

P/C Insurance in the Age of Mega-Catastrophes Trends, Challenges & Opportunities

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Presentation Outline



- P/C Insurance Industry Overview & Outlook
 - Measuring the impact of catastrophe losses
- Catastrophe Loss Overview
 - US and global trends
- Public Policy Issues
 - Federal disaster response
 - Flood insurance
 - Terrorism
 - Cyber Risk: The Cat of the Future?
- Reinsurance Market Update
 - The flood of alternative capital is transforming this sector
- Property Exposure Overview & Residual Markets
- The Importance of Financial Strength



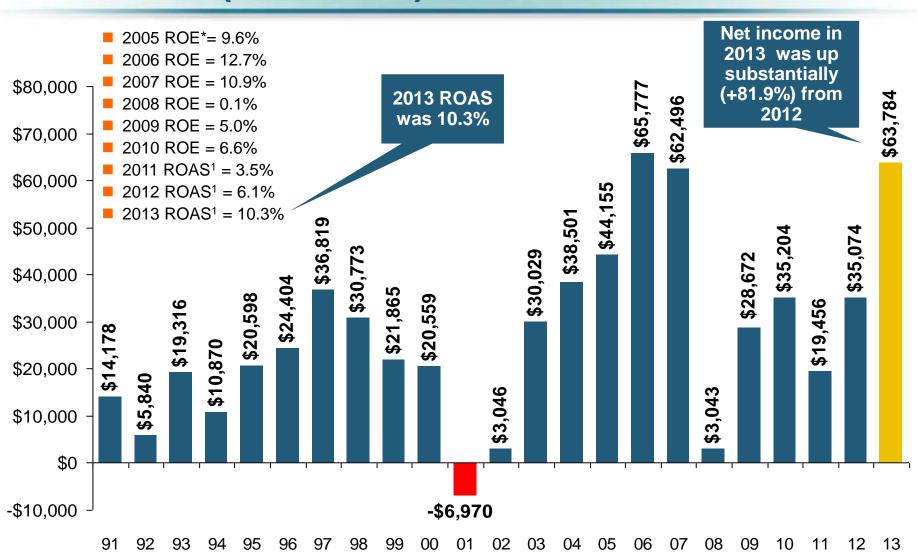
P/C Insurance Industry Financial Overview

2013: Best Year in the Post-Crisis Era

Performance Improved with Lower CATs, Strong Markets

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



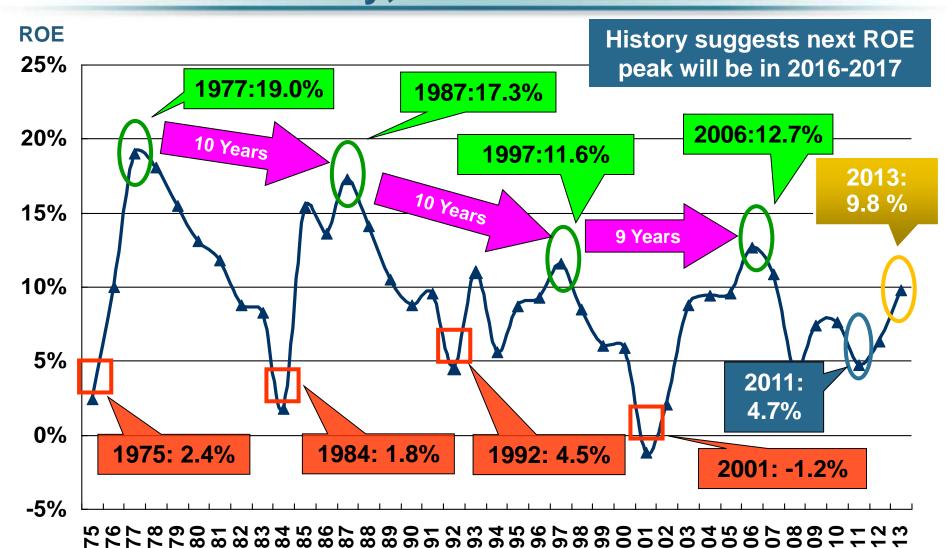


•ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 9.8% ROAS in 2013, 6.3% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009.

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

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



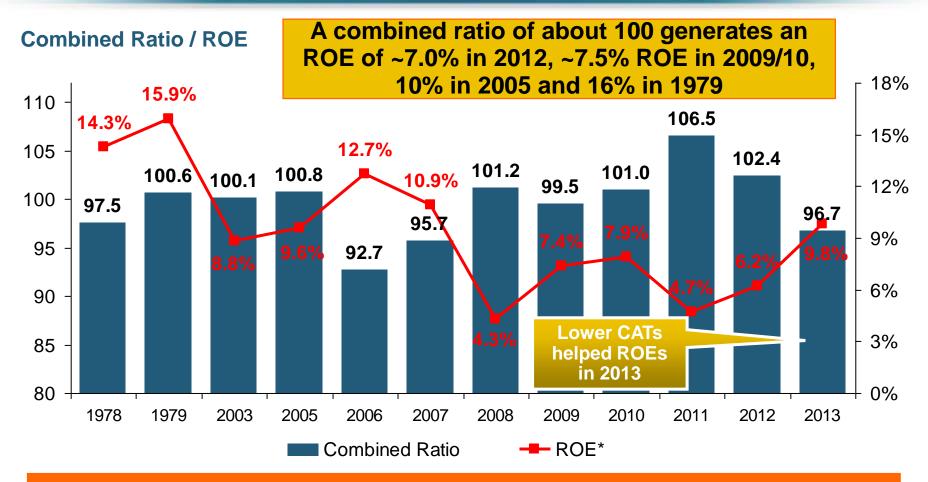


*Profitability = P/C insurer ROEs. 2011-13 figures are estimates based on ROAS data. Note: Data for 2008-2013 exclude mortgage and financial guaranty insurers.

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

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





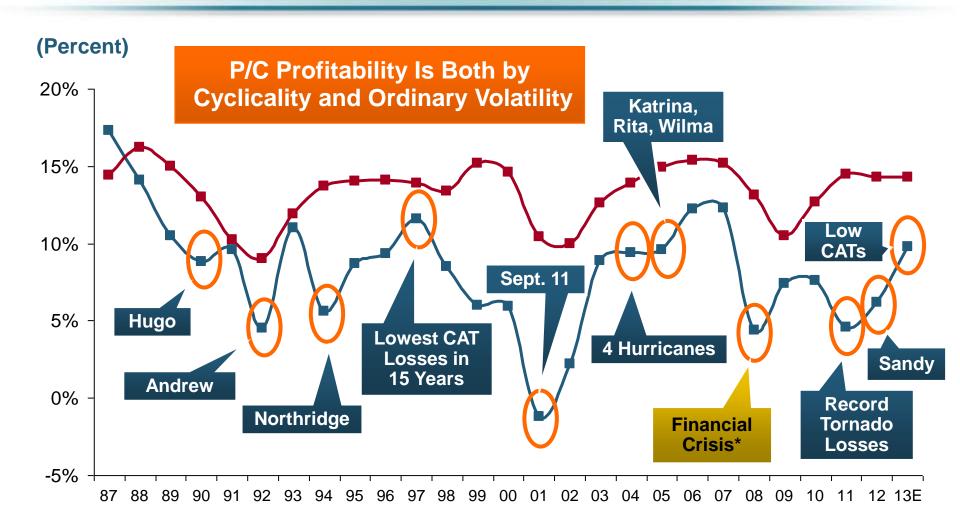
Combined Ratios Must Be Lower in Today's Depressed Investment Environment to Generate Risk Appropriate ROEs

^{* 2008 -2013} figures are return on average surplus and exclude mortgage and financial guaranty insurers. 2013 combined ratio including M&FG insurers is 96.1; 2012 =103.2, 2011 = 108.1, ROAS = 3.5%.

Source: Insurance Information Institute from A.M. Best and ISO Verisk Analytics data.

ROE: Property/Casualty Insurance vs. Fortune 500, 1987–2013E*

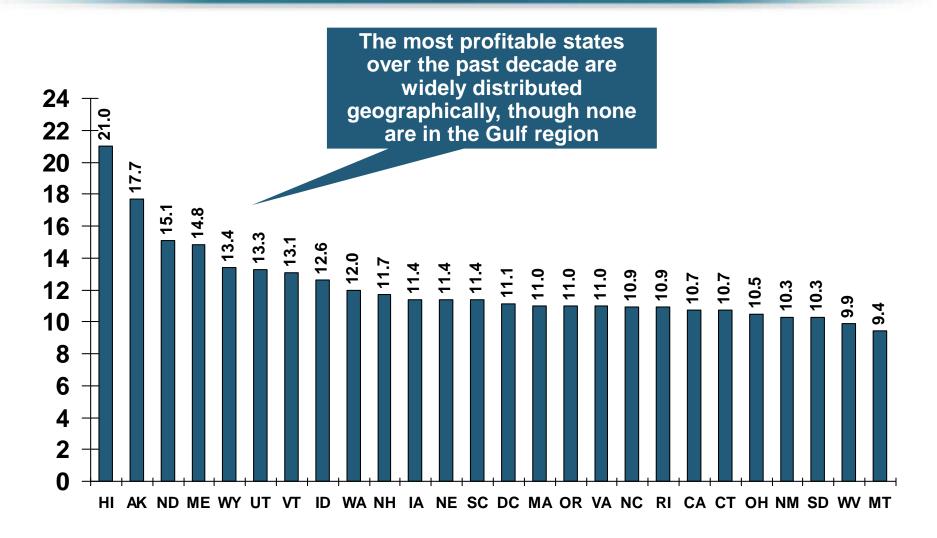




^{*} Excludes Mortgage & Financial Guarantee in 2008 – 2013. 2013 Fortune 500 figure is I.I.I. estimate. Sources: ISO, *Fortune*; Insurance Information Institute.

RNW All Lines by State, 2003-2012 Average: Highest 25 States

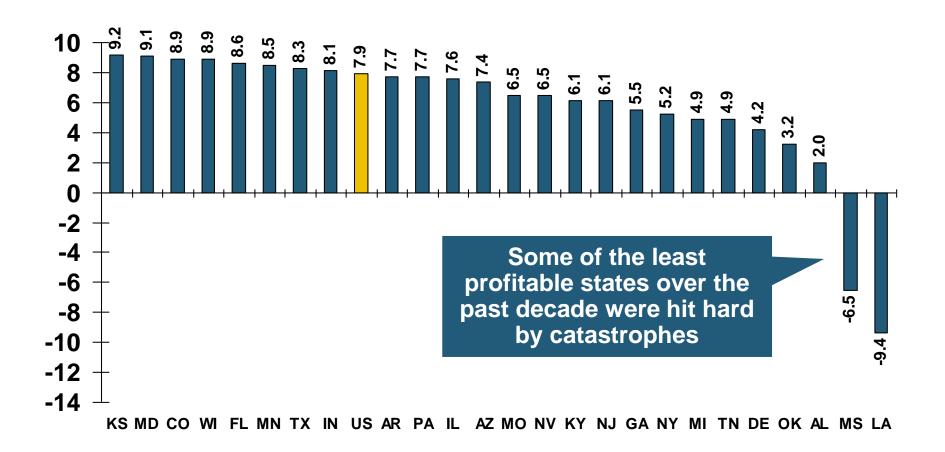




Source: NAIC.

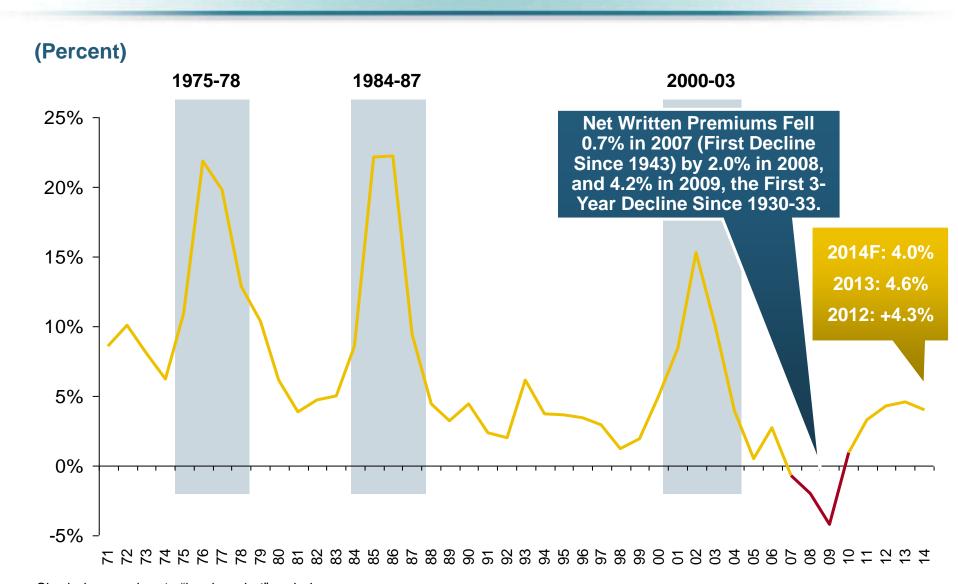
RNW All Lines by State, 2003-2012 Average: Lowest 25 States





Net Premium Growth: Annual Change, 1971—2014F

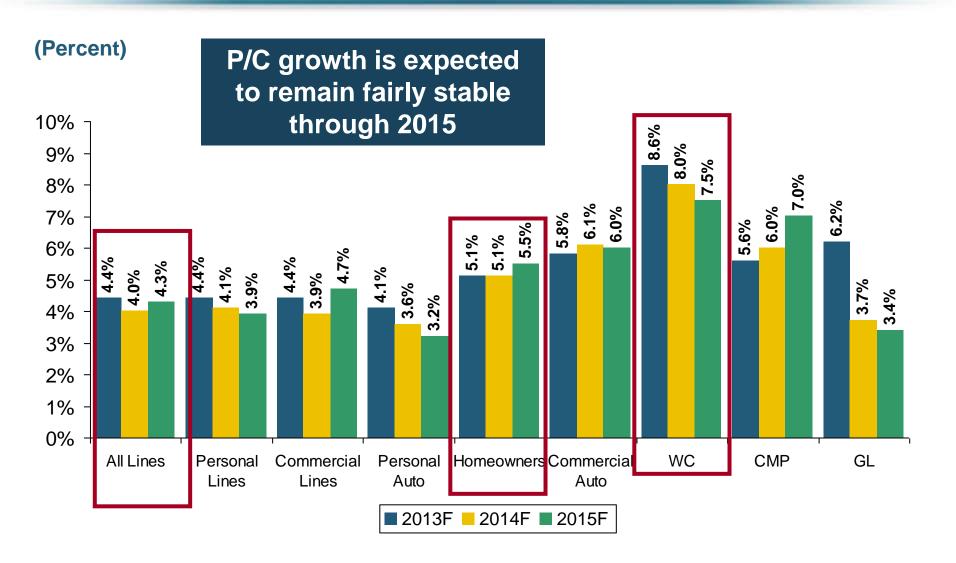




Shaded areas denote "hard market" periods Sources: A.M. Best (historical and forecast), ISO, Insurance Information Institute.

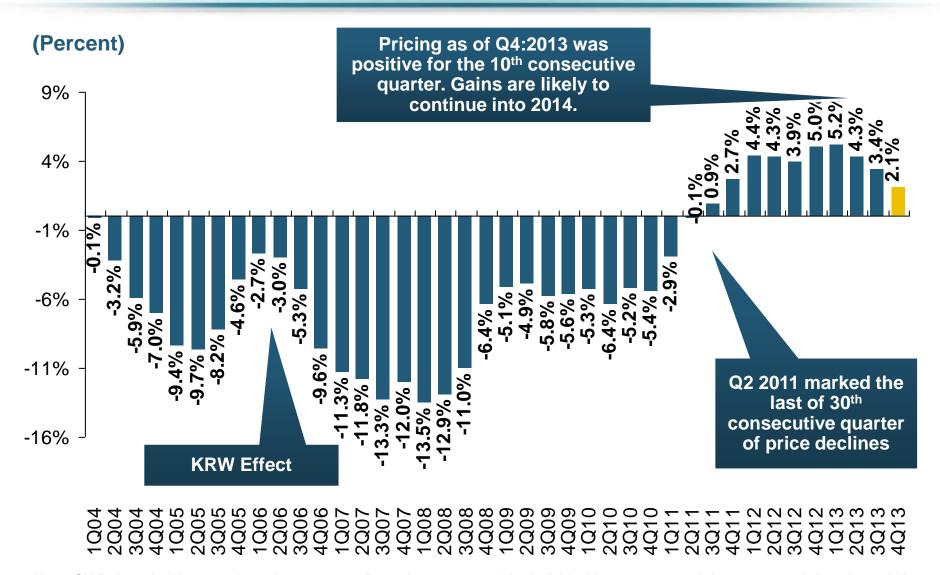
Growth in Direct Written Premium by Line, 2013-2015F*





Average Commercial Rate Change, All Lines, (1Q:2004–4Q:2013)





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

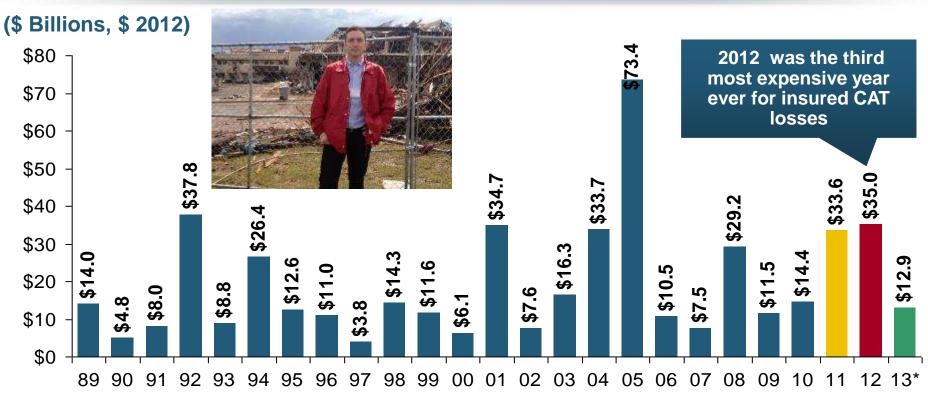


U.S. Insured Catastrophe Loss Update

2013 Was a Welcome Respite from the High Catastrophe Losses in Recent Years 2014 Winter Storm Losses Manageable

U.S. Insured Catastrophe Losses





2012 Was the 3rd Highest Year on Record for Insured Losses in U.S. History on an Inflation-Adj. Basis. 2011 Losses Were the 6th Highest. YTD 2013 Running Well Below 2011 and 2012 YTD Totals.

Record tornado losses caused 2011 CAT losses to surge

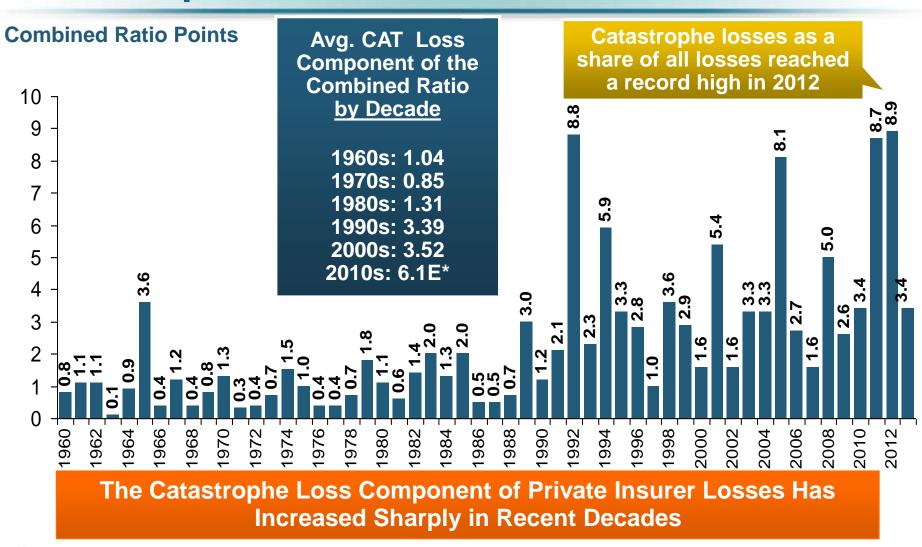
Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)

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

^{*}Through 12/31/13.

Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2013*





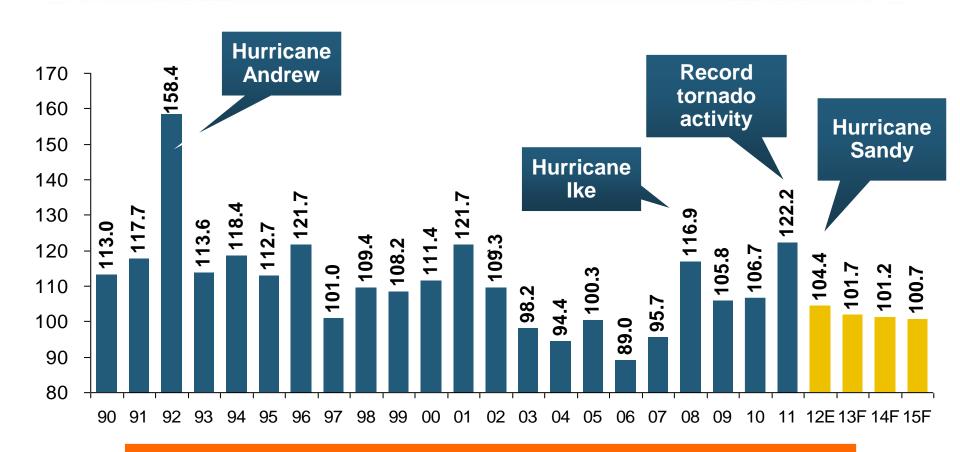
^{*2010}s represent 2010-2013.

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



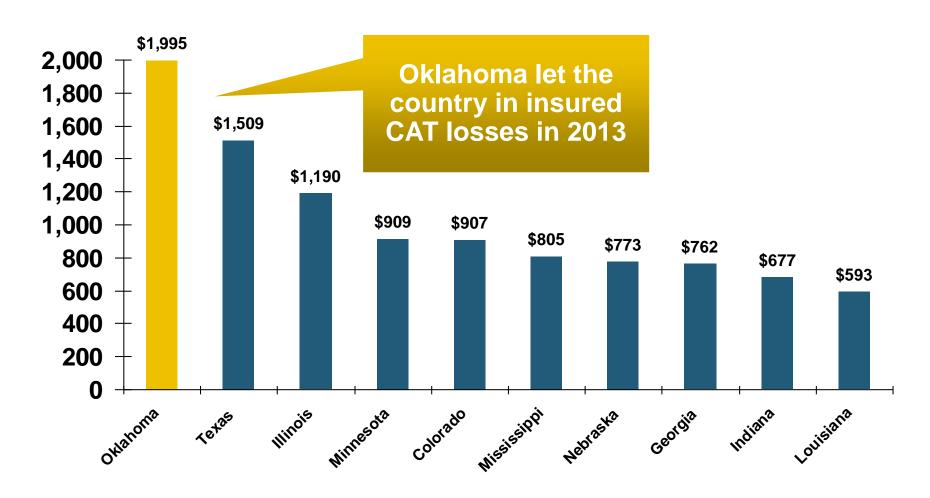


Homeowners Performance in 2011/12 Impacted by Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity

Top 10 States for Insured Catastrophe Losses, 2013



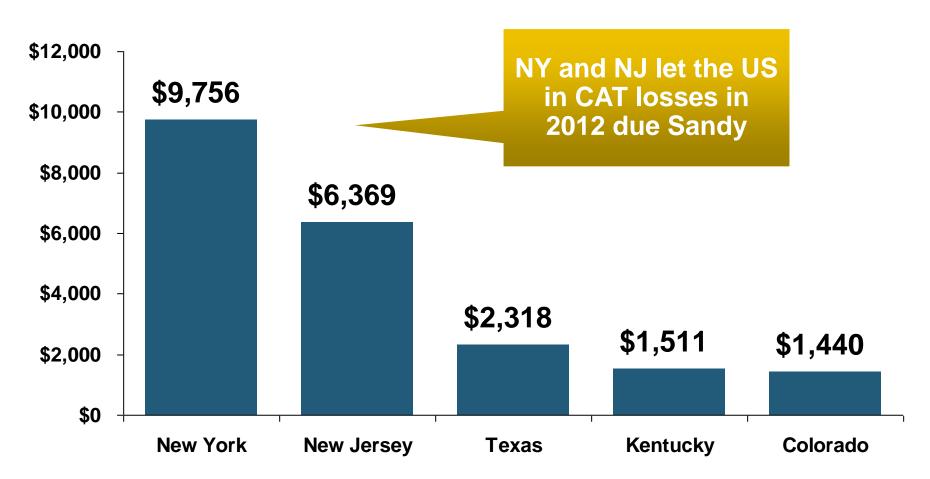
\$ Millions



Top 5 States by Insured Catastrophe Losses in 2012*







^{*}Includes catastrophe losses of at least \$25 million. Sources: PCS unit of ISO; Insurance Information Institute.

Insurers Making a Difference in Impacted Communities





Presentation of a check to Moore, OK, Public School Relief Fund Destroyed home in Tuscaloosa.
Insurers will pay some 165,000 claims totaling \$2 billion in the Tuscaloosa/
Birmingham areas alone.

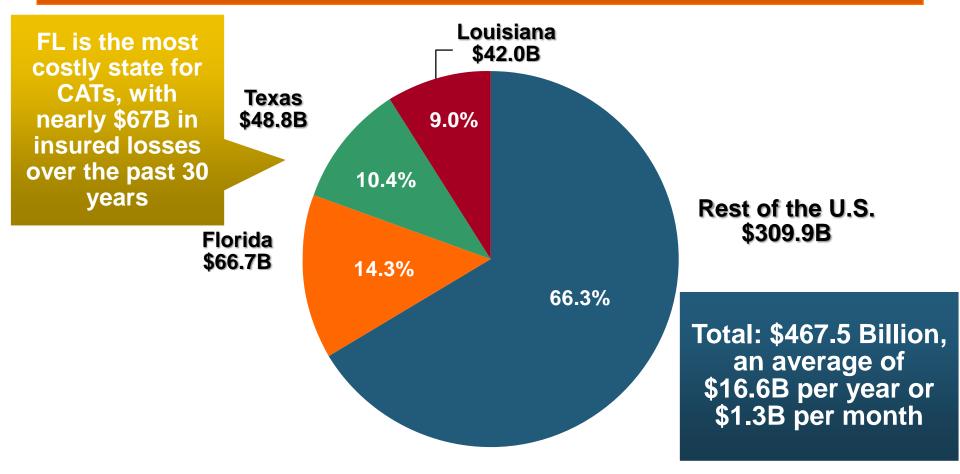


Presentation of a check to Tuscaloosa Mayor Walt Maddox to the Tuscaloosa Storm Recovery Fund

Top States by Inflation-Adjusted Insured Catastrophe Losses, 1983–2012

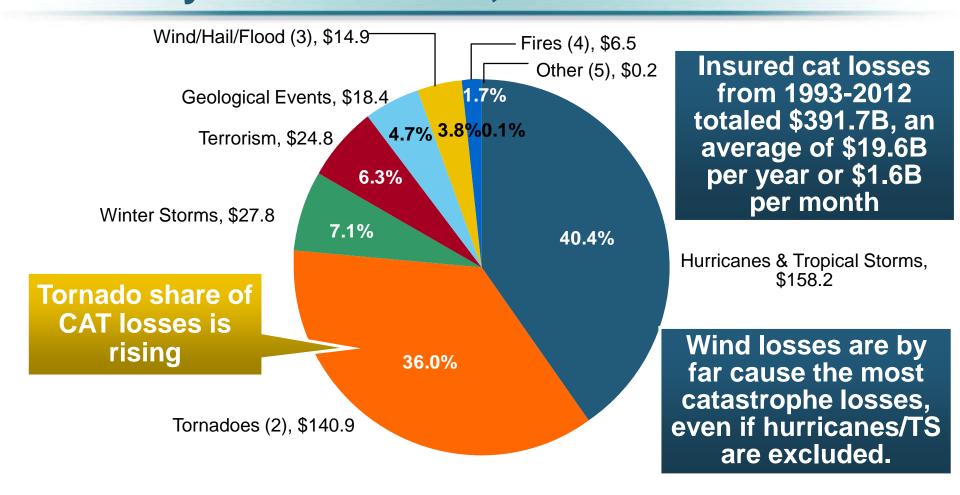


Over the Past 30 Years Florida Has Accounted for the Largest Share of Catastrophe Losses in the U.S., Followed by Texas and Louisiana



Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1993–2012¹





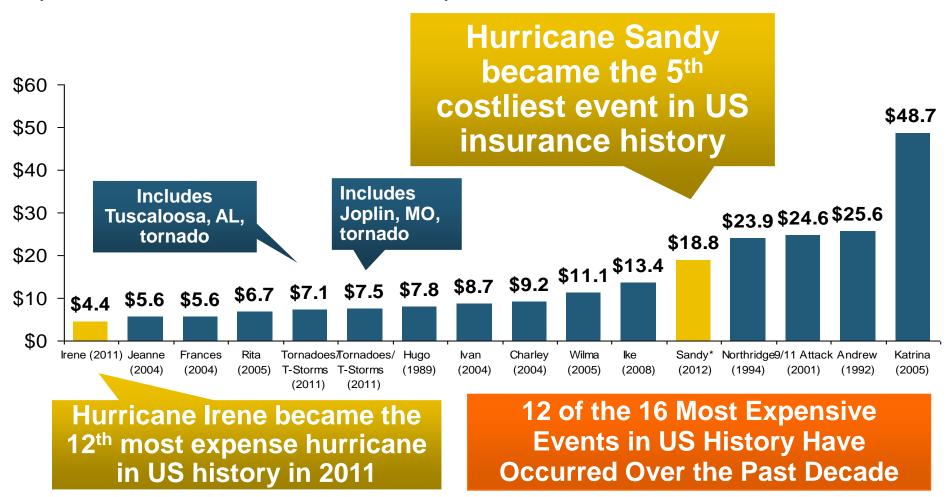
- 1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2012 dollars.
- 2. Excludes snow.
- 3. Does not include NFIP flood losses
- 4. Includes wildland fires
- 5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those covered by workers compensation. Source: ISO's Property Claim Services Unit.

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Top 16 Most Costly Disasters in U.S. History



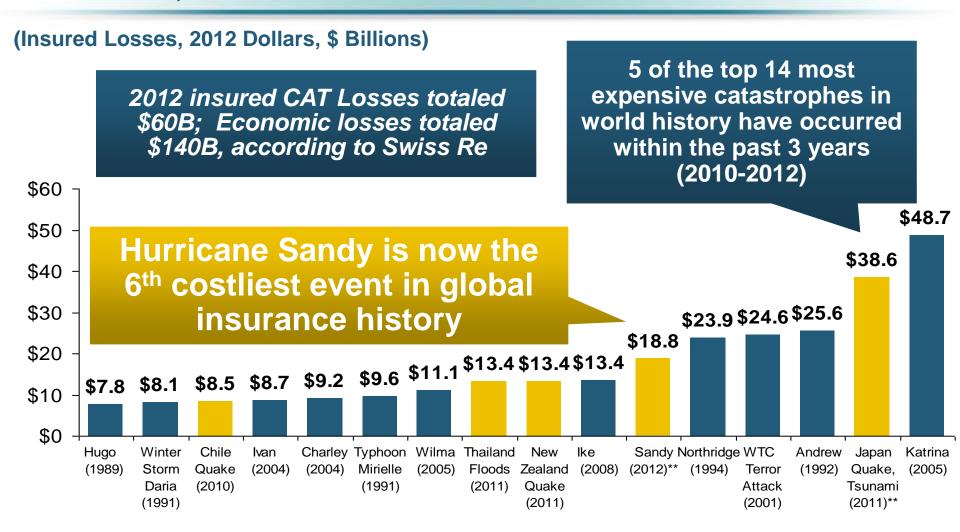
(Insured Losses, 2012 Dollars, \$ Billions)



^{*}PCS estimate as of 4/12/13.

Top 16 Most Costly World Insurance Losses, 1970-2013*



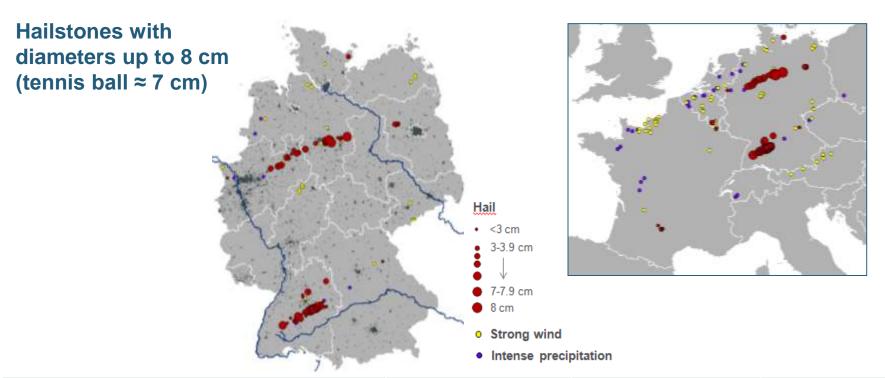


^{*}Figures do not include federally insured flood losses.

^{**}Estimate based on PCS value of \$18.75B as of 4/12/13.
Sources: Munich Re; Swiss Re; Insurance Information Institute research.

Hailstorm on July 27-28 in <u>Germany</u> Was Most Expensive CAT Worldwide in 2013!





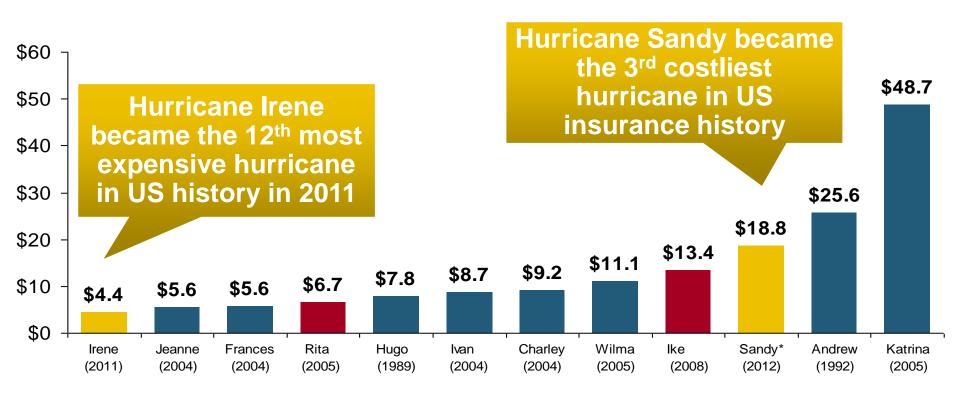
Region	Overall losses	Insured losses	Fatalities
Southwestern and Northern Germany	US\$ 4.8bn	US\$ 3.7bn	0

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)



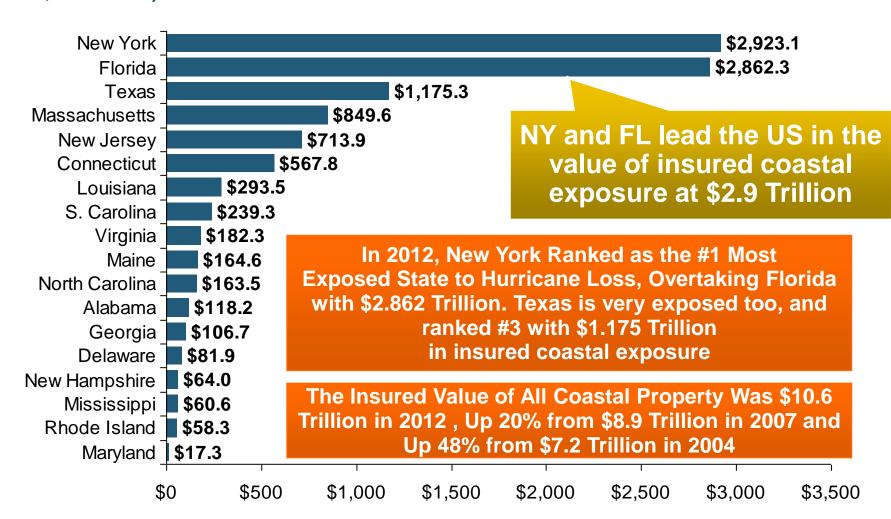
*PCS estimate as of 4/12/13.

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

Total Value of Insured Coastal Exposure in 2012



(2012, \$ Billions)

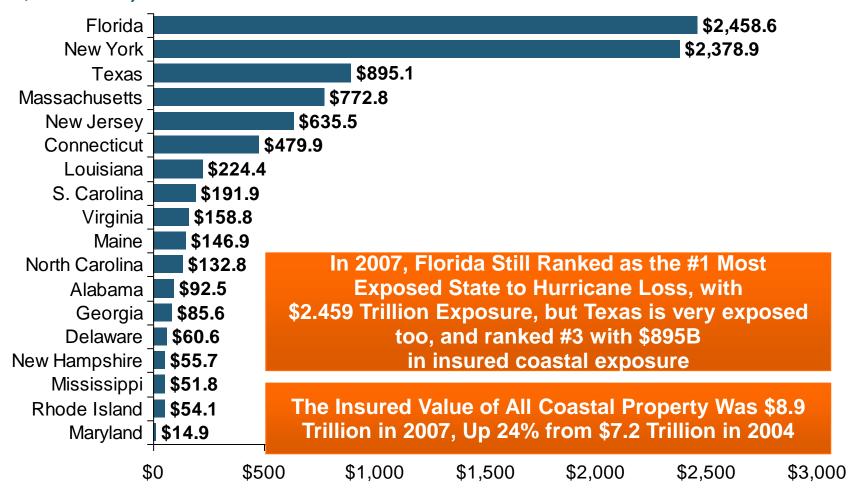


Source: AIR Worldwide

Total Value of Insured Coastal Exposure in 2007



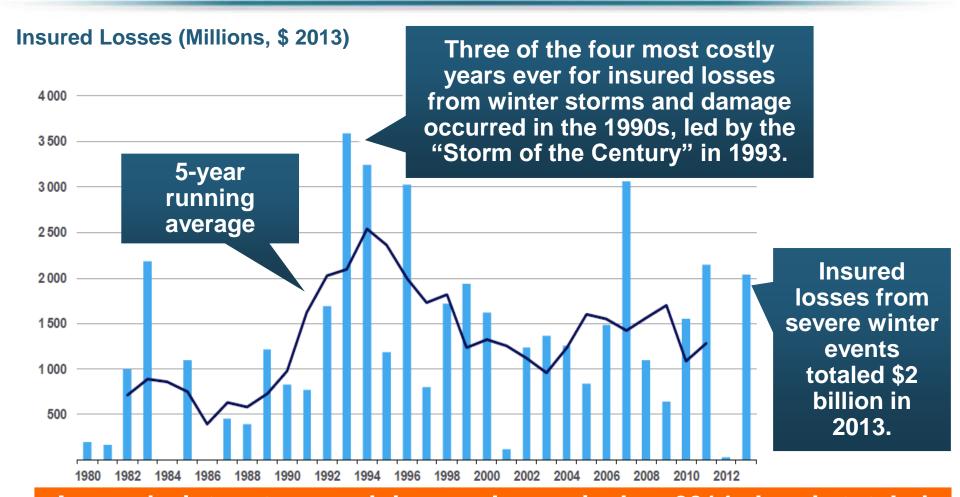
(2007, \$ Billions)



Source: AIR Worldwide

Winter Storm and Winter Damage Events in the US and Canada, 1980-2013 (2013 US\$)





\$1.5 billion. Continued severe weather since then makes it likely that 2014 will become one of the top 5 costliest winters since 1980.

Top 10 Winter Storm and Winter Damage Events in the US and Canada, 1980-2013*



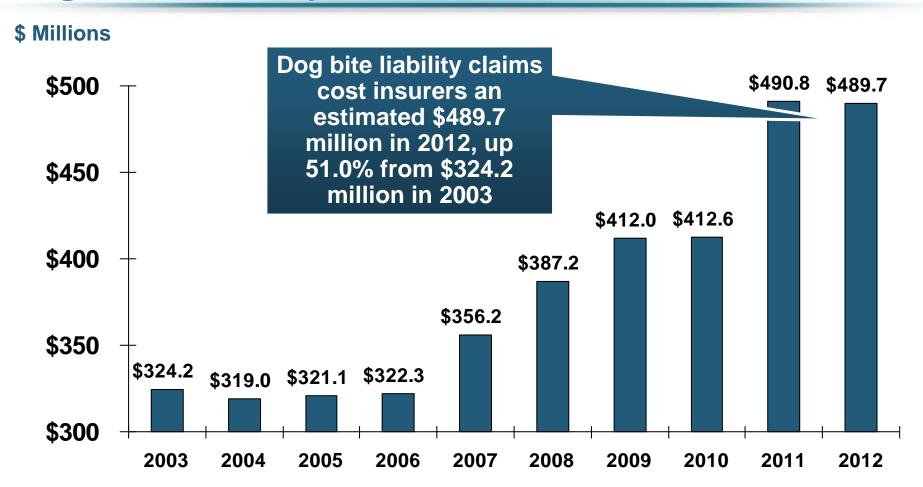
Ranked by Insured Loss, in Millions of \$ 2013*

Period	Area	Economic Loss (in inflation- adjusted 2013 \$US mill)	Insured Loss (in inflation-adjusted 2013 \$US mill)	Fatalities
Mar. 11-14, 1993	CAN, USA	8,061	3,224	270
Dec. 17-30,1983	USA	2,339	2,058	500
Apr. 13-17, 2007	CAN, USA	2,247	1,775	23
Dec. 10-13, 1992	USA	4,981	1,660	19
Jan. 5-12, 1998	CAN, USA	4,145	1,644	45
Feb. 10-12, 1994	USA	4,716	1,258	9
Jan. 17-20, 1994	USA	1,572	1,258	70
Apr. 7-11, 2013	USA	1,600	1,200	N/A
Jan. 1-4, 1999	CAN, USA	1,398	1,084	25
Jan. 31-Feb. 2, 2011	USA	1,346	1,010	36

^{*}Top 10 events in original insured loss dollars were adjusted to and ranked by the Insurance Information Institute to 2013 inflation-adjusted values. Sources: Munich Re NatCatSERVICE; Insurance Information Institute.

Insured Homeowners Losses Due Dog Bite Liability Claims, 2003-2012





The Increased Average Cost per Dog Bite Claim is Pushing Total Dog Bite Liabiity Claim Costs Higher Even as the Number of Claims Remains Relatively Flat

Natural Disaster Losses in the United States, by Type, 2013



As of December 31, 2013	Number of Events	Fatalities	Estimated Overall Losses (US \$m)	Estimated Insured Losses (US \$m)
Severe Thunderstorm	69	110	16,341	10,274
Winter Storm	11	43	2,935	1,895
Flood	19	23	1,929	240
Earthquake & Geophysical	6	1	Minor	Minor
Tropical Cyclone	1	1	Minor	Minor
Wildfire, Heat, & Drought	22	29	620	385
Totals	128	207	21,825	12,794

Significant Natural Catastrophes, 2013

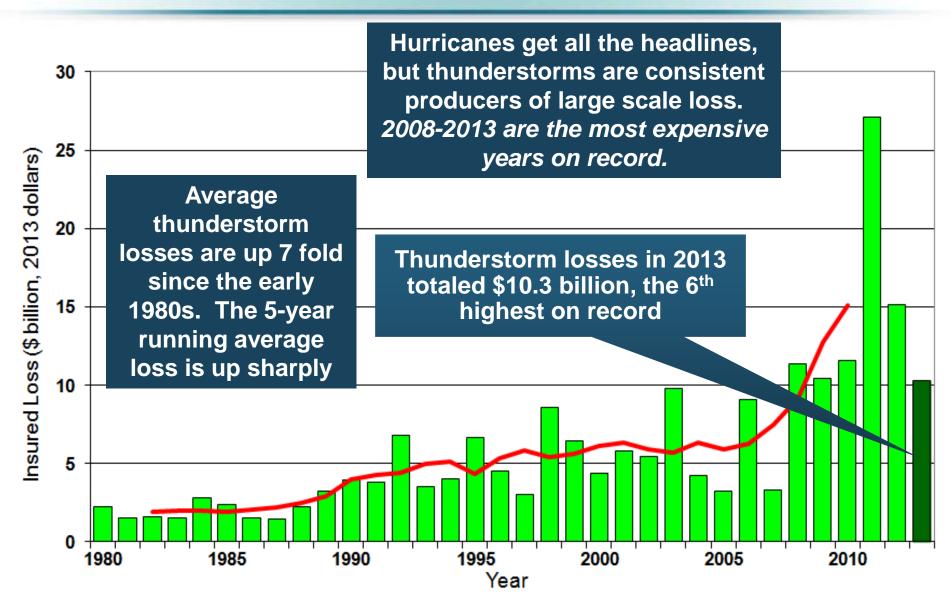


(Events with \$1 billion economic loss and/or 50 fatalities)

Date	Event	Estimated Economic Losses (US \$m)	Estimated Insured Losses (US \$m)
February 24 – 25	Winter Storm	1,300	690
March 18 – 19	Thunderstorms	2,200	1,600
April 7 – 11	Winter Storm	1,600	1,200
April 16 – 18	Thunderstorms	1,100	560
May 18 – 20	Thunderstorms	3,100	1,800
May 28 – 31	Thunderstorms	2,800	1,400
August 6 – 7	Thunderstorms	1,300	740
September 9 – 16	Flooding	1,500	160
November 17 - 18	Thunderstorms	1,300	931

U.S. Thunderstorm Insured Loss Trends, 1980 – 2013

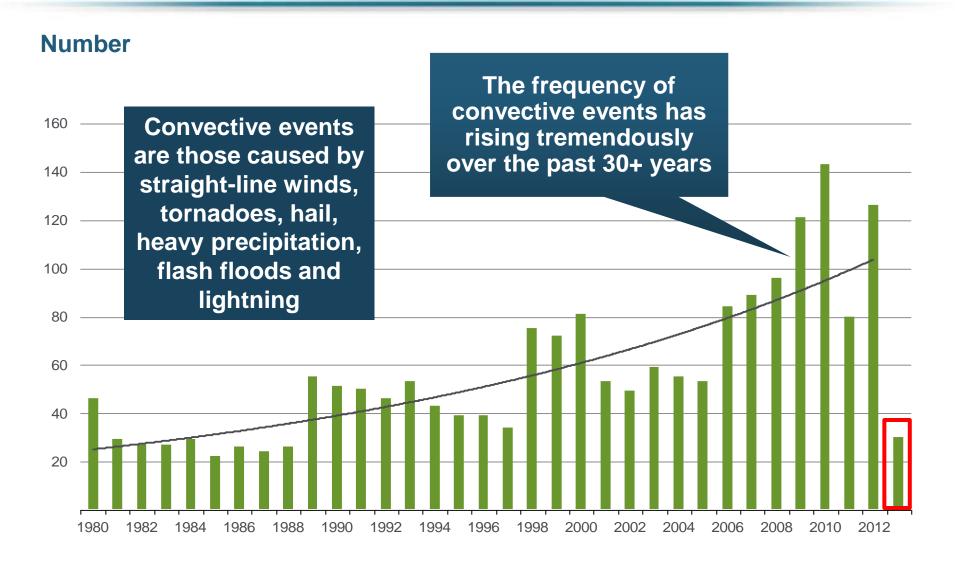




Convective Loss Events in the U.S.



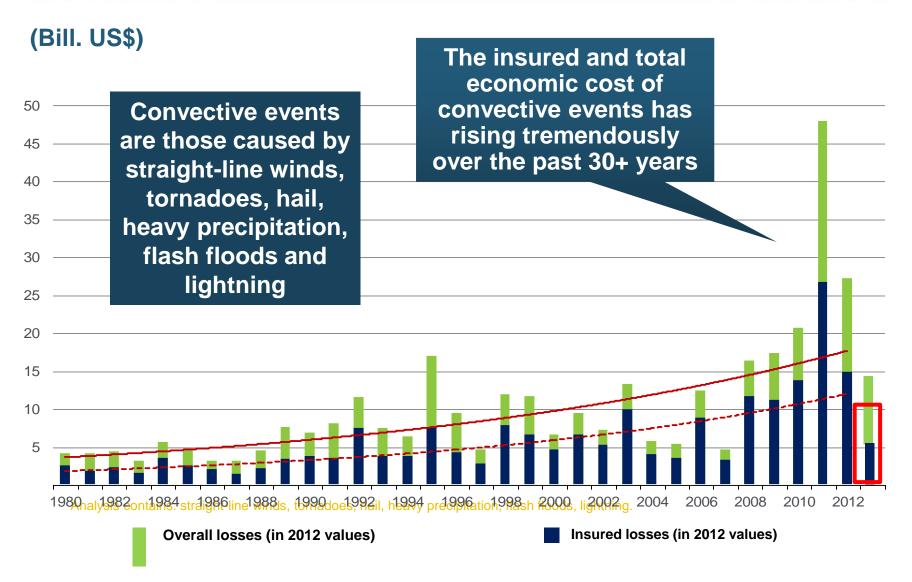
Number of events 1980 – 2012 and First Half 2013



Convective Loss Events in the U.S.



Overall and insured losses 1980 - 2012 and First Half 2013

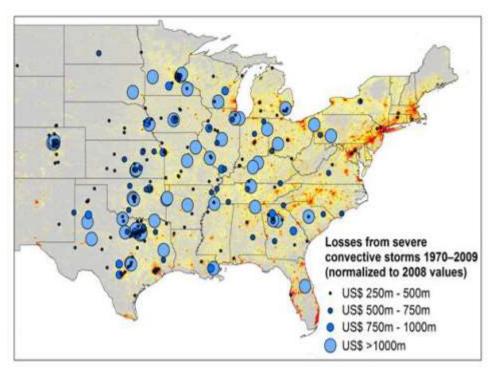


New Research Suggests Increase in Convective Activity Is Costly for Insurers



- Study examines convective (hail, tornado, thundersquall and heavy rainfall) events in the US with losses exceeding US\$ 250m in the period 1970–2009 (80% of all losses)
- 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

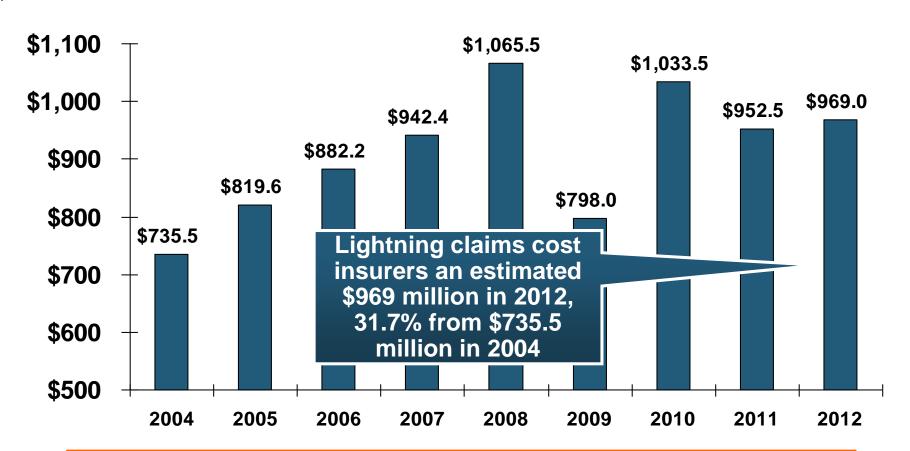
For the first time research shows that climatic changes have already influenced US thunderstorm losses



Insured Homeowners Losses Due to Lightning, 2004-2012



\$ Millions

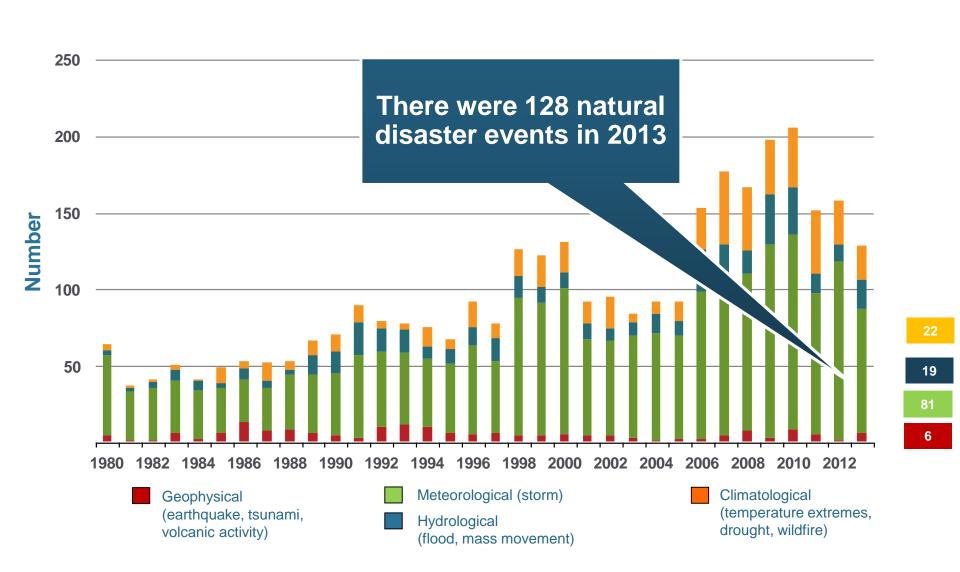


The Increased Number and Value of Expensive Electronic Devices in Homes is Pushing the Total Lightning Claim Costs Up Even as the Number of Lightning Claims Falls

Natural Disasters in the United States, 1980 – 2013



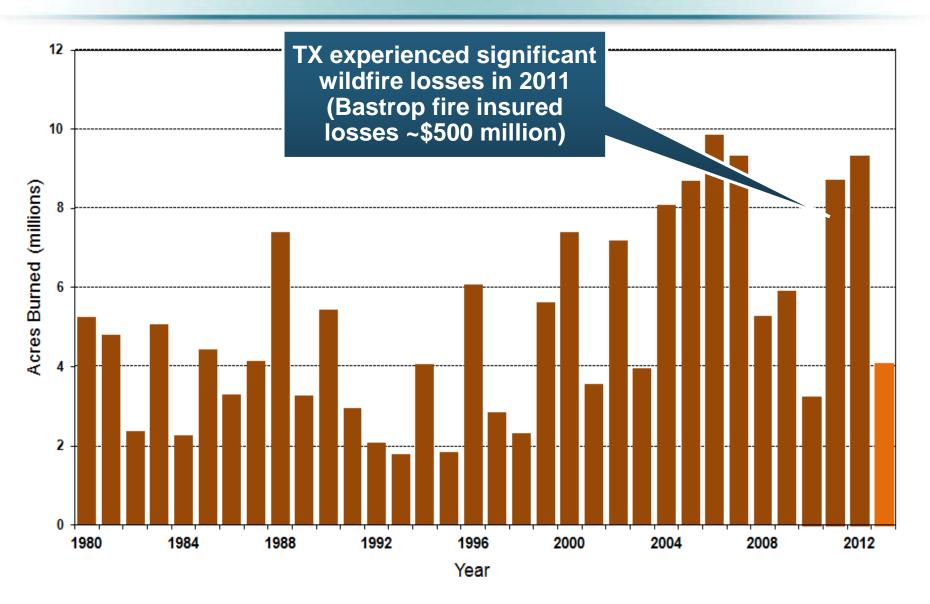
Number of Events (Annual Totals 1980 – 2013)



Source: MR NatCatSERVICE

Number of Acres Burned in Wildfires, 1980 – 2013

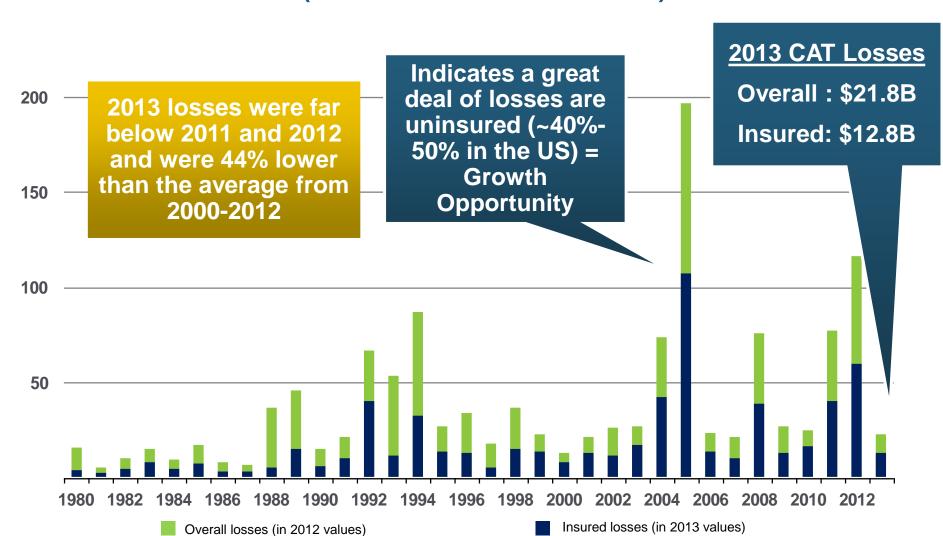




Losses Due to Natural Disasters in the US, 1980–2013



(2013 Dollars, \$ Billions) (Overall and Insured Losses)

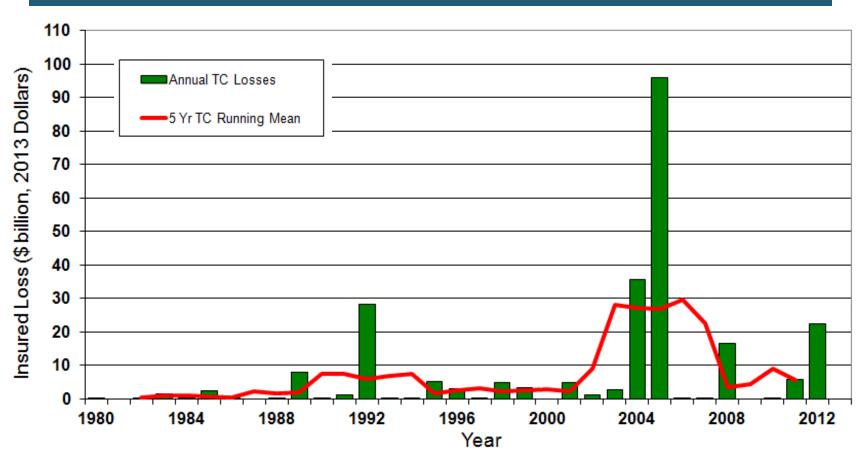


Source: MR NatCatSERVICE

Insured US Tropical Cyclone Losses, 1980 - 2013

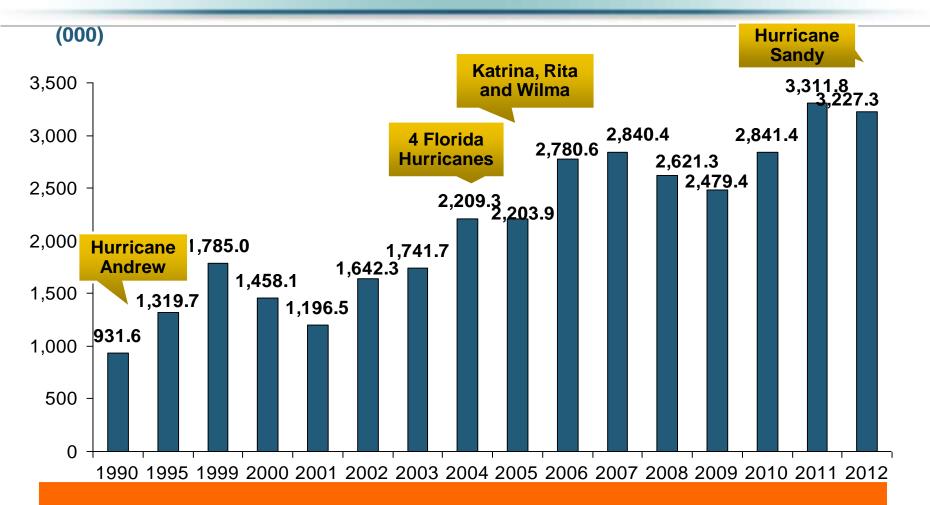


The current 5-year average (2008 - 2013) insured tropical cyclone loss is \$5.6 billion per year.



U.S. Residual Market: Total Policies In-Force (1990-2012) (000)

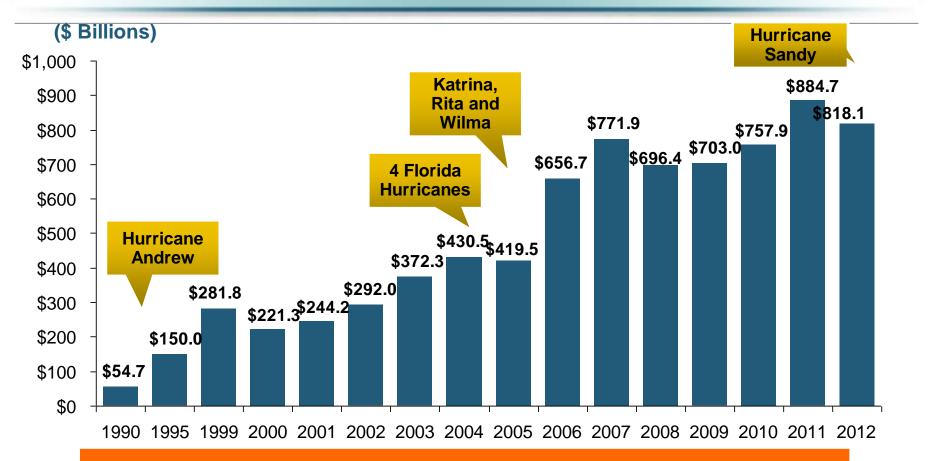




In the 23-year period between 1990 and 2012, the total number of policies in-force in the residual market (FAIR & Beach/Windstorm) Plans has more than tripled.

U.S. Residual Market Exposure to Loss (1990-2012) (\$ Billions)



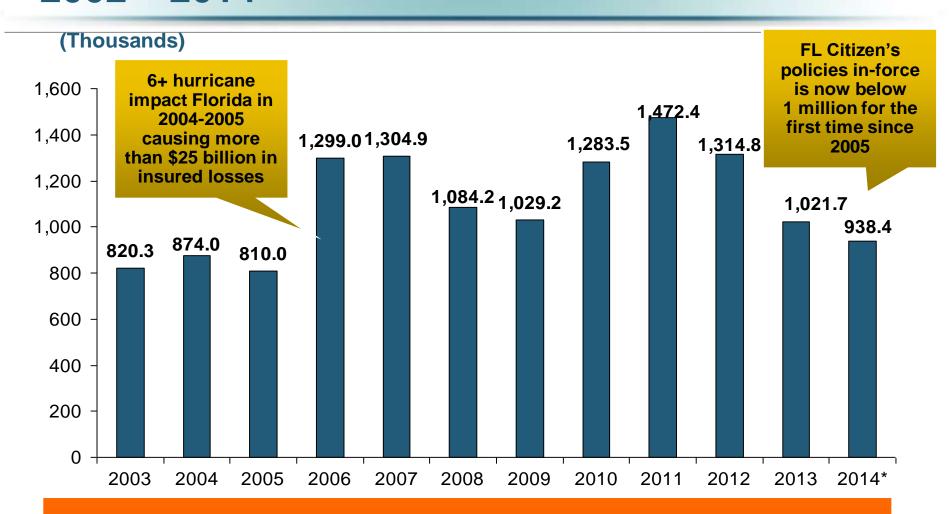


In the 23-year period between 1990 and 2012, total exposure to loss in the residual market (FAIR & Beach/Windstorm) Plans has surged from \$54.7 billion in 1990 to \$818.1 billion in 2012.

Source: PIPSO; Insurance Information Institute (I.I.I.).

Florida Citizens Total Policies In-Force, 2002 – 2014*



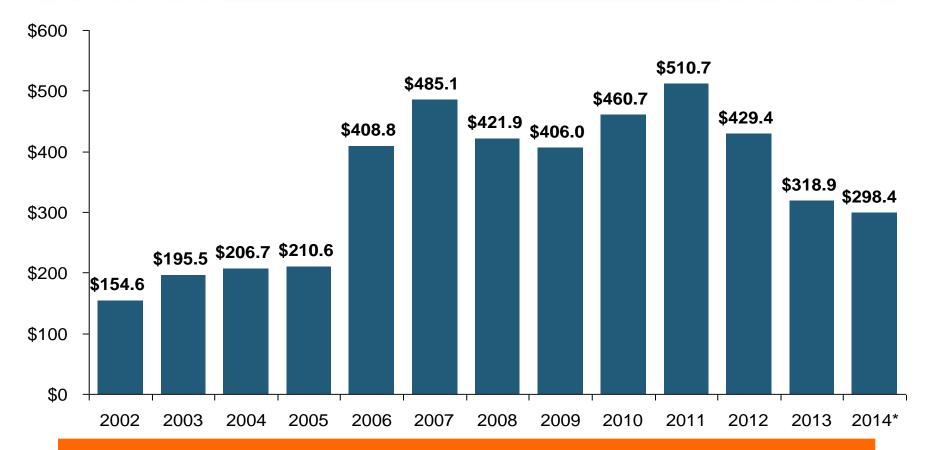


Florida Citizens is experiencing meaningful depopulation

^{*}Year-end figures 2003-2013 and as of 3/31/14 for 2014 accessed at https://www.citizensfla.com/about/bookofbusiness/. Source: PIPSO; Florida Citizens, Insurance Information Institute

Florida Citizens Exposure to Loss, 2002 – 2014* (\$ Billions)



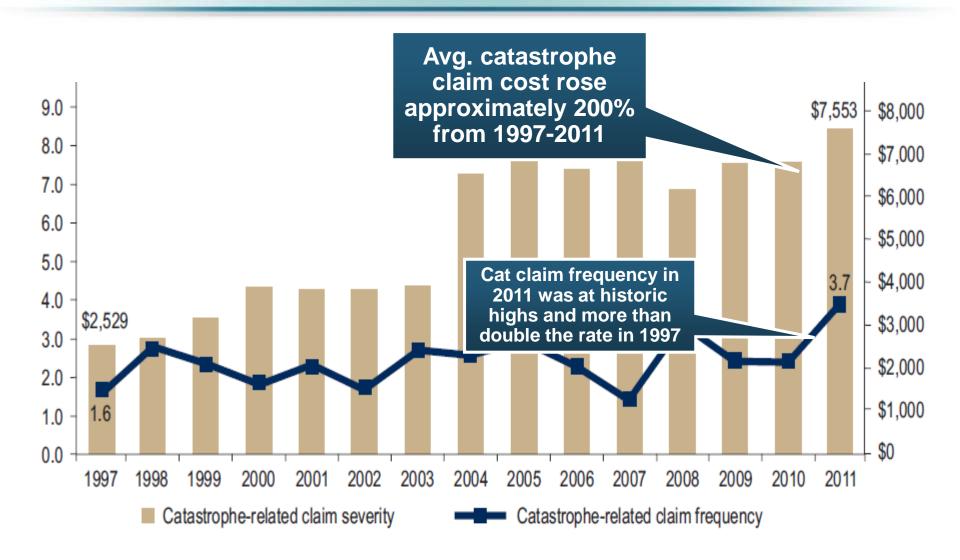


Total exposure to loss in Florida Citizens since its 2002 inception increased by 230 percent, from \$154.6 billion to \$510.7 billion in 2011 but has now dropped by \$212.3 billion or 41.6% through 3/31/14

^{*}As of March 31, 2014 from Florida Citizens accessed at: https://www.citizensfla.com/about/bookofbusiness/ Source: PIPSO; Insurance Information Institute (I.I.I.).

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

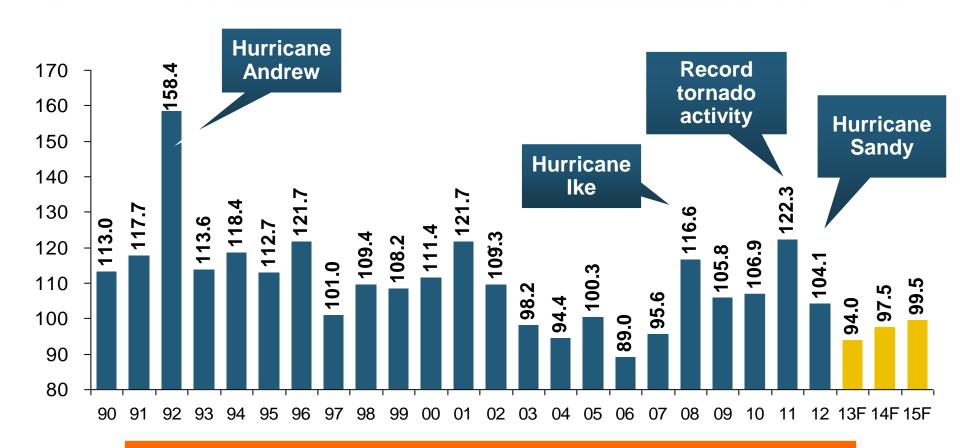




^{*}All policy forms combined, countrywide.
Source: Insurance Research Council, *Trends in Homeowners Insurance Claims*, Sept. 2012 from ISO Fast Track data.

Homeowners Insurance Combined Ratio: 1990–2015F

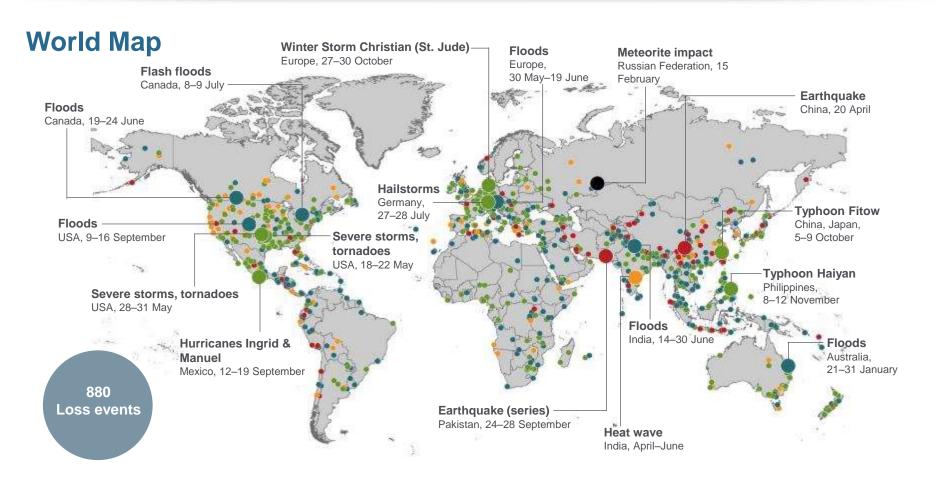




Homeowners Performance in 2011/12 Impacted by Large Cat Losses. Extreme Regional Variation Can Be Expected Due to Local Catastrophe Loss Activity

Natural Loss Events: Full Year 2013





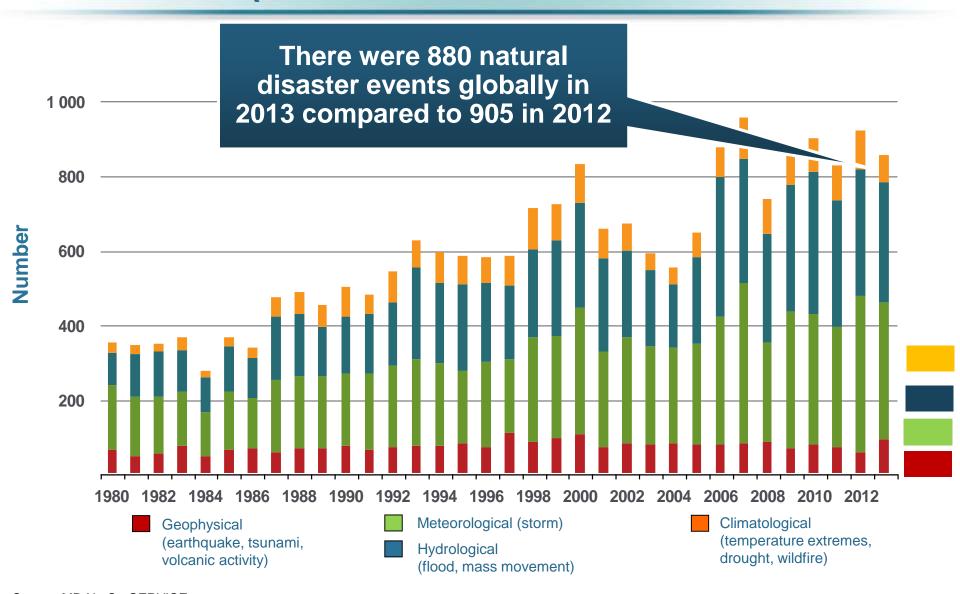
- Natural catastrophes
- Selection of significant Natural catastrophes

- Geophysical events (earthquake, tsunami, volcanic activity)
- Meteorological events (storm)

- Hydrological events (flood, mass movement)
- Climatological events
 (extreme temperature, drought, wildfire)
- Extraterrestrial events (Meteorite impact)

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

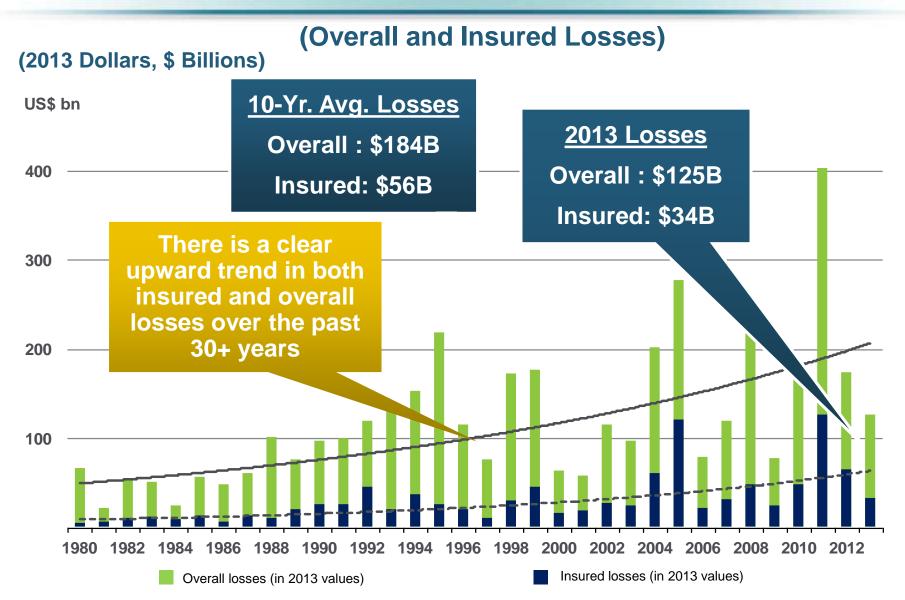




Source: MR NatCatSERVICE

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





Source: MR NatCatSERVICE

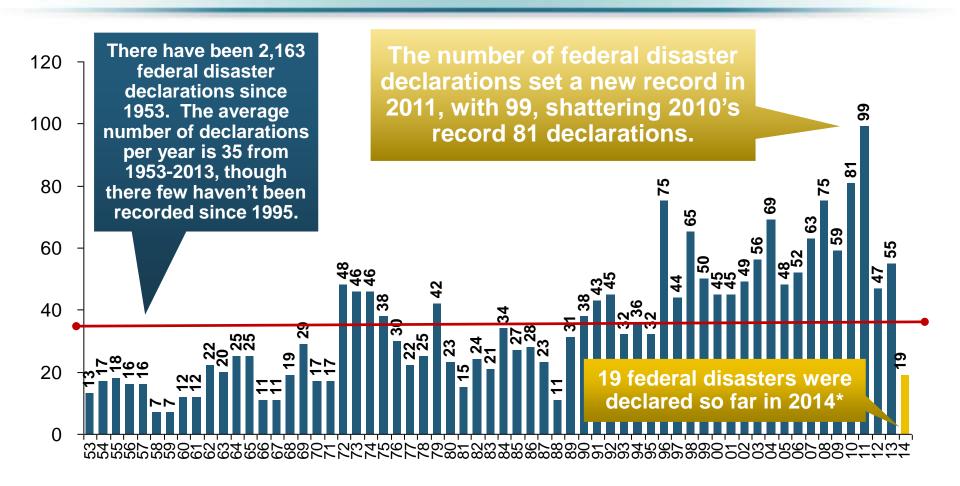


Federal Disaster Declarations Patterns: 1953-2014

Disaster Declarations Set New Records in Recent Years

Number of Federal Major Disaster Declarations, 1953-2014*



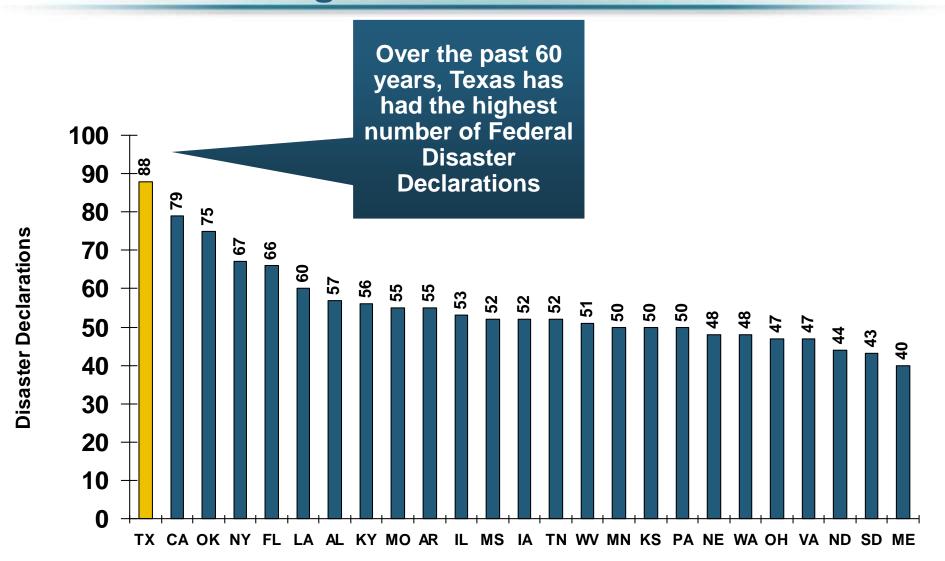


The Number of Federal Disaster Declarations Is Rising and Set New Records in 2010 and 2011 Before Dropping in 2012/13

^{*}Through April 23, 2014.

Federal Disasters Declarations by State, 1953 – 2014: Highest 25 States*



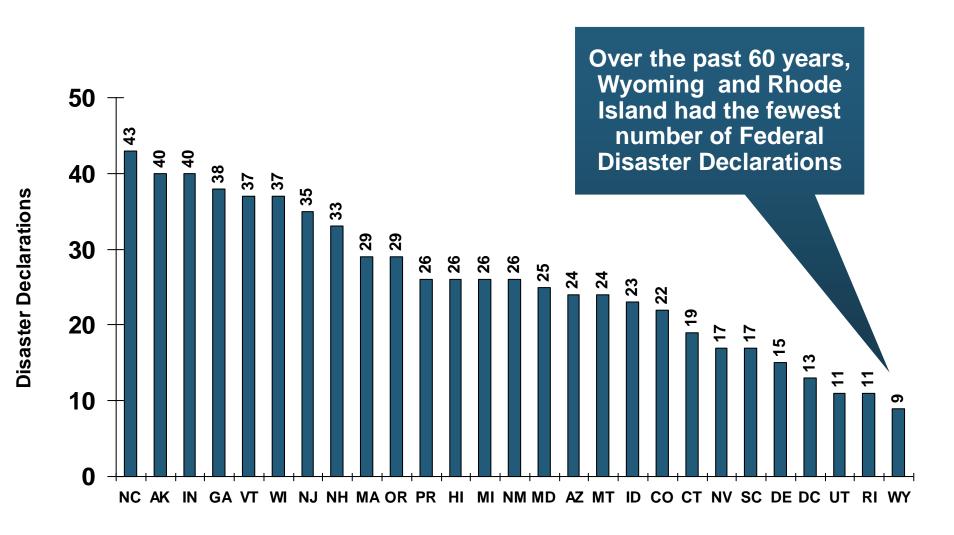


^{*}Through April 23, 2014. Includes Puerto Rico and the District of Columbia.

Source: FEMA: http://www.fema.gov/news/disaster_totals_annual.fema; Insurance Information Institute.

Federal Disasters Declarations by State, 1953 – 2014: Lowest 25 States*





^{*}Through April 23, 2014. Includes Puerto Rico and the District of Columbia.

Source: FEMA: http://www.fema.gov/news/disaster_totals_annual.fema; Insurance Information Institute.

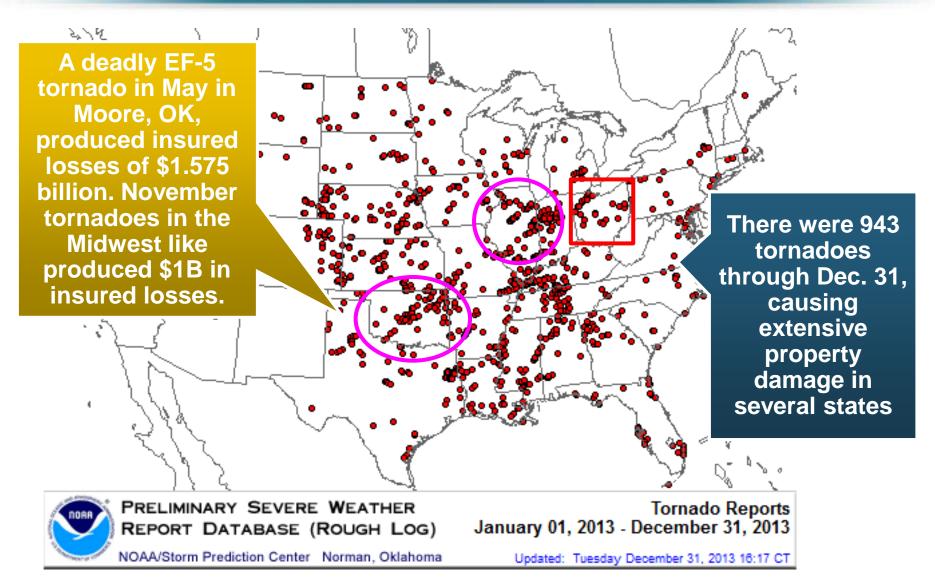


SEVERE WEATHER REPORT UPDATE: 2013-2014

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

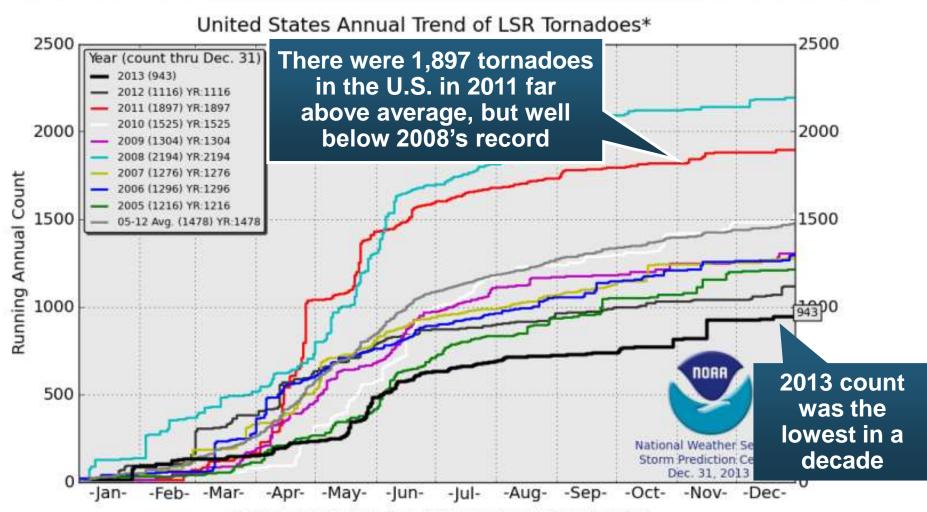
Location of Tornado Reports in 2013





U.S. Tornado Count, 2005-2013*





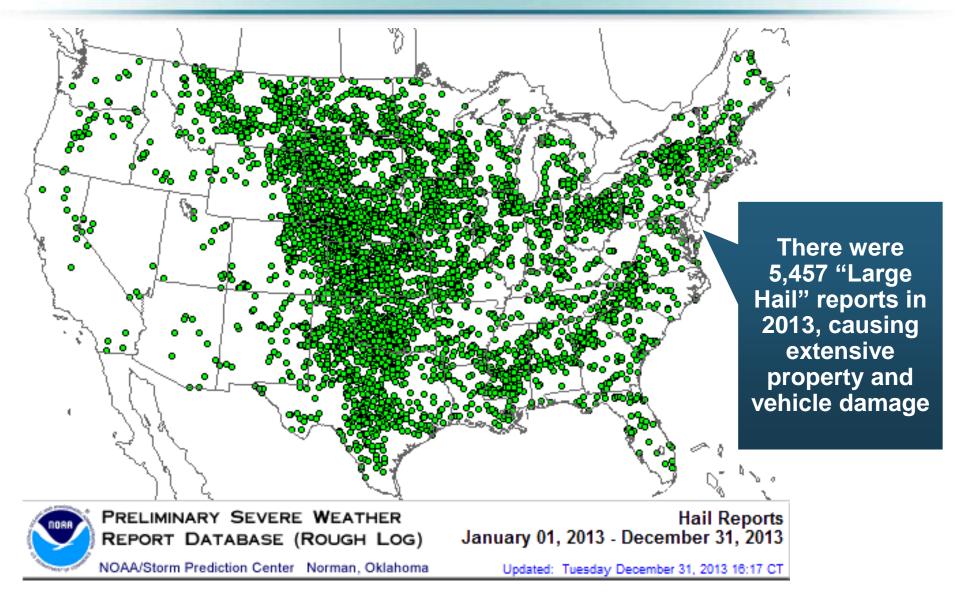
*Preliminary tornadoes from NWS Local Storm Reports (LSRs) Annual average is based on preliminary LSRs, 2005-2012

*Through Dec. 31, 2013.

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

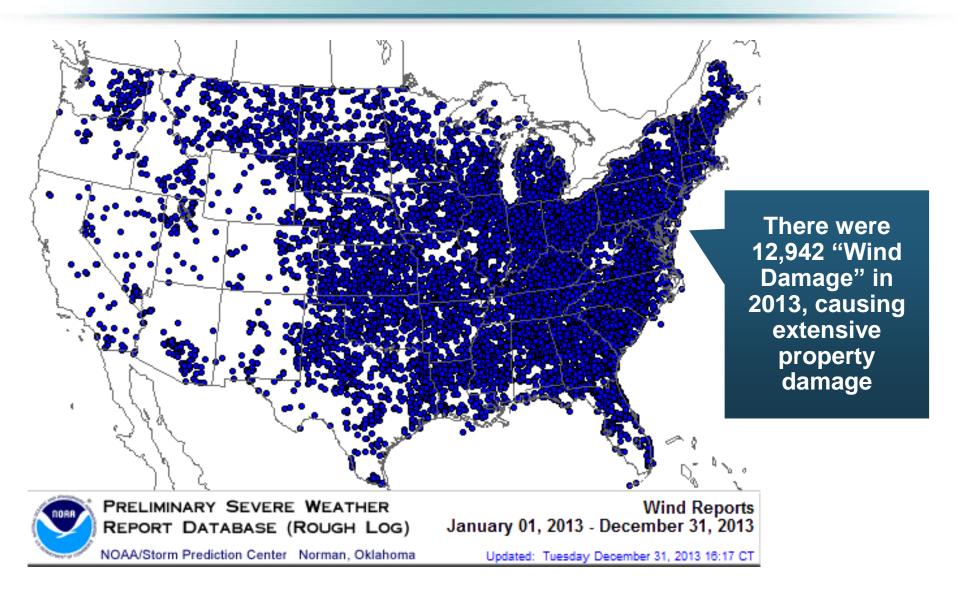
Location of Large Hail Reports: 2013





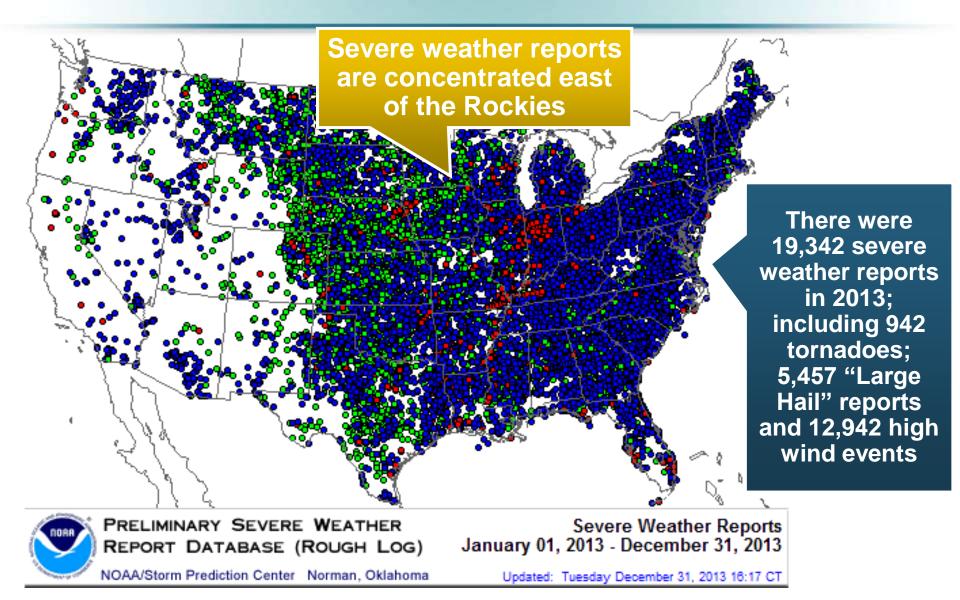
Location of High Wind Reports: 2013





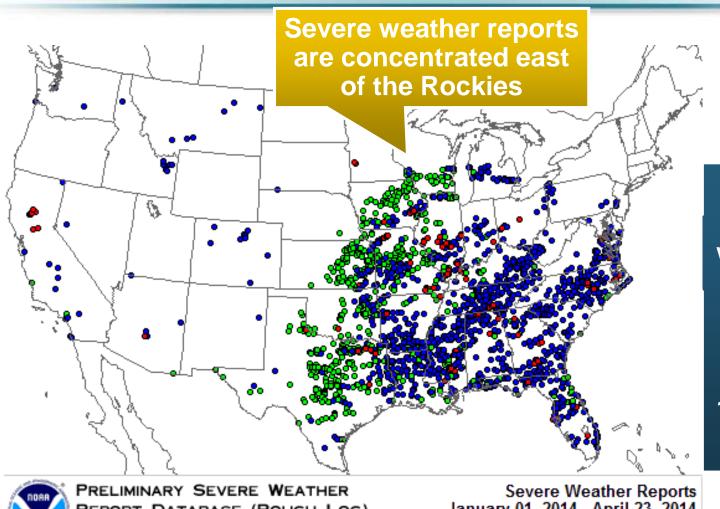
Severe Weather Reports: 2013





Severe Weather Reports: 2014*





There were **2,066** severe weather reports in 2013; including 109 tornadoes; 689 "Large Hail" reports and 1,268 high wind events

REPORT DATABASE (ROUGH LOG) NOAA/Storm Prediction Center Norman, Oklahoma

January 01, 2014 - April 23, 2014

Updated: Wednesday April 23, 2014 07:47 CT

*Through April 23.



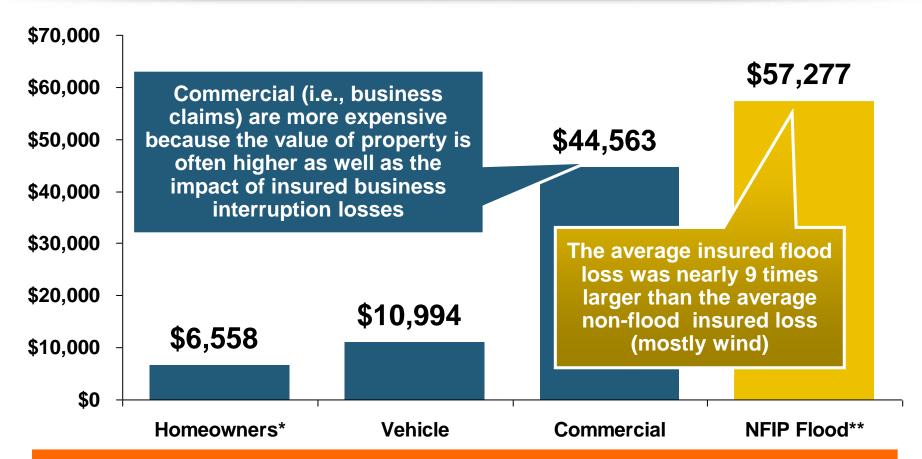
Flood Insurance

I.I.I. Survey: Public Conflicted on Flood

- Flood Should Reflect True Risk
 - Keep the Subsidies
- Would Prefer to Purchase from Private Insurers

Hurricane Sandy: Average Claim Payment by Type of Claim





Post-Sandy, the I.I.I. worked very hard to make help media, consumers and regulators understand the distinction between a flood claim and a standard homeowners claim. *NFIP is \$24B in debt.*

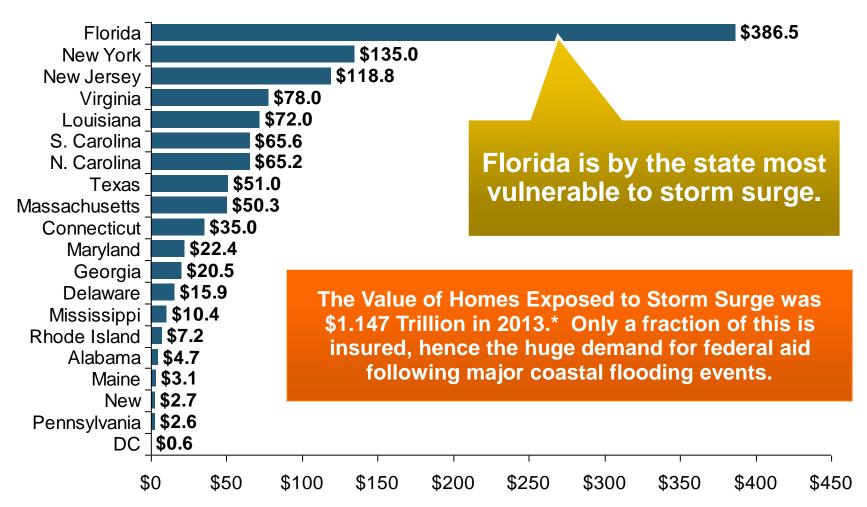
^{*}Includes rental and condo policies (excludes NFIP flood). **As of Oct. 31, 2013.

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

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.

Biggert-Waters: Media and Congressional Maelstrom



- BW-12 Rate Increases to Phase Out Subsidies Began in 2013
 - Note: Only 20% of NFIP policies are subsidized
- Jan. 1, 2013: Non-Primary/Secondary Residences
 - Increases of 25% per year until full-risk rate achieved
 - Reaction: Very muted; Vacation homes/wealthier owners
- Oct. 1, 2013: Subsidized Severe or Repetitive Loss Policies and Owners of Business/Non-Residential Properties
 - Increases of 25% per year until full-risk rate achieved
 - Reaction: Huge consumer backlash, intense media coverage leading to a Congressional effort to delay BW-12 by 4 years (effectively killing it). Even Maxine Waters supports delay...
- Subsidy Lost if Policy Lapses, Severe Repeated, New Policy
- House and Senate Bills to Reduce Burden Need to be Reconciled
- Future Pvt. Insurer Flood Participation Impacted by BW-12 Debate

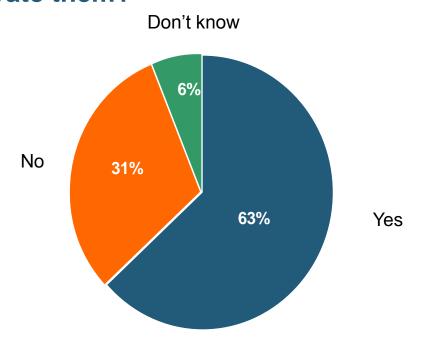
Summary of House Bill (Passed March 4, 2014)



- 9 Premium classifications with increases capped at 18%
- \$25 surcharge on primary residences; \$250 for non-primary
- Restoration of "grandfather" clause allowing continued subsidies for homes that were compliant under old FEMA maps but no longer are
- Eliminates property sales trigger
- Reimburses home owners for successful FEMA map challenges
- Creates a "flood insurance advocate"
- Refunds policyholders who were charged higher rates under BW-12 for homes built before FEMA established flood-risk maps
- CBO scoring of bill said that it will not increase the deficit
 - Didn't say that it would eliminate the current \$24 bill deficit



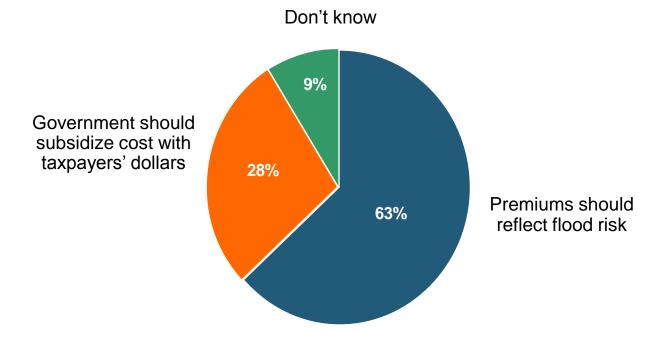
Q. Do you think it is fair that flood insurance premium increases are higher if people who live in high flood risk areas and rebuild their homes do not elevate them?



Almost two-thirds of Americans think that it is fair that flood insurance premiums be raised for people who live in high flood risk areas and rebuild their homes after a flood but do not elevate them.



Q. Do you think flood insurance premiums should reflect the risk of flooding no matter what the cost or do you think the government should subsidize the cost of flood insurance with taxpayers' dollars?

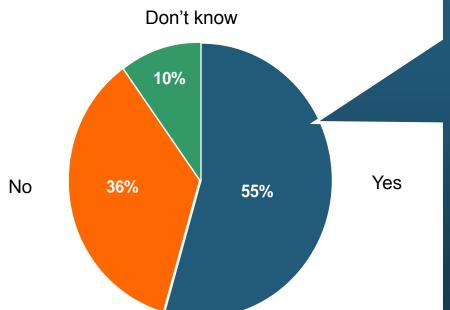


Almost two-thirds of Americans think flood insurance premiums should be raised to reflect the risk of flooding.



Q. The federal government provides insurance coverage at taxpayersubsidized rates for damage from floods through the National Flood Insurance Plan. A new law eliminates the subsidy and raises rates. Do

you think the rate increase should be repealed?

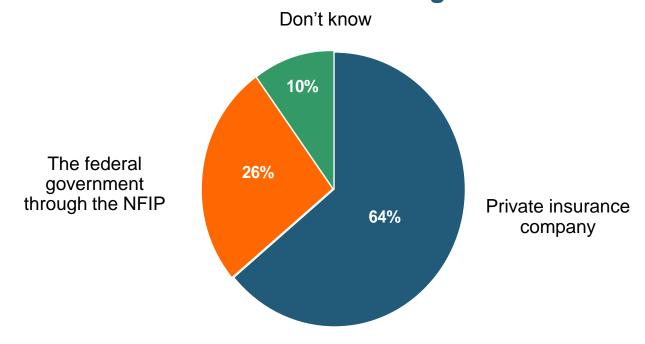


It is inconsistent for the public to support full-risk rates but maintain subsidies, but this exactly mirrors Congressional sentiments, with supporters of BW-12 and even Tea Party conservatives supporting continuation of the subsidies

More than half of Americans polled for the November 2013
Pulse thought that hikes in National Flood Insurance premiums should be repealed.



Q. If the costs were similar, would you prefer to buy flood insurance from a private insurance company or from the federal government through the National Flood Insurance Program?



Six out of 10 Americans would prefer to buy flood insurance from a private insurance company as opposed to the federal government, if costs were similar.



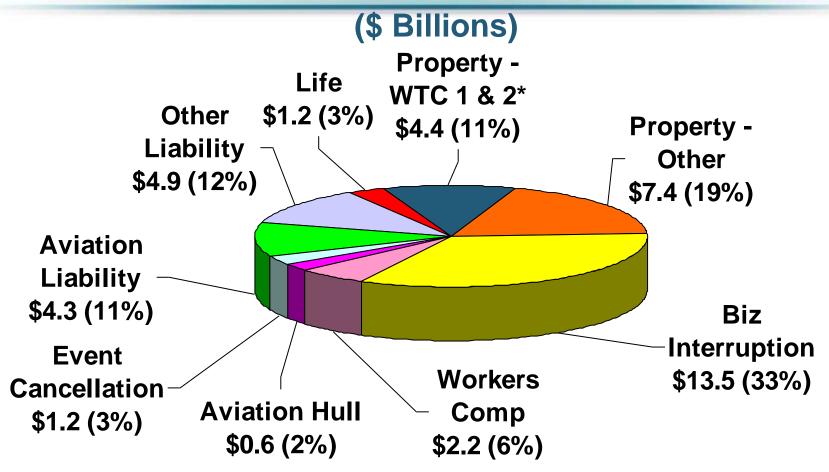
Terrorism Update

TRIA's Success
Consequences of Expiration

Download III's Terrorism Insurance Report at: http://www.iii.org/white_papers/terrorism-risk-a-constant-threat-2014.html

Loss Distribution by Type of Insurance from Sept. 11 Terrorist Attack (\$ 2013)





Total Insured Losses Estimate: \$42.9B**

*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.

Source: Insurance Information Institute.

^{**\$32.5} billion in 2001 dollars.

Terrorism Risk Insurance Program



- Testified before House Financial Services Nov. 2013
- Testified before Senate Banking Cmte. in Sept. 2013
- Provided testimony at NYC hearing in June 2013
- Provided Capitol Hill Joint House/Senate Staff Briefing in April 2014
- I.I.I. Published Several Updates to its Study on Terrorism Risk and Insurance



Senate Banking Committee, 9/25/13



House Financial Services Subcommittee, 11/13/13

I.I.I. White Paper (March 2014): Terrorism Risk: A Constant Threat





TERRORISM RISK: A CONSTANT THREAT

Impacts for Property/Casualty Insurers

MARCH 2014

Robert P. Hartwig, Ph. D. CPCU President (2 12) 346-5520 bobin@ill.org

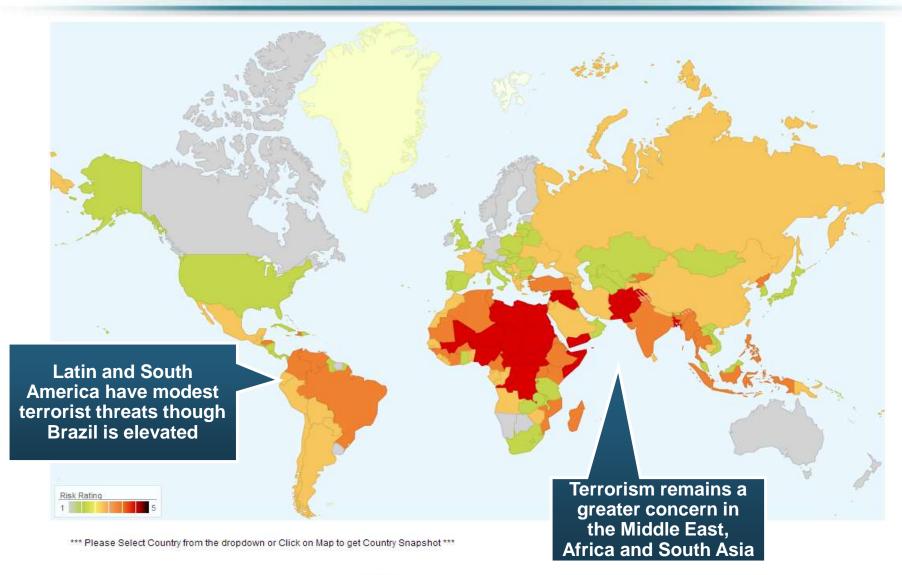
Claire Wilking on Consultant (9.17.) 459-6497 claire wildling

- Detailed history of TRIA
- How TRIA works
- Assessing the threat of terrorism
- Terrorism market conditions
- Global perspective
- Download at

http://www.iii.org/white_papers/ terrorism-risk-a-constantthreat-2014.html

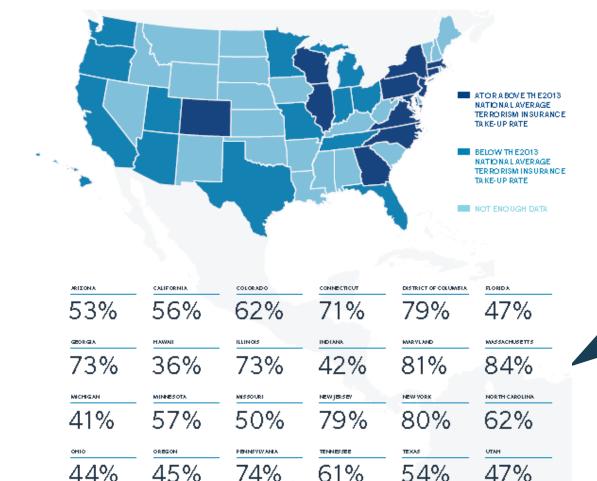
Terrorism Risk in 2013: Greatest Business Opportunities Are Often in Risky Nations





Terrorism Insurance Take-Up Rates by State for 2013*





The overall US takeup rate for terrorism coverage was 62% in 2013 and ranged from a lows of 41% in Michigan to a high of 84% in Massachusetts (where demand likely increased due to the April 2013 Boston Marathon bombing)

60%

77%

Source: Marsh 2014 Terrorism Risk Insurance Report; Insurance Information Institute.

80%

The 27 states listed met the minimum threshold.

of available 2013 peer data

^{*}Data for 27 states with sufficient data.

Summary of President's Working Group Report on TRIA (April 2014)



- Insurance for terrorism risk is available and affordable
 - Availability/affordability have has not changed appreciably since 2010
- Prices for terrorism risk insurance vary considerably depending on the policyholder's industry and location of risk
- Prices have declined since TRIA was enacted
 - Currently ~3% to 5% of commercial property insurance premiums
- Take-up rates have improved since adoption of TRIA
 - Overall take-up rate is steady at ~60% (62% in 2013 per Marsh)
- Market capacity is currently tightening given uncertainty over TRIA reauthorization
- The private market does not have the capacity to provide reinsurance for terror risk to the extent currently provided by TRIA
- In the absence of TRIA, terrorism risk insurance would likely be less available. Coverage that would be available likely would be more costly and/or limited in scope

Source: Report of the President's Working Group on Financial Markets, The Long-Term Availability and Affordability of Insurance for Terrorism Risk,

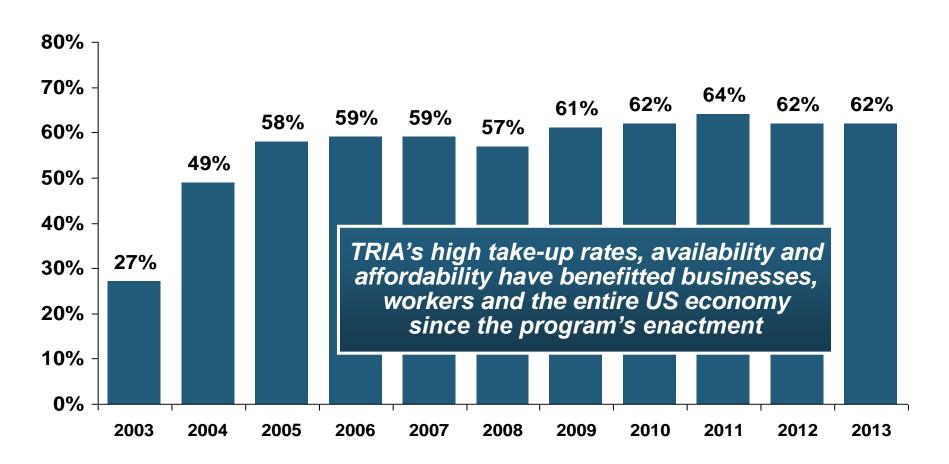
Top 3 Key Facts About TRIA



- 1. TRIA costs taxpayers virtually nothing
- 2. TRIA as currently structured continues to provide tangible benefits to the U.S. economy in the form of:
 - Terrorism insurance market stability, affordability and availability
 - Smooth functioning of commercial lending activity
 - Employment stimulus
- 3. TRIA is now clearly a critical part of the U.S. national economic security infrastructure
 - A primary goal of terrorism is to destabilize the U.S. economy
 - Terrorism risk insurance is critical to ensure a swift recovery in the event of future attacks
- Bottom Line: TRIA is an unambiguous, unmitigated success

Terrorism Insurance Take-up Rates, By Year, 2003-2013





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.

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

TRIA in its current form provides at least 8 levels of taxpayer protection

Consequences of Substantially Restructuring TRIA



- Increases in required insurer retentions/deductibles do not "create" new capacity
- New capacity has entered primarily because:
 - TRIA remains in place
 - No major successful attack has occurred since 9/11
 - Modest improvement in modeling/understanding terror risk
- Many smaller/medium-sized insurers are likely already at or near their exposure limits, so increasing required retentions will <u>not</u> incentivize them to write more coverage
 - A.M. Best: 19% of insurers with < \$500 million in surplus failed stress tests; 11% of those with \$500 to \$1 billion failed
 - Insurance Information Institute: Insurers with <\$500 million in surplus wrote 16.8% of TRIA-back lines in 2012; those with less than \$1 billion in surplus wrote 23.6% of TRIA-backed coverages

Consequences of a Failure to Reauthorize TRIA *Followed by a Major Terrorist Attack*



- If TRIA is not reauthorized, only limited private insurance would be available to cover losses arising from future attacks
 - Potentially large gap between insured and economic losses
- The federal government would be called upon to provide very large amounts of aid (tens of billions of dollars +)
 - Federal govt. has no delivery mechanism for post-attack aid
 - Under TRIA, federal response largely piggybacks on an efficient pvt. Insurer claims adjusting and payment system
- The existing standalone market would likely seize and contract
 - ◆ Depletion of capital → Availability crunch, Prices soar
 - Uncertainty over likelihood of future attacks
 - Terrorism exclusions would become ubiquitous
- Congress would likely be compelled to legislate TRIA anew

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



Bill	Summary
•H.R. 508: "Terrorism Risk Insurance Act of 2002 Reauthorization Act of 2013" •Introduced Feb. 5 by Rep. Michael Grimm (D-NY)	●5-Year Extension (through 2019) ●Extend recoupment period for any TRIA assistance from 2017 to 2019
•H.R. 2146: "Terrorism Risk Insurance Program Reauthorization Act of 2013" •Introduced May 23 by Rep. Michael Capuano (D-MA)	 10-Year Extension (through 2024) Extend recoupment period for any TRIA assistance from 2017 to 2024 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 Reports to be drafted with consultation from NAIC and representatives of the insurance and securities industries and policyholders
•H.R. 1945: "Fostering Resilience to Terrorism Act of 2013" •Introduced May 9 by Rep. Benny Thompson (D-MS)	 10-Year Extension (through 2024) Recoupment period changed to 2024 Would transfer responsibility for certification of a "act of terrorism" to the Secretary of Homeland Security from Secretary of Treasury. PWGFM to issue reports in 2017, 2020 and 2023 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."

Source: Nelson, Levine, de Luca & Hamilton, FIO Focus, June 10, 2013; 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)	 Very few data points Terror modeling still in infancy, untested. Inconsistent assessment of threat
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)	 Potential loss is virtually unbounded. Losses can easily exceed insurer capital resources for paying claims. Extreme risk in workers compensation and statute forbids exclusions.

Source: Insurance Information Institute

Terrorism Violates Traditional Requirements for Insurability (cont'd)



Requirement	Definition	Violation
Diversifiable Risk	 •Must be able to spread/distribute risk across large number of risks •"Law of Large Numbers" helps makes losses manageable and less volatile 	concentrated geographically or
Random Loss Distribution/ Fortuity Source: Insurance Information Institute	 Probability of loss occurring must be purely random and fortuitous Events are individually unpredictable in terms of time, location and magnitude 	of destruction •Dynamic target shifting from "hardened targets" to "soft

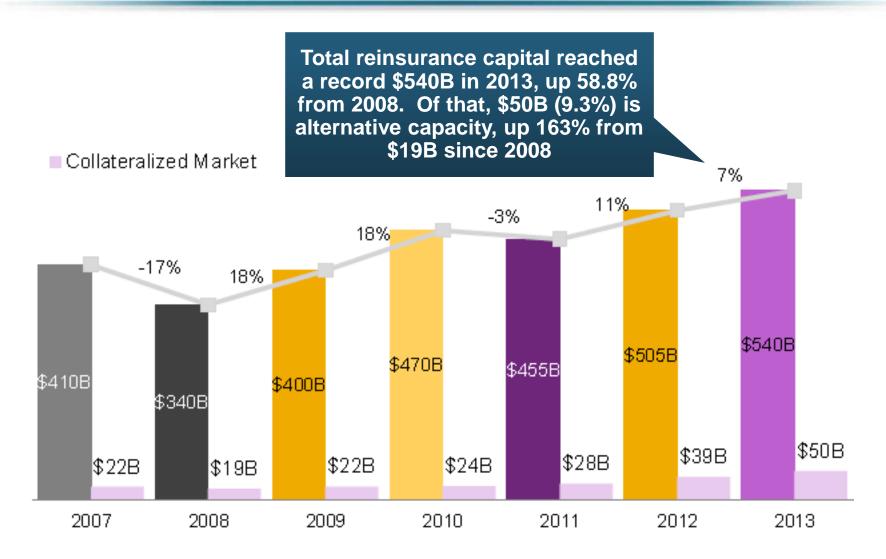


REINSURANCE MARKET CONDITIONS

Ample Capacity as
Alternative Capital is
Transforming the
Market—And Pushing
Down Prices

Global Reinsurance Capital (Traditional and Alternative), 2007 - 2013





Source: Aon Benfield Reinsurance Market Outlook, April 1, 2014; Insurance Information Institute.

Global Reinsurer Capital, 2007-2013:H1*



(\$ Billions)



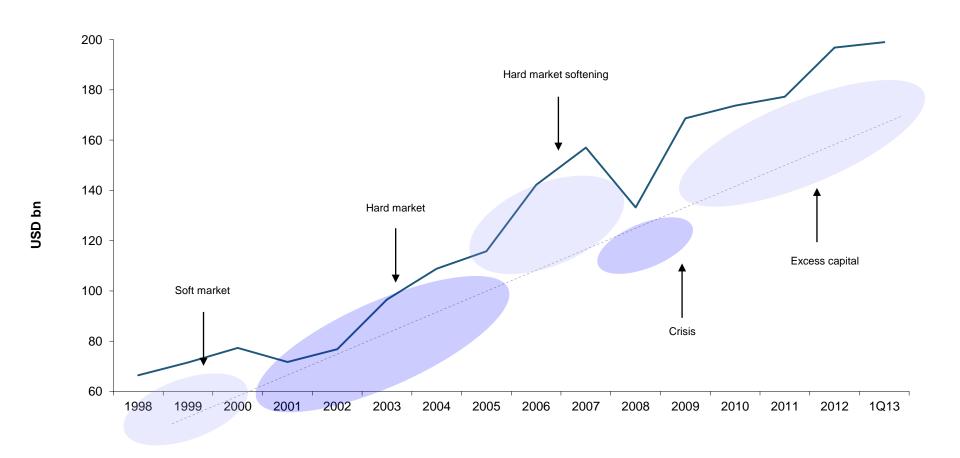
Global Reinsurance Capital Has Been Trending Generally Upward Since the Global Financial Crisis, a Trend that Seems Likely to Continue

^{*}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

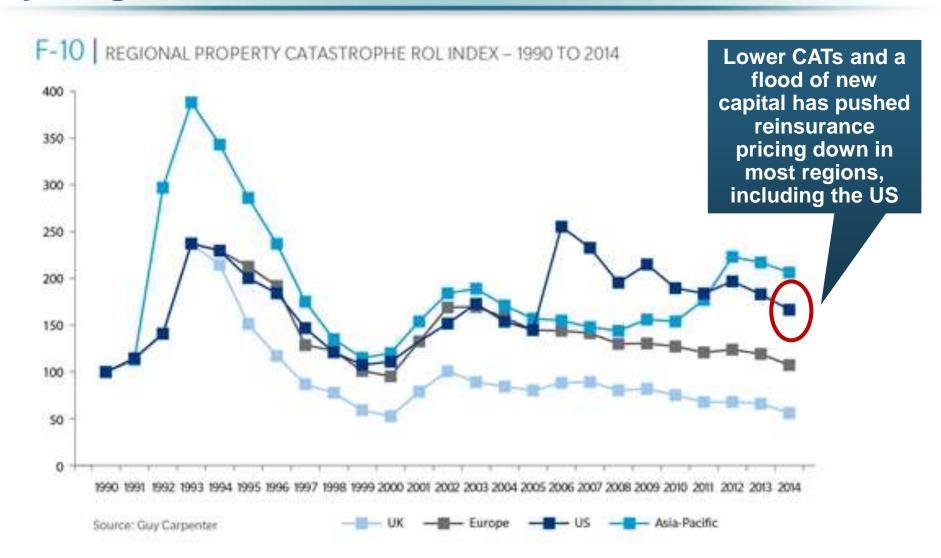




Source: Guy Carpenter

Reinsurance Pricing: Rate-on-Line Index by Region, 1990 – 2014*



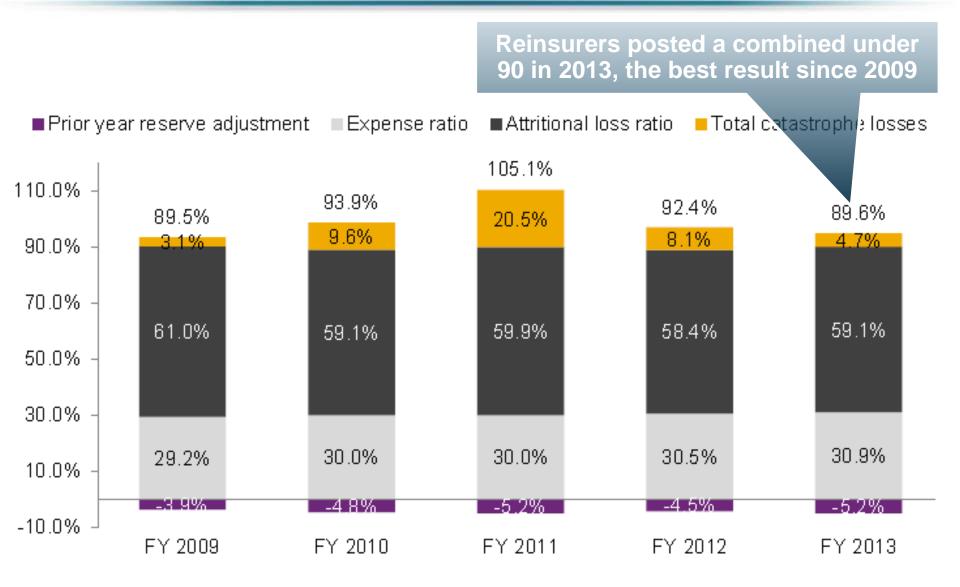


*As of Jan. 1.

Source: Guy Carpenter

Reinsurer Combined Ratios (Aon Benfield Aggregate), 2007 - 2013

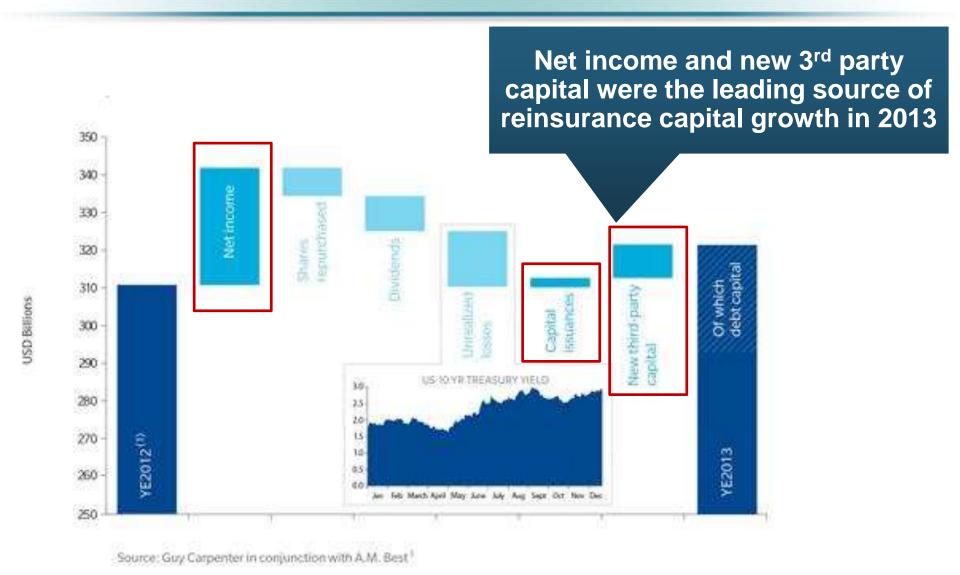




Source: Aon Benfield Reinsurance Market Outlook, April 1, 2014; Insurance Information Institute.

Sources of Reinsurance Capital Change: YE 2012 to YE 2013

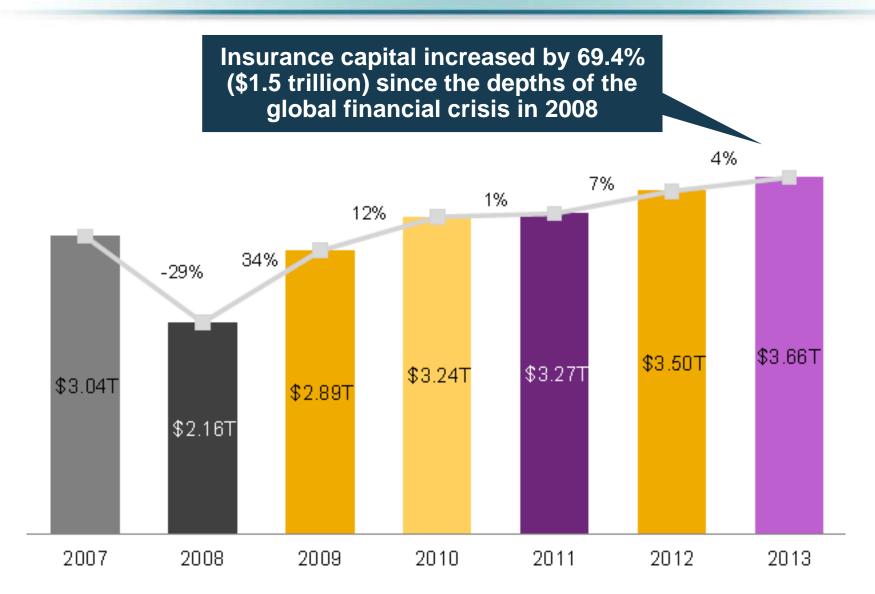




Sources: Guy Carpenter and A.M. Best; Insurance Information Institute .

Global Insurance Capital, 2007 - 2013



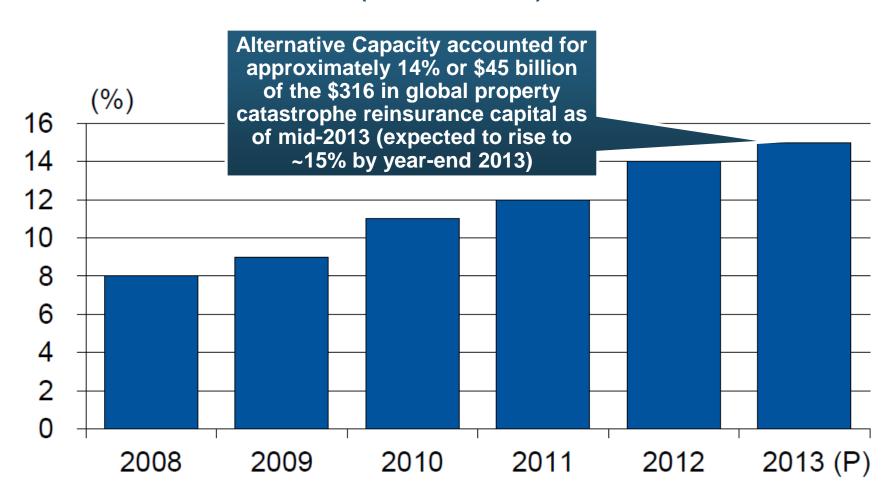


Source: Aon Benfield Reinsurance Market Outlook, April 1, 2014; Insurance Information Institute.

Alternative Capacity as a Percentage of Global Property Catastrophe Reinsurance Limit

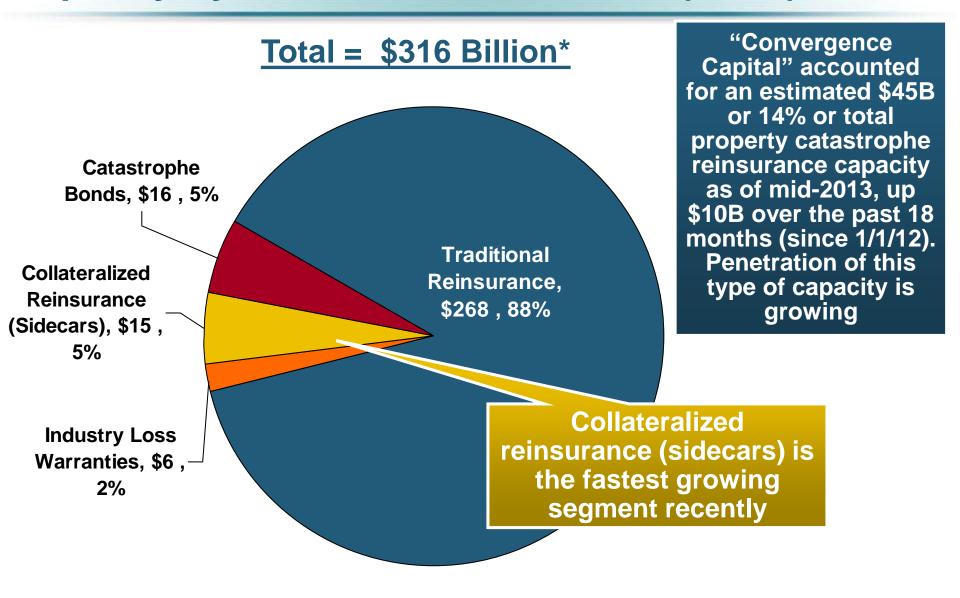


(As of Year End)



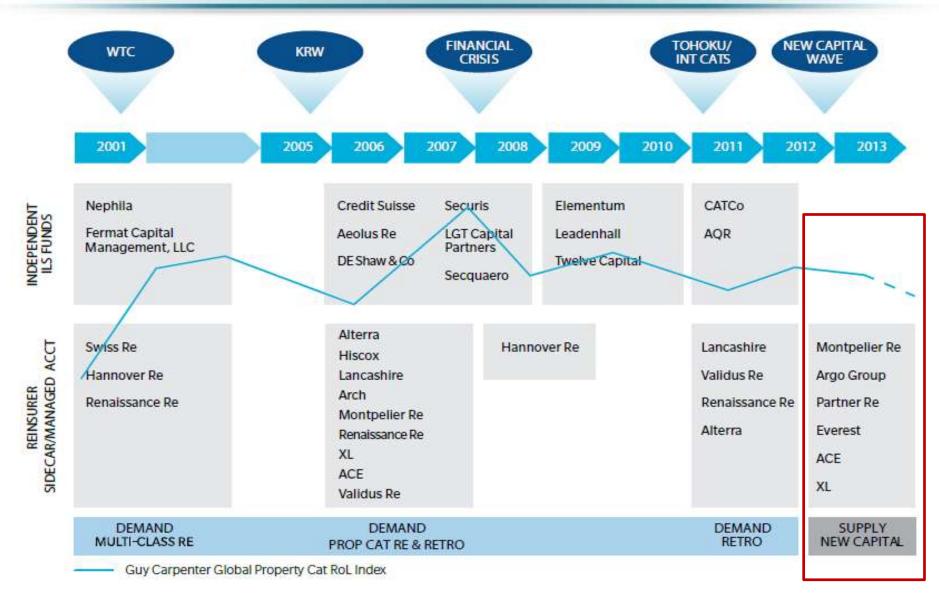
Property Catastrophe Reinsurance Capacity by Source as of Mid-2013 (\$ Bill)





Alternative Capacity Development, 2001—2013:H1

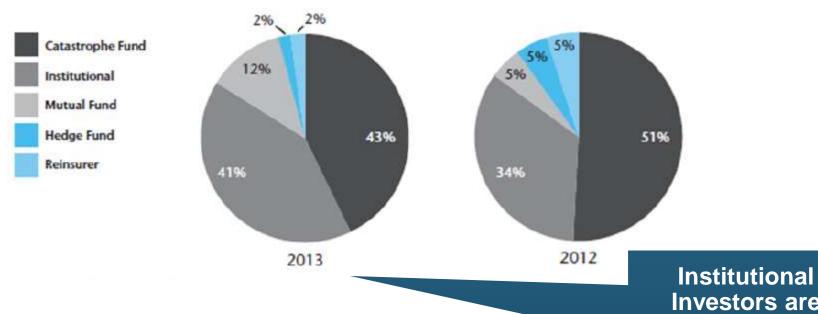




Source: Guy Carpenter; Mid-Year Market Report, September 2013; Insurance Information Institute.

Investor by Category, 2013 vs. 2012*





Investors are accounting for a larger share of alternative reinsurance investors

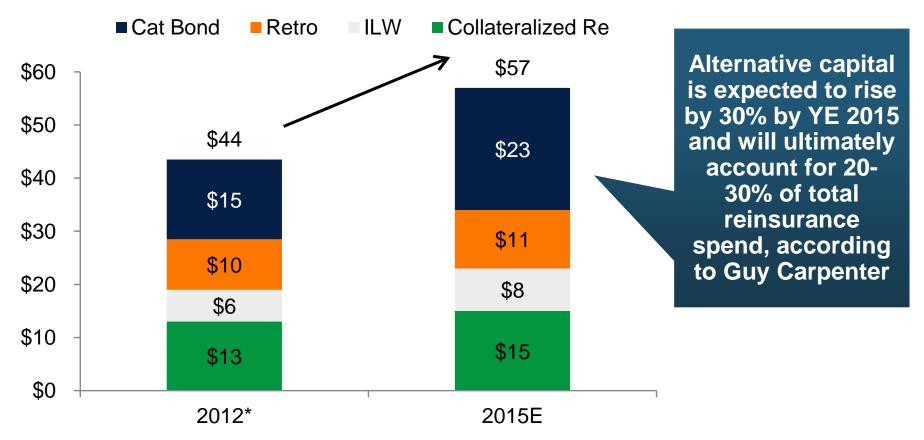
*As of June 30 each year.

Source: Aon Benfield Securities; Insurance Information Institute.

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



NON-TRADITIONAL P/CAT LIMITS BY TYPE



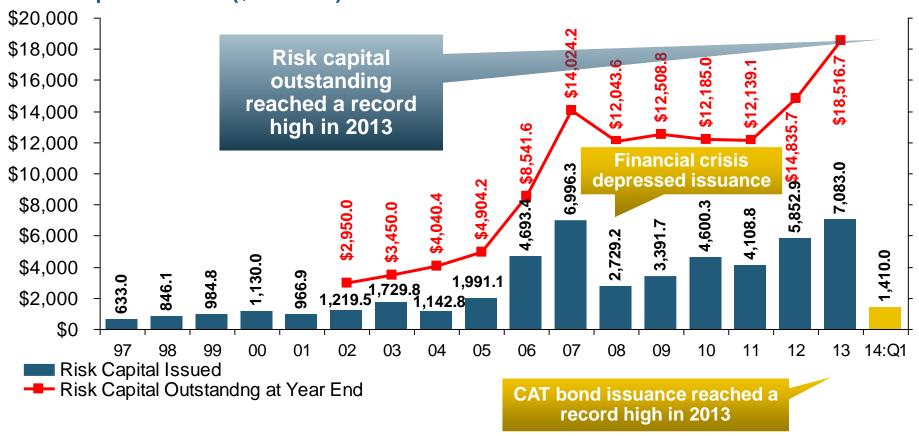
Source: Guy Carpenter; *As Of Mar-2013

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

Catastrophe Bonds: Issuance and Outstanding, 1997- 2014:Q1*







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

Source: Guy Carpenter; Insurance Information Institute.

^{*}Through Jan. 31, 2014.

Questions Arising from Influence of Alternative Capital



- Could Pension Fund Money Swamp 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?
 - What happens when interest rates rise?
- Terms and Conditions Could Weaken
 - Multi-year deals

Questions Arising from Influence of Alternative Capital



- What Will Happen When Investors Face Large-Scale Losses?
- Does ILS Have a Higher Propensity to Litigate?
 - Short-term focus could contribute to disputes
 - Large share of triggered transactions ended up in dispute
- How Low Will ROLs Be Pushed?
- Does the New Interconnectedness with Capital Markets Lend Credence to the Suggestion that Reinsurance Is a Systemic Risky Business?
- Will Alternative Capital Drive Consolidation Among Traditional Reinsurers?
 - ◆ Has the mating dance begun? → Endurance/Aspen



CAT OF THE FUTURE? CYBER RISK

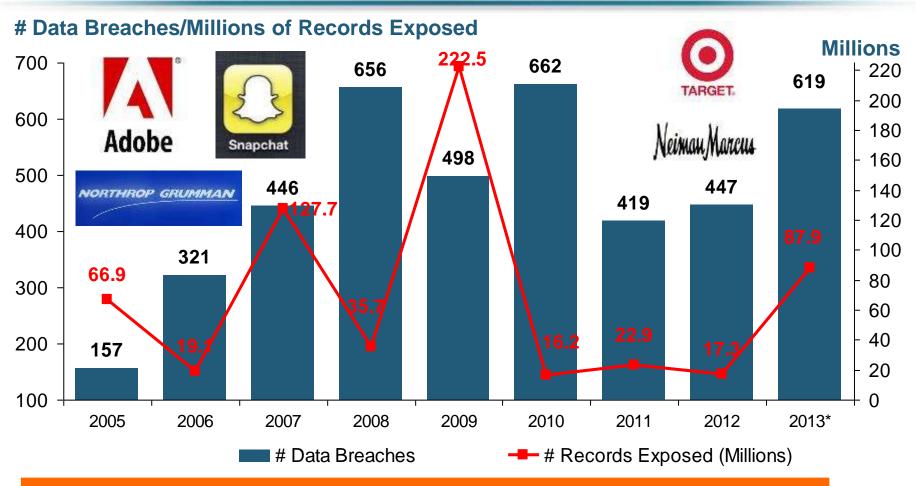
Cyber Risk is a Rapidly Emerging Exposure for Businesses Large and Small in Every Industry

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





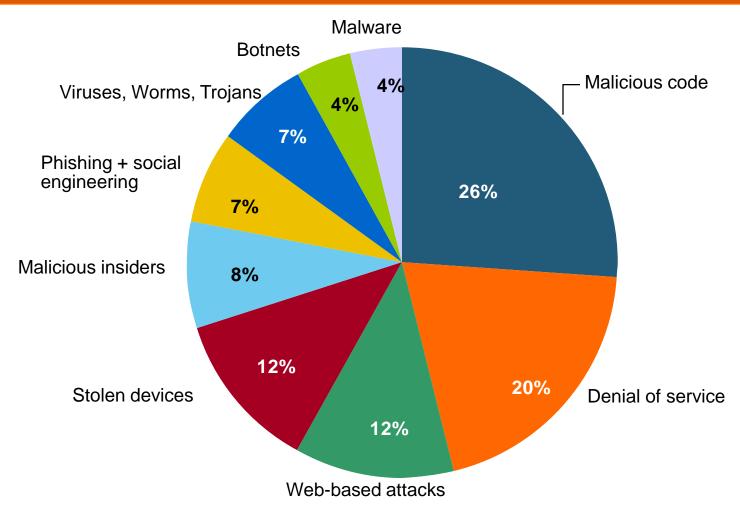
The Total Number of Data Breaches (+38%) and Number of Records Exposed (+408%) in 2013 Soared

^{* 2013} figures as of Jan. 1, 2014 from the ITRC updated to an additional 30 million records breached (Target) as disclosed in Jan. 2014. Source: Identity Theft Resource Center.

The Most Costly Cyber Crimes, Fiscal Year 2012



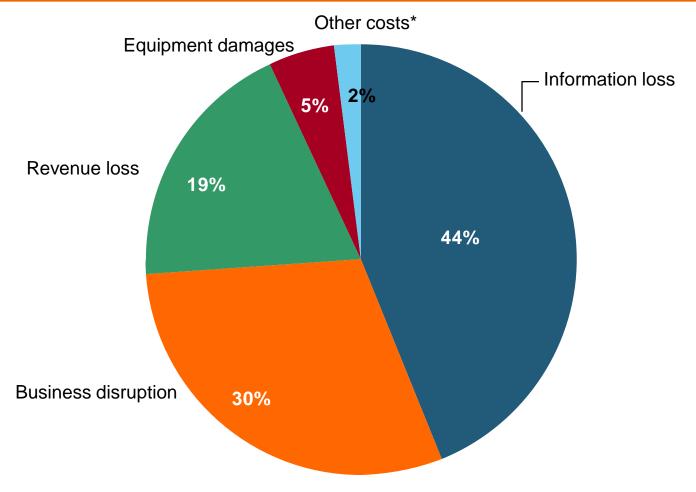
Malicious code, denial of service and web-based attacks account for more than 58 percent of the total annualized cost of cyber crime experienced by 56 companies.



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.

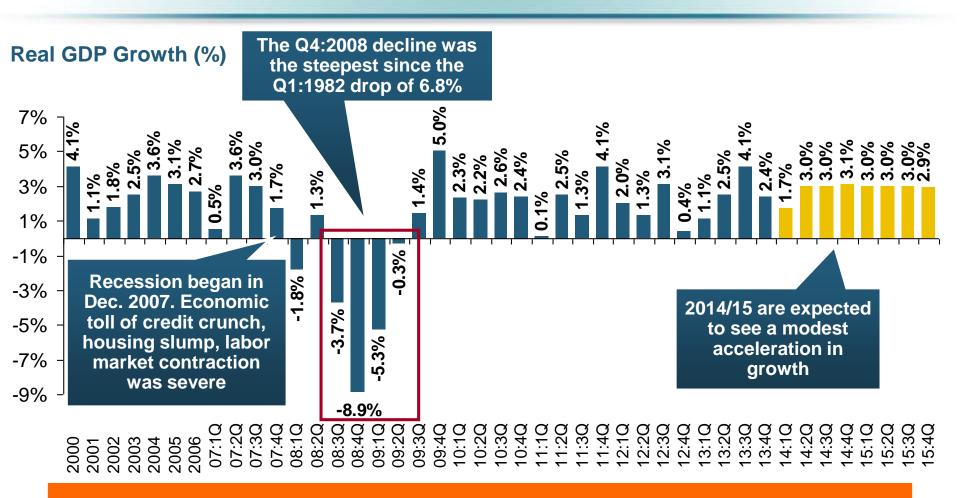


The Strength of the Economy Will Influence P/C Insurer Growth Opportunities

Growth Will Expand Insurer Exposure
Base Across Most Lines

US Real GDP Growth*



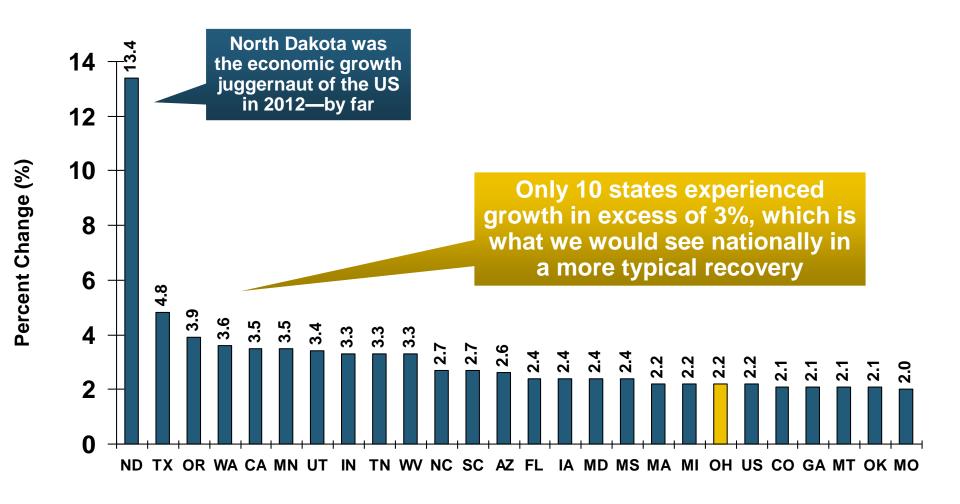


Demand for Insurance Should Increase in 2014/15 as GDP Growth Accelerates Modestly and Gradually Benefits the Economy Broadly

^{*} Estimates/Forecasts from Blue Chip Economic Indicators.

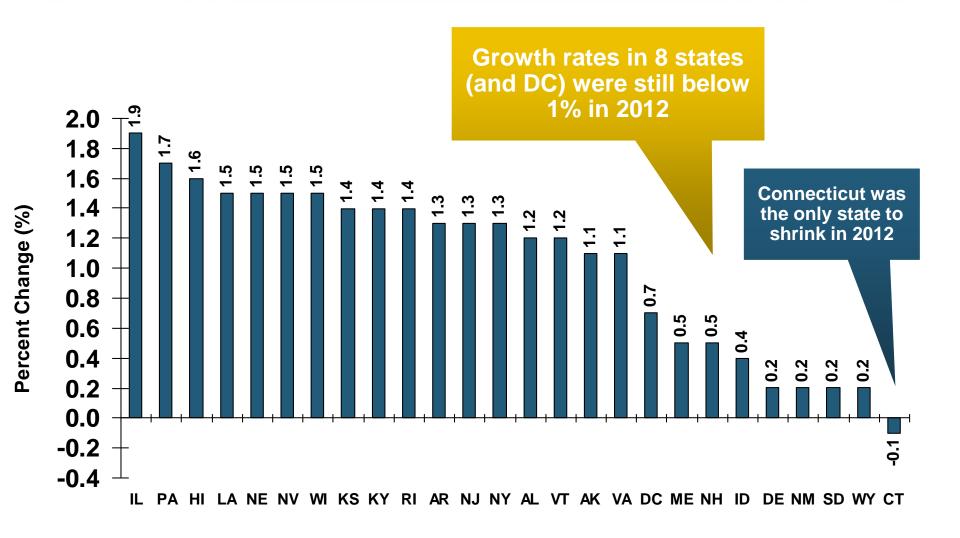
Real GDP by State Percent Change, 2012: Highest 25 States





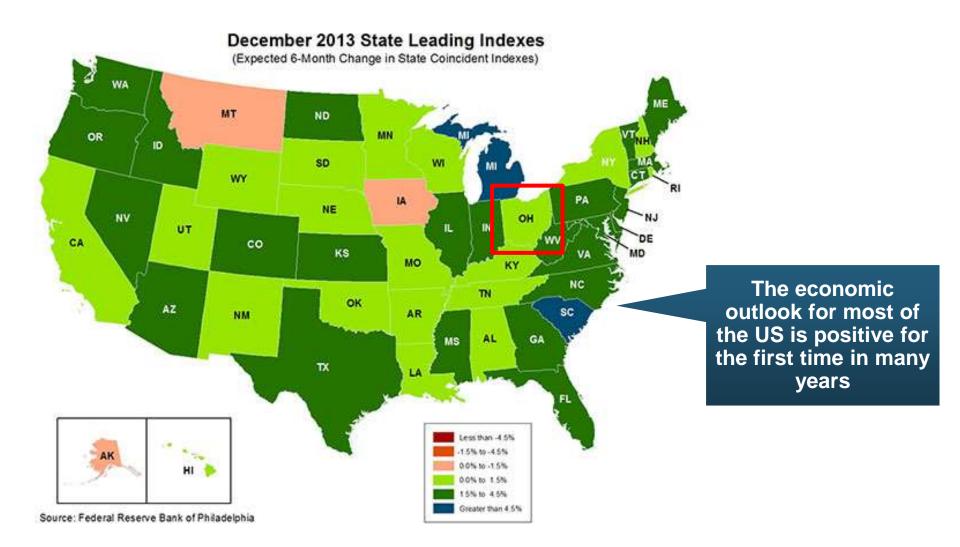
Real GDP by State Percent Change, 2012: Lowest 25 States





State-by-State Leading Indicators through 2014:Q2

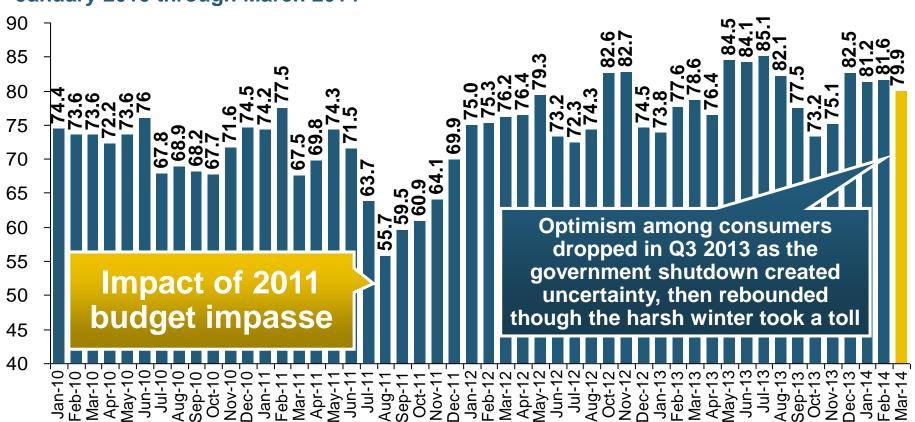




Consumer Sentiment Survey (1966 = 100)



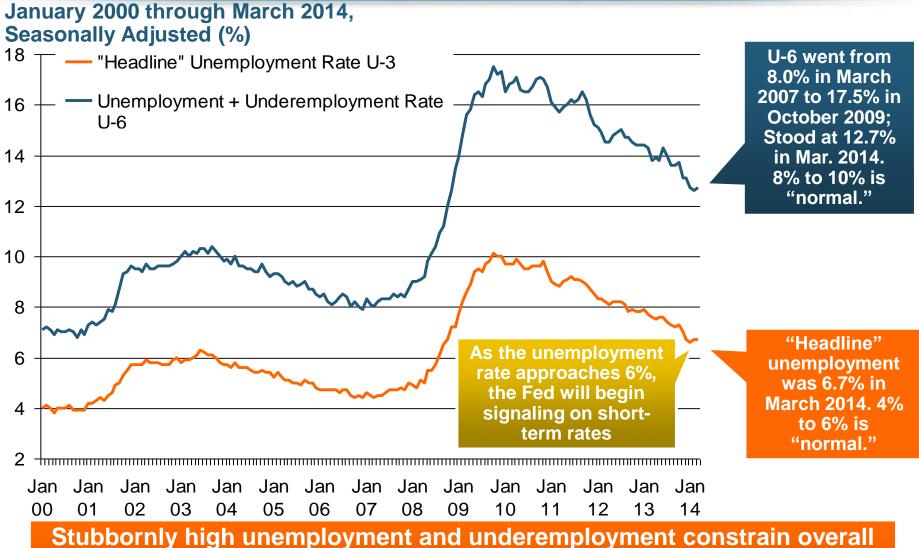




Consumer confidence has been low for years amid high unemployment, falling home prices and other factors adversely impact consumers, but improved substantially over the past 2+ years, though uncertainty in Washington sometimes takes a toll.

Unemployment and Underemployment Rates: Still Too High, But Falling

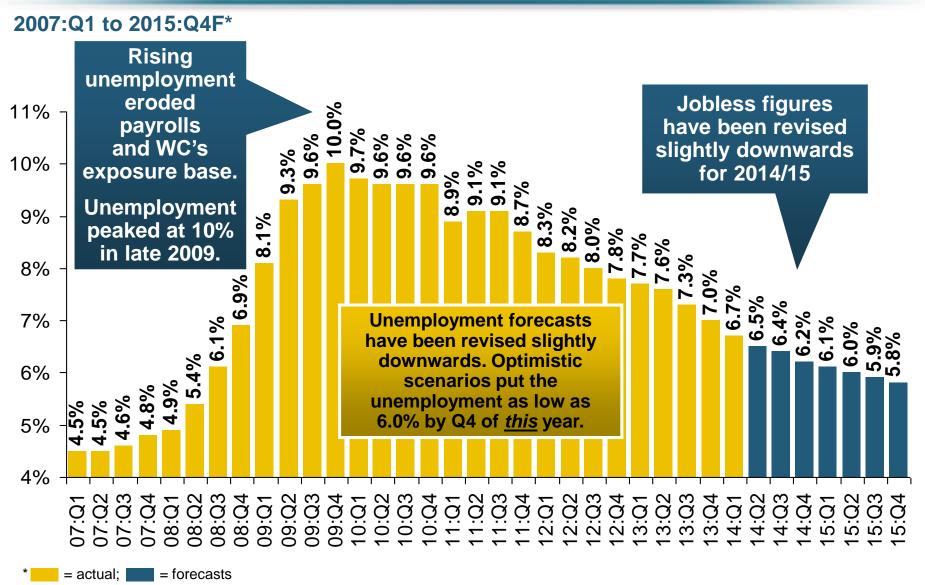




Stubbornly high unemployment and underemployment constrain overall economic growth, but the job market is now clearly improving.

US Unemployment Rate Forecast

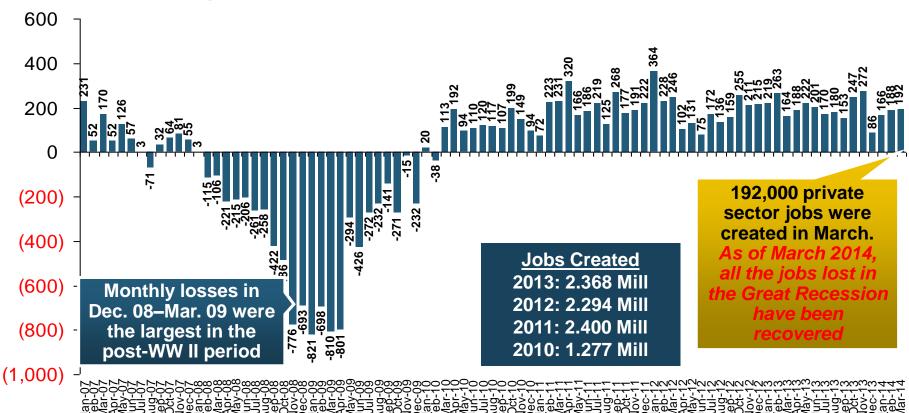




Monthly Change in Private Employment



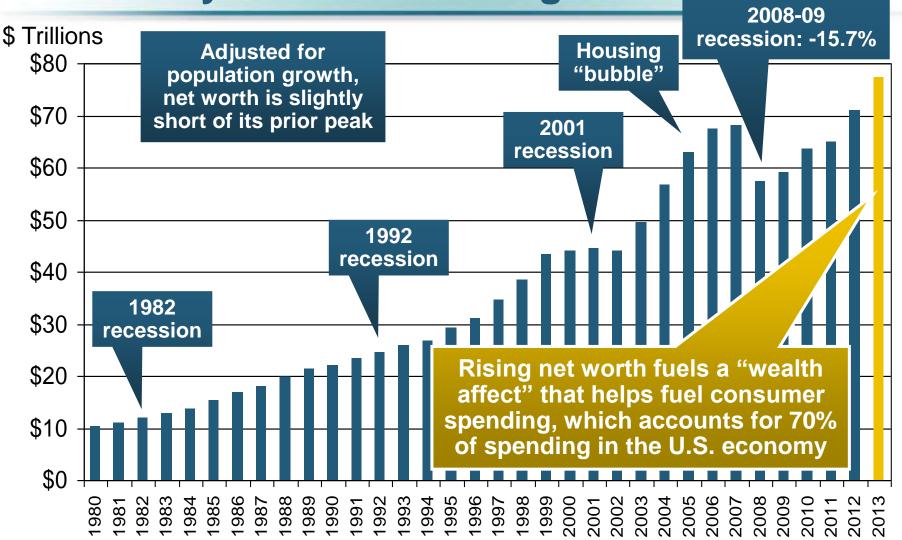




Private Employers Added 8.88 million Jobs Since Jan. 2010 After Having Shed 5.01 Million Jobs in 2009 and 3.76 Million in 2008 (State and Local Governments Have Shed Hundreds of Thousands of Jobs)



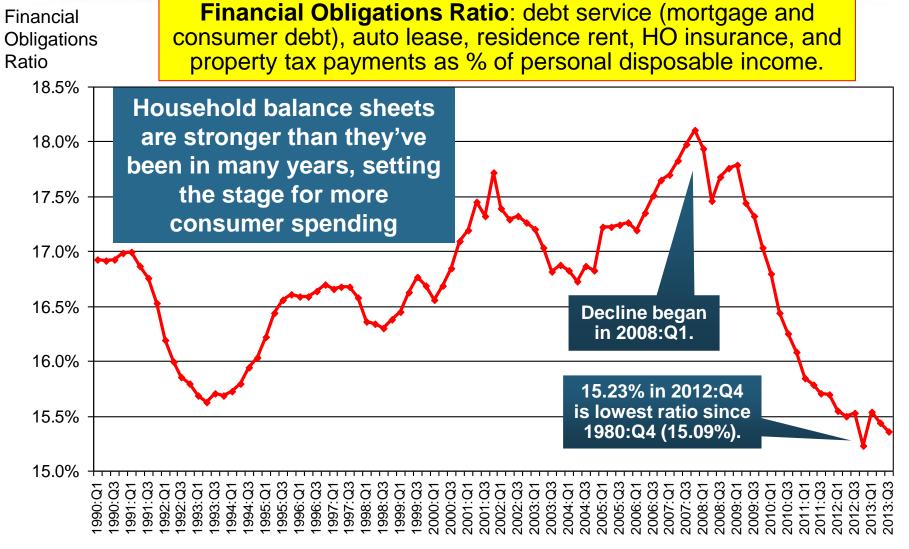




^{*}and nonprofit organizations. Data are as of year-end, except in 2013:Q3 (data posted on Dec 9, 2013). Next release March 6, 2014. Data not seasonally adjusted or inflation-adjusted Source: Federal Reserve Board

Household Financial Obligations Ratio Recently Hit A Historic Low



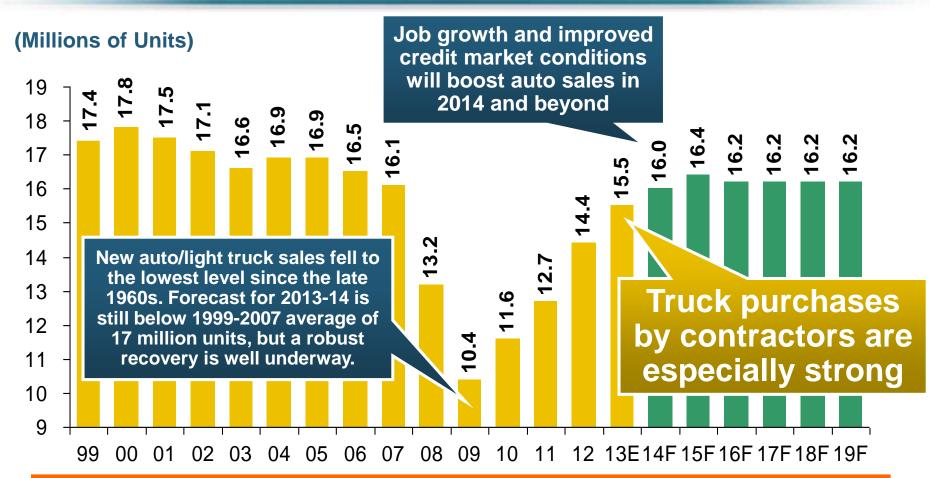


^{*}through 2013:Q3 (data posted on Dec 13, 2013)

Source: Federal Reserve Board, at http://www.federalreserve.gov/releases/housedebt

Auto/Light Truck Sales, 1999-2019F

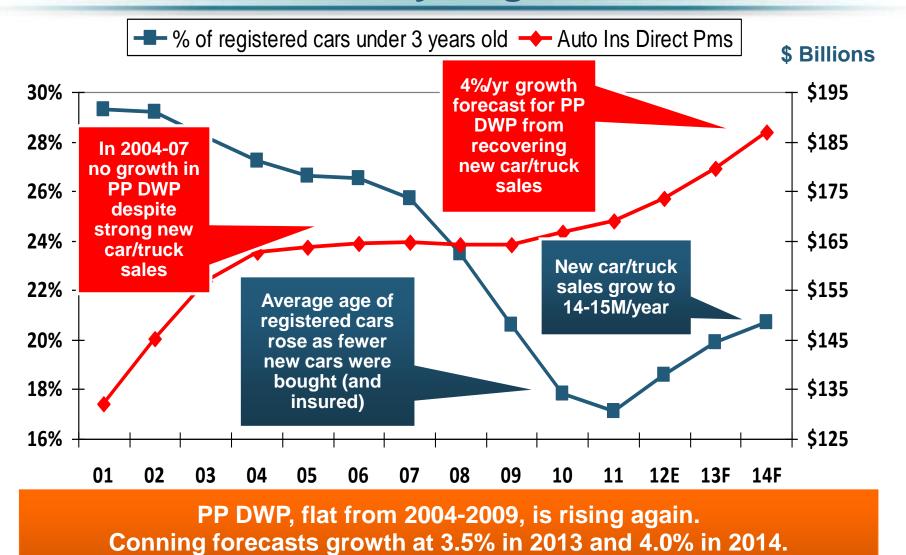




Car/Light Truck Sales Will Continue to Recover from the 2009 Low Point, Bolstering the Auto Insurer Growth and the Manufacturing Sector Along With Workers Comp Exposures

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

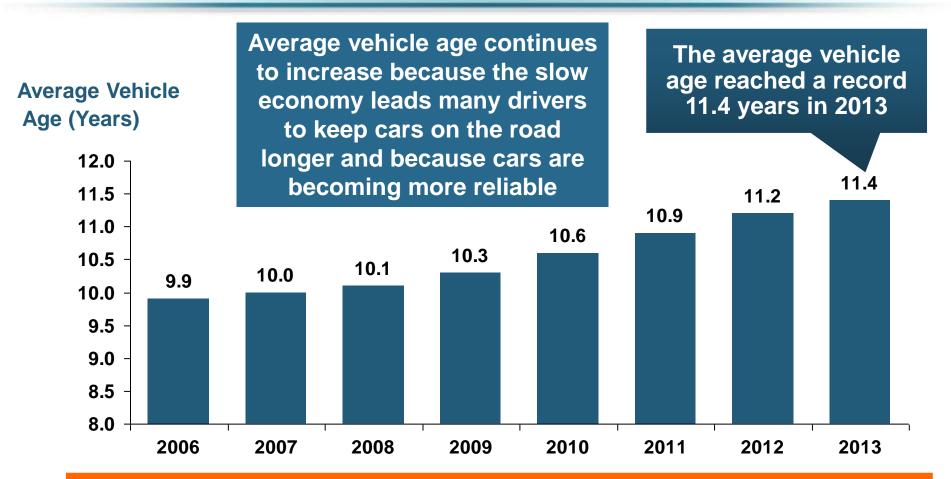




Sources: AIPSO Facts (various issues); SNL Financial; Conning Research & Consulting, *Property-Casualty Forecast and Analysis*, First Quarter 2012; Insurance Information Institute.

Average Age of Vehicles on the Road, 2006—2013

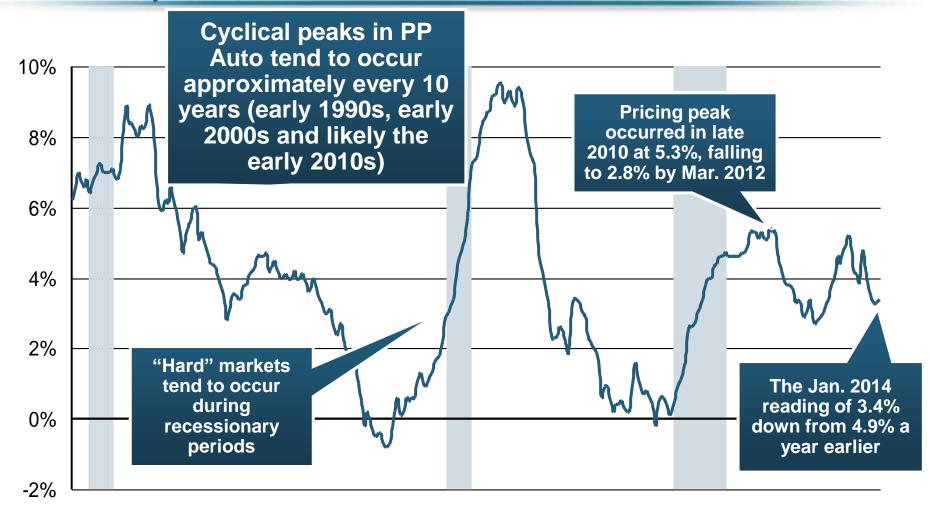




The average age of a vehicle on the road is is expected to continue to increase until 2018. By 2018, the number of vehicles 12+ years old is expected to rise 11.6% from 2013 and the number that are under 5 years old is expected to increase by 41%

Monthly Change* in Auto Insurance Prices, 1991–2014*



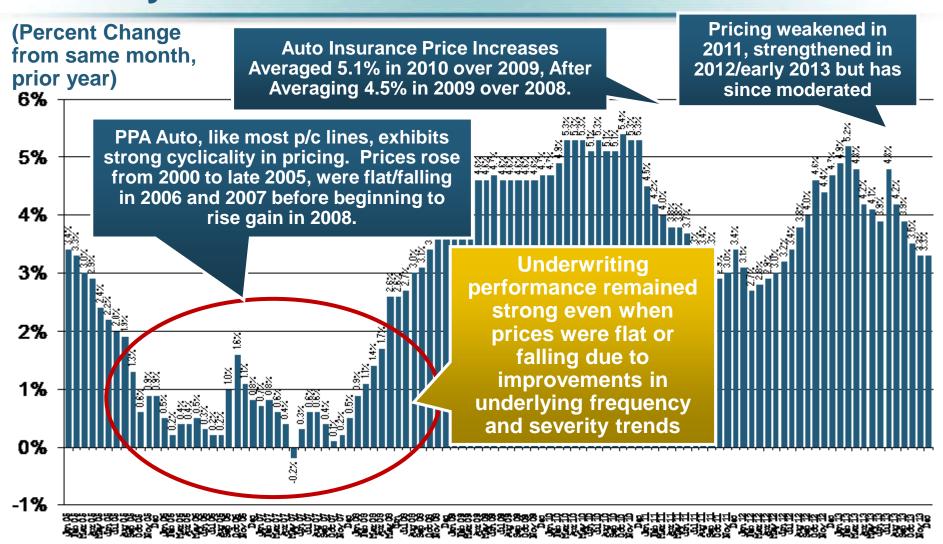


'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14

^{*}Percentage change from same month in prior year; through January 2014; seasonally adjusted Note: Recessions indicated by gray shaded columns.

Monthly Change* in Auto Insurance Prices, January 2005 - December 2013

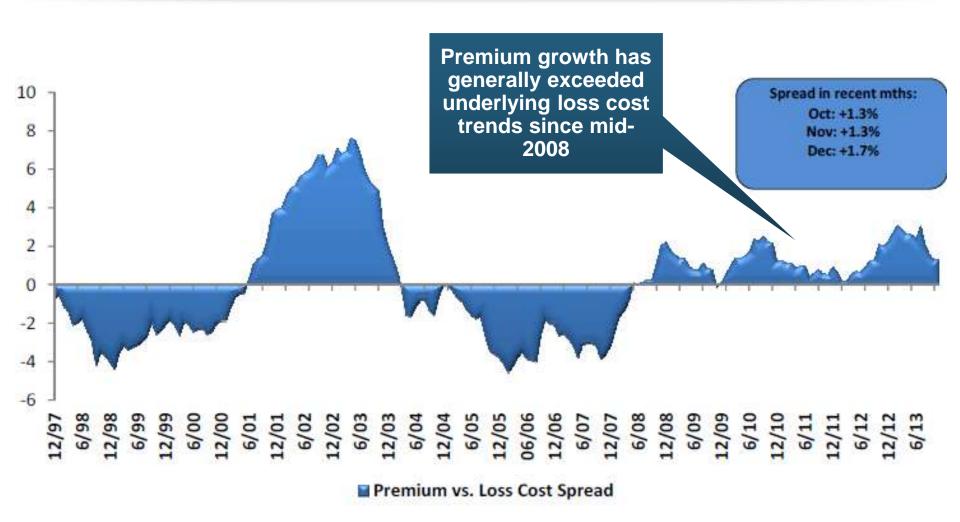




^{*}Percentage change from same month in prior year, seasonally adjusted. Sources: US Bureau of Labor Statistics; Insurance Information Institute

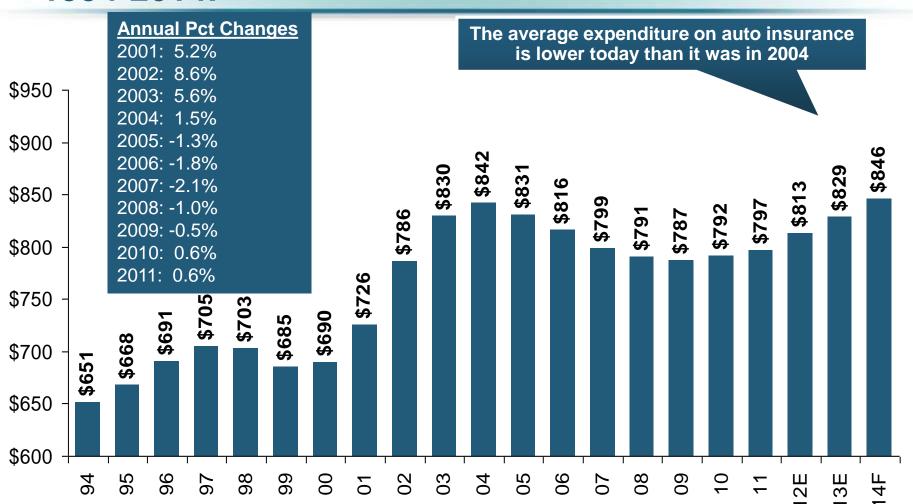
Private Passenger Auto: Premium Growth vs. Loss Cost Spread





Average Expenditures* on Auto Insurance, 1994-2014F





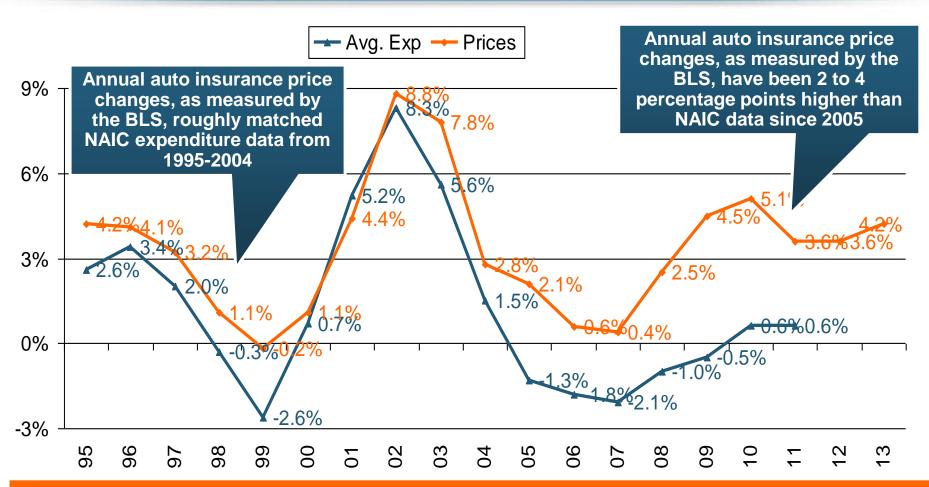
Across the U.S., auto insurance expenditures fell by 0.8% in 2008 and 0.5% in 2009 but rose 0.5% in 2010 and 0.8% in 2011.

I.I.I. estimates for 2012-2014 are each +2.0%.

^{*} The NAIC data are per-vehicle (actually, per car-year)
Sources: NAIC for 1994-2011; Insurance Information Institute estimates for 2012-2014 based on CPI and other data.

Annual Pct. Change in Avg. Expenditures on Auto Insurance, vs. Auto Insurance Prices, 1995-2011

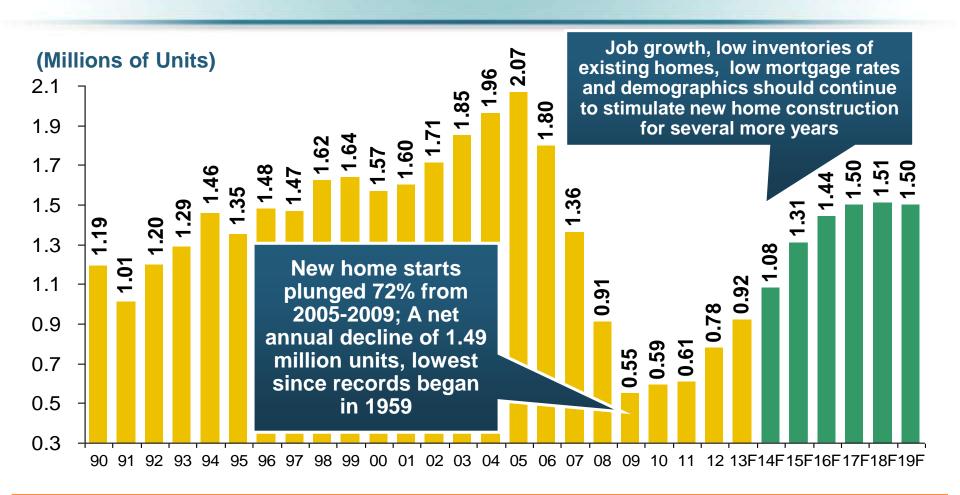




The gap since 2005 between price changes and expenditures on auto insurance might be due to buyers increasing deductibles, obtaining discounts, and other premium-reducing behavior.

New Private Housing Starts, 1990-2019F

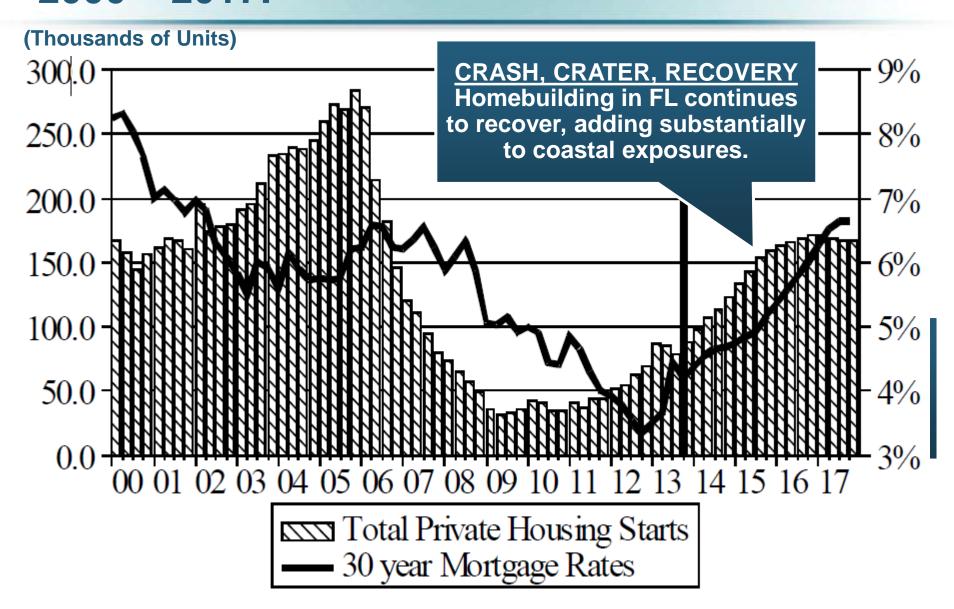




Insurers Are Continue to See Meaningful Exposure Growth in the Wake of the "Great Recession" Associated with Home Construction: Construction Risk Exposure, Surety, Commercial Auto; Potent Driver of Workers Comp Exposure

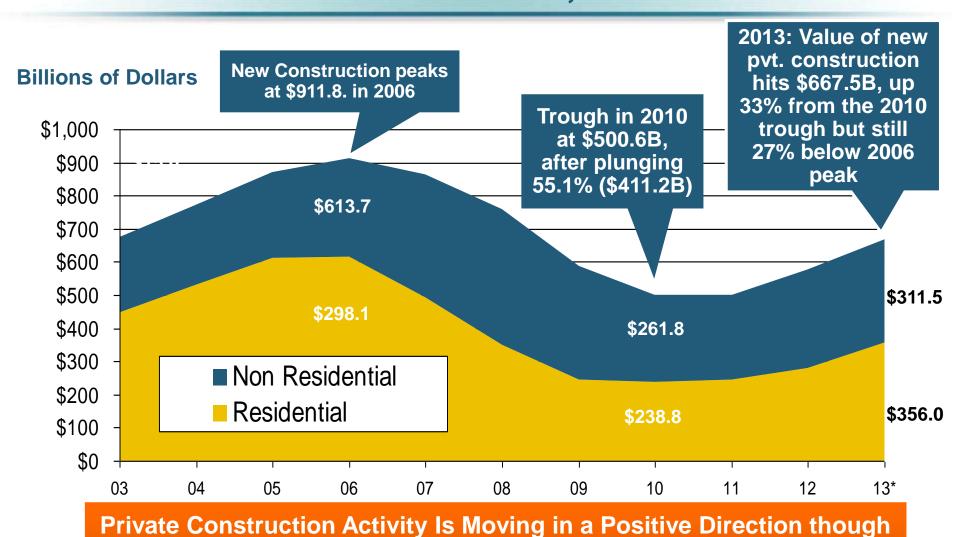
Florida Total Private Housing Starts, 2000 – 2017F





Value of New Private Construction: Residential & Nonresidential, 2003-2013*





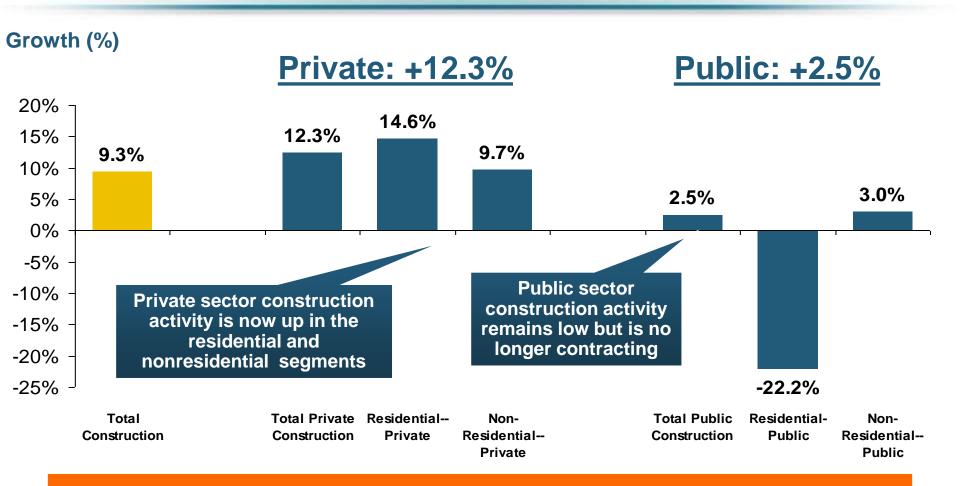
Remains Well Below Pre-Crisis Peak; Residential Dominates

^{*2013} figure is a seasonally adjusted annual rate as of December.

Sources: US Department of Commerce; Insurance Information Institute.

Value of Construction Put in Place, January 2014 vs. January 2013*





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

^{*}seasonally adjusted Source: U.S. Census Bureau, http://www.census.gov/construction/c30/c30index.html; Insurance Information Institute.

Construction Employment, Jan. 2010—March 2014*



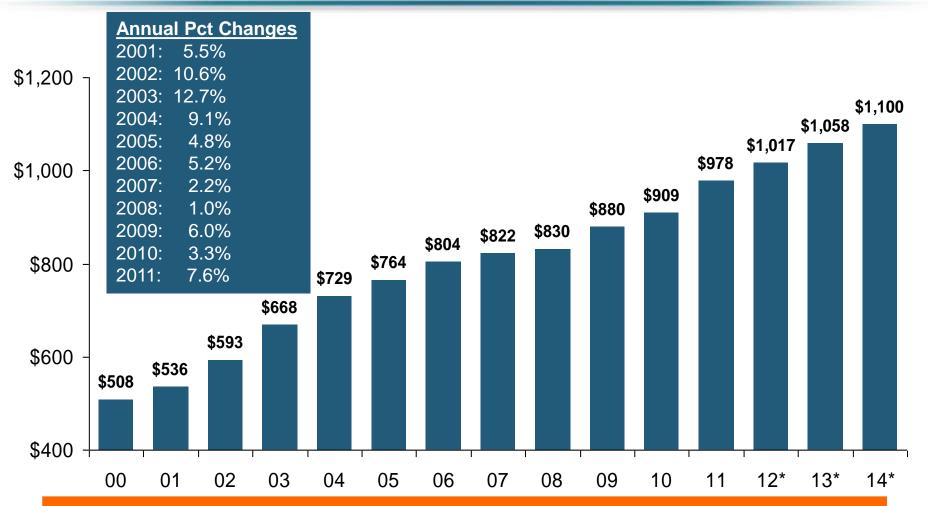


Construction and manufacturing employment constitute 1/3 of all payroll exposure.

^{*}Seasonally adjusted.

Average Premium for Home Insurance Policies**





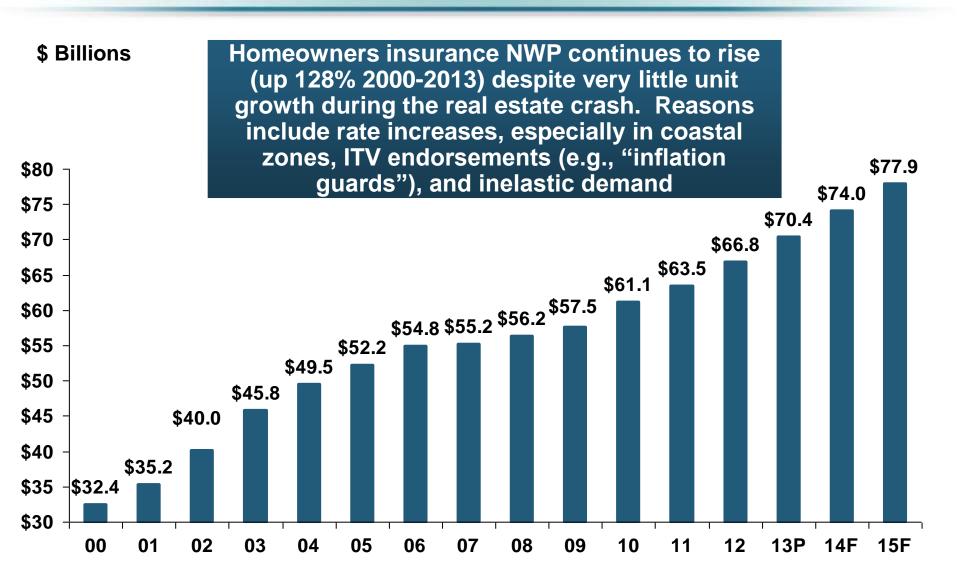
Across the U.S., home insurance expenditures rose by an estimated 4.0% in 2012-2014

^{*} Insurance Information Institute Estimates/Forecasts **Excludes state-run insurers.

Sources: NAIC; Insurance Information Institute estimates for 2012-2014 based on CPI data and other data.

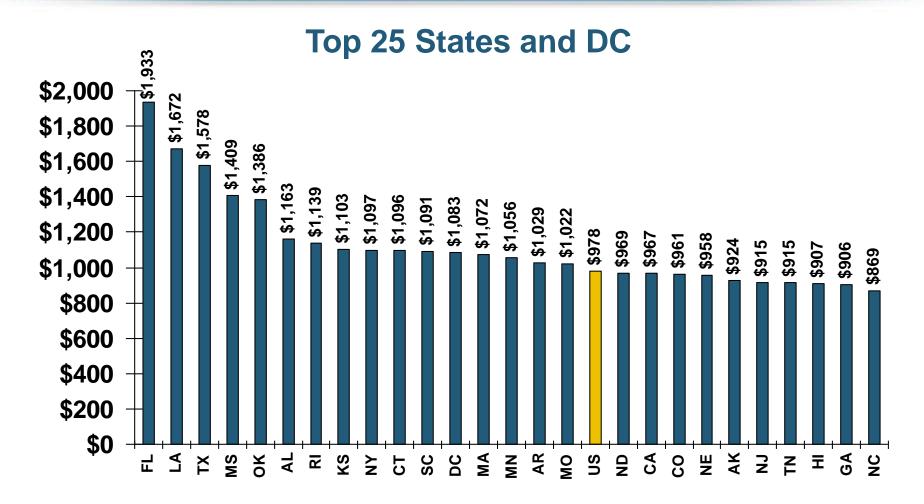
Homeowners Insurance Net Written Premium, 2000–2015F





Average Premiums For Home Insurance By State, 2011* (1)





^{*}Latest available.

Note: Average premium=Premiums/exposure per house years. A house year is equal to 365 days insured coverage for a single dwelling.

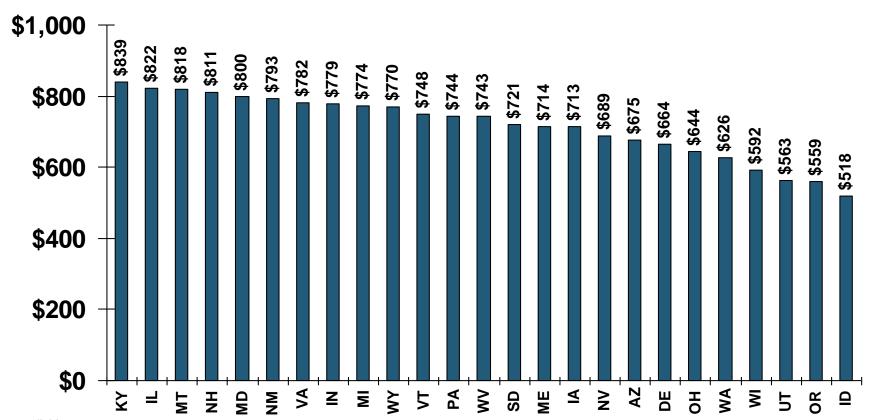
Source: NAIC; Insurance Information Institute.

⁽¹⁾ Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides "all risks" coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written.

Average Premiums For Home Insurance By State, 2011* (1)



Bottom 25 States



Latest available

Note: Average premium=Premiums/exposure per house years. A house year is equal to 365 days insured coverage for a single dwelling.

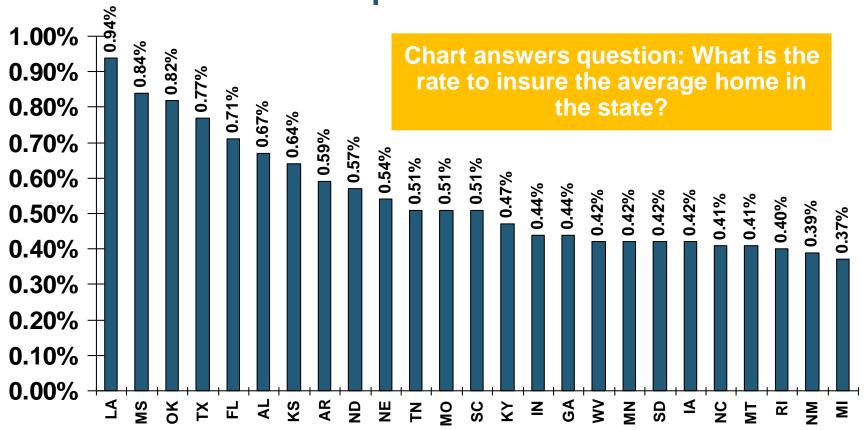
Source: © 2013 National Association of Insurance Commissioners (NAIC). Reprinted with permission. Further reprint or distribution strictly prohibited without written permission of NAIC.

^{• (1)} Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides "all risks" coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written.

Estimated Median Rate For Home Insurance By State, 2011* (1)







^{*}Latest available.

Note: Estimated median = average premium in median insurance range/estimated average insurance value in that range.

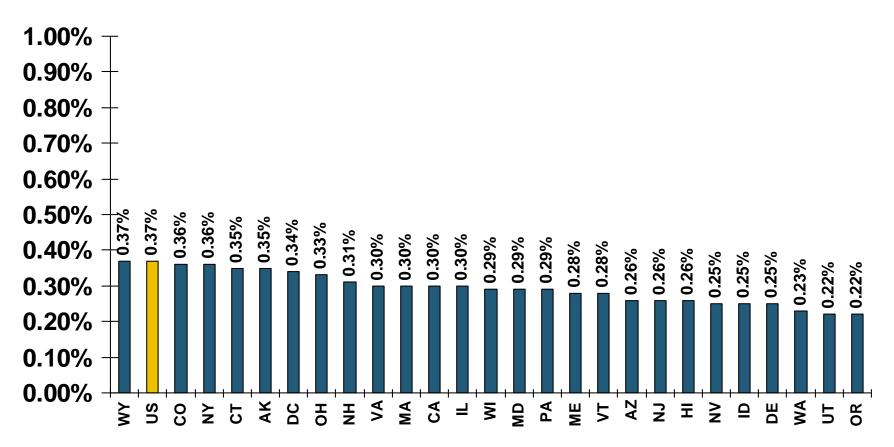
Source: Insurance Information Institute estimate from NAIC data.

⁽¹⁾ Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides "all risks" coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written.

Estimated Median Rate For Home Insurance By State, 2011* (1)



Bottom 25 States and DC



^{*}Latest available.

Note: Estimated median = average premium in median insurance range/estimated average insurance value in that range.

Source: Insurance Information Institute estimate from NAIC data.

⁽¹⁾ Based on the HO-3 homeowner package policy for owner-occupied dwellings, 1 to 4 family units. Provides "all risks" coverage (except those specifically excluded in the policy) on buildings and broad named-peril coverage on personal property, and is the most common package written.

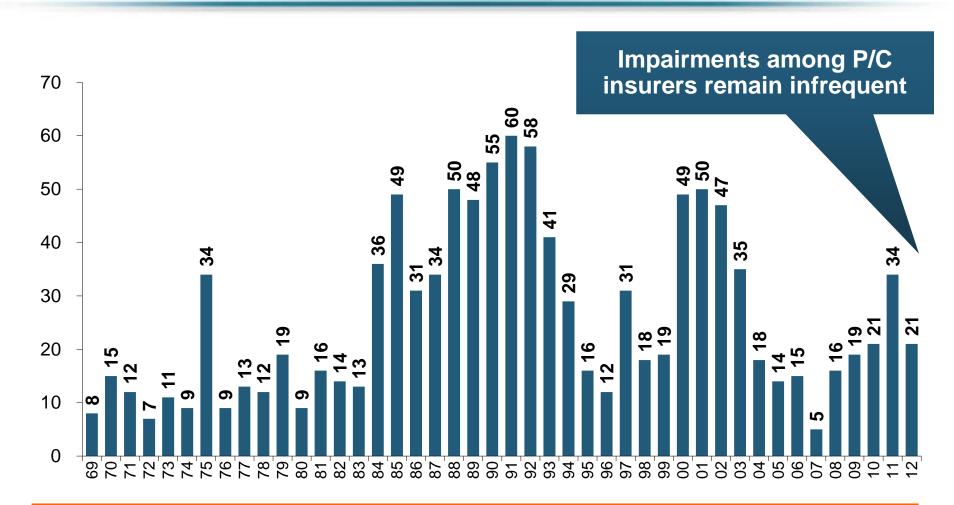


Financial Strength & Underwriting

Cyclical Pattern is P-C Impairment
History is More Closely Tied to
Underwriting, Reserving & Pricing
than to Catastrophe Activity

P/C Insurer Impairments, 1969–2012

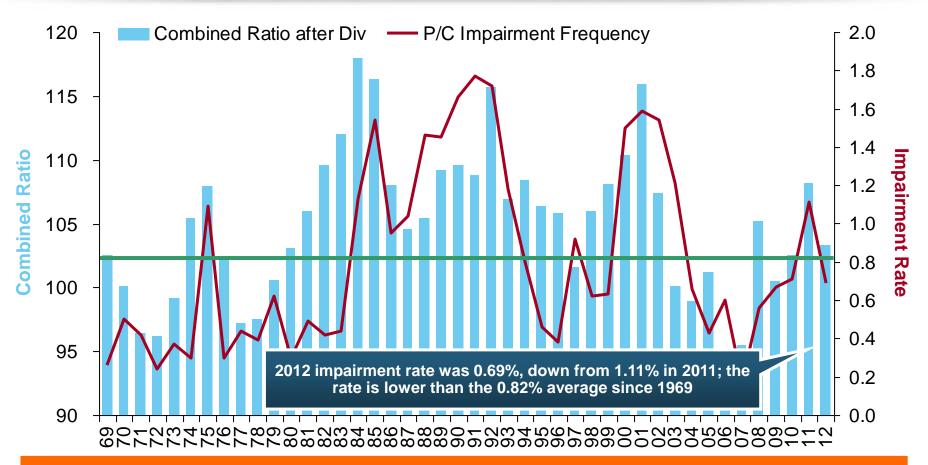




The Number of Impairments Varies Significantly Over the P/C Insurance Cycle, With Peaks Occurring Well into Hard Markets

P/C Insurer Impairment Frequency vs. Combined Ratio, 1969-2012





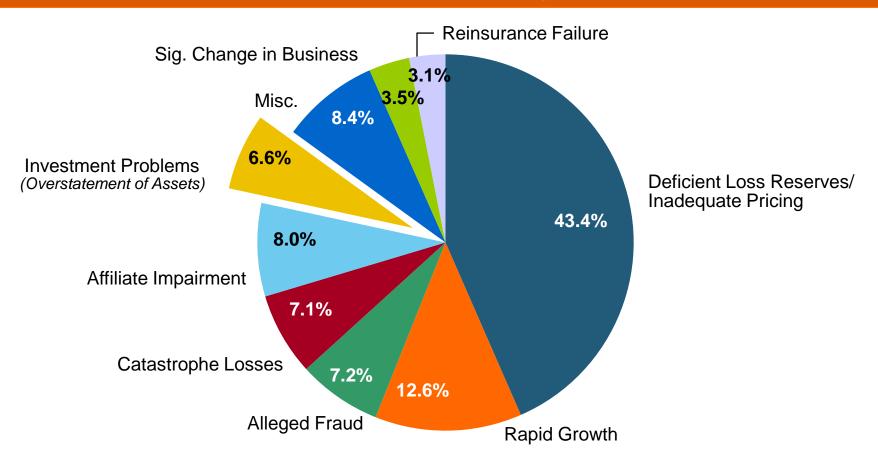
Impairment Rates Are Highly Correlated With Underwriting Performance and Reached Record Lows in 2007; Recent Increase Was Associated Primarily With Mortgage and Financial Guaranty Insurers and Not Representative of the Industry Overall

Reasons for US P/C Insurer Impairments, 1969–2012



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

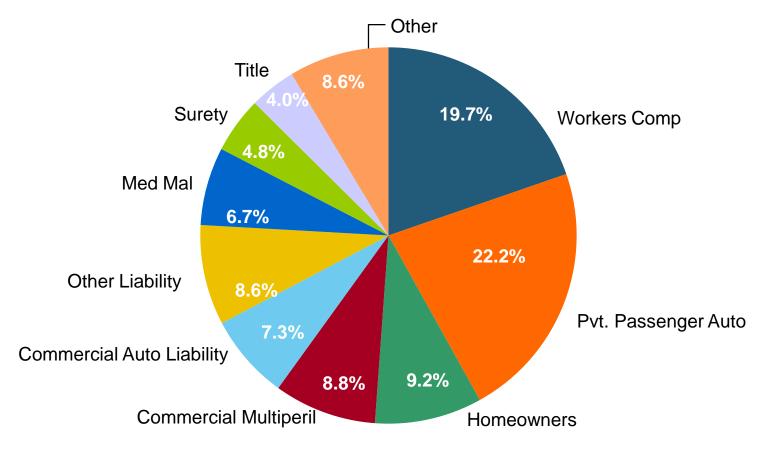


Source: A.M. Best Special Report "Pace of P/C Impairments Slowed in 2012; Auto Writers, RRGs Continued to Struggle," June 2013; Insurance Information Institute.

Top 10 Lines of Business for US P/C Impaired Insurers, 2000–2012



Workers Comp and Pvt. Passenger Auto Account for More Than 40 Percent of the Impaired Insurers Since 2000



Source: A.M. Best Special Report "Pace of P/C Impairments Slowed in 2012; Auto Writers, RRGs Continued to Struggle," June 2013; Insurance Information Institute.

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