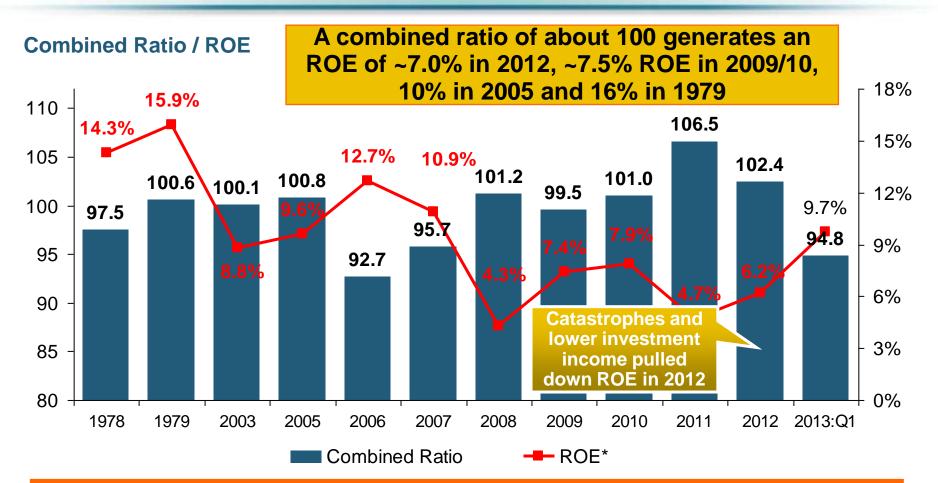
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\*Profitability = P/C insurer ROEs. 2011-13 figures are estimates based on ROAS data. Note: Data for 2008-2013 exclude mortgage and financial guaranty insurers.

Source: Insurance Information Institute; NAIC, ISO, A.M. Best.

## A 100 Combined Ratio Isn't What It Once Was: Investment Impact on ROEs

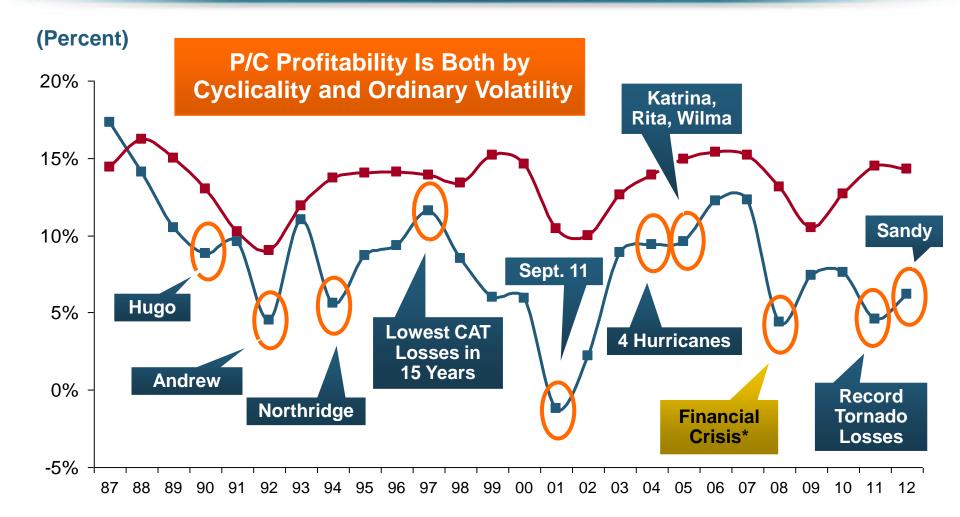


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#### Combined Ratios Must Be Lower in Today's Depressed Investment Environment to Generate Risk Appropriate ROEs

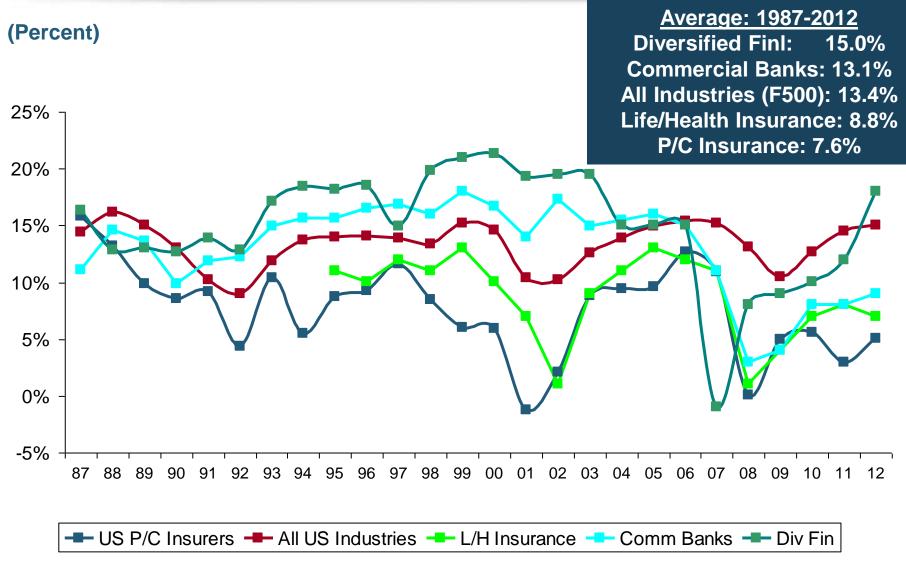
\* 2008 -2012 figures are return on average surplus and exclude mortgage and financial guaranty insurers. 2012 combined ratio including M&FG insurers is 103.2, 2011 combined ratio including M&FG insurers is 108.1, ROAS = 3.5%. Source: Insurance Information Institute from A.M. Best and ISO data.

#### ROE: Property/Casualty Insurance vs. Fortune 500, 1987–2012\*



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

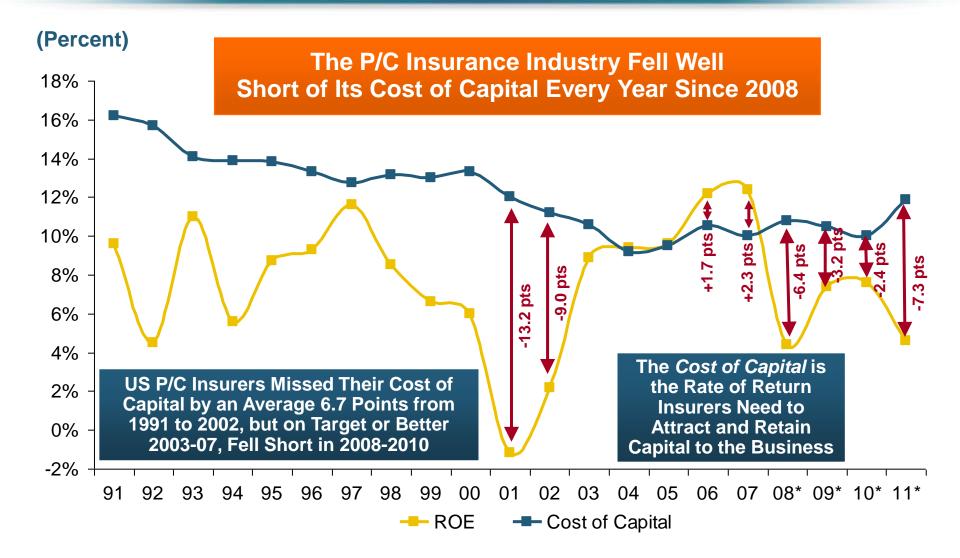
#### ROE: ROEs by Industry vs. Fortune 500, 1987–2012\*



\* All figures are GAAP.

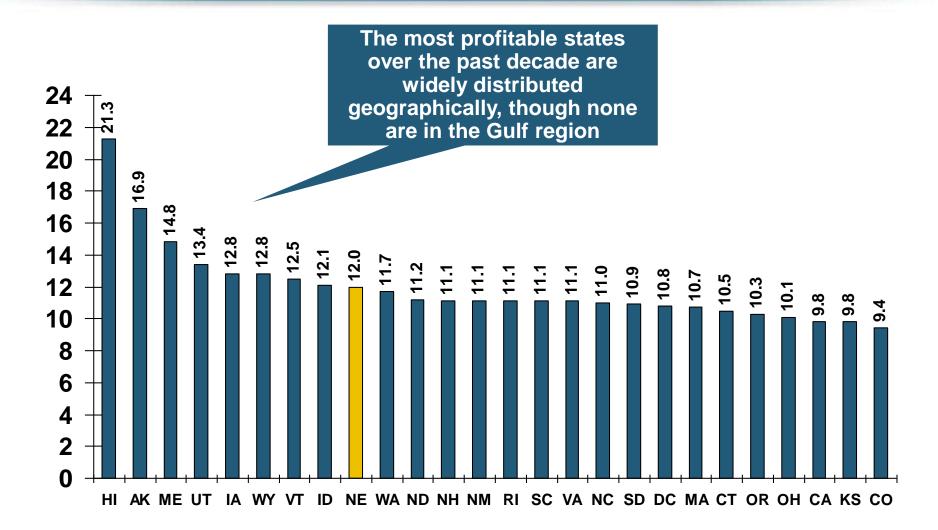
Sources: ISO, Fortune; Insurance Information Institute.

#### ROE vs. Equity Cost of Capital: U.S. P/C Insurance:1991-2011\*



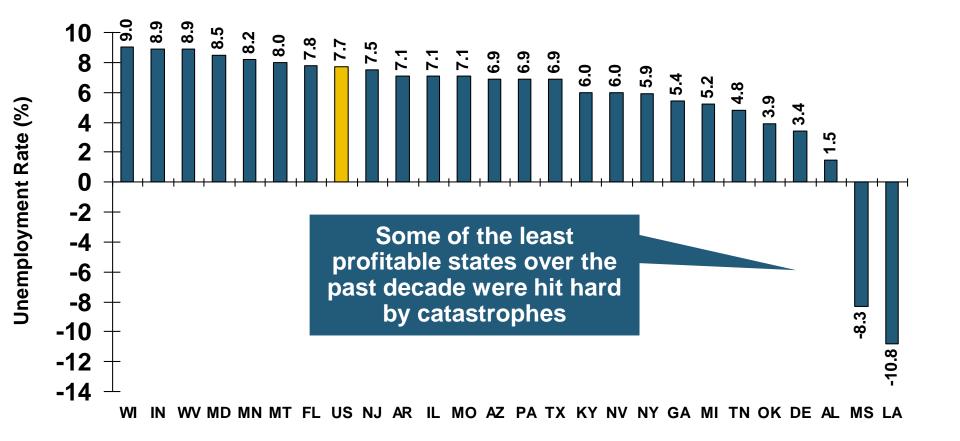
\* Return on average surplus in 2008-2011 excluding mortgage and financial guaranty insurers. Source: The Geneva Association, Insurance Information Institute NSURANCE

#### RNW All Lines by State, 2002-2011 Average: Highest 25 States



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#### RNW All Lines by State, 2002-2011 Average: Lowest 25 States



Source: NAIC.

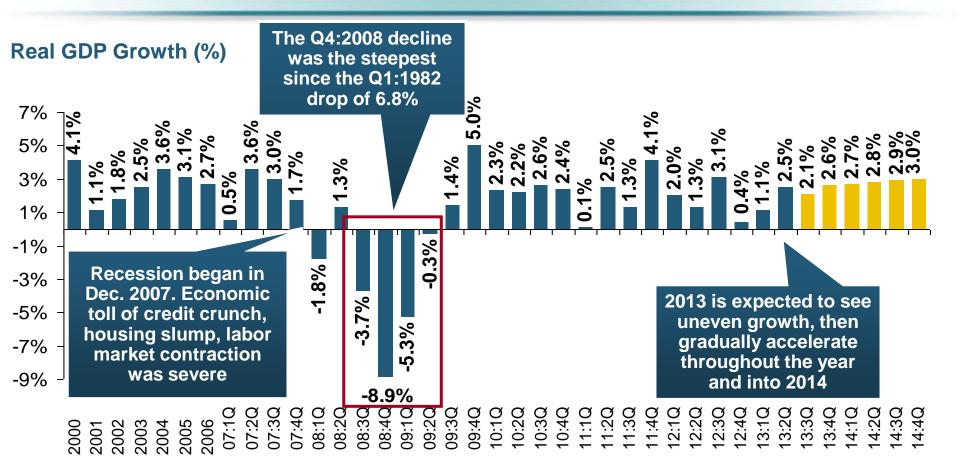


# The Strength of the Economy Will Influence P/C Insurer Growth Opportunities

Growth Will Expand Insurer Exposure Base Across Most Lines

### **US Real GDP Growth\***



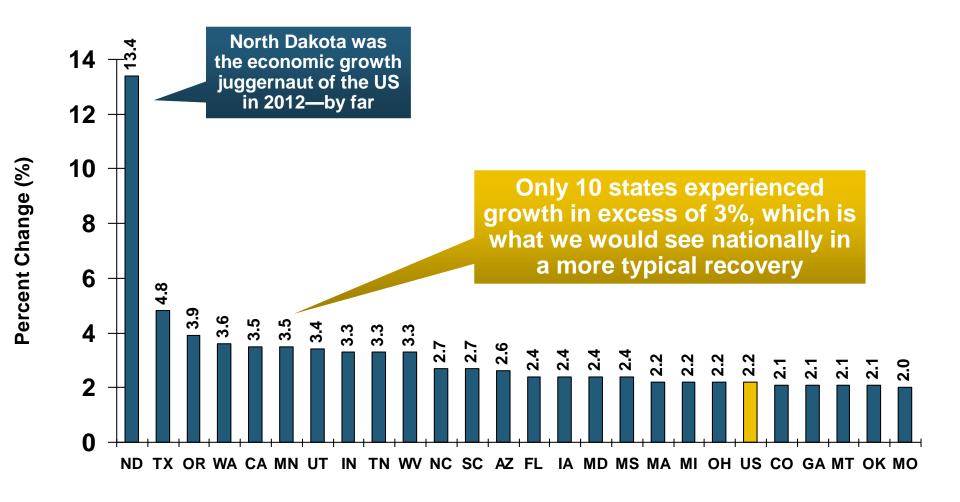


#### Demand for Insurance Continues To Be Impacted by Sluggish Economic Conditions, but the Benefits of Even Slow Growth Will Compound and Gradually Benefit the Economy Broadly

\* Estimates/Forecasts from Blue Chip Economic Indicators.

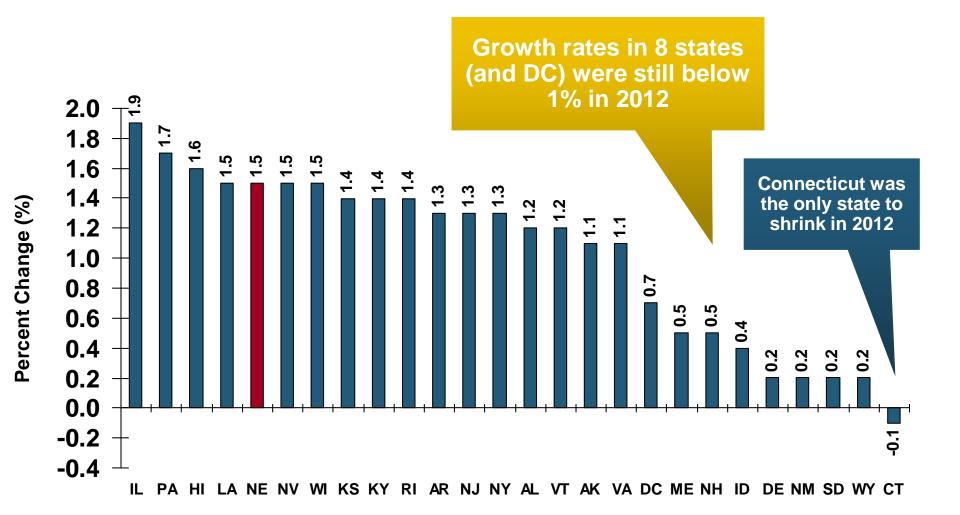
Source: US Department of Commerce, Blue Economic Indicators 9/13; Insurance Information Institute.

# Real GDP by State Percent Change, 2012: The Highest 25 States

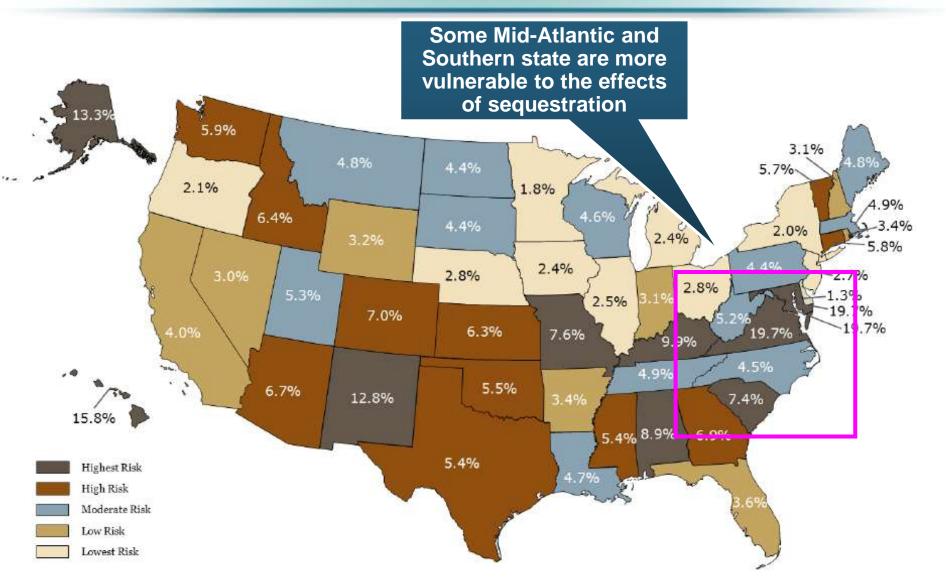


#### Real GDP by State Percent Change, 2012: Lowest 25 States



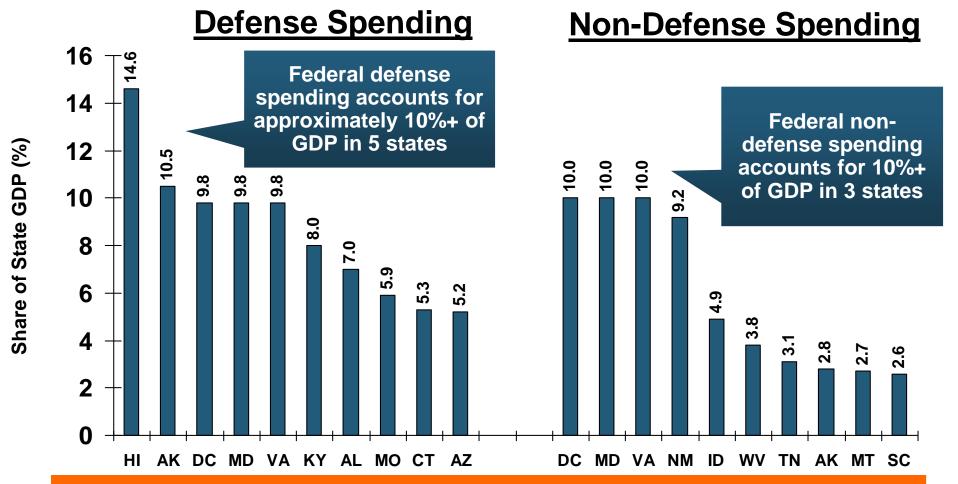


### Federal Spending as a Share of State GDP: Vulnerability to Sequestration Varies



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

#### Defense and Non-Defense Federal Spending as a Share of State GDP: Top 10 States\*



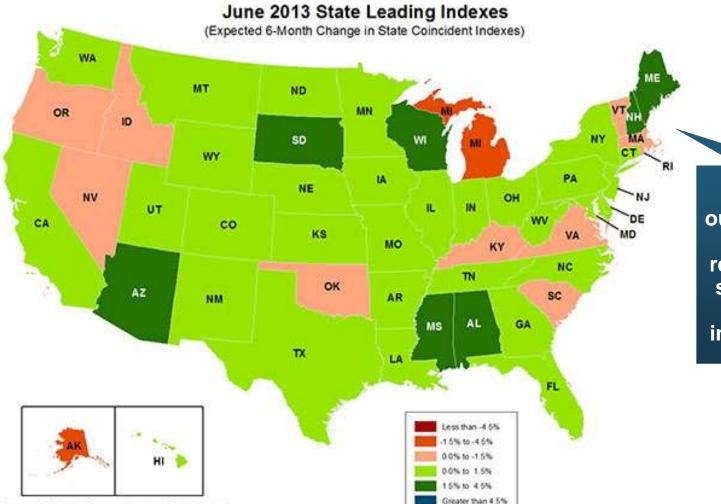
#### Sequestration Could Adversely Impact Commercial Insurance Exposures Directly at Defense Contractors and Indirectly in Impacted Communities

\*As of 2010.

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

# State-by-State Leading Indicators through 2013:Q4



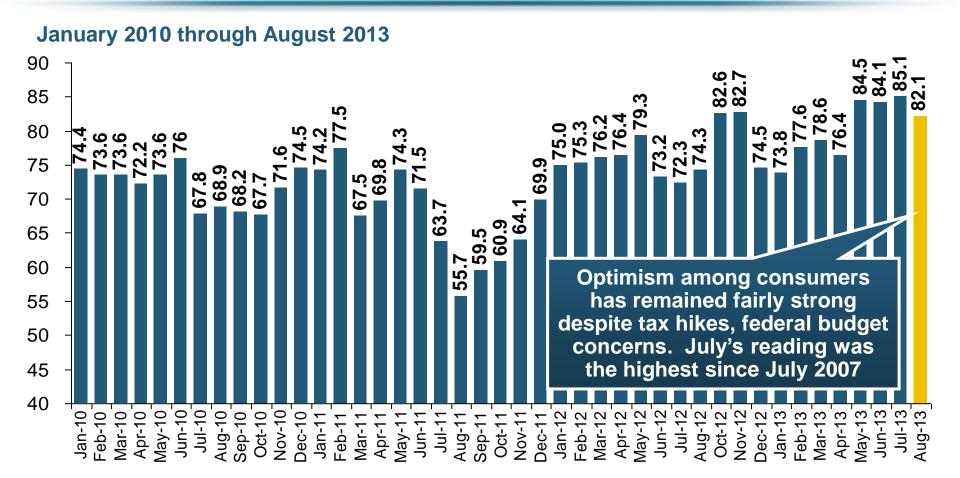


Source: Federal Reserve Bank of Philadelphia

The economic outlook for Northeast and Mid-Atlantic regions is mixed but suggests growth in the creation of insurable exposures

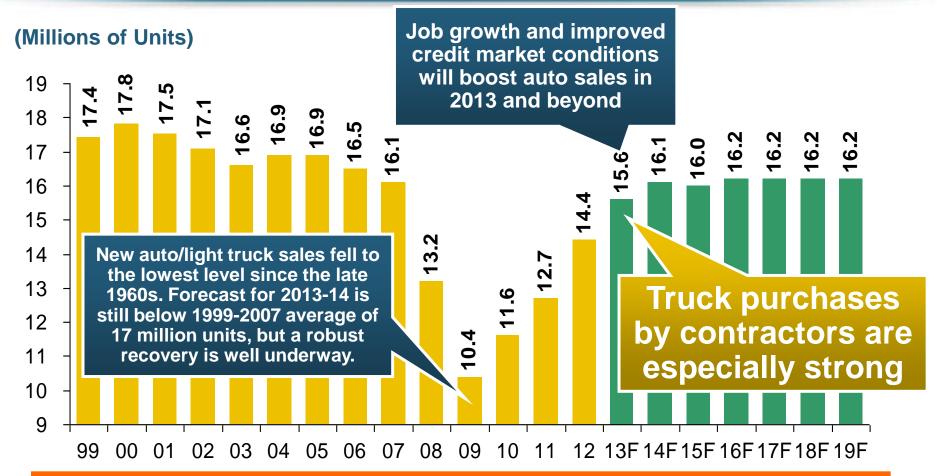
Sources: Federal Reserve Bank of Philadelphia at http://www.philadelphiafed.org/index.cfm ;Insurance Information Institute.

#### Consumer Sentiment Survey (1966 = 100)



Consumer confidence has been low for years amid high unemployment, falling home prices and other factors adversely impact consumers, but improved substantially over the past two years

## Auto/Light Truck Sales, 1999-2019F



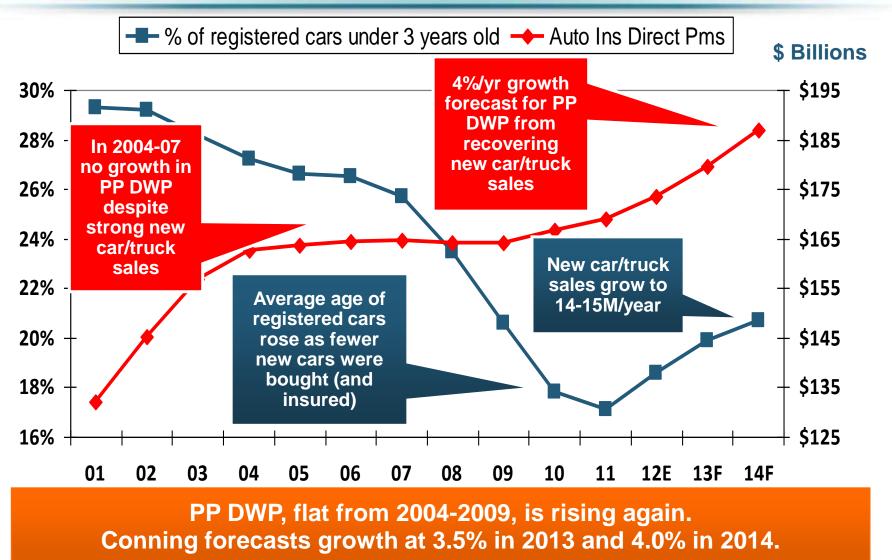
#### Car/Light Truck Sales Will Continue to Recover from the 2009 Low Point, Bolstering the Auto Insurer Growth and the Manufacturing Sector Along With Workers Comp Exposures

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (9/13 and 3/13); Insurance Information Institute.

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#### Personal Auto Insurance Direct Written Premiums vs. Recently-Registered Cars

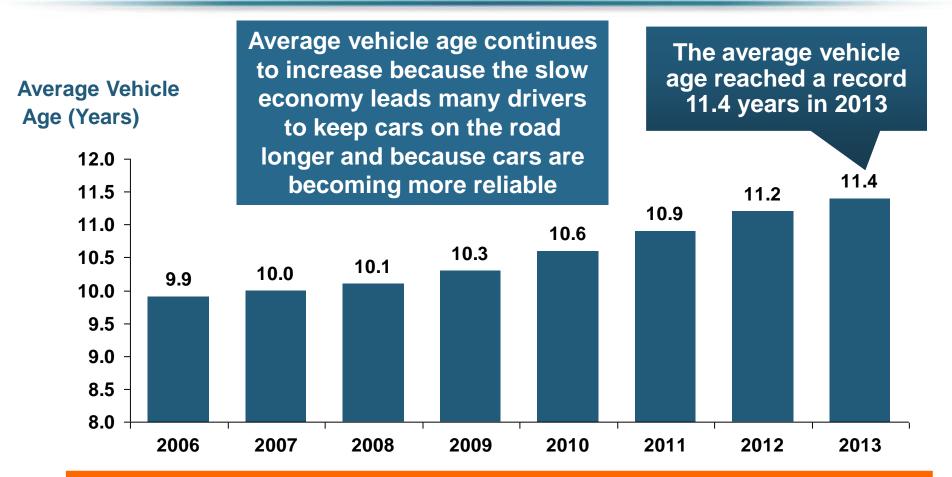
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Sources: AIPSO Facts (various issues); SNL Financial; Conning Research & Consulting, *Property-Casualty Forecast and Analysis*, First Quarter 2012; Insurance Information Institute.

# Average Age of Vehicles on the Road, 2006—2013

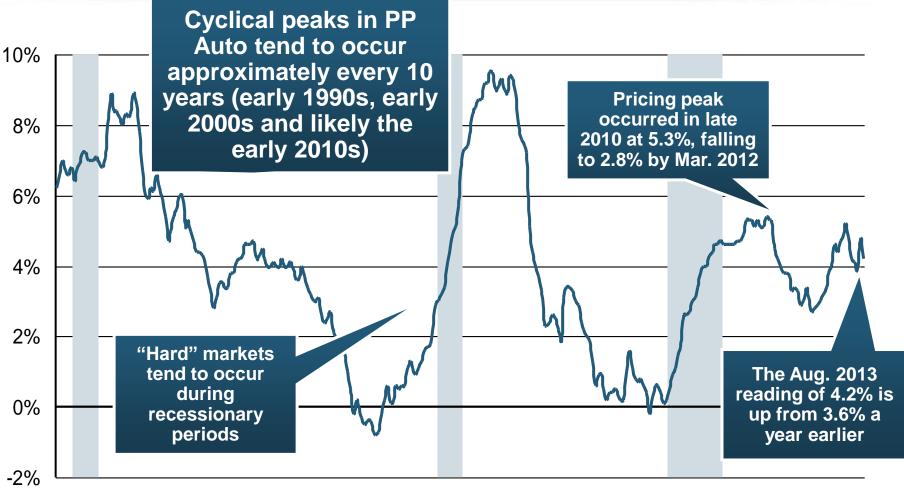
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The average age of a vehicle on the road is is expected to continue to increase until 2018. By 2018, the number of vehicles 12+ years old is expected to rise 11.6% from 2013 and the number that are under 5 years old is expected to increase by 41%

Sources: Polk, August 2013 Survey; Insurance Information Institute.

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



'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13

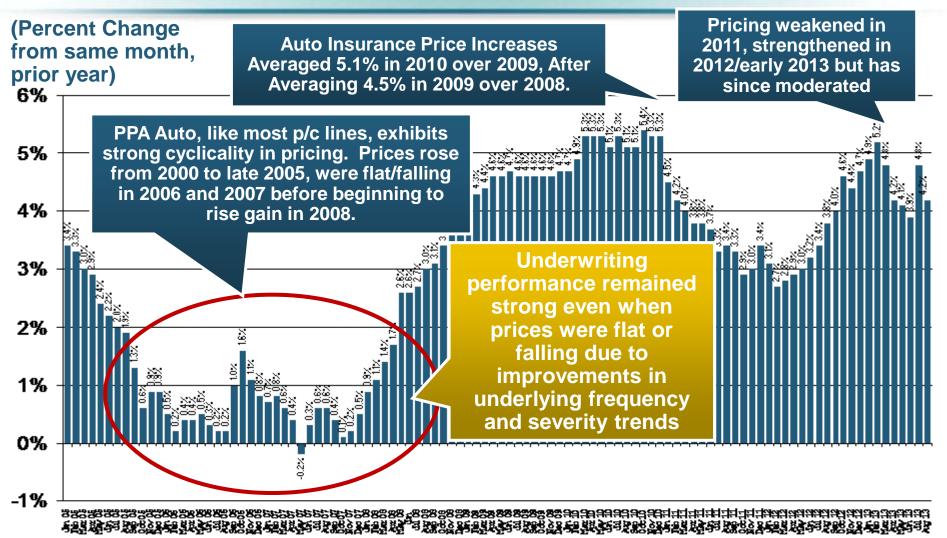
\*Percentage change from same month in prior year; through August 2013; seasonally adjusted

Note: Recessions indicated by gray shaded columns.

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

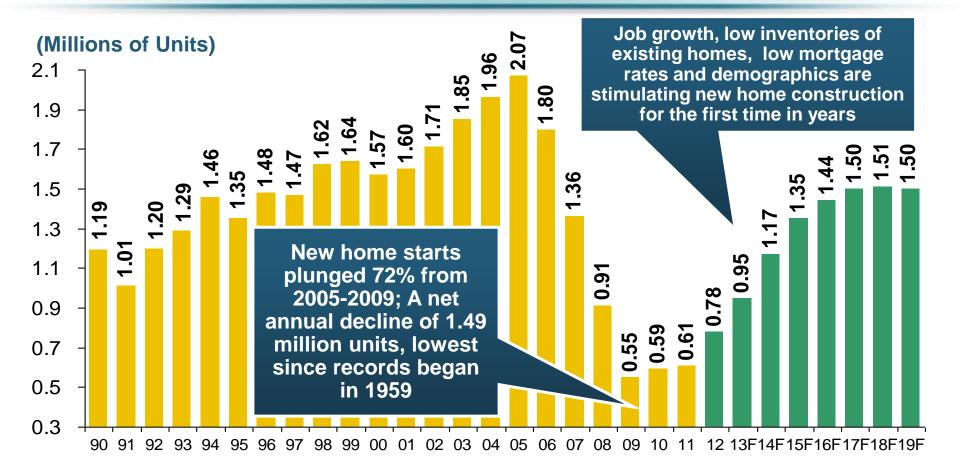
#### Monthly Change\* in Auto Insurance Prices, January 2005 - August 2013





\*Percentage change from same month in prior year, seasonally adjusted. Sources: US Bureau of Labor Statistics; Insurance Information Institute

### New Private Housing Starts, 1990-2019F

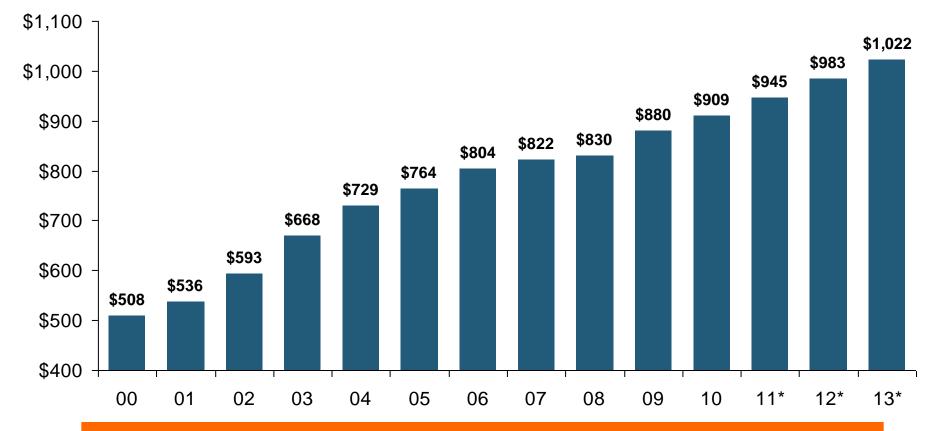


Insurers Are Starting to See Meaningful Exposure Growth for the First Time Since 2005 Associated with Home Construction: Construction Risk Exposure, Surety, Commercial Auto; Potent Driver of Workers Comp Exposure

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (9/13 and 3/13); Insurance Information Institute.

#### Average Premium for Home Insurance Policies\*\*



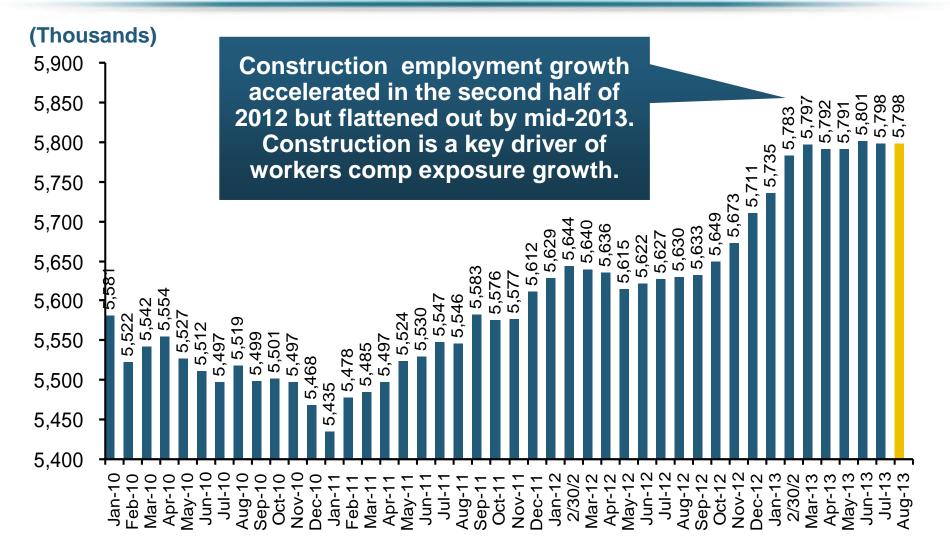


## Countrywide Home Insurance Expenditures Increased by an Estimated 4.0% in 2011-2013

\* Insurance Information Institute Estimates/Forecasts \*\*Excludes state-run insurers. Source: NAIC, Insurance Information Institute estimates for 2011-2013 based on CPI data and other data.

## Construction Employment, Jan. 2010—August 2013\*

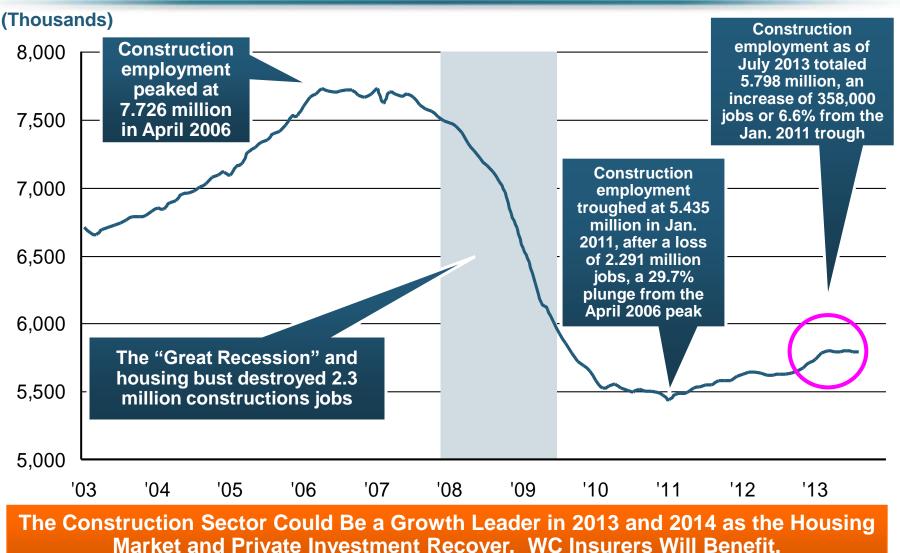




\*Seasonally adjusted Sources: US Bureau of Labor Statistics at <u>http://data.bls.gov;</u> Insurance Information Institute.

### Construction Employment, Jan. 2003–August 2013

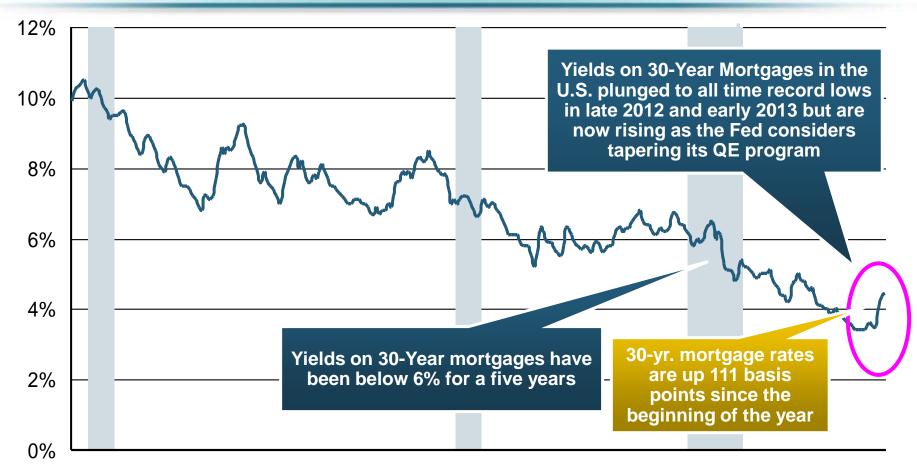




Note: Recession indicated by gray shaded column.

Sources: U.S. Bureau of Labor Statistics; Insurance Information Institute.

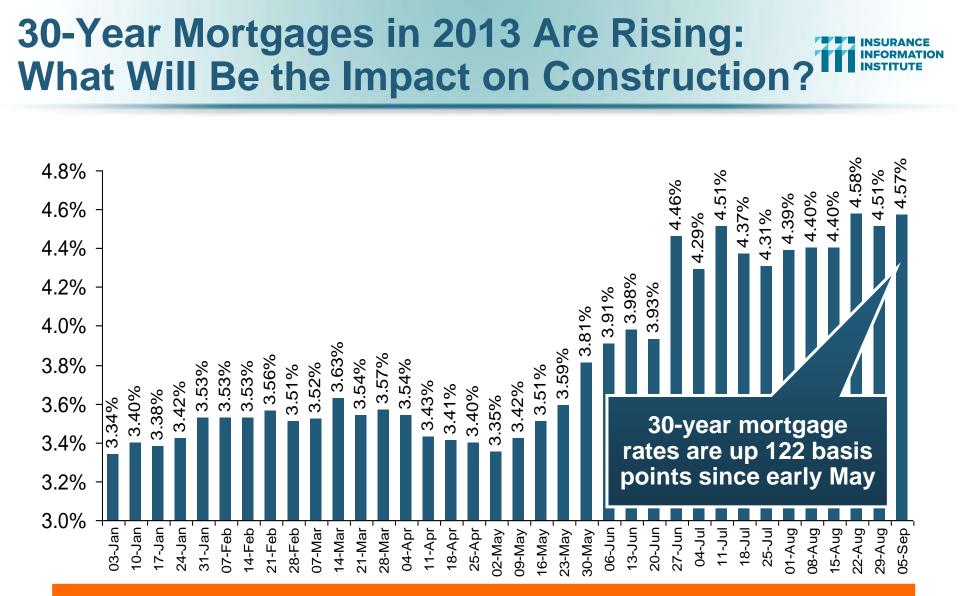
## Interest Rate on Convention 30-Year Mortgages: Headed Back Up, 1990–2013\*



'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13

## 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 August 2013. Note: Recessions indicated by gray shaded columns. Sources: Federal Reserve Bank at <u>http://www.federalreserve.gov/releases/h15/data.htm</u>. National Bureau of Economic Research (recession dates); Insurance Information Institutes.

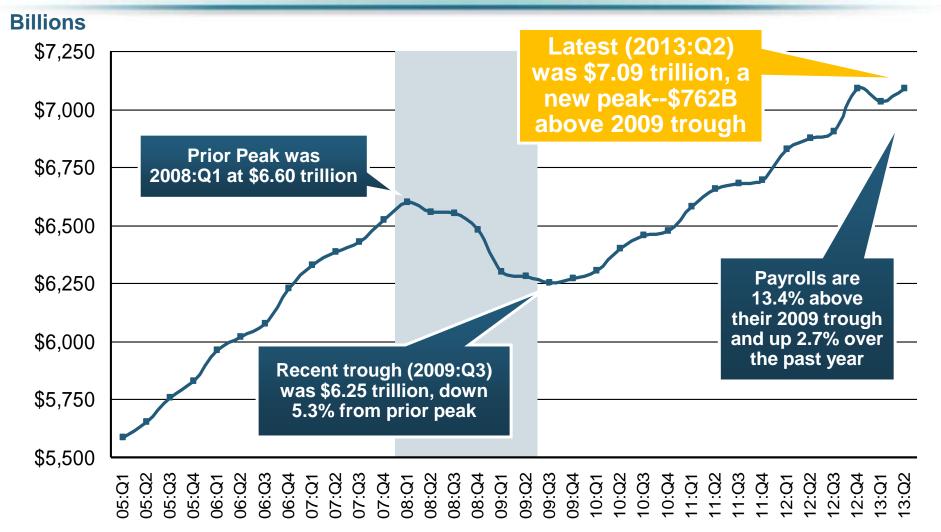


#### Mortgage Interest Rates Will Rise as Expectations Over the Fed's Tapering of QE3 Persist; Still Low by Historical Standards

\*Weekly through September 5, 2013.

Sources: Federal Reserve Bank at <u>http://www.federalreserve.gov/releases/h15/data.htm</u>.; Insurance Information Institutes.

#### Nonfarm Payroll (Wages and Salaries): Quarterly, 2005–2013:Q2



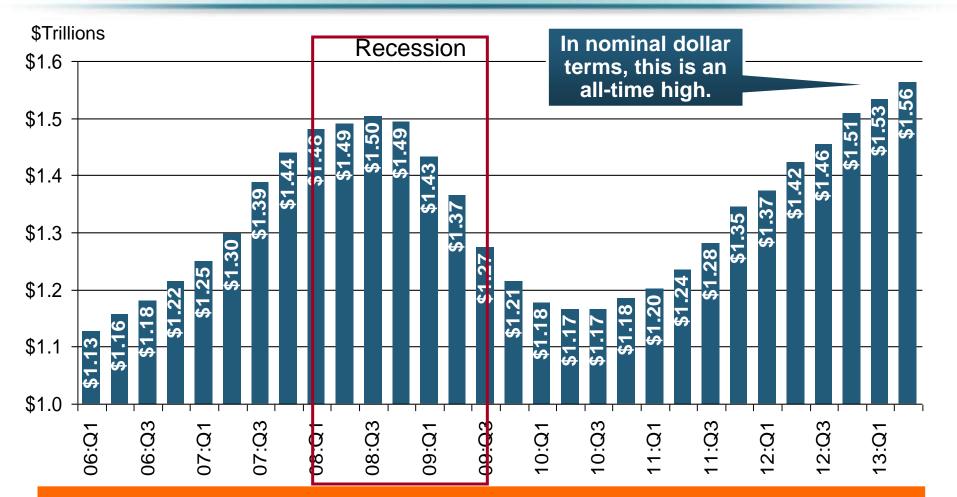
Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.

Sources: <u>http://research.stlouisfed.org/fred2/series/WASCUR;</u> National Bureau of Economic Research (recession dates); Insurance Information Institute.

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#### Commercial & Industrial Loans Outstanding at FDIC-Insured Banks, Quarterly, 2006-2013\*



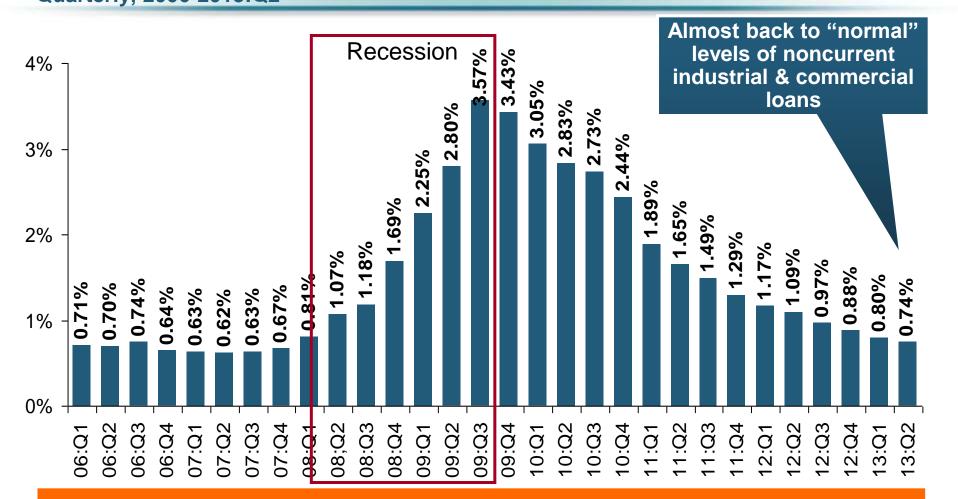


#### Outstanding loan volume has been growing for over two years and (as of year-end 2012) surpassed previous peak levels.

\*Latest data as of 9/8/2013.

Source: FDIC at http://www2.fdic.gov/qbp/ (Loan Performance spreadsheet); Insurance Information Institute.

#### Percent of Non-Current Commercial & Industrial Loans Outstanding at FDIC-Insured Banks, Quarterly, 2006-2013:Q2\*



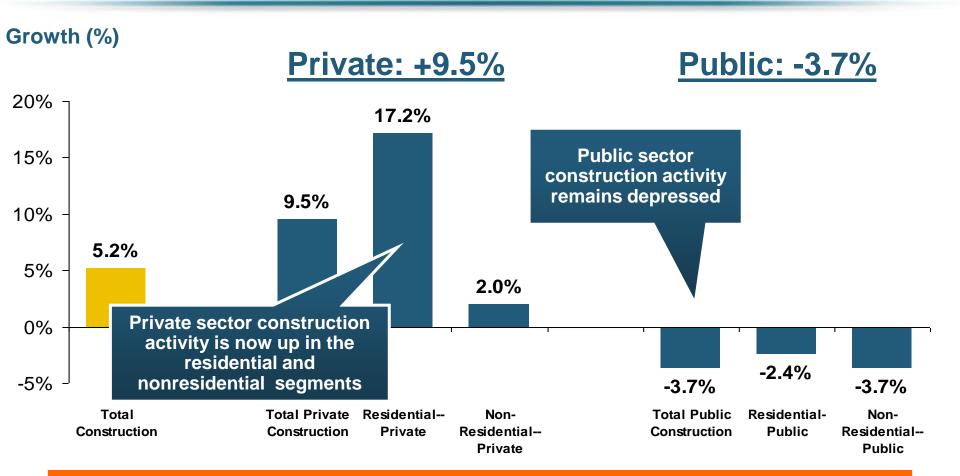
Non-current loans (those past due 90 days or more or in nonaccrual status) are nearly back to early-recession levels, fueling bank willingness to lend.

\*Latest data as of 9/8/2013.

Source: FDIC at http://www2.fdic.gov/qbp/ (Loan Performance spreadsheet); Insurance Information Institute.

### Value of Construction Put in Place, July 2013 vs. July 2012\*

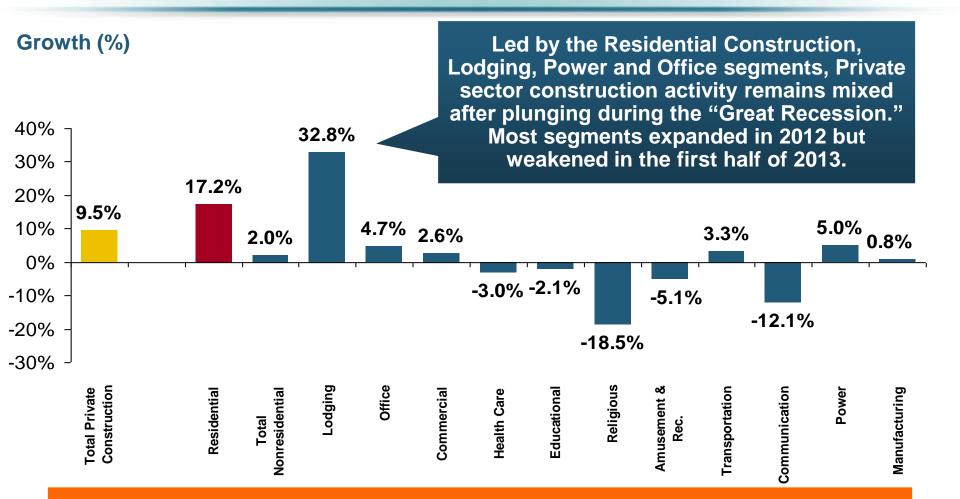




#### Overall Construction Activity is Up, But Growth Is Entirely in the Private Sector as State/Local Government Budget Woes Continue

\*seasonally adjusted Source: U.S. Census Bureau, <u>http://www.census.gov/construction/c30/c30index.html</u>; Insurance Information Institute.

#### Value of Private Construction Put in Place, by Segment, July 2013 vs. July 2012\*



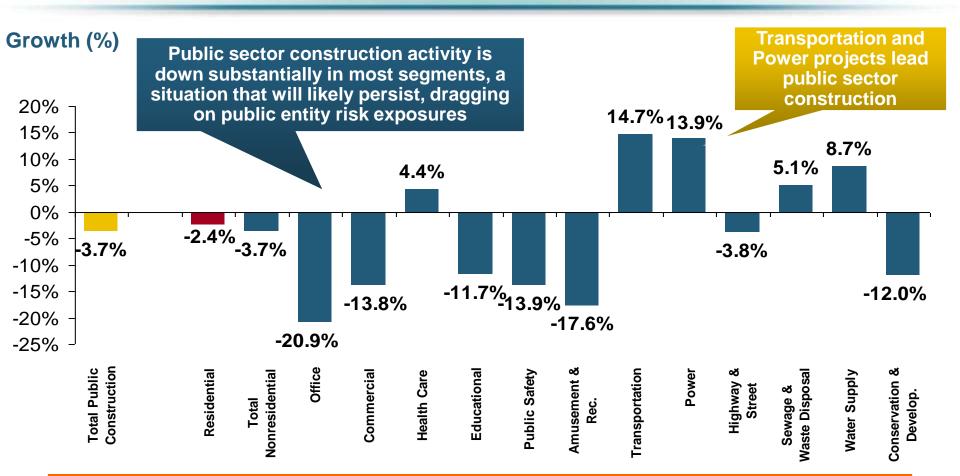
## Private Construction Activity is Up in Some Segments, Including the Key Residential Construction Sector, But Weakened in the First Half of 2013

\*seasonally adjusted

Source: U.S. Census Bureau, <u>http://www.census.gov/construction/c30/c30index.html</u>; Insurance Information Institute.

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#### Value of Public Construction Put in Place, by Segment, July 2013 vs. July 2012\*



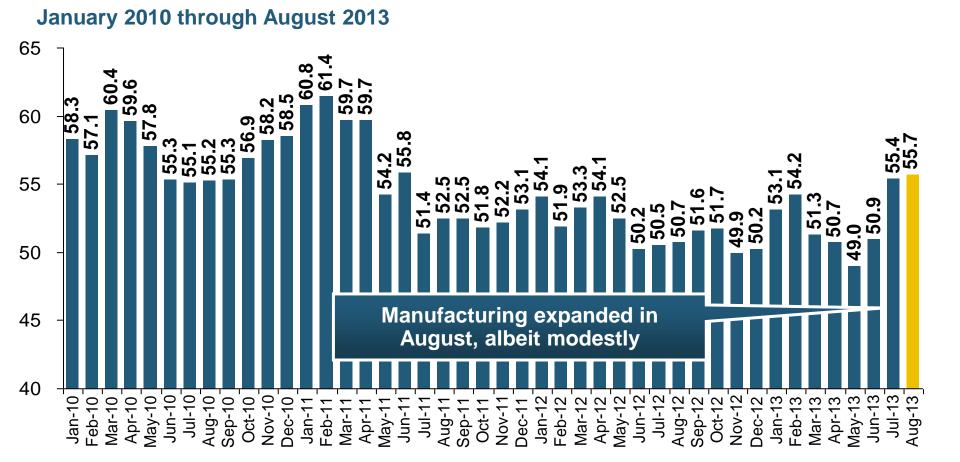
Public Construction Activity is Down in Many Segments as State and Local Budgets Remain Under Stress; Improvement Possible in 2014.

\*seasonally adjusted

Source: U.S. Census Bureau, <u>http://www.census.gov/construction/c30/c30index.html</u>; Insurance Information Institute.

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#### ISM Manufacturing Index (Values > 50 Indicate Expansion)

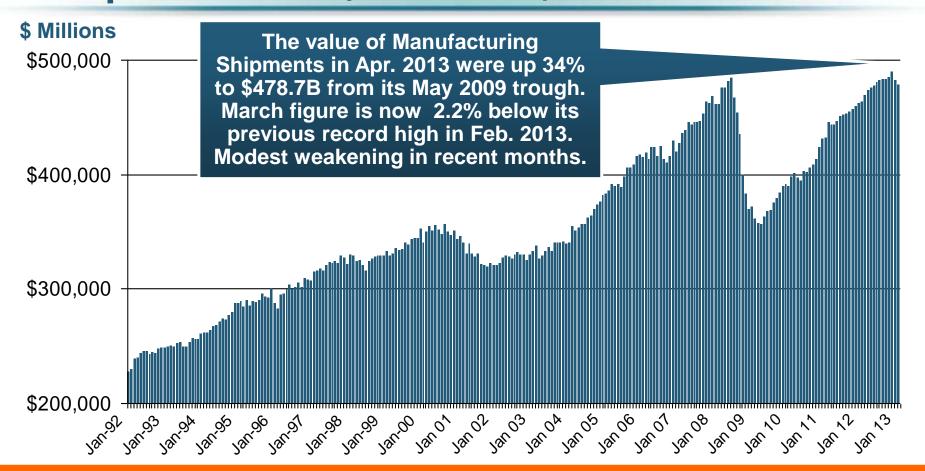


The manufacturing sector expanded for 42 of the 44 months from Jan. 2010 through June 2013. Recent weakness stems largely from woes in Europe and a Slowdown in China.

Source: Institute for Supply Management at <u>http://www.ism.ws/ismreport/mfgrob.cfm;</u> Insurance Information Institute.

#### Dollar Value\* of Manufacturers' Shipments Monthly, Jan. 1992—Apr. 2013



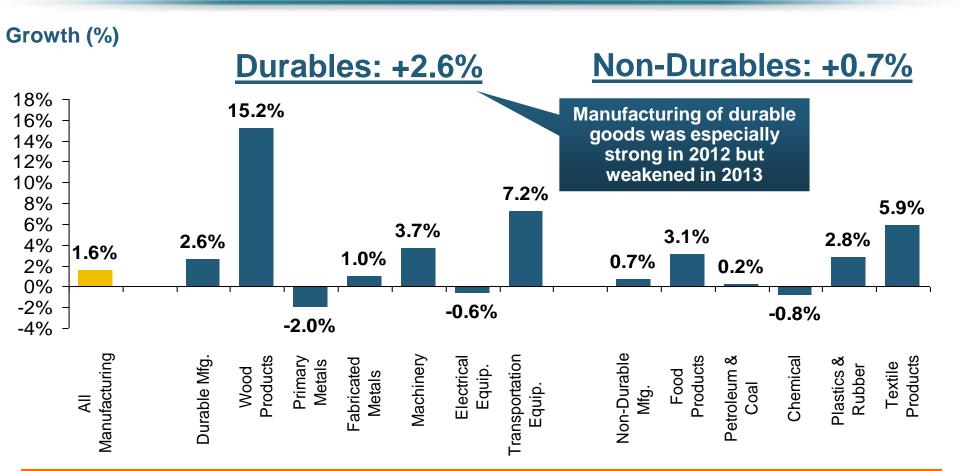


Monthly shipments in Feb. 2013 exceeded their pre-crisis (July 2008) peak. Trough in May 2009. Growth from trough to Apr. 2013 was 34%. Manufacturing is an energy intensive activity and growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, Property and Various Liability Coverages

\*seasonally adjusted

Source: U.S. Census Bureau, Full Report on Manufacturers' Shipments, Inventories, and Orders, http://www.census.gov/manufacturing/m3/

### **Manufacturing Growth for Selected** Sectors, 2013 vs. 2013\*

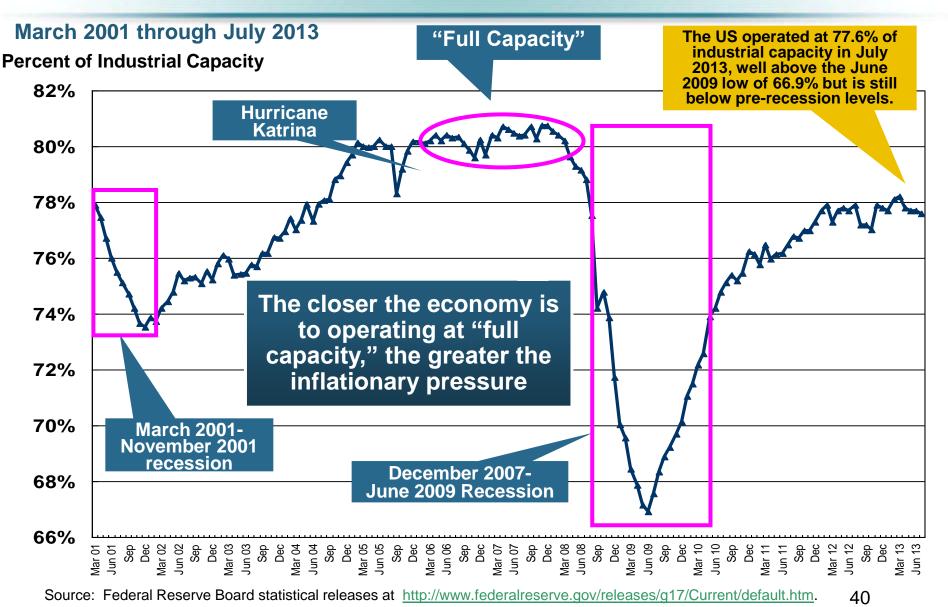


Manufacturing Is Expanding—Albeit More Slowly—Across a Number of Sectors that Will Contribute to Growth in Insurable Exposures Including: WC, **Commercial Property, Commercial Auto and Many Liability Coverages** 

\*Seasonally adjusted; Date are YTD comparing data through July 2013 to the same period in 2012. Source: U.S. Census Bureau, Full Report on Manufacturers' Shipments, Inventories, and Orders, http://www.census.gov/manufacturing/m3/ 39

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#### Recovery in Capacity Utilization is a Positive Sign for Commercial Exposures

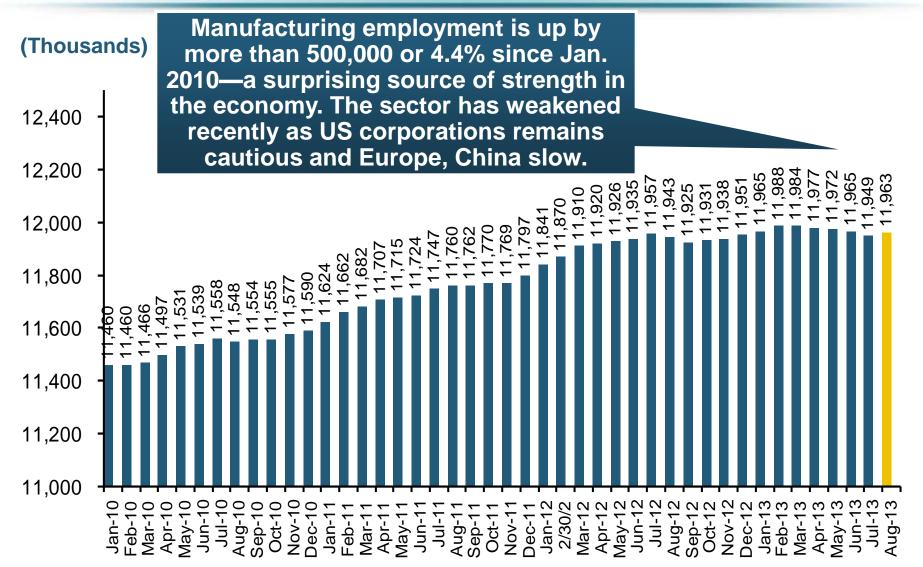


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# Manufacturing Employment, Jan. 2010—August 2013\*

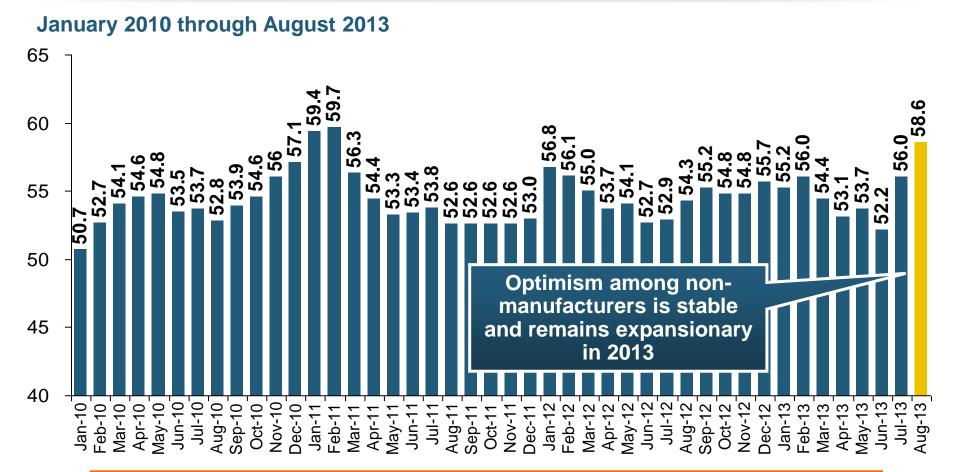




\*Seasonally adjusted

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

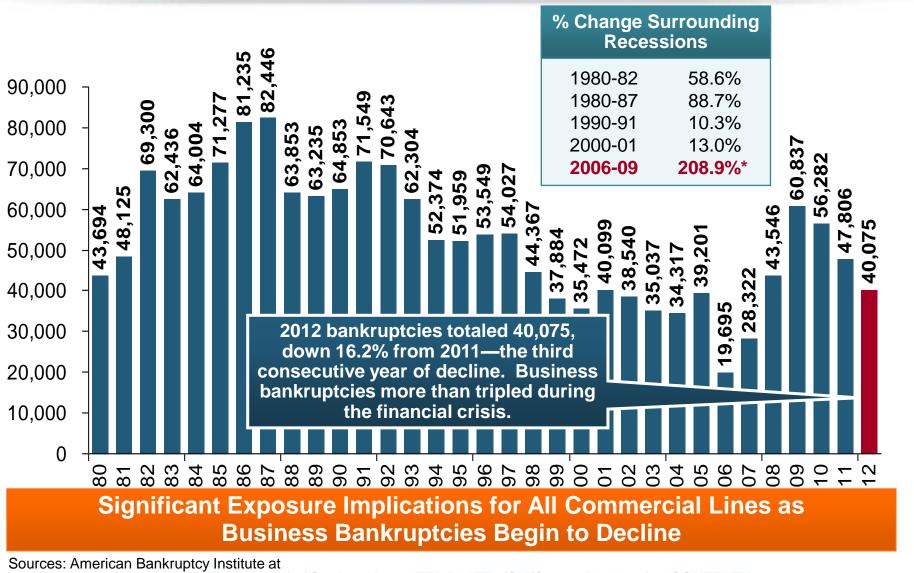
#### ISM Non-Manufacturing Index (Values > 50 Indicate Expansion)



Non-manufacturing industries have been expanding and adding jobs. This trend is likely to continue into 2014.

Source: Institute for Supply Management at <a href="http://www.ism.ws/ismreport/nonmfgrob.cfm">http://www.ism.ws/ismreport/nonmfgrob.cfm</a>; Insurance Information Institute.

## Business Bankruptcy Filings, 1980-2012

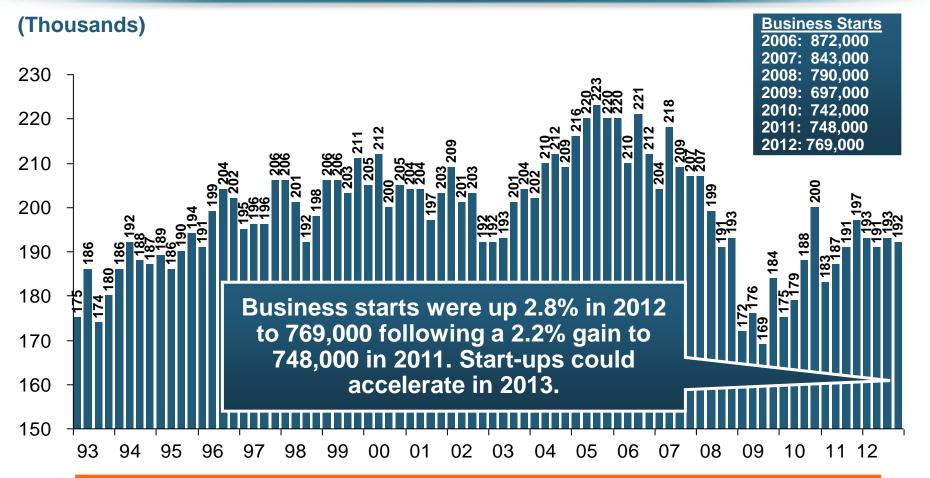


http://www.abiworld.org/AM/AMTemplate.cfm?Section=Home&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=61633; Insurance Information Institute

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### Private Sector Business Starts, 1993:Q2 – 2012:Q4\*





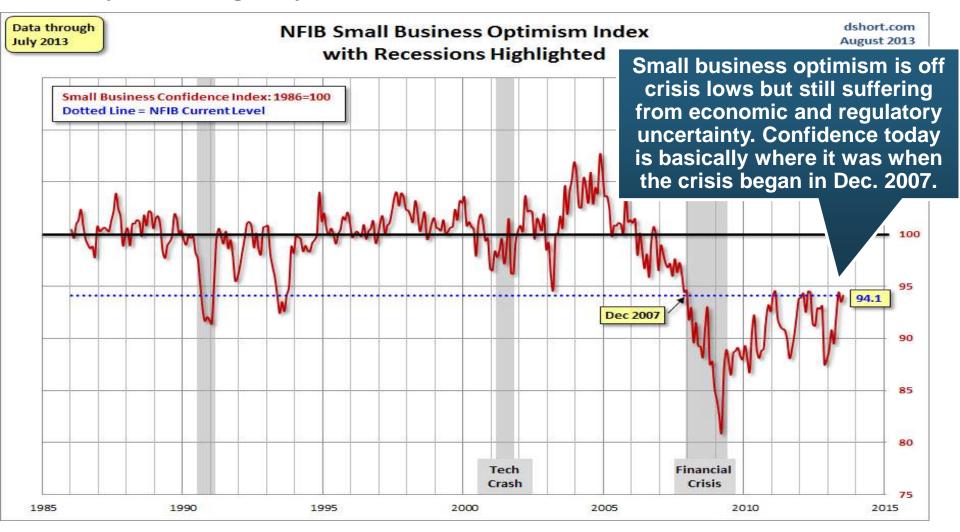
#### Business Starts Were Down Nearly 20% in the Recession, Holding Back Most Types of Commercial Insurance Exposure, But Are Recovering Slowly

\* Data through Dec. 30, 2012 are the latest available as of Aug. 16, 2013; Seasonally adjusted. Source: Bureau of Labor Statistics, http://www.bls.gov/news.release/cewbd.t08.htm.

# **NFIB Small Business Optimism Index**



#### January 1985 through July 2013



Source: National Federation of Independent Business at <a href="http://www.advisorperspectives.com/dshort/charts/indicators/Sentiment.html?NFIB-optimism-index.gif">http://www.advisorperspectives.com/dshort/charts/indicators/Sentiment.html?NFIB-optimism-index.gif</a>; Insurance Information Institute.

## 12 Industries for the Next 10 Years: Insurance Solutions Needed



Health Care		
Health Sciences		
Energy (Traditional)		
Alternative Energy	Many industries are	
Petrochemical	poised for growth, though	
Agriculture	insurers' ability to	
Natural Resources	capitalize on these industries	
Technology (incl. Biotechnology)	varies widely	
Light Manufacturing		
Insourced Manufacturing		
Export-Oriented Industries		
Shipping (Rail, Marine, Trucking, Pipelines)		

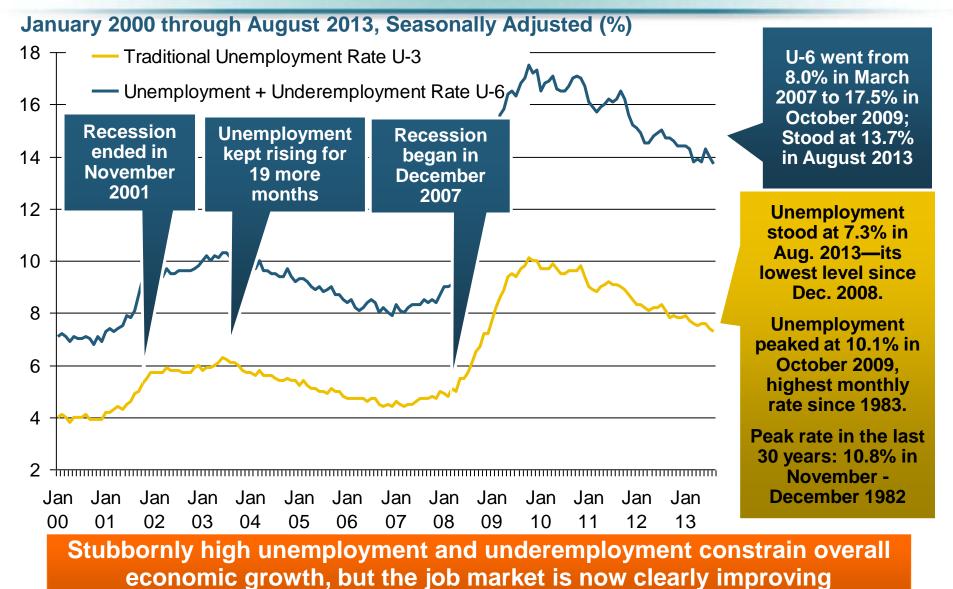


# Labor Market Trends

Massive Job Losses Sapped the Economy and Commercial/Personal Lines Exposure, But Trend is Improving

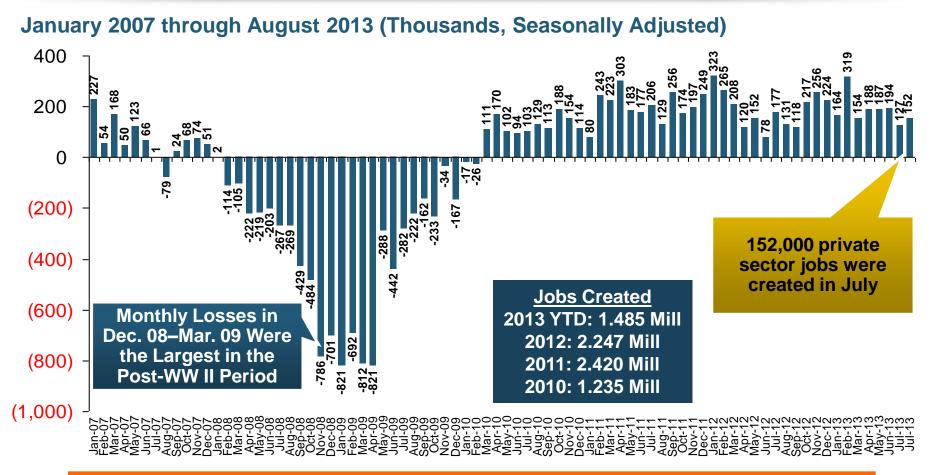
#### Unemployment and Underemployment Rates: Stubbornly High, But Falling





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

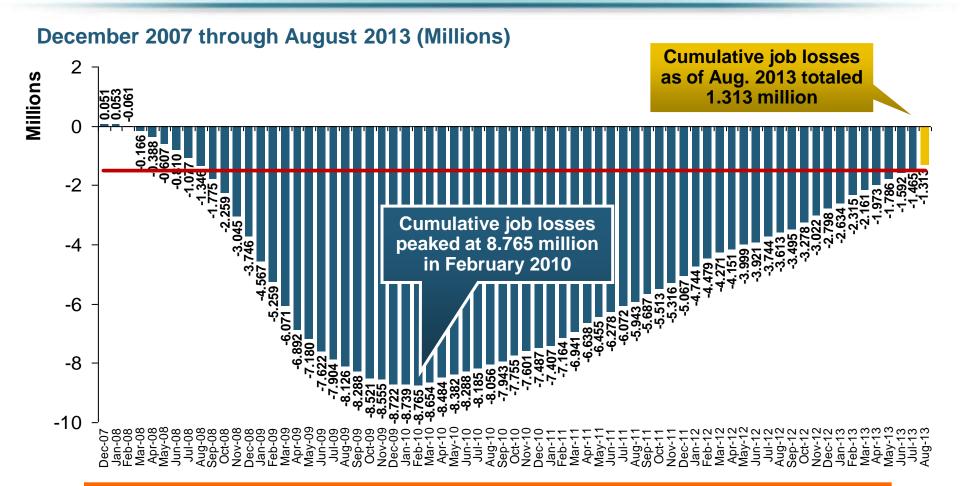
## Monthly Change in Private Employment



Private Employers Added 7.41 million Jobs Since Jan. 2010 After Having Shed 4.98 Million Jobs in 2009 and 3.80 Million in 2008 (State and Local Governments Have Shed Hundreds of Thousands of Jobs)

Source: US Bureau of Labor Statistics: <u>http://www.bls.gov/ces/home.htm;</u> Insurance Information Institute

### Cumulative Change in Private Employment: Dec. 2007—Aug. 2013

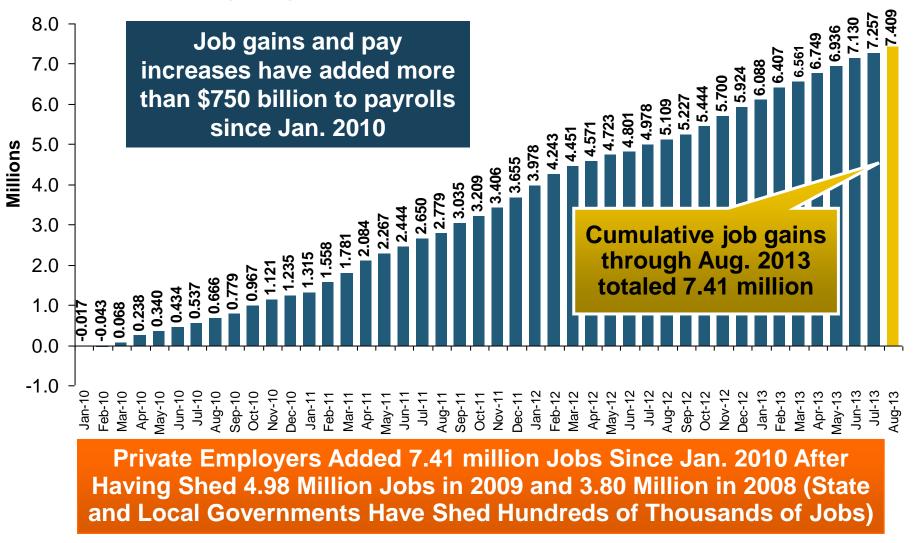


Private Employers Added 7.29 million Jobs Since Jan. 2010 After Having Shed 4.98 Million Jobs in 2009 and 3.80 Million in 2008 (State and Local Governments Have Shed Hundreds of Thousands of Jobs)

Source: US Bureau of Labor Statistics: http://www.bls.gov/ces/home.htm; Insurance Information Institute

## Cumulative Change in Private Sector Employment: Jan. 2010—August 2013

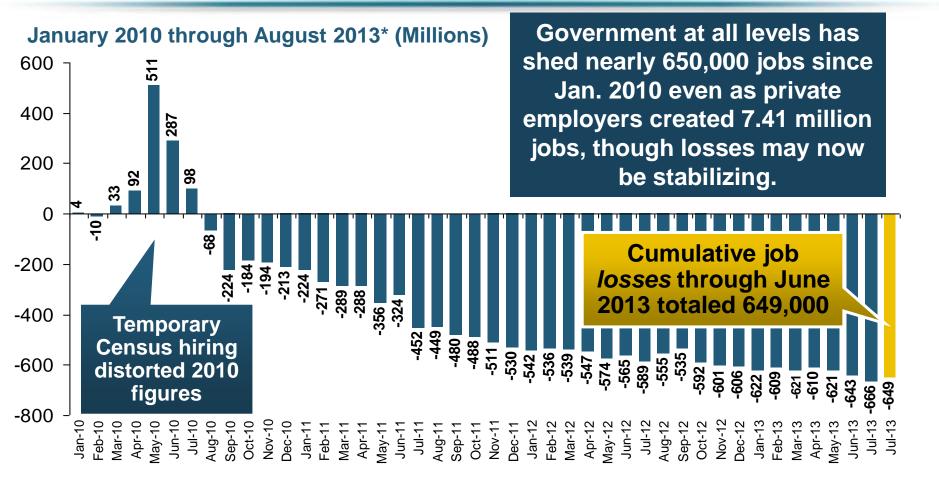
#### January 2010 through August 2013\* (Millions)



Source: US Bureau of Labor Statistics: http://www.bls.gov/ces/home.htm; Insurance Information Institute

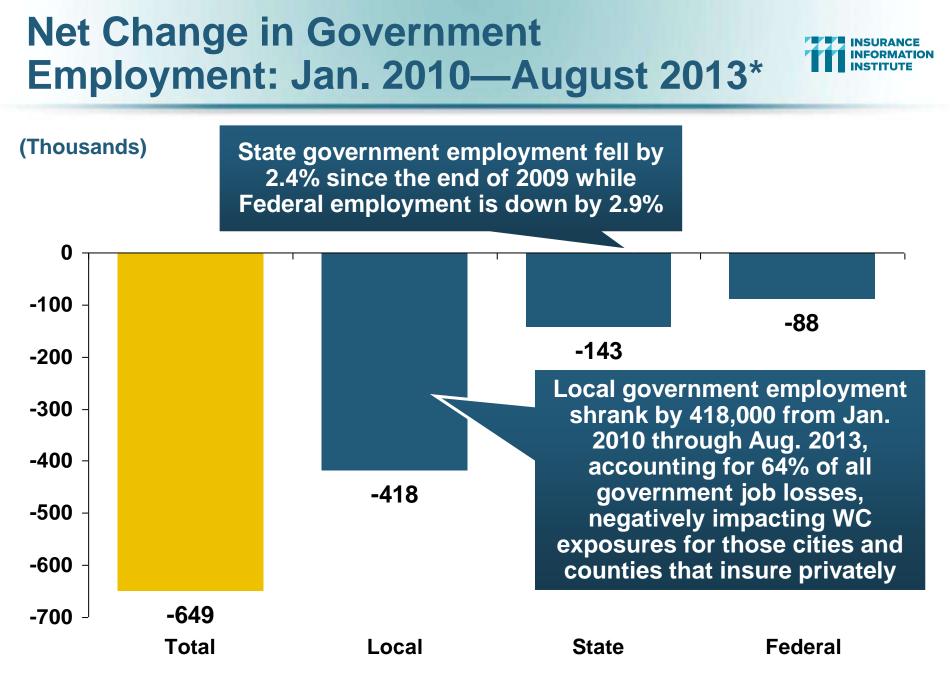
## Cumulative Change in Government Employment: Jan. 2010—August 2013





Governments at All Levels are Under Severe Fiscal Strain As Tax Receipts Plunged and Pension Obligations Soared During the Financial Crisis: Sequestration Will Add to this Toll

Source: US Bureau of Labor Statistics <u>http://www.bls.gov/data/#employment;</u> Insurance Information Institute

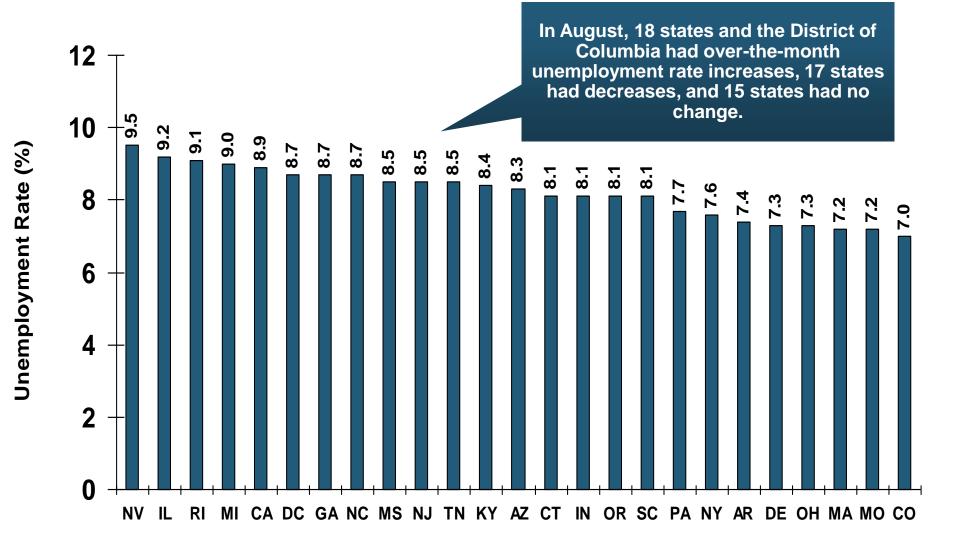


\*Cumulative change from prior month; Base employment date is Dec. 2009.

Source: US Bureau of Labor Statistics http://www.bls.gov/data/#employment; Insurance Information Institute

#### Unemployment Rates by State, August 2013: Highest 25 States\*



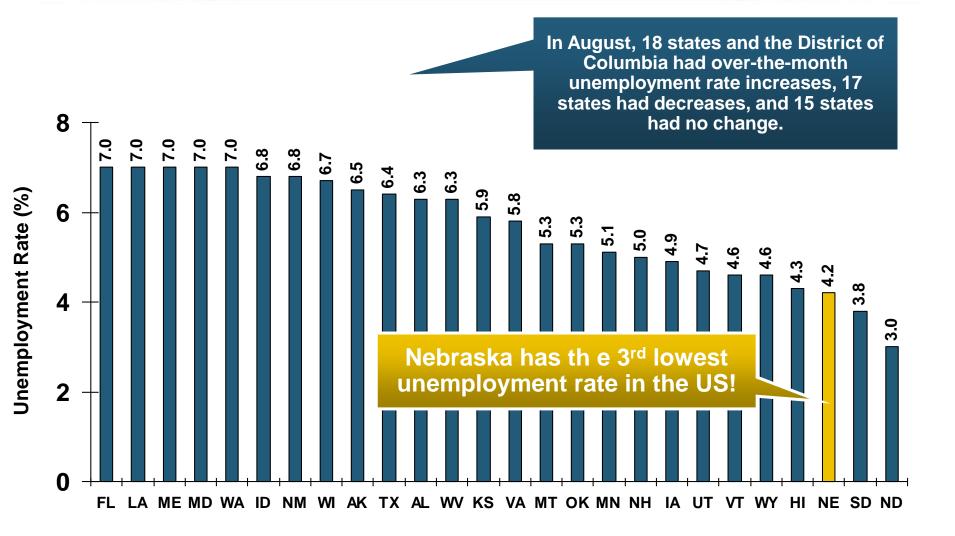


\*Provisional figures for August 2013, seasonally adjusted.

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

#### Unemployment Rates by State, August 2013: Lowest 25 States\*

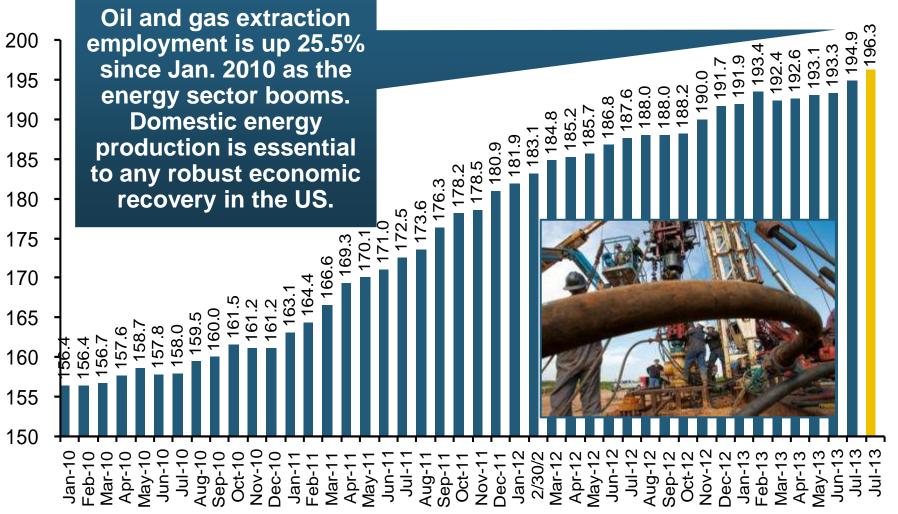




\*Provisional figures for August 2013, seasonally adjusted. Sources: US Bureau of Labor Statistics; Insurance Information Institute.

# Oil & Gas Extraction Employment, Jan. 2010—August 2013\*

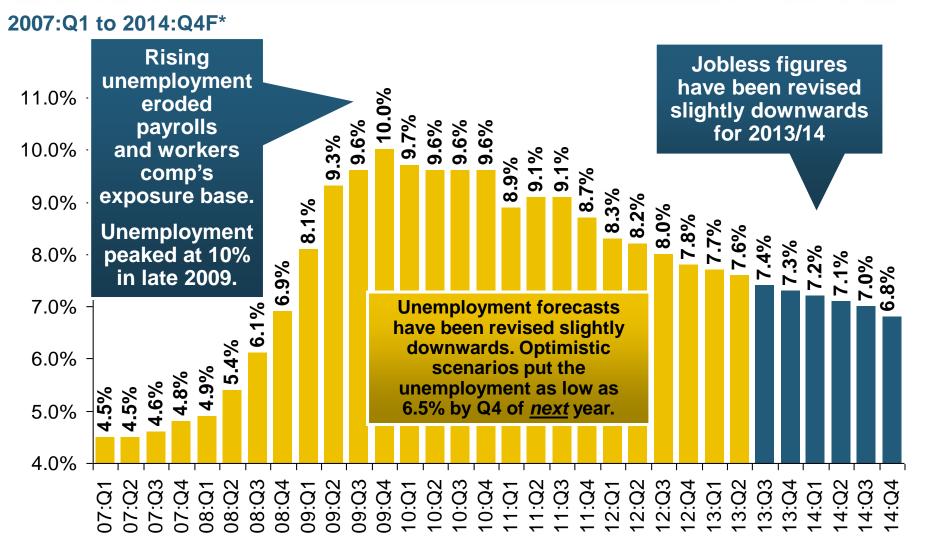
#### (Thousands)



\*Seasonally adjusted

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

# **US Unemployment Rate Forecast**



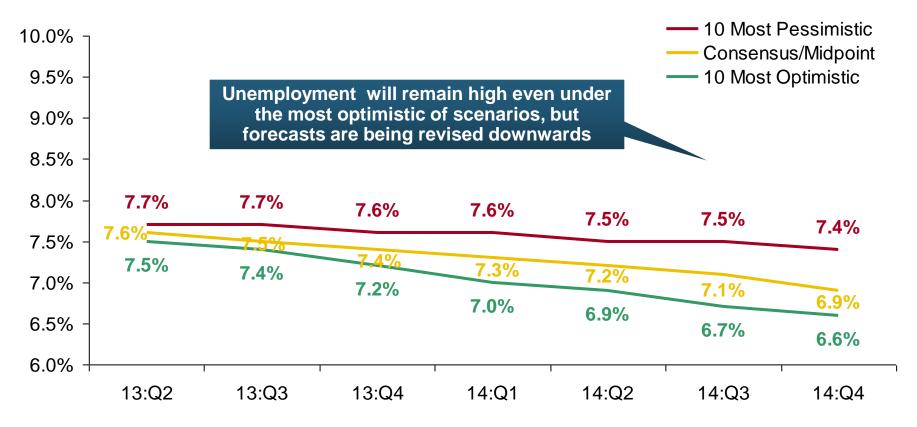
= actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (9/13 edition); Insurance Information Institute.

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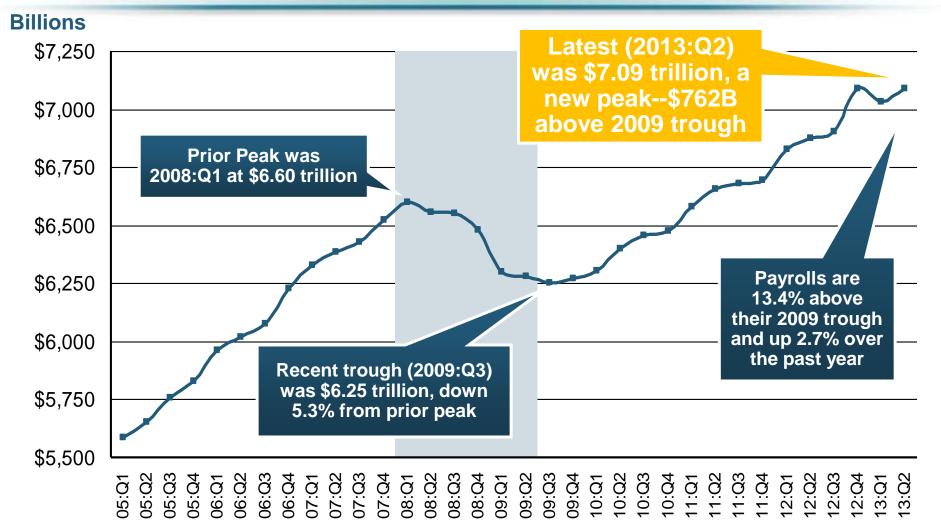
# **US Unemployment Rate Forecasts**

#### Quarterly, 2013:Q1 to 2014:Q4



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#### Nonfarm Payroll (Wages and Salaries): Quarterly, 2005–2013:Q2

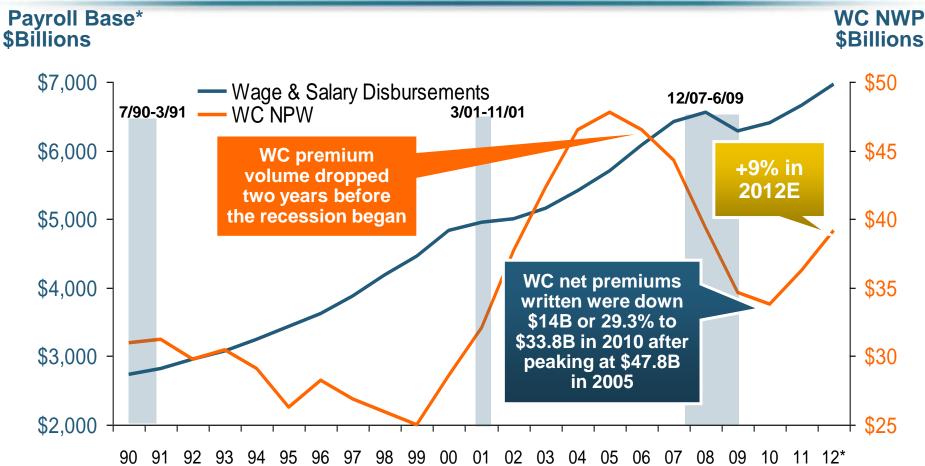


Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.

Sources: <u>http://research.stlouisfed.org/fred2/series/WASCUR;</u> National Bureau of Economic Research (recession dates); Insurance Information Institute.

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



#### 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 <u>http://research.stlouisfed.org/fred2/series/WASCUR</u>; NCCI; I.I.I.

INSURANCE



# U.S. Insured Catastrophe Loss Update

# Catastrophe Losses in Recent Years Have Been Very High

# **U.S. Insured Catastrophe Losses**



\*Through 6/2/13. Includes \$2.6B for 2013:Q1 (PCS) and \$5.32B for the period 4/1 – 6/2/13 (Aon Benfield Monthly Global Catastrophe Recap). 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.

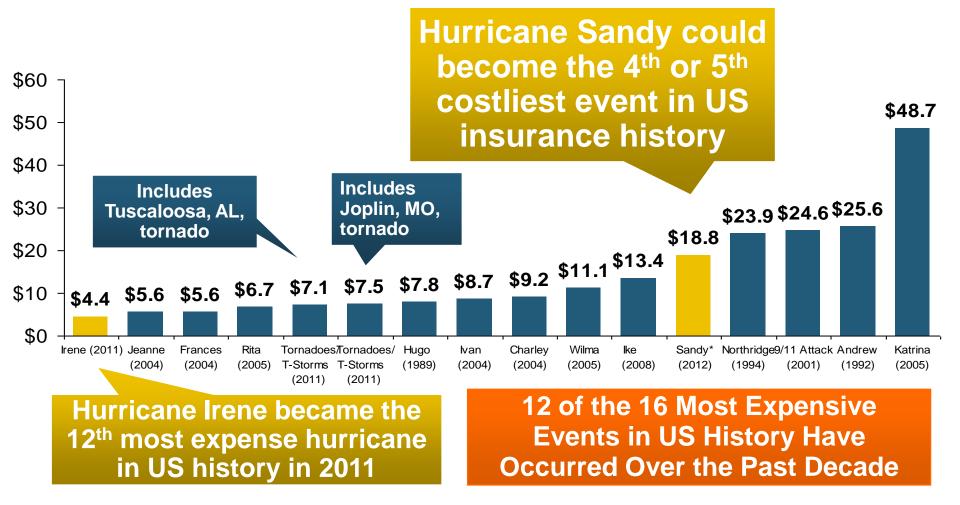
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INFORMATION

## Top 16 Most Costly Disasters in U.S. History

INSURANCE INFORMATION INSTITUTE

(Insured Losses, 2012 Dollars, \$ Billions)



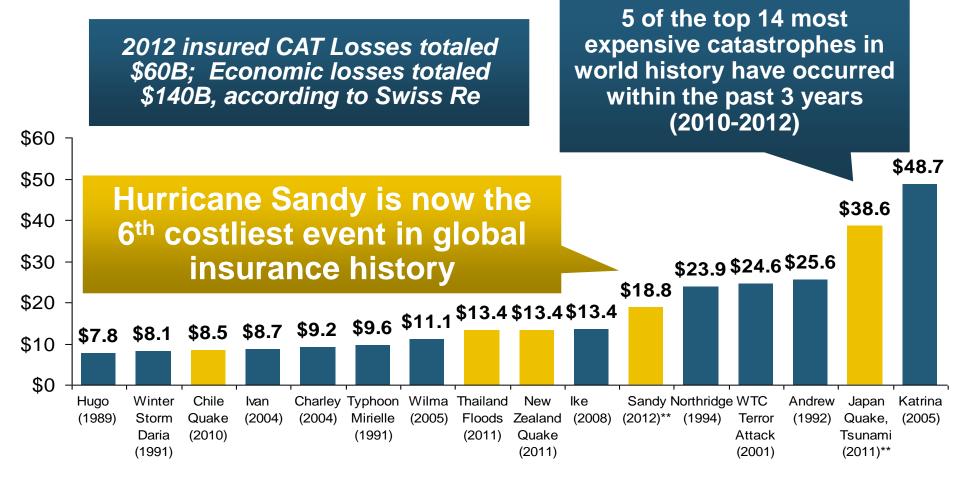
\*PCS estimate as of 4/12/13.

Sources: PCS; Insurance Information Institute inflation adjustments to 2012 dollars using the CPI.

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

#### INSURANCE INFORMATION INSTITUTE

(Insured Losses, 2012 Dollars, \$ Billions)



\*Figures do not include federally insured flood losses.

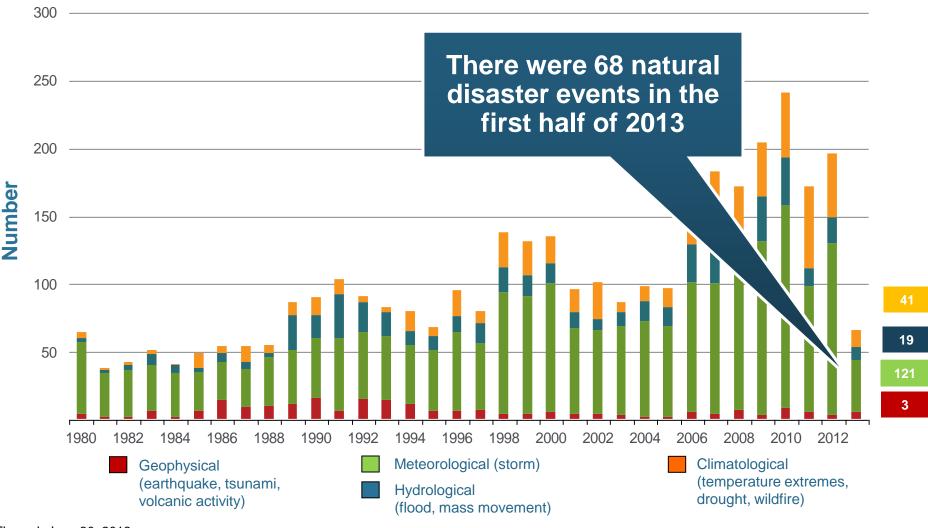
\*\*Estimate based on PCS value of \$18.75B as of 4/12/13.

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

# Natural Disasters in the United States, 1980 – June 2013\*



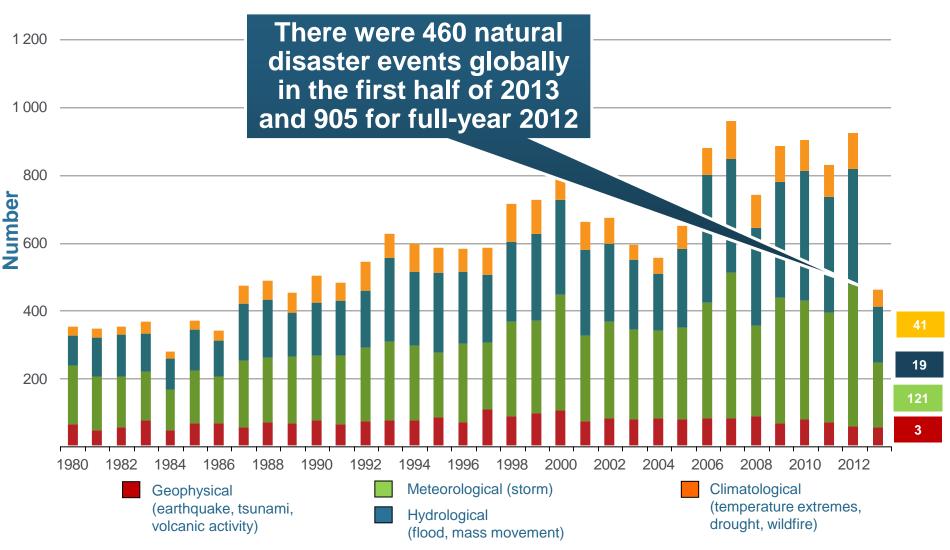
Number of Events (Annual Totals 1980 – June 2013\*)



\*Through June 30, 2013. Source: MR NatCatSERVICE

#### Natural Disasters Worldwide, 1980 – 2013\* (Number of Events)

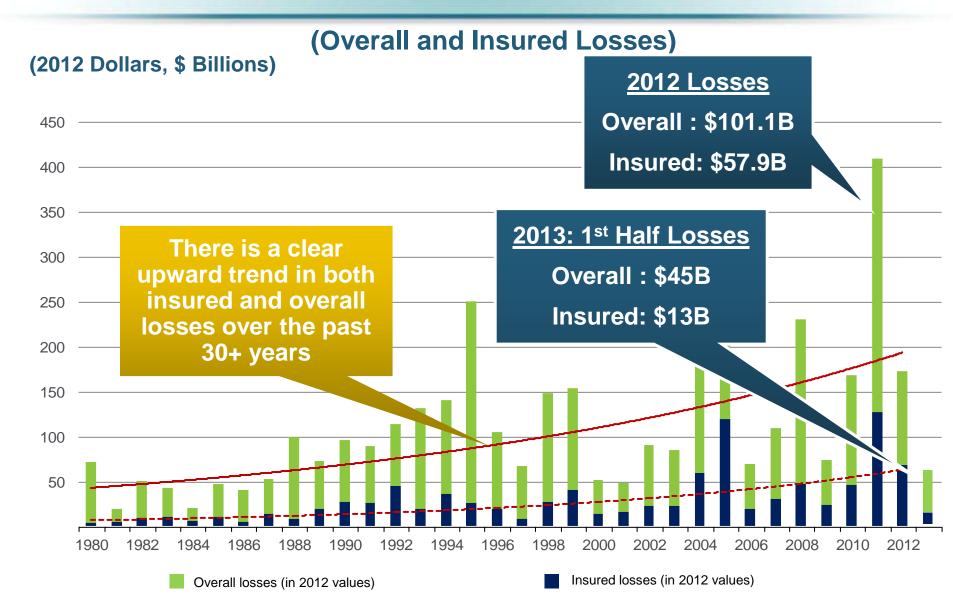




\*Through June 30, 2013. Source: MR NatCatSERVICE

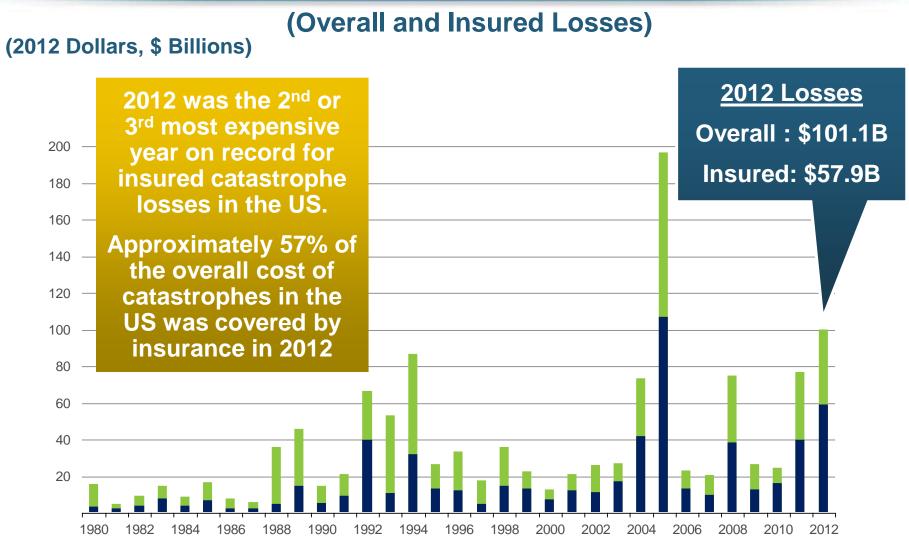
#### Losses Due to Natural Disasters Worldwide, 1980–2013\* (Overall & Insured Losses)





\*Through June 30, 2013. Source: MR NatCatSERVICE

# Losses Due to Natural Disasters in the US, 1980–2012 (Overall & Insured Losses)

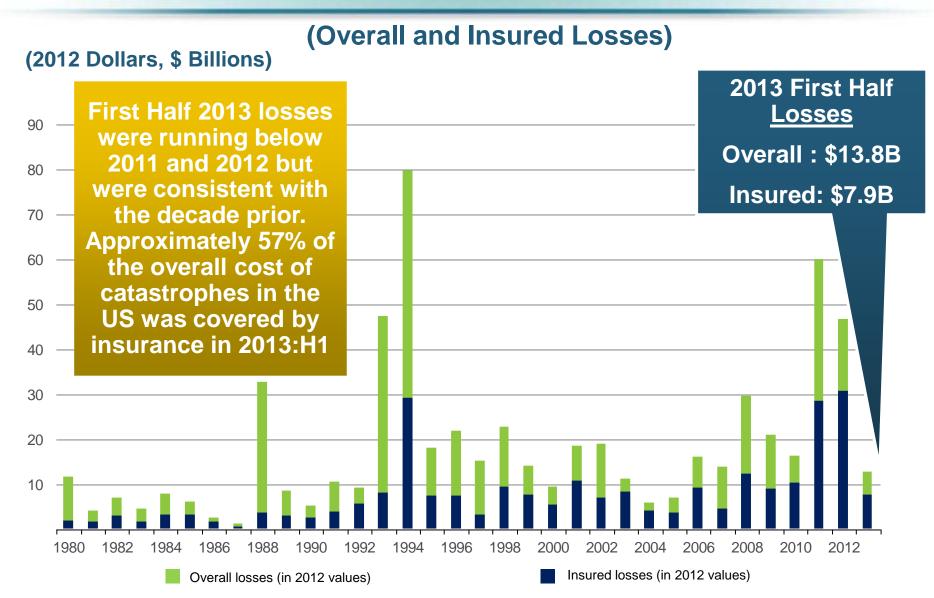


Overall losses (in 2012 values)

Insured losses (in 2012 values)

# Losses Due to Natural Disasters in the US, 1980–2013 (Jan.-June Only)





# Natural Disaster Losses in the United States: 2012

As of January 1, 2013	Number of Events	Fatalities	Estimated Overall Losses (US \$m)	Estimated Insured Losses (US \$m)
Tropical Cyclone	4	143	52,240	26,360
Severe Thunderstorm	115	118	27,688	14,914
Drought	2	0	20,000	16,000†
Wildfire	38	13	1,112	595
Winter Storm	2	7	81	38
Flood	19	3	13	0 <sup>++</sup>
TOTALS	184	284	\$101,134	\$57,907

Source: MR NatCatSERVICE

† - Includes Federal Crop Insurance Losses. † † - Excludes federal flood.

### Natural Disaster Losses in the United States: First Half 2013



As of July 1, 2013	Number of Events	Fatalities	Estimated Overall Losses (US \$m)	Estimated Insured Losses (US \$m)
Severe Thunderstorm	29	66	10,180	6,325
Winter Storm	13	17	2,434	1,255
Flood	10	9	500	Minor
Earthquake & Geophysical	5	0	Minor	Minor
Tropical Cyclone	1	1	Minor	Minor
Wildfire, Heat, & Drought	11	23	700	365
Totals	68	116	13,814	7,945

## **Significant Natural Catastrophes, 2012**

(Events with \$1 billion economic loss and/or 50 fatalities)



Date	Event	Estimated Economic Losses (US \$m)	Estimated Insured Losses (US \$m)
June – Sept 2012	Central US Drought	20,000	16,000†
March 2 - 3	Thunderstorms	5,000	2,500
April 2 – 4	Thunderstorms	1,550	775
April 13- 15	Thunderstorms	1,800	910
April 28 – 29	Thunderstorms	4,500	2,500
May 25 – 30	Thunderstorms	3,400	1,700
June 6 – 7	Thunderstorms	1,400	1,000
June 11 – 13	Thunderstorms	1,900	950
June 28 – July 2	Thunderstorms	4,000	2,000
August 26 - 30	Hurricane Isaac	2,000	1,220
October 28 - 30	Hurricane Sandy	50,000	25,000 <sup>††</sup>

Source: MR NatCatSERVICE

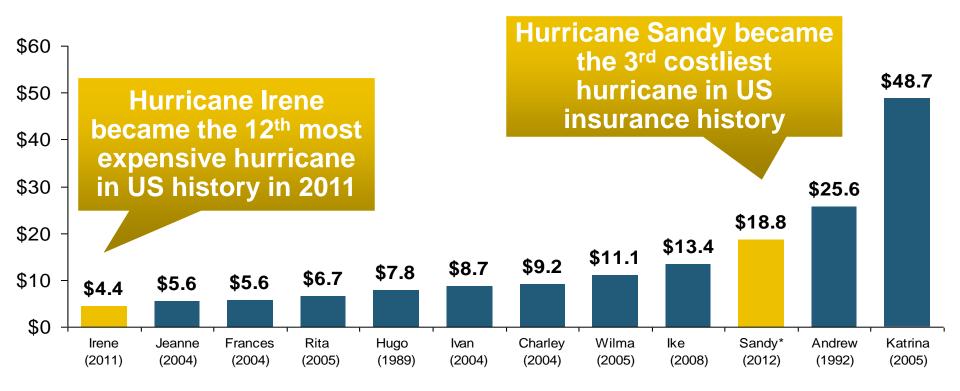
† - Includes Federal Crop Insurance Losses.; † † - Excludes NFIP losses.

### Top 12 Most Costly Hurricanes in U.S. History



(Insured Losses, 2012 Dollars, \$ Billions)

10 of the 12 most costly hurricanes in insurance history occurred over the past 9 years (2004–2012)

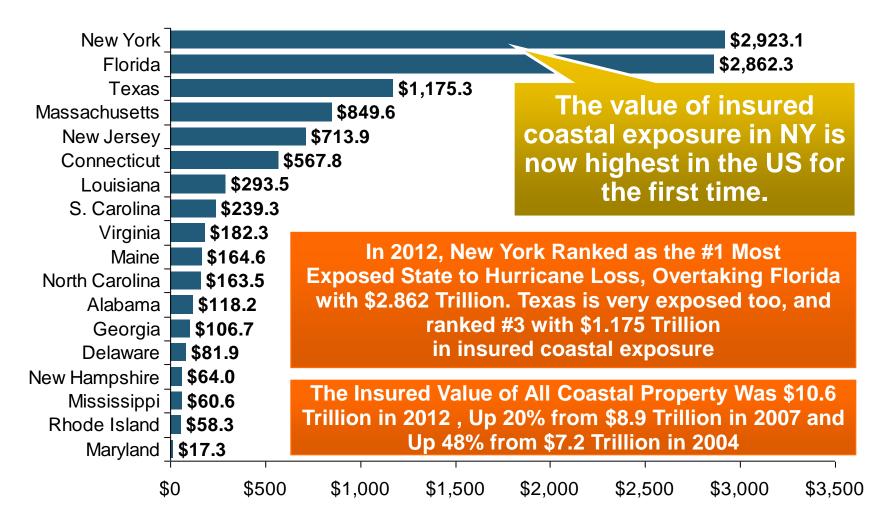


\*PCS estimate as of 4/12/13.

Sources: PCS; Insurance Information Institute inflation adjustments to 2012 dollars using the CPI.

# Total Value of Insured Coastal Exposure

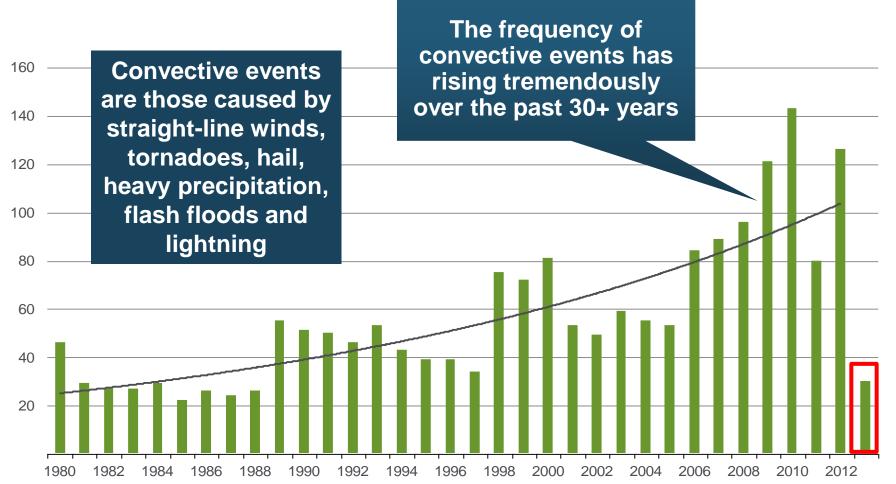
### (2012, \$ Billions)



### **Convective Loss Events in the U.S.** Number of events 1980 – 2012 and First Half 2013

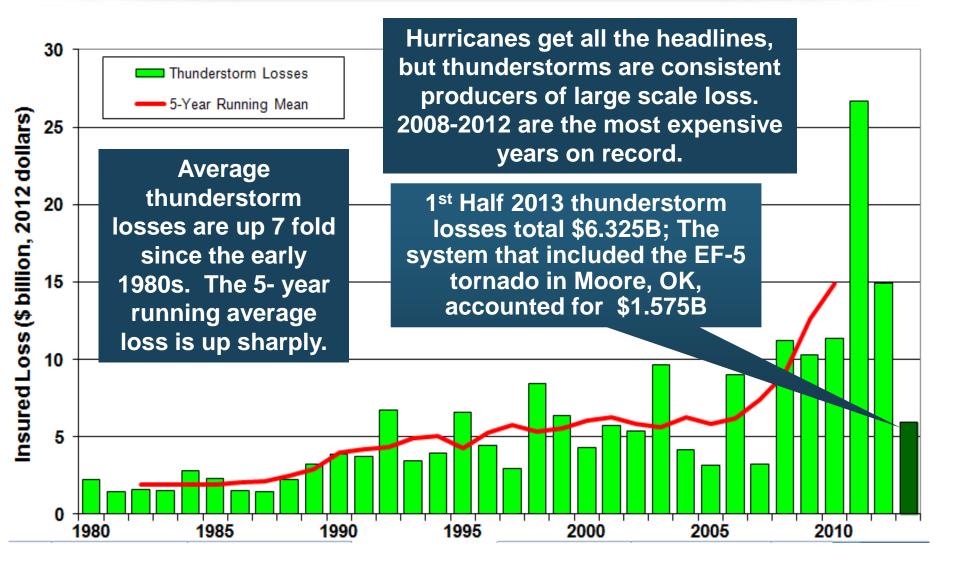


#### Number



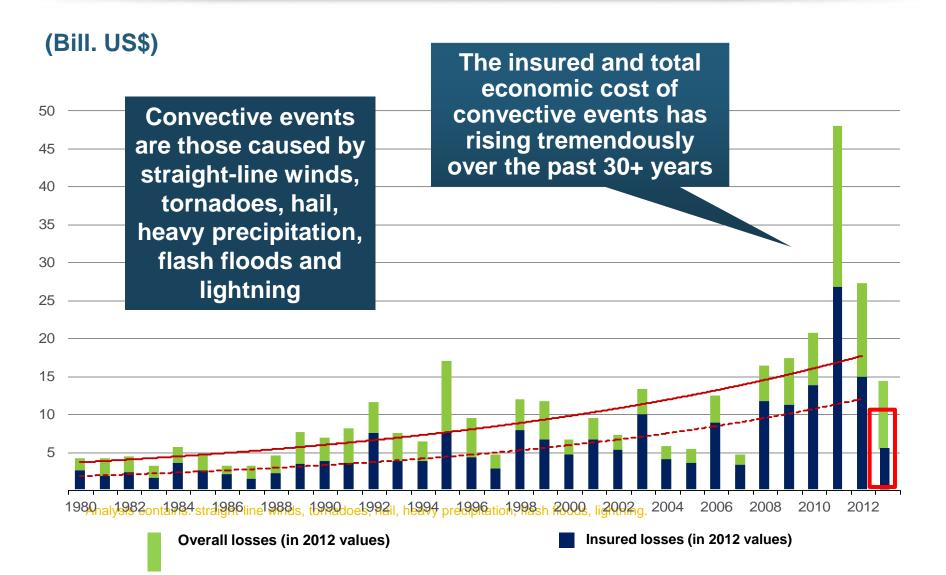
### U.S. Thunderstorm Loss Trends, 1980 – June 30, 2013





### **Convective Loss Events in the U.S.** Overall and insured losses 1980 – 2012 and First Half 2013



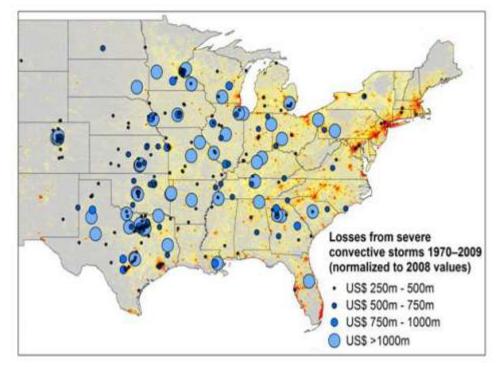


### New Research Suggests Increase in Convective Activity Is Costly for Insurers



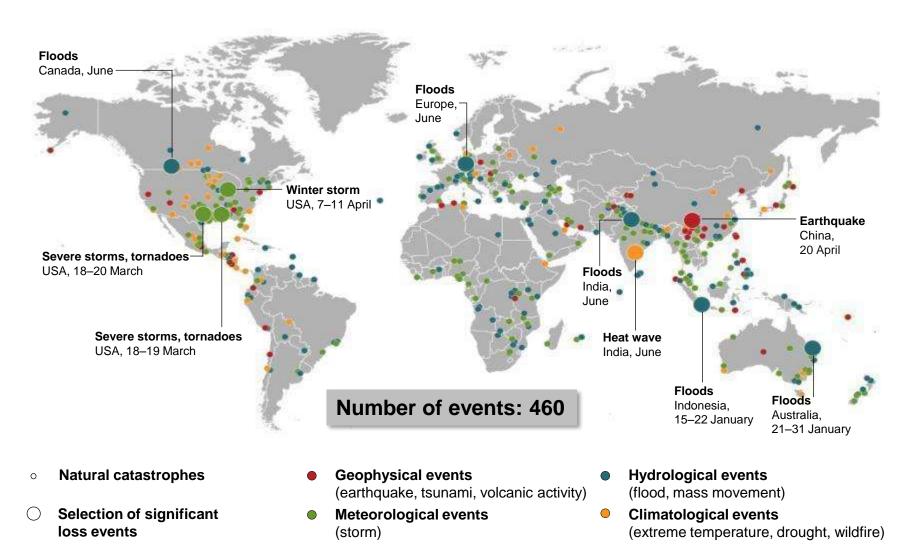
- Past losses are normalized (i.e., adjusted) to currently exposed values
- After normalization there are still increases of losses
- Increases are correlated with the increase in the meteorological potential for severe thunderstorms and its variability

For the first time research shows that climatic changes have already influenced US thunderstorm losses



Source: Munich Re research paper, Marhc 18, 2013: *Rising Variability in Thunderstorm-Related U.S. Losses as a Reflection of Changes in Large-Scale Thunderstorm Forcing.* 

### Natural Catastrophes January – June 2013 World map with significant events

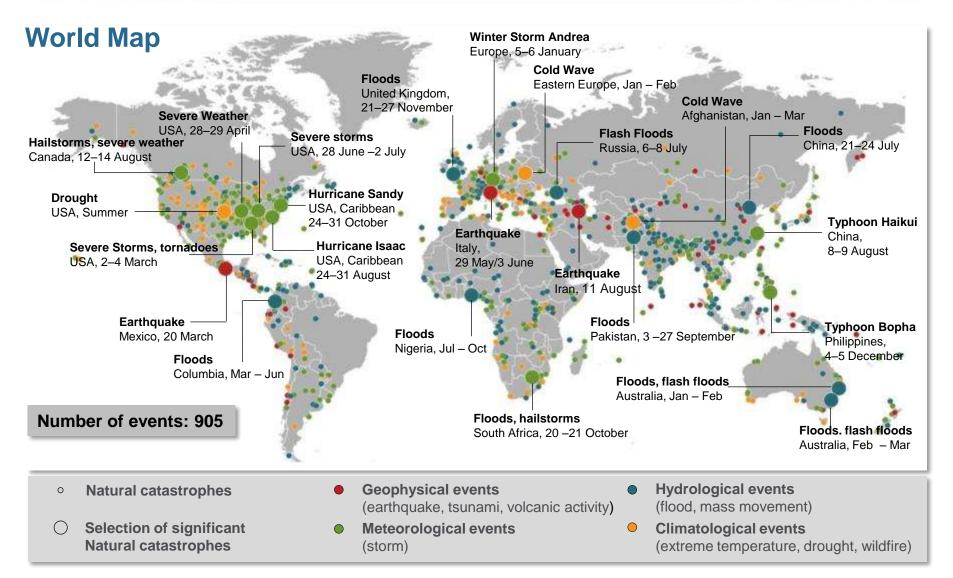


Source: 2013 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE – as at June 2013

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### Natural Loss Events: Full Year 2012





Source: Geo Risks Research, NatCatSERVICE - As of January 2013

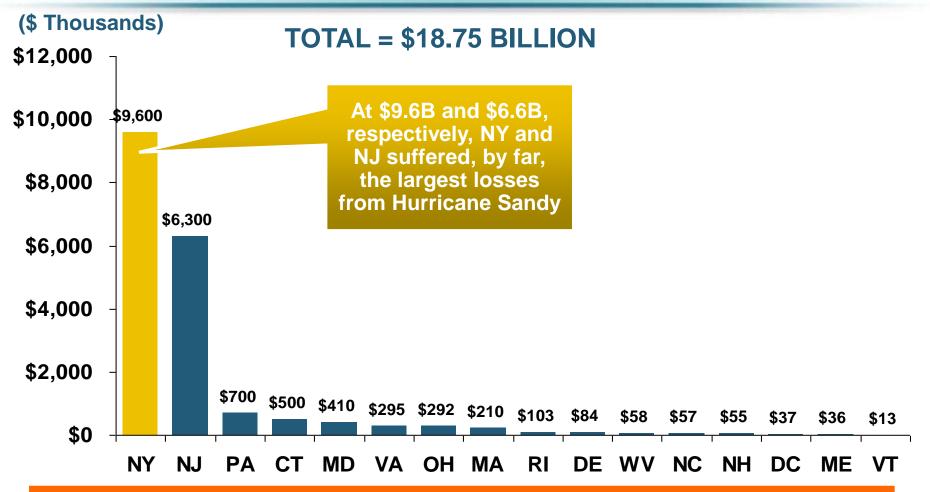


# **Hurricane Sandy Summary**

# Sandy Became One of the Most Expensive Events in Insurance History

# Hurricane Sandy: Claim Payments to Policyholders, by State



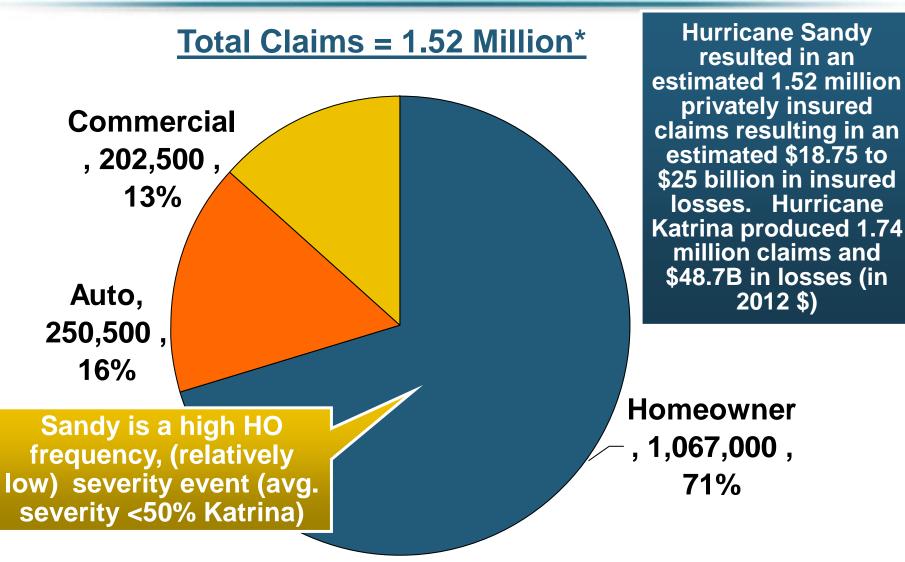


### Insurers Will Pay at Least \$18.75 Billion to 1.52 Million Policyholders Across 15 States and DC in the Wake of Hurricane Sandy

Sources: Catastrophe loss data is for Catastrophe Serial No. 90 (Oct. 28 – 31, 2012) from PCS as of Jan. 18, 2013; Insurance Information Institute .

### Hurricane Sandy: Number of Claims by Type\*

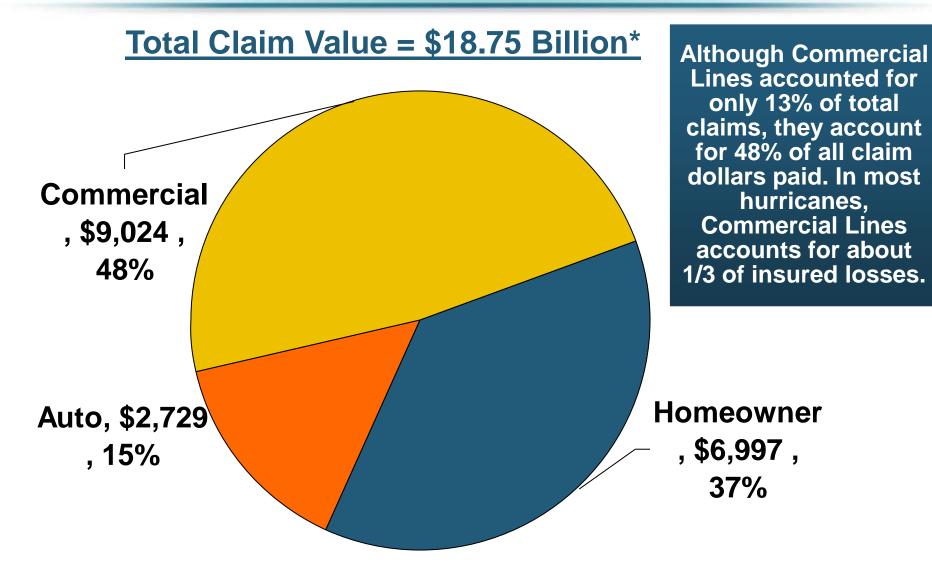
#### INSURANCE INFORMATION INSTITUTE



\*PCS claim count estimate s as of 1/18/13. Loss estimate represents PCS total (\$18.75B) and upper end of range estimates by risk modelers RMS, Eqecat and AIR. All figures exclude losses paid by the NFIP. Source: PCS; AIR, Egecat, AIR Worldwide; Insurance Information Institute.

### Hurricane Sandy: Insured Loss by Claim Type\* (\$ Millions)

#### INSURANCE INFORMATION INSTITUTE



\*PCS insured loss estimates as of 1/18/13. Catastrophe modeler estimates range up to \$25 billion. All figures exclude losses paid by the NFIP. Source: PCS; Insurance Information Institute.

### Outlook for 2013 Hurricane Season: 75% Worse Than Average



Forecast Parameter	<b>Median</b> (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%

Source: Philip Klotzbach and Dr. William Gray, Colorado State University, June 2013, accessed at <a href="http://tropical.atmos.colostate.edu/forecasts/2013/apr2013/apr2013.pdf">http://tropical.atmos.colostate.edu/forecasts/2013/apr2013/apr2013.pdf</a> ; Insurance Information Institute...

### Landfall Probabilities for 2013 Hurricane Season: Above Average

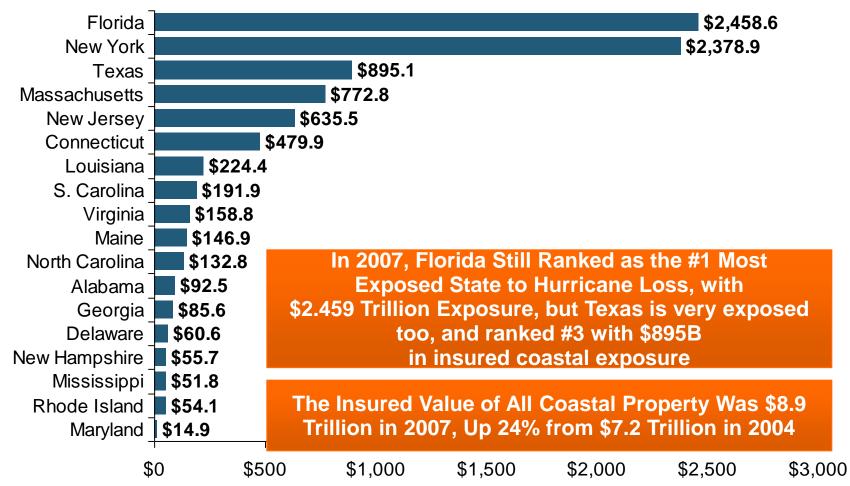


	Average*	2013F
Entire US East & Gulf Coasts	52%	72%
US East Coast Including Florida Peninsula	31%	48%
Gulf Coast from Florida Panhandle to Brownsville	30%	47%
Caribbean	42%	61%

\*Average over the past century. Source: Philip Klotzbach and Dr. William Gray, Colorado State University, June 2013.

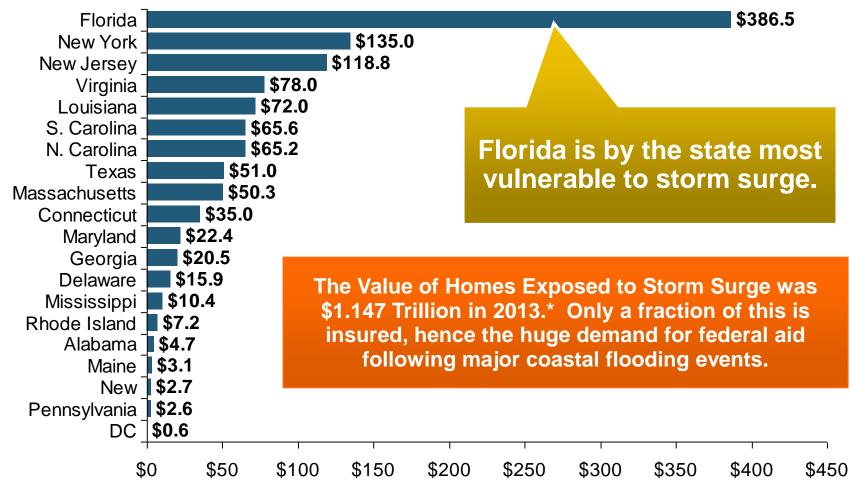
# Total Value of Insured Coastal Exposure in 2007

#### (2007, \$ Billions)



### Total Potential Home Value Exposure to Storm Surge Risk in 2013\*

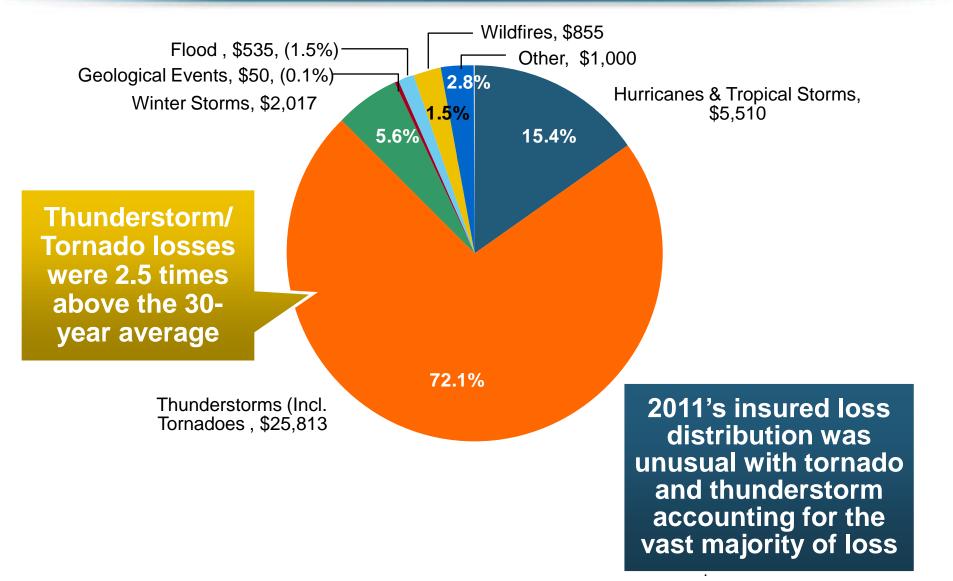
### (\$ Billions)



\*Insured and uninsured property. Based on estimated property values as of April 2013.

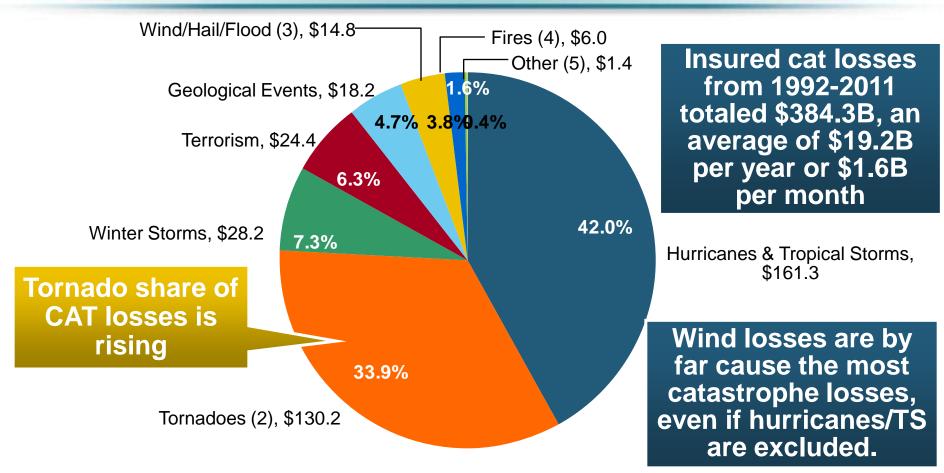
Source: Storm Surge Report 2013, CoreLogic.

# U.S. Insured Catastrophe Losses by Cause of Loss, 2011 (\$ Millions)



Source: ISO's Property Claim Services Unit, Munich Re; Insurance Information Institute.

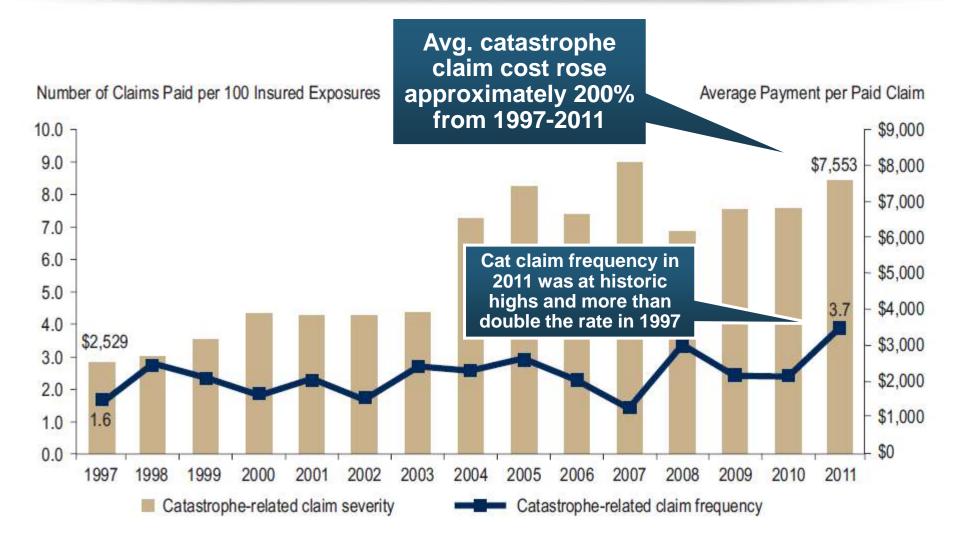
### Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1992–2011<sup>1</sup>



- 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.

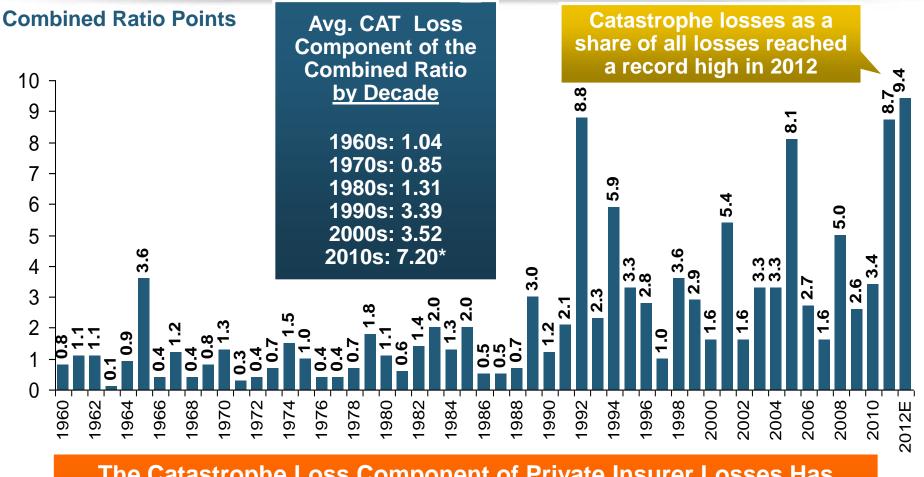
### Homeowners Insurance Catastrophe-Related Claim Frequency and Severity, 1997—2012\*



\*All policy forms combined, countrywide.

Source: Insurance Research Council, Trends in Homeowners Insurance Claims, Sept. 2012 from ISO Fast Track data.

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

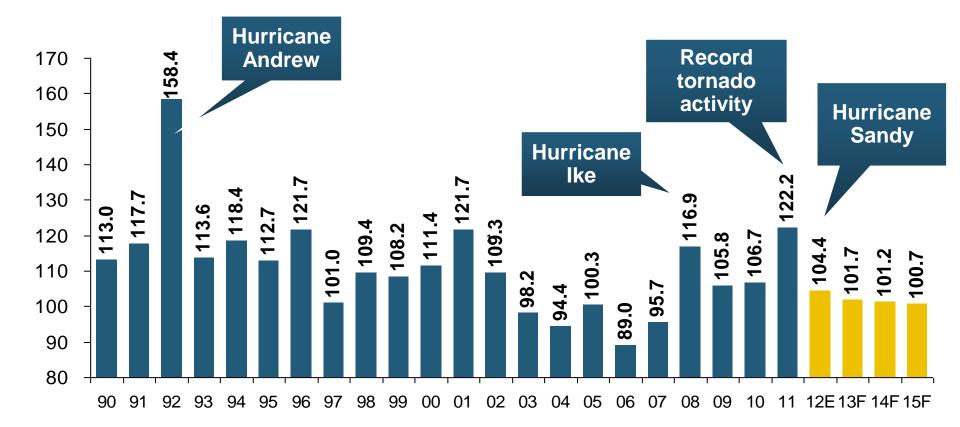


### The Catastrophe Loss Component of Private Insurer Losses Has Increased Sharply in Recent Decades

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.

### Homeowners Insurance Combined Ratio: 1990–2015F



Homeowners Performance in 2011/12 Impacted by Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity

Sources: A.M. Best (1990-2011); Conning (2012E-2015F); Insurance Information Institute.

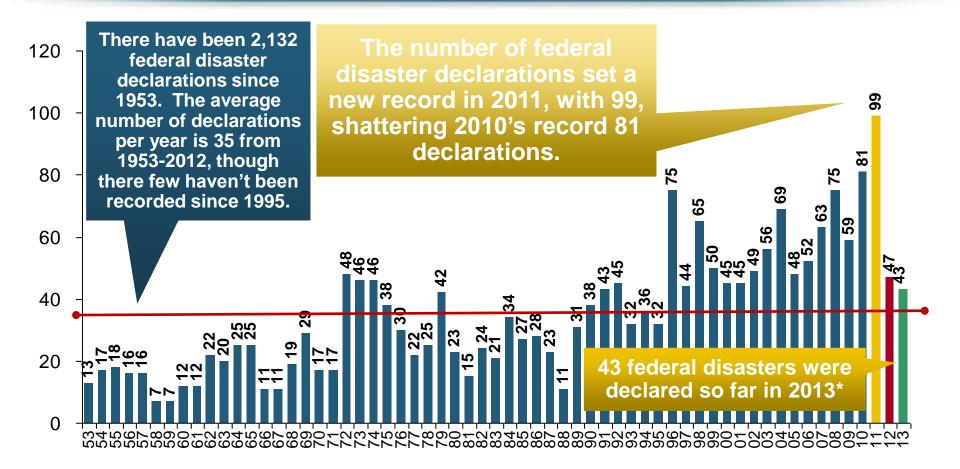


# Federal Disaster Declarations Patterns: 1953-2013

Disaster Declarations Set New Records in Recent Years

### Number of Federal Disaster Declarations, 1953-2013\*



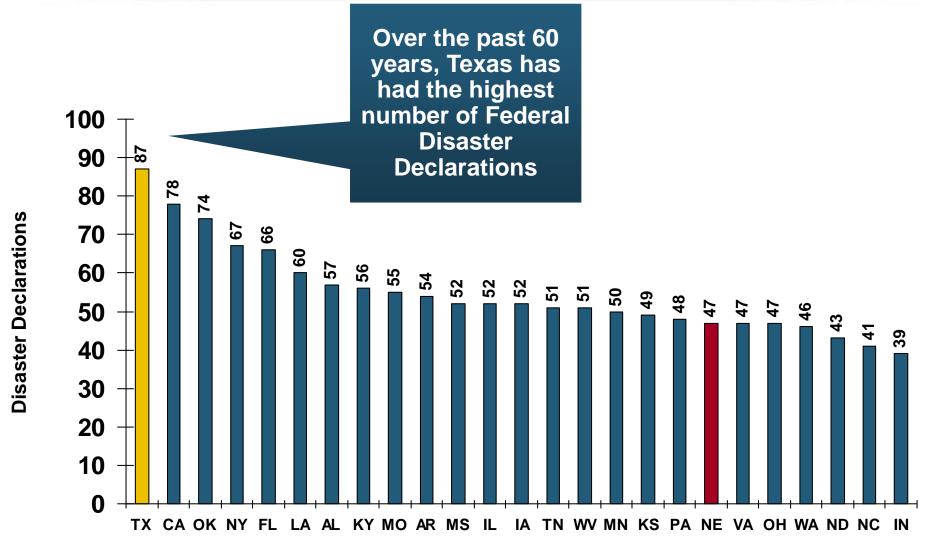


# The Number of Federal Disaster Declarations Is Rising and Set New Records in 2010 *and* 2011. Hurricane Sandy Produced 13 Declarations in 2012/13.

\*Through September 25, 2013.

Source: Federal Emergency Management Administration; http://www.fema.gov/disasters; Insurance Information Institute.

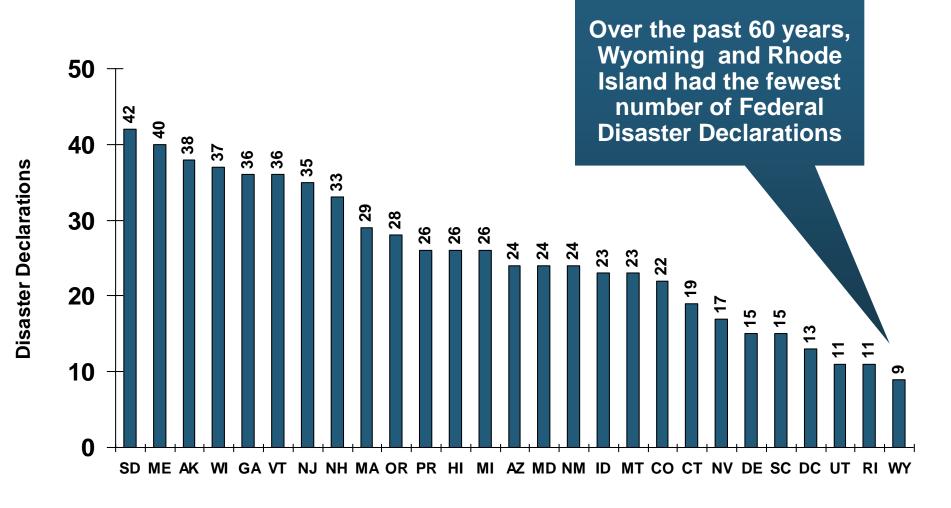
### Federal Disasters Declarations by State, 1953 – 2013: Highest 25 States\*



\*Through Sept. 25, 2013. Includes Puerto Rico and the District of Columbia.

Source: FEMA: <u>http://www.fema.gov/news/disaster\_totals\_annual.fema;</u> Insurance Information Institute.

### Federal Disasters Declarations by State, 1953 – 2013: Lowest 25 States\*



\*Through Sept. 15, 2013. Includes Puerto Rico and the District of Columbia.

Source: FEMA: <u>http://www.fema.gov/news/disaster\_totals\_annual.fema;</u> Insurance Information Institute.

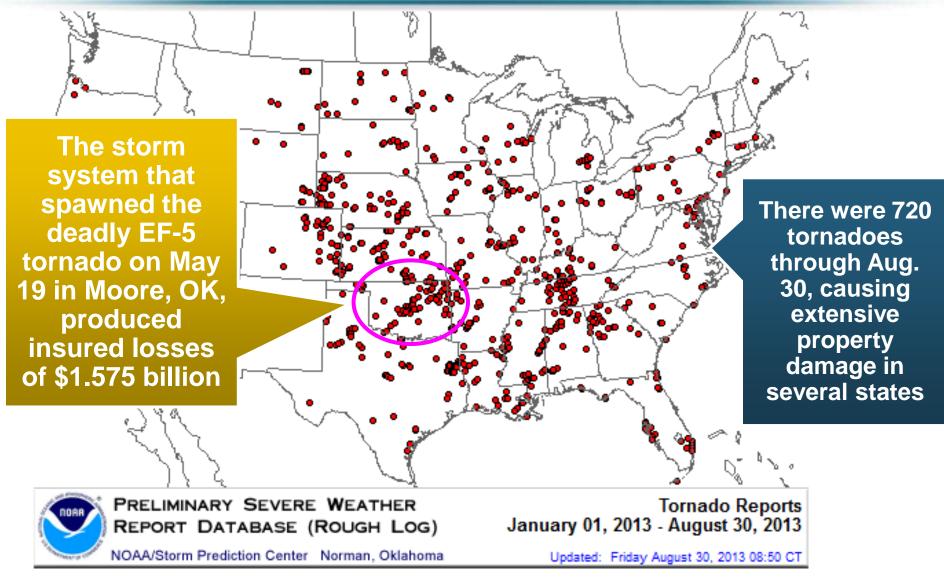


### **SEVERE WEATHER REPORT UPDATE: 2013**

## Damage from Tornadoes, Large Hail and High Winds Keep Insurers Busy

### Location of Tornado Reports: Through August 30, 2013

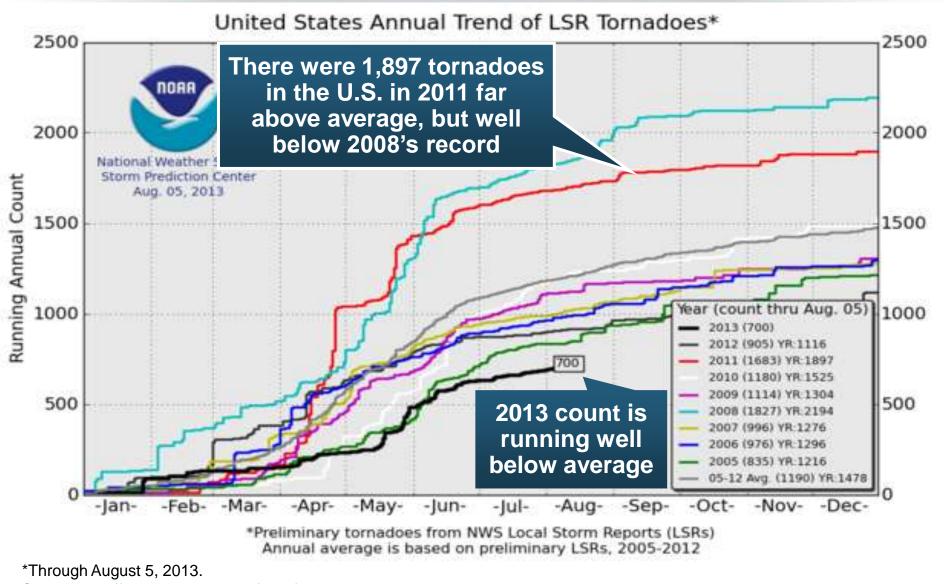




Source: NOAA Storm Prediction Center; <u>http://www.spc.noaa.gov/climo/online/monthly/2013\_annual\_summary.html#;</u> PCS.

### U.S. Tornado Count, 2005-2013\*

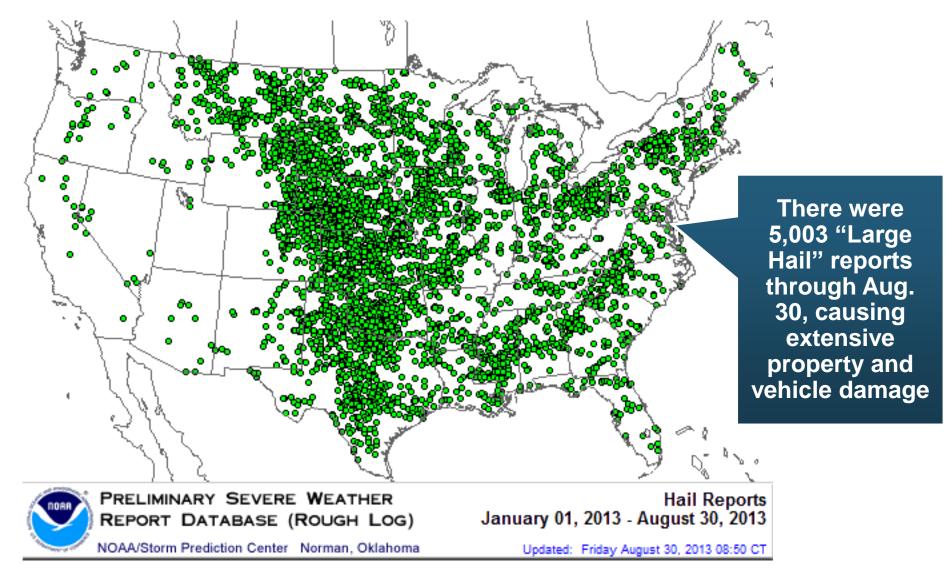




Source: http://www.spc.noaa.gov/wcm/.

### Location of Large Hail Reports: Through August 30, 2013

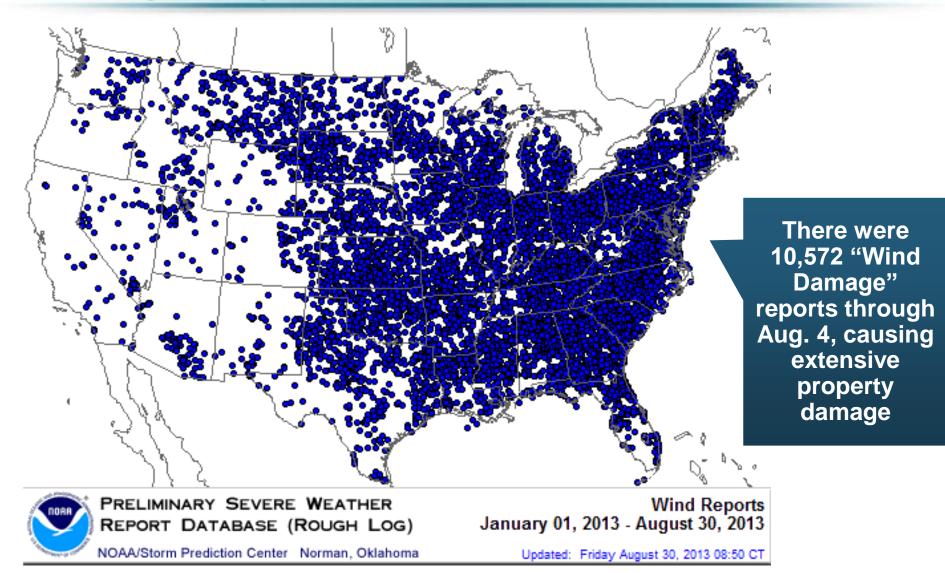




Source: NOAA Storm Prediction Center; http://www.spc.noaa.gov/climo/online/monthly/2013\_annual\_summary.html#

### Location of High Wind Reports: Through August 30, 2013

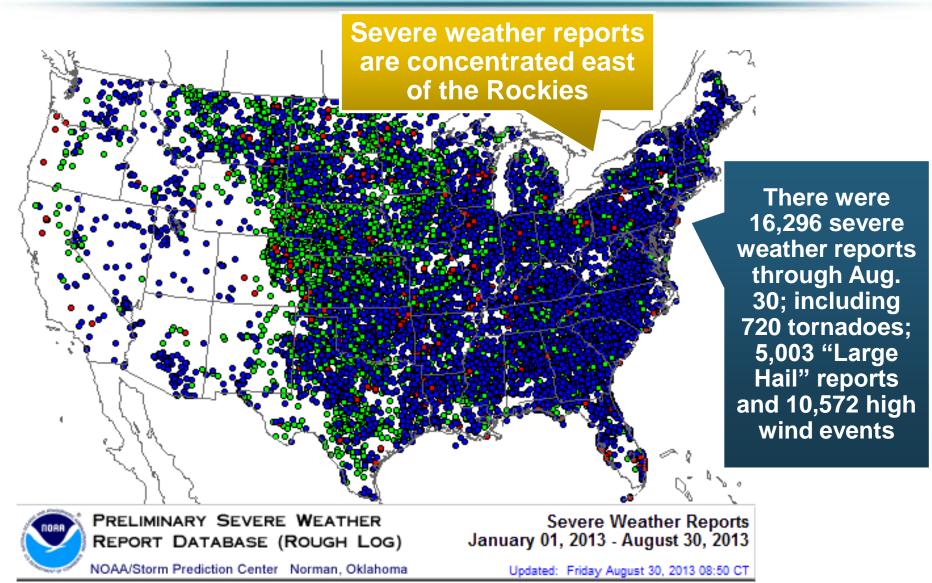




Source: NOAA Storm Prediction Center; http://www.spc.noaa.gov/climo/online/monthly/2013\_annual\_summary.html#

### Severe Weather Reports: Through August 30, 2013

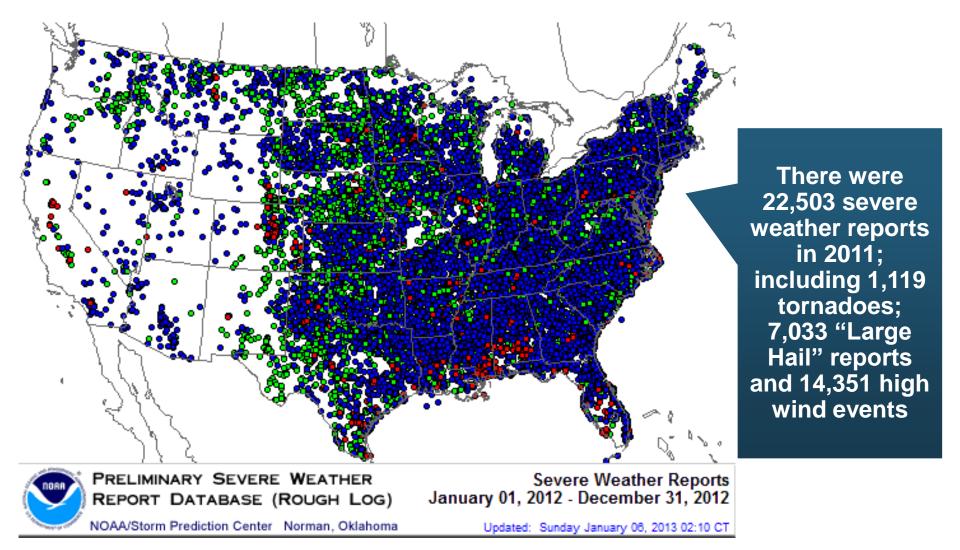




Source: NOAA Storm Prediction Center; http://www.spc.noaa.gov/climo/online/monthly/2013\_annual\_summary.html#

### **Severe Weather Reports, 2012**





Source: NOAA Storm Prediction Center; <a href="http://www.spc.noaa.gov/climo/online/monthly/2012\_annual\_summary.html">http://www.spc.noaa.gov/climo/online/monthly/2012\_annual\_summary.html</a>



# **Terrorism Update**

## Boston Marathon Bombings Underscore the Need for Extension of the Terrorism Risk Insurance Program

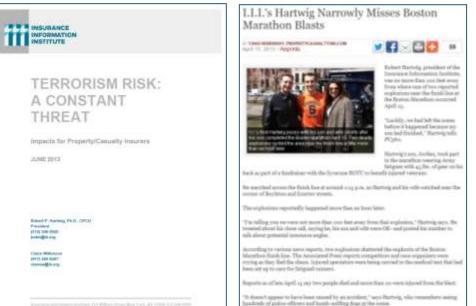
Download III's Terrorism Insurance Report at: <u>http://www.iii.org/white\_papers/terrorism-</u> <u>risk-a-constant-threat-2013.html</u>

### **Terrorism Risk Insurance Program**



- Reauthorization Was a Major Industry Initiative for 2013 Even Before Boston
- I.I.I. Testified at First Congressional Hearing on 9/11/12
  - Provided testimony at NYC hearing on 6/17/13
- I.I.I. Accelerated Planned Study on Terrorism Risk and Insurance in the Wake of Boston and Was Well Received
  - Terrorism: A Constant Threat issued in June 2013





### **Terrorism Risk Insurance Program**



Boston Marathon Bombing Has Helped Focus Attention in Congress on TRIPRA and its Looming Expiration

- Act expires 12/31/14
- Exclusionary language will likely be inserted for post-1/1/2014 renewals and will likely lead to significant media interest (educational opportunity)
- Numerous headwinds; not a priority issue in 2013 in Congress
- 3 extension bills introduced in 2013—2 since Boston

### Media Interest Soared

- I.I.I. was conducting its first interviews within minutes after live-tweeting (nearly) from the scene; TV interest was high
- Local, national and international media focused on this topic for the first time in any significant way since TRIA's inception in late 2002
- Inquiries revealed very little/no understanding (or even awareness) outside insurance industry and business owners
- Certification process caused confusion

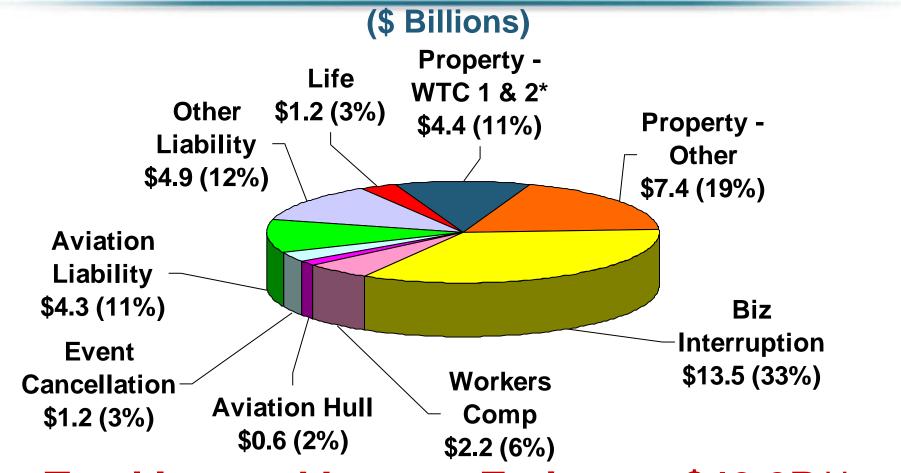
### **TRIA Outlook**



### Difficult Reauthorization Battle Ahead

- Very difficult to overcome antigovernment/small government, Tea Party forces in the House
- Most Committee members in both houses weren't around in 2007
- House Hearings in 2012; House and Senate in Sept. 2013
- If Reauthorized, Insurer Participation Likely Increased
- Some Have Attacked TRIA as "Corporate Welfare"
  - In reality the taxpayer is 100% protected
  - NFIP, Crop programs have led to miscomprehensions
- Emphasizing Benefits to Employees Under WC is Key
- Misperception by Some that Terrorism is Urban Issue
- Certification Process Needs Clarification

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



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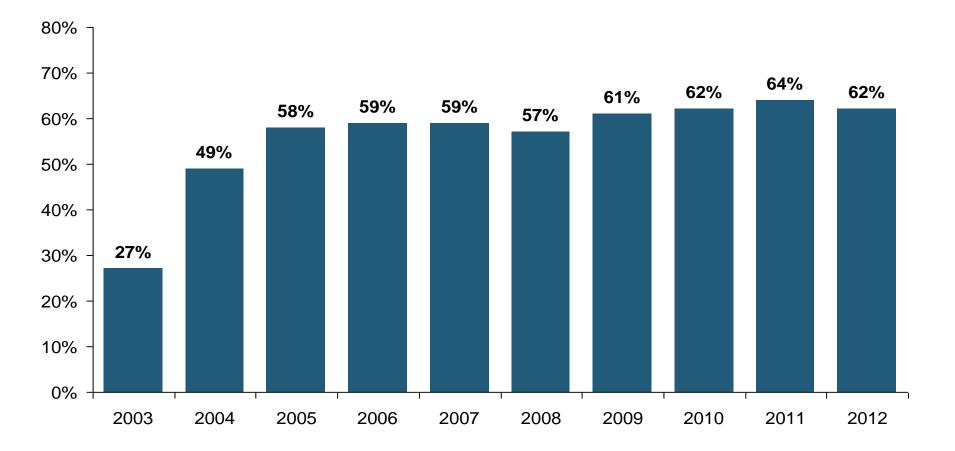
# Total Insured Losses Estimate: \$40.0B\*\*

\*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.

#### Exhibit 3 Terrorism Insurance Take-up Rates, By Year, 2003-2012



In 2003, the first year TRIA was in effect, the terrorism take-up rate was 27 percent. Since then, it has increased steadily, remaining in the low 60 percent range since 2009.

Source: Marsh Global Analytics, 2013 Terrorism Risk Insurance Report, May 2013.

#### Exhibit 4 Pyramid of Taxpayer Protection: Strong, Stable, Sound and Secure



Hard Cap \$100 Bill

Government Recoupment

Industry Aggregate Retention: \$27.5 Bill

Insurer Co-Payments 15% Above Retention

Individual Insurer Retention 20% of Premiums Earned

Program Dollar Threshold \$100 Million

Certification Dollar Threshold \$5 Million

Certification of Terrorist Act: Definition Must Be Met

# Summary of Terrorism Risk Insurance Program Extension Bills Introduced in 2013

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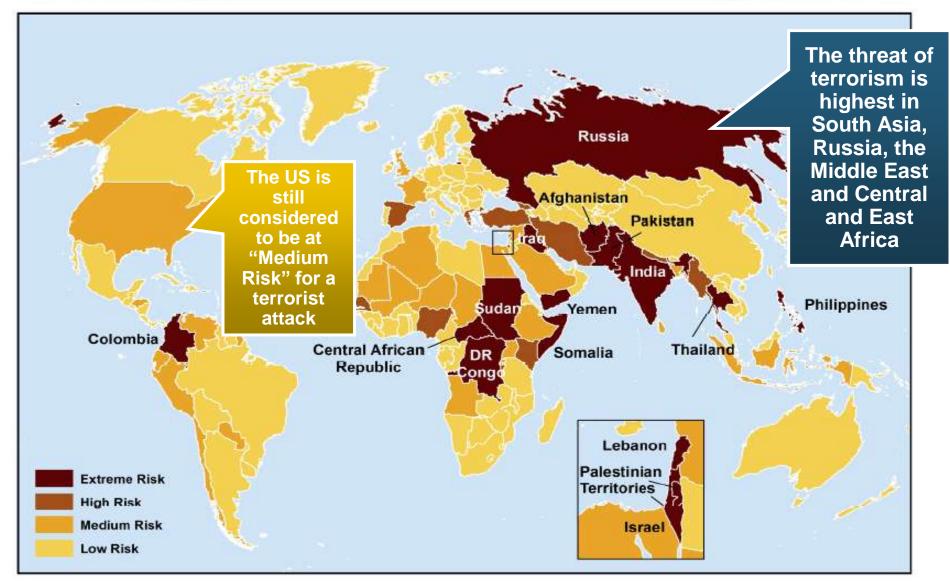
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Bill	Summary
•H.R. 508: <i>"Terrorism Risk Insurance Act of 2002 Reauthorization Act of 2013"</i> •Introduced Feb. 5 by Rep. Michael Grimm (D-NY)	<ul> <li>•5-Year Extension (through 2019)</li> <li>•Extend recoupment period for any TRIA assistance from 2017 to 2019</li> </ul>
•H.R. 2146: <i>"Terrorism Risk Insurance Program Reauthorization Act of 2013"</i> •Introduced May 23 by Rep. Michael Capuano (D-MA)	<ul> <li>10-Year Extension (through 2024)</li> <li>Extend recoupment period for any TRIA assistance from 2017 to 2024</li> <li>Requires President's Working Group on Financial Markets (PWGFM) to issue reports on long-term availability and affordability of terrorism insurance in 2017, 2020 and 2023</li> <li>Reports to be drafted with consultation from NAIC and representatives of the insurance and securities industries and policyholders</li> </ul>
<ul> <li>•H.R. 1945: "Fostering Resilience to Terrorism Act of 2013"</li> <li>•Introduced May 9 by Rep. Benny Thompson (D-MS)</li> </ul>	<ul> <li>•10-Year Extension (through 2024)</li> <li>•Recoupment period changed to 2024</li> <li>•Would transfer responsibility for certification of a "act of terrorism" to the Secretary of Homeland Security from Secretary of Treasury.</li> <li>•PWGFM to issue reports in 2017, 2020 and 2023</li> <li>•Requires Sec. of DHS to provide insureds with "timely homeland security information, including terrorism risk information, at the appropriate level of classification and information on best practices to foster resilience to an act of terrorism."</li> </ul>

Source: Nelson, Levine, de Luca & Hamilton, FIO Focus, June 10, 2013; Insurance Information Institute.

### **Terrorist Risk Index**





Sources: Maplecroft Terrorism Risk Index; (2011); Guy Carpenter; Insurance Information Institute.

# **Terrorism Violates Traditional Requirements for Insurability**



Requirement	Definition	Violation
Estimable Frequency	•Insurance requires large number of observations to develop predictive rate- making models (an actuarial concept known as credibility)	<ul> <li>Very few data points</li> <li>Terror modeling still in infancy, untested.</li> <li>Inconsistent assessment of threat</li> </ul>
Estimable Severity	•Maximum possible/ probable loss must be at least estimable in order to minimize "risk of ruin" (insurer cannot run an unreasonable risk of insolvency though assumption of the risk)	<ul> <li>Potential loss is virtually unbounded.</li> <li>Losses can easily exceed insurer capital resources for paying claims.</li> <li>Extreme risk in workers compensation and statute forbids exclusions.</li> </ul>

# **Terrorism Violates Traditional Requirements for Insurability (cont'd)**



Requirement	Definition	Violation
Diversifiable Risk	<ul> <li>Must be able to spread/distribute risk across large number of risks</li> <li>"Law of Large Numbers" helps makes losses manageable and less volatile</li> </ul>	<ul> <li>Losses likely highly concentrated geographically or by industry (e.g., WTC, power plants)</li> </ul>
Random Loss Distribution/ Fortuity	<ul> <li>Probability of loss occurring must be purely random and fortuitous</li> <li>Events are individually unpredictable in terms of time, location and magnitude</li> </ul>	<ul> <li>coordinated and deliberate acts</li> <li>of destruction</li> <li>Dynamic target shifting from</li> <li>"hardened targets" to "soft</li> </ul>



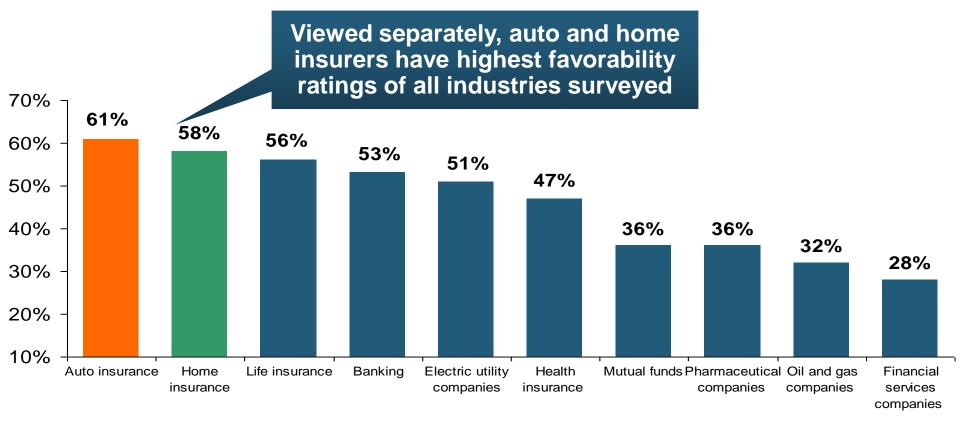
# **Public Opinion Survey**

Industry Favorability Ratings Policy Forms & Disclosure Disaster Preparedness

# I.I.I. Poll: Favorability



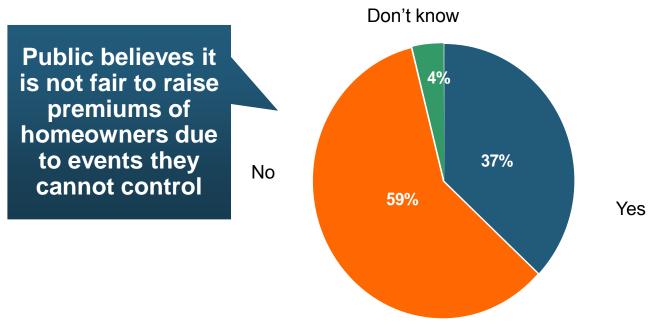
#### Percent of Public Rating Industry as Very or Mostly Favorable, 2013



#### Auto Insurers and Home Insurers Ranked Highest.

# **I.I.I.** Poll: Homeowners Insurance

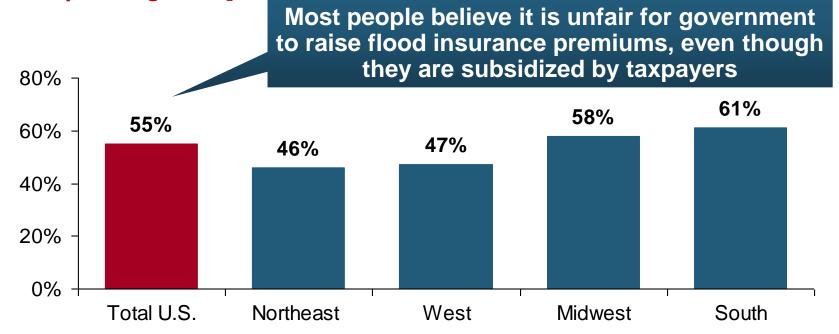
Q. Do you think that it is fair that people who live in areas affected by record storms in 2011 and 2012 should pay more for their homeowners insurance in the future?



Nearly 60 percent of Americans believe that homeowners insurance premiums should not be raised as a result of recent storms in their areas.

# I.I.I. Poll: Flood Insurance

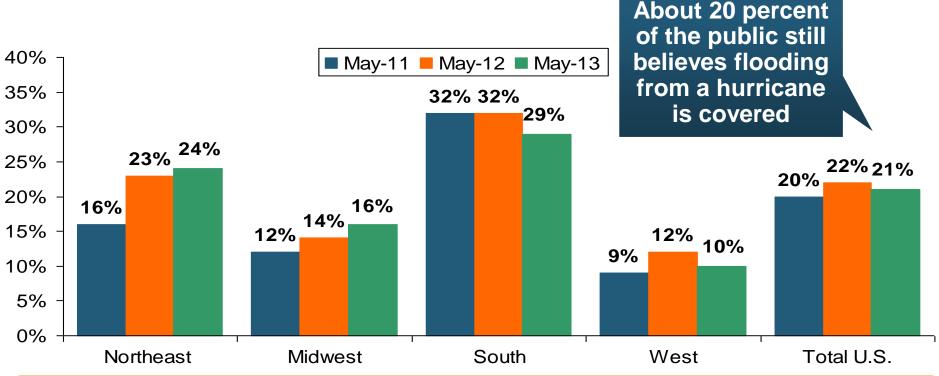
Q. The federal government plans to raise the price of flood insurance so it reflects the costs of paying claims. Do you believe this is fair? [% Responding "NO"]



More than one-half of Americans do not think it is fair for the federal government to raise its flood insurance premiums to better reflect claims payouts.

# **I.I.I. Poll: Disaster Preparedness**

#### Q. Does your homeowners policy cover damage from flooding during a hurricane?<sup>1</sup>

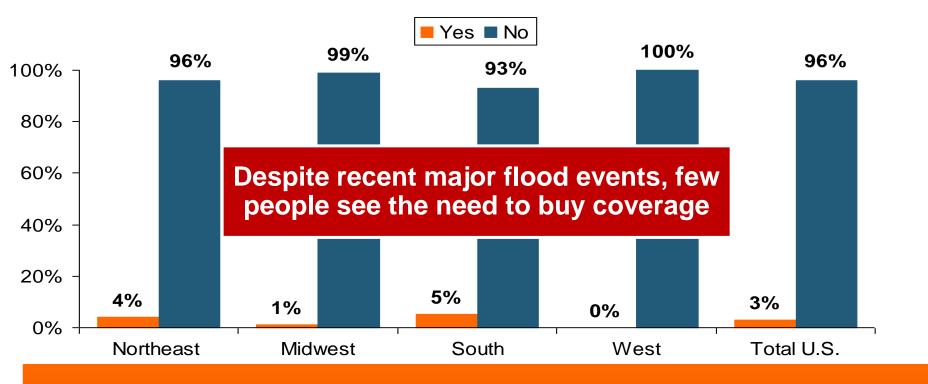


The proportion of homeowners who believe their homeowners policy covers damage from flooding during a hurricane stands at 21 percent. This proportion rises eight percentage points in the South, to 29 percent.

<sup>1</sup>Asked of those who have homeowners insurance and who responded "yes".

# **I.I.I. Poll: Disaster Preparedness**

Q. Have recent flooding events such as Hurricane Sandy or Hurricane Irene motivated you to buy flood coverage?<sup>1</sup>



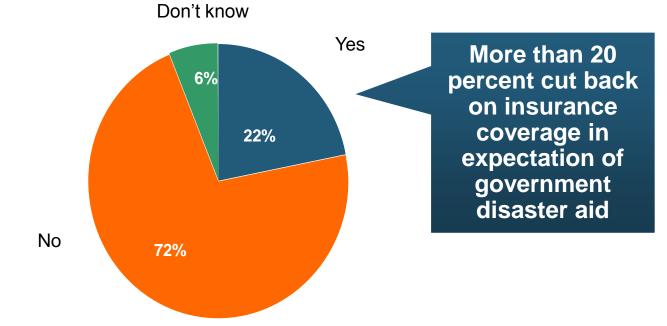
#### Recent storms have not motivated people to buy flood insurance coverag.e

<sup>1</sup>Asked of those who have homeowners insurance but not flood insurance.

Source: Insurance Information Institute Annual Pulse Survey.

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Q. If you expect some relief from the government, do you purchase less insurance coverage against these natural disasters than you would have otherwise?



Seventy-two percent of Americans would not purchase less insurance if they expect some relief from the government—but 22% would.



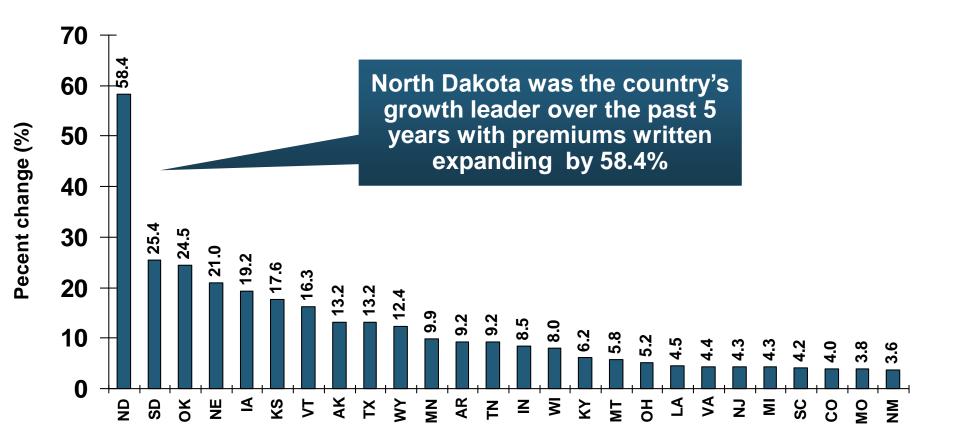
# Growth Analysis by State and Business Segment

# Premium Growth Rates Vary Tremendously by State

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



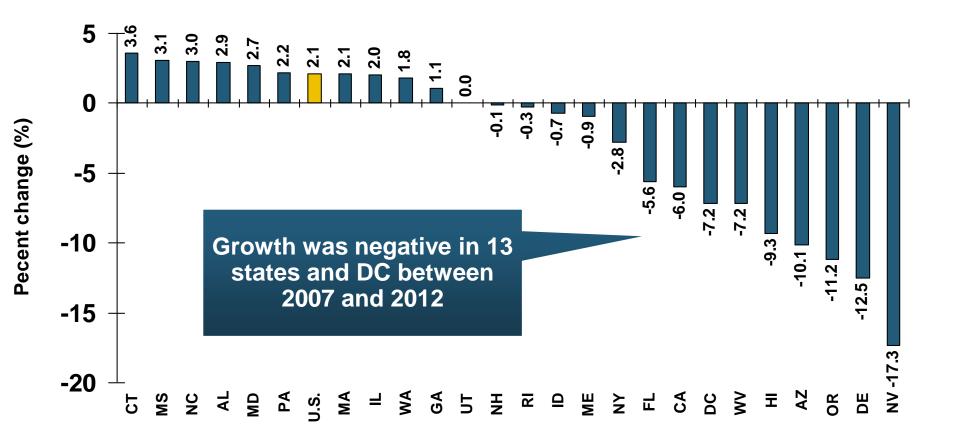
**Top 25 States** 



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



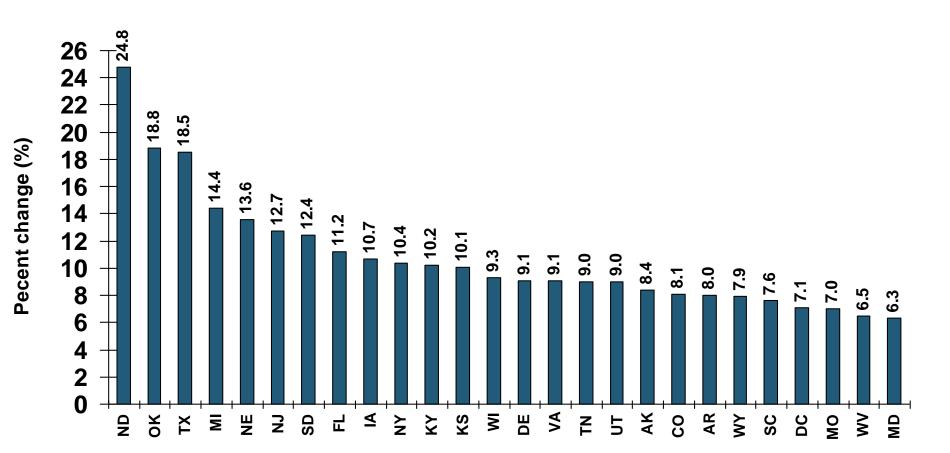
#### **Bottom 25 States**



# Direct Premiums Written: PP Auto Percent Change by State, 2007-2012\*



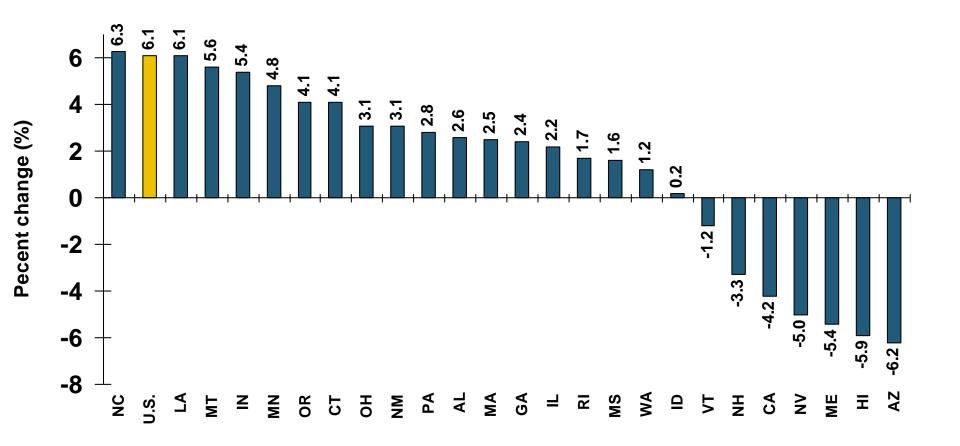
**Top 25 States** 



# Direct Premiums Written: PP Auto Percent Change by State, 2007-2012\*



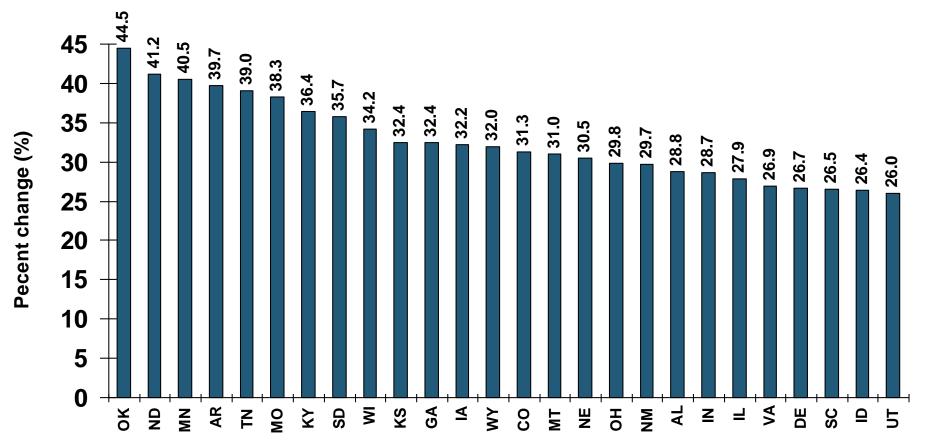
#### **Bottom 25 States**



# Direct Premiums Written: Homeowners Percent Change by State, 2007-2012\*



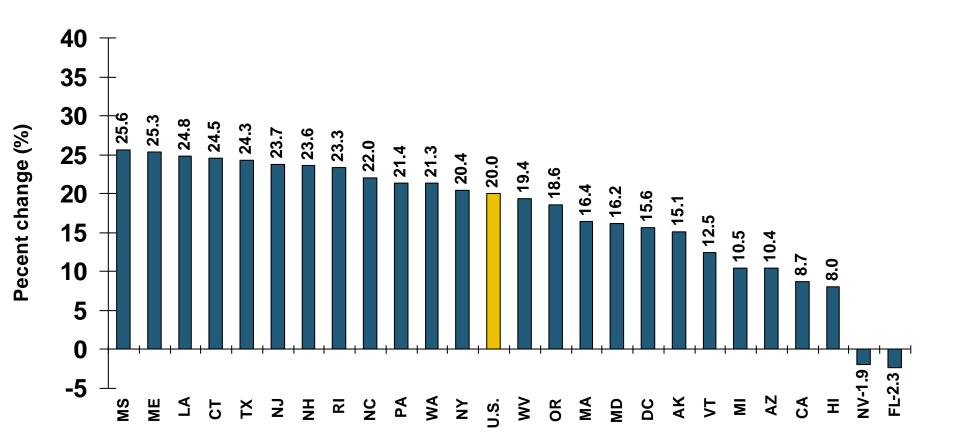
**Top 25 States** 



# Direct Premiums Written: Homeowners Percent Change by State, 2007-2012\*



#### **Bottom 25 States**

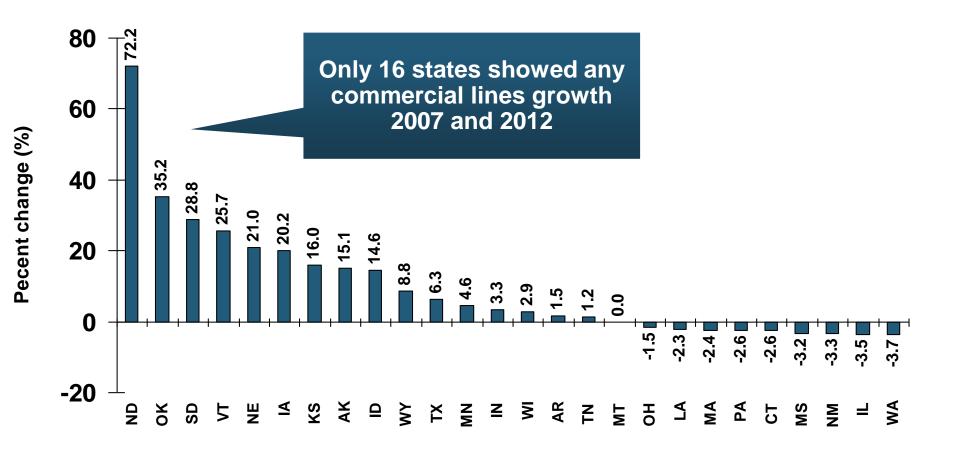


Sources: SNL Financial LC.; Insurance Information Institute.

# Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2012\*



**Top 25 States** 

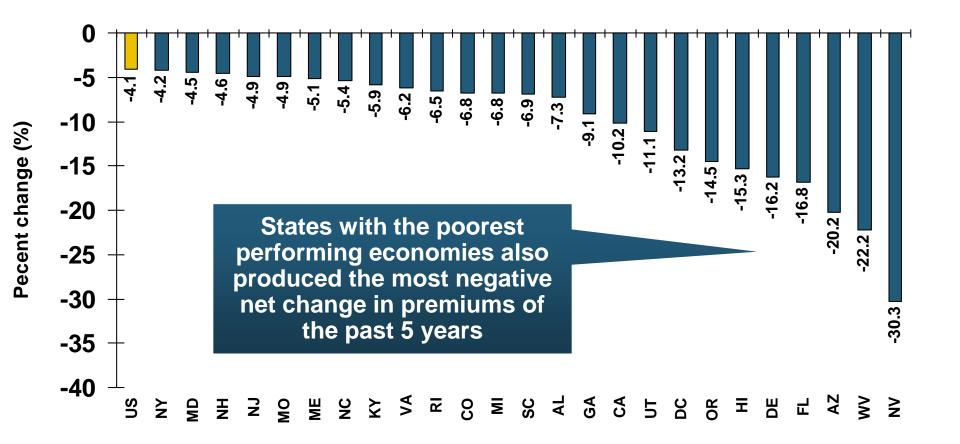


130

# Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2012\*



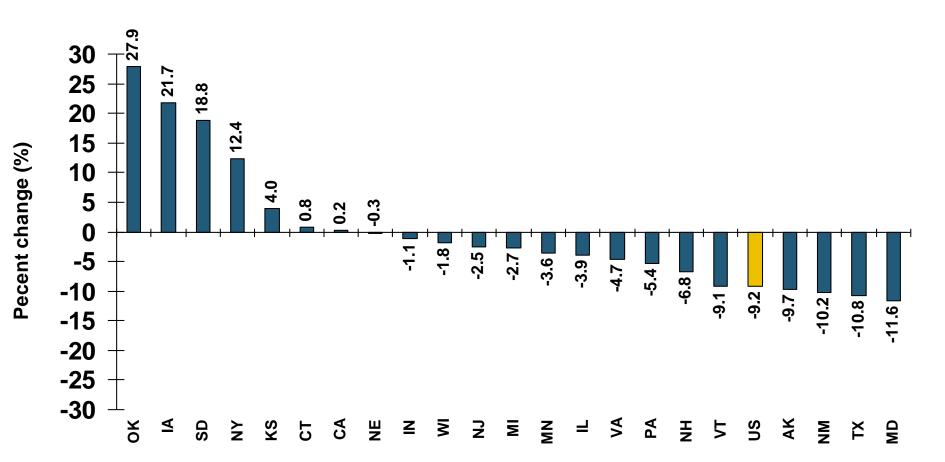
#### **Bottom 25 States**



Sources: SNL Financial LC.; Insurance Information Institute.

# Direct Premiums Written: Workers' Comp

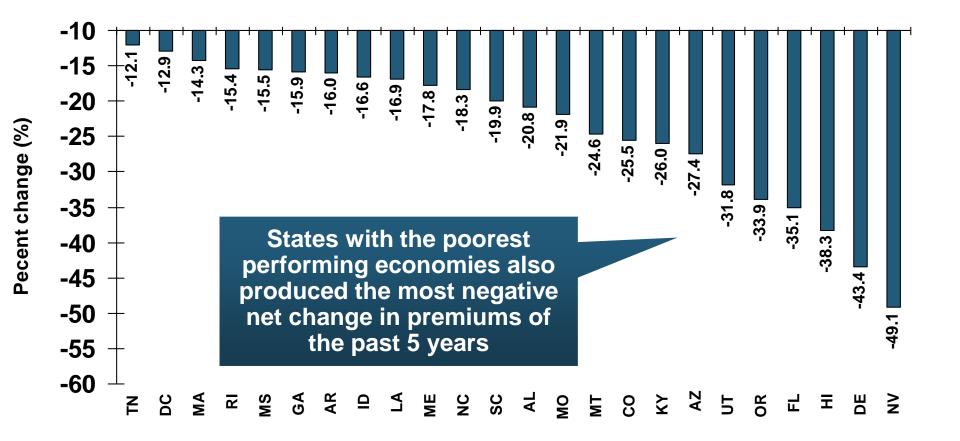




\*Excludes monopolistic fund states: ND, OH, WA, WY as well as WV, which transitioned to a competitive structure during this period. Sources: SNL Financial LC.; Insurance Information Institute.

# Direct Premiums Written: Worker's Comp

#### **Bottom 25 States**



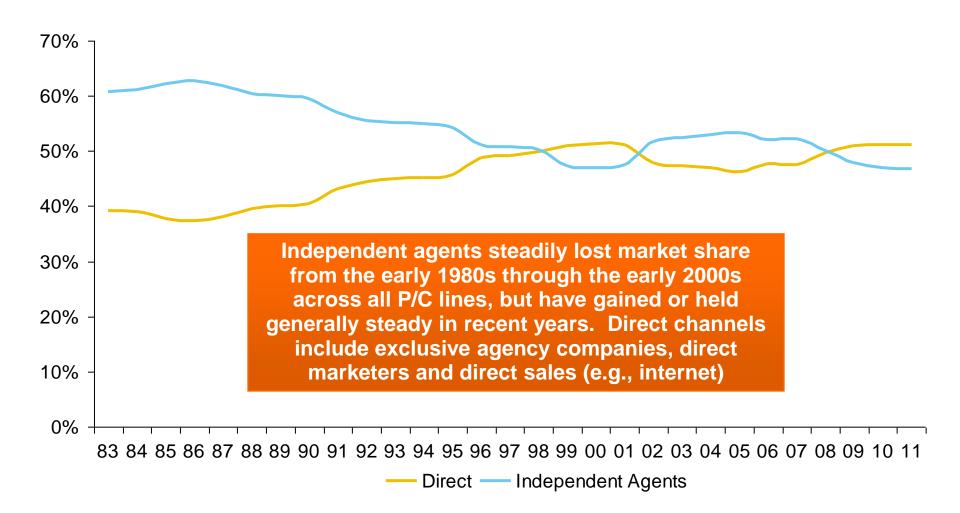
\*Excludes monopolistic fund states: ND, OH, WA, WY as well as WV, which transitioned to a competitive structure during this period. Sources: SNL Financial LC.; Insurance Information Institute.



# **Distribution Trends**

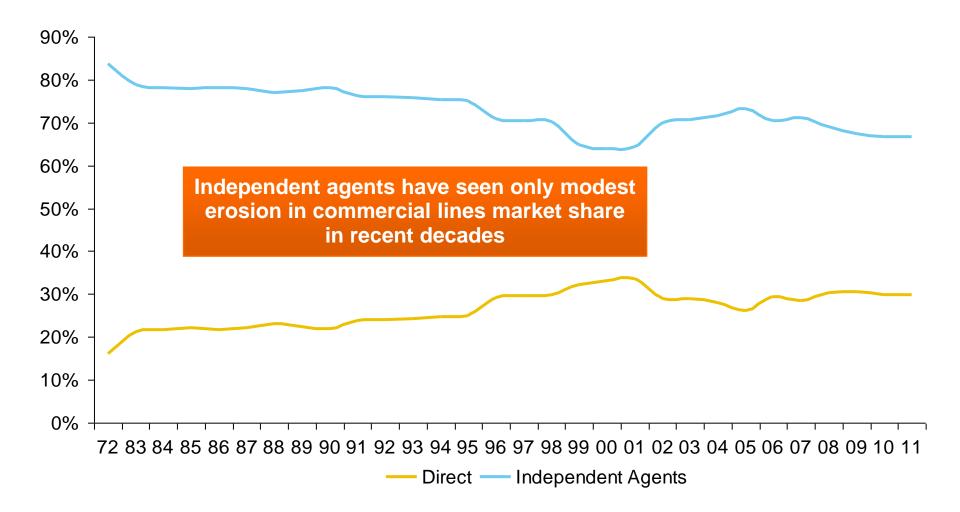
# Distribution by Channel Type Continues to Evolve Around the World

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

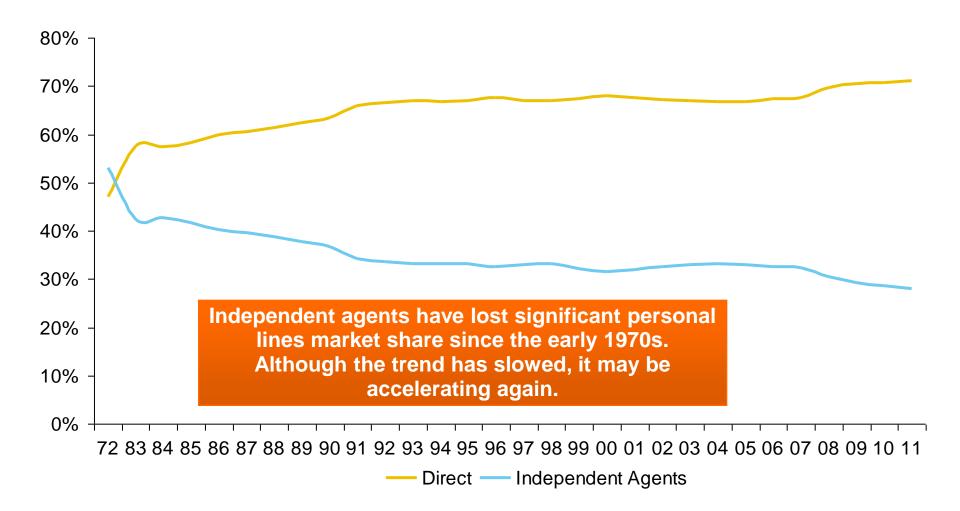


Source: Insurance Information Institute; based on data from Conning and A.M. Best.

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

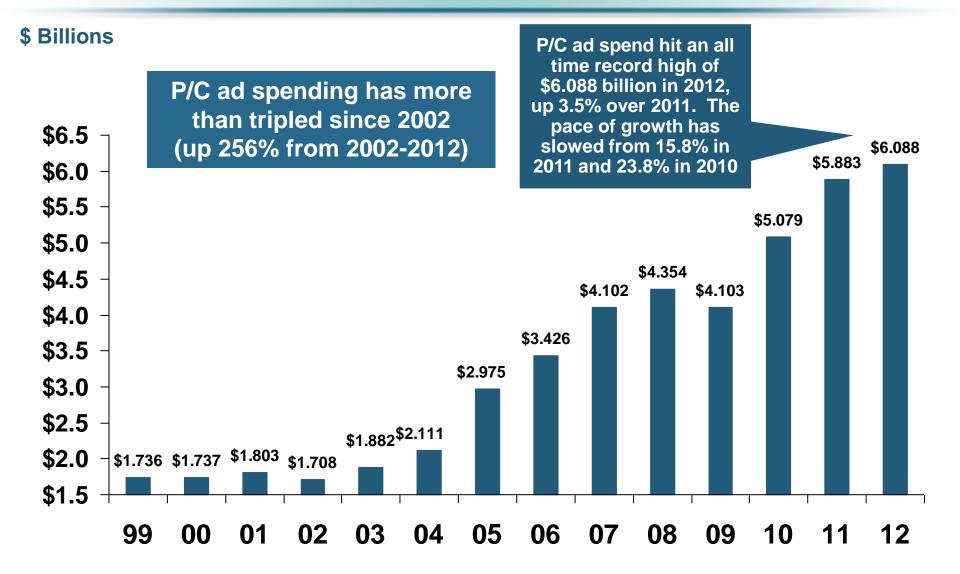


# Personal Lines Distribution Channels, Direct vs. Independent Agents



# Advertising Expenditures by P/C Insurance Industry, 1999-2012





Source: Insurance Information Institute from consolidated P/C Annual Statement data, Insurance Expense Exhibit (Part I).



# The BIG Question: Where Is the Market Heading?

Catastrophes and Other Factors Are Pressuring Insurance Markets New Factor: Record Low Interest Rates Are Contributing to Underwriting and Pricing Pressures



# INVESTMENTS: THE NEW REALITY

Investment Performance is a Key Driver of Profitability

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

## Property/Casualty Insurance Industry Investment Income: 2000–2013\*1

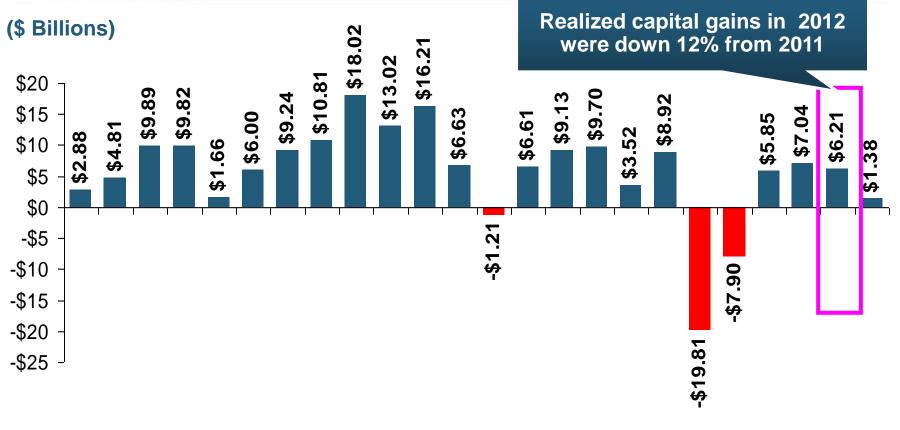


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Investment Income Fell in 2012 and is Falling in 2013 Due to Persistently Low Interest Rates, Putting Additional Pressure on (Re) Insurance Pricing

<sup>1</sup> Investment gains consist primarily of interest and stock dividends.. \*Estimate based on annualized actual Q1:2013 investment income of \$11.385B. Sources: ISO: Insurance Information Institute.

# P/C Insurer Net Realized Capital Gains/Losses, 1990-2013:Q1



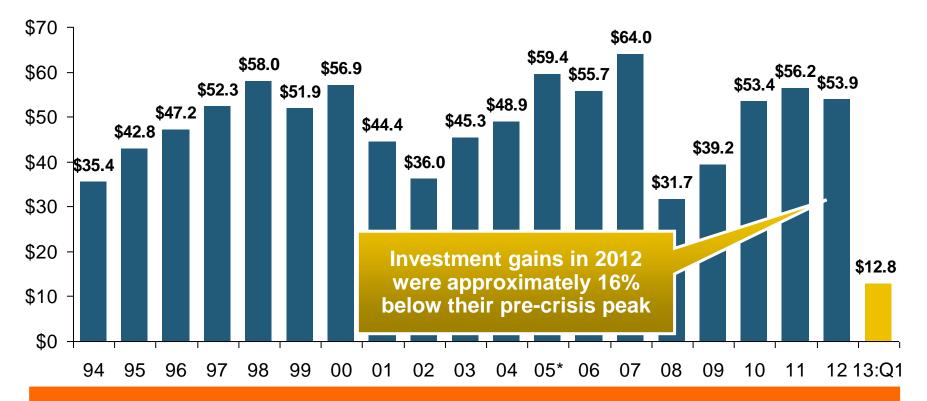
90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 1213:Q1

Insurers Posted Net Realized Capital Gains in 2010, 2011 and 2012 Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were the Primary Cause of 2008/2009's Large Drop in Profits and ROE

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

## Property/Casualty Insurance Industry Investment Gain: 1994–2013:Q1<sup>1</sup>

(\$ Billions)



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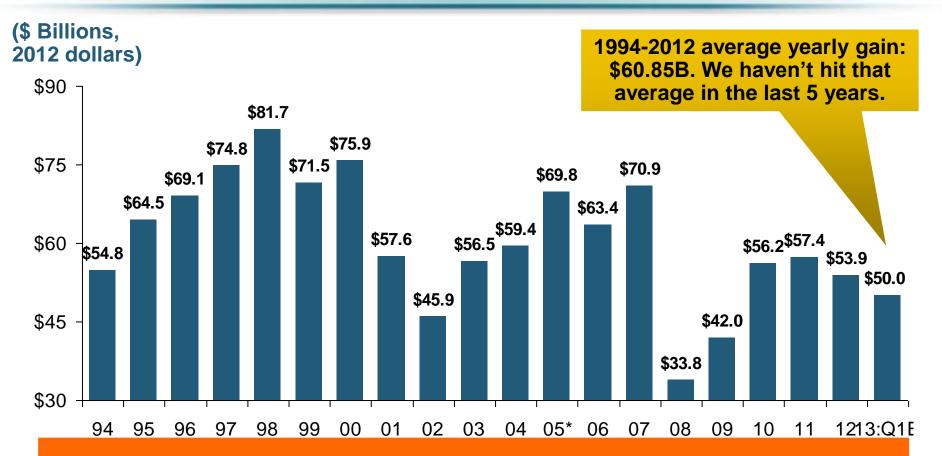
Investment Gains Are Slipping in 2012 as Low Interest Rates Reduce Investment Income and Lower Realized Investment Gains; The Financial Crisis Caused Investment Gains to Fall by 50% in 2008

<sup>1</sup> Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

\* 2005 figure includes special one-time dividend of \$3.2B;

Sources: ISO; Insurance Information Institute.

## P/C Industry Investment Gains, Inflation-Adjusted: 1994–2012<sup>1</sup>

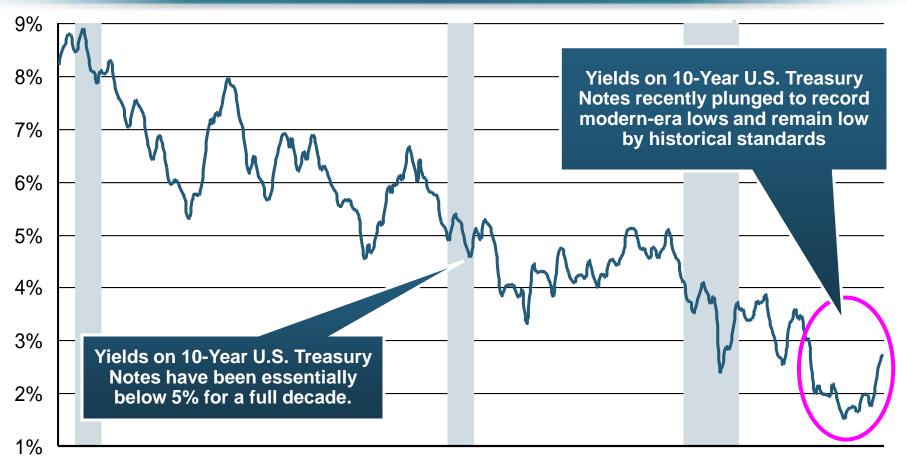


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Because the Federal Reserve Board aims to keep interest rates exceptionally low until the unemployment rate hits 6.5%—likely at least another year off—maturing bonds will be re-invested at even lower rates.

 <sup>1</sup>Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.
 \*2005 figure includes special one-time dividend of \$3.2B; 2013F figure is I.I.I. estimate for 2013:Q1, annualized. Sources: ISO; Insurance Information Institute.

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

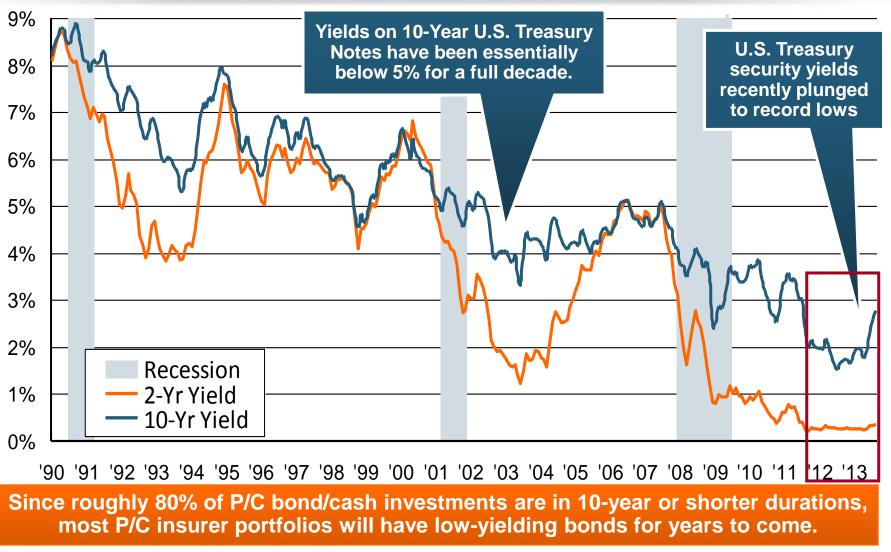


'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13

## 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 August 2013. Note: Recessions indicated by gray shaded columns. Sources: Federal Reserve Bank at <u>http://www.federalreserve.gov/releases/h15/data.htm</u>. National Bureau of Economic Research (recession dates); Insurance Information Institutes. INSURANCE

## U.S. Treasury Security Yields: A Long Downward Trend, 1990–2013\*

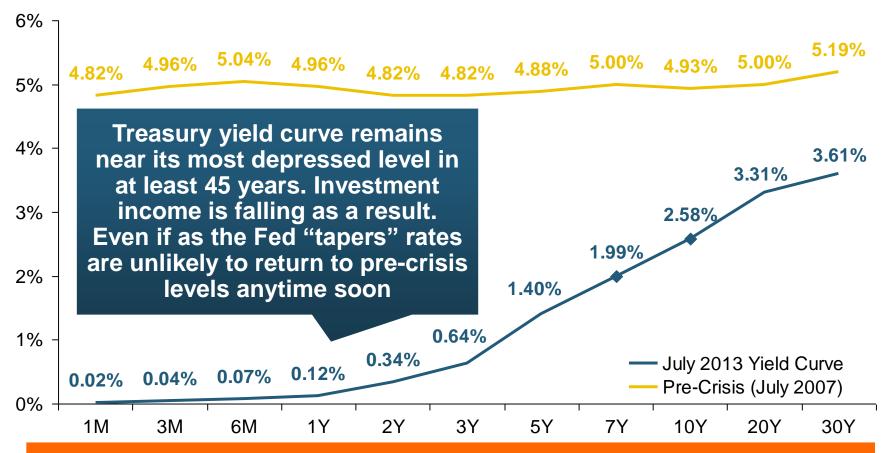


\*Monthly, constant maturity, nominal rates, through August 2013.

Sources: Federal Reserve Bank at <a href="http://www.federalreserve.gov/releases/h15/data.htm">http://www.federalreserve.gov/releases/h15/data.htm</a>. National Bureau of Economic Research (recession dates); Insurance Information Institute.

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#### Treasury Yield Curves: Pre-Crisis (July 2007) vs. July 2013



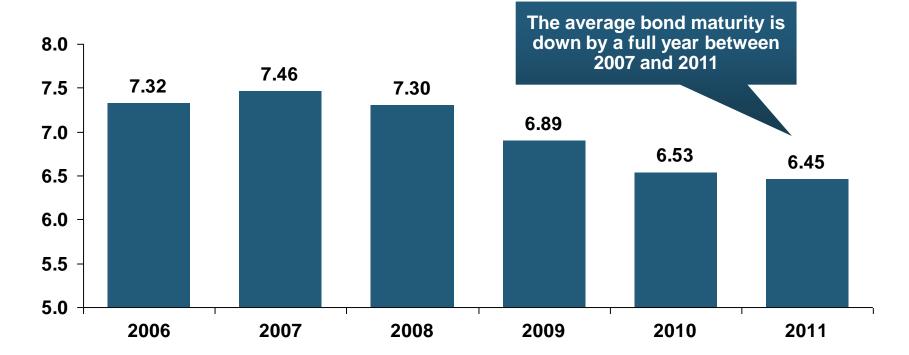
The Fed Is Actively Signaling that it Is Determined to Keep Rates Low Until Unemployment Drops Below 6.5% or Until Inflation Expectations Exceed 2.5%; Low Rates Add to Pricing Pressure for Insurers.

Source: Federal Reserve Board of Governors; Insurance Information Institute.

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# Average Maturity of Bonds Held by US P/C Insurers, 2006—2011\*

**Average Maturity (Years)** 



Falling Average Maturity (and Duration) of the P/C Industry's Bond Portfolio is Contributing to the Drop in Investment Income Along With Lower Yields

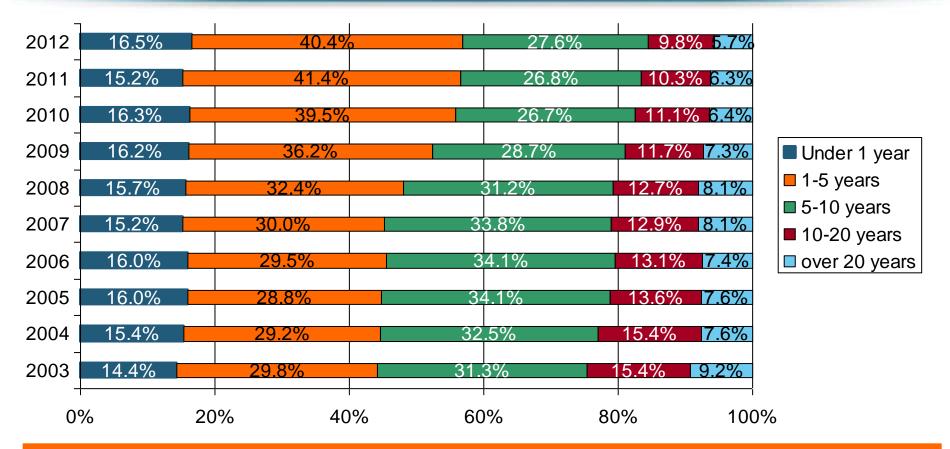
\*Year-end figures. Latest available.

Sources: Insurance Information Institute calculations based on A.M. Best data.

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## Distribution of Bond Maturities, P/C Insurance Industry, 2003-2012

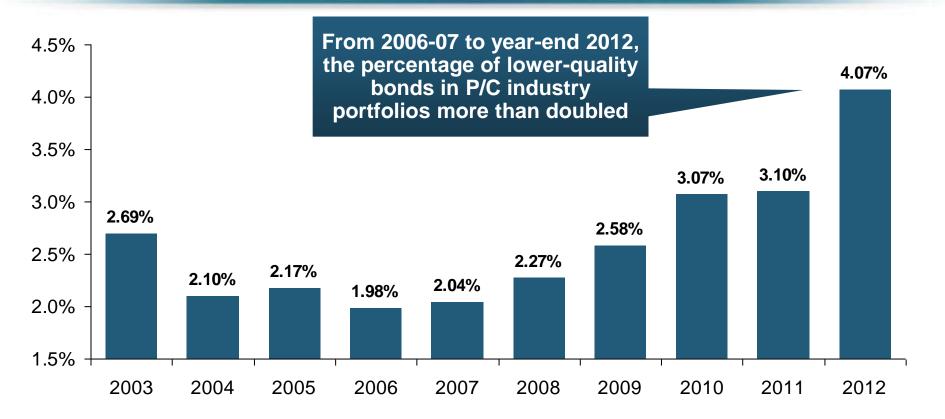




The main shift over these years has been from bonds with longer maturities to bonds with shorter maturities. The industry first trimmed its holdings of over-10-year bonds (from 24.6% in 2003 to 15.5% in 2012) and then trimmed bonds in the 5-10-year category (from 31.3% in 2003 to 27.6% in 2012). Falling average maturity of the P/C industry's bond portfolio is contributing to a drop in investment income along with lower yields.

Sources: SNL Financial; Insurance Information Institute.

### Bonds Rated NAIC Quality Category 3-6 as a Percent of Total Bonds, 2003–2012

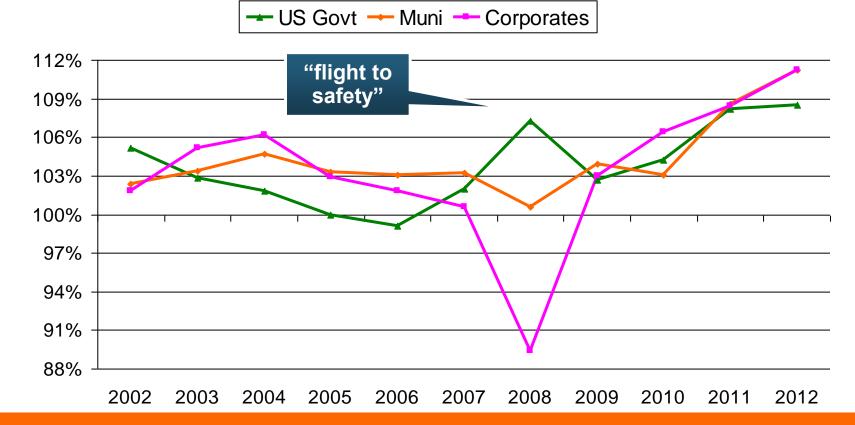


There are many ways to capture higher yields on bond portfolios. One is to accept greater risk, as measured by NAIC bond ratings. The ratings range from 1 to 6, with the highest quality rated 1. Even in 2012, over 95% of the industry's bonds were rated 1 or 2.

Sources: SNL Financial; Insurance Information Institute.

#### Insurance Industry Fair Value as a Percent of Par History, by Bond Type, 2002–2012

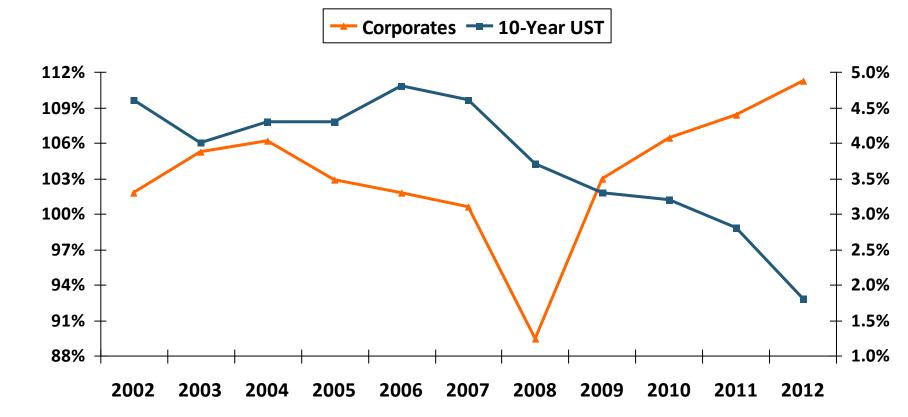




#### Because the Federal Reserve Board aims to keep interest rates exceptionally low until the "headline" unemployment rate hits 6.5%, maturing bonds will be re-invested at even lower rates.

Sources: NAIC Capital Markets Special Report 5.21.13 "The Trajectory of Interest Rates and Its Impact on the Market Value of the U.S. Insurance Industry's Bond Portfolio," Table 2; Insurance Information Institute.

#### As Yields (Blue) Sank, Fair Value as a Percent of Par (Orange) Rose, 2002–2012



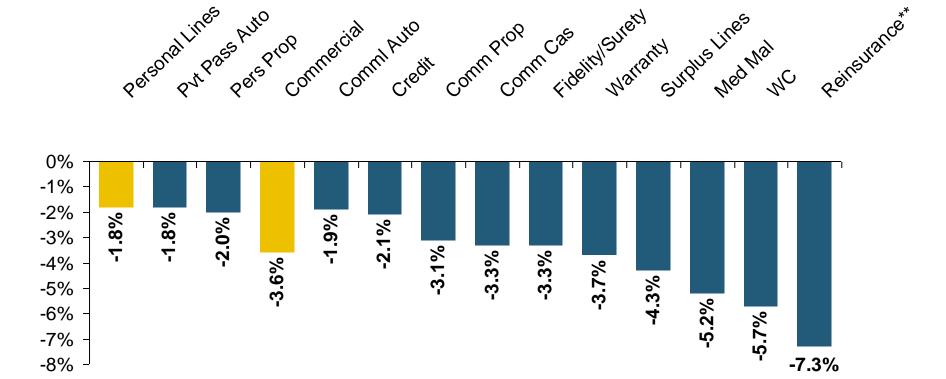
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When interest rates rise again, the Fair Value of Insurance Industry bonds will fall. How far and how fast the fall occurs depends on many factors, but the direction of change is clear.

Sources: NAIC Capital Markets Special Report 5.21.13 "The Trajectory of Interest Rates and Its Impact on the Market Value of the U.S. Insurance Industry's Bond Portfolio," Table 2; Insurance Information Institute.

#### Reduction in Combined Ratio Necessary to Offset 1% Decline in Investment Yield to Maintain Constant ROE, by Line\*





#### Lower Investment Earnings Place a Greater Burden on Underwriting and Pricing Discipline

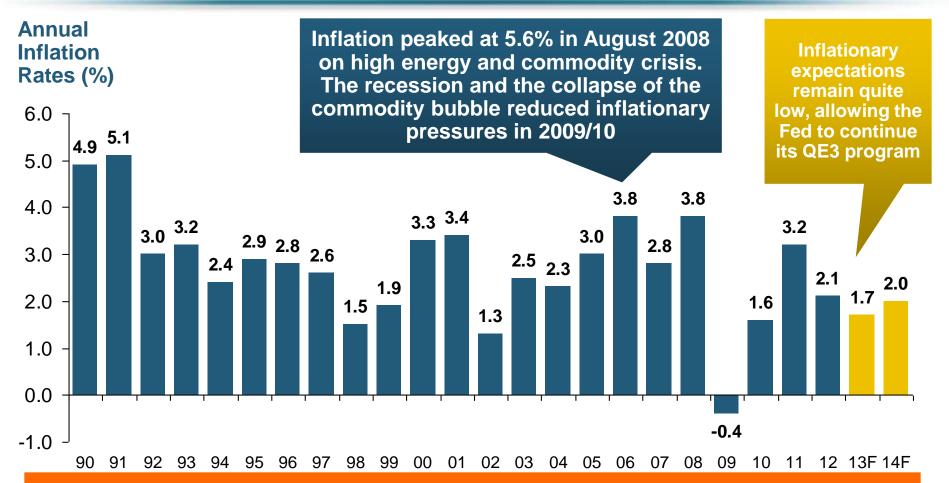
\*Based on 2008 Invested Assets and Earned Premiums

\*\*US domestic reinsurance only

Source: A.M. Best; Insurance Information Institute.

#### Annual Inflation Rates, (CPI-U, %), 1990–2014F

#### INSURANCE INFORMATION INSTITUTE



The slack in the U.S. economy suggests that inflationary pressures should remain subdued for an extended period of times. Energy, health care and commodity prices, plus U.S. debt burden, remain longer-run concerns

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, 5/13 (forecasts).

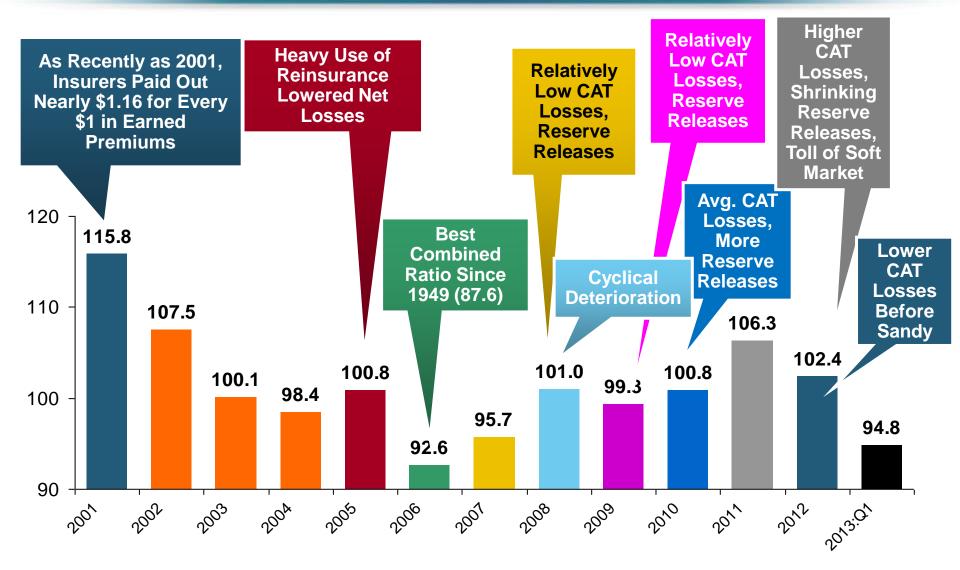


# **1. UNDERWRITING**

# Underwriting Losses in 2011 and 2012 Are Elevated by High Catastrophe Losses

#### P/C Insurance Industry Combined Ratio, 2001–2013:Q1\*

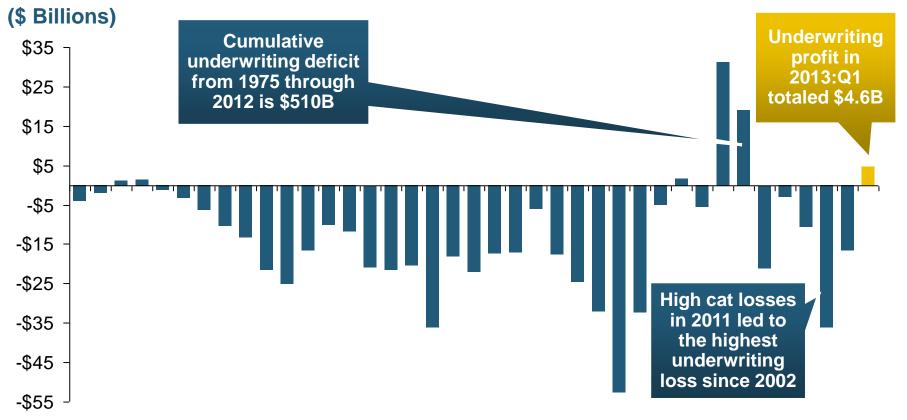




\* Excludes Mortgage & Financial Guaranty insurers 2008--2012. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2. Sources: A.M. Best, ISO.

## Underwriting Gain (Loss) 1975–2013:Q1\*



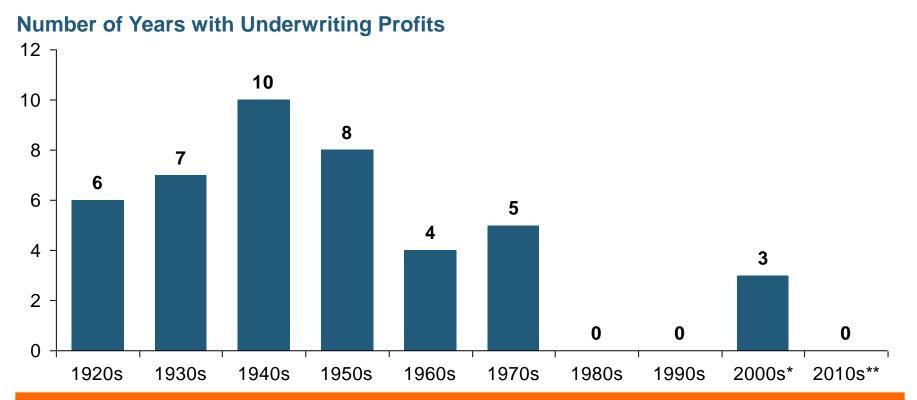


75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 1**2**3:Q1

## Large Underwriting Losses Are *NOT* Sustainable in Current Investment Environment

\* Includes mortgage and financial guaranty insurers in all years. Sources: A.M. Best, ISO; Insurance Information Institute.

## Number of Years with Underwriting Profits by Decade, 1920s–2010s



Underwriting Profits Were Common Before the 1980s (40 of the 60 Years Before 1980 Had Combined Ratios Below 100) – But Then They Vanished. Not a Single Underwriting Profit Was Recorded in the 25 Years from 1979 Through 2003

\* 2009 combined ratio excl. mort. and finl. guaranty insurers was 99.3, which would bring the 2000s total to 4 years with an u/w profit. \*\*Data for the 2010s is for the period 2010 through 2012.

Note: Data for 1920–1934 based on stock companies only.

Sources: Insurance Information Institute research from A.M. Best Data.

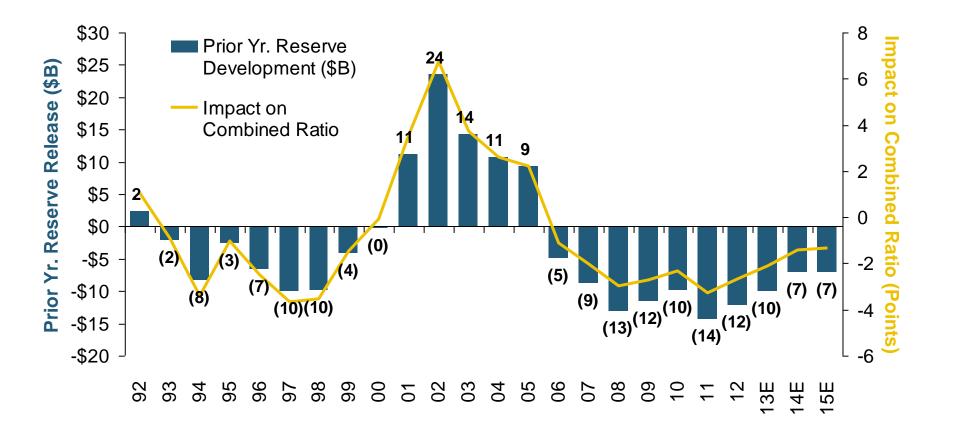
#### Combined Ratios by Predominant Business Segment, 2012 vs. 2011\*



The combined ratios for both personal and (Percent) commercial lines improved substantially 2011 2012 109.3 110 in 2012, Despite Sandy 108.1 108 105.9 106 104.7 104.6 103.2 104 102.3 102 101.1 100 98 96 **All Lines Diversified Insurers** Personal Lines **Commercial Lines** Predominating Predominating \*Excludes mortgage and financial guaranty insurers.

Source: ISO/PCI; Insurance Information Institute

### P/C Reserve Development, 1992–2015E



Note: 2005 reserve development excludes a \$6 billion loss portfolio transfer between American Re and Munich Re. Including this transaction, total prior year adverse development in 2005 was \$7 billion. The data from 2000 and subsequent years excludes development from financial guaranty and mortgage insurance.

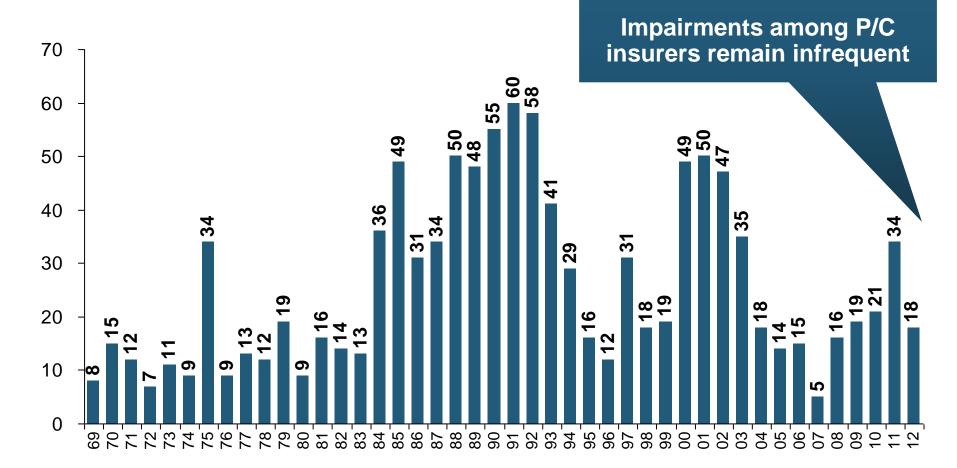
Sources: A.M. Best, ISO, Barclays Research (estimates).



# Financial Strength & Underwriting

## Cyclical Pattern is P-C Impairment History is Directly Tied to Underwriting, Reserving & Pricing

### P/C Insurer Impairments, 1969–2012

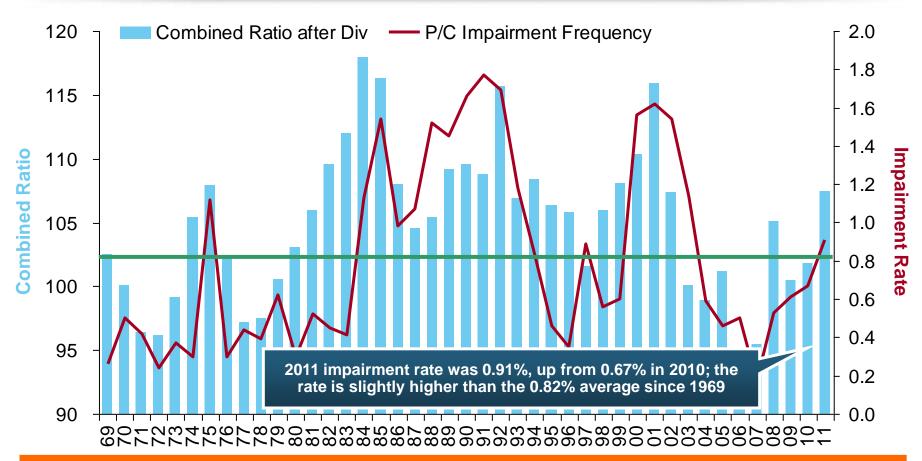


The Number of Impairments Varies Significantly Over the P/C Insurance Cycle, With Peaks Occurring Well into Hard Markets

Source: A.M. Best Special Report "1969-2011 Impairment Review," June 2012 and March 6, 2013 update; Insurance Info. Institute.

## P/C Insurer Impairment Frequency vs. Combined Ratio, 1969-2011

INSURANCE INFORMATION INSTITUTE

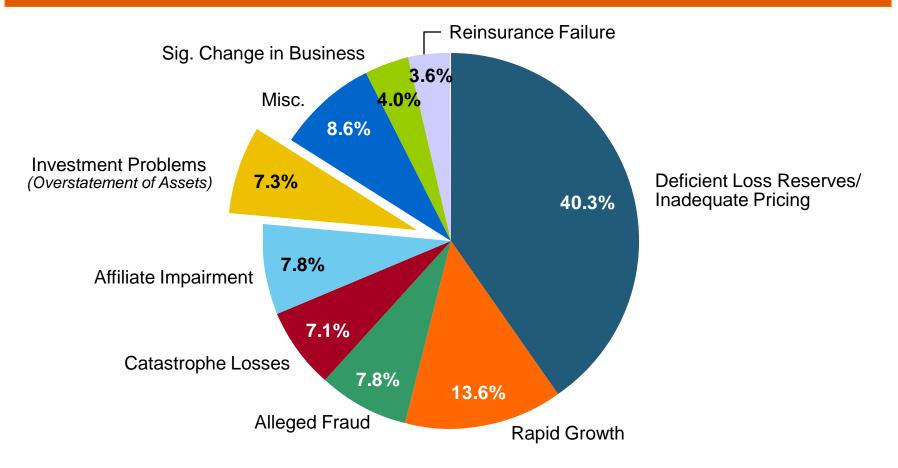


Impairment Rates Are Highly Correlated With Underwriting Performance and Reached Record Lows in 2007; Recent Increase Was Associated Primarily With Mortgage and Financial Guaranty Insurers and Not Representative of the Industry Overall

### Reasons for US P/C Insurer Impairments, 1969–2010



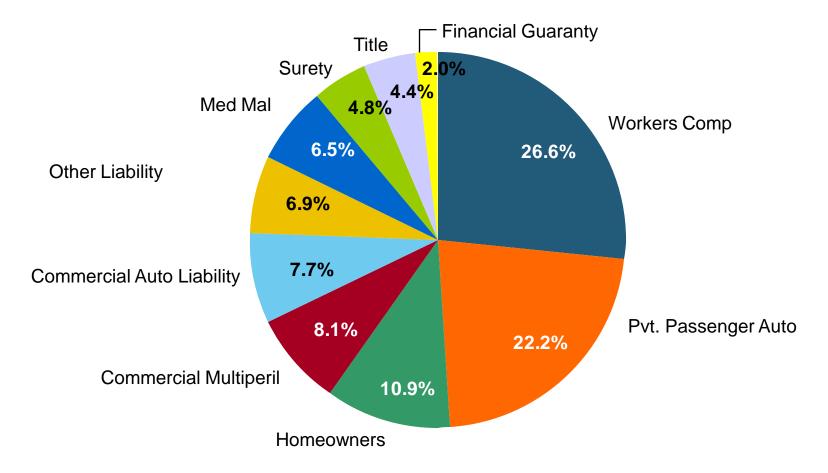
Historically, Deficient Loss Reserves and Inadequate Pricing Are By Far the Leading Cause of P-C Insurer Impairments. Investment and Catastrophe Losses Play a Much Smaller Role



Source: A.M. Best: 1969-2010 Impairment Review, Special Report, April 2011.

### Top 10 Lines of Business for US P/C Impaired Insurers, 2000–2010

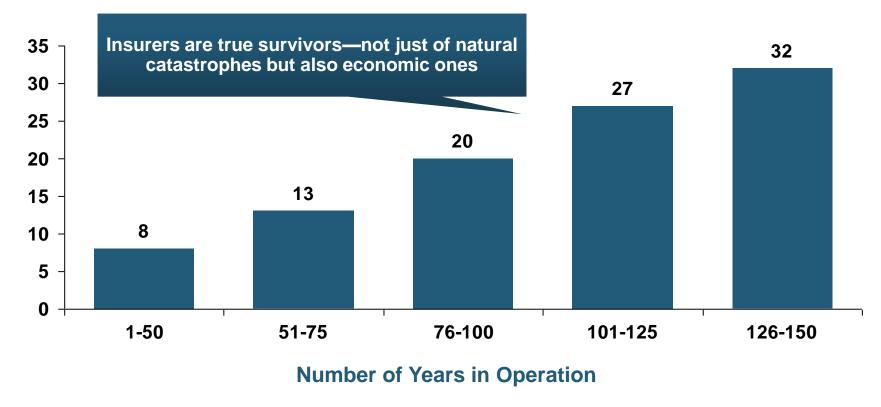
Workers Comp and Pvt. Passenger Auto Account for Nearly Half of the Premium Volume of Impaired Insurers Over the Past Decade



Source: A.M. Best: 1969-2010 Impairment Review, Special Report, April 2011.

## Number of Recessions Endured by P/C Insurers, by Number of Years in Operation

#### **Number of Recessions Since 1860**



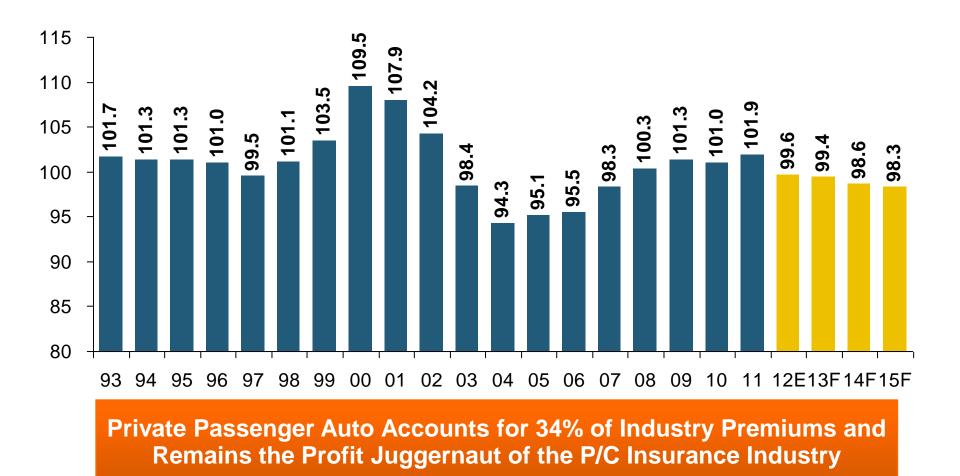
Many US Insurers Are Close to a Century Old or Older

Sources: Insurance Information Institute research from National Bureau of Economic Research data.

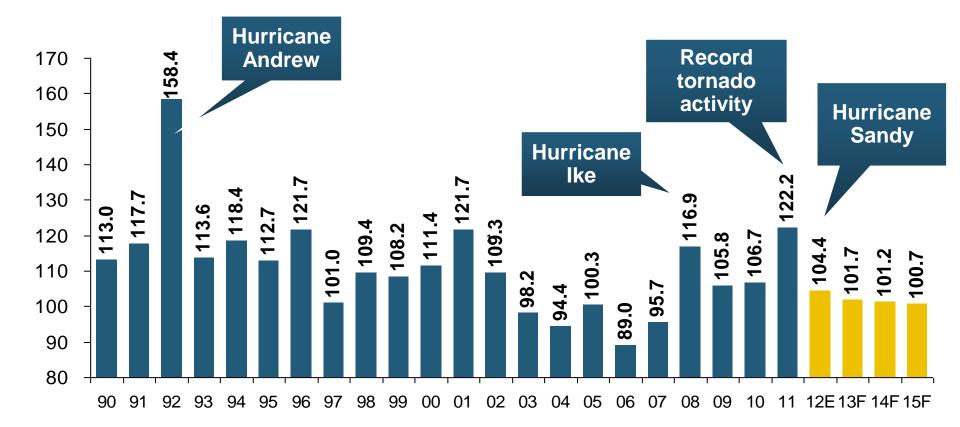


# **Performance by Segment**

#### Private Passenger Auto Combined Ratio: 1993–2015F



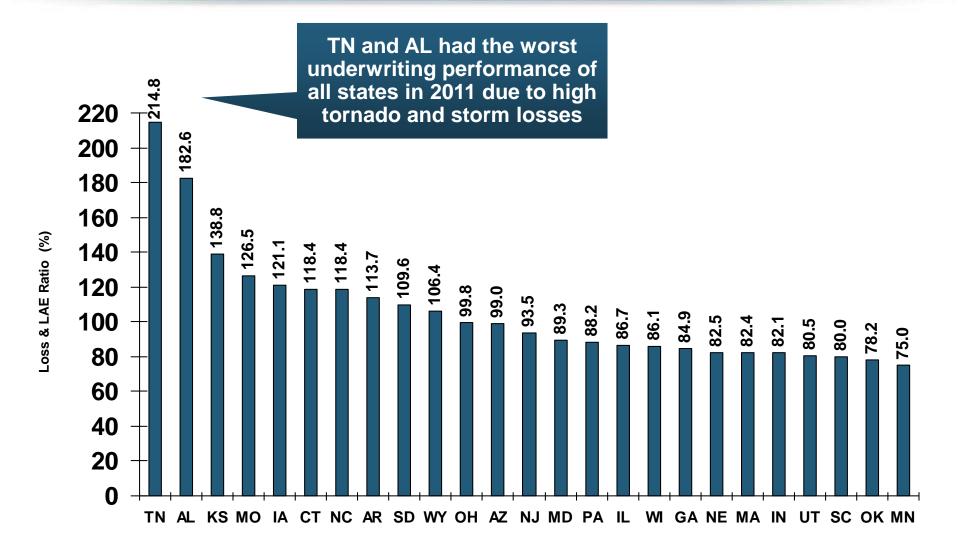
#### Homeowners Insurance Combined Ratio: 1990–2015F



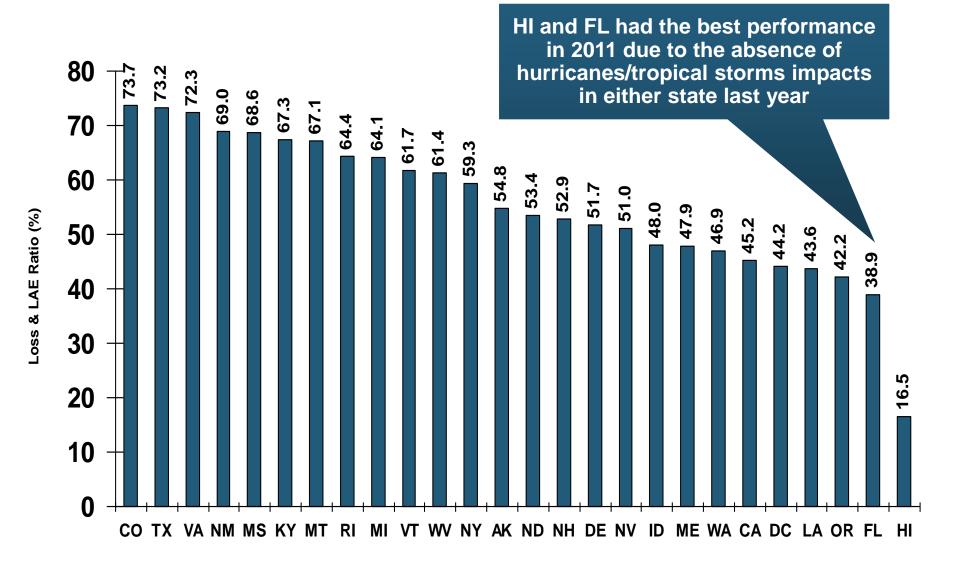
Homeowners Performance in 2011/12 Impacted by Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity

Sources: A.M. Best (1990-2011);Conning (2012E-2015F); Insurance Information Institute.

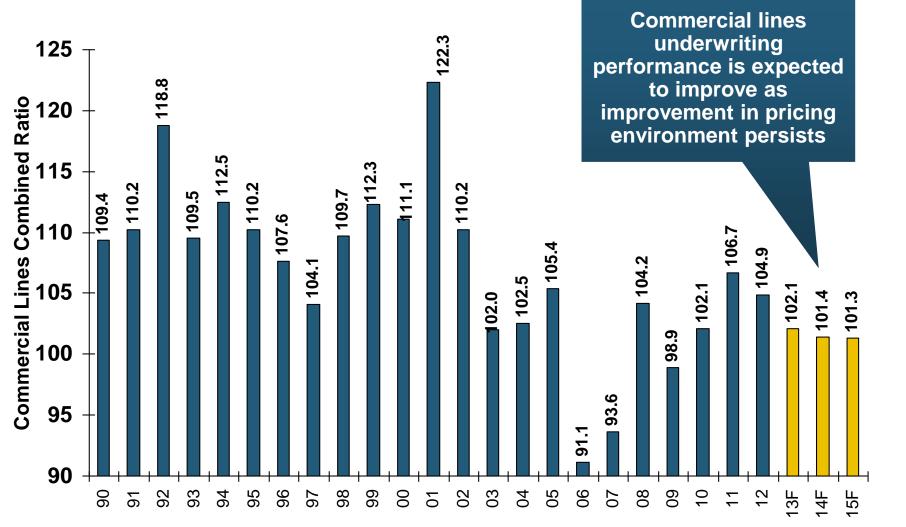
#### Homeowners Multi-Peril Loss & LAE Ratio, 2011: INSURANCE Highest 25 States



# Homeowners Multi-Peril Loss & LAE Ratio, 2011: The Insurance Information Lowest 25 States

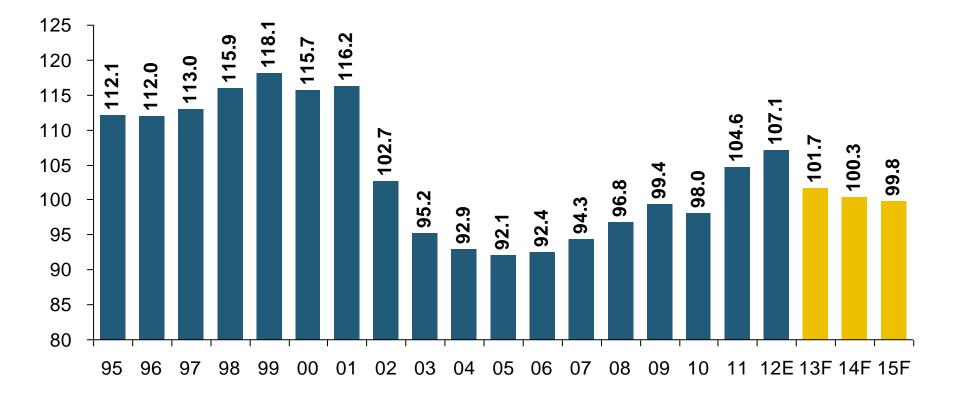


# Commercial Lines Combined Ratio, 1990-2015F\*



\*2007-2012 figures exclude mortgage and financial guaranty segments. Source: A.M. Best (1990-2011); Conning (2012-2015F) Insurance Information Institute INSURANCE INFORMATION INSTITUTE

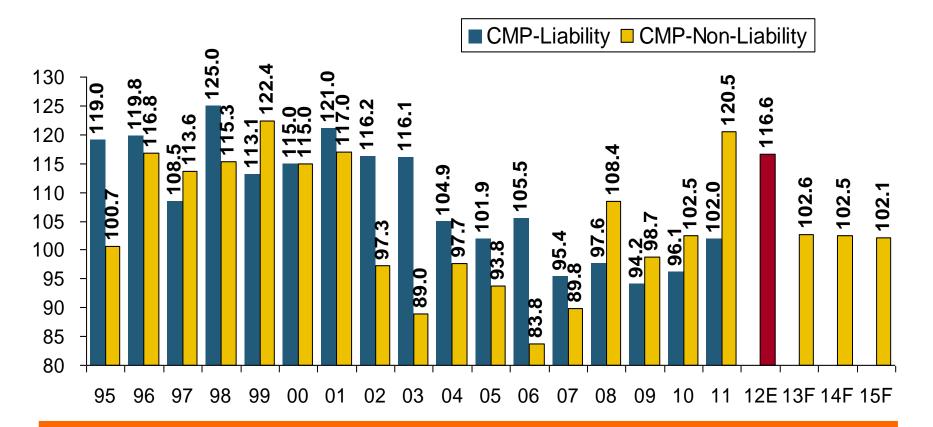
# Commercial Auto Combined Ratio: 1993–2015F



#### Commercial Auto is Expected to Improve as Rate Gains Outpace Any Adverse Frequency and Severity Trends

Sources: A.M. Best (1990-2012E); Conning (2012-2015F); Insurance Information Institute.

## **Commercial Multi-Peril Combined Ratio:** 1995–2015F

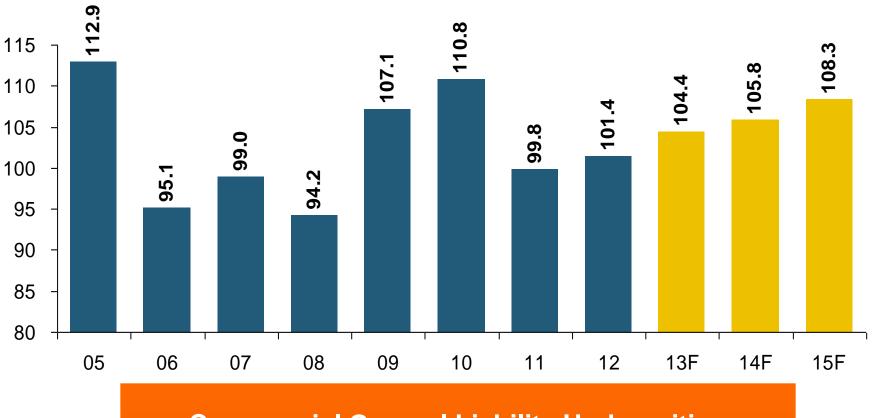


#### Commercial Multi-Peril Underwriting Performance is Expected to Improve in 2013 Assuming Normal Catastrophe Loss Activity

\*2012-2013 figures are A.M. Best estimate/forecast for the combined liability and non-liability components. Same for Conning 2014-2015F figures.

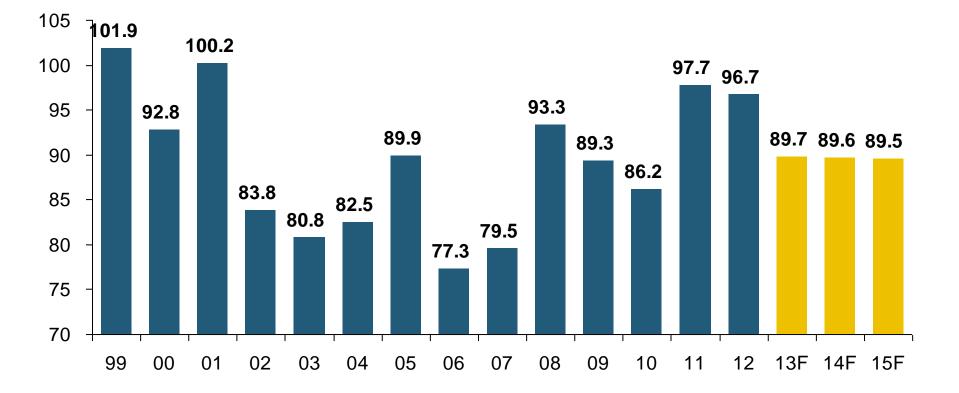
Sources: A.M. Best; Conning; Insurance Information Institute.

# General Liability Combined Ratio: 2005–2015F



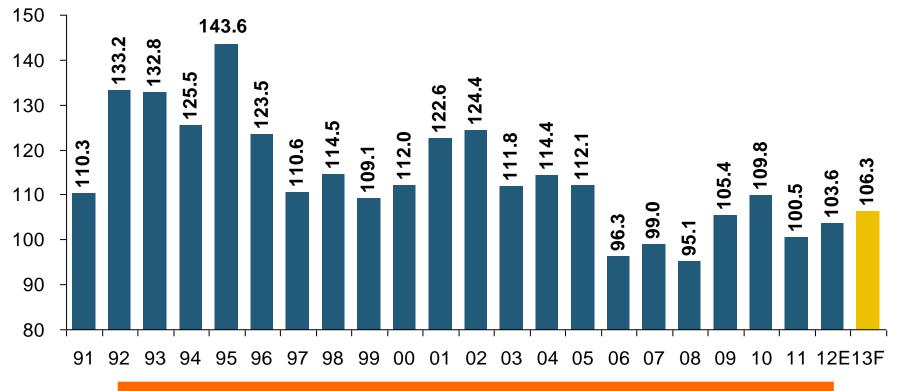
Commercial General Liability Underwriting Performance Has Been Volatile in Recent Years ISURANCE

### Inland Marine Combined Ratio: 1999–2015F



#### Inland Marine is Expected to Remain Among the Most Profitable of All Lines

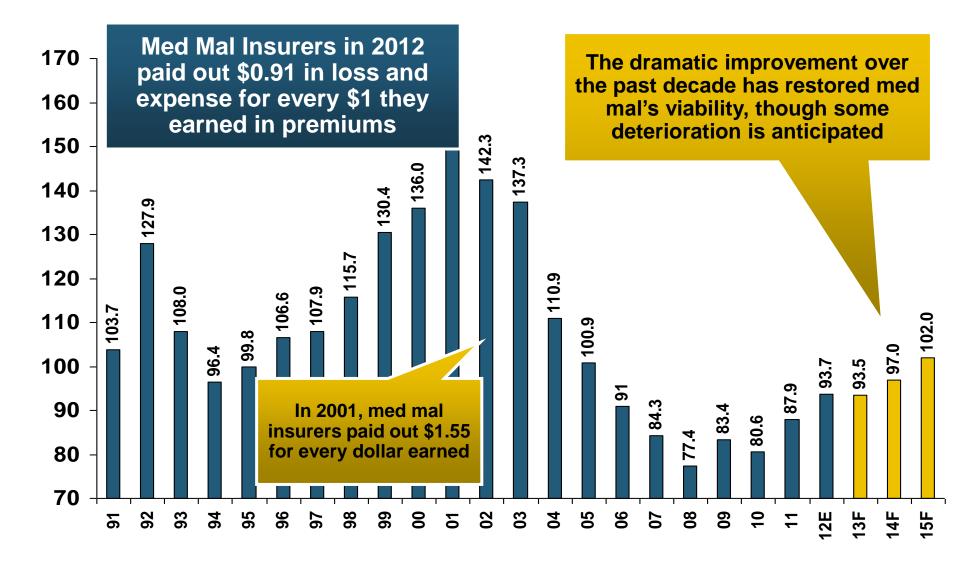
#### Other & Products Liability Combined Ratio: 1991–2013F



Liability Lines Have Performed Better in the Post-Tort Reform Era (~2005), but There Has Been Some Deterioration in Recent Years

Sources: A.M. Best ; Insurance Information Institute.

#### Medical Malpractice Combined Ratio vs. All Lines Combined Ratio, 1991-2015F



INSURANCE



## Workers Compensation Operating Environment

The Weak Economy and Soft Market Have Made the Workers Comp Operating Increasingly Challenging

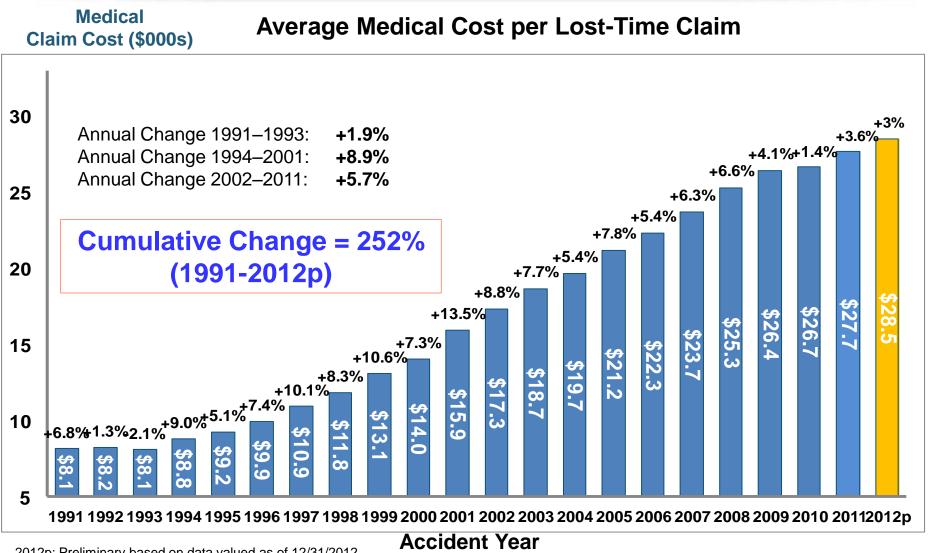
#### Workers Compensation Combined Ratio: 1994–2012P



Workers Comp Results Began to Improve in 2012. Underwriting Results Deteriorated Markedly from 2007-2010/11 and Were the Worst They Had Been in a Decade.

Sources: A.M. Best (1994-2009); NCCI (2010-2012P) and are for private carriers only; Insurance Information Institute.

## Workers Compensation Medical Severity Moderate Increase in 2012



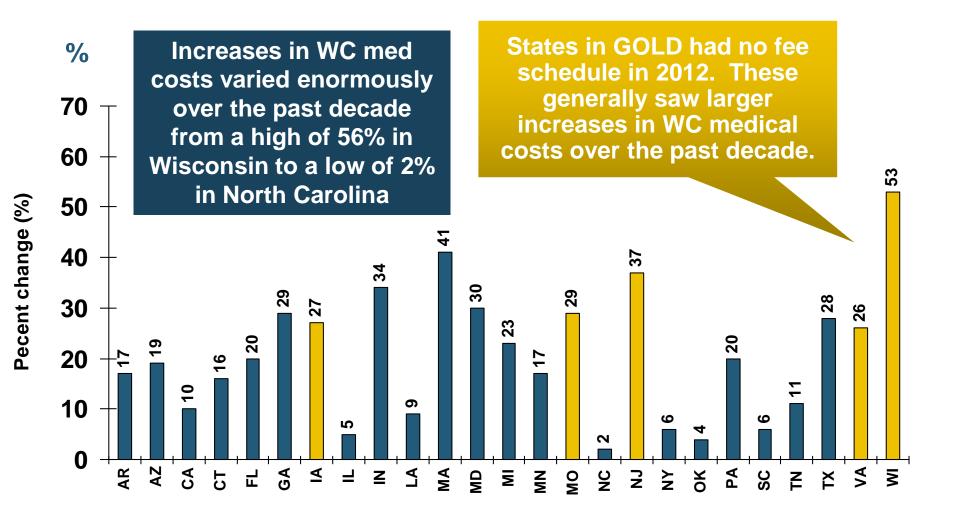
2012p: Preliminary based on data valued as of 12/31/2012.

1991-2011: Based on data through 12/31/2011, developed to ultimate

Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

## Change in Price Paid for Medical Professional Services in WC, 2002-2012\*

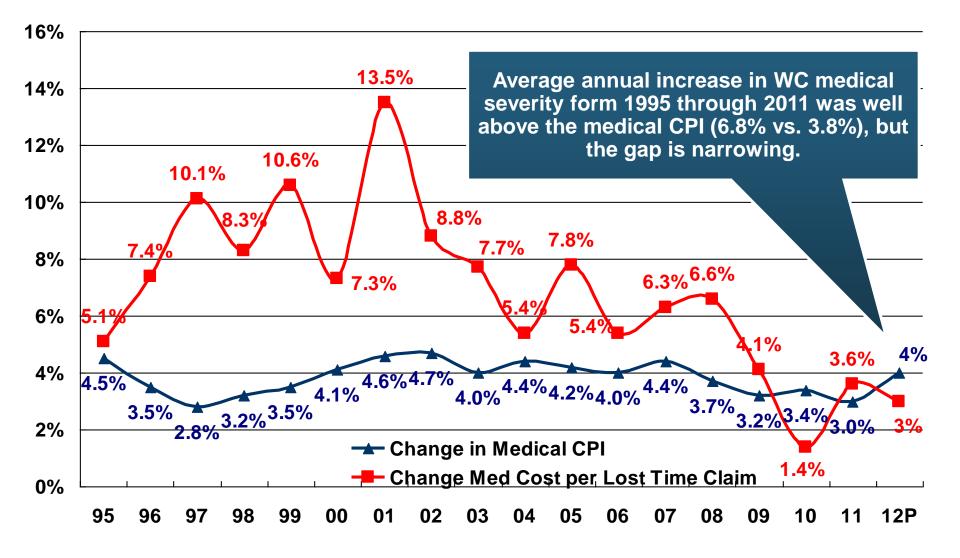




\*Data are preliminary as of 6/30/12.

Sources: Workers Compensation Research Institute, WCRI Medical Price Index for Workers Compensation, 5th Edition; Ins. Info. Institute. 182

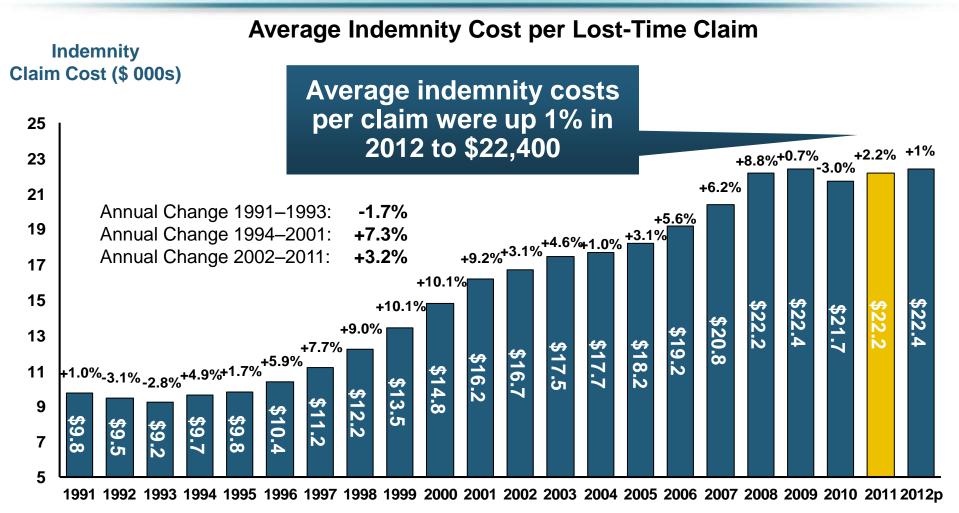
## WC Medical Severity Generally Outpaces the Medical CPI Rate



Sources: Med CPI from US Bureau of Labor Statistics, WC med severity from NCCI based on NCCI states.

## Workers Comp Indemnity Claim Costs: Small Increase in 2012





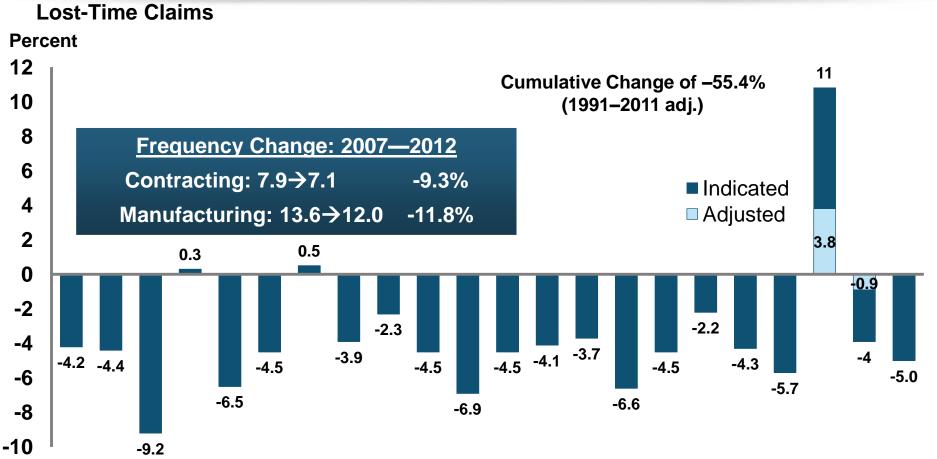
#### **Accident Year**

2012p: Preliminary based on data valued as of 12/31/2012.

1991-2011: Based on data through 12/31/2011, developed to ultimate

Based on the states where NCCI provides ratemaking services including state funds, excluding WV; Excludes high deductible policies.

## Workers Compensation Lost-Time Claim Frequency Declined in 2012



1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 20112012p

#### **Accident Year**

\*Adjustments primarily due to significant audit activity.

2012p: Preliminary based on data valued as of 12/31/2012

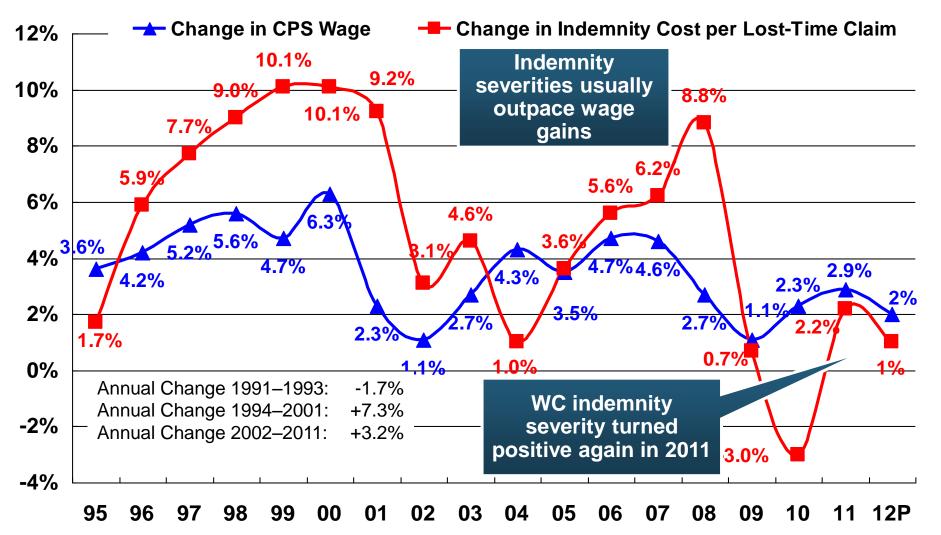
1991-2011: Based on data through 12/31/2011, developed to ultimate

Based on the states where NCCI provides ratemaking services, including state funds; excludes high deductible policies

Frequency is the number of lost-time claims per \$1M pure premium at current wage and voluntary loss cost level

INSURANCE

# WC Indemnity Severity vs. Wage Inflation, 1995 -2012p

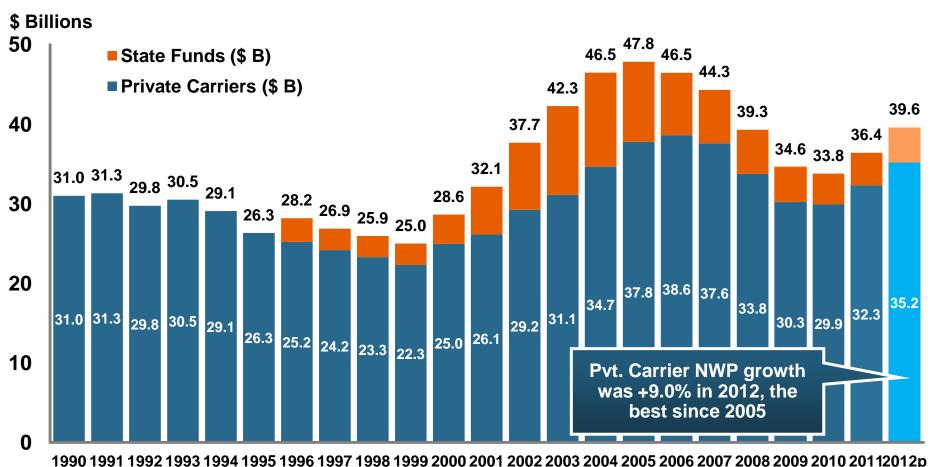


2011p: Preliminary based on data valued as of 12/31/2011; 1991-2010: Based on data through 12/31/2010, developed to ultimate. Based on the states where NCCI provides ratemaking services. Excludes the effects of deductible policies. CPS = Current Population Survey. Source: NCCI

### Workers Compensation Premium: Second Consecutive Year of Increase



**Net Written Premium** 



p Preliminary

Source: 1990–20102p Private Carriers, Annual Statement Data, NCCI.

1996–2012p State Funds: AZ, CA, CO, HI, ID, KY, LA, MD, MO, MT, NM, OK, OR, RI, TX, UT Annual Statements State Funds available for 1996 and subsequent

### 2012 Workers Compensation Direct Written Premium Growth, by State\*



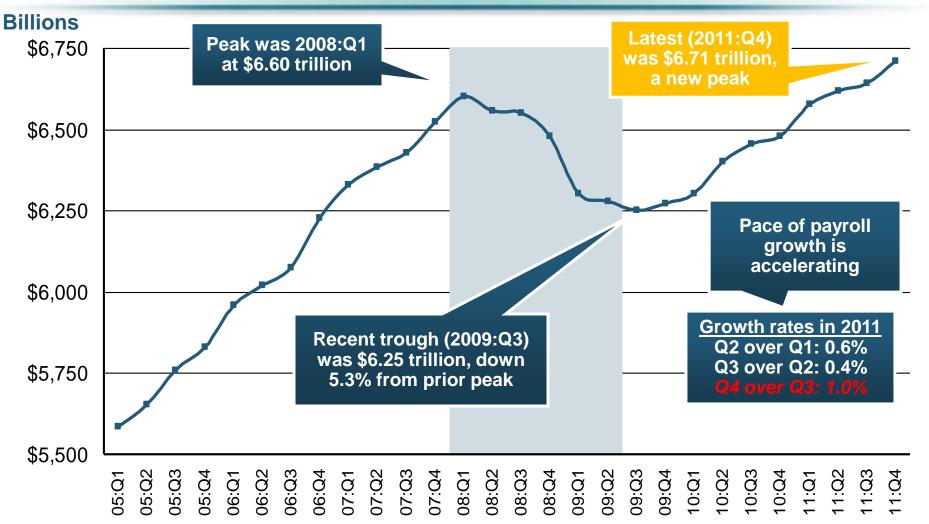
**PRIVATE CARRIERS: Overall 2012 Growth = +9%** 

While growth rates varied widely, all states experienced growth in excess of 5% in 2012 VΤ ME MT MN OR NH ID MA WI NY SD M PA IA NV CT NE UT IL NJ IN CA. 60 DE KS MD MO KY DC NC TN OK AZ NM AR SC MS GA AL TX > 10% LA AK > 5% and ≤ 10% ≤ 5% HI

\*Excludes monopolistic fund states (in white): OH, ND, WA and WY. Source: NCCI.

RI

### Nonfarm Payroll (Wages and Salaries): Quarterly, 2005–2011:Q4



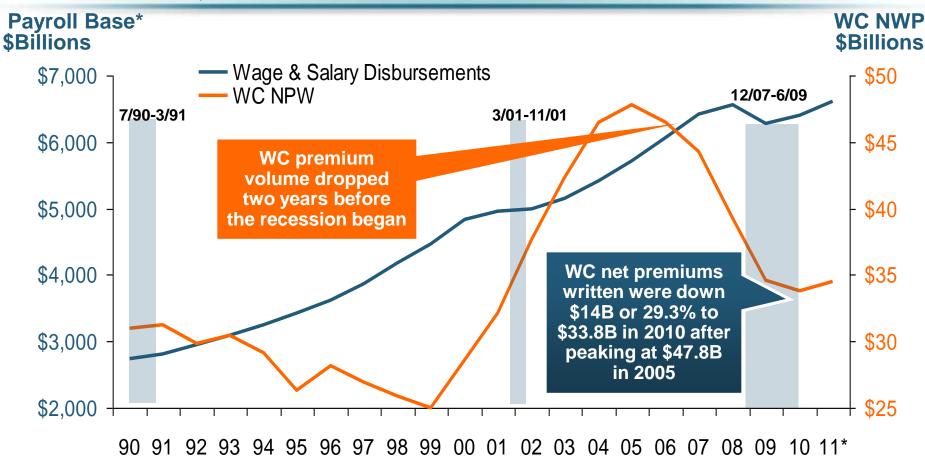
Note: Recession indicated by gray shaded column. Data are seasonally adjusted annual rates.

Sources: <u>http://research.stlouisfed.org/fred2/series/WASCUR;</u> National Bureau of Economic Research (recession dates); Insurance Information Institute.

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## Payroll vs. Workers Comp Net Written Premiums, 1990-2011

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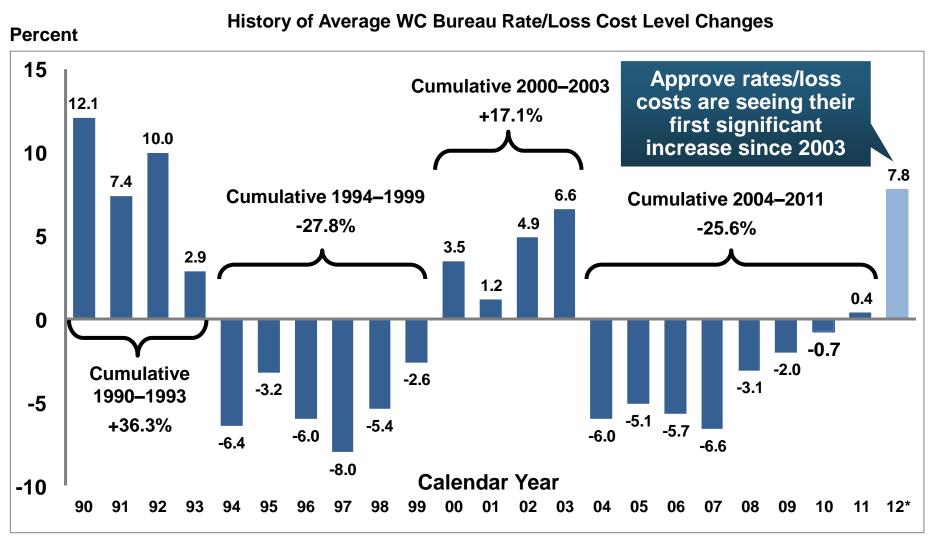


## Resumption of payroll growth and rate increases suggests WC NWP will grow again in 2012

\*Private employment; Shaded areas indicate recessions. Payroll and WC premiums for 2011 is I.I.I. estimate Sources: NBER (recessions); Federal Reserve Bank of St. Louis at <a href="http://research.stlouisfed.org/fred2/series/WASCUR">http://research.stlouisfed.org/fred2/series/WASCUR</a> ; NCCI; I.I.I.

### Average Approved Bureau Rates/Loss Costs

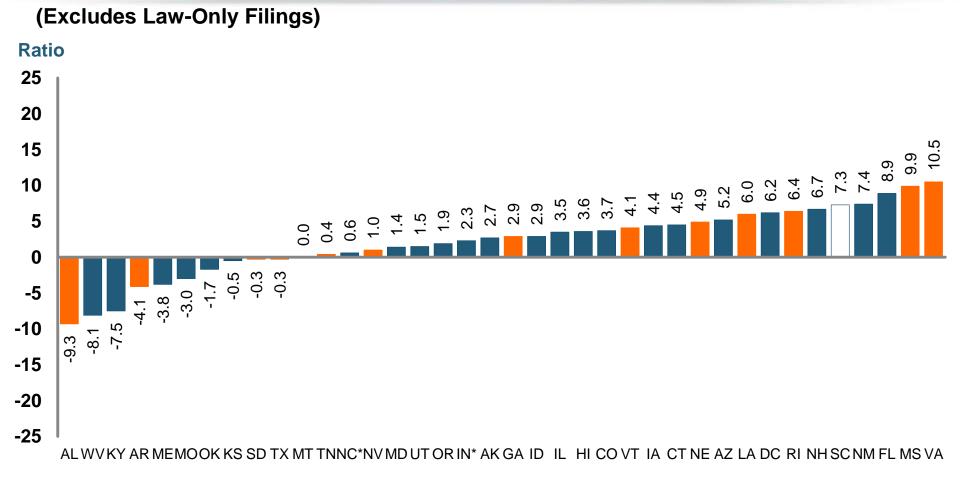




\*States approved through 7/31/12.

Note: Countrywide approved changes in advisory rates, loss costs and assigned risk rates as filed by applicable rating organization. Source: NCCI.

## Current NCCI Voluntary Market Filed Rate/Loss Cost Changes



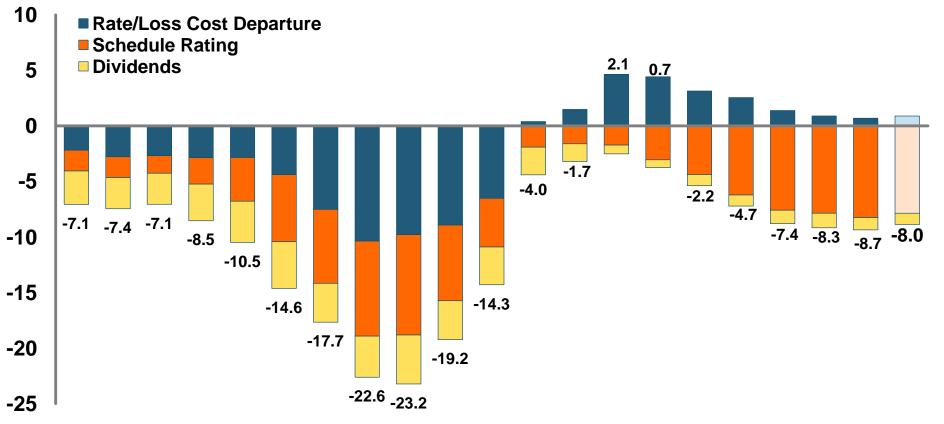
Effective Dates 1/1/2012 and Prior Effective Dates Subsequent to 1/1/2012 Diled and Pending

## Impact of Discounting on Workers Compensation Premium



#### **NCCI States—Private Carriers**

#### Percent



1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 20102011p

#### p Preliminary

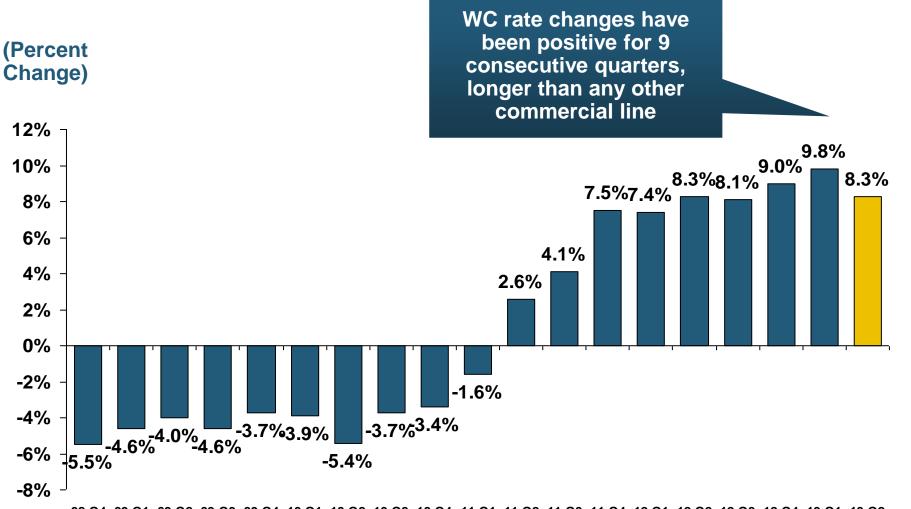
**Policy Year** 

Dividend ratios are based on calendar year statistics

NCCI benchmark level does not include an underwriting contingency provision Based on data through 12/31/2011 for the states where NCCI provides ratemaking services Source: NCCI.

## Workers Comp Rate Changes, 2008:Q4 – 2013:Q2

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08:Q4 09:Q1 09:Q2 09:Q3 09:Q4 10:Q1 10:Q2 10:Q3 10:Q4 11:Q1 11:Q2 11:Q3 11:Q4 12:Q1 12:Q2 12:Q3 12:Q4 13:Q1 13:Q2

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; Information Institute.

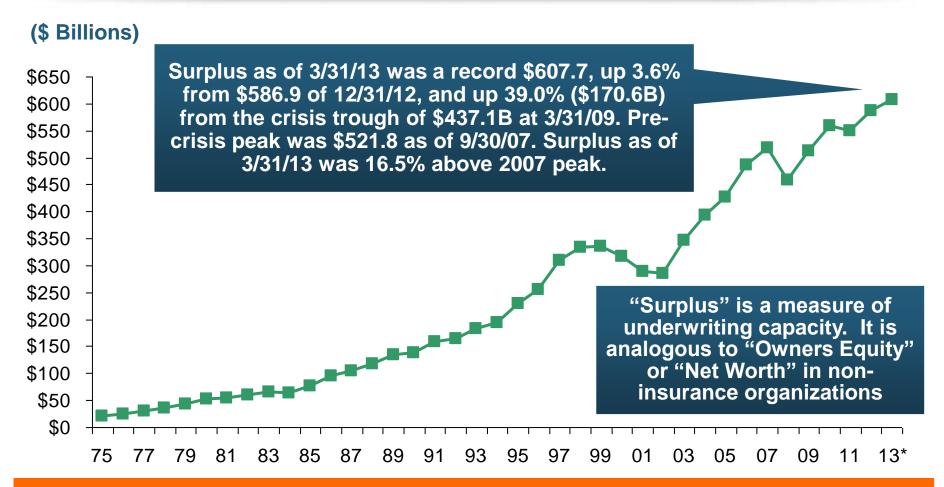


## 2. SURPLUS/CAPITAL/CAPACITY

## How Will Large Catastrophe Losses Impact Capacity?

# US Policyholder Surplus: 1975–2013\*





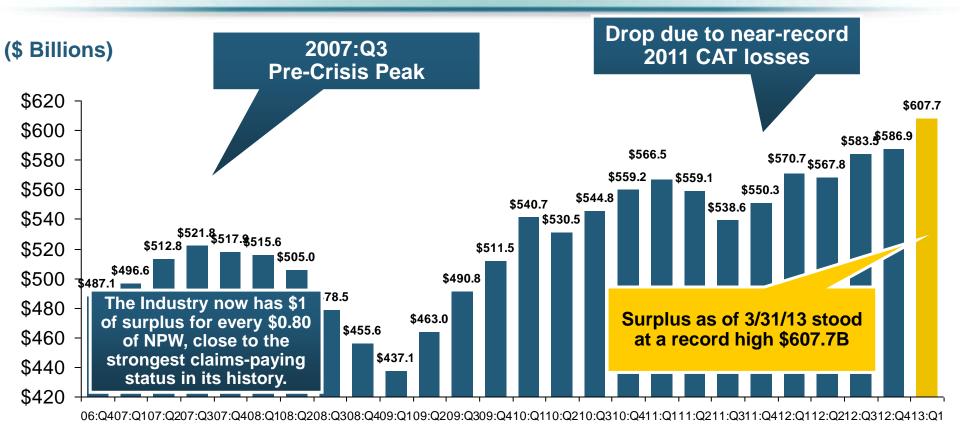
## The Premium-to-Surplus Ratio Stood at \$0.77:\$1 as of 3/31/13, A Near Record Low (at Least in Recent History)\*

\* As of 3/31/13.

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

## Policyholder Surplus, 2006:Q4–2013:Q1

INSURANCE INFORMATION INSTITUTE



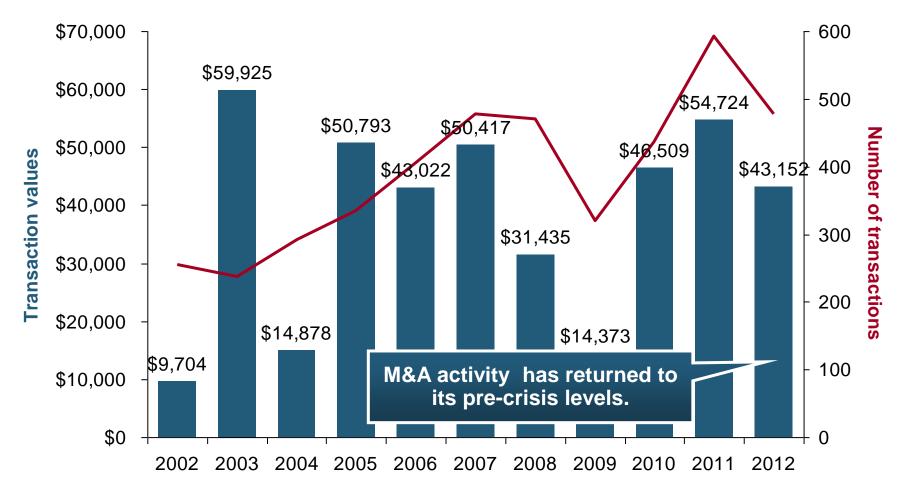
\*Includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a noninsurance business in early 2010.

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

Sources: ISO, A.M .Best.

## U.S. INSURANCE MERGERS AND ACQUISITIONS, 2002-2012 (1)

(\$ Millions)



(1) Includes transactions where a U.S. company was the acquirer and/or the target.

Source: Conning proprietary database.

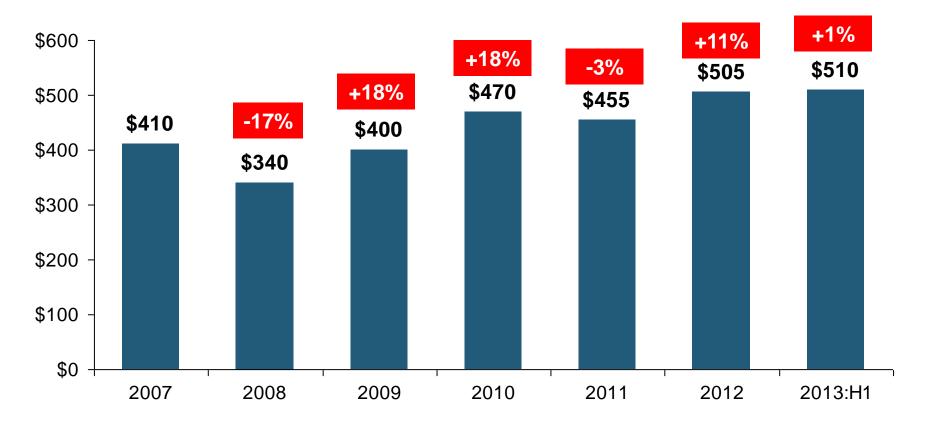


## 3. REINSURANCE MARKET CONDITIONS

## Ample Capacity as Alternative Capital is Transforming the Market



(\$ Billions)

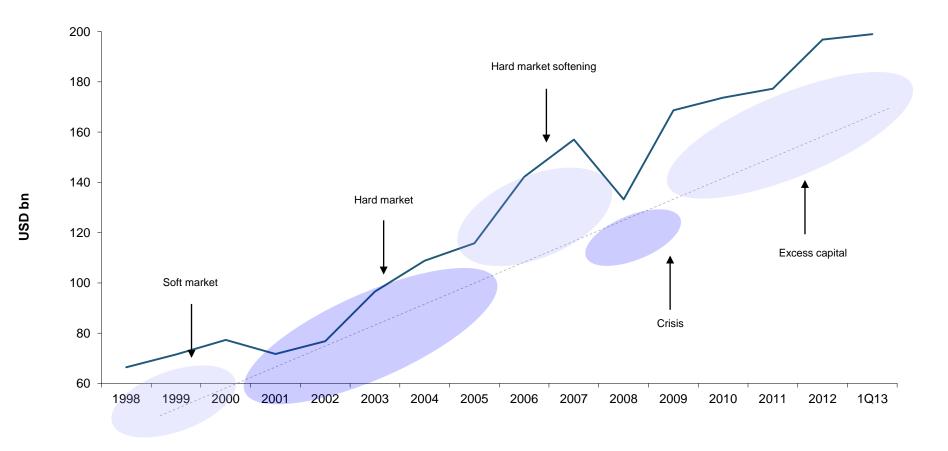


### Global Reinsurance Capital Has Been Trending Generally Upward Since the Global Financial Crisis, a Trend that Seems Likely to Continue

\*Includes both traditional and non-traditional forms of reinsurance capital.

Source: Aon Benfield Aggregate study for the 6 months ending June 2013; Insurance Information Institute.

### Long-Term Evolution of Shareholders' Funds for the Guy Carpenter Global Reinsurance Composite



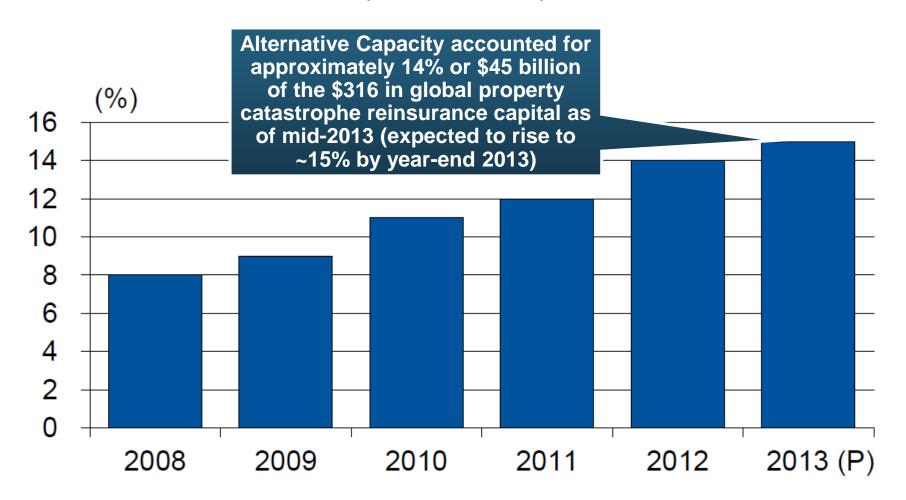
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Source: Guy Carpenter

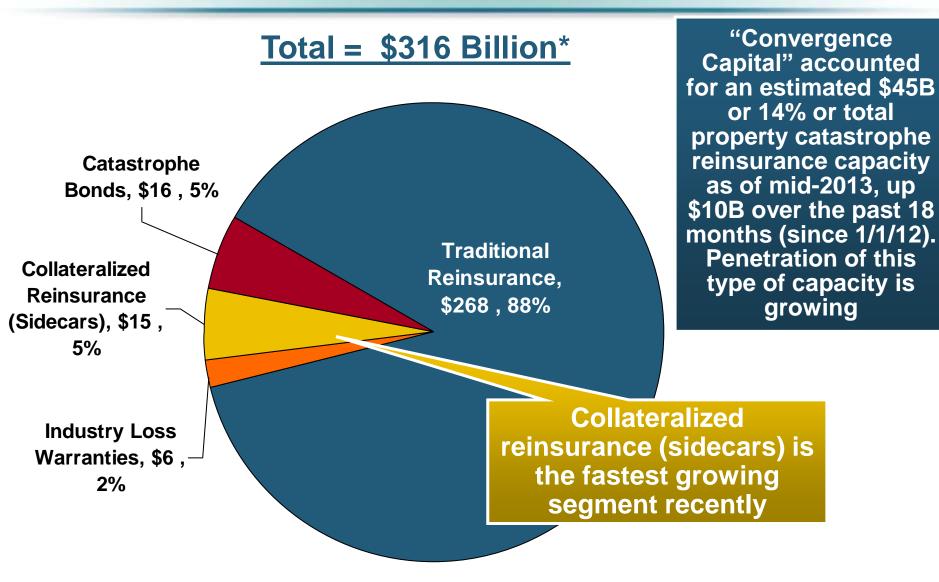
### Alternative Capacity as a Percentage of Global Property Catastrophe Reinsurance Limit

### (As of Year End)



Source: Guy Carpenter

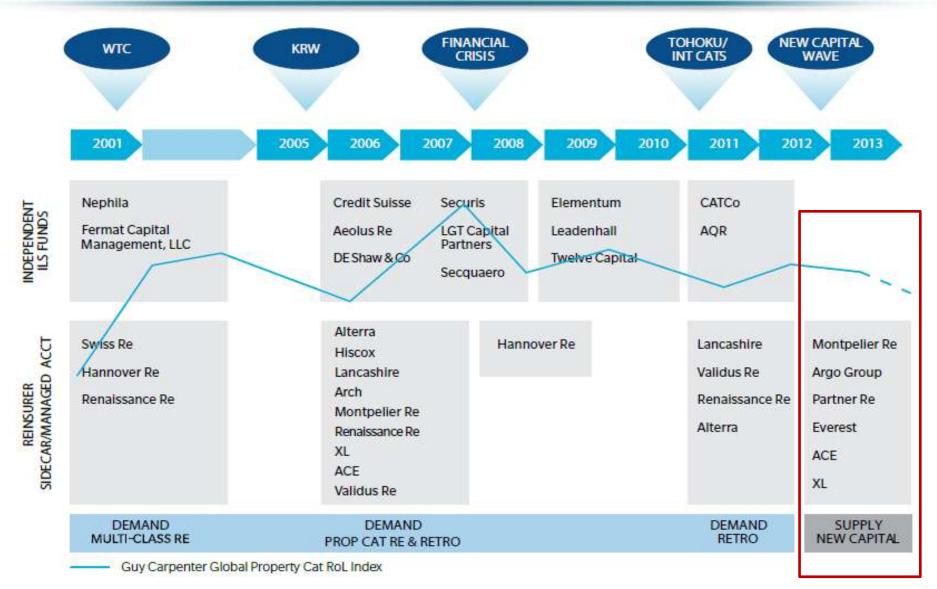
## Property Catastrophe Reinsurance Capacity by Source as of Mid-2013 (\$ Bill)



Source: Guy Carpenter; Mid-Year Market Report, September 2013; Insurance Information Institute.

# Alternative Capacity Development, 2001—2013:H1

#### INSURANCE INFORMATION INSTITUTE

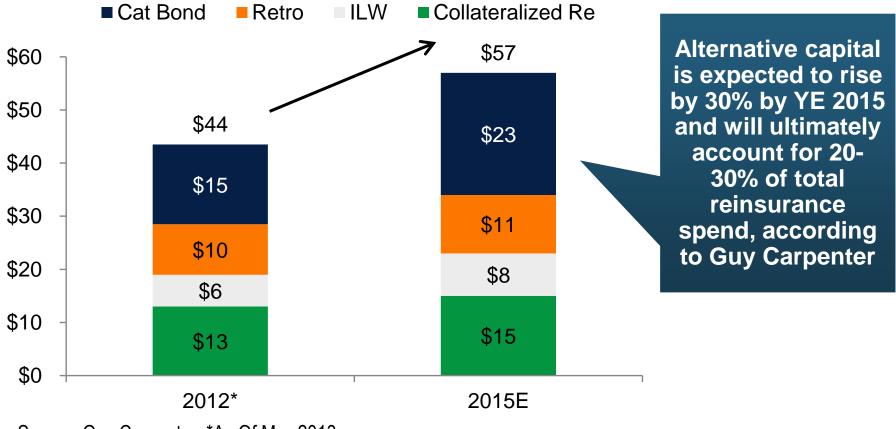


Source: Guy Carpenter; Mid-Year Market Report, September 2013; Insurance Information Institute.

## Non-Traditional Property Catastrophe Limits by Type, YE 2012 vs. YE 2015E



### NON-TRADITIONAL P/CAT LIMITS BY TYPE

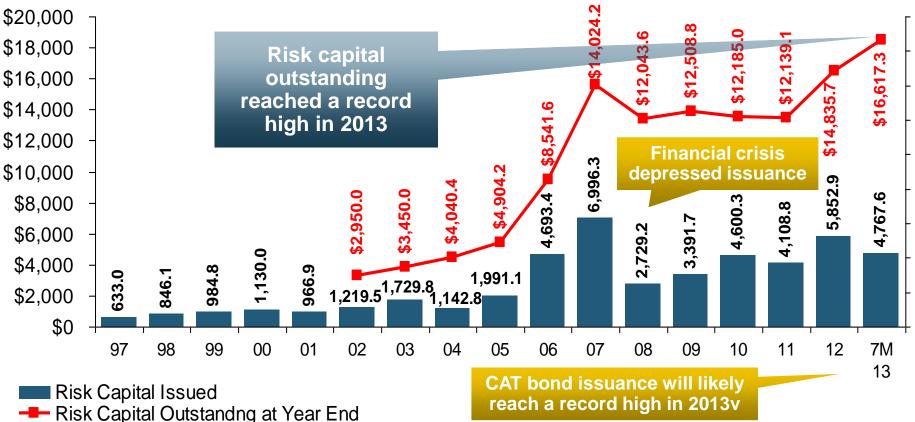


Source: Guy Carpenter; \*As Of Mar-2013

Source: Guy Carpenter; Reinsurance Association of America; Insurance Information Institute.

# Catastrophe Bonds: Issuance and Outstanding, 1997-2013\*

#### **Risk Capital Amount (\$ Millions)**



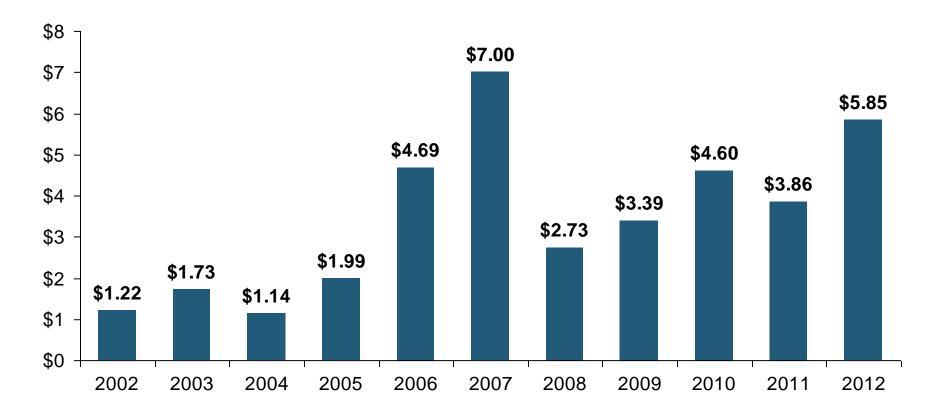
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Catastrophe Bond Issuance Is Approaching Pre-Crisis Levels While Risk Capital Outstanding Stands at an All-Time Record

\*Through July 2013. Source: Guy Carpenter; Insurance Information Institute.

## CATASTROPHE BONDS, ANNUAL RISK CAPITAL ISSUED, 2002-2012

(\$ Billions)

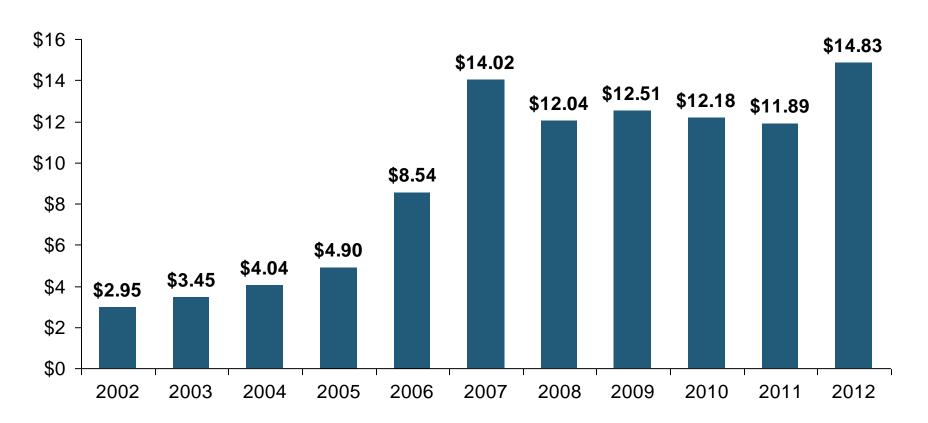


Note

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## CATASTROPHE BONDS, RISK CAPITAL OUTSTANDING, 2002-2012

(\$ Billions)



Note

## Catastrophe Bond Issuances, First Half 2013



		Amount	2013	
Sponsor	Transaction	(\$ Mil.)	Issue Date	Peril
Cincinnati Insurance Group	Skyline Re Ltd.	61.2	January	U.S. Earthquake and Thunderstorm
Nationwide Mutual	Caelus Re 2013	270	March	U.S. Hurricane and Earthquake
Citizens Property Insurance	Everglades Re	250	March	Florida Hurricane
State Farm	Merna Re IV	300	April	U.S. Earthquake
Nationwide Mutual	Caelus Re 2013	320	April	U.S. Hurricane and Earthquake
North Carolina JUA/IUA	Tar Heel Re	500	April	North Carolina Hurricane
Turkish Catastrophe Insurance Pool	Bospherus 1 Re	400	April	Turkey Earthquake
Louisiana Citizens	Pelican Re	140	May	Louisiana Hurricane
American Coastal Insurance Company	Armor Re	183	May	Florida Hurricane
Travelers	Long Point Re III	300	May	Northeast U.S. Hurricane
Florida Municipal Insurance Trust	Sunshine Re	20	May	Florida Hurricane
Allianz	Blue Danube II	175	May	Earthquake
USAA	Residential Re	300	May	U.S. Hurricane, Earthquake, Thunderstorm
Southern Oak	Oak Leaf Re	30	May	Florida Hurricane
Allstate	Sanders Re	350	May	U.S. Hurricane and Earthquake
Amlin AG	Tramline Re II	75	June	U.S. Hurricane/Canada Earthquake
Munich Re	Queen Street VIII Re	75	June	U.S. Hurricane/Australia Cyclone
Assurant	Ibis Re II	185	June	U.S. Hurricane

Sources: Willis Capital Markets & Advisory, Fitch Ratings; Insurance Information Institute.

# Sidecar Transactions (Post-Sandy) and Hedge Fund-Backed Reinsurers



### Sidecar Transactions — Post Hurricane Sandy

Sponsor	Transaction	Capital (\$ Mil.)	Date
Lancashire	Saltire Re I	250	November 2012
Alterra	New Point V	247	December 2012
RenRe	Upsilon Re II	185	January 2013
Argo	Harambee Re	N.A.	January 2013
Validus	AlphaCat Re 2013	230	January 2013
Everest Re	Mt. Logan Re	250	January 2013
PartnerRe	Lorenz Re	75	March 2013
ACE	Altair Re	95	April 2013

Sidecars (collateralized reinsurance) are the fastest growing alternative capital segment, account for about 15% or \$5 bill of total property catastrophe reinsurance capital

#### N.A. - Not available.

Source: Company press releases and filings.

### Hedge Fund-Backed Reinsurers

More hedge fund money is coming into the business

Company	Initial Capital (\$ Mil.)	Operations Date	Major Investors
AQR Re Ltd.	260	Jan. 2012	AQR Capital Management, LLC
Greenlight Capital Re, Ltd.	212	April 2006	Greenlight Capital
PaCRe, Ltd.	500	April 2012	Paulson & Co., Validus
S.A.C. Re Holdings Ltd.	500	July 2012	S.A.C. Capital Advisors, Capital Z Partners III LP
Third Point Reinsurance Co. Ltd.	750	Jan. 2012	Third Point LLC, Kelso & Co, Pine Brook Road Partners

Source: Company press releases and filings.

Sources: Willis Capital Markets & Advisory, Fitch Ratings; Insurance Information Institute.

## (Re) Insurers Investing in Insurance Linked Securities (ILS) Fund Managers



(Re)insurer	Asset Manager/Fund	
Alleghany	Ares Management	Several (re)insurers have formed asset
Allied World	Vorld Aeolus Capital Management Leadenhall Capital Partners	
Amlin		
Aspen Re	Cartesian Iris Re	independent asset managers that are focused on
Hannover Re	ncashire Saltire Management	
Lancashire		
Montpelier Re		
Munich Re	MEAG Munich Ergo	asset managers invest third party
RenaissanceRe	SCOR Atropos Transatlantic Pillar Capital Holdings	
SCOR		
Transatlantic		
Validus		
KL Stone Point Capital		retrocession and ILS contracts.

Sources: Willis Capital Markets & Advisory, Fitch Ratings; Insurance Information Institute.

## Alternative Reinsurance Capital Summary

### Alternative Reinsurance Here to Stay

➤ Capital markets have effectively discovered reinsurance another "asset class," in part due to Federal Reserve's unprecedented actions since the financial crisis to keep interest rates low across the entire yield curve.

➤A convergence of the reinsurance and capital markets persists with many companies both providing and using alternative forms of risk transfer to supplement the traditional balance sheet, transforming several reinsurers into risk asset managers. These structures include catastrophe bonds (cat bonds), collateralized quota-share reinsurance vehicles (sidecars), industry loss warranties (ILWs), hedge fund-supported reinsurers and asset managers investing in insurance-linked securities (ILS).

### Property Catastrophe Drives Market:

➤ The nature of property catastrophe risk as being highly modeled and commoditized serves as an important economic force driving its transfer into the capital markets. Casualty (re)insurance lines have had limited movement into the alternative reinsurance market thus far, as the less standardized and more specialized nature of these longer term risks makes them better suited for more permanent traditional capacity providers.

Sources: Fitch Ratings, Alternative Reinsurance Market Update, September 5, 2013; Insurance Information Institute.

# Alternative Reinsurance Capital Summary (Insurance Continued)

### Strong Investor Demand

➤Comparatively high potential returns of catastrophe risk through cat bonds and sidecar investments are particularly attractive to investors, although this spread has been shrinking due to increased investor demand. However, the lack of correlation between catastrophe losses and returns on other major asset classes should continue to contribute to strong demand from investors, which include hedge funds, private equity and institutional investors.

### •Shock (i.e., Large Loss) Event Could Alter Market

➢One area of uncertainty is how investors would react to an environment of *less favorable catastrophe risk spreads* or a *large unexpected catastrophe loss*, either of which could cause capital to retreat. This risk is likely higher for hedge fund capital, as pension fund capital tends to be more permanent, given their long-term investment outlook and more diversified risk exposure.

### •Mixed Impact to Reinsurers' Ratings:

Fitch views the growth and acceptance of alternative reinsurance as a mixed impact for the credit quality of reinsurers' ratings. Favorably, these products can be used to manage reinsurers' exposure and capital and serve as a source of fee income. Negatively, alternative coverage represents competition for traditional reinsurers that, in conjunction with the strong overall capitalization of the reinsurance industry, have worked to notably dampen reinsurance pricing Sources: Fitch Ratings, Alternative Reinsurance Market Update, September 5, 2013.

# Alternative Reinsurance Capital Summary (continued)

#### • Sponsors Benefit From New Issuance:

➤As investor demand has continued to grow for catastrophe bonds, sponsors have been able to offer deals at considerably lower coupon rates and with increasingly favorable structures that suit individual company needs. These market conditions are likely to drive further issuance of cat bonds in the near term if (re)insurers believe they can produce a cost-effective alternative to supplement their reinsurance program. As of midyear, 2013 is on track to produce a record amount of catastrophe bond issuance.

#### •Sidecars Continue to Provide Capacity:

Several sidecars emerged late in 2012 and early into 2013 following Hurricane Sandy. These vehicles were opportunistically seeking to capitalize on any potential improvements in property catastrophe pricing. However, they also represented several newer entrants into the alternative reinsurance space looking to participate in what continues to be an important and growing segment of the reinsurance market.

## **Questions Arising from Influence of Alternative Capital**

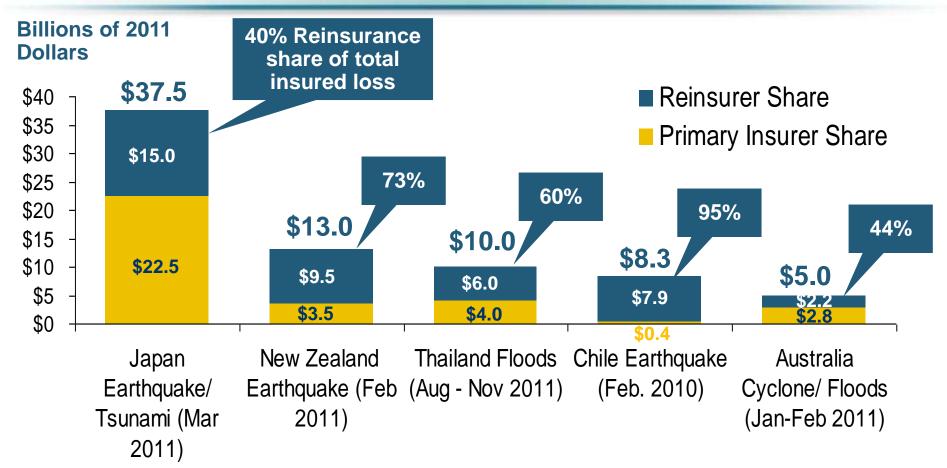
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- Could Pension Fund Money Swap Traditional Capacity?
  - US private pension funds hold ~\$7 trillion in assets
  - 2% allocation = \$140 billion
  - Global property cat capital = ~\$316 bill as of mid-2013
- Do New Investors Have a Lower Cost of Capital?
  - New capacity expects 6-8% rate of return compared to 8-10% for traditional reinsurance, according to Dowling & Partners
- Will Reinsurance Pricing Become More Closely Linked to Interest Rates?

### Terms and Conditions Could Weaken

Multi-year deals

## Reinsurer Share of Recent Significant Market Losses

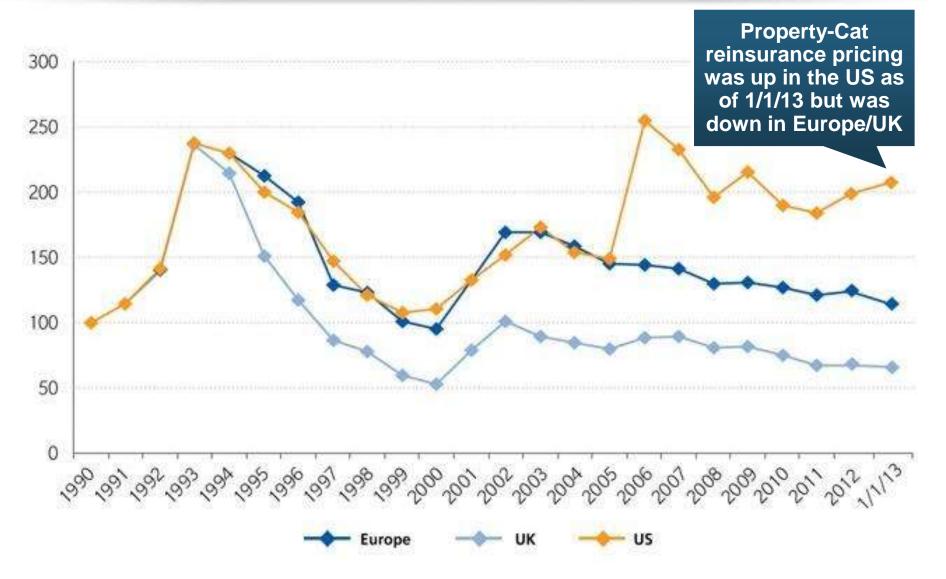


### Reinsurers Paid a High Proportion of Insured Losses Arising from Major Catastrophic Events Around the World in Recent Years

Source: Insurance Information Institute from reinsurance share percentages provided in RAA, ABIR and CEA press release, Jan. 13, 2011.

INSURANCE

## Regional Property Catastrophe Rate on Line Index, 1990—2013 (as of January 1)



Sources: Guy Carpenter; Insurance Information Institute.

## Alternative Capital: Important Definitions

#### Alternative Reinsurance Market

Alternative reinsurance is effectively any form of managing and transferring (re)insurance risk through the use of the capital markets rather than the traditional reinsurance market. These nontraditional structures commonly include catastrophe bonds (cat bonds), collateralized quota-share reinsurance vehicles (sidecars) and industry loss warranties (ILWs).

Alternatives to traditional reinsurance essentially began following Hurricane Andrew, with the introduction of exchange traded insurance options in 1992, the first cat bond in 1994, and later sidecars in 2001, following the events of Sept. 11, 2001. However, the market began to grow significantly following Hurricane Katrina in 2005, as (re)insurers were essentially forced to increase issuances of catastrophe bonds and expand the use of sidecars in order to absorb underwriting capacity as retrocession availability became more scarce and expensive.

#### Catastrophe Bonds

Cat bonds are bonds issued by an insurer with a condition that if the issuer suffers a catastrophe loss greater than a specified amount, the obligation to pay interest/principal is deferred or forgiven, thus effectively prompting a default on the bond. Cat bonds allow sponsors (most often a (re)insurer) to transfer a portion of its catastrophe risk to the capital markets through securities purchased by investors and actively traded in the secondary market.

Favorably for the sponsor, cat bonds offer collateralized (most often invested in U.S. Treasury Money Market Funds) protection that is locked in at a fixed cost over multiple years (typically two to four years). This allows the (re)insurer to be less subject to changing reinsurance market conditions. For the investor, cat bonds offer a comparatively high yield and an opportunity to diversify their portfolios. This is due to the lack of correlation between catastrophe losses and returns on other major asset classes that are tied to more macroeconomic and financial market conditions.

#### Sidecars

Sidecars are special-purpose reinsurers that provide dedicated collateralized quota-share reinsurance, often for a single ceding company that transfers a portion of its underwriting risk (and related capital investment), and in turn receives a ceding commission. They also can be a source of fee income for the reinsurers that underwrite or provide management services to such third-party risk vehicles.

Sidecar vehicles are often established by traditional reinsurers as a means to tap into the external capacity offered by the capital markets from hedge funds, investment banks, private equity and other opportunistic investors and increase the efficiency and diversification of the company's reinsurance program. They typically have a limited life expectancy and are often wound up when market conditions deteriorate, after which any remaining capital funds are returned to investors and the sponsor.

#### Industry Loss Warranties

ILWs are a type of private reinsurance or derivative contract through which one party (often an insurer) will purchase protection based on the total loss arising from an event to the entire insurance industry rather than their own losses. The buyer pays a premium to the company that writes the ILW cover (often a reinsurer or hedge fund) and in return receives coverage for a specified limit if industry losses exceed the predefined amount under the ILW trigger.



## 4. RENEWED PRICING DISCIPLINE

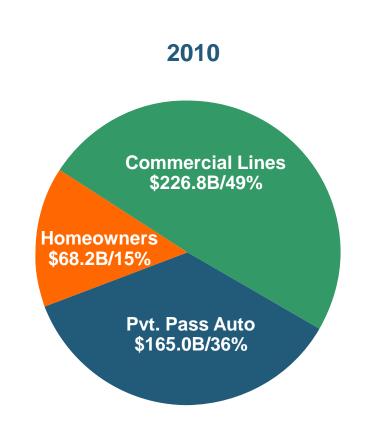
## **Evidence of a Broad and Sustained Shift in Pricing**

## Distribution of Direct Premiums Written by Segment/Line, 2010



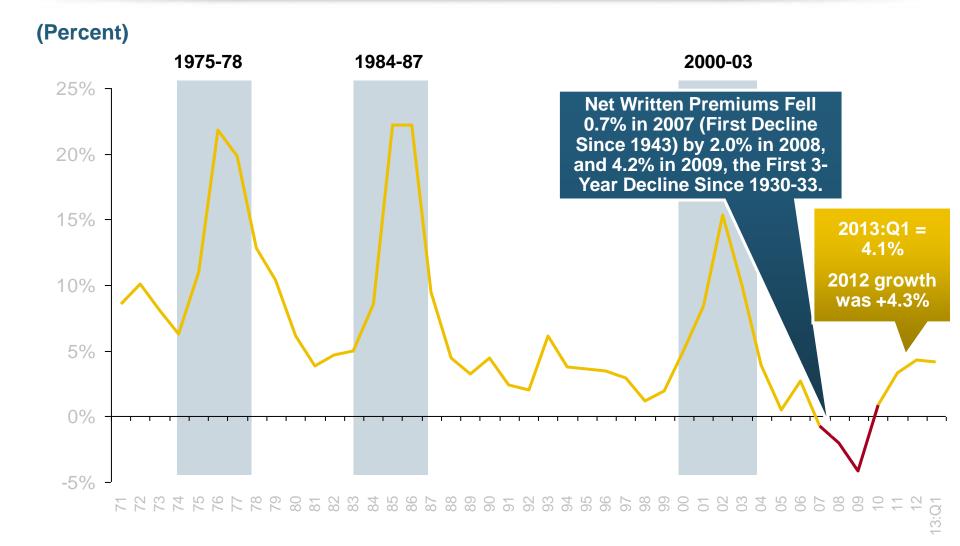
#### **Distribution Facts**

- Personal/Commercial lines split has been about 50/50 for many years; Personal Lines overtook Commercial Lines in 2010
- Pvt. Passenger Auto is by far the largest line of insurance and is currently the most important source of industry profits
  - Billions of additional dollars in homeowners insurance premiums are written by staterun residual market plans



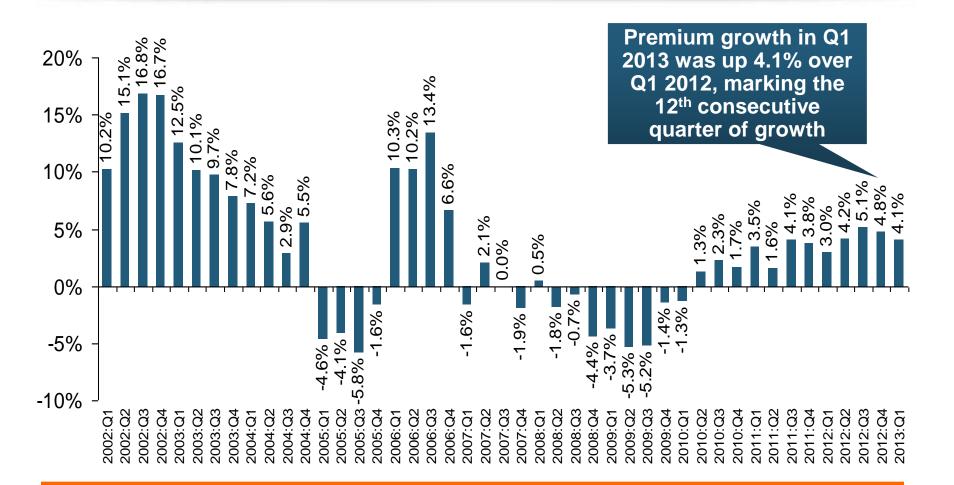
Sources: A.M. Best; Insurance Information Institute research.

# Net Premium Growth: Annual Change, 1971—2013:Q1



Shaded areas denote "hard market" periods Sources: A.M. Best (historical and forecast), ISO, Insurance Information Institute.

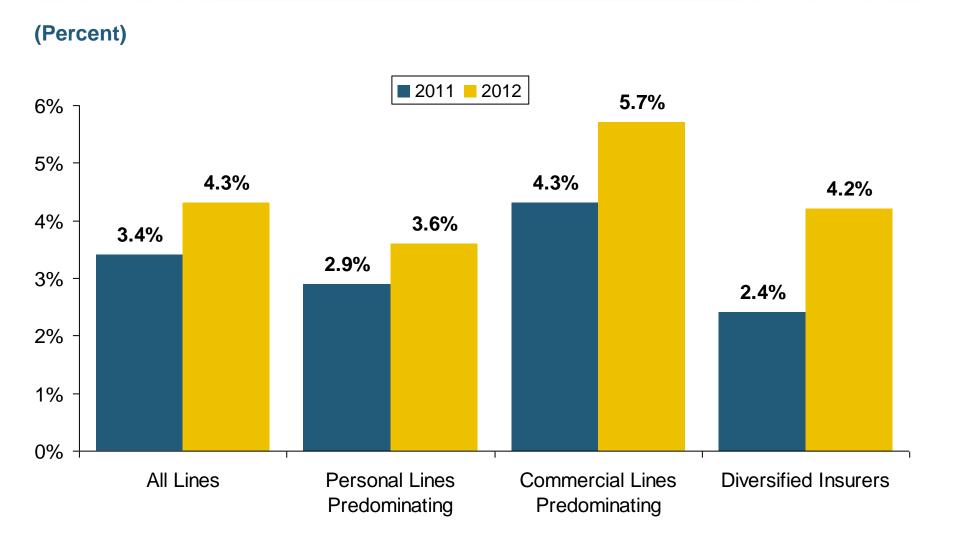
### P/C Net Premiums Written: % Change, Quarter vs. Year-Prior Quarter



## Sustained Growth in Written Premiums (vs. the same quarter, prior year) Will Continue through 2013

Sources: ISO, Insurance Information Institute.

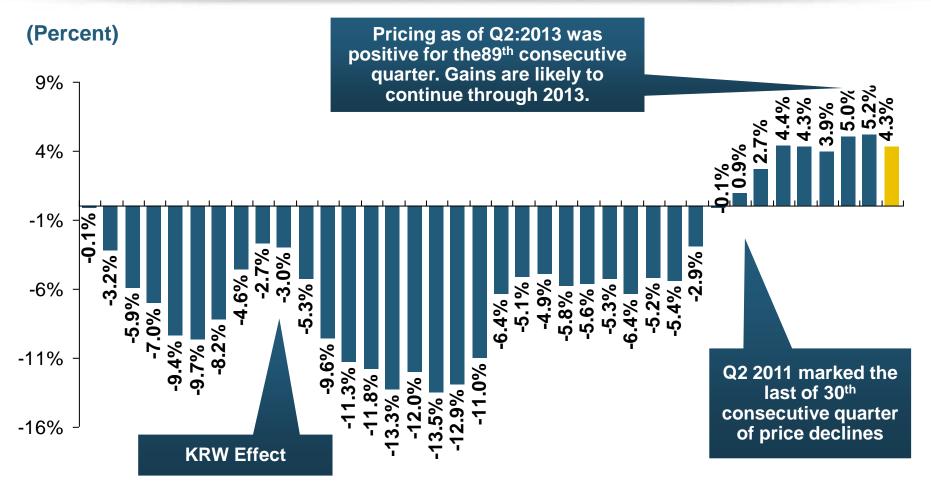
# Growth in Net Written Premium by Segment, 2012 vs. 2011\*



\*Excludes mortgage and financial guaranty insurers. Source: ISO/PCI; Insurance Information Institute ISUDANCE

### Average Commercial Rate Change, All Lines, (1Q:2004–2Q:2013)



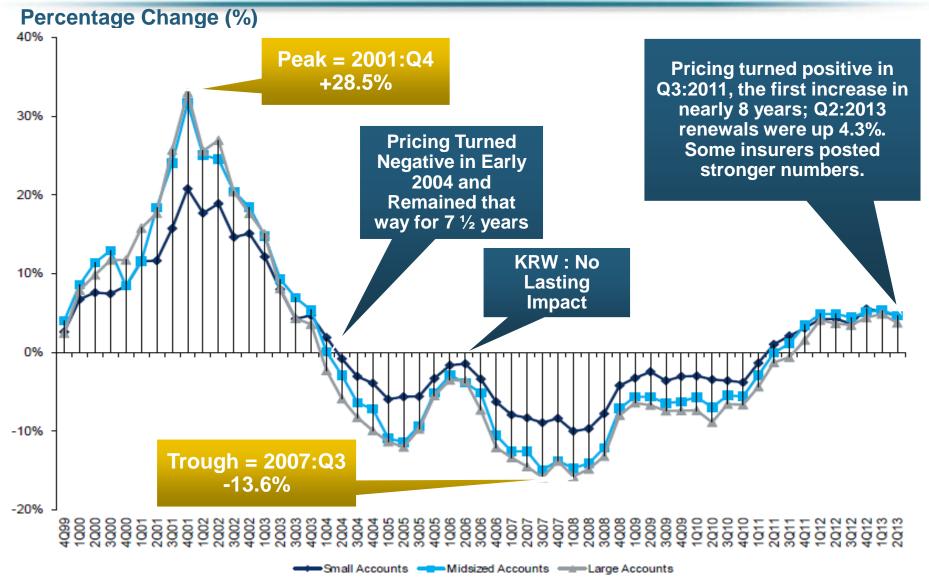


## $\begin{array}{c} 1004\\ 2004\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3005\\ 3006\\ 1000\\ 1000\\ 3005\\ 3006\\ 3006\\ 1000\\ 1000\\ 1000\\ 3005\\ 3000\\ 1000\\ 1000\\ 3000\\ 1000\\$

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

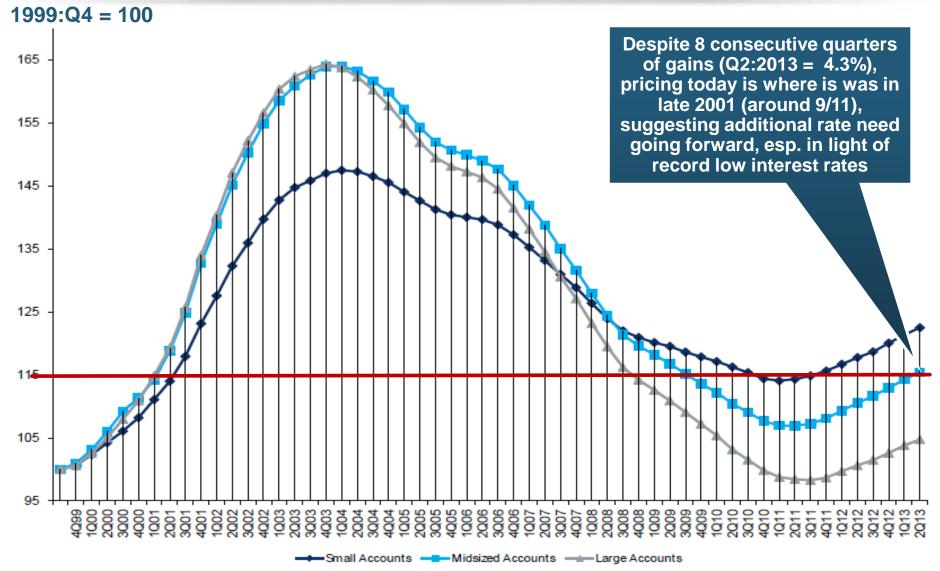
## Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2013:Q2





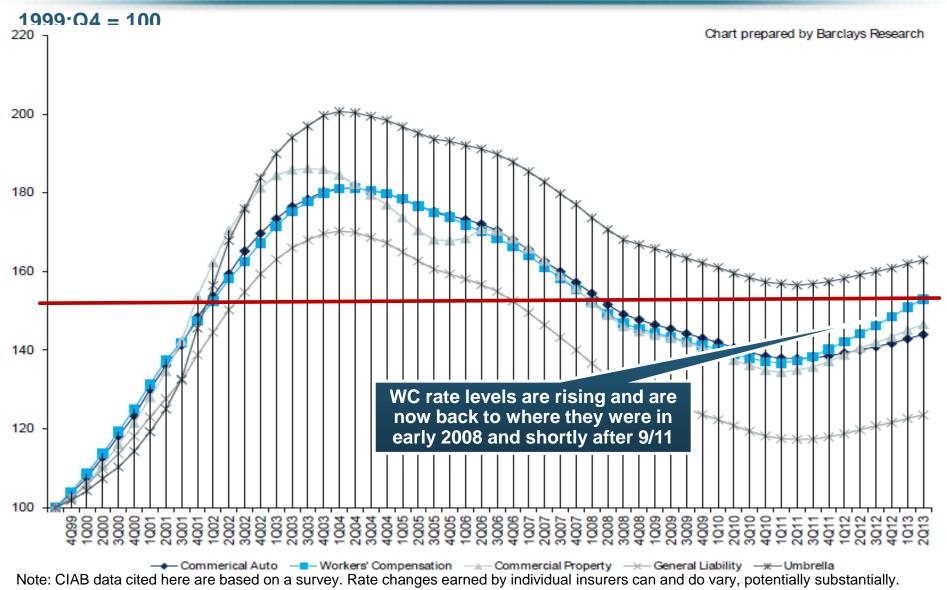
Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

### Cumulative Qtrly. Commercial Rate Changes, **HINSURANCE** by Account Size: 1999:Q4 to 2013:Q2



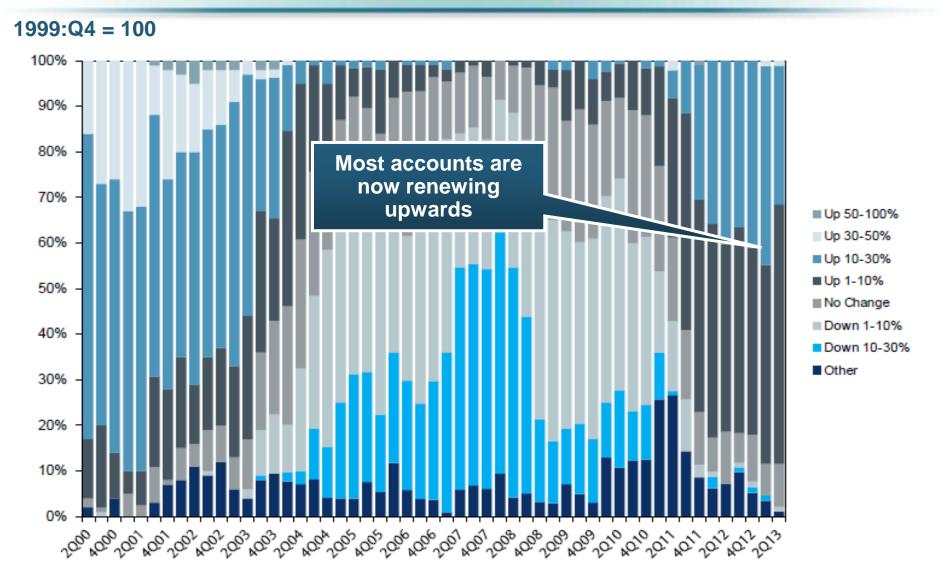
Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

### Cumulative Qtrly. Commercial Rate Changes, **The Insurance** by Line: 1999:Q4 to 2013:Q2



Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

## Workers Comp. Quarterly Rate Changes, by Line: 2000:Q1 to 2013:Q2

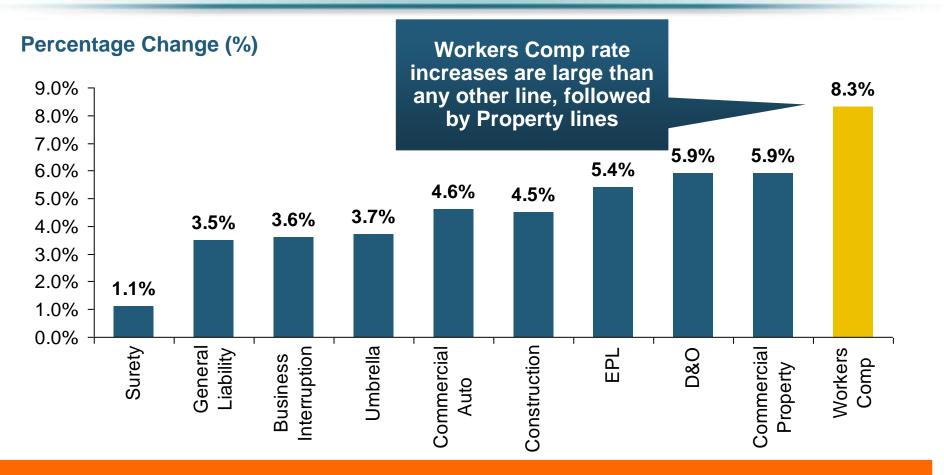


Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially. Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

INSURANCE

# Change in Commercial Rate Renewals, by Line: 2013:Q2

#### INSURANCE INFORMATION INSTITUTE

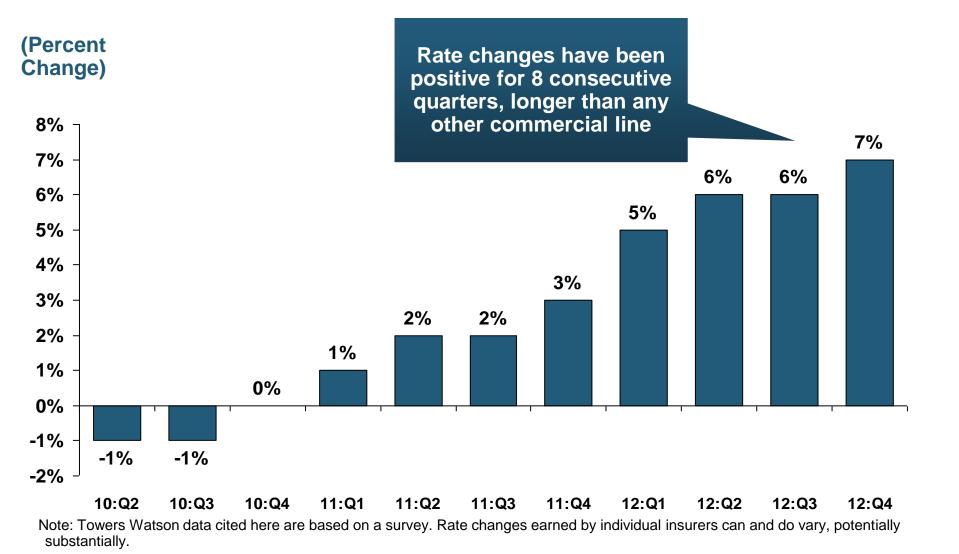


Major Commercial Lines Renewed Uniformly Upward in Q2:2013 for the 8th Consecutive Quarter; Property Lines & Workers Comp Leading the Way; Cat Losses and Low Interest Rates Provide Momentum Going Forward

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.

### CLIPS: Change in Written Price Level: All Lines, 2010:Q2 – 2012:Q4

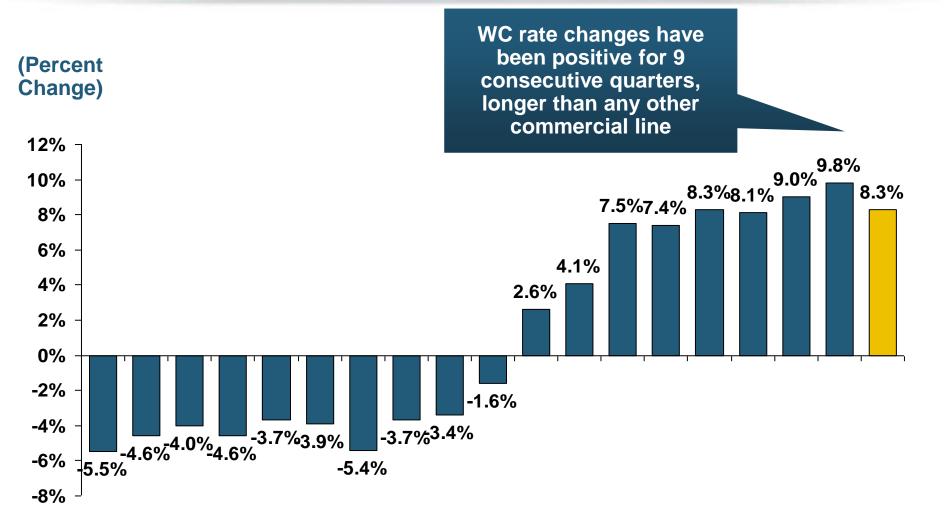




Source: Towers Watson; Information Institute.

## Workers Comp Rate Changes, 2008:Q4 – 2013:Q2

#### INSURANCE INFORMATION INSTITUTE



#### 08:Q409:Q109:Q209:Q309:Q410:Q110:Q210:Q310:Q411:Q111:Q211:Q311:Q412:Q112:Q212:Q312:Q413:Q113:Q2

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; Information Institute.

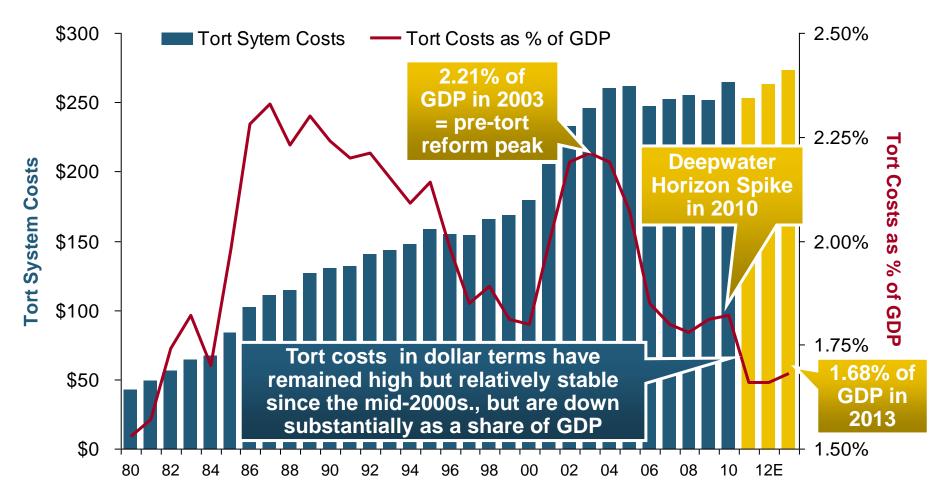


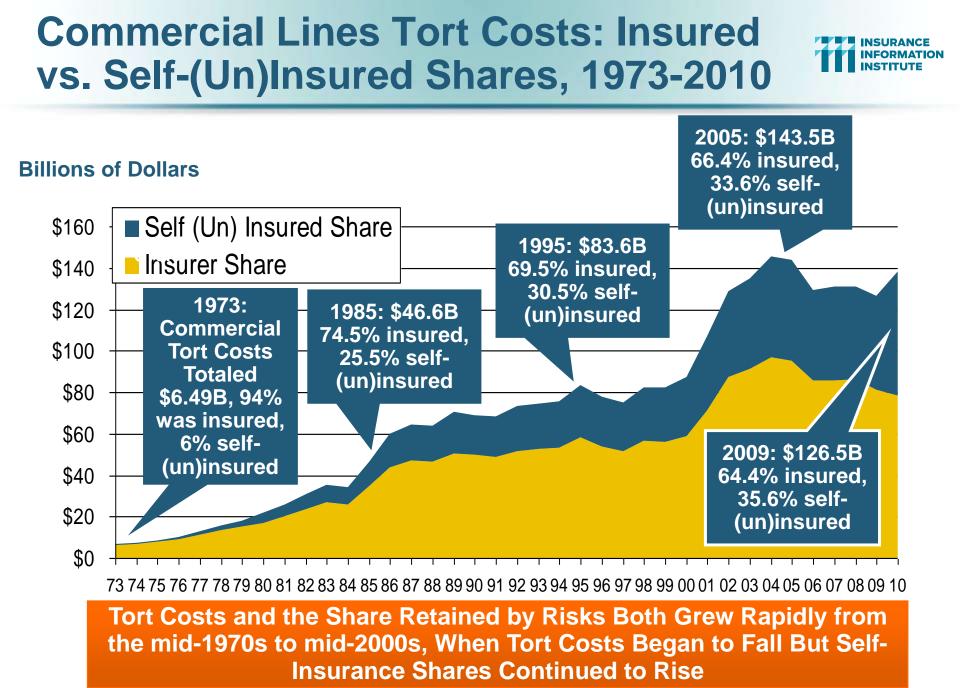
## Shifting Legal Liability & Tort Environment

## Is the Tort Pendulum Swinging Against Insurers?

## Over the Last Three Decades, Total Tort Costs as a % of GDP Appear Somewhat Cyclical, 1980-2013E



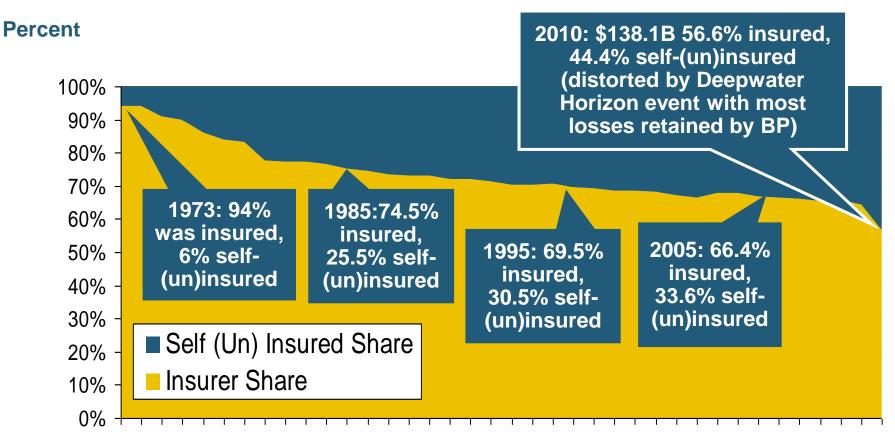




Sources: Towers Watson, 2011 Update on US Tort Cost Trends, III Calculations based on data from Appendix 4.

# Commercial Lines Tort Costs: Insured vs. Self-(Un)Insured Shares, 1973-2010





73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10

The Share of Tort Costs Retained by Risks Has Been Steadily Increasing for Nearly 40 Years. This Trend Contributes Has Left Insurers With Less Control Over Pricing.

Sources: Towers Watson, 2011 Update on US Tort Cost Trends, III Calculations based on data from Appendix 4.

### Business Leaders Ranking of Liability Systems in 2012



**Worst States Best States** New in 2012 41. Florida Delaware **Newly Notorious** Wyoming Minnesota 42. Oklahoma Nebraska Kansas Oklahoma Idaho 43. Alabama Wyoming New Mexico 44. Minnesota **Rising Above Drop-offs** 45. Montana Kansas Indiana Arkansas 46. Illinois Idaho Colorado California 47. Virginia **Massachusetts** South Dakota 48. Mississippi North Dakota 49. Louisiana Utah

50.

West Virginia

#### **10.** Iowa

1.

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Source: US Chamber of Commerce 2012 State Liability Systems Ranking Study; Insurance Info. Institute.

# The Nation's Judicial Hellholes: 2012/2013

#### INSURANCE INFORMATION INSTITUTE





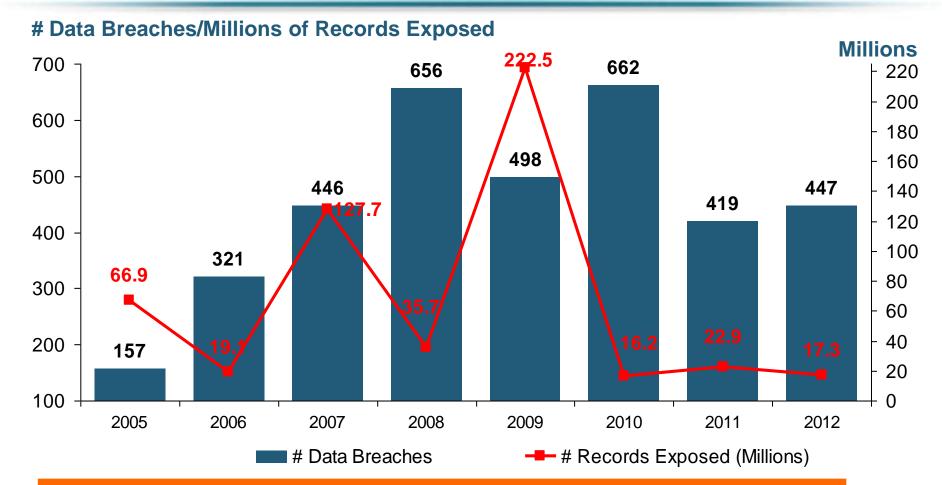
## **CYBER RISK**

## Cyber Risk is a Rapidly Emerging Exposure for Businesses Large and Small in Every Industry

**NEW III** White Paper:

http://www.iii.org/assets/docs/pdf/paper\_CyberRisk\_2013.pdf

# Data Breaches 2005-2013, By Number of Breaches and Records Exposed



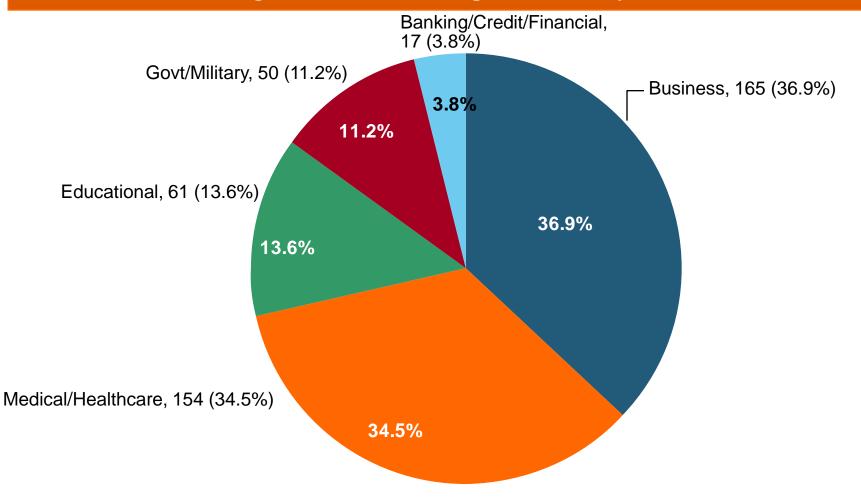
The total number of data breaches and number of records exposed fluctuates from year to year and over time.

\* 2013 figures as of March 19, 2013. Source: Identity Theft Resource Center

## 2012 Data Breaches By Business Category, By Number of Breaches



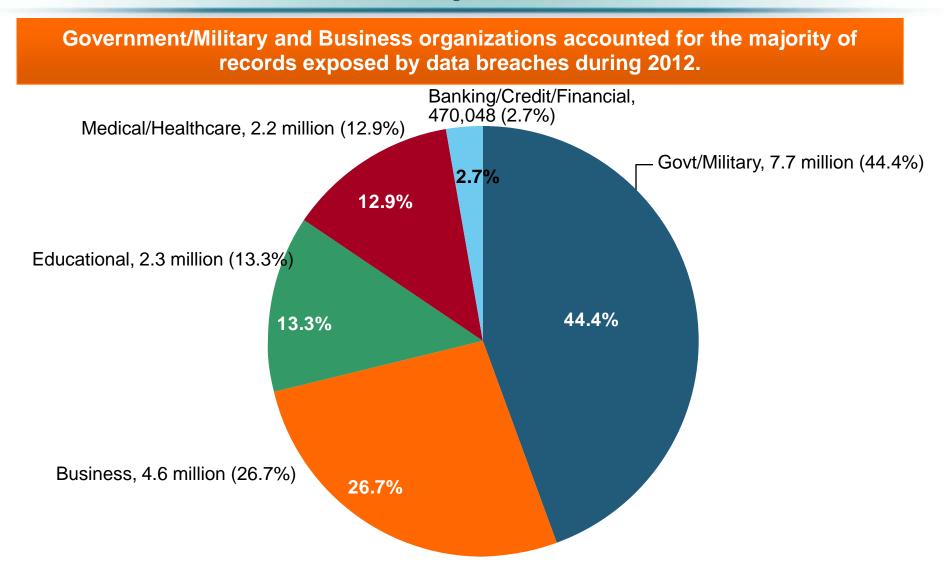
The majority of the 447 data breaches in 2012 affected business and medical/healthcare organizations, according to the Identity Theft Resource Center.



Source: Identity Theft Resource Center, http://www.idtheftcenter.org/ITRC%20Breach%20Report%202012.pdf.

### 2012 Data Breaches By Category, By Number of Records Exposed

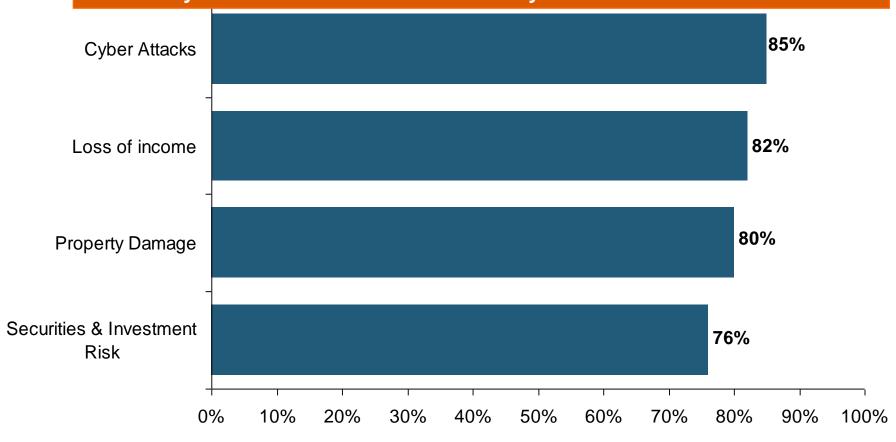




Source: Identity Theft Resource Center, http://www.idtheftcenter.org/ITRC%20Breach%20Report%202012.pdf.

### AIG Survey: Cyber Attacks Top Concern Among Execs

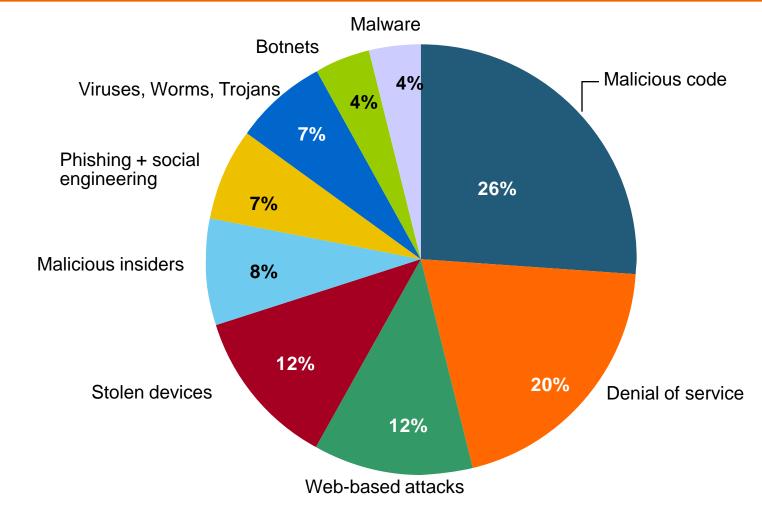
While companies are focused on managing a variety of business risks, cyber attacks are a top concern. Some 85% of 258 executives surveyed said they were very or somewhat concerned about cyber attacks on their businesses.



Source: Penn Schoen Berland on behalf of American International Group.

# The Most Costly Cyber Crimes, Fiscal Year 2012

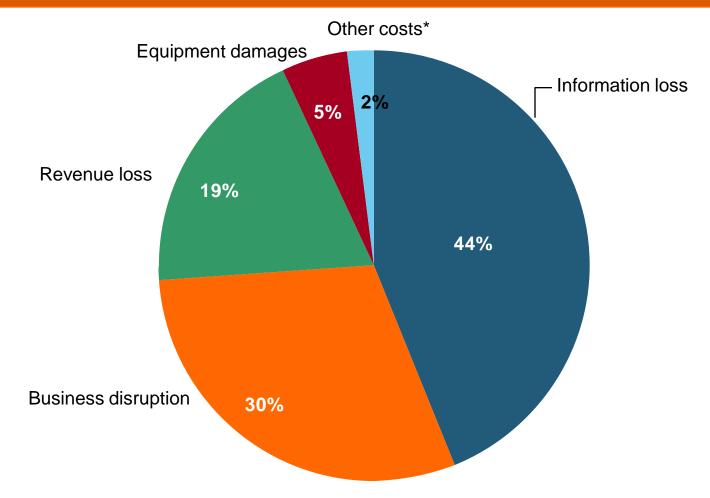
Malicious code, denial of service and web-based attacks account for more than 58 percent of the total annualized cost of cyber crime experienced by 56 companies.



Source: 2012 Cost of Cyber Crime: United States, Ponemon Institute.

# External Cyber Crime Costs: Fiscal Year 2012

Information loss (44%) and business disruption or lost productivity (30%) account for the majority of external costs due to cyber crime.



\* Other costs include direct and indirect costs that could not be allocated to a main external cost category Source: 2012 Cost of Cyber Crime: United States, Ponemon Institute.

## High Profile Data Breaches, 2012-2013



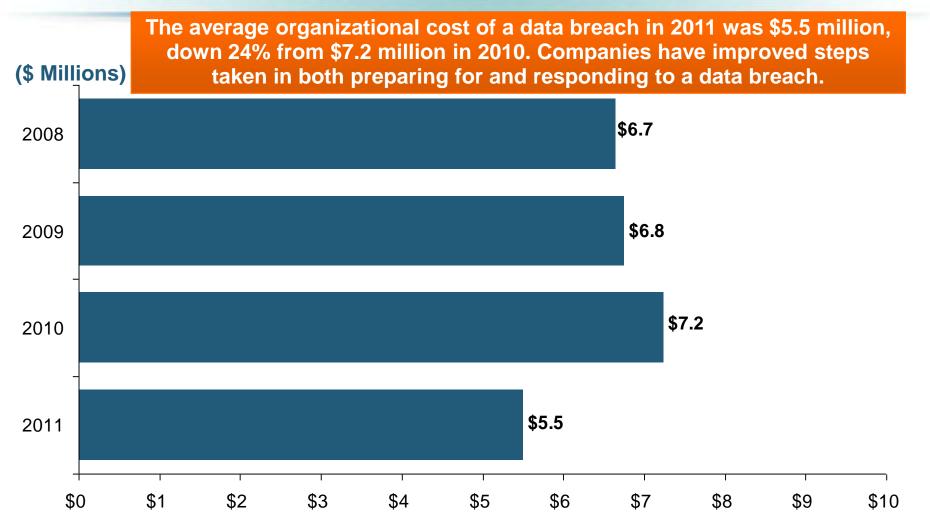
Date	Company	Description of Breach
Mar 2013*	South Korean banks, media cos	Cyber attack causes computers to crash at South Korean banks and media companies, paralyzing bank machines across the country. No immediate reports of records compromised.
July 2012	Yahoo	Security breach at Yahoo in which some 450,000 passwords lifted and posted to the Internet.
July 2012	eHarmony	Online dating site eHarmony confirms security breach in which some 1.5 million user names and passwords compromised.
July 2012	LinkedIn	Social networking site LinkedIn reportedly targeted in hacker attack that saw 6.5 million hashed passwords posted to the Internet.
April 2012	Utah Dept of Technology Services	Utah Department of Technology notifies of a March 30 breach of a server containing personal data including social security numbers for about 780,000 Medicaid patient claims. Breach traced to Eastern Europe hackers.
Mar 2012	Global Payments	Credit card processor Global Payments confirms hacker attack has compromised the payment card numbers of around 1.5 million cardholders.
Mar 2012	CA Dept of Child Support Services	Officials announce that four computer storage devices containing personal information for about 800,000 adults and children in California's child support system were lost by IBM and Iron Mountain Inc.
Jan 2012	Zappos	Online shoe retailer Zappos announces that information, such as names, addresses and passwords on as many as 24 million customers illegally accessed.
Jan 2012	NY State Electric + Gas Co	Security breach at NYSEG that allowed unauthorized access to NYSEG customer data, containing social security numbers, dates of birth and bank account numbers, exposing 1.8 million records.

\*March 2013 attack is not part of ITRC research.

Sources: Identity Theft Resource Center, <u>http://www.idtheftcenter.org/ITRC%20Breach%20Report%202012.pdf;</u> Insurance Information Institute (I.I.I.) research.

## Average Organizational Cost of a Data Breach, 2008-2011\* (\$ Millions)



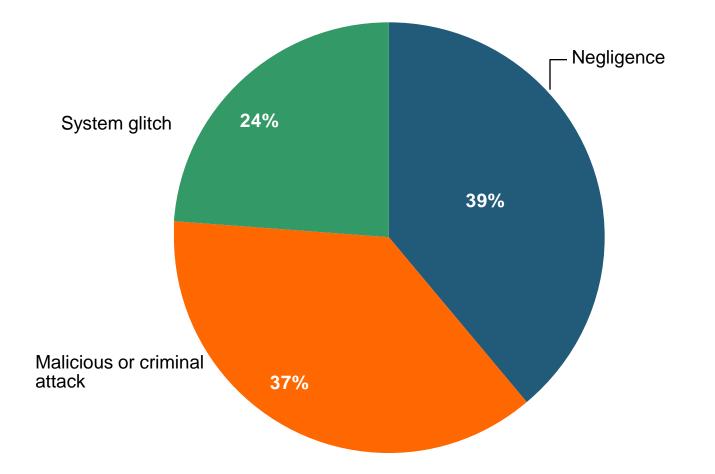


\*Findings of this benchmark study pertain to the actual data breach experiences of 49 U.S. companies from 14 different industry sectors, all of which participated in the 2011 study. Total breach costs include: lost business resulting from diminished trust or confidence of customers ;costs related to detection, escalation, and notification of the breach; and ex-post response activities, such as credit report monitoring. Source: 2011 Annual Study: U.S. Cost of a Data Breach, the Ponemon Institute.

### **Main Causes of Data Breach**



Negligent employees and malicious attacks are most often the cause of the data breach. Some 39 percent of incidents involve a negligent employee or contractor, while 37 percent concern a malicious or criminal attack.

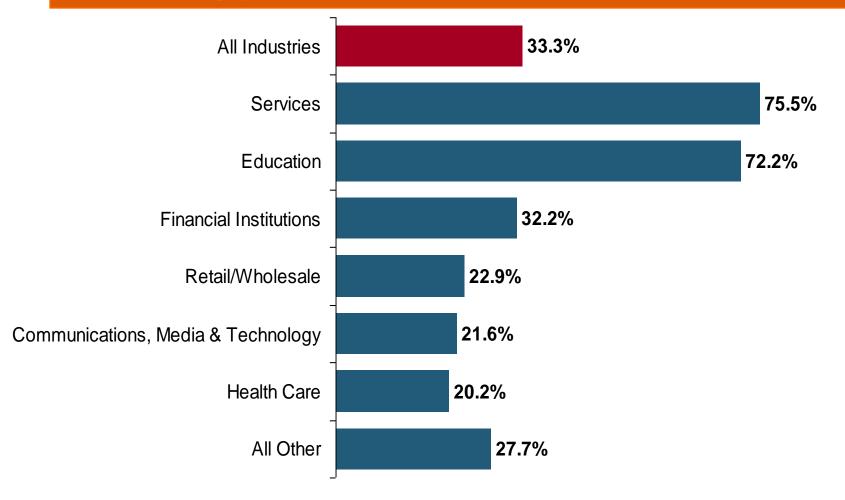


Source: 2011 Cost of Data Breach Study: United States, Ponemon Institute, March 2012

### Marsh: Increase in Purchase of Cyber Insurance Among U.S. Companies, 2012



Interest in cyber insurance continues to climb. The number of companies purchasing cyber insurance increased 33 percent from 2011 to 2012.



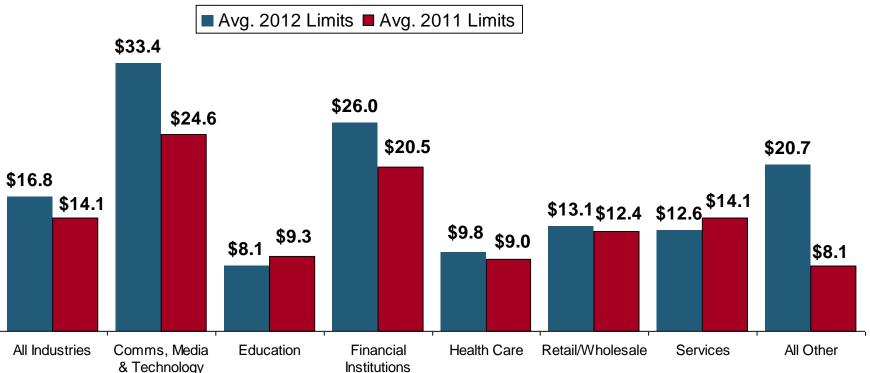
Source: Marsh Global Analytics, Marsh Risk Management Research Briefing, March 2013

#### Marsh: Total Limits Purchased, By Industry – Cyber Liability, All Revenue Size



Cyber insurance limits purchased in 2012 averaged \$16.8 million across all industries, an increase of nearly 20% over 2011.

#### (\$ Millions)

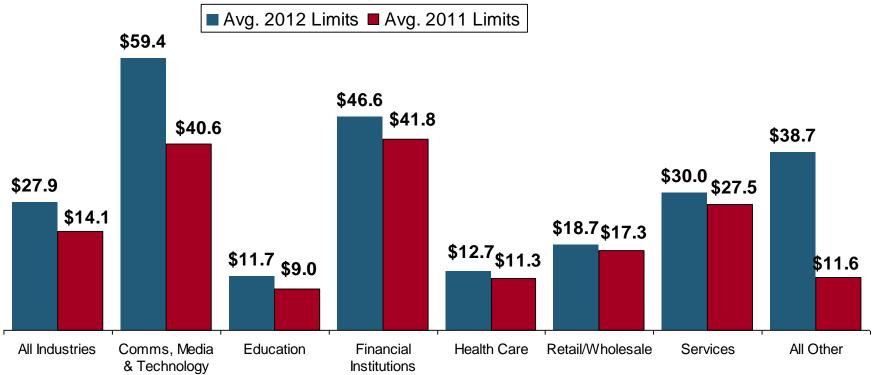


Source: Marsh Global Analytics, Marsh Risk Management Research Briefing, March 2013

### Marsh: Total Limits Purchased, By Industry – Cyber Liability, Revenue \$1 Billion+

Among larger companies, average cyber insurance limits purchased in 2012 increased nearly 30% over 2011.

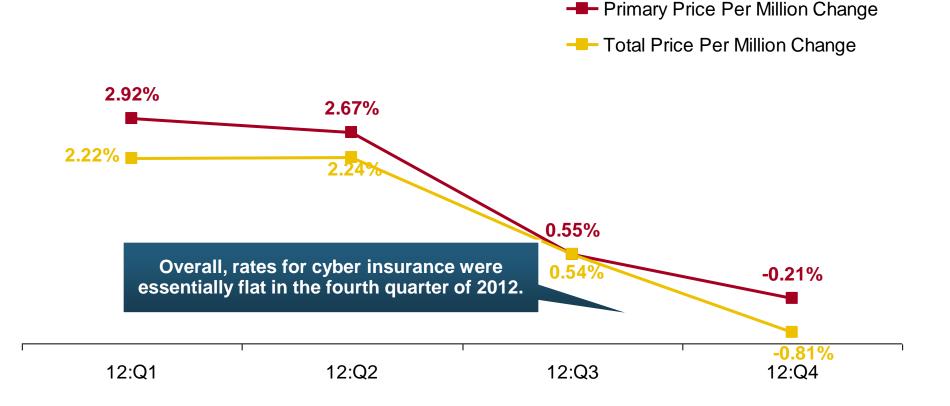
#### (\$ Millions)



Source: Marsh Global Analytics, Marsh Risk Management Research Briefing, March 2013

NSURANCE

# Cyber Liability: Historical Rate (price per million) Changes



Source: Marsh Global Analytics, Marsh Risk Management Research Briefing, March 2013



### **Insurance Information Institute Online:**

# www.iii.org

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